

*"All economics rests on some sort of implicit psychology. The only question is whether the implicit psychology is good or bad. We think it is simply unwise to do economics without paying attention to good psychology."* — Camerer & Loewenstein, Introduction, *Advances in Behavioral Economics*, 2002

### Course Description

This seminar is designed to provide an introduction to the major theoretical constructs and methodologies of Behavioral Economics. Behavioral economics concerns itself with the implications on economic outcomes, models of behavior and decision-making, based on insights from psychology.

The interface of psychology and economics has a long history—indeed, early economists such as Smith, Marshall, Marx and Menger did not assume agents as rational (foresightful utility-maximizers), or even self-interested. Modern neoclassical theory postulates that individuals' decisions are made by purely self-interested, and perfectly rational agents. However, empirical findings from experimental economics have revealed substantial discrepancies between theoretically-derived "optimal" actions, and the actual behavior of real economic actors; in fact, we find individuals display systematic departures from the standard paradigm.

Behavioral economics recognizes that people can be limited in their calculating ability, self-interest, willpower, and even knowledge of their own preferences. However, while reconsidering some of the assumptions of neoclassical economics, the discipline has typically sought to modify—not supplant—standard neoclassical theory. It seeks to make standard models more realistic, by utilizing insights from psychology. The fundamental emphasis on formal mathematical modeling that typifies modern economics is maintained.

Behavioral economics attempts to model explanations for such issues as:

- How cognitive limitations preclude actors from correctly applying statistics to process information and act optimally; actors tend to use heuristics and display systematic biases.
- Agents face limitations in their ability to process all relevant information, and they are sensitive to the way information is framed—overvaluing information that is readily available. Likewise, decisions agents make appear to be highly context-dependent.
- Agents will weigh losses more heavily than gains; and their attitude towards risk varies accordingly. Can this explain observed investor behavior in the stock market?
- Why do people in "ultimatum games" reject substantial offers, and how can their apparent expressions of social preference be included in economic theorizing?
- Economic actors appear not merely motivated by their material self-interest: many people care about equity and fairness, and care about other people's utility.
- People typically overestimate their ability to perform a task.
- How does equilibration occur through processes of individual learning, evolutionary selection, or imitation?

## Course Prerequisites

This is a research-orientated seminar for upper-level undergraduate and graduate students. A basic understanding of Microeconomic Theory at the level of Varian's *Intermediate Microeconomics: A Modern Approach* is assumed (copies of the text are in the library). Familiarity with Game Theory is helpful at the level of an introductory text, such as Harrington's *Games, Strategies, and Decision-Making*, or Mendelson's *Introducing Game Theory and Its Applications* (both of which are available in the library).

## Course Requirements

For each session, one paper is required reading for undergraduate students ( [1] ); and two papers are required reading for graduate students ( [1] + [2] ). Students should prepare a brief written review (about 200 words) on each paper, identifying issues, comments and questions to be discussed in class.

Readings will be posted online in the course "skydrive" for students to access. I also will include additional suggested articles and other resources, for students interested in further explorations of a topic. Sometimes, students will be asked to present papers for the class. In those cases, use of the suggested readings (and/or additional resources the student finds on their own) should be utilized.

## Course Topics and Schedule

There will be 13 sessions of the course. The topics and schedule are as follows:

WEEK	DATE	OUTLINE	SESSION TOPIC
1	04.10	--	Class introduction (no readings)
2	04.17	I.	Introduction to Behavioral Economics
3	04.24	II.A	Bounded Rationality
4	05.08	II.B	Preferences: Context Dependency
5	05.15	II.C	Preferences: Stability and Consistency
6	05.22	II.D	Social Preferences: Altruism and Fairness I
7	05.29	II.E	Social Preferences: Altruism and Fairness II
8	06.05	III.A	Psychological Influences on Decision-Making
9	06.12	III.B	Search Strategies
10	06.19	III.C	Overconfidence
11	06.26	III.D	Prospect Theory & Probability Judgment
12	07.03	III.E	Neuroeconomics
13	07.10	--	<i>tbd</i>

## Course Topics and Detailed Readings

### I. INTRODUCTION

- [1] Pesendorfer, W. ( 2006 ). "Behavioral Economics Comes of Age: A Review Essay on *Advances in Behavioral Economics*". *Journal of Economic Literature*, Vol. XLIV, pp. 712–721
- [2] Fudenberg, D. ( 2006 ). "Advancing Beyond *Advances in Behavioral Economics*". *Journal of Economic Literature*, Vol. XLIV, pp. 694–711
- Kahneman, D. ( 2003 ). "Maps of Bounded Rationality--Psychology for Behavioral Economics". *American Economic Review*, Vol. 93, No. 5, pp. 1449-1475

### II. RATIONALITY & PREFERENCES

#### A. Bounded Rationality

- [1] Aumann, R. ( 1997 ) "Rationality & Bounded Rationality" *Games & Economic Behavior*, Vol 21, p2-14
- [2] de Palma, A., et al. ( 1994 ). "Rational Choice Under an Imperfect Ability To Choose", *American Economic Review*, Vol. 84, No. 3, pp. 419-440.
- Conlisk, J. ( 1996 ). "Why bounded rationality?", *Journal of Economic Literature*, Vol 34, pp.669-700.

#### B. Preferences: Context Dependency

- [1] Tversky, A. & Simonson, I. ( 1993 ). "Context-Dependent Preferences". *Management Science*, Vol. 39, No. 10 (Oct., 1993), pp. 1179-1189
- [2] Bateman, I. et al. ( 1997 ). "A Test of the Theory of Reference-Dependent Preferences". *Quarterly Journal of Economics*, Vol. 112, No. 2, pp. 479-505
- Koszegi, B. and Rabin, M. ( 2006 ). "A Model of Reference-Dependent Preferences". *Quarterly Journal of Economics*, Vol. 121, pp. 1133-66

#### C. Preferences: Stability and Consistency

- [1] Rieskamp, J., Busemeyer, J. & Mellers, B. ( 2006 ). "Extending the Bounds of Rationality: Evidence and Theories of Preferential Choice". *Journal of Economic Literature*, Vol. XLIV, pp. 631–661
- [2] Ariely, Loewenstein & Prelec. ( 2003 ). "'Coherent Arbitrariness': Stable Demand Curves Without Stable Preferences," *Quarterly Journal of Economics*, vol. 118(1), pp. 73-105
- Holcombe, Randall. ( 2009 ). "The Behavioral Foundations of Austrian Economics", *Review of Austrian Economics*, Vol. 22 pp. 301–313

#### D. Social Preferences: Altruism and Fairness I

- [1] López-Pérez,R., & Vorsatz, M. ( 2010 ). " On approval and disapproval: Theory and experiments". *Journal of Economic Psychology*, Vol. 31, pp.527–541
- [2] Rabin, M. ( 1993 ). "Incorporating Fairness into Game Theory and Economics". *American Economic Review*, Vol. 83, pp. 1281-302
- Fehr, E. & Schmidt, K. (1999) A Theory of Fairness, Competition, and Cooperation, *QJE*, 114, 817-68.
- Benabou, R. & Tirole, J. (2006). "Incentives and Pro-social Behavior". *AER*, 96, 1652-78.

## **E. Social Preferences: Altruism and Fairness II**

- [1] Ariely, Gneezy, Loewenstein, & Mazar, (2009), "Large stakes and big mistakes," *Review of Economic Studies*, pp. 451-469
- [2] Gill, D. & Stone, R. ( 2010 ). "Fairness and desert in tournaments". *Games and Economic Behavior* Vol. 69, pp. 346–364

## **III. DECISION-MAKING**

### **A. Psychological Influences**

- [1] Kahneman, D. ( 2011 ). Chapter 1 in *Thinking, Fast and Slow*, (Farrar, Straus & Giroux: New York).
- [2] Gabaix, Xavier & Laibson, David. "Bounded Rationality and Directed Cognition", Working Paper. [http://www.economics.harvard.edu/files/faculty/37\\_boundedRationality.pdf](http://www.economics.harvard.edu/files/faculty/37_boundedRationality.pdf)
- Tversky, A. and Kahneman, D. (1981). "The framing of decisions and the psychology of choice". *Science*, Vol. 211, pp.453-458.

### **B. Search Strategies**

- [1] Caplin, A., Dean, M., & Martin, D. ( 2011 ). " Search and Satisficing ". *American Economic Review*, Vol. 101, pp. 2899–2922
- [2] MacLeod, W. ( 2002 ). "Complexity, Bounded Rationality, and Heuristic Search". *Contributions in Economic Analysis Policy*, Vol 1, No. 1.

### **C. Overconfidence**

- [1] Compte, O. & Postlewaite, A. ( 2004 ). "Confidence-Enhanced Performance". *American Economic Review*, Vol. 94 No. 5
- [2] Grinblatt, M. and Keloharju, M. ( 2001 ). " What Makes Investors Trade?". *Journal of Finance*, Vol. 56, No. 2
- Benabou, R and Jean Tirole. 2002. "Self-Confidence and Social Interactions". NBER WP 7585.

### **D. Prospect Theory & Probability Judgment**

- [1] Gilovich, T., et al. ( 1988 ). "The hot hand in basketball: On the misperception of random sequences". *Cognitive Psychology*. Vol. 17, pp. 295-314.
- [2] Tversky, A. and Kahneman, D. ( 1992 ). "Advances in Prospect theory: Cumulative representation of uncertainty". *Journal of Risk and Uncertainty*, v. 5 (4), 1992.
- Al-Najjar, Nabil I. ( 2003 ). "Probabilistic Representation of Complexity". *Journal of Economic Theory*, Volume 111, Issue 1, pp. 49–87

### **E. Neuroeconomics**

- [1] Camerer, Loewenstein & Prelec. ( 2005 ). "Neuroeconomics: How neuroscience can inform economics". *Journal of Economic Literature*, Vol. XLIII, pp. 9–64.
- [2] Rustichini, A. et al. ( 2005 ). " A brain imaging study of the choice procedure ". *Games and Economic Behavior*, Vol. 52, No. 2, pp. 257–282
- Glimcher, P., Dorris, M., & Bayer, H. ( 2005 ). "Physiological utility theory and the neuroeconomics of choice". *Games and Economic Behavior*. Vol. 52, No. 2, pp. 213-256.