



Economics 499
Experimental Economics
Spring 2007

Instructor: Prof. Jeffrey Carpenter, Warner 305f, 443-3241 (Econ dept: 443-5327), email: jpc@mid...

Time and Location: Monday Evenings 7:30 - 10:25, Warner 506.

Office Hours: Tuesday and Thursday 4-5pm or by appointment.

Reading Material: *Markets, Games, and Strategic Behavior* (pdf) by Charles A. Holt and various journal articles.

Description of the Course: This class is designed to highlight a relatively new area of study in economics - how people actually behave given economic incentives. Rather than learning economic models of behavior (e.g., consumption, investment, production) in this class you will learn how to test such behavioral models using the experimental lab.

Each week we will examine a new area of experimentation. However, the class is split into three broad sections: classic experiments from the early days, experiments in strategic interaction that have challenged the way the economists think about individual motivation, and the new frontiers of experimentation. Each class will be split into three sections. In the first section we will conduct a typical experiment in the topic of the day (think of this as experiential learning). In the second part we will go through the discussion questions that you will turn in each week, and in the last third, we will discuss individual experiments to highlight the underlying research agenda in each area.

Material and Schedule: For most topics Holt's book (which he has agreed to allow us to use in pdf form) will provide an introduction to the week's topic. To supplement these short chapters, we will also read many of the original experiments straight from books and journals. Below is a summary schedule for our class. A detailed reading list appears at the end of the syllabus.

Date(s)	Topic/Activity
I. Origins & Classics	
Class 1: February 12th	Economics as an Experimental Science
Class 2: February 19th	Markets
Class 3: February 26th	Asset Markets and Stats Review
Class 4: March 5th	Auctions
II. Strategic Interaction and Social Preferences	
Class 5: March 12th	Alternating Offers Bargaining and Fairness
Class 6: March 19th	Dictators and Altruists
Class 7: April 2nd	Trust and Positive Reciprocity
Class 8: April 9th	Social Dilemmas (PD, VCM, CPR)
Class 9: April 16th	Punishment and Negative Reciprocity
III. Frontiers	
Class 10: April 23rd	Field Experiments
Class 11: April 30th	Neuroeconomics
IV. Research Presentations and Exams	
Class 12: May 7th	Student Research Presentations
Finals week	Oral Exams

Grading: Grades will depend on a combination of your research output and your demonstration of knowledge. As for research, you will work in pairs to conduct an experiment that the two of you will design. Although you will design and conduct an experiment in pairs, each of you will write your own term paper based on the experiment. To get you to think about your research project early, each pair will write the equivalent of a grant proposal (see the following link for the formatting of your proposal: http://www.ssrc.org/fellowships/art_of_writing_proposals.page). In the proposal you will explain in detail the experiment that you want to conduct and why it will inform an interesting economic puzzle. Each team will be allocated \$100 to use as subject payments.

As for the attainment of knowledge, each week you will turn in responses to discussion questions that are based on the reading for the week. There will also be an oral final exam. During the final exam each of you will randomly draw two topics from a list that I will give you beforehand. You will then be expected to spend ten minutes per question telling me what you know about the topic. All this stuff counts towards your grade as follows.

Discussion Questions	10%
Grant Proposal	20%
Research Paper	45%
Oral Exam	25%.

Detailed Reading List: Many of the following are available online through JSTOR (or at: <http://community.middlebury.edu/~jcarpent/EC499.html>)

Class 1: Economics as an Experimental Science

Required:

- [1] Holt book, *Preface & Chapter 1*. [PDF]
- [2] Smith, V., 1989. Theory, Experiment and Economics. *Journal of Economic Perspectives*, 3(1), 151-169. [JSTOR]
- [3] Smith, V., 1994. Economics in the Laboratory. *Journal of Economic Perspectives*, 8(Winter), 113-131. [JSTOR]

Suggested:

- [4] Camerer, Colin, 2003, *Behavioral Game Theory: Experiments on Strategic Interaction*. Princeton University Press, Princeton. *Appendices to Chapter 1*
- [5] Davis, Douglas and Holt, Charles, 1993, *Experimental Economics*. Princeton University Press, Princeton. *Chapter 1*.
- [6] Friedman, Daniel and Sunder, Shyam, 1994, *Experimental Methods: a primer for economists*. Cambridge University Press, Cambridge. *Chapters 1-3*.

Class 2: Markets

Required:

- [1] Holt book, *Chapter 2*. [PDF]
- [2] Davis, Douglas and Holt, Charles, 1993, *Experimental Economics*. Princeton University Press, Princeton. *Chapter 3*.

Suggested:

- [3] Chamberlin, E., 1948. An Experimental Imperfect Market. *Journal of Political Economy*, 56(April), 95-108. [JSTOR]
- [4] Smith, V., 1962. An Experimental Study of Competitive Market Behavior. *Journal of Political Economy*, 70(April), 111-137. [JSTOR]

Class 3: Asset Markets and Stats Review

Required:

- [1] Holt book, *Chapter 18*. [PDF]
- [2] Ball, Sheryl B. and Holt, Charles A., 1998. Classroom Games: Speculation and Bubbles in an Asset Market. *Journal of Economic Perspectives*, 12(1), 207-218. [JSTOR]
- [3] Sunder, S., 1995, *Experimental Asset Markets*. In: J. Kagel and A. Roth (Eds.), *The Handbook of Experimental Economics*. Princeton University Press, Princeton.

- [4] Dufwenberg, Martin, Lindqvist, Tobias and Moore, Evan, 2003, Bubbles and Experience: An Experiment, *American Economic Review*, forthcoming.
- [5] Noussair, Charles and Tucker, Steven, 2003, Futures Markets and Bubble Formation in Experimental Asset Markets, *Pacific Economic Review* 11(2):167-84.
- [6] Friedman, Daniel and Sunder, Shyam, 1994, *Experimental Methods: a primer for economists*. Cambridge University Press, Cambridge, *Chapter 7 - Data Analysis*.

Suggested:

- [7] Smith, Vernon L., Suchanek, Gerry L. and Williams, Arlington W., 1988. Bubbles, Crashes, and Endogenous Expectations in Experimental Spot Asset Markets. *Econometrica*, 56(5), 1119-1151. [JSTOR]
- [8] Friedman, Daniel and Sunder, Shyam, 1994, *Experimental Methods: a primer for economists*. Cambridge University Press, Cambridge, *Chapter 8 - Reporting your results*.

Class 4: Auctions

Required:

- [1] Holt book, *Chapters 19 & 21*. [PDF]
- [2] Milgrom, Paul, 1989. Auctions and Bidding: A Primer. *Journal of Economic Perspectives*, 3(3), 3-22. [JSTOR]
- [3] Carpenter, Jeffrey, Holmes, Jessica and Matthews, Peter, 2004, Charity Auctions: A Field Experimental Investigation, IZA working paper number 1330.

Suggested:

- [4] Kagel, John H., 1995, Auctions: A Survey of Experimental Research. In: John H. Kagel and Alvin E. Roth (Eds.), *The handbook of experimental economics*. Princeton University Press, Princeton, pp. 501-585.
- [5] Schram, Arthur, Onderstal, Sander, 2006, Bidding to Give: An experimental comparison of auctions for charity, CREED, University of Amsterdam, Working Paper.
- [6] Goeree, J. K., Maasland, E., Onderstal, S. and Turner, J., 2005. How (Not) to Raise Money, *Journal of Political Economy*, 113(4):897-918.

Class 5: Alternating Offers Bargaining and Fairness

Required:

- [1] Holt Book, *Chapter 23*. [PDF]
- [2] Elster, Jon, 1989, *The Cement of Society: a study of social order*. Cambridge University Press, Cambridge, *Chapter. 2, pp.68-96*
- [3] Gueth, Werner, Schmittberger, Rolf and Schwarze, Bernd, 1982. An Experimental Analysis of Ultimatum Bargaining. *Journal of Economic Behavior and Organization*, 3, 367-388.
- [4] Binmore, Ken, Shaked, A. and Sutton, J., 1985. Testing Noncooperative Bargaining Theory: a preliminary study. *American Economic Review*, 75(5), 1178-1180. [JSTOR]
- [5] Neelin, Janet, Sonnenschein, Hugo and Spiegel, Matthew, 1988. A Further Test of Noncooperative Bargaining Theory. *American Economic Review*, 78(4), 824-836. [JSTOR]
- [6] Carpenter, Jeffrey P., 2003. Is Fairness Used Instrumentally? Evidence from Sequential Bargaining. *Journal of Economic Psychology*, 24(4), 467-489.

Suggested:

- [7] Roth, Alvin, 1995, Bargaining Experiments. In: John Kagel and Alvin Roth (Eds.), *The Handbook of Experimental Economics*. Princeton University Press, Princeton, pp. 253-348.
- [8] Sutton, John, 1986. Non-Cooperative Bargaining Theory: An Introduction. *Review of Economic Studies*, 709-724. [JSTOR]

Class 6: Dictators and Altruists

Required:

- [1] Forsythe, R., Horowitz, J., Savin, N.E. and Sefton, M., 1994. Fairness in Simple Bargaining Experiments. *Games and Economic Behavior*, 6, 347-369.
- [2] Hoffman, Elizabeth, McCabe, Kevin and Smith, Vernon, 1996. Social Distance and Other-Regarding Behavior in Dictator Games. *American Economic Review*, 86(3, June), 653-660. [JSTOR]
- [3] Carpenter, Jeffrey, Burks, Stephen and Verhoogen, Eric, 2005, Comparing Students to Workers: The Effects of Social Framing on Behavior in Distribution Games. In: Jeffrey Carpenter, Glenn Harrison and John List (Eds.), *Field Experiments in Economics*. Research in Experimental Economics. JAI/Elsevier, Greenwich, Conn. and London, pp. 261-290.

- [4] Eckel, C. and Grossman, P., 1996. Altruism in Anonymous Dictator Games. *Games and Economic Behavior*, 16, 181-191.
- [5] Benz, Matthias and Meier, Stephan, 2006, Do People Behave in Experiments as in Real Life? Evidence from donations, Federal Reserve Bank of Boston, Working Paper 06-8.
- [6] Carpenter, Jeffrey, Liati, Allison and Vickery, Brian, 2005, They Come to Play: Supply effects in an economic experiment, Department of Economics, Middlebury College Working Paper.

Suggested:

- [7] Camerer, Colin and Thaler, Richard, 1995. Anomalies: ultimatums, dictators and manners. *Journal of Economic Perspectives*, 9(2, Spring), 209-219. [JSTOR]
- [8] Carpenter, Jeffrey, Verhoogen, Eric and Burks, Stephen, 2005. The Effect of Stakes in Distribution Experiments. *Economics Letters*, 86(3), 393-398.
- [9] Fong, Christina, 2005, Empathic Responsiveness: Evidence from a Randomized Experiment on Giving to Welfare Recipients, Carnegie Mellon, Department of Social and Decision Sciences Working Paper.

Class 7: Trust and Positive Reciprocity

Required:

- [1] Berg, Joyce, Dickaut, John and McCabe, Kevin, 1995. Trust, Reciprocity and Social History. *Games and Economic Behavior*, 10, 122-142.
- [2] Burks, Stephen V., Carpenter, Jeffrey P. and Verhoogen, Eric, 2003. Playing Both Roles in the Trust Game. *Journal of Economic Behavior and Organization*, 51(2), 195-216.
- [3] Cox, James C., 2004. How to Identify Trust and Reciprocity. *Games and Economic Behavior*, 46, 260-281.
- [4] Karlan, Dean, 2005. Using Experimental Economics to Measure Social Capital and Predict Financial Decisions. *American Economic Review*, 95(5):1688-99.
- [5] Barr, Abigail, 2003. Trust and Expected Trustworthiness: Experimental Evidence from Zimbabwe. *The Economic Journal*, 113(489), 614-630.
- [6] Fehr, Ernst, Kirchsteiger, Georg and Riedl, Arno, 1993. Does Fairness Prevent Market Clearing? An Experimental Investigation. *Quarterly Journal of Economics*, 437-459. [JSTOR]

Suggested:

- [7] Fehr, Ernst and Gaechter, Simon, 2001, Fairness in the Labour Market – A Survey of Experimental Results. In: Friedel Bolle and Marco Lehmann-Waffenschmidt (Eds.), *Surveys in Experimental Economics. Bargaining, Cooperation and Election Stock Markets*. Physica Verlag.

Class 8: Social Dilemmas (PD, VCM, CPR)

Required:

- [1] Holt Book, *Chapters 26 & 28*. [PDF]
- [2] Fehr, Ernst, Kosfeld, Michael and Weibull, Jorgen, 2003, The Game Prisoners (Really) Play, Institute for Empirical Research in Economics, University of Zurich, Working Paper.
- [3] Burks, Stephen, Carpenter, Jeffrey and Goette, Lorenz, 2005, Performance Pay and the Erosion of Worker Cooperation: Field experimental evidence, Department of Economics, Middlebury College Working Paper.
- [4] Dawes, Robyn and Thaler, Richard, 1988. Anomalies Cooperation. *Journal of Economic Perspectives*, 2(3), 187-197. [JSTOR]
- [5] Ostrom, Elinor, Gardner, Roy and Walker, James, 1994, *Rules, Games and Common-Pool Resources*. University of Michigan Press, Ann Arbor, *Chapter 5*.

Suggested:

- [6] Ledyard, John, 1995, Public Goods: a survey of experimental research. In: John Kagel and Alvin Roth (Eds.), *The Handbook of Experimental Economics*. Princeton University Press, Princeton, pp. 111-194.
- [7] Cardenas, J.C., Stranlund, J. and Willis, C., 2000. Local Environmental Control and Institutional Crowding-Out. *World Development*, 28(10), 1719-1733.
- [8] Frank, R., Gilovich, T. and Regan, D., 1993. Does Studying Economics Inhibit Cooperation? *Journal of Economic Perspectives*, 7(2), 159-171. [JSTOR]

Class 9: Punishment and Negative Reciprocity

Required:

- [1] Fehr, Ernst and Gaechter, Simon, 2000. Cooperation and Punishment in Public Goods Experiments. *American Economic Review*, 90(4), 980-994. [JSTOR]

- [2] Carpenter, Jeffrey, 2004. Punishing Free-Riders: how group size affects mutual monitoring and the provision of public goods. *Games and Economic Behavior*, forthcoming.
- [3] Carpenter, Jeffrey, 2005. The Demand for Punishment. *Journal of Economic Behavior & Organization*, forthcoming.
- [4] Masclet, David, Noussair, Charles, Tucker, Steven and Villeval, Marie-Claire, 2003. Monetary and Nonmonetary Punishment in the Voluntary Contributions Mechanism. *American Economic Review*, 93(1), 366-380.
- [5] Carpenter, Jeffrey and Matthews, Peter, 2005, Norm Enforcement: Anger, Indignation, or Reciprocity, Department of Economics, Middlebury College, Working Paper 0503.

Suggested:

- [6] Fehr, Ernst and Fischbacher, Urs, 2004. Third Party Punishment and Social Norms. *Evolution and Human Behavior*, 25, 63-87.
- [7] Nikiforakis, Nikos, 2004, Punishment and Counter-punishment in Public Goods Games: Can we still govern ourselves?, Department of Economics, Royal Holloway University of London Working Paper.

Class 10: Field Experiments

Required:

- [1] Harrison, Glenn and List, John, 2004. Field Experiments. *Journal of Economic Literature*, 42(December), 1009-1055.
- [2] Cardenas, Juan Camilo and Carpenter, Jeffrey, 2005, Behavioral Development Economics: Lessons from field labs in the developing world, *Journal of Development Studies*, forthcoming.
- [3] List, John, 2004. Young, Selfish and Male: Field Evidence of Social Preferences. *The Economic Journal*, 114(January), 121-149.
- [4] Carpenter, Jeffrey and Seki, Erika, 2005, Do Social Preferences Increase Productivity? Field experimental evidence from fishermen in Toyama Bay, IZA Discussion Paper 1697.

Suggested:

- [5] Cardenas, Juan Camilo and Carpenter, Jeffrey, 2005, Three Themes on Field Experiments and Economic Development. In: Jeffrey Carpenter, John List and Glenn Harrison (Eds.), *Field Experiments in Economics*. JAI Press, Greenwich, pp. 71-124.

Class 11: Neuroeconomics

Required:

- [1] Camerer, Colin, Loewenstein, George and Prelec, Drazen, 2005. Neuroeconomics: How neuroscience can inform economics. *Journal of Economic Literature*, 43(1), 9-64.
- [2] Rustichini, Aldo, 2005. Neuroeconomics: Present and future. *Games and Economic Behavior*, 52, 201-212.
- [3] Fehr, Ernst, Fischbacher, Urs and Kosfeld, Michael, forthcoming. Neuroeconomic Foundations of Trust and Social Preferences. *American Economic Review*.
- [4] de Quervain, Dominique, Fischbacher, Urs, Treyer, Valerie, Schellhammer, Melanie, Schnyder, Ulrich et al., 2004. The Neural Basis of Altruistic Punishment. *Science*, 305(August 27), 1254-1258.
- [5] Kosfeld, Michael, Heinrichs, Markus, Zak, Paul, Fischbacher, Urs and Fehr, Ernst, 2005. Oxytocin increases trust in humans. *Nature*, 435(2), 673-676.
- [6] Sanfey, A.G., Rilling, J.K., Aronson, J.A., Nystrom, L.E. and Cohen, J.D., 2003. The Neural Basis of Economic Decision-Making in the Ultimatum Game. *Science*, 300(13 June), 1755-1758.

Suggested:

- [7] Rustichini, Aldo, Dickhaut, John, Ghirardato, Paolo, Smith, Kip and Pardo, Jose, 2005. A Brain Imaging Study of the Choice Procedure. *Games and Economic Behavior*, 52, 257-282.
- [8] Bhatt, Meghana and Camerer, Colin, 2005. Self-Referential Thinking and Equilibrium as States of Mind in Games: fMRI evidence. *Games and Economic Behavior*, 52, 424-459.