Bowdoin College, Department of Economics
ECON 3355: Behavioral Economic Theory
Spring 2020

"I can calculate the motion of heavenly bodies but not the madness of people." — Isaac Newton

Time & Class Location:	T,Th 10:05-11:30, VAC 303
Professor:	Dan Stone
Email:	dstone@bowdoin.edu (feel free to email questions as appropriate)
Office Hours:	Hubbard 108; M, W 2:15-3:45. If you'd like to meet and can't make it at those times, don't hesitate to email to set up an appointment.

Prerequisites:
Intermediate micro (Econ 2555) and statistics (Econ 2557) or equivalent. Note also that students can take this course or Econ 3533 (a seminar on behavioral economics) but not both. The material covered in both courses is very similar, but this course focuses on mathematical models while the other course emphasizes discussion and original research by students.

Course description and learning goals:
This course will cover models of the main topics of behavioral economics—the study of violations of the standard economic assumptions that individuals optimize stable and purely self-interested objective functions, and implications for individual economic agents, markets, and the economy overall.

Why models? There is substantial overlap between the fields of behavioral economics and social psychology (and some overlap with aspects of sociology as well). Behavioral economics is distinguished from these other disciplines/fields to a large extent because of the use of models in behavioral economics. That is: behavioral economics is, to a large extent, psychology/sociology done by economists, i.e., psychological and sociological topics studied with economic models. Models clarify many of these concepts and provide new insights, and allow us to precisely identify distinctions between normatively optimal, and actual, behavior. And in addition to covering models, this class will also certainly discuss empirical (real-world) and experimental evidence of behavioral deviations from standard economic norms, and discuss the behavioral topics we cover.

The topics we are covering fall in four main categories, which correspond to four parts of the course, as follows: 1) behavioral belief formation (the law of small numbers, gambler's fallacy, hot hand bias, improbability principle, availability bias, representativeness, base-rate neglect, overconfidence and motivated reasoning); 2) behavioral individual choice (loss aversion, sunk cost and opportunity cost neglect, prospect theory, probability weighting, mental accounts, framing); 3) behavioral intertemporal and strategic choice (present bias, level-k strategic thinking, deception and credulity); 4) social forces (reciprocity, fairness, and other-regarding-preferences; social learning; social image concerns; happiness). At the end of the semester we

will also discuss behavioral welfare economics, policy, and new research that examines how the various behavioral concepts relate to one another, as time allows.

This course approaches behavioral economics as an extension of standard economics so we will typically briefly review standard models before discussing behavioral modifications. Students will also engage with recent scholarly literature on these topics to both improve your comfort with reading and interpreting academic research, and to gain an understanding of the research frontier for these topics.

Last but not least, another goal of the class is to help you better understand behavior you encounter in everyday life—why people act in seemingly puzzling ways—and to help you better understand, and improve, your own judgment and decision-making. That means to sometimes make more rational decisions in the traditional sense—and to sometimes be more rational in a broader, less direct sense.

Format and grading:
This course will largely, but not completely, follow the format of the required textbook, <u>A Course in Behavioral Economics</u>, by Erik Angner. Your grade in this course will be calculated as follows. There will be four tests based on textbook/lecture material. Your top three test scores will count for 20% each and your lowest will count for 15%, so test scores will account for 3*20%+15% = 75% of your class grade in total. (That is, the weight for your course grade will be lowered for your lowest test score.)

There will also be one presentation (5%), one written report (5%), classwork/participation (10%), and a series of very short quizzes, counting for 5% in total, on the other required text, <u>Misbehaving</u>, an intellectual history of behavioral economics by Economics Nobel laureate Richard Thaler. I will explain the grading of classwork and participation in class.

The presentations and written reports will both be fairly brief and both be on journal articles that relate to and extend material that we are covering in class at the time. The journal article assignments will be determined in the first two weeks of the course (your articles and dates will be assigned to you; the dates for your presentation and written report will be spread out by at least a few weeks).

I use a 10 point scale for course letter grades with 3 point increments for 'half-grades' (i.e., >=93.0 course numerical grade = A; >=90.0 and < 93 = A-, >= 87.0 and < 90 = B+, etc) with the potential for some grades being curved upward (much more likely for lower grades).

Don't hesitate to come to my office hours or set up an appointment any time you'd like to discuss anything. If you have questions on how you are doing grade-wise at any point during the semester, let me know. All course documents and grades will be posted to blackboard or emailed to you.

Required books:

A Course in Behavioral Economics, 2E Erik Angner, 2016
Misbehaving, Richard Thaler, 2015 (2017 Econ Nobel laureate)
Behavioral Economics: Toward a New Economics by Integration with Traditional Economics, by Ogaki and Tanaka
Ungated copy available at https://link.springer.com/content/pdf/10.1007%2F978-981-10-6439-5.pdf

Additional recommended books:

'New classics': Nudge, Sunstein/Thaler; Irrational Exuberence, Shiller; The Undoing Project, Michael Lewis (see also Sunstein and Thaler, "THE TWO FRIENDS WHO CHANGED HOW WE THINK ABOUT HOW WE THINK," *The New Yorker*, Dec 7, 2016); Thinking, Fast and Slow, Kahneman.

Other favorites: Elephant in the Brain (rationalization of behavioral-seeming phenomena), Simler and Hanson; Superforecasting , Tetlock; Behave, Sapolsky; The Sense of Style (on writing, from a cognitive psych perspective), Pinker.

New (or soon to be released) books that I'm curious to check out: The Power of Bad (Baumeister and Tierney), The Hot Hand: The Mystery and Science of Streaks (Cohen), Noise (Kahneman, Sunstein, someone else!), Under the Influence (Frank).

Course schedule and readings (subject to change)

21-Jan   Introductions, intro to the field

Part I: Belief formation
23-Jan   Review of probability theory (Angner ch 4); (recommended/optional additional
                references:
                https://nostarch.com/download/samples/BayesianStatisticsTheFunWay_Ch07_Sample.pd
                f, https://arbital.com/p/bayes_rule/?l=1zq)
28-Jan   Behavioral belief formation: law of small #s, gambler's fallacy, hot hand bias,
                improbability principle (Angner ch 5; recommended additional reference:
                Benjamin, 2018, Handbook of Behavioral Econ chapter on errors in probabilistic
                reasoning, https://www.nber.org/papers/w25200.pdf)
30-Jan   Behavioral beliefs ctd: availability, representativeness, base-rate neglect
4-Feb   Behavioral beliefs ctd; overconfidence
6-Feb   Behavioral beliefs ctd, **papers/presentations #1**
11-Feb   **Test 1**

Part II: Individual (static) choice
13-Feb   Loss aversion, WTP vs WTA (Angner ch 3)
18-Feb   Sunk cost neglect, opportunity cost neglect (Angner ch 3 ctd)
20-Feb   Rational choice under uncertainty: EU-maximization, risk preferences;
                Behavioral choice under uncertainty (prospect theory) (Angner chs 6-7)

25-Feb	Behavioral choice under uncertainty ctd (Rabin and Thaler, JEP 2001, https://www.aeaweb.org/articles?id=10.1257/jep.15.1.219; recommended additional reading: Barberis, 2013, http://pubs.aeaweb.org/doi/pdfplus/10.1257/jep.27.1.173; O'Donohue and Sprenger, Handbook of Behavioral Econ chapter on reference-dependent preferences, https://www.sciencedirect.com/science/article/pii/S2352239918300034)
27-Feb	Uncertainty and individual choice ctd (framing, mental accounts), **papers/presentations 2**
3-Mar	Uncertainty ctd, **papers/presentations 3**
5-Mar	**Test 2**

Spring break (!)

Part III: Intertemporal and strategic choice

24-Mar	Exponential discounting (Angner ch 8)
26-Mar	Behavioral intertemporal choice (Angner ch 9; Ogaki and Tanaka); recommended/optional extra reading: Ericson and Laibson, Handbook of Behavioral Econ chapter on intertemporal choice, https://reader.elsevier.com/reader/sd/pii/S2352239918300253?token=1477E4F27AD4A2A24C813684E8629F8E60424CCBEE5BCAE24ECFEEA431BAC6EAB4A535267230CF163360D3E183C61C71
31-Mar	Intertemporal choice ctd, **papers/presentations 4**
2-Apr	Game theory review (Angner ch 10), level-k model; recommended/optional extra reading: Eyster, Handbook of Behavioral Econ chapter on errors in strategic reasoning, https://www.sciencedirect.com/science/article/pii/S235223991830023X
7-Apr	Limited strategic thinking ctd, deception, **papers/presentations 5**
9-Apr	**Test 3**

Part IV: Social forces

14-Apr	Social preferences: altruism, warm glow, fairness, reciprocity, social image (Angner ch 11; Ogaki and Tanaka ch 8)
16-Apr	Social preferences ctd, **papers/presentations 6; Thaler quiz 1**
21-Apr	Conformity: social learning; **Thaler quiz 2**
23-Apr	Conformity: social image concerns; recommended/optional extra reading: Bursztyn and Jensen, 2017, https://www.annualreviews.org/doi/full/10.1146/annurev-economics-063016-103625; **Thaler quiz 3**
28-Apr	Social forces ctd; **Thaler quiz 4**
30-Apr	Nudges/behavioral welfare economics, "Is it all connected?", **papers/presentations 7; Thaler quiz 5**
5-May	**Test 4** or make-up class if necessary (if I have to cancel an earlier class this will be a make-up class and Test 4 will be during finals period)