

14.13: Psychology and Economics

Frank Schilbach (MIT)

Syllabus Fall 2017

Instructor: Frank Schilbach (fschilb@mit.edu; E52-560)

Office hours by appointment – please sign up [HERE](#).

Assistant: Emily Gallagher (emily@mit.edu)

Lectures: Monday and Wednesday 10:30 am to noon, E52-164

Graduate teaching assistants:

Maddie McKelway (mckelway@mit.edu); office hours: Thursday 4:00pm to 5:00pm, E52-548

Allan Hsiao (ajhsiao@mit.edu); office hours: Friday 3:00 pm to 4:00 pm, E52-548

Recitations: Fridays 9 am to 10 am, E52-164

Course website:

<https://learning-modules.mit.edu/class/index.html?uuid=/course/14/fa17/14.13#info>

Online forum (Piazza): piazza.com/mit/fall2017/1413

Course Overview: Behavioral Economics (aka ‘Psychology and Economics’) is a growing sub-field of economics that incorporates insights from psychology and other social sciences into economics. The broad goal of these efforts is to make economic models more realistic and to strengthen their predictive power by incorporating previously neglected features such as self control issues, concerns for others, or aversion to losses. This course covers recent advances in behavioral economics by reviewing some of the assumptions made in mainstream economic models, and by discussing how human behavior systematically departs from these assumptions. We draw on empirical evidence from psychology and related fields that shed light on preferences, cognition, and behavior. Topics include deviations from the standard model in terms of (i) preferences (present bias, reference dependence, and social preferences), (ii) beliefs (overconfidence, projection bias, and attribution bias), and (iii) decision-making (cognition, attention, and framing), as well as (iv) market and policy reactions to such deviations. Applications will cover a wide range of fields, including labor and public economics, industrial organization, health economics, finance, and development economics. Students participate in surveys and small experiments in class, review evidence from lab and field experiments, and examine how the results can be integrated into existing or novel models.

Prerequisites. As the class is considering *deviations* from mainstream models of economics, a solid grasp of these models is essential for mastering the material. Therefore, 14.01 or an equivalent introductory microeconomics course is a prerequisite for this class. If you have not taken 14.01, please talk to me after the first lecture to discuss whether this class is suitable for you.

Reading materials. There is no textbook for this course. The fairly detailed lecture slides are meant to be self-explanatory, and they are complemented by recitation notes as well as by a set of readings for each class, as specified in the reading list. These readings will feature in lectures, quizzes, exams, and problem sets. If a reading is marked as required, you are responsible for preparing the paper prior to class, which means reading the abstract, introduction and conclusion (not necessarily the body of the paper), and additional sections of the paper as specified in the reading list.

Class attendance. Given that the class does not follow a textbook, most of the course materials will be based on empirical and theoretical papers from leading academic journals. While the lecture notes are fairly comprehensive, the course material will be difficult to master without attending lectures. Moreover, there will be unannounced short quizzes at the start of approximately four of the lectures throughout the semester. These quizzes will test basic knowledge of starred readings and materials covered in the previous lecture, and they will count toward your grade for the course (see more below). If you pay attention in lectures and do the specified readings before class, the quizzes will be easy for you.

Laptop policy. Electronic devices may not be used in class unless you opt into a “laptop” seating section of the classroom in which laptops and iPads may be used. Cell phones, smart or not, are not allowed to be used in class. If you are interested in sitting in this laptop section, please send an email with the subject line “14.13 laptop sign-up” to Allan (ajhsiao@mit.edu) no later than 11:59 pm on Sunday, September 10, so we can finalize name tags and assigned seating areas for the two sections of the classroom. After September 10, no more laptop sign-ups will be accepted.

Grading. The class is *not* graded on a curve. It is possible that everyone will do very well, which will make me very happy. However, if you do not put effort into this class, you will likely not do well, i.e. you may receive a C or worse. If we think you are headed for a D or an F, we will try to warn you before the drop date. Your grade in this course will be composed of four components as specified below.

- **Short quizzes (5%) and class participation (5%).** If you participate regularly in class, I will learn your name and count your participation towards your grade. I will also give about four in-class quizzes at the start of lecture. These quizzes will be brief, non-technical checkups on your knowledge of what’s going on in the class (readings, lectures, problem sets). The quizzes are meant to help you to keep up with the materials of the course throughout the semester. I may also cold call in class to help overcome your natural shyness and ward off your natural sleepiness.
- **Problem sets (25%).** There will be five problem sets over the course of the semester, which will cover materials from lecture, readings, and class discussions. You must submit your problem sets in pdf-form using Learning Modules. Late problem sets will not be accepted, and there won’t be any exceptions to this policy. To accommodate for unanticipated events, illness, conflicts in your schedule, or other rational or irrational reasons that may prevent you

from submitting the problem set on time, we will automatically drop the problem set with your lowest score.

The problem set schedule is as follows:

- PS1 is due at 10/1/2017 at 8 pm.
- PS2 is due at 10/19/2017 at 8 pm.
- PS3 is due at 11/10/2017 at 8 pm.
- PS4 is due at 11/19/2017 at 8 pm.
- PS5 is due at 12/3/2017 at 8 pm.

Note that problem sets are due at 8 pm each day. Please make sure to submit your problem set a bit earlier to account for network issues or other unforeseen problems. Late problem sets will not be accepted for such reasons.

- **Exams (65%).** There will be two closed-book, closed-notes exams. First, there will be a mid-term exam in class (85 minutes), which will count for 25% of your grade. Second, there will be a cumulative end-term exam (180 minutes), which will count for 40% of your grade. If your grade on the final is higher than your grade on the midterm, both grades will be replaced with your grade on the final so that your final counts for 65% of your grade. The date for the final exam will be announced by the MIT Registrar's Office later in the semester. Please do *not* schedule your travels before the exam dates are announced!

Questions regarding grading. You should direct any questions regarding grading first to your TA. Importantly, you must submit your exam or problem set no more than one week after the assignment has been handed back. To have your grading be reconsidered, take the following steps:

- (1) Take the material to the TA along with a note describing specifically what you believe the problem to be. Include your email address in this note.
- (2) After the TA has contacted you by email, schedule an in-person meeting to discuss the issue.

Getting help outside of class. If you have questions regarding the class material or problem sets, there are four ways to get help:

- (i) Use the online forum ([Piazza](#)). We will have threaded discussions (monitored by the TA and professor) for all problem sets and class-related topics, which should allow you to get a timely, high-quality answer to most of your questions.
- (ii) Drop in during TA office hours.
- (iii) Go to Prof. Schilbach's office hours.
- (iv) Ask questions during recitation and in class.

Please avoid sending us your class-related questions by email (except for personal class-related matters). The discussion forum and office hours are more efficient ways for us to communicate with you, and your forum questions and responses will benefit many of your classmates.

Academic Integrity. In this class, you will be held to the high standard of academic integrity expected of all students at MIT. We will follow MIT's Academic Integrity Policy (see complete policy at integrity.mit.edu).

You may work jointly with other groups on problem sets but each of you must submit solutions individually. If you choose to work with other students, we expect that you work jointly on the solutions rather than simply copying solutions from another student. This will help you to learn the material and to prepare for exams. You must work without other students, without books, and without notes on all quizzes and exams.

Violating the Academic Integrity policy in any way will result in official Institute sanction. Please review the Academic Integrity policy and related resources, and contact us if you have any questions related to the Academic Integrity of this course.

Check. Great, you are still reading! To confirm that you indeed read the syllabus, please email a picture of a bear to Prof. Schilbach (fschilb@mit.edu) with the subject line "14.13 bear confirmation".

Tentative Schedule. Below is a tentative schedule for the semester, along with the corresponding reading materials for each class.

- Class topics and readings are subject to revision, i.e. some topics might be revised or even dropped altogether if time runs short.
- Starred readings are required – please read these papers before coming to class.
- I will announce in each class which paper(s) to read for the subsequent class(es).
- Non-starred readings are *not* required, but they may help you understand the materials covered in lectures or problem sets. You might want to consult these papers in case you'd like to deepen your understanding of the material covered in class, but we will not test you on the content of these papers beyond the parts that are covered in class.

General Books of Interest (not required). The following books are background readings in case you would like to learn more. They are by no means required.

- [Kahneman et al. \(1982\)](#): *Judgment Under Uncertainty: Heuristics and Biases*
- [Kahneman and Tversky \(2000\)](#): *Choices, Values and Frames*
- [Kahneman \(2011\)](#): *Thinking, Fast and Slow*
- [Ross and Nisbett \(1991\)](#): *The Person and the Situation: Perspectives of Social Psychology*
- [Cialdini \(1993\)](#): *Influence, the Psychology of Persuasion*
- [Thaler and Sunstein \(2008\)](#): *Nudge: Improving Decisions about Health, Wealth, and Happiness*
- [Ariely \(2009\)](#): *Predictably Irrational: The Hidden Forces that Shape our Decisions*
- [Mullainathan and Shafir \(2013\)](#): *Scarcity: Why Having Too Little Means so Much*
- [Lewis \(2017\)](#): *The Undoing Project: A Friendship That Changed Our Minds*
- [Thaler \(2015\)](#): *Misbehaving: The Making of Behavioral Economics*

Introduction and Overview (Sept 6, 11)

- ** [Rabin \(2002\)](#): *A Perspective on Psychology and Economics* (sections I and II)
- [Carter et al. \(2017\)](#): *The Impact of Computer Usage on Academic Performance: Evidence from a Randomized Trial at the United States Military Academy*
- [Darley and Batson \(1973\)](#): *“From Jerusalem to Jericho”: A Study of Situational and Dispositional Variables in Helping Behavior*
- [DellaVigna \(2009\)](#): *Psychology and Economics: Evidence from the Field*
- [Gabaix and Laibson \(2008\)](#): *The Seven Properties of Good Models*
- [Mullainathan and Thaler \(2000\)](#): *Behavioral Economics*
- [Rabin \(1998\)](#): *Psychology and Economics*
- [Rabin \(2013\)](#): *Incorporating Limited Rationality into Economics*

Time Preferences (Sept 13, 18, 20, 25)

Introduction to Time Preferences

- ** [Frederick et al. \(2002\)](#): *Time Discounting and Time Preference: A Critical Review*
- [Akerlof \(1991\)](#): *Procrastination and Obedience*

Quasi-Hyperbolic Discounting

- ** [O'Donoghue and Rabin \(1999\)](#): *Doing it Now or Later*
- [Laibson \(1997\)](#): *Golden Eggs and Hyperbolic Discounting*
- [O'Donoghue and Rabin \(2001\)](#): *Choice and Procrastination*

Empirical Applications

- ** [Ariely and Wertenbroch \(2002\)](#): *Procrastination, Deadlines, and Performance*
- [Ashraf, Karlan and Yin \(2006\)](#): *Tying Odysseus to the Mast: Evidence from a Commitment Savings Product in the Philippines*
- [Bryan et al. \(2010\)](#): *Commitment Devices*
- [DellaVigna and Malmendier \(2006\)](#): *Paying Not To Go To the Gym*
- [Gruber and Koszegi \(2001\)](#): *Is Addiction 'Rational'? Theory and Evidence*
- [Hershfield \(2011\)](#): *Future Self-continuity: How Conceptions of the Future Self Transform Intertemporal Choice*
- [Kaur, Kremer and Mullainathan \(2015\)](#): *Self-Control at Work*
- [Milkman et al. \(2014\)](#): *Holding the Hunger Games Hostage at the Gym*
- [Schilbach \(2017\)](#): *Alcohol and Self-Control: A Field Experiment in India*

Risk Preferences (Sept 27, Oct 2) and Reference Dependence (Oct 4, 11)

Introduction to Risk Preferences

- ** [Rabin and Thaler \(2001\)](#): *Anomalies: Risk Aversion*
- ** [Sydnor \(2010\)](#): *(Over)insuring Modest Risk*
- [Rabin \(2000\)](#): *Risk Aversion and Expected-Utility Theory: A Calibration Theorem*

Reference-Dependent Preferences

- ** [Tversky and Kahneman \(1979\)](#): *Prospect Theory: An Analysis of Decision under Risk*

Empirical Applications

- [Allen et al. \(2017\)](#): *Reference-Dependent Preferences: Evidence from Marathon Runners*
- [Camerer et al. \(1997\)](#): *Labor Supply of New York City Cabdrivers: One Day at a Time*

- [Camerer \(2001\)](#): *Prospect Theory in the Wild: Evidence from the Field*
- [Carmon and Ariely \(2000\)](#): *Focusing on the Forgone: How Value Can Appear So Different to Buyers and Sellers*
- [Genesove and Mayer \(2001\)](#): *Loss Aversion and Seller Behavior: Evidence from the Housing Market*
- [Pope and Schweitzer \(2011\)](#): *Is Tiger Woods Loss Averse? Persistent Bias in the Face of Experience, Competition, and High Stakes*

Social Preferences (Oct 16, 18, 25)

Experiments in Class

- No readings. You will participate in simple in-class experiments. You can make some money while learning about the generosity of your classmates.

Modeling and Measuring Social Preferences

** [Camerer and Fehr \(2004\)](#)

Empirical Applications

- ** [Bandiera et al. \(2005\)](#): *Social Preferences and the Response to Incentives: Evidence from Personnel Data*
- ** [Rao \(2013\)](#): *Familiarity Does Not Breed Contempt: Diversity, Discrimination and Generosity in Delhi Schools*
- [Gneezy and List \(2006\)](#): *Putting Behavioral Economics to Work: Testing for Gift Exchange in Labor Markets Using Field Experiments*
- [Henrich \(2012\)](#): *Hunter-Gatherer Cooperation*
- [Lazear et al. \(2006\)](#): *Sorting, Prices, and Social Preferences*
- [Andreoni and Bernheim \(2007\)](#): *Social Image and the 50-50 Norm: A Theoretical and Experimental Analysis of Audience Effects*
- [Dana et al. \(2007\)](#): *Exploiting Moral Wiggle Room: Experiments Demonstrating an Illusory Preference for Fairness*
- [Ellingsen and Johannesson \(2007\)](#): *Paying Respect*

Oct 23: Mid-term exam (in class)

Limited Attention (one lecture)

- ** [Chetty et al. \(2009a\)](#): *Saliency and Taxation: Theory and Evidence*
- [Hanna et al. \(2014\)](#): *Learning Through Noticing: Theory and Evidence from a Field Experiment*

- [Huberman and Regev \(2001\)](#): *Contagious Speculation and a Cure for Cancer: A Nonevent That Made Stock Prices Soar*
- [DellaVigna \(2009\)](#): *Psychology and Economics: Evidence from the Field*

Beliefs and Learning (two lectures)

- ** [Oster et al. \(2013\)](#): *Optimal Expectations and Limited Medical Testing: Evidence from Huntington's Disease*
- ** [Chen et al. \(2016\)](#): *Decision-making under the Gambler's Fallacy: Evidence from Asylum Judges, Loan Officers, and Baseball Umpires*
- [Gilovich et al. \(1985\)](#): *The Hot Hand in Basketball: On the Misperception of Random Sequences*
- [Gold and Hester \(1987\)](#): *The gambler's fallacy and the coin's memory*
- [Loewenstein \(1987\)](#): *Anticipation and the Valuation of Delayed Consumption*
- [Malmendier and Tate \(2008\)](#): *Who makes acquisitions? CEO overconfidence and the market's reaction*
- [Tversky and Kahneman \(1974\)](#): *Judgment under Uncertainty: Heuristics and Biases*

Projection and Attribution Bias (two lectures)

- ** [Haggag and Pope \(2016\)](#): *Attribution Bias in Economic Decision Making*
- ** [Loewenstein et al. \(2003\)](#): *Projection Bias in Predicting Future Utility*
- ** [Read and van Leeuwen \(1998\)](#): *Predicting Hunger: The Effects of Appetite and Delay on Choice*
- [Badger et al. \(2007\)](#): *Altered States: The Impact of Immediate Craving on the Valuation of Current and Future Opioids*
- [Boven and Loewenstein \(2003\)](#): *Social Projection of Transient Drive States*
- [Busse et al. \(2015\)](#): *The Psychological Effect of Weather on Car Purchases*
- [Conlin et al. \(2007\)](#): *Projection Bias in Catalog Orders*
- [Loewenstein \(1996\)](#): *Out of Control: Visceral Influences on Behavior*
- [Schelling \(1984\)](#): *Self-Command in Practice, in Policy, and in a Theory of Rational Choice*

Mental Accounting (one lecture)

- ** [Hastings and Shapiro \(2013\)](#): *Fungibility and Consumer Choice: Evidence from Commodity Price Shocks*
- [Thaler \(1985\)](#): *Mental Accounting and Consumer Choice*
- [Thaler \(1999\)](#): *Mental Accounting Matters*

Gender, Discrimination, and Identity (one lecture)

- [Goldin \(2014\)](#): *A Grand Gender Convergence: Its Last Chapter*
- ** [Bertrand et al. \(2015\)](#): *Gender Identity and Relative Income within Households*
- [Vesterlund et al. \(2015\)](#): *Breaking the Glass Ceiling with "No"*
- [Fredrickson et al. \(1998\)](#): *That Swimsuit Becomes You: Sex Differences in Self-Objectification, Restrained Eating, and Math Performance*
- [Niederle and Vesterlund \(2011\)](#): *Gender and Competition*

November 22: No class (Thanksgiving)

Malleability and Inaccessibility of Preferences (one lecture)

- ** [Ariely et al. \(2003\)](#); 'Coherent Arbitrariness'; *Stable Demand Curves without Stable Preferences*
- [Nisbett and Wilson \(1977\)](#): *Telling More Than We Can Know: Verbal Reports on Mental Processes*

Frames, Defaults, and Nudges (two lectures)

- ** [Madrian and Shea \(2001\)](#): *Power of Suggestion: Inertia in 401(k) Participation and Savings Behavior*
- [Bertrand et al. \(2010\)](#): *What's Advertising Content Worth? Evidence from a Consumer Credit Marketing Field Experiment*
- [Blumenstock et al. \(2016\)](#): *Mobile-izing Savings with Automatic Contributions: Experimental Evidence on Dynamic Inconsistency and the Default Effect in Afghanistan*
- [Carroll et al. \(2009\)](#): *Optimal Defaults and Active Decisions*
- [Chetty et al. \(2009b\)](#): *Active vs. Passive Decisions and Crowd-Out in Retirement Savings Accounts*
- [Huber et al. \(1982\)](#): *Adding Asymmetrically Dominated Alternatives: Violations of Regularity and the Similarity Hypothesis*
- [Thaler and Benartzi \(2004\)](#): *Save More TomorrowTM: Using Behavioral Economics to Increase Employee Saving*

Happiness (one lecture)

- ** [Kahneman and Thaler \(2006\)](#): *Anomalies: Utility Maximization and Experienced Utility*
- [Kahneman \(1994\)](#): *New Challenges to the Rationality Assumption*
- [Koszegi and Rabin \(2008\)](#): *Choices, Situations and Happiness*
- [Schkade and Kahneman \(1998\)](#): *Does Living in California Make People Happy? A Focusing Illusion in Judgments of Life Satisfaction*

- [Stevenson and Wolfers \(2008\)](#): *Economic Growth and Subjective Well-Being: Reassessing the Easterlin Paradox*

Policy and Paternalism (one lecture)

- ** [Thaler and Sunstein \(2003\)](#): *Libertarian Paternalism*
- [Camerer et al. \(2003\)](#): *Regulation for Conservatives: Behavioral Economics and the Case for “Asymmetric Paternalism”*
- [Glaeser \(2006\)](#): *Paternalism and Psychology*
- [Loewenstein et al. \(2007\)](#): *Asymmetric Paternalism to Improve Health Behaviors*

Poverty Through the Lens of Psychology (two lectures)

- ** [Mani et al. \(2013\)](#): *Poverty Impedes Cognitive Function*
- ** [Schilbach, Mullainathan and Schofield \(2016\)](#): *The Psychological Lives of the Poor*
- [Banerjee et al. \(2015\)](#): *A Multi-faceted Program Causes Lasting Progress for the Very Poor: Evidence from Six Countries*
- [Haushofer and Fehr \(2014\)](#): *On the Psychology of Poverty*
- [Shah et al. \(2015\)](#): *Scarcity Frames Value*

Final exam during exam period (date TBD)

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