

Behavioral Economics

FALL 2016

Instructor: Professor Alex Imas

Time and Location: BH237B, Tuesdays and Thursdays, 10:30-11:50 a.m.

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Outline and Objectives

OVERVIEW AND GOALS

This course will be taught seminar-style, with lectures on the behavioral economics literature studying decision-making and strategic interactions and interactive presentations of recent and original research. One of the main goals of the course is to provide students with hands-on experience on how to design and carry out their own experiments. To this end, active experimentation using both traditional and cutting-edge research methods will constitute a significant portion of the class.

The lectures will explore how psychology and economics have been integrated to form behavioral economics, giving researchers a unique set of tools to study how people respond to risk, make choices over time, and interact with others. We will then do an overview of how behavioral economics has been used to test game theory of strategic interactions and how people learn about their environment and the actions of others. The last sections of the class will briefly review work on behavioral finance and emotions.

Students will have an opportunity to critically discuss existing behavioral economics research as well as to present their own research ideas. Everyone will have an opportunity to both participate and run their own experiments.

PREREQUISITES

While there are no formal requirements for the class, students should be comfortable with basic economic principles such as supply and demand, utility functions, and choice under risk.

We will not be using that much math in the class, but familiarity with certain theoretical constructs is required in order to understand why experiments are used to study them.

FORMAT

The course will be taught in a seminar format. Students are expected to interact, comment and challenge the presenter. The class is organized into modules, with each module composed of two to four classes focused on one of the topics listed below. The first classes in a module will introduce the seminal papers in the literature, one class will be devoted to recent developments on the topic, and the last class of each module will feature student presentations on the topic. Students will both participate in experiments and conduct their own in line with the theme of each module.

REQUIREMENTS AND GRADING

Since a major goal of the class is the development of research skills, there will be no in-class exams. Presentations, participation and the take-home assignments will be used to determine grading. Students will have an opportunity to present their own ideas and existing working papers of others throughout the semester. In addition, a final paper will be due at the end of the semester.

Participation

Given the seminar format of this course, students are expected to play an active role in class discussions. Students should plan on preparing 2-3 questions on each of the required readings to be discussed. In addition, a student will be assigned to present a working or recently published paper from the reading list on each topic. The presentations should be around 30 minutes, and designed to facilitate discussion. The presenters are encouraged to incorporate their own thoughts and opinions about the paper.

Idea Briefs

For each topic covered, students will write a short idea brief (1-2 pages) focusing on a research idea related to the topic. The idea briefs should focus on the big picture questions that the research aims to answer, with a focus on the motivation and the experimental design used to explore it. For each module, ten students will be chosen to give short (5-10 minute) presentations of their idea brief on the day that they are due.

Original Experiments

Throughout the class we will be using the Mechanical Turk crowdsourcing platform to conduct experiments in real-time. Students will be expected to submit one original experiment for each module that will be voted on (double-blind) by the class. The winning experiment will be carried out and the results discussed.

Final Project

The final project is a paper (10-20 pages) on an original research topic of the student's choice. The paper should be structured as a standard scientific article, with an introduction, literature review, procedures, results, discussion and conclusion. Actual data is not required. If no data was collected, the results section should contain a detailed plan on how such data would be analyzed. Students can work together. Each student or group will make a brief presentation (20 minutes) of their final project.

Grading

The grade will be based 40% on participation, 20% on idea briefs, 20% on original experiments and 20% on the final project.

Depending on the distribution on points the class can be curved up (never down). Hence, if you have over 90% of the possible points you are going to have an A regardless of how everybody else does. Letter grades are in principle assigned according to the percentage of total points according to the following scale:

100-90	A
89- 80	B
79-70	C
69-60	D
< 60	R

TEXT

Unfortunately, there is no standard behavioral economics textbook. So, most of the material will come from the lecture. I will post a version of the lecture slides on blackboard after each class. The slides will provide a detailed outline of lecture, however they should not be considered exhaustive.

Required and optional reading will be posted to blackboard and the course website. The following text is encouraged:

Camerer, C. F., Loewenstein, G., and Rabin, M. *Advances in Behavioral Economics*, New York, Princeton University Press, 2004.

Administrative Issues and Policies

EMAIL

The best way to reach me is via email. I will do my best to answer emails as soon as I receive them, but it is not always possible. In addition, I will send out class information to the email you have on file with the university (through blackboard), so make sure that email is correct and course emails do not go to the spam folder.

ASSIGNMENT POLICY

You must turn in all the assignments by the due date *during the first 10 minutes of class* to receive full credit. After that, you may turn an assignment until the end of the day the assignment is due, with a penalty of 25% of the total possible points. Under no circumstances you may turn any assignment later than the day it is due.

COMPUTERS, PHONES, AND FOOD

To avoid unnecessary distractions I ask you to please turn off (silent) cell phones. You are free to use a laptop computer during lecture strictly for taking notes and other class-related activities. If it becomes apparent that the computer is being used for non-class related purposes, this privilege will be revised. Eating, drinking coffee, water, or anything else (non-alcoholic) is perfectly fine.

Academic Integrity

Academic integrity is a serious issue. All things considered, a marginally better grade is not every worth engaging in academic dishonesty (copying, cheating, plagiarizing). Many of the assignments are collaborative by nature, and I encourage you to work with your classmates on them. However,

each student should turn in their own assignment and clearly indicate who they had worked with. Copying, cheating, or plagiarizing are going to be penalized.

Take Care of Yourself

Do your best to maintain a healthy lifestyle this semester by eating well, exercising, avoiding drugs and alcohol, getting enough sleep and taking some time to relax. This will help you achieve your goals and cope with stress.

All of us benefit from support during times of struggle. You are not alone. There are many helpful resources available on campus and an important part of the college experience is learning how to ask for help. Asking for support sooner rather than later is often helpful.

If you or anyone you know experiences any academic stress, difficult life events, or feelings like anxiety or depression, we strongly encourage you to seek support. Counseling and Psychological Services (CaPS) is here to help: call 412-268-2922 and visit their website at <http://www.cmu.edu/counseling/>. Consider reaching out to a friend, faculty or family member you trust for help getting connected to the support that can help.

If you have questions about this or your coursework, please let me know.

Approximate Course Outline

This is an ambitious list of topics for the semester. We might not get through all of it if some topics take more time than expected, and that is OK.

Required readings are in **bold**. Readings not in bold are meant to supplement the lectures.

August 30 - Introduction

Assignments Due: None

Behavioral and Experimental Economics

- Smith, V. L. (1994). Economics in the Laboratory. *Journal of Economic Perspectives*, 8, 113-131.
- Loewenstein, G. (1999). Experimental Economics from the Vantage-Point of Behavioral Economics. *Economic Journal*, 109, 25-34.
- Smith, V. (1991). Rational Choice: The Contrast between Economics and Psychology. *Journal of Political Economy*, 99, 877-897.
- Kahneman, D. and Smith, V. (2002). Foundations of Behavioral and Experimental Economics. Royal Swedish Academy of Sciences.
- Binmore, Ken. (2005). Economic Manor Straw Man? *The Behavioral and Brain Science*, 28, 815-818.

Methods of Behavioral Economics

- Hertwig, R. and Ortmann, A. (2001). Experimental Practices in Economics: A Methodological Challenge for Psychologists? *The Behavioral and Brain Sciences*, 24, 383-403.
- Ariely, D. and Norton, M. (2007). Psychology and Experimental Economics: A Gap in Abstraction. *Current Directions in Psychological Science*, 16, 336-339.
- Camerer, C. and Hogarth, R. (1999). The Effects of Financial Incentives in Experiments: A Review and Capital-Labor-Production Framework. *Journal of Risk and Uncertainty*, 19, 7-42.
- Smith, V. and Walker, J. (1989). Monetary Rewards and Decision Cost in Experimental Economics. *Economic Inquiry*, 21, 245-261.
- Bonetti, S. (1998). Experimental Economics and Deception. *Journal of Economic Psychology*, 19, 377-395.
- Jamison, J., Karlan, D. and Schechter, L. (2008). To Deceive or Not to Deceive: The Effect of Deception on Behavior in Future Laboratory Experiments. *Journal of Economic Behavior and Organization*, 68, 477-488.

Psychology and Economics

- Thaler, R. (1980). Towards a Positive Theory of Consumer Choice. *Journal of Economic Behavior and Organization*, 1, 39-60.
- Rabin, M. (1998). Psychology and Economics. *Journal of Economic Literature*, 1, 11-46.

September 1 - Risk Preferences and Mental Accounting: Foundations 1

Assignments Due: Required Readings

Expected Utility and Prospect Theory

- **Kahneman, D. and Tversky, A. (1979). Prospect Theory: An Analysis of Decision Under Risk. *Econometrica*, 47, 263-292.**
- Koszegi, B. and Rabin, M. (2006). A Model of Reference-Dependent Preferences. *Quarterly Journal of Economics*, 121, 1133-1165.
- Tversky, A. and Kahneman, D. (1992). Advances in Prospect Theory: Cumulative Representation of Uncertainty. *Journal of Risk and Uncertainty*, 5, 297-323.
- Camerer, C., Babcock, L., Loewenstein, G. and Thaler, R. (1997). Labor Supply of New York City Cabdrivers: One Day at a Time. *Quarterly Journal of Economics*, 112, 407-441.

September 6 - Risk Preferences and Mental Accounting: Foundations 2

Assignments Due: Required Readings

Endowment Effect

- **Kahneman, D., Knetsch, J. and Thaler, R. (1991). Anomalies: The Endowment Effect, Loss Aversion, and Status Quo Bias. Journal of Economic Perspectives, 5, 193-2006.**
- List, J. (2003). Does Market Experience Eliminate Market Anomalies? Quarterly Journal of Economics, 118, 41-71.
- Engelmann, D. and Guillaume, H. (2010). Reconsidering the Effect of Market Experience on the Endowment Effect. Econometrica, 10, 2005-2019.
- Thaler, R. and Benartzi, B. (2004). Save More Tomorrow : Using Behavioral Economics to Increase Employee Savings. Journal of Political Economy, 112, S164-S187.

Mental Accounting

- Thaler, R. (1985). Mental Accounting and Consumer Choice. Marketing Science, 4, 199-214.
- Thaler, R. (1999). Mental Accounting Matters. Journal of Behavioral Decision Making, 12, 183-206.
- Prelec, D. and Loewenstein, G. (1998). The Red and the Black: Mental Accounting of Savings and Debt. Marketing Science, 17, 4-28.

History-Dependent Risk Preferences

- Thaler, R. and Johnson, E. (1990). Gambling with the House Money and Trying to Break Even: The Effects of Prior Outcomes on Risky Choice. Management Science, 36, 643-660.
- Weber, M. and Zuchel, H. (2005). How Do Prior Outcomes Affect Risky Choice? Further Evidence on the House-Money Effect and Escalation of Commitment. Decision Analysis, 2, 30-43.
- Andrade, E. and Iyer, G. (2009). Planned Versus Actual Betting in Sequential Betting. Journal of Marketing Research, 46, 372-383.

Ambiguity Aversion

- Fox, C. and Tversky, A. (1995). Ambiguity Aversion and Comparative Ignorance. Quarterly Journal of Economics, 110, 585-603.
- Ellsberg, D. (1961). Risk, Ambiguity, and the Savage Axioms. Quarterly Journal of Economics, 76, 143-149.
- Camerer, C. and Weber, M. (1992). Recent Developments in Modeling Preferences: Uncertainty and Ambiguity. Journal of Risk and Uncertainty, 5, 323-370.
- Halevy, Y. (2007). Ellsberg Revisited: An Experimental Study. Econometrica, 75, 503-536.

September 8 - Risk Preferences and Mental Accounting: Advances

Assignments Due: Required Readings

- Barberis, N. (2013). Thirty Years of Prospect Theory: A Review and Assessment. *Journal of Economic Perspectives*, 27, 173-196.
- Gneezy, U., List, J. and Wu, G. (2006). The Uncertainty Effect: When a Risky Prospect is Valued Less than its Worst Possible Outcome. *Quarterly Journal of Economics*, 121, 1283-1309.
- Abeler, J., Falk, A., Gotte, L. and Huffman, D. (2011). Reference Points and Effort Provision. *American Economic Review*, 101, 470-492.
- Charness, G., Gneezy, U. and Imas, A. (2013). Experimental Methods: Eliciting Risk Preferences. *Journal of Economic Behavior and Organization*, forthcoming.
- Rabin, M. and Weizsacker, G. (2009). Narrow Bracketing and Dominated Choices. *American Economic Review*, 99, 1508-1543.
- Imas, A. (2016). The Realization Effect: Risk-Taking after Realized versus Paper Losses. *American Economic Review*, forthcoming.

Presentation

- **Abeler, A. and Marklein, F. Fungibility, Labels and Consumption. mimeo.**

Presentation:

September 13 - Risk Preferences and Mental Accounting: Advances

Assignments Due: Idea briefs

September 15 - Time Preferences: Foundations 1

Assignments Due: Required Readings

- **Loewenstein, G. and Thaler, R. (1989). Anomalies: Intertemporal Choice. *Journal of Economic Perspectives*, 3, 181-193.**
- Frederick, S., Loewenstein, G. and O'Donoghue, T. (2002). Time Discounting and Time Preferences: A Critical Review. *Journal of Economic Literature*, 40, 351-401.
- O'Donoghue, T. and Rabin, M. (1999). Doing it Now or Doing it Later. *American Economic Review*, 89, 103-124.
- Kirby, K., Petry, N. and Bickel, W. (1999). Heroin Addicts Have Higher Discount Rates for Delayed Rewards than Non-Drug-Using Controls. *Journal of Experimental Psychology: General*, 128, 78-87.

September 20 - Time Preferences: Foundations 2

Assignments Due: Required Readings

- **Ariely, D. and Wertenbroch, K. (2002) Procrastination, Deadlines, and Performance: Self-Control by Precommitment, Psychological Science, Vol. 13, 219-224.**

September 22 - Time Preferences: Advances

Assignments Due: Required Readings

- Prelec, D. and Loewenstein, G. (1997). Beyond Time Discounting. *Marketing Letters*, 8, 97-108
- Anderson, S., Harrison, G., Lau, M. and Rutstrom, E. (2008). Eliciting Risk and Time Preferences. *Econometrica*, 76, 583-618.
- Benhabib, J., Bisin, A. and Schotter, A. (2010). Present-Bias, Quasi-Hyperbolic Discounting, and Fixed Costs. *Games and Economic Behavior*, 69, 205-223.
- Read, D., Frederick, S., Orsel, B. and Rahman, J. (2005). Four Score and Seven Years from Now: The Date/Delay Effect in Temporal Discounting. *Management Science*, 51, 1326-1335.
- Eil, D. (2012). Hypobolic Discounting and Willingness-to-Wait. Mimeo.

Presentation

- **Imas, A., Kuhn, M. and Mironova, V. Waiting to Choose, mimeo.**

Presentation:

September 27 - Time Preferences: Advances

Assignments Due: Idea briefs

September 29 - Social Preferences: Foundations

Assignments Due: Required Readings

Social Preferences (Global)

- **Loewenstein, G., Thompson, L. and Bazerman, M. (1989). Social Utility and Decision Making in Interpersonal Contexts. Journal of Personality and Social Psychology, 57, 426-441.**
- Charness, G. and Rabin, M. (2002). Understanding Social Preferences with Simple Tests. *Quarterly Journal of Economics*, 117, 817-869.
- Fehr, E. and Schmidt, K. (1999). A Theory of Fairness, Competition and Cooperation. *Quarterly Journal of Economics*, 114, 817-868.

- Andreoni, J. and Miller, J. (2002). Giving According to GARP: An Experimental Test of the consistency of Preferences for Altruism.
- Becker, G. (1976). A Theory of Social Interactions. *Journal of Political Economy*, 82, 1063-1093.

Reciprocity and Fairness

- **Camerer, C. and Thaler, R. (1995). Anomalies: Ultimatums, Dictators and Manners. *Journal of Economic Perspectives*, 9, 209-219.**
- Fehr, E. and Gächter, S. Fairness and Retaliation: The Economics of Reciprocity. *Journal of Economic Perspectives*, 14, 159-181.
- Dawes, R. M. and Thaler, R. (1988). Anomalies: Cooperation. *Journal of Economic Perspectives*, 2, 187-197.
- Rabin, M. (1993). Incorporating Fairness into Game Theory and Economics. *American Economic Review*, 83, 1281-1302.

Warm Glow

- Andreoni, J. (1990). Impure Altruism and Donations to Public Goods: A Theory of Warm Glow Giving. *Economic Journal*, 100, 464-477.
- Andreoni, J. (1993). An Experimental Test of the Public-Goods Crowding-Out Hypothesis. *American Economic Review*, 83, 1317-1327.

October 4 - Social Preferences: Advances

Assignments Due: Required Readings

- Dana, J., Weber, R. A. and Kuang, J. X. (2007). Exploiting Moral Wiggle Room: Experiments Demonstrating an Illusory Preference for Fairness. *Economic Theory*, 33, 67-80.
- Dellavigna, S., List, J. and Malmendier, U. (2012). Testing for Altruism and Social Pressure in Charitable Giving. *Quarterly Journal of Economics*, 127, 1-56.
- Dana, J., Cain, D. and Dawes, R. (2006). What You Dont Know Wont Hurt Me: Costly (but Quiet) Exit in Dictator Games. *Organizational Behavior and Human Decision Processes*, 100, 193-201.
- Gneezy, U. and List, J. (2006). Putting Behavioral Economics to Work: Testing for Gift Exchange in Labor Markets using Field Experiments. *Econometrica*, 74, 1364-1384.
- Andreoni, J. and Bernheim, B. D. (2009). Social Image and the 50-50 Norm: A Theoretical and Experimental Analysis of Audience Effects. *Econometrica*, 77, 1607-1636.
- Krupka, E. and Weber, R. A. (2013). Identifying Social Norms Using Coordination Games: Why Does Dictator Game Sharing Vary? *Journal of the European Economic Association*, forthcoming.

Presentation

- **Fisman, R., Jakiela, P., and Kariv, S. How Did Distributional Preferences Change During the Great Recession? Mimeo.**

Presentation:

October 6 - Social Preferences: Advances

Assignments Due: Idea briefs

October 11 - No Class

Yom Kippur

October 13 - Strategic Interactions and Markets: Foundations 1

Assignments Due: Required Readings

Markets

- **Smith, V. L. (1962). An Experimental Study of Competitive Market Behavior. Journal of Political Economy, 70, 111-137.**
- Smith, V. L. (1989). Theory, Experiments and Economics. Journal of Economic Perspectives, 3, 151-169.
- Forsythe, R., Palfrey, T. and Plott, C. (1982). Asset Valuation in an Experimental Market. Econometrica, 50, 537-567.
- Kahneman, D., Knetsch, J. and Thaler, R. (1986). Fairness as a Constraint on Profit Seeking: Entitlements in the Market. American Economic Review, 76, 728-741.

October 18 - Guest Lecture

October 20 - Guest Lecture

October 25 - Strategic Interactions and Markets: Foundations 2

Assignments Due: Required Readings

Game Theory

- **Roth, A. and Malouf, M. (1979). Game-Theoretic Models and the Role of Information in Bargaining. Psychological Review, 86, 574-594.**
- McKelvey, R. and Palfrey, T. (1992). An Experimental Study of the Centipede Game. Econometrica, 60, 803-836.

- Roth, A. and Murnighan, J. K. (1982). The Role of Information in Bargaining: An Experimental Study. *Econometrica*, 50, 1123-1142.
- Ochs, J. and Roth, A. (1989). An Experimental Study of Sequential Bargaining. *American Economic Review*, 79, 355-384.

Behavioral Game Theory

- Nagel, R. (1995). Unraveling in Guessing Games: An Experimental Study. *American Economic Review*, 85, 1313-1326.
- Ho, T., Camerer, C. and Weigelt, K. (1998). Iterated Dominance and Iterated Best Response in Experimental p-Beauty Contests. *American Economic Review*, 88, 947-969.
- Costa-Gomes, M., Crawford, V. and Broseta, B. (2001). Cognition and Behavior in Normal-Form Games: An Experimental Study. *Econometrica*, 69, 1193-1235.
- Camerer, C., Ho, T. and Chong, J. (2004). A Cognitive Hierarchy Model of Games. *Quarterly Journal of Economics*, 119, 861-898.

October 27 - Strategic Interactions and Markets: Advances

Assignments Due: Required Readings

- Dufwenberg, M., Lindqvist, T. and Moore, E. (2005). Bubbles and Experience: An Experiment. *American Economic Review*, 95, 1731-1737.
- Dal Bo, P. and Frechette, G. (2011). The Evolution of Cooperation in Infinitely Repeated Games: Experimental Evidence. *American Economic Review*, 101, 411-429.
- Friedman, D. and Oprea, R. (2012). A Continuous Dilemma. *American Economic Review*, 102, 337-363.
- Oprea, R. (2012). Survival Versus Profit Maximization in a Dynamic Stochastic Experiment. Mimeo.
- Bernard, M., Fanning, J. and Yuksel, S. (2013). The Benefits of Being Able to Fire (and Replace) People. Mimeo
- Palfrey, T. and Wang, S. (2013). Speculative Overpricing in Asset Markets with Information Flows. *Econometrica*, forthcoming.

Presentation

- **Falk, A. and Szech, N. (2013). Morals and Markets. *Science*, 340, 707-711.**

Presentation:

November 1 - Strategic Interactions and Markets: Advances

Assignments Due: Idea briefs

November 3 - Learning and Persuasion: Foundations

Assignments Due: Required Readings

Communication

- **Schelling, T. (1957). Bargaining, Communication, and Limited War. Conflict Resolution, 1, 19-36.**
- Crawford, V. (1998). A Survey of Experiments on Communication via Cheap Talk. *Journal of Economic Theory*, 78, 286-298.

Herding and Information Cascades

- Anderson, L. and Holt, C. (1997). Information Cascades in the Laboratory. *American Economic Review*, 87, 847-862.
- Allsopp, L. and Hey, J. (2000). Two Experiments to Test a Model of Herd Behavior. *Experimental Economics*, 3, 121-136.
- Plott, C., Wit, J. and Yang, W. (2003). Parimutuel Betting Markets as Information Aggregation Devices: Experimental Results. *Economic Theory*, 22, 311-351.

November 8 - Learning and Persuasion: Advances

Assignments Due: Required Readings

- Gneezy, U. (2005). Deception: The Role of Consequences. *American Economic Review*, 95, 384-394.
- Charness, G. and Dufwenberg, M. (2006). Promises and Partnerships. *Econometrica*, 74, 1579-1601.
- Erat, S. and Gneezy, U. (2012). White Lies. *Management Science*, 58, 723-733.
- Houser, D. and Xiao, E. (2010). Classification of Natural Language Messages Using a Coordination Game. *Experimental Economics*, 14, 1-14.
- Vespa, E. and Wilson, A. (2012). Communication with Multiple Senders and Multiple Dimensions: An Experiment. Mimeo
- Ellingsen, T. and Ostling, R. (2010). When Does Communication Improve Coordination? *American Economic Review*, 100, 1695-1724.
- Celen, B. and Kariv, S. (2004). Distinguishing Informational Cascades from Herd Behavior in the Laboratory. *American Economic Review*, 94, 484-498.

Presentation

- **Charness, G., Rustichini, A., and van de Ven, J. Self-confidence and Strategic Behavior. Mimeo.**

Presentation:

November 10 - Learning and Persuasion: Advances

Assignments Due: Idea briefs

November 15 - Incentives and Labor Markets: Foundations

Assignments Due: Required Readings

Labor Markets

- **Fehr, E., Kirchler, A., Weichbold, A. and Gächter, S. (1998) When Social Norms Overpower Competition: Gift Exchange in Experimental Labor Markets. *Journal of Labor Economics*, 16, 324-351.**

Crowding out and psyching out

- Gneezy, U., Meier, S. and Rey-Biel, P. (2011). When and Why Incentives (Dont) Work to Modify Behavior. *Journal of Economic Perspectives*, 25, 191-210.
- Gneezy, U. and Rustichini, A. (2000). Pay Enough or Dont Pay at All. *Quarterly Journal of Economics*, 115, 791-810.
- Ariely, D., Gneezy, U., Loewenstein, G. and Mazar, N. (2008). Large Stakes and Big Mistakes. *Review of Economic Studies*, 76, 451-469.

November 17 - Incentives and Labor Markets: Advances

Assignments Due: Required Readings

- Gneezy, A., Gneezy, U., Reinder, G. and Nelson, L. (2012). Pay-What-You-Want, Identity, and Self-Signaling in Markets. *PNAS*, 109, 7236-7240.
- Kullgren, J., Troxel, A., Loewenstein, G., Asch, D., Norton, L., Wesby, L., Tao, Y., Zhu, J., Volpp, K. (2013). Individual Versus Group Based Financial Incentives for Weight Loss: A Randomized, Controlled Trial. *Annals of Internal Medicine*, 158, 505-514.
- Imas, A. (2013). Working for the Warm Glow: On the Benefits and Limits of Prosocial Incentives. *Journal of Public Economics*, forthcoming.
- Charness, G. and Gneezy, U. (2009). Incentives to Exercise. *Econometrica*, 77, 909-931.
- Sadoff, S., Fryer, R., Levitt, S. and List, J. (2012). Enhancing the Efficacy of Teacher Incentives Through Loss Aversion: A Field Experiment. Mimeo.

Presentation

- **Gneezy, A., Gneezy, U., Nelson, L. and Brown, A. (2010). Shared Social Responsibility: A Field Experiment in Pay-What-You-Want Pricing and Charitable Giving. *Science*, 329, 325-327.**

Presentation:

November 22, 24 No Class

Thanksgiving

November 29 - Incentives and Labor Markets: Advances

Assignments Due: Idea briefs

December 1 - Behavioral Finance and Emotions

Assignments Due: Required Readings

Myopic Loss Aversion

- **Gneezy, U. and Potters, J. (1997). An Experiment on Risk Taking and Evaluation Periods. Quarterly Journal of Economics, 112, 631-645.**
- Benartzi, S. and Thaler, R. (1995). Myopic Loss Aversion and the Equity Premium Puzzle. Quarterly Journal of Economics, 110, 73-92.
- Thaler, R., Tversky, A. and Kahneman, D. (1997) The Effect of Myopia and Loss Aversion on Risk Taking: An Experimental Test. Quarterly Journal of Economics, 112, 647-661.

Disposition Effect

- Weber, M. and Camerer, C. (1998). The Disposition Effect in Securities Trading: An Experimental Analysis. Journal of Economic Behavior and Organization, 33, 167-184.
- Shefrin, H. and Statman, M. (1985). The Disposition to Sell Winners Too Early and Ride Losers Too Long: Theory and Evidence. Journal of Finance, 40, 777-790.

Risk and Affect

- **Shiv, B., Loewenstein, G., Bechara, A., Demasio, H. and Damasio, A. (2005). Investment Behavior and the Negative Side of Emotion. Psychological Science, 16, 435-439.**
- Loewenstein, G., Hsee, C., Weber, E. and Welch, N. (2001). Risk as Feelings. Psychological Bulletin, 127, 267-286.
- Van Winden, F., Krawczyk, M. and Hopfensitz, A. (2011). Investment, Resolution of Risk and the Role of Affect. Journal of Economic Psychology, 32, 918-939.
- Lerner, J. and Keltner, D. (2001). Fear, Anger and Risk. Journal of Personality and Social Psychology, 81, 146-159.

Emotions and Empathy Gaps

- Loewenstein, G. (1996). Out of Control: Visceral Influences on Behavior. Organizational Behavior and Human Decision Processes, 65, 272-292.

- Loewenstein, G., O'Donoghue, T. and Rabin, M. (2003). Projection Bias in Predicting Future Utility. *Quarterly Journal of Economics*, 118, 1209-1248.
- Xiao, E. and Houser, D. (2005). Emotion Expression in Human Punishment Behavior. *PNAS*, 102, 7398-7401.
- Gneezy, U. and Imas, A. (2013). The Materazzi Effect: On the Strategic Use of Anger. *PNAS*, forthcoming

December 6 and 8

Final Presentations