

**PST 1710**  
**Experimental and Behavioral Economics**  
**Bentley University**  
**Fall 2014**

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**Course web page:** on blackboard

**Text:** No textbook. Readings consist of journal articles which are available online through the Bentley network. Three recommended texts, however are:

Douglas D. Davis and Charles A. Holt, *Experimental Economics* (**DH**)  
John H. Kagel and Alvin E. Roth, *The Handbook of Experimental Economics* (**KR**)  
Sidney Siegel and N. John Castellan, Jr., *Nonparametric Statistics for the Behavioral Sciences*

## **COURSE DESCRIPTION**

This course provides an introduction to the issues covered and methodologies employed in the field of Behavioral Economics.

Behavioral Economics adds insights from Psychology to the economic model of behavior. In so doing, it looks beyond the standard neoclassical model of how people, managers and firms make decisions, examining ways in which behavior is not consistent with strict rational self-interested decision-making. This includes “irrational” behavior such as over-valuing losses and failing to exert the effort needed to find the exact choice that maximizes personal payoffs. It also includes social preferences, where people care about the payoffs of others and not just themselves out of concerns for fairness or altruism. Frequently, we will review how standard economic theory predicts people will behave in a given situation, and compare that to how people actually behave.

The course begins with an overview of the primary statistical tools employed in the field. Because it is frequently inappropriate to assume that our data are drawn from a particular type of distribution, many if not most of these techniques are nonparametric. With these methods in our toolbox, we then proceed to an overview of the many issues covered in the field, and discuss examples from the literature of how these tools are applied.

## LEARNING OBJECTIVES

By the end of the course, you should:

1. Have a firm understanding of how to properly structure an experiment to maximize the statistical power of your tests;
2. Know which statistical tests (both parametric and nonparametric) are appropriate to use given the nature of your experiment, and how to put them into practice;
3. Have an understanding of the basic economic theory used to generate predictions about how people should behave in a strategic interaction;
4. Have a firm grasp of the various types of behaviors that have been found in the literature that are inconsistent with theory; and
5. Demonstrate your understanding of all of these issues by developing a viable research proposal in the domain of behavioral economics.

## GRADING

Grades will be determined by your performance on the following class requirements:

<b>Item</b>	
Homework Assignments	10%
Presentations	30%
Research Proposal/Project	60%

**All work:** Most assignments can and should be done as a group.

### **Homework assignments:**

Homework assignments will be assigned only in the early part of the semester; later, your work will center on being prepared for in-class discussions. They will be posted on the course Blackboard site under Assignments. Solutions to the problems will be posted on the due date, and we will go over some of them in class. They should be regarded as your primary preparation for the midterm exam.

### **Presentations:**

After the initial section on experimental and nonparametric methods, each week as we cover the various topic areas, one of you will lead the discussion. As part of this, you will prepare a document that summarizes each paper on the reading list on your topic area. Then, you will present the results of a literature search on where the week's theme has come up in interesting papers from the accounting or business literature, depending on your discipline. Finally, you should come up with a research idea or two based on this literature, which we will discuss and brainstorm as a group. For the following week, you will prepare a document summarizing the research design that emerged from our discussion. The following week, we will begin by discussing and refining your idea further before proceeding to the next topic area. These ideas will serve as the seeds for your Research Proposal, discussed more thoroughly below.

Thus, in total, you should produce three documents for your discussion week:

Before your class (distribute by early Wednesday at the latest):

1. A summary of the Economics papers on the reading list
2. A summary of the papers you found on related themes in the Accounting/Business literature

After your class, before the next one:

3. A write-up of your research idea discussed the previous week

### **Research Proposal/Project:**

Each of you is expected to assemble a research proposal for a behavioral study by the end of the semester. This proposal begins by providing a survey of the literature on a particular experimental topic area. The proposal then describes a new research question(s) and why it is important, and also includes relevant theory, experimental instructions, and an experimental design. To facilitate feedback, you will be required to present your research proposal near the end of the semester in a 30-minute time slot. The written proposal is due 48 hours after your presentation and you should take account of the comments given during your seminar.

Some guidelines questions that we will discuss:

1. What is the question you would like to have answered after the experiment? (Your answer should be a single sentence with a question mark at the end.)
2. What do you know already about the possible answers to the question you have stated above?
3. What are the various possible ways of finding an answer to the question you have stated above? Include both experimental as well as any other methods you know about.
4. What are the advantages and disadvantages of using an experiment to find an answer?
5. What are the chances that the answer you get from the experiment will surprise you or others? What are the chances that it will change someone's mind?
6. How would you conduct the experiment? (Write down a design and instructions.)
7. Is your experimental design the simplest possible design to help answer the question you have stated?
8. What are the possible outcomes of the experiment? Do the possible outcomes include at least one outcome that will answer the question you stated above? What is the chance that you will observe this outcome?

## TENTATIVE COURSE TOPICS AND READINGS

### Area 1: background

#### Week 1: Game theory

Potential topics:

Simultaneous move games

Sequential move games

Finitely repeated games

Infinitely repeated games

Readings: none

#### Weeks 2 - 3: Types of experiments and appropriate statistical methods

- One sample designs
- Two sample (or more) designs
  - o Between
  - o Within
- Lab vs. field
- Hypothesis testing, given the nature of the dependent variable
- Introduction to STATA

Readings:

Introductory chapters of:

Kagel and Roth, *The Handbook of Experimental Economics*

Davis and Holt, *Experimental Economics*

Roth, Alvin E. (1988); "Laboratory Experimentation in Economics: A Methodological Overview", *Economic Journal*, Vol. 98, 974-1031.

Charness, G., Gneezy, U., & Kuhn, M. A. (2012). Experimental methods: Between-subject and within-subject design. *Journal of Economic Behavior & Organization*, 81(1), 1–8.

Harrison, G. and List, J. "Field Experiments." *Journal of Economic Literature*, 42(4), December 2004, pp. 1009-1055.

List, J.A. "Why Economists should conduct field experiments and 14 tips for pulling one off." *Journal of Economic Perspectives*, 25(3), Summer 2011, pp. 3-16.

Select chapters from *Nonparametric Statistics for the Behavioral Sciences*, Sidney Siegel and N. John Castellan, Jr.

## **Weeks 4-5: Power and optimal experiment design**

### Readings:

List, J. A., Sadoff, S., & Wagner, M. (2011). So You Want to Run an Experiment, Now What? Some Simple Rules of Thumb for Optimal Experimental Design. *Experimental Economics*, 14, 439–457.

## Area 2: topics

The references listed here are all from the Economics literature. The discussion leader for each week will add others before class that week.

### 1. Social Preferences

#### A. Overview

\* Camerer, Colin F., and Ernst Fehr. 2004 "Measuring Social Norms and Preferences Using Experimental Games: A Guide for Social Scientists." In *Foundations of Human Sociality: Economic Experiments and Ethnographic Evidence from Fifteen Small-Scale Societies*, eds. Joseph Henrich et al., 55–95. Oxford: Oxford University Press.

Levitt, S. D. and J. List "What do laboratory experiments measuring social preferences tell us about the real world?" *Journal of Economic Perspectives*, (2007) 21(2): pp. 153-174.

List, John A. "The Behavioralist Meets the Market: Measuring Social Preferences and Reputation Effects in Actual Transactions." *Journal of Political Economy*, 114(1), 2006, pp. 1-37.

Fehr, Ernst, et al., "Does Fairness Prevent Market Clearing? An Experimental Investigation." *Quarterly Journal of Economics*, May 1993, 437-59.

#### B. Trust and Reciprocity

\* Berg, Joyce, Dickhaut, John and McCabe, Kevin. "Trust, Reciprocity and Social History." *Games and Economic Behavior*, 10, 1995, pp. 122-142.

Gneezy, U., & List, J. A. (2006). Putting Behavioral Economics to Work: Testing for Gift Exchange in Labor Markets Using Field Experiments. *Econometrica*, 74(5), 1365–1384.

Ortmann, A., Fitzgerald, J., & Boeing, C. (2000). Trust, reciprocity, and social history: A re-examination. *Experimental Economics*.

Glaeser, E. L., Laibson, D. I., Sheinkman, J. A., & Soutter, C. L. (2000). Measuring trust. *Quarterly Journal of Economics*, (August), 811–846.

\* Cox, J. (2004). How to identify trust and reciprocity. *Games and Economic Behavior*, 46(2), 260–281.

Bolton, G., Katok, E., & Ockenfels, A. (2004). Trust among Internet traders: A behavioral economics approach. *Analyse und Kritik*, (5).

## C. Fairness

\* Camerer, Colin and Richard Thaler, "Anomalies: Ultimatums, Dictators and Manners." *Journal of Economic Perspectives*, 9, 1995, 209-219.

Camerer, C., & Fehr, E. (2004). Measuring social norms and preferences using experimental games: A guide for social scientists. In J. Heinrich et al. (Ed.), *Foundations of Human Sociality: Economic Experiments and Ethnographic Evidence from Fifteen Small-Scale Societies* (pp. 55–95). Oxford: Oxford University Press.

Charness, G., & Levine, D. I. (2007). Intention and Stochastic Outcomes: An Experimental study. *The Economic Journal*, 117(522), 1051–1072.

Charness, G., & Rabin, M. (2002). Understanding social preferences with simple tests. *The Quarterly Journal of Economics*, 117(3), 817–869.

Fehr, E., & Schmidt, K. M. (1999). A Theory Of Fairness, Competition, and Cooperation. *Quarterly Journal of Economics*, 114(3), 817–868.

Güth, W., Schmittberger, R., & Schwarze, B. (1982). An experimental analysis of ultimatum bargaining. *Journal of Economic Behavior & ...*, 3(4), 367–388.

Bolton, G., & Ockenfels, A. (2000). ERC: A theory of equity, reciprocity, and competition. *American Economic Review*, 90(1), 166–193.

List, J. A. (2006). The Behavioralist Meets the Market: Measuring Social Preferences and Reputation Effects in Actual Transactions. *Journal of Political Economy*, 114(1), 1–37.

## D. Altruism

Andreoni, J., Harbaugh, W. T., & Vesterlund, L. (2007). Altruism in experiments. *The New Palgrave Dictionary of Economics*, 2, 1–16.

Crumpler, H., & Grossman, P. (2008). An experimental test of warm glow giving. *Journal of Public Economics*, 92, 1011 – 1021.

Eckel, C. C., Grossman, P. J., & Johnston, R. M. (2005). An experimental test of the crowding out hypothesis. *Journal of Public Economics*, 89(8), 1543–1560.

\* List, J. A. (2007). On the interpretation of giving in dictator games. *Journal of Political Economy*, 115(3), 482–493.

## **2. Thinking rationally; limited strategic thinking**

Benzion, U., Rapoport, A., & Yagil, J. (1989). Discount rates inferred from decisions: An experimental study. *Management Science*, 35(3), 270–284.

DellaVigna, S, and Ulrike Malmendier. 2006. “Paying Not to Go to the Gym.” *The American Economic Review* 96 (3): 694–719.

Loewenstein, G., & Thaler, R. (1989). Anomalies: intertemporal choice. *The Journal of Economic Perspectives*, 3(4), 181–193.

\* Nagel, Rosemarie. “Unraveling in Guessing Games: An Experimental Study.” *American Economic Review*, 85(5), December 1995, pp. 1313-1326.

\* Sally Sadoff, Steven Levitt and John List. “ Checkmate: Exploring Backward Induction Among Chess Players” *American Economic Review* (2011)

Rubinstein, A. (2003). “Economics and Psychology”? The Case of Hyperbolic Discounting. *International Economic Review*, 44(4), 1207–1216.



### 3. Loss Aversion and Prospect Theory

Crawford, V., & Meng, J. (2011). New York City Cab Drivers' Labor Supply Revisited: Reference-Dependent Preferences with Rational Expectations Targets for Hours and Income. *The American Economic Review*, 101(August), 1912–1932.

Haigh, M. S., & List, J. a. (2005). Do Professional Traders Exhibit Myopic Loss Aversion? An Experimental Analysis. *The Journal of Finance*, 60(1), 523–534.

Kahneman, D. (2003). Maps of bounded rationality: Psychology for behavioral economics. *American Economic Review*, 93(5), 1449–1475.

\* Kahneman, Daniel and Tversky, Amos. "Prospect Theory: An analysis of decision under risk." *Econometrica*, 47(2), March 1979, pp. 263-292.

Knetsch, Jack L., Richard H. Thaler, Daniel Kahneman, (1991), "Anomalies: The Endowment Effect, Loss Aversion, and Status Quo Bias." *Journal of Economic Perspectives*, 5(1): pp. 193-206

\* Kahneman, Daniel; Jack L. Knetsch, and Richard H. Thaler, "Experimental Tests of the Endowment Effect and the Coase Theorem." *Journal of Political Economy*; 98(6), December 1990, 1325-48.

List, John A. "Does Market Experience Eliminate Market Anomalies?" *Quarterly Journal of Economics*, 2003, February, 41-71.

#### **4. Cooperation**

Robyn M. Dawes and Richard H. Thaler, "Anomalies: Cooperation." *The Journal of Economic Perspectives*, Vol. 2, No. 3 (Summer, 1988), pp. 187-197

List, John A. "Friend or Foe? A Natural Experiment of the Prisoner's Dilemma." *Review of Economics and Statistics*, 88(3), August 2006, pp. 463-471.

#### **5. Discrimination**

List, John A. "The Nature and Extent of Discrimination in the Marketplace: Evidence from the Field," *Quarterly Journal of Economics*, 2004, 119(1): 49-89

Bertrand Marianne, and Sendhil Mullainathan, "Are Emily and Greg More Employable than Lakisha and Jamal? A Field Experiment on Labor Market Discrimination," *American Economic Review*, 2004, 94(4): 991-1013.

Gneezy, Uri, John A. List and Michael K. Price, "Toward an Understanding of Why People Discriminate: Evidence from a Series of Natural Field Experiments," NBER working paper 17855

#### **6. Experiments in the Workplace**

Bandiera, O., Barankay, I., Rasul, I., 2005. Social preferences and the response to incentives: Evidence from personnel data. *Quarterly Journal of Economics* 120(3), 917-962.

Hossain, Tanjim and John List, 2009, "The Behavioralist Visits the Factory: Increasing Productivity Using Simple Framing Manipulations," working paper.

Gneezy, U., List, J., 2006. Putting behavioral economics to work: testing for gift exchange using field experiments, *Econometrica* 74, 1365-1384.

## 7. Gender

- Castillo, M., Petrie, R., Torero, M., & Vesterlund, L. (2013). Gender differences in bargaining outcomes: A field experiment on discrimination. *Journal of Public Economics*, 99, 35–48.
- Croson, Rachel, and Uri Gneezy. 2009. “Gender Differences in Preferences.” *Journal of Economic Literature* 47 (2): 448–474.
- Della Vigna, S., List, J. A., Malmendier, U., & Rao, G. (2013). The importance of being marginal: gender differences in generosity. *NBER Working Paper 18748*.
- \* Gneezy, Uri, Kenneth L Leonard, and John A. List. 2009. “Gender Differences in Competition: Evidence From a Matrilineal and a Patriarchal Society.” *Econometrica* 77 (5): 1637–1664.
- Flory, Jeffrey A, Andreas Leibbrandt, and John A List. 2010. “Do Competitive Workplaces Deter Female Workers? A Large-scale Natural Field Experiment on Gender Differences in Job Entry Decisions.” *NBER Working Paper 16546*.
- \* Niederle, M, and L Vesterlund. 2007. “Do Women Shy Away from Competition? Do Men Compete Too Much?” *Quarterly Journal of Economics* (August): 1067–1101.
- Niederle, Muriel, and Lise Vesterlund. 2011. “Gender and Competition.” *Annual Review of Economics* 3 (1) (September): 601–630.