

MIT 14.13: Psychology and Economics

Frank Schilbach and Dmitry Taubinsky

Syllabus Fall 2020

Instructors:

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Individual Zoom office hours by appointment – please sign up [HERE](#).

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Lectures: Tuesdays and Thursdays 10:30 AM - 12 PM on Zoom (<https://mit.zoom.us/j/98330225807>)

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Matthew Ridley (mridley@mit.edu)

Wednesdays 4:00 PM - 5:00 PM

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Recitations: <https://mit.zoom.us/j/91727034890>

Thursdays 1:00 PM - 2:00 PM

Fridays 11:00 AM - 12:00 PM

Fridays 2:00 PM - 3:00 PM

Course website:

<https://canvas.mit.edu/courses/3612>

Online forum (Piazza): <https://piazza.com/mit/fall2020/1413/home>

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 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 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 on Zoom during the scheduled time of the class. Students are strongly encouraged to attend these lectures synchronously during this time. However, given difficulties for some students to attend online lectures live in different time zones, etc., a recording of this class will be uploaded to the course website as well. 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 does not factor into grades (see below).

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 (50%).** There will be two exams, which will both be administered online.
 - (1) The mid-term exam will count for 25% of your grade. 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 October 20, 2020 (instead of class on that day). Starting at 8:01 am EDT, you will be given 12 hours (until 8:00 pm EDT) to pick a 120-minute window during which you can complete the exam.
 - (2) The cumulative final exam (180 minutes) will count for 25% of your grade. Again, we will ensure you have time to upload your answers. 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 50% of your grade. The final exam will take place during the finals period (exact day to be determined by the registrar). Starting at 8:01 am EST, you will be given 12 hours (until 8:00 pm EST) to pick a 180-minute window during which you can complete the exam.
- **Problem sets (30%).** 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 Sep 22 at 6 pm.
- PS2 is due on Oct 6 at 6 pm.
- PS3 is due on Oct 29 at 6 pm.
- PS4 is due on Nov 12 at 6 pm.
- PS5 is due on Dec 3 at 6 pm.

Note that problem sets are each due at 6 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.

- **Weekly memos (20%).** Each week, you will be asked to write a brief memo (1 - 2 paragraphs) that relates the class content to issues that you experienced in your life. Memos will be due on **Sunday at 6pm**, and should be at least 150 words (please do not send more than one page).

The goal of the memos is for you to reflect on the course material and think about how it is relevant to your life. In addition, the memos will help you stay up-to-date with the course materials each week. As such, we will not grade the memos harshly and expect to give most memos full marks. Your best 8 out of 10 memos will count toward your grade.

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 an in-person 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 ([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, see above).
- (iv) Ask questions during Prof. Schilbach's office hours (on Zoom, 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.
- **IMPORTANT:** On the mid-term and final exam, you can consult your notes but you must work on your own, i.e. without the help of other students or anyone else in person or online.
- 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 bear 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 'bear'.

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 (FS, Sep 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 (FS, Sep 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*

Risk Preferences (DT, Sep 22, 24) and Reference Dependence (DT, Sep 29, Oct 1)

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 (FS, Oct 6, 8, 15, 22)

Experiments in Class (October 6)

- 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 \(2019\)](#): *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*
- [Dana et al. \(2007\)](#): *Exploiting Moral Wiggle Room: Experiments Demonstrating an Illusory Preference for Fairness*
- [Ellingsen and Johannesson \(2007\)](#): *Paying Respect*

Oct 13: No class (Monday schedule)

Oct 20: Mid-term exam

Beliefs and Learning (DT, Oct 27)

- ** [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*

Limited Attention (DT, Oct 29)

- ** [Chetty et al. \(2009\)](#): *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*

Heuristic Choice (DT, Nov 3, 5)

Anchoring

- [Jacowitz and Kahneman \(1995\)](#): *Measures of Anchoring in Estimation Tasks*
- [Ariely et al. \(2003\)](#): *'Coherent Arbitrariness': Stable Demand Curves Without Stable Preferences*
- [Bruner and Potter \(1964\)](#): *Interference in Visual Recognition*
- [Lord and Lepper \(1979\)](#): *Biased Assimilation and Attitude Polarization: The Effects of Prior Theories on Subsequently Considered Evidence*
- [Tversky and Kahneman \(1974\)](#): *Judgment under Uncertainty: Heuristics and Biases*

Bracketing

- [Tversky and Kahneman \(1986\)](#): *The Behavioral Foundations of Economic Theory*
- Ironing and Spotlighting
- [Ito \(2014\)](#): *Do Consumers Respond to Marginal or Average Price? Evidence from Nonlinear Electricity Pricing*
- [Liebman and Zeckhauser \(2004\)](#): *Scheduling*
- [Rees-Jones and Taubinsky \(2018\)](#): *Taxing Humans: Pitfalls of the Mechanism Design Approach and Potential Resolutions*
- Mental Accounting and Applications
- [Thaler \(1990\)](#): *Saving, Fungibility, and Mental Accounts*
- [Milkman and Beshears \(2009\)](#): *Mental accounting and small windfalls: Evidence from an online grocer*
- [Hastings and Shapiro \(2013\)](#): *Fungibility and Consumer Choice: Evidence from Commodity Price Shocks*
- [Thaler \(1981\)](#): *An Economic Theory of Self-Control*
- [Kooreman \(2000\)](#): *The Labeling Effect of a Child Benefit System*
- [Almond et al. \(2011\)](#): *Inside the War on Poverty: The Impact of Food Stamps on Birth Outcomes*
- [Shapiro and Slemrod \(2001\)](#): *Consumer Response to Tax Rebates*
- [Feldman \(2010\)](#): *Mental Accounting Effects of Income Tax Shifting*
- [Fogel et al. \(2004\)](#): *Loss Aversion for Quality in Consumer Choice*

Behavioral Agents in Markets (DT, Nov 10)

Market Forces

- [Friedman \(1953\)](#): *Essays in Positive Economics*
- [Grossman and Miller \(1988\)](#): *Grossman, Sanford and Miller, Merton*
- [De Long et al. \(1990\)](#): *Noise Trader Risk in Financial Markets*
- [Shleifer and Vishny \(1997\)](#): *The Limits of Arbitrage*
- [Lamont and Thaler \(2003\)](#): *Can the Market Add and Subtract? Mispricing in Tech Stock Carve-outs*

Shrouded Attributes

- [Gabaix and Laibson \(2006\)](#): *Shrouded Attributes, Consumer Myopia, and Information Suppression in Competitive Markets*
- [Woodward and Hall \(2010\)](#): *Consumer Confusion in the Mortgage Market: Evidence of Less Than a Perfectly Transparent and Competitive Market*
- [Ausubel \(1991\)](#): *The Failure of Competition in the Credit Card Market*
- [Agarwal et al. \(2008\)](#): *Learning in the Credit Card Market*
- [Alexander et al. \(1998\)](#): *Mutual fund shareholders: characteristics, investor knowledge, and sources of information*
- [Barber et al. \(2005\)](#): *Out of Sight, Out of Mind: The Effects of Expenses on Mutual Fund Flows*
- [Hall \(2003\)](#): *The Inkjet Aftermarket: An Economic Analysis*
- [Hossain and Morgan \(2006\)](#): *Shrouded attributes and information suppression: Evidence from field experiments*
- [Brown et al. \(2010\)](#): *Shrouded Attributes and Information Suppression: Evidence from the Field*

Default Effects, Nudges, and Policy (DT, Nov 12)

- [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*
- [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: Evidence from Denmark*
- [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*

Optimal Public Policy with Behavioral Agents (DT, Nov 17, 19)

- [Allcott and Taubinsky \(2015\)](#): *Evaluating Behaviorally Motivated Policy: Experimental Evidence from the Lightbulb Market*
- [Allcott et al. \(2019\)](#): *Regressive Sin Taxes, with an Application to the Optimal Soda Tax*

Nov 24, 26: No class (Thanksgiving)

Poverty Through the Lens of Psychology (FS, Dec 1)

- ** [Mani et al. \(2013\)](#): *Poverty Impedes Cognitive Function*
- [Schilbach et al. \(2016\)](#): *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*

Happiness and Mental Health (FS, Dec 3)

- ** [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*

Gender, Discrimination, and Identity (FS, Dec 8)

- ** [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*

Final exam during exam period (TBD)

References

- Agarwal, Sumit, John Driscoll, Xavier Gabaix, and David Laibson**, “Learning in the Credit Card Market,” *NBER Working Papers 13822*, 2008.
- Akerlof, George A.**, “Procrastination and Obedience,” *American Economic Review, Papers and Proceedings*, 1991, *81* (2), 1–19.
- Alexander, Gordon, Jonathan D. Jones, and Peter Nigro**, “Mutual fund shareholders: characteristics, investor knowledge, and sources of information,” *Financial Services Review*, 1998, *7* (4), 301–316.
- Allcott, Hunt and Dmitry Taubinsky**, “Evaluating Behaviorally Motivated Policy: Experimental Evidence from the Lightbulb Market,” *American Economic Review*, 2015, *105* (8), 2501–2538.
- , **Benjamin B Lockwood, and Dmitry Taubinsky**, “Regressive Sin Taxes, with an Application to the Optimal Soda Tax,” *The Quarterly Journal of Economics*, 2019, *134* (3), 1557–1626.
- Allen, Eric, Patricia Dechow, Devin Pope, and George Wu**, “Reference-Dependent Preferences: Evidence from Marathon Runners,” *Management Science*, 2017, *63* (6), 1657–1672.
- Almond, Douglas, Hilary Hoynes, and Diane Whitmore Schanzenbach**, “Inside the War on Poverty: The Impact of Food Stamps on Birth Outcomes,” *The Review of Economics and Statistics*, 2011, *93* (2), 387–403.
- Andreoni, James and Douglas Bernheim**, “Social Image and the 50-50 Norm: A Theoretical and Experimental Analysis of Audience Effects,” *Econometrica*, 2007, *77* (5).
- Ariely, Dan**, *Predictably Irrational: The Hidden Forces that Shape our Decisions*, New York: Harper, 2009.
- and **Klaus Wertenbroch**, “Procrastination, Deadlines, and Performance: Self-Control by Precommitment,” *Psychological Science*, 2002, *13* (3), 219–224.
- , **George Loewenstein, and Drazen Prelec**, “‘Coherent Arbitrariness’: Stable Demand Curves Without Stable Preferences,” *Quarterly Journal of Economics*, 2003, *118* (1), 73–106.
- Ashraf, Nava, Dean Karlan, and Wesley Yin**, “Tying Odysseus to the Mast: Evidence from a Commitment Savings Product in the Philippines,” *Quarterly Journal of Economics*, 2006, *121* (2), 635–672.
- Ausubel, Lawrence M.**, “The Failure of Competition in the Credit Card Market,” *American Economic Review*, 1991, *81* (1), 50–81.
- Bandiera, Oriana, Iwan Barankay, and Imran Rasul**, “Social Preferences and the Response to Incentives: Evidence from Personnel Data,” *Quarterly Journal of Economics*, 2005, *120* (3), 917–962.
- Banerjee, Abhijit, Nathanael Goldberg, Dean Karlan, Pariente William Osei Robert, Jeremy Shapiro, Bram Thuysbaert, and Christopher Udry**, “A Multi-faceted Program Causes Lasting Progress for the Very Poor: Evidence from Six Countries,” *Science*, 2015, *348* (6236), 772–788.
- Barber, Brad, Terrance Odean, and Lu Zheng**, “Out of Sight, Out of Mind: The Effects of Expenses on Mutual Fund Flows,” *The Journal of Business*, 2005, *78* (6), 2095–2120.
- Bertrand, Marianne, Emir Kamenica, and Jessica Pan**, “Gender Identity and Relative Income within Households,” *Quarterly Journal of Economics*, 2015, *130* (2), 571–614.
- Beshears, John, James Choi, David Laibson, and Brigitte Madrian**, “The importance of default options for retirement saving outcomes: evidence from the United States,” 2005, (43).
- Bettinger, Eric, Bridget Long, Philip Oreopoulos, and Lisa Sanbonmatsu**, “The Role of Simplification and Information in College Decisions: Results from the HR Block FAFSA Experiment,” *NBER Working Papers 15361*, 2009.

- Bhargava, Saurabh, George Loewenstein, and Justin Sydnor**, “Choose to Lose: Health Plan Choices from a Menu with Dominated Option,” *The Quarterly Journal of Economics*, 2017, *132* (3), 1319–1372.
- Brown, Jennifer, Tanjim Hossain, and John Morgan**, “Shrouded Attributes and Information Suppression: Evidence from the Field,” *The Quarterly Journal of Economics*, 2010, *125* (2), 859–876.
- Bruner, J. S. and M. C. Potter**, “Interference in visual recognition,” *Science*, 1964, *144*, 424–425.
- Bryan, Gharad, Dean Karlan, and Scott Nelson**, “Commitment Devices,” *Annual Review of Economics*, 2010, *2*, 671–698.
- Camerer, Colin**, “Prospect Theory in the Wild: Evidence from the Field,” in Daniel Kahneman and Amos Tversky, eds., *Choices, Values, and Frames*, Cambridge: Cambridge University Press, 2001, chapter 16.
- **and Ernst Fehr**, “Measuring social norms and preferences using experimental games: A guide for social scientists,” in Bowles Camerer Fehr Gintis Henrich, Boyd and McElreath, eds., *Foundations of Human Sociality*, Oxford: Oxford University Press, 2004.
- **, Linda Babcock, George Loewenstein, and Richard Thaler**, “Labor Supply of New York City Cabdrivers: One Day at a Time,” *Quarterly Journal of Economics*, 1997, *112* (2), 407–441.
- Carmon, Ziv and Dan Ariely**, “Focusing on the Forgone: How Value Can Appear So Different to Buyers and Sellers,” *Journal of Consumer Research*, 2000, *27* (3), 360–370.
- Carroll, Gabriel D., James J. Choi, David Laibson, Brigitte C. Madrian, and Andrew Metrick**, “Optimal Defaults and Active Decisions,” *Quarterly Journal of Economics*, 2009, *124* (4), 1639–1674.
- Carter, Susan, Kyle Greenberg, and Michael Walker**, “The Impact of Computer Usage on Academic Performance: Evidence from a Randomized Trial at the United States Military Academy,” *Economics of Education Review*, 2017, *56*, 118–132.
- Chen, Daniel, Tobias J. Moskowitz, and Kelly Shue**, “Decisionmaking under the Gambler’s Fallacy: Evidence from Asylum Judges, Loan Officers, and Baseball Umpires,” *Quarterly Journal of Economics*, 2016, *131* (3), 1181–1242.
- Chetty, Raj**, “Behavioral Economics and Public Policy: A Pragmatic Perspective,” *American Economic Review*, 2015, *105* (5), 1–33.
- **, Adam Looney, and Kory Kroft**, “Salience and Taxation: Theory and Evidence,” *American Economic Review*, 2009, *99* (4), 1145–1177.
- **, John N. Friedman, Soren Leth-Petersen, Torben Heien Nielsen, and Tore Olsen**, “Active vs. Passive Decisions and Crowd-Out in Retirement Savings Accounts: Evidence from Denmark,” *Quarterly Journal of Economics*, 2014, *129* (3), 1141–1219.
- Cialdini, Robert B.**, *Influence, the Psychology of Persuasion*, New York: William Morrow Publishing Company, 1993.
- Cronqvist, Henrik and Richard H. Thaler**, “Design Choices in Privatized Social-Security Systems: Learning from the Swedish Experience,” *American Economic Review*, 2004, *94* (2), 424–428.
- Dana, Jason, Roberto A. Weber, and Jason Xi Kuang**, “Exploiting Moral Wiggle Room: Experiments Demonstrating an Illusory Preference for Fairness,” *Economic Theory*, 2007, *33* (1).
- Darley, John and C. Daniel Batson**, ““From Jerusalem to Jericho”: A Study of Situational and Dispositional Variables in Helping Behavior,” *Journal of Personality and Social Psychology*, 1973, *27* (1), 100–108.
- DellaVigna, Stefano**, “Psychology and Economics: Evidence from the Field,” *Journal of Economic Literature*, 2009, *47* (2), 315–372.

- and Ulrike Malmendier, “Paying Not To Go To the Gym,” *American Economic Review*, 2006, 96 (3), 694–719.
- Ellingsen, Tore and Magnus Johannesson, “Paying Respect,” *Journal of Economic Perspectives*, 2007, 21 (4).
- Feldman, Naomi, “Mental Accounting Effects of Income Tax Shifting,” *The Review of Economics and Statistics*, 2010, 92 (1), 70–86.
- Fogel, Suzanne, Dan Lovallo, and Carmina Caringal, “Loss Aversion for Quality in Consumer Choice,” *Australian Journal of Management*, 2004, 29 (1), 45–63.
- Frederick, Shane, George Loewenstein, and Ted O’Donoghue, “Time Discounting and Time Preference: A Critical Review,” *Journal of Economic Literature*, 2002, XL (2), 351–401.
- Fredrickson, Barbara L., Tomi-Ann Roberts, Stephanie M. Noll, Diane M. Quinn, and Jean M. Twenge, “That Swimsuit Becomes You: Sex Differences in Self-Objectification, Restrained Eating, and Math Performance,” *Journal of Personality and Social Psychology*, 1998, 75 (5), 1098–1098.
- Friedman, Milton, *Essays in Positive Economics*, University of Chicago Press, 1953.
- G., L. Ross Lord Charles and M. R. Lepper, “Biased Assimilation and Attitude Polarization: The Effects of Prior Theories on Subsequently Considered Evidence,” *Journal of Personality and Social Psychology*, 1979, 37 (11), 2098–2109.
- Gabaix, Xavier and David Laibson, “Shrouded Attributes, Consumer Myopia, and Information Suppression in Competitive Markets,” *The Quarterly Journal of Economics*, 2006, 121 (2), 505–540.
- and —, “The Seven Properties of Good Models,” *The Foundations of Positive and Normative Economics: A Handbook*, 2008.
- Genesove, David and Christopher Mayer, “Loss Aversion and Seller Behavior: Evidence from the Housing Market,” *Quarterly Journal of Economics*, 2001, 116 (4), 1233–1260.
- Gilovich, Thomas, Robert Vallone, and Amos Tversky, “The Hot Hand in Basketball: On the Misperception of Random Sequences,” *Cognitive Psychology*, 1985, 17.
- Gneezy, Uri and John List, “Putting Behavioral Economics to Work: Testing for Gift Exchange in Labor Markets Using Field Experiments,” *Econometrica*, 2006, 74 (5), 1365–1384.
- Gold, E and G Hester, “The gambler’s fallacy and the coin’s memory,” *Unpublished manuscript. Carnegie Mellon University.*, 1987.
- Goldin, Claudia, “A Grand Gender Convergence: Its Last Chapter,” *American Economic Review*, 2014, 104 (4), 1091–1119.
- Grossman, Sanford and Merton Miller, “Liquidity and Market Structure,” *NBER Working Papers 2641*, 1988.
- Gruber, Jonathan and Botond Koszegi, “Is Addiction ‘Rational’? Theory and Evidence,” *Quarterly Journal of Economics*, 2001, 116 (4), 1261–1303.
- Hall, Robert, “The Inkjet Aftermarket: An Economic Analysis,” *Stanford University Working Paper*, 2003.
- Handel, Benjamin, “Adverse Selection and Inertia in Health Insurance Markets: When Nudging Hurts,” *American Economic Review*, 2013, 103 (7), 2643–2682.
- Hanna, Rema, Sendhil Mullainathan, and J. Schwartzstein, “Learning Through Noticing: Theory and Evidence from a Field Experiment,” *Quarterly Journal of Economics*, 2014, 129 (3), 1311–1353.
- Hastings, Justine and Jesse Shapiro, “Fungibility and Consumer Choice: Evidence from Commodity Price Shocks,” *Quarterly Journal of Economics*, 2013, 128 (4), 1449–1498.

- Haushofer, Johannes and Ernst Fehr**, “On the Psychology of Poverty,” *Science*, 2014, *344* (6186), 862–867.
- Henrich, Joseph**, “Hunter-Gatherer Cooperation,” *Nature*, 2012, *481*.
- Hershfield, Hal E.**, “Future Self-Continuity: How Conceptions of the Future Self Transform Intertemporal Choice,” *Annals of the New York Academy of Sciences*, 2011, *1235*, 30–43.
- Hossain, Tanjim and John Morgan**, “Shrouded attributes and information suppression: Evidence from field experiments,” *University of California, Berkeley mimeo*, 2006.
- Huberman, Gur and Tomer Regev**, “Contagious Speculation and a Cure for Cancer: A Nonevent That Made Stock Prices Soar,” *The Journal of Finance*, 2001, *56* (1).
- Ito, Koichiro**, “Do Consumers Respond to Marginal or Average Price? Evidence from Nonlinear Electricity Pricing,” *American Economic Review*, 2014, *104* (2), 537–563.
- Jacowitz, K. E. and D. Kahneman**, “Measures of Anchoring in Estimation Tasks,” *Personality and Social Psychology Bulletin*, 1995, *21*, 1161–1166.
- Johnson, Eric J. and Daniel Goldstein**, “Do Defaults Save Lives?,” *Science*, 2003, *302* (5649), 1338–1339.
- Kahneman, Daniel**, “New Challenges to the Rationality Assumption,” *Journal of Institutional and Theoretical Economics*, 1994, *150*, 18–36.
- , *Thinking, Fast and Slow*, New York: Farrar, Straus and Giroux, 2011.
- **and Amos (eds.) Tversky**, *Choices, Values and Frames*, New York: Russell Sage Foundation: Cambridge University Press, 2000.
- **and Richard H. Thaler**, “Anomalies: Utility Maximization and Experienced Utility,” *Journal of Economic Perspectives*, 2006, *20* (1), 221–234.
- , **Paul Slovic, and Amos Tversky**, *Judgment Under Uncertainty: Heuristics and Biases*, New York: Cambridge University Press, 1982.
- Kaur, Supreet, Michael Kremer, and Sendhil Mullainathan**, “Self-Control at Work,” *Journal of Political Economy*, 2015, *123* (6), 1227–1277.
- Kooreman, Peter**, “The Labeling Effect of a Child Benefit System,” *American Economic Review*, 2000, *90* (3), 571–583.
- Koszegi, Botond and Matthew Rabin**, “Choices, Situations and Happiness,” *Journal of Public Economics*, 2008, *92* (8-9), 1821–1832.
- Laibson, David**, “Golden Eggs and Hyperbolic Discounting,” *Quarterly Journal of Economics*, 1997, *112* (2), 443–478.
- Lamont, Owen and Richard Thaler**, “Can the Market Add and Subtract? Mispricing in Tech Stock Carve-outs,” *Journal of Political Economy*, 2003, *111* (2), 227–268.
- Lazear, Edward, Ulrike Malmendier, and Roberto Weber**, “Sorting, Prices, and Social Preferences,” *NBER Working Paper 12041*, 2006.
- Levitt, Steven D.**, “Heads or Tails: The Impact of a Coin Toss on Major Life Decisions and Subsequent Happiness,” *NBER Working Paper*, 2016.
- Lewis, Michael**, *The Undoing Project: A Friendship That Changed Our Minds*, New York: W. W. Norton & Company, 2017.
- Liebman, Jeffrey B and Richard Zeckhauser**, “Schmeduling,” *Working Paper*, 2004.

- Loewenstein, George**, “Anticipation and the Valuation of Delayed Consumption,” *The Economic Journal*, 1987, *97* (387).
- Long, J Bradford De, Andrei Shleifer, Lawrence Summers, and Robert Waldmann**, “Noise Trader Risk in Financial Markets,” *Journal of Political Economy*, 1990, *98* (4), 703–738.
- Madrian, Brigitte C. and Dennis F. Shea**, “Power of Suggestion: Inertia in 401(k) Participation and Savings Behavior,” *Quarterly Journal of Economics*, 2001, *116* (4), 1149–1187.
- Malmendier, Ulrike and Geoffrey Tate**, “Who makes acquisitions? CEO overconfidence and the market’s reaction,” *Journal of Financial Economics*, 2008, *89*.
- Mani, Anandi, Sendhil Mullainathan, Eldar Shafir, and Jiaying Zhao**, “Poverty Impedes Cognitive Function,” *Science*, 2013, *341* (6149), 976–980.
- Milkman, Katherine and John Beshears**, “Mental accounting and small windfalls: Evidence from an online grocer,” *Journal of Economic Behavior & Organization*, 2009, *71* (2), 384–394.
- , **Julia A. Minson, and Kevin G.M. Volpp**, “Holding the Hunger Games Hostage at the Gym: An Evaluation of Temptation Bundling,” *Management Science*, 2014, *60* (2), 283–299.
- Mullainathan, Sendhil and Eldar Shafir**, *Scarcity: Why Having Too Little Means So Much*, Time Books, Henry Holt and Co. LLC, 2013.
- and **Richard H. Thaler**, “Behavioral Economics,” *National Bureau of Economic Research*, 2000, (w7948).
- Niederle, Muriel and Lise Vesterlund**, “Gender and Competition,” *Annual Review of Economics*, 2011, *3*, 601–630.
- O’Donoghue, Ted and Matthew Rabin**, “Doing It Now or Later,” *American Economic Review*, 1999, *89* (1), 103–124.
- and —, “Choice and Procrastination,” *Quarterly Journal of Economics*, 2001, *116* (1), 121–160.
- Oster, Emily, Ira Shoulson, and E. Ray Dorsey**, “Optimal Expectations and Limited Medical Testing: Evidence from Huntington Disease,” *American Economic Review*, 2013, *103* (2), 804–830.
- Pope, Devin and Maurice Schweitzer**, “Is Tiger Woods Loss Averse? Persistent Bias in the Face of Experience, Competition, and High Stakes,” *American Economic Review*, 2011, *101* (1), 129–157.
- Rabin, Matthew**, “Psychology and Economics,” *Journal of Economic Literature*, 1998, *36* (1), 11–46.
- , “Risk Aversion and Expected-utility Theory: A Calibration Theorem,” *Econometrica*, 2000, *68* (5), 1281–1292.
- , “A Perspective on Psychology and Economics,” *European Economic Review*, 2002, *46* (4-5), 657–685.
- , “Incorporating Limited Rationality into Economics,” *Journal of Economic Literature*, 2013, *51* (2), 528–543.
- and **Richard Thaler**, “Anomalies – Risk Aversion,” *Journal of Economic Perspectives*, 2001, *15* (1), 219–232.
- Rao, Gautam**, “Familiarity Does Not Breed Contempt: Diversity, Discrimination and Generosity in Delhi Schools,” *American Economic Review*, 2019.
- Rees-Jones, Alex and Dmitry Taubinsky**, “Taxing Humans: Pitfalls of the Mechanism Design Approach and Potential Resolutions,” *Tax Policy and the Economy*, 2018, *32* (1), 107–133.
- Ross, Lee and Richard E. Nisbett**, *The Person and the Situation: Perspectives of Social Psychology*, Philadelphia: Temple University Press, 1991.

- Sarsons, Heather**, “Interpreting Signals in the Labor Market: Evidence from Medical Referrals,” *Working Paper*, 2019.
- Schilbach, Frank**, “Alcohol and Self-Control : A Field Experiment in India,” *mimeo*, 2017.
- , **Sendhil Mullainathan, and Heather Schofield**, “The Psychological Lives of the Poor,” *American Economic Review Papers and Proceedings*, 2016, *106* (5), 435–440.
- Schkade, David and Daniel Kahneman**, “Does Living in California Make People Happy? A Focusing Illusion in Judgments of Life Satisfaction,” *Psychological Science*, 1998, *9* (5), 340–346.
- Shah, Anuj, Sendhil Mullainathan, and Eldar Shafir**, “Scarcity Frames Value,” *Psychological Science*, 2015, *26* (4), 402–412.
- Shapiro, Matthew and Joel Slemrod**, “Consumer Response to Tax Rebates,” *NBER Working Paper 8672*, 2001.
- Shleifer, Andrei and Robert Vishny**, “The Limits of Arbitrage,” *Journal of Finance*, 1997, *52* (1), 35–55.
- Stevenson, Betsey and Justin Wolfers**, “Economic Growth and Subjective Well-Being: Reassessing the Easterlin Paradox,” *Brookings Papers on Economic Activity*, 2008, *Spring*, 1–102.
- Sydnor, Justin**, “(Over)insuring Modest Risks,” *American Economic Journal: Applied Economics*, 2010, *2* (4), 177–199.
- Thaler, Richard**, “Some Empirical Evidence on Dynamic Inconsistency,” *Economics Letters*, 1981, *8*, 201–207.
- Thaler, Richard H.**, “Saving, Fungibility, and Mental Accounts,” *Journal of Economic Perspectives*, 1990, *4* (1), 193–205.
- , *Misbehaving: The Making of Behavioral Economics*, New York: W. W. Norton & Company, 2015.
- , “Behavioral Economics: Past, Present, and Future,” *American Economic Review*, 2016, *106* (7), 1577–1600.
- **and Cass R. Sunstein**, *Nudge: Improving Decisions about Health, Wealth and Happiness*, New Haven: Yale University Press, 2008.
- **and Shlomo Benartzi**, “Save More TomorrowTM: Using Behavioral Economics to Increase Employee Saving,” *Journal of Political Economy*, 2004, *112* (S1), S164–S187.
- Tversky, Amos and Daniel Kahneman**, “Judgment under Uncertainty: Heuristics and Biases,” *Science*, 1974, *185* (4157).
- **and** —, “Prospect Theory: An Analysis of Decision under Risk,” *Econometrica*, 1979, *47* (2), 263–292.
- **and** —, “The Behavioral Foundations of Economic Theory,” *The Journal of Business*, 1986, *59* (4), S251–S278.
- Vesterlund, Lise, Linda Babcock, and Laurie Weingart**, “Breaking the Glass Ceiling with “No”: Gender Differences in Declining Requests for Non-Promotable Tasks,” *mimeo*, 2015.
- Woodward, Susan E. and Robert Hall**, “Consumer Confusion in the Mortgage Market: Evidence of Less Than a Perfectly Transparent and Competitive Market,” *American Economic Review*, 2010, *100* (2), 511–515.

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