

MIT 14.13/14.131: Psychology and Economics

Syllabus Spring 2022

Instructors:

Main instructor: Frank Schilbach (fschilb@mit.edu)

Frank's office hours by appointment (Zoom or in person at E52-560): please sign up [HERE](#).

Six guest lectures by Elisa Macchi (emacchi@mit.edu)

Elisa's Office hours by appointment.

Lectures: Tuesdays and Thursdays 9:00 am to 10:30 am at 32-123

Teaching assistants and office hours:

Hector Blanco (hblanco@mit.edu); OH: Thursdays 5-6pm (in person: E52-548)

Antoine Boris Levy (levya@mit.edu); OH: Thursdays 4-5pm (in person: E52-416)

Sean Wang (swang1@mit.edu); OH: Wednesdays 4.30-5.30pm (in person: E52-532)

Edwin Song (song22@mit.edu); OH: Tuesdays 5-6pm (Zoom: <https://mit.zoom.us/j/99984212900>)

We will have additional office hours on Fridays before problem sets are due.

Recitations:

Fridays 11:00 am to 12:00 pm at 4-370

Fridays 12:00 pm to 1:00 pm at 4-370

Fridays 1:00 pm to 2:00 pm on Zoom: <https://mit.zoom.us/j/91454783913>

Course website: <https://canvas.mit.edu/courses/12762>

Online forum (Piazza): <https://piazza.com/mit/spring2022/1413>

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, concern 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 sheds 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 economic models, and how they apply to their everyday lives.

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 the instructors 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 slides as well as by a set of readings for each class, as specified in the reading list. Starred readings will feature in lectures, exams, and problem sets. If a reading is starred, you are strongly encouraged to read the paper prior to class, which means reading the sections announced in class, usually abstract, introduction, and selected sections of the paper.

Lectures. Each lecture will be given in person during the scheduled time of the class. Students are encouraged to attend these lectures. However, given difficulties for some students to attend in-person lectures due to circumstances of the pandemic, shortly after each lecture (usually within 24 hours), a recording of the class will be uploaded to the course website. Recitations will also be recorded. Given that the class does not follow a textbook, most of the course materials will be based on academic papers from leading journals. While the lecture slides are fairly comprehensive, the course material will be difficult to master without attending lectures live or watching the recordings. However, attendance of lecture and recitations does not factor into grades (see below).

Laptop policy. You may use laptops or tablets for note taking only. Cell phones, smart or not, are not allowed to be used in class.

Grading. The class is *not* graded on a curve. It is possible that everyone will do very well, which will make us very happy. However, if you do not put effort into this class, you will likely not do well. If we think you are in danger of failing the class, we will try to warn you before the drop date. Here are the different components of your grade:

- **Exams (60%).** There will be two exams.
 - (1) The mid-term exam will count for 20% of your grade. The mid-term exam will be done online. It will be designed for 85 minutes but you will be given 120 minutes to complete it online to account for difficulties uploading your answers or any other issues that may arise. The mid-term exam will take place on March 17, 2022 (instead of class on that day). You will be given several hours to pick a 120-minute window during which you can complete the exam.
 - (2) The cumulative final exam (180 minutes) will count for 40% of your grade. This exam will take place in person on Monday, May 16, 2022 from 1:30 PM to 4:30 PM at Johnson Track. 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 60% of your grade.
- **Problem sets (40%).** 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 Gradescope (<https://www.gradescope.com/>). 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 tentative problem set schedule is as follows:

- PS1 is due on Feb 22 at 8 pm.
- PS2 is due on Mar 11 at 8 pm.
- PS3 is due on Apr 8 at 8 pm.
- PS4 is due on Apr 22 at 8 pm.
- PS5 is due on May 6 at 8 pm.

Note that problem sets are each due at 8 pm. 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.

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

- (1) Email your TA along with a note describing specifically what you believe the problem to be.
- (2) The TA will schedule a meeting to discuss the issue, likely during TA office hours.

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. ([Link to Piazza](#)). We will have threaded discussions (monitored by the TAs 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) Ask questions during recitation and lectures.
- (iii) Ask questions during TA office hours (on Zoom or in-person, see above).
- (iv) Ask questions during Prof. Schilbach's office hours (on Zoom or in-person, see above)

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 at MIT](#)).
- 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.
- 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 send an email with a picture of a tiger to Prof. Schilbach (fschilb@mit.edu), with the subject line “14.13 confirmation”. Please send interesting pictures, not just the first one that shows up when googling ‘tiger’.

Other MIT Resources

The Department of Economics values an inclusive environment. If you need a disability accommodation to access this course, please communicate with us early in the semester. If you have your accommodation letter, please meet with the faculty so that we can understand your needs and implement your approved accommodations. If you have not yet been approved for accommodations, please contact Student Disability Services at uaap-sds@mit.edu to learn about their procedures. We encourage you to do so early in the term to allow sufficient time for implementation of services/accommodations that you may need.

The WCC at MIT (Writing and Communication Center) offers free one-on-one professional advice from communication experts. The WCC is staffed completely by MIT lecturers. All have advanced degrees. All are experienced college classroom teachers of communication. All are published scholars and writers. Not counting the WCC’s director’s years (he started the WCC in 1982), the WCC lecturers have a combined 133 years’ worth of teaching here at MIT (ranging from 4 to 24 years). The WCC works with undergraduate, graduate students, post-docs, faculty, staff, alums, and spouses.

The WCC helps you strategize about all types of academic and professional writing as well as about all aspects of oral presentations (including practicing classroom presentations & conference talks as well as designing slides). No matter what department or discipline you are in, the WCC helps you think your way more deeply into your topic, and helps you see new implications in your data, research, and ideas.

The WCC also helps with all English as Second Language issues, from writing and grammar to pronunciation and conversation practice. The WCC is located in E18-233, 50 Ames Street. To guarantee yourself a time, make an appointment. To register with our online scheduler and to make appointments, go to <https://mit.mywconline.com/>.

To access the WCC’s many pages of advice about writing and oral presentations, go to <http://cmsw.mit.edu/writing-and-communication-center/>. Check the online scheduler for up-to-date hours and available appointments.

Tentative Schedule and Reading List

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*

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 will be covered in lectures, problem sets and exams. Students are strongly encouraged to read these papers before coming to class.
- We 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.

Introduction and Overview (Frank, February 1, 3)

- ** [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*
- [Thaler \(2016\)](#): *Behavioral Economics: Past, Present, and Future*

Time Preferences (Frank, February 8, 10, 15, 17)

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*

Feb 22: No class (Monday schedule)

Risk Preferences and Reference Dependence (Frank, February 24, March 1 and 3)

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*

Limited Attention (Frank, March 8)

- ** Chetty et al. (2009): *Saliency and Taxation: Theory and Evidence*
- DellaVigna (2009): *Psychology and Economics: Evidence from the Field*
- Hanna et al. (2014): *Learning Through Noticing: Theory and Evidence from a Field Experiment*
- Morrison and Taubinsky (2019): *Rules of Thumb and Attention Elasticities: Evidence from Under- and Overreaction to Taxes*
- Huberman and Regev (2001): *Contagious Speculation and a Cure for Cancer: A Nonevent That Made Stock Prices Soar*
- Lacetera et al. (2012): *Heuristic Thinking and Limited Attention in the Car Market*
- DellaVigna and Pollet (2009): *Investor Inattention and Friday Earnings Announcements*

Beliefs and Learning (Frank, March 10 and 15)

- Oster et al. (2013): *Optimal Expectations and Limited Medical Testing: Evidence from Huntington's Disease*
- ** Tversky and Kahneman (1974): *Judgment under Uncertainty: Heuristics and Biases*
- 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*

March 17: Mid-term exam

March 22 and 24: No class (Spring break)

Projection and Attribution Bias (Frank, March 29)

- ** [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*
- [Haggag and Pope \(2016\)](#): *Attribution Bias in Economic Decision Making*

Social Preferences (Frank/Elisa March 31; Elisa April 5, 7, 12, 14)

Experiments in Class (March 31)

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

Modeling and Measuring Social Preferences

- ** [Camerer and Fehr \(2004\)](#): *Measuring social norms and preferences using experimental games: A guide for social scientists*
- ** [Bursztyrn and Jensen \(2017\)](#): *Social image and economic behavior in the field: Identifying, understanding, and shaping social pressure*

Empirical Applications

- ** [Bandiera et al. \(2005\)](#): *Social Preferences and the Response to Incentives: Evidence from Personnel Data*
- ** [Rao \(2019\)](#): *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*

- [Curry et al. \(2018\)](#): *Happy to Help? A Systematic Review and Meta-analysis of the Effects of Performing Acts of Kindness on the Well-being of the Actor*
- [Dana et al. \(2007\)](#): *Exploiting Moral Wiggle Room: Experiments Demonstrating an Illusory Preference for Fairness*
- [Ellingsen and Johannesson \(2007\)](#): *Paying Respect*
- [Bursztyn and Jensen \(2015\)](#): *How does peer pressure affect educational investments?*
- [Bursztyn et al. \(2020\)](#): *Misperceived social norms: Women working outside the home in Saudi Arabia*

Gender, Discrimination, and Identity (Elisa, April 19)

- ** [Sarsons \(2019\)](#): *Interpreting Signals in the Labor Market: Evidence from Medical Referrals*
- [Bertrand et al. \(2015\)](#): *Gender Identity and Relative Income within Households*
- [Goldin \(2014\)](#): *A Grand Gender Convergence: Its Last Chapter*
- [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*

Frames, Defaults, and Nudges (Elisa, April 21)

- ** [Madrian and Shea \(2001\)](#): *The Power of Suggestion: Inertia in 401(k) Participation and Savings Behavior*
- [Carroll et al. \(2009\)](#): *Optimal Defaults and Active Decisions*
- [Chetty et al. \(2014\)](#): *Active vs. Passive Decisions and Crowd-Out in Retirement Savings Accounts*
- [Bernheim et al. \(2015\)](#): *The Welfare Economics of Default Options in 401(k) Plans*
- [Chetty \(2015\)](#): *Behavioral Economics and Public Policy: A Pragmatic Perspective*
- [Beshears et al. \(2005\)](#): *The importance of default options for retirement saving outcomes: evidence from the United States*
- [Thaler and Benartzi \(2004\)](#): *Save More TomorrowTM: Using Behavioral Economics to Increase Employee Saving*
- [Cronqvist and Thaler \(2004\)](#): *Design Choices in Privatized Social-Security Systems: Learning from the Swedish Experience*
- [Bhargava et al. \(2017\)](#): *Choose to Lose: Health Plan Choices from a Menu with Dominated Option*
- [Handel \(2013\)](#): *Adverse Selection and Inertia in Health Insurance Markets: When Nudging Hurts*

- Johnson and Goldstein (2003): *Do Defaults Save Lives?*
- Bettinger et al. (2009): *The Role of Simplification and Information in College Decisions: Results from the HR Block FAFSA Experiment*

Malleability and Inaccessibility of Preferences (Frank, Apr 26)

- ** 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*

Happiness and Mental Health (Frank, April 28)

- ** Kahneman and Krueger (2006): *Developments in the Measurement of Subjective Well-Being*
- Kahneman and Deaton (2010): *High income improves evaluation of life but not emotional well-being*
- Stevenson and Wolfers (2008): *Economic Growth and Subjective Well-Being: Reassessing the Easterlin Paradox*
- Levitt (2016): *Heads or Tails: The Impact of a Coin Toss on Major Life Decisions and Subsequent Happiness*
- 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*

Poverty Through the Lens of Psychology (Frank, May 3 and 5)

- ** Mani et al. (2013): *Poverty Impedes Cognitive Function*
- Schilbach et al. (2016): *The Psychological Lives of the Poor*
- Shah et al. (2018): *Money in the Mental Lives of the Poor*
- Banerjee et al. (2015): *A Multi-faceted Program Causes Lasting Progress for the Very Poor: Evidence from Six Countries*
- Bessone et al. (2021): *The Economic Consequences of Increasing Sleep Among the Urban Poor*
- Dean (2021): *Noise, Cognitive Function, and Worker Productivity*
- Duquenois (2022): *Fictional Money, Real Costs: Impacts of Financial Salience on Disadvantaged Students*
- Haushofer and Fehr (2014): *On the Psychology of Poverty*
- Kaur et al. (2022): *Do Financial Concerns Make Workers Less Productive?*

- [Rao et al. \(2021\)](#): *Informing sleep policy through field experiments*
- [Ridley et al. \(2020\)](#): *Poverty, depression, and anxiety: Causal evidence and mechanisms*
- [Shah et al. \(2015\)](#): *Scarcity Frames Value*

Policy and Paternalism (Frank, May 10)

** [Thaler and Sunstein \(2003\)](#): *Libertarian Paternalism*

- [Allcott and Kessler \(2019\)](#): *The Welfare Effects of Nudges: A Case Study of Energy Use Social Comparisons*
- [Camerer et al. \(2003\)](#): *Regulation for Conservatives: Behavioral Economics and the Case for “Asymmetric Paternalism”*
- [Fishbane et al. \(2020\)](#): *Behavioral nudges reduce failure to appear for court*
- [Glaeser \(2006\)](#): *Paternalism and Psychology*
- [Loewenstein et al. \(2007\)](#): *Asymmetric Paternalism to Improve Health Behaviors*

Final exam during exam period (May 16)

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