## ECONOMICS 352 & 452: BEHAVIORAL ECONOMICS

## Fall 2023

This version: November 21, 2023. Click here for newest version.

Instructor:	Felipe A. Araujo	Time:	Tu-Th 13:35-14:50pm
Email:	f.araujo@lehigh.edu	Place:	Business Innovation 220

Course Page The official course page is on Course Site, where I will post lecture materials, required readings, assignments, as well as all communication.

Office Hours Tu & Th 11:00am-12:30pm, or by appointment, at RBC 266. You're encouraged to come to office hours if you have questions or just want to discuss some topic further.

Course Overview Behavioral Economics is a sub-field of economics which incorporates insights from Psychology and other disciplines into economics. From its start a couple of decades ago, it has grown to become one of the major topics of research in economics. This course provides an introduction to the field, covering both theory and applications. Students will participate in small experiments in class and are expected to actively take part in classroom discussions of the relevant papers. Covered topics include (i) preferences (present bias, reference dependence, and social preferences), (ii) beliefs (overconfidence, projection bias, and attribution bias), and (iii) decision-making (mental accounting, attention, and framing), as well as (iv) financial and labor market consequences of such deviations. Note that one semester it not nearly enough to cover all of Behavioral Economics and so many interesting topics were left out.

**Prerequisites** A complete understanding of the material require a solid grasp of mainstream economics at the level of an intermediate micro class. Knowledge of statistics and basic econometrics is also needed. Advanced mathematics is not required, though some of the models are math intensive.

Lecture materials There is no textbook for this class. Camerer, Loewenstein and Rabin (2004) is a suggested reading. The course will be structured as seminar-style discussions of published papers. Lecture notes will serve as complements and will sometimes contain original material and extensions. Required and suggested readings will be made available on Course Site. Finally, we will use the MobLab app to run experiments and surveys in the classroom. The semester-long subscription costs \$25. Instructions for how to sign-up are on Course Site.

Participation Given the seminar-like structure of the class, students are expected to play an active role in class. Students should bring their questions on each of the required readings, as I plan to devote the last 10-20 minutes of each class to open discussion. Moreover, about a third of the classes will start with a short quiz on the required readings. The quiz may include that day's reading as well as other recent required papers. The questions are intended to make sure students read and comprehended the main message of the paper and will count towards the course grade (the lowest quiz grade will be dropped).

Essay Assignment Every other week students will answer an essay question about that week's readings. The question will be related to the topics covered and also require some original thinking. Please answer the questions in a concise (at most two pages) and well thought-out essay. Your answers should be typed and <u>not</u> hand-written (12 point font, 1" margins, and 1.5 spacing). As with the quiz assignment, the lowest essay grade will be dropped.

**Student Presentations** Students will present a recently published or working paper on a covered topic. Students might select the paper from that topic's suggested readings or else propose a different one. In the latter case, students should contact me prior to deciding on the paper.

Final Project The final project can be either an (i) original paper on a topic of the student's choice or (ii) a critical review of one of the *suggested* readings accompanied by a proposed extension. For option (i), the paper should be structured as a standard research article (introduction, literature review, methods, results, and discussion/conclusion). Actual data collection and analysis is not required; if there is no data, the methods section should contain a detailed plan of how to obtain and analyze data to answer the research question. As for option (ii), the review should assess the paper's main contribution, its strengths and weaknesses, and propose an extension. Both types of final projects should be between 10-15 pages long (12 point font, 1" margins, and 1.5 spacing), <u>not</u> counting references or title pages. PhD students *have* to go with option (i).

Year of Learning The College of Business' year of leaning theme for 2023-2024 is "Interdependency Between Government and Business". Even though we don't have a specific topic devoted to it, I will add relevant discussions throughout the semester. Suggestions from the students are also welcomed.

**Grading Policy** Grades will be based on participation quizzes, essay questions, paper presentations, and the final project. The weights used to compute the weighted average score, based on which a letter grade will be determined, and the relevant dates, are listed below.

Grading	components,	dates	and	weights
Orading	COmponents	uaucs,	and	WCIGIIUS

Grade Component	Date	Weight
Participation	Almost-weekly quizzes	30%
Essay Questions	Due on Tuesdays	20%
Paper Presentation	TBA	20%
Final Project	December 15, $2023 @ 12pm$	30%

Numerical and letter grades

Score	Letter Grade
[92, 100]	A
[90, 92)	A-
[87, 90)	B+
[82, 87)	В
[80, 82)	B-
[77, 80)	C+
[72, 77)	$\mathbf{C}$
[70, 72)	C-
[67, 70)	D+
[62, 67)	D
[60, 62)	D-
[0, 60)	F

**Attendance:** Even though lecture notes are thorough, the material will be hard to comprehend without attending class and actively participating in the discussions. Moreover, the participation grade will be based on short quizzes at the start of some (around 10) classes and hence only available for those that show up. The quizzes will be easy for everyone that read the required papers and participated in class.

Check I'm glad you're still reading! To verify you have read the entire syllabus, please email me a picture of your favorite Brazilian beach at f.araujo@lehigh.edu, with the subject line "BE: beach picture".

Tutoring The College of Business Undergraduate Programs Office publishes a grid outlining the various

business tutoring options and times at the beginning of every semester. If you have any questions or concerns about tutoring, please contact Assistant Dean Beth Pelton at bap212@lehigh.edu.

Accommodations for Students with Disabilities: Lehigh University is committed to maintaining an equitable and inclusive community and welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact Disability Support Services (DSS), provide documentation, and participate in an interactive review process. If the documentation supports a request for reasonable accommodations, DSS will provide students with a Letter of Accommodations. Students who are approved for accommodations at Lehigh should share this letter and discuss their accommodations and learning needs with instructors as early in the semester as possible. For more information or to request services, please contact Disability Support Services in person in Williams Hall, Suite 301, via phone at 610-758-4152, via email at indss@lehigh.edu, or online at https://studentaffairs.lehigh.edu/disabilities.

Lehigh University Policy on Harassment and Non-Discrimination: Lehigh University upholds The Principles of Our Equitable Community and is committed to providing an educational, working, co-curricular, social, and living environment for all students, staff, faculty, trustees, contract workers, and visitors that is free from harassment and discrimination on the basis of age, color, disability, gender identity or expression, genetic information, marital or familial status, national or ethnic origin, race, religion, sex, sexual orientation, or veteran status. Such harassment or discrimination is unacceptable behavior and will not be tolerated. The University strongly encourages (and, depending upon the circumstances, may require) students, faculty, staff or visitors who experience or witness harassment or discrimination, or have information about harassment or discrimination in University programs or activities, to immediately report such conduct. If you have questions about Lehigh's Policy on Harassment and Non-Discrimination or need to report harassment or discrimination, contact the Equal Opportunity Compliance Coordinator (Alumni Memorial Building / 610.758.3535 / eocc@lehigh.edu)

Lehigh Student Senate Academic Integrity Statement: "We, the Lehigh University Student Senate, as the standing representative body of all undergraduates, reaffirm the duty and obligation of the students to meet and uphold the highest principles and values of personal, moral and ethical conduct. As partners in our educational community, both students and faculty share the responsibility for promoting the helping to ensure an environment of academic integrity. As such, each student is expected to complete all academic course work in accordance to the standards set forth by the faculty and in compliance with the university's Code of Conduct."

The Principles of Our Equitable Community: Lehigh University endorses The Principles of Our Equitable Community. We expect each member of this class to acknowledge and practice these Principles. Respect for each other and for differing viewpoints is a vital component of the learning environment inside and outside the classroom.

Course Outline and Schedule: The table below details the complete class and assignment schedules as well as the topics covered and the required and suggested readings.

## Lectures and Assignment: Topics and Schedule

Topics	Readings & Assignment
Topic 1	Introduction to Behavioral Economics  Paguired reading: Compare and Leowenstein (2011) [pp. 1-15]
08/29	Required reading: Camerer and Loewenstein (2011) [pp. 1-15]  Suggested reading: Mullainathan and Thaler (2000); Thaler (2016); Falk and Heckman (2009)
	$\underline{\text{Assignment}}$ : N/A
	Required reading: Loewenstein (1999); Rabin (2002) [sections I and II]
08/31	Suggested reading: Carter, Greenberg and Walker (2017); DellaVigna (2009); Simon (1972); Rabin (1998, 2013); Hertwig and Ortmann (2001)
	$\underline{\text{Assignment}}$ : N/A
Topic 2	Risk Preferences I: Introduction  Required reading: Rabin and Thaler (2001)
09/05	Suggested reading: Rabin (2000); Starmer (2000)
09/00	$\underline{\text{Assignment}}$ : N/A
	Required reading: Sydnor (2010)
09/07	Suggested reading: Pope and Schweitzer (2011)
00/01	$\underline{\text{Assignment}}$ : N/A
Topic 3	Risk Preferences II: Reference-Dependence and Loss Aversion  Required reading: Kahneman and Tversky (1979) (Part I)
09/12	Suggested reading: Tversky and Kahneman (1992); Kőszegi and Rabin (2006); Camerer, Babcock, Loewenstein and Thaler (1997); Camerer (2011)
	$\underline{\text{Assignment}}$ : N/A
	Required reading: Kahneman and Tversky (1979) (Part II)
09/14	Suggested reading: Camerer and Loewenstein (2011); Allen, Dechow, Pope and Wu (2017); Abeler, Falk, Goette and Huffman (2011)
	$\underline{\text{Assignment}}$ : N/A
	Required reading: Genesove and Mayer (2001)
09/19	Suggested reading: Camerer and Loewenstein (2011); Allen, Dechow, Pope and Wu (2017); Abeler, Falk, Goette and Huffman (2011)
	Assignment: Essay I
Topic 4	Time Preferences Required reading: Frederick, Loewenstein and O'donoghue (2002) (sections I-V)
09/21	Suggested reading: Loewenstein and Thaler (1989); Akerlof (1991)
(Online cla	$\overline{\text{Assignment: N/A}}$

09/26	Required reading: Frederick, Loewenstein and O'donoghue (2002) (sections I-V); Ariely and Wertenbroch (2002)
	Suggested reading: Read, Frederick, Orsel and Rahman (2005); Imas, Kuhn and Mironova (2021b)
	Assignment: N/A
	Required reading: Ariely and Wertenbroch (2002)
09/28	Suggested reading: O'Donoghue and Rabin (2000); DellaVigna and Malmendier (2006); Bisin and Hyndman (2020)
	Assignment: N/A
Topic 5	Social Preferences Required reading: Camerer and Thaler (1995)
10 /03	Suggested reading: Dawes and Thaler (1988)
10/03	Assignment: Essay II
	Required reading: Bandiera, Barankay and Rasul (2005)
10/05	Suggested reading: Gneezy and List (2006); Lazear, Malmendier and Weber (2006); Bauer, Ruof and Smeets (2021)
	Assignment: N/A
	Required reading: Dana, Weber and Kuang (2007); Bartling, Weber and Yao $(2015)$
10/10	Suggested reading: Andreoni and Bernheim (2009); Exley (2016); Dana, Cain and Dawes (2006); Gneezy, Gneezy, Nelson and Brown (2010)
	Assignment: N/A
Topic 6	Heuristics and Biases Required reading: Tversky and Kahneman (1974)
10/12	Suggested reading: Camerer and Loewenstein (2011)
10/12	$\underline{\text{Assignment}}$ : N/A
Topic 7	Projection and Attribution Bias Required reading: Haggag, Pope, Bryant-Lees and Bos (2019)
10/17	Suggested reading: Conlin, O'Donoghue and Vogelsang (2007)
10/17	Assignment: N/A
	Required reading: Haggag, Pope, Bryant-Lees and Bos (2019)
10/19	Suggested reading: Conlin, O'Donoghue and Vogelsang (2007)
	Assignment: Essay III & Student presentations (1)
Topic 8	Incentives and Labor Markets Required reading: Fehr, Kirchler, Weichbold and Gächter (1998)
10/24	Suggested reading: Gneezy and Rustichini (2011); Gneezy, Meier and Rey-Biel (2011)
	Assignment: Student presentations (2)

10/26	Required reading: Fehr, Kirchler, Weichbold and Gächter (1998)
	Suggested reading: Gneezy and Rustichini (2011); Gneezy, Meier and Rey-Biel (2011)
	Assignment: Student presentations (2)
	Required reading: Ariely, Gneezy, Loewenstein and Mazar (2009)
10/21	Suggested reading: Bowles and Polania-Reyes (2012); Ederer and Manso (2013)
10/31	Assignment: Student presentations (2)
Topic 9	Endowment Effect Required reading: Kahneman, Knetsch and Thaler (1990)
11/02	Suggested reading: Kahneman, Knetsch and Thaler (1991); Ericson, Fuster et al. (2013); Plott and Zeiler (2005, 2007); Hartzmark, Hirshman and Imas (2021)
	Assignment: N/A
Topic 10	Behavioral Finance
11/07	NO CLASS: Civic Engagement Day
	Required reading: Gneezy and Potters (1997)
11/09	Suggested reading: Benartzi and Thaler (1995); Haigh and List (2005)
	Assignment: Essay IV
	Required reading: Odean (1998)
11/14	Suggested reading: Akepanidtaworn, Di Mascio, Imas and Schmidt (2021); Shefrin and Statman (1985); Imas (2016)
	Assignment: N/A
	Required reading: Lei, Noussair and Plott (2001)
11/16	Suggested reading: Dufwenberg, Lindqvist and Moore (2005); Smith, Suchanek and Williams (1988)
	Assignment: N/A
	Required reading: Lei, Noussair and Plott (2001)
11/21	Suggested reading: Dufwenberg, Lindqvist and Moore (2005); Smith, Suchanek and Williams (1988)
	Assignment: N/A
<b>Topic 11</b> 11/23	Mental Accounting NO CLASS: Thanksgiving Day
11/28	Required reading: Thaler (1999); Abeler and Marklein (2017)
	Suggested reading: Thaler (1985); Imas, Loewenstein and Morewedge (2021a); Hastings and Shapiro (2013)
	Assignment: N/A

Topic 12	Framing Effects, Nudging, and Defaults Required reading: Madrian and Shea (2001)
11/30	Suggested reading: Chetty, Friedman, Leth-Petersen, Nielsen and Olsen (2014)
	Assignment: Essay V
12/05	Required reading: Thaler and Benartzi (2004)  Suggested reading: Bertrand, Karlan, Mullainathan, Shafir and Zinman (2010)
	Assignment: N/A
12/07	Required reading: Johnson and Goldstein (2003)
	Suggested reading: Choi, Laibson, Madrian and Metrick (2003)
	Assignment: N/A

## References

- **Abeler, Johannes and Felix Marklein**, "Fungibility, Labels, and Consumption," *Journal of the European Economic Association*, 2017, 15 (1), 99–127.
- \_ , Armin Falk, Lorenz Goette, and David Huffman, "Reference points and effort provision," American Economic Review, 2011, 101 (2), 470–92.
- Akepanidtaworn, Klakow, Rick Di Mascio, Alex Imas, and Lawrence Schmidt, "Selling fast and buying slow: Heuristics and trading performance of institutional investors," Technical Report, National Bureau of Economic Research 2021.
- **Akerlof, George A**, "Procrastination and obedience," The American Economic Review, 1991, 81 (2), 1–19.
- Allen, Eric J, Patricia M Dechow, Devin G Pope, and George Wu, "Reference-dependent preferences: Evidence from marathon runners," *Management Science*, 2017, 63 (6), 1657–1672.
- Andreoni, James and B Douglas Bernheim, "Social image and the 50–50 norm: A theoretical and experimental analysis of audience effects," *Econometrica*, 2009, 77 (5), 1607–1636.
- **Ariely, Dan and Klaus Wertenbroch**, "Procrastination, deadlines, and performance: Self-control by precommitment," *Psychological science*, 2002, 13 (3), 219–224.
- \_ , Uri Gneezy, George Loewenstein, and Nina Mazar, "Large stakes and big mistakes," The Review of Economic Studies, 2009, 76 (2), 451–469.
- Bandiera, Oriana, Iwan Barankay, and Imran Rasul, "Social preferences and the response to incentives: Evidence from personnel data," *The Quarterly Journal of Economics*, 2005, 120 (3), 917–962.
- Bartling, Björn, Roberto A Weber, and Lan Yao, "Do markets erode social responsibility?," The Quarterly Journal of Economics, 2015, 130 (1), 219–266.
- Bauer, Rob, Tobias Ruof, and Paul Smeets, "Get Real! Individuals Prefer More Sustainable Investments," The Review of Financial Studies, 04 2021, 34 (8), 3976–4043.
- Benartzi, Shlomo and Richard H Thaler, "Myopic loss aversion and the equity premium puzzle," *The quarterly journal of Economics*, 1995, 110 (1), 73–92.
- Bertrand, Marianne, Dean Karlan, Sendhil Mullainathan, Eldar Shafir, and Jonathan Zinman, "What's advertising content worth? Evidence from a consumer credit marketing field experiment," *The quarterly journal of economics*, 2010, 125 (1), 263–306.
- Bisin, Alberto and Kyle Hyndman, "Present-bias, procrastination and deadlines in a field experiment," Games and Economic Behavior, 2020, 119, 339–357.
- Bowles, Samuel and Sandra Polania-Reyes, "Economic incentives and social preferences: substitutes or complements?," *Journal of Economic Literature*, 2012, 50 (2), 368–425.
- Camerer, Colin F, "CHAPTER FIVE. Prospect Theory in the Wild: Evidence from the Field," in "Advances in behavioral economics," Princeton University Press, 2011, pp. 148–161.
- \_ and George Loewenstein, "CHAPTER ONE. Behavioral Economics: Past, Present, Future," in "Advances in behavioral economics," Princeton University Press, 2011, pp. 3–52.
- \_ and Richard H Thaler, "Anomalies: Ultimatums, dictators and manners," Journal of Economic perspectives, 1995, 9 (2), 209–219.
- \_ , George Loewenstein, and Matthew Rabin, Advances in behavioral economics, Princeton university press, 2004.

- Camerer, Colin, Linda Babcock, George Loewenstein, and Richard Thaler, "Labor supply of New York City cabdrivers: One day at a time," *The Quarterly Journal of Economics*, 1997, 112 (2), 407–441.
- Carter, Susan Payne, Kyle Greenberg, and Michael S 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.
- Chetty, Raj, John N Friedman, Søren Leth-Petersen, Torben Heien Nielsen, and Tore Olsen, "Active vs. passive decisions and crowd-out in retirement savings accounts: Evidence from Denmark," The Quarterly Journal of Economics, 2014, 129 (3), 1141–1219.
- Choi, James J, David Laibson, Brigitte C Madrian, and Andrew Metrick, "Optimal defaults," American Economic Review, 2003, 93 (2), 180–185.
- Conlin, Michael, Ted O'Donoghue, and Timothy J Vogelsang, "Projection bias in catalog orders," *American Economic Review*, 2007, 97 (4), 1217–1249.
- Dana, Jason, Daylian M Cain, and Robyn M Dawes, "What you don Ot know won Ot hurt me: Costly (but quiet) exit in dictator games," Organizational Behavior and Human Decision Processes, 2006, 100, 193–201.
- \_ , Roberto A Weber, and Jason Xi Kuang, "Exploiting moral wiggle room: experiments demonstrating an illusory preference for fairness," *Economic Theory*, 2007, 33 (1), 67–80.
- **Dawes, Robyn M and Richard H Thaler**, "Anomalies: cooperation," *Journal of economic perspectives*, 1988, 2 (3), 187–197.
- **DellaVigna, Stefano**, "Psychology and economics: Evidence from the field," *Journal of Economic literature*, 2009, 47 (2), 315–72.
- \_ and Ulrike Malmendier, "Paying not to go to the gym," american economic Review, 2006, 96 (3), 694–719.
- **Dufwenberg, Martin, Tobias Lindqvist, and Evan Moore**, "Bubbles and experience: An experiment," *American economic review*, 2005, 95 (5), 1731–1737.
- Ederer, Florian and Gustavo Manso, "Is pay for performance detrimental to innovation?," *Management Science*, 2013, 59 (7), 1496–1513.
- Ericson, Keith M Marzilli, Andreas Fuster et al., "The Endowment Effect," NBER Working Papers, 2013, (19384).
- Exley, Christine L, "Excusing selfishness in charitable giving: The role of risk," *The Review of Economic Studies*, 2016, 83 (2), 587–628.
- Falk, Armin and James J Heckman, "Lab experiments are a major source of knowledge in the social sciences," science, 2009, 326 (5952), 535–538.
- Fehr, Ernst, Erich Kirchler, Andreas Weichbold, and Simon Gächter, "When social norms over-power competition: Gift exchange in experimental labor markets," *Journal of Labor economics*, 1998, 16 (2), 324–351.
- Frederick, Shane, George Loewenstein, and Ted O'donoghue, "Time discounting and time preference: A critical review," *Journal of economic literature*, 2002, 40 (2), 351–401.
- Genesove, David and Christopher Mayer, "Loss aversion and seller behavior: Evidence from the housing market," The quarterly journal of economics, 2001, 116 (4), 1233–1260.

- Gneezy, Ayelet, Uri Gneezy, Leif D Nelson, and Amber Brown, "Shared social responsibility: A field experiment in pay-what-you-want pricing and charitable giving," *Science*, 2010, 329 (5989), 325–327.
- **Gneezy, Uri and Aldo Rustichini**, "CHAPTER TWENTY-ONE. Incentives, Punishment, and Behavior," in "Advances in behavioral economics," Princeton University Press, 2011, pp. 572–589.
- \_ and Jan Potters, "An experiment on risk taking and evaluation periods," The quarterly journal of economics, 1997, 112 (2), 631–645.
- \_ and John A List, "Putting behavioral economics to work: Testing for gift exchange in labor markets using field experiments," *Econometrica*, 2006, 74 (5), 1365–1384.
- \_ , Stephan Meier, and Pedro Rey-Biel, "When and why incentives (don't) work to modify behavior," Journal of economic perspectives, 2011, 25 (4), 191–210.
- Haggag, Kareem, Devin G Pope, Kinsey B Bryant-Lees, and Maarten W Bos, "Attribution bias in consumer choice," *The Review of Economic Studies*, 2019, 86 (5), 2136–2183.
- **Haigh, Michael S and John A List**, "Do professional traders exhibit myopic loss aversion? An experimental analysis," *The Journal of Finance*, 2005, 60 (1), 523–534.
- Hartzmark, Samuel M, Samuel D Hirshman, and Alex Imas, "Ownership, Learning, and Beliefs\*," *The Quarterly Journal of Economics*, 04 2021, 136 (3), 1665–1717.
- Hastings, Justine S and Jesse M Shapiro, "Fungibility and consumer choice: Evidence from commodity price shocks," *The quarterly journal of economics*, 2013, 128 (4), 1449–1498.
- Hertwig, Ralph and Andreas Ortmann, "Experimental practices in economics: A methodological challenge for psychologists?," *Behavioral and Brain Sciences*, 2001, 24 (3), 383–403.
- Imas, Alex, "The realization effect: Risk-taking after realized versus paper losses," American Economic Review, 2016, 106 (8), 2086–2109.
- \_ , George Loewenstein, and Carey K Morewedge, "Mental money laundering: A motivated violation of fungibility," Journal of the European Economic Association, 2021, 19 (4), 2209–2233.
- \_ , Michael Kuhn, and Vera Mironova, "Waiting to Choose: The Role of Deliberation in Intertemporal Choice," American Economic Journal: Microeconomics, 2021.
- Johnson, Eric J and Daniel Goldstein, "Do defaults save lives?," 2003.
- Kahneman, Daniel and Amos Tversky, "Prospect Theory: An Analysis of Decision under Risk," *Econometrica*, 1979, 47 (2), 263–292.
- \_ , Jack L Knetsch, and Richard H Thaler, "Experimental tests of the endowment effect and the Coase theorem," Journal of political Economy, 1990, 98 (6), 1325–1348.
- \_ , \_ , and \_ , "Anomalies: The endowment effect, loss aversion, and status quo bias," *Journal of Economic perspectives*, 1991, 5 (1), 193–206.
- Kőszegi, Botond and Matthew Rabin, "A model of reference-dependent preferences," The Quarterly Journal of Economics, 2006, 121 (4), 1133–1165.
- Lazear, Edward, Ulrike Malmendier, and Roberto Weber, "Sorting, prices, and social preferences," Technical Report, National Bureau of Economic Research 2006.
- Lei, Vivian, Charles N Noussair, and Charles R Plott, "Nonspeculative bubbles in experimental asset markets: Lack of common knowledge of rationality vs. actual irrationality," *Econometrica*, 2001, 69 (4), 831–859.

- **Loewenstein, George**, "Experimental economics from the vantage-point of behavioural economics," *The Economic Journal*, 1999, 109 (453), F25–F34.
- and Richard H Thaler, "Anomalies: intertemporal choice," Journal of Economic perspectives, 1989, 3 (4), 181–193.
- Madrian, Brigitte C and Dennis F Shea, "The power of suggestion: Inertia in 401 (k) participation and savings behavior," *The Quarterly journal of economics*, 2001, 116 (4), 1149–1187.
- Mullainathan, Sendhil and Richard H Thaler, "Behavioral economics," Technical Report, National Bureau of Economic Research 2000.
- Odean, Terrance, "Are investors reluctant to realize their losses?," The Journal of finance, 1998, 53 (5), 1775–1798.
- O'Donoghue, Ted and Matthew Rabin, "The economics of immediate gratification," *Journal of behavioral decisión making*, 2000, 13 (2), 233–250.
- **Plott, Charles R and Kathryn Zeiler**, "The willingness to pay-willingness to accept gap, the" endowment effect," subject misconceptions, and experimental procedures for eliciting valuations," *American Economic Review*, 2005, 95 (3), 530–545.
- \_ and \_ , "Exchange asymmetries incorrectly interpreted as evidence of endowment effect theory and prospect theory?," American Economic Review, 2007, 97 (4), 1449–1466.
- **Pope, Devin G and Maurice E Schweitzer**, "Is Tiger Woods loss averse? Persistent bias in the face of experience, competition, and high stakes," *American Economic Review*, 2011, 101 (1), 129–57.
- 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), 1281–1281.
- \_ , "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), 528–43.
- \_ and Richard H Thaler, "Anomalies: risk aversion," Journal of Economic perspectives, 2001, 15 (1), 219–232.
- Read, Daniel, Shane Frederick, Burcu Orsel, and Juwaria Rahman, "Four score and seven years from now: The date/delay effect in temporal discounting," *Management Science*, 2005, 51 (9), 1326–1335.
- **Shefrin, Hersh and Meir Statman**, "The disposition to sell winners too early and ride losers too long: Theory and evidence," *The Journal of finance*, 1985, 40 (3), 777–790.
- Simon, Herbert A, "Theories of bounded rationality," Decision and organization, 1972, 1 (1), 161–176.
- Smith, Vernon L, Gerry L Suchanek, and Arlington W Williams, "Bubbles, crashes, and endogenous expectations in experimental spot asset markets," *Econometrica: Journal of the Econometric Society*, 1988, pp. 1119–1151.
- **Starmer, Chris**, "Developments in non-expected utility theory: The hunt for a descriptive theory of choice under risk," *Journal of economic literature*, 2000, 38 (2), 332–382.
- Sydnor, Justin, "(Over) insuring modest risks," American Economic Journal: Applied Economics, 2010, 2 (4), 177–99.
- Thaler, Richard, "Mental accounting and consumer choice," Marketing science, 1985, 4 (3), 199–214.

- **Thaler, Richard H**, "Mental accounting matters," Journal of Behavioral decision making, 1999, 12 (3), 183–206.
- \_ , "Behavioral economics: Past, present, and future," American Economic Review, 2016, 106 (7), 1577–1600.
- and Shlomo Benartzi, "Save more tomorrow<sup>™</sup>: 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), 1124–1131.
- \_ and \_ , "Advances in prospect theory: Cumulative representation of uncertainty," Journal of Risk and uncertainty, 1992, 5 (4), 297–323.