

Applications of Psychology and Economics – Econ 219B
Spring 2015
Wednesday 12-3, 639 Evans Hall

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Syllabus

Features of this course

This course is the continuation of the 219A class in *Psychology and Economics – Theory*, taught by Justin Sydnor. As in 219A, we will keep emphasizing the psychological evidence as the basis for sound economic analysis. We will also insist on the importance of neoclassical theory as a successful benchmark that you are required to know. Finally, several topics of this course are designed to be the empirical counterpart of the theory covered in 219A.

There are two main differences between 219A and 219B. First, this class has largely an empirical orientation, as opposed to the theoretical orientation of 219B. I will present empirical papers drawn from a variety of fields: asset pricing, corporate finance, consumption, development economics, environmental economics, health economics, industrial organization, labor economics, political economy, and public economics. As such, the class is also meant for applied students that do not intend to make Psychology and Economics one of their main fields, but want to apply some of the behavioral ideas to their field of interest.

The second main feature of the course will be its emphasis on dissertation writing. Throughout the course I will do my best to point out what seem to me like good directions for empirical research. In addition, as an incentive to get you started, one of the requirements of the course is a paper on an applied topic using field data.

The 219B course also covers a set of 11 Methodological Topics, including some of the how-to-do list for empirical behavioral research. These include (i) practical topics such as approval from Human Subjects and how to run field experiments, (ii) conceptual issues such as the difference between lab and field experiments and mis-application of present-bias models; and (iii) econometric issues such as clustering of standard errors. These topics are integrated with the other research topics.

Rules of the game

As a general rule, you should have taken the 219A course before you take this course. If you have not, but are interested in taking this course, please come and talk to me. The prerequisites of the 219A course, that is, an understanding of the economics of uncertainty and game theory at the level of 201B, apply to this course as well. In addition, it is important that you have had exposure to econometrics and empirical research. You should be familiar with OLS estimation, panel data models, and discrete choice models. For example, you should have no uncertainty as to what fixed effects do in a regression. Although it is not a requirement for this course, I recommend taking at least one labor economics, public economics, or applied econometrics course to anyone contemplating doing empirical research.

Throughout the course, I will assign two to four required readings each week. The required readings are starred in the reading list below. The non-starred readings are optional, but I suggest that you at least read the introduction. So much of a paper is in the introduction (if the introduction is well-written).

There are four requirements for the course: problem sets, a final exam, an empirical problem set, and an empirical paper. The last two requirements are either/or, that is, you can do either the empirical problem set or the paper.

Problem Sets. The problem sets will test your knowledge of modeling and of empirical specifications. The problem sets will be on Present-Biased Preferences, Reference Dependence, on Social Preferences, and on Behavioral IO.

Exam. The in-class exam will cover the material of the whole class and will be modeled on the type of questions that I ask in the problem sets. You will have some previous exams to practice.

Empirical Paper. I encourage everyone to try to write an empirical paper on a Psychology and Economics topic. This will help you to get started on your research, which of course is the ultimate purpose of taking a PhD. The paper can be written with up to two other students in the class. I encourage everyone to email and see me during Matthew's part of the semester or at the beginning of my part, and no later than the week before Spring break. A two-page written proposal is due after Spring Break. The final 10-15 page paper is due on May 13.

The *ideal* paper contains a novel idea, the empirical strategy, and preliminary empirical results. Realistically, you can do significantly less as long as you show significant effort. Two things are key: (i) that you do at least some preliminary analysis with data, since one purpose of the requirement is to make sure that you learn to use Stata or another statistical package; (ii) that you use field data, as opposed to experimental data. (This is by no means meant as a negative on doing lab experiments. Laboratory experiments are great. However, this class focuses on field data) Replication of existing studies is perfectly fine, and encouraged. Replication, in fact, is a good way to start original research, and more and more replication data sets are available on the AER and JPE websites. Some of the papers prepared for this class in past year have turned into publishable papers and, in one case, even into a job market paper. I encourage you therefore to think of presenting the paper that comes out of this class in the Psychology and Economics non-Lunch.

In any case, you are strongly encouraged to attend the Psychology and Economics non-lunch (meeting on some Fridays 10.30-12) if you are interested in making Psychology and Economics one of your fields. In addition, you should attend the Psychology and Economics Seminar (Tu 2-3.30) as much as you can. Spots to go for lunch with outside speakers are available for sign-up.

Empirical Problem Set. The alternative assignment is a one-time, significant empirical problem set that is meant to familiarize you with empirical research in Psychology and Economics. The problem set will focus on earning announcements and the response of stock prices to the new information contained in the announcements. You can work on the assignment in groups of up to three people, but each one should hand in a solution. The data will be in Stata format. I will assume that you have a working knowledge of Stata.

The course webpage is an important instrument for this course (you can find the link from my webpage). On the website you will find updated lists of readings, the assignments, and the revised lecture notes in pdf format.

Grading. The final grade will be an average with weight 30% on the problem sets, 40% on the final (in-class) exam, and the remaining 30% on either the paper or empirical problem set.

Meeting. The best way to meet is to send me an email to schedule – in fact, you are supposed to email me so we can talk about your paper project! I also have office hours on Thursdays between 12 and 2.

Tentative schedule of classes

The schedule will vary somewhat as the class unfolds. The syllabus will be updated periodically on the course webpage.

Week of March 5 – Meet Stefano to discuss paper topic

Part I -- Non-Standard Preferences

January 21 – Lecture 1

Introduction

Psychology and Economics: The Methodologies

Psychology and Economics: The Fields

Present-Biased Preferences, Part 1

Status-Quo in Financial Decisions

Methodological Topic: Reading the Psychology Journals

Problem Set 1 on Present-Biased Preferences assigned

January 28 – Lecture 2

Present-Biased Preferences, Part 2

Present-Bias and Status Quo

Consumption Choices: Investment Goods

Homework Completion

Exercise

Problem Set 1 on Present-Biased Preferences due

February 4 – Lecture 3

Present-Biased Preferences, Part 3

Consumption Choices: Investment Goods

Work Effort

Consumption Choices: Leisure Goods

Credit Card Borrowing

Consumption-Savings

Summary of the Applications

Methodological Topic: Commitment Field Experiment Designs

Methodological Topic: Common Errors in Applying Present-Biased Preferences

Problem Set 2 on Reference Dependence assigned

February 11 – Lecture 4

Present-Biased Preferences, Part 4

Laboratory Evidence
Reference Dependence, Part 1
Housing Market
Mergers
Workplace Effort

February 18 – Lecture 5
Reference Dependence, Part 2
Daily Labor Supply
Insurance Choices
Financial Decisions
Problem Set 2 on Reference Dependence due
Problem Set 3 on Social Preferences assigned

February 25 – Lecture 6
Reference Dependence, Part 3
Job Search
The New Bunching-Based Evidence:
Taxes
Running

March 4 – Lecture 7
Social Preferences, Part 1
Workplace Relations
Gift Exchange in the Lab and Field
Methodological Topic: Running a Field Experiment
Problem Set 2 on Social Preferences due

March 11 – Lecture 8
Social Preferences, Part 2
Charitable Giving
Social Pressure
Evolution of Social Preferences

Part II -- Non-Standard Beliefs

March 18 – Lecture 9
Overconfidence
Law of Small Numbers
Projection Bias
Introducing Limited Attention
Two-page proposal due

March 25– Spring Break – No Lecture

Week of April 2 – Meet Stefano again to discuss progress on paper topic

Part III -- Non-Standard Decision-Making

April 1 – Lecture 10
Limited Attention

Shipping Costs
Taxes
Left-Digit Inattention
Financial Market Evidence
Methodological Topic: Portfolio Methodology

April 8 – Lecture 11

Framing
Menu Effects
 Choice Avoidance
 Preference for Familiar
 Preference for Salient
 Confusion
Persuasion
Problem Set 4, Assigned

April 15 – Lecture 12

Emotions: Mood
Emotions: Arousal
Methodological Topic: Lab and Field Experiments
Happiness
Empirical Problem Set Handed Out

Part IV – Market Response to Biases

April 22 – Lecture 13

Market Reaction to Biases, Part 1
 Behavioral IO
 Behavioral Corporate Finance
 Behavioral Labor
 Behavioral Political Economy
Methodological Topic: Markets and Non-Standard Behavior
Problem Set 4 due

April 29 – Lecture 14

Market Reaction to Biases, Part 2
 Behavioral Finance
 Behavioral Welfare Economics
Conclusion

In-Class Exam (during RRR period), May 6, 12-3

Friday May 15 (midnight) – Due date for Paper and Empirical Problem Set

Readings

*designates required readings.

The following paper will cover, in a dense manner, the topics covered in the class:

* DellaVigna, Stefano, "Psychology and Economics: Evidence from the Field", *Journal of Economic Literature*, June 2009, Vol. 47, pp. 315-372.

The following articles provide partial overviews of the field of Psychology and Economics:

Rabin, Matthew. 1998. "Psychology and Economics." *Journal of Economic Literature*, 36(1): 11-46.

An early classic, emphasizes the psychology and its application to economics

Camerer, Colin. 2005. "Behavioral Economics" *World Congress of the Econometric Society*, London, 18-24.

Not comprehensive, but interesting ideas on the field

Mullainathan, Sendhil and Richard H. Thaler. 2001. "Behavioral Economics" in *International Encyclopedia of Social Sciences*, Pergamon Press, 1094-1100.

Classifies most P&E into Bounded Self-Control, Bounded Rationality, and Bounded Self-Interest

For those looking for a background book in social psychology to complement the content of the Psychology and Economics sequence, I highly recommend:

L. Ross and R.E. Nisbett, *The Person and the Situation*, McGraw-Hill, 1991.

A primer into a number of important social psychology findings, a wonderful classic, just recently was re-printed.

Daniel Kahneman, Paul Slovic, and Amos Tversky. *Judgment Under Uncertainty: Heuristics and Biases*, Cambridge University Press, 1982.

A classic of the cognitive psychology literature.

Part I -- Non-Standard Preferences

Lecture 1

Status-Quo Bias in Financial Decisions

* Madrian, Brigitte C. and Dennis F. Shea. 2001. "The Power of Suggestion: Inertia in 401(k) Participation and Savings Behavior." *Quarterly Journal of Economics*, 116(4): 1149-1187.

Choi, James J., David Laibson, Brigitte C. Madrian and Andrew Metrick. 2006. "Saving for Retirement on The Path of Least Resistance," in Ed McCaffrey and Joel Slemrod, eds., *Behavioral Public Finance: Toward a New Agenda* New York: Russell Sage Foundation, pp. 304-351.

* Carroll, Gabriel D.; Choi, James J. and David Laibson and Brigitte Madrian and Andrew Metrick."Optimal Defaults and Active Decisions," *Quarterly Journal of Economics*, 2009, 124, 4.

Cronqvist, Henrik, and Richard H. Thaler. 2004 "Design Choices in Privatized Social-Security Systems: Learning from the Swedish Experience." *American Economic Review Papers and Proceedings*, Vol. 94(2), pp. 424-428.

* Chetty, Raj, John N. Friedman, Soren Leth-Peterson, Torben Heien Nielsen, and Tore Olsen. 2014. "Active vs. Passive Decisions and Crowd-out in Retirement Savings Accounts: Evidence from Denmark." *Quarterly Journal of Economics*, 129(3): 1141-1219.

Comparison to Effect of Financial Education

Duflo, Esther and Emmanuel Saez. 2003. "The Role Of Information And Social Interactions In Retirement Plan Decisions: Evidence From A Randomized Experiment." *Quarterly Journal of Economics*, 118(3): 815-842.

Lecture 2

Status-Quo Bias in Financial Decisions, Explained with Present Bias

* O'Donoghue, Ted and Matthew Rabin. 2001. "Choice and Procrastination," *Quarterly Journal of Economics*, 121-160.

O'Donoghue, Ted and Matthew Rabin. 1999 "Doing It Now or Later," *American Economic Review*, 89(1), 103-124.

Ted O'Donoghue and Matthew Rabin. "Procrastination in Preparing for Retirement", in *Behavioral Dimensions of Retirement Economics*, Henry Aaron, editor, The Brookings Institution, 1999.

Other Default Effects

Abadie, Alberto, and Sebastien Gay. 2006. "The Impact of Presumed Consent Legislation on Cadaveric Organ Donation: A Cross-Country Study" *Journal of Health Economics*, 25(4): 599--620.

* Ben Handel. "Adverse Selection and Inertia in Health Insurance Markets: When Nudging Hurts", *American Economic Review*, vol. 103 (7), 2013, 2643-2682.

Present-Biased Preferences: Consumer Behavior I (Investment Goods)

Ariely, Dan and Wertenbroch, Klaus (2002), "Procrastination, Deadlines, and Performance: Self-Control by Precommitment, *Psychological Science*, 13 (May), 219-224

* DellaVigna, Stefano and Malmendier, Ulrike. 2006. "Paying Not To Go To The Gym", *American Economic Review*, 96(3): 694-719.

Lecture 3

Present-Biased Preferences: Consumer Behavior I (Investment Goods)

* Supreet Kaur, Michael Kremer and Sendhil Mullainathan. 2013. "Self-Control at Work" Working paper.

Present-Biased Preferences: Consumer Behavior II (Leisure Goods)

* Ausubel, Lawrence. "Adverse Selection in the Credit Card Market", Working Paper, University of Maryland, June 1999.

Shui, Haiyan, and Ausubel, Lawrence. "Time Inconsistency in the Credit Card Market", mimeo.

* David Laibson, Andrea Repetto and Jeremy Tobacman, "Estimating Discount Functions from Lifecycle Consumption Choices" 2007.

Laibson, David. 1997. "Golden eggs and hyperbolic discounting", *Quarterly Journal Of Economics*, Vol. 112(2), pp. 443-77.

* Ashraf, Nava, Dean Karlan, and Wesley Yin. 2006. "Tying Odysseus to the Mast: Evidence from a Commitment Savings Product in the Philippines." *Quarterly Journal of Economics* 121, no. 2.

Methodology: Design of Commitment Field Experiments

Giné, Xavier, Dean Karlan, and Jonathan Zinman. 2010. "Put Your Money Where Your Butt Is: A Commitment Contract for Smoking Cessation." *American Economic Journal: Applied Economics*, 2(4): 213–35.

Royer, Heather, Mark Stehr, and Justin Sydnor "The Effectiveness of Financial Incentives and Commitment Devices for Gym Usage in the Workplace" Working paper.

Vinci Chow. 2011. "Demand for a Commitment Device in Online Gaming" Working paper.

Present-Biased Preferences: Seven More Applications

Duflo, Esther, Michael Kremer, and Jonathan Robinson. 2009. "Nudging Farmers to use Fertilizer: Evidence from Kenya" Working Paper.

DellaVigna, Stefano and M. Daniele Paserman. 2005. "Job Search and Impatience." *Journal of Labor Economics*, 23(3): 437-466.

Fang, Hanming, and Dan Silverman. "Time-inconsistency and Welfare Program Participation: Evidence from NSLY." *International Economic Review* 50(4), 2009, 1043-1077.

Lecture 4

Present-Biased Preferences: Evidence from the Laboratory

Jess Benhabib, Alberto Bisin, Andrew Schotter. "Present-bias, quasi-hyperbolic discounting, and fixed costs", *Games and Economic Behavior*, Volume 69, Issue 2, July 2010, Pages 205-223

James Andreoni & Charles Sprenger, 2012. "Estimating Time Preferences from Convex Budgets," *American Economic Review*, Vol. 102(7), pages 3333-56, December.

* Ned Augenblick, Muriel Niederle, Charles Sprenger. "Working Over Time: Dynamic Inconsistency in Real Effort Tasks", Working paper.

Reference Dependence and Housing Markets

* Genesove, David and Christopher Mayer. 2001. "Loss Aversion and Seller Behavior: Evidence from the Housing Market," *Quarterly Journal of Economics*, 116(4), 1233-1260.

Reference Dependence and Mergers

* Malcolm Baker, Xin Pan, Jeffrey Wurgler, “The effect of reference point prices on mergers and acquisitions”, *Journal of Financial Economics*, Volume 106, Issue 1, October 2012, Pages 49-71.

Reference Dependence and Pay-Setting

* Mas, Alexander. 2006. “Pay, Reference Points, And Police Performance”, *Quarterly Journal of Economics*, Vol. 121 (3): 783-821.

Lecture 5

Reference Dependence and Labor supply

* Camerer, Colin, Babcock, Linda, Loewenstein, George, and Thaler, Richard. “Labor supply of New York City Cabdrivers: One day at a time”, 1997, *Quarterly Journal Of Economics*, pp. 407-42. (CVF 20)

* Henry S. Farber, 2005. "Is Tomorrow Another Day? The Labor Supply of New York City Cabdrivers," *Journal of Political Economy*, vol. 113(1), pages 46-82, February.

Farber, Henry S. “Reference-Dependent Preferences and Labor Supply: The Case of New York City Taxi Drivers” *American Economic Review*, Volume 98, Number 3, June 2008 , pp. 1069-1082(14).

* Fehr, Ernst and Lorenz Goette. 2007. “Do Workers Work More if Wages are High? Evidence from a Randomized Field Experiment.” *American Economic Review*, 97(1).

Crawford, Vincent and Meng, JuanJuan. 2011. “New York City Cab Drivers' Labor Supply Revisited: Reference-Dependent Preferences with Rational Expectations Targets for Hours and Income” *American Economic Review*, Vol, 101, Number 5, August 2011, pp. 1912-1932(21)

Reference Dependence and Disposition Effect

* Odean, Terry. 1998. “Are Investors Reluctant to Realize Their Losses?”, *Journal of Finance*, pp. 1775-1798. (CVF 21)

Ivkovich, Zoran, James Poterba and Scott Weisbenner. 2005 “Tax-Motivated Trading by Individual Investors.” *American Economic Review*, 95(5): 1605—1630.

* Barberis, Nicholas and Wei Xiong..“What Drives the Disposition Effect? An Analysis of a Long-Standing Preference-Based Explanation.” *Journal of Finance*, Volume 64, Issue 2, pages 751–784, April 2009.

* Itzhak Ben-David and David Hirshleifer. "Are Investors Really Reluctant to Realize Their Losses? Trading Responses to Past Returns and the Disposition Effect" *Review of Financial Studies* (2012) 25(8): 2485-2532.

* Ingersoll, Jonathan and Lawrence Jin. "Realization Utility with Reference-Dependent Preferences" *Review of Financial Studies*, 2013.

Karlsson, Niklas, George Loewenstein, and Duane Seppi. 2009. “The ‘Ostrich’ Effect: Selective Attention to Information about Investments” *Journal of Risk and Uncertainty*. Volume 38, Number 2, 95-115.

Reference Dependence and Equity Premium

Benartzi, Shlomo and Thaler, Richard. 1995. "Myopic loss aversion and the equity premium puzzle", *Quarterly Journal of Economics*, 110, pp.73-92. (CVF 17)

Barberis, Nicholas, Ming Huang and Tano Santos. 2001. "Prospect Theory and Asset Prices", *Quarterly Journal of Economics*, 116(1): 1-53.

Barberis, Nicholas and Huang, Ming. "Mental Accounting, Loss Aversion, and Individual Stock Returns" *Journal of Finance*, 56, 2001, pp.1247-92.

Reference Dependence and Domestic Violence

Card, David and Gordon Dahl. 2011. "Family Violence and Football: The Effect of Unexpected Emotional Cues on Violent Behavior" *Quarterly Journal of Economics*, 126 (1): 103-143.

Lecture 6

Reference Dependence and Insurance Choices

* Justin Sydnor. 2010. "(Over)insuring Modest Risks." *American Economic Journal: Applied Economics*, 2(4): 177-99.

Barseghyan, Levon; Molinari, Francesca; O'Donoghue, Ted; Teitelbaum, Joshua C. "The Nature of Risk Preferences: Evidence from Insurance Choices" *American Economic Review*, 103(6), October 2013, pp. 2499-2529.

Reference Dependence and Job Search

DellaVigna, Stefano; Attila Lindner, Balazs Reizer, and Johannes Schmieider. "Reference Dependent Job Search: Evidence from Hungary"

Methodology: Bunching-Based Evidence of Reference Dependence

* Rees-Jones, Alex. 2013. "Loss Aversion Motivates Tax Sheltering: Evidence From US Tax Returns", Working paper.

Eric Allen, Patricia Dechow, Devin Pope, and George Wu. 2013. "Reference-Dependent Preferences: Evidence from Marathon Runners", Working paper.

Lecture 7

Social Preferences in The Workplace: Horizontal Preferences

* Bandiera, Oriana, Iwan Barankay and Imran Rasul. 2005. "Social Preferences and the Response to Incentives: Evidence from Personnel Data." *Quarterly Journal of Economics*, 120(3): 917--962.

Hjort, Jonas. "Ethnic Divisions and Production in Firms". 2013.

Daniel Kahneman, Jack L. Knetsch and Richard H. Thaler. "Fairness and the Assumptions of Economics" *Journal of Business*, Vol. 59, No. 4, Part 2 (Oct., 1986), pp. S285-S300.

David Card, Alexandre Mas, Enrico Moretti & Emmanuel Saez, 2012. "Inequality at Work: The Effect of Peer Salaries on Job Satisfaction," *American Economic Review*, Vol. 102(6), pages 2981-3003.

Social Preferences in the Workplace: Gift Exchange and Vertical Preferences

* Fehr, Kirchsteiger, and Riedl. 1993. "Does Fairness Prevent Market Clearing? An Experimental Investigation" *Quarterly Journal of Economics*, 108, pp. 437-459.

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

* Gneezy, Uri, and John List. 2006. "Putting Behavioral Economics To Work: Testing For Gift Exchange In Labor Markets Using Field Experiments", *Econometrica*, Vol. 74(5), pp. 1365--1384.

* Sebastian Kube, Michel André Maréchal and Clemens Puppe. "Do Wage Cuts Damage Work Morale: Evidence From a Natural Field Experiment". *Journal of the European Economic Association*, Volume 11, Issue 4, pages 853–870, August 2013.

Sebastian Kube, Michel André Maréchal and Clemens Puppe. "The Currency of Reciprocity: Gift-Exchange in the Workplace". *American Economic Review*, Volume 102, Number 4, June 2012, pp. 1644-1662(19).

* Krueger, Alan and Alexandre Mas. 2004. "Strikes, Scabs and Tire Separations: Labor Strife and the Production of Defective Bridgestone/Firestone Tires," *Journal of Political Economy*, 112(2): 253-89.

Methodology: Field Experiments

Esther Duflo, Rachel Glennerster, Michael Kremer, "Using Randomization in Development Economics Research: A Toolkit", In: T. Paul Schultz and John A. Strauss, Editor(s), *Handbook of Development Economics*, Elsevier, 2007, Volume 4, Pages 3895-3962.

Lecture 8

Social Preferences: Charitable Giving

Jim Andreoni, "The Economics of Philanthropy." in N. Smeltser, P. Baltes, eds., *International Encyclopedia of Social and Behavioral Sciences*, Elsevier: Oxford, 2001, 11369-11376.

John A. List and David Lucking-Reiley, "The Effects of Seed Money and Refunds on Charitable Giving: Experimental Evidence from a University Capital Campaign." *Journal of Political Economy*, February 2002, vol. 110, no. 8, pp. 215-233.

Falk, Armin. "Gift Exchange in the Field", *Econometrica*, Volume 75, Issue 5, pages 1501–1511, September 2007.

Craig E. Landry, Andreas Lange, John A. List, Michael K. Price, Nicholas G. Rupp. "Toward an Understanding of the Economics of Charity: Evidence from a Field Experiment" *Quarterly Journal of Economics*, May 2006, Vol. 121, No. 2, Pages 747-782.

* DellaVigna, Stefano, John A. List and Ulrike Malmendier. "Testing for altruism and social pressure in charitable giving" *Quarterly Journal of Economics* (2012) 127 (1): 1-56.

Social Pressure

Asch, "Opinions and social pressure," *Scientific American*, 193, 1955.

Milgram, Stanley. 1963. "Behavioral study of obedience." *Journal of Abnormal and Social Psychology*, 67: 371-378.

Garicano, Luis, Ignacio Palacios-Huerta, and Canice Prendergast. 2005. "Favoritism Under Social Pressure," *Review of Economics and Statistics*, 87(2): 208-216.

Armin Falk, Andrea Ichino, "Clean Evidence on Peer Pressure", *Journal of Labor Economics*, Vol. 24, No. 1 (January 2006), pp. 39-57

* Alexandre Mas & Enrico Moretti, 2009. "Peers at Work," *American Economic Review*, Vol. 99(1), pages 112-45, March.

* Gerber, Alan, Donald Green, Christopher Larimer. "Social Pressure and Voter Turnout: Evidence from a Large-Scale Field Experiment," *American Political Science Review*, Vol. 102(01). February 2008, pp 33-48.

Social Preferences: Evolution

Fisman, Kariv, and Markovits (2009). "Exposure to ideology and distributional preferences"

* Rao, Gautam. 2014. "Familiarity Does Not Breed Contempt: Diversity, Discrimination and Generosity in Delhi Schools"

Part II -- Non-Standard Beliefs

Lecture 9

Overconfidence

Cowgill, Bo and Eric Zitzewitz. 2013 "Using Prediction Markets to Track Information Flows: Evidence from Google.

* Malmendier, Ulrike, and Geoffrey Tate. "Who Makes Acquisitions? CEO Overconfidence and the Market's Reaction," *Journal of Financial Economics* Volume 89, Issue 1, July 2008, Pages 20-43.

* Odean, Terrance. 1999. "Do investors trade too much?" *American Economic Review*, 89: 1279—1298.

Odean, Terrance and Brad Barber. "Boys will be Boys: Gender, Overconfidence, and Common Stock Investment", *Quarterly Journal of Economics*, February 2001, Vol. 116, No. 1, 261-292.

D'Acunto. "Identity, Overconfidence, and Investment Decisions" 2013.

Daniel, Kent D., David Hirshleifer, and Avanidhar Subrahmanyam. 1998. "Investor psychology and security market under- and over-reactions", *Journal of Finance*, 53: 1839--1886.

Law of Small Numbers

Matthew Rabin. "Inference by Believers in the Law of Small Numbers" *Quarterly Journal of Economics* (2002) 117 (3): 775-816

Charles T. Clotfelter and Philip J. Cook. "The "Gambler's Fallacy" in Lottery Play" *Management Science* 1993 39:12, 1521-1525.

Terrell, Dek. 1994. "A Test of the Gambler's Fallacy -- Evidence from Pari-Mutuel Games," *Journal of Risk and Uncertainty*, 8(3): 309-317.

Fuster, Andreas, David Laibson, Brock Mendel. 2010. "Natural expectations and macroeconomic fluctuations" *Journal of Economic Perspectives* 24 (4), 67-84.

* Benartzi, Shlomo. 2001. "Excessive Extrapolation and the Allocation of 401(k) Accounts to Company Stock" *Journal of Finance*, 56(5):1747-1764.

De Bondt, Werner and Richard Thaler. "Does the Stock Market Overreact?" *Journal of Finance*, Volume 40, Issue 3, pages 793–805, July 1985.

Nicholas Barberis, Andrei Shleifer, Robert Vishny, "A model of investor sentiment", *Journal of Financial Economics*, Volume 49, Issue 3, 1 September 1998, Pages 307-343.

Gallagher, Justin. "Learning about an Infrequent Event: Evidence from Flood Insurance Take-up in the US" Forthcoming *American Economic Journal: Applied Economics*.

Projection Bias

Conlin, Michael, Ted O'Donoghue, and Timothy J. Vogelsang. "Projection Bias in Catalog Orders." *American Economic Review*, Volume 97, Number 4, September 2007, pp. 1217-1249.

Acland, Dan and Matthew Levy. 2013. "Habit Formation, Naivete, and Projection Bias in Gym Attendance" Working paper.

* Meghan R. Busse, Devin G. Pope, Jaren C. Pope, Jorge Silva-Risso. 2013. "Projection Bias in the Car and Housing Markets".

Limited Attention: Introduction

Huberman, Gur, and Tomer Regev. 2001. "Contagious Speculation and a Cure for Cancer: A Nonevent that Made Stock Prices Soar." *Journal of Finance*, 56(1): 387-396.

* DellaVigna, Stefano, "Psychology and Economics: Evidence from the Field", *Journal of Economic Literature*, June 2009, Vol. 47, pp. 315-372.

Part III -- Non-Standard Decision-Making

Lecture 10

Limited Attention: Consumption Behavior

Hossain, Tanjim and John Morgan. 2006. "...Plus Shipping and Handling: Revenue (Non) Equivalence in Field Experiments on eBay," *Advances in Economic Analysis & Policy*, 6(2): 1429-1429.

Hossain, Tanjim and John Morgan. 2009. "Shrouded Attributes and Information Suppression: Evidence from Field Experiments" *Quarterly Journal of Economics*.

* Raj Chetty, Adam Looney, Kory Kroft, 2009. "Salience and Taxation: Theory and Evidence," *American Economic Review*, vol. 99(4), pages 1145-77, September.

* Lacetera, Nicola, Devin Pope, Justin Sydnor. 2012. "Heuristic Thinking and Limited Attention in the Car Market" *American Economic Review*, Vol. 102(5), pages 2206-36, August.

Meghan Busse, Nicola Lacetera, Devin Pope, Jorge Silva-Risso, and Justin Sydnor. "Estimating the Effect of Salience in Wholesale and Retail Car Markets" *American Economic Review Papers and Proceedings* (2013) 103(3), 570-74.

Limited Attention: Financial Market Evidence

* DellaVigna, Stefano and Joshua Pollet. 2009. "Investor Inattention and Friday Earnings Announcements" *Journal of Finance*, April 2009, Vol. 64, pp. 709-749.

Hirshleifer, David A., Sonya S. Lim, and Siew Hong Teoh. 2009. "Driven to Distraction: Extraneous Events and Underreaction to Earnings News" *Journal of Finance*, Volume 64, Issue 5, pages 2289–2325, October 2009.

* Cohen, Lauren, and Andrea Frazzini. "Economic Links and Predictable Returns", *Journal of Finance*, 63, no. 4 (August 2008).

DellaVigna, Stefano and Joshua Pollet. 2007. "Demographics and Industry Returns" *American Economic Review*, 97: 1167-1702.

Lecture 11

Framing

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