

GU 4840: Behavioral Economics

Spring 2020

Columbia University

Contact Details

Professor: Mark Dean

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Classes: 10.10 to 11.25 on Mondays and Wednesdays in Mudd 833

Office Hours: 12.00 to 2.00 Mondays, or by appointment (Room 1031 IAB)

Website: <http://www.columbia.edu/~md3405>

CourseWorks: <https://courseworks2.columbia.edu/courses/96191>

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Course Description

Within economics, the standard model of behavior is that of a perfectly rational, self-interested utility maximizer with unlimited cognitive resources. In many cases, this provides a good approximation to the types of behavior that economists are interested in. However, over the past 30 years, psychologists, experimental and behavioral economists have documented ways in which the standard model is not just

wrong, but is wrong in ways that are important for economic outcomes. Understanding these behaviors, and their implications, is one of the most exciting areas of current economic inquiry.

The aim of this course is to provide a grounding in the main areas of study within behavioral economics, including temptation and self-control, fairness and reciprocity, reference dependence, bounded rationality and choice under risk and uncertainty. For each area we will study three things:

1. The evidence that indicates that the standard economic model is missing some important behavior
2. The models that have been developed to capture these behaviors
3. Applications of these models to (for example) finance, labor and development economics

As well as the standard lectures, homework assignments, exams and so on, you will be asked to participate in economic experiments, the data from which will be used to illustrate some of the principals in the course. An integral part of the course will be a research proposal that you must complete by the end of the course, outlining a novel piece of research that you would be interested in doing.

Prerequisites

UN3211 Intermediate Micro and UN3213 Intermediate Macro. The course will be technical (including some proofs) but should not require any mathematics beyond the pre-requisites for Intermediate Micro

Assessment

Assessment will be based on 4 items: Homeworks (20%), Midterm (20%), Final (35%), and Research Proposal (25%)

Homework:

There will be approximately 8-10 assignments over the semester, and these will be relatively tough. Homeworks will be available each Wednesday, and will be due in class the following Wednesday. The TAs will return graded transcripts and post solutions.

You are allowed (and in fact encouraged) to work in groups of up to 3 for homeworks. You can hand in one homework for your group, and will all get the same grade. It is of course important for you to ensure that all members of the group contribute and understand the material: free riders are likely to find it tricky come exam time.

Homework will be graded on a 10 point scale. Homework that is not handed in at the correct time will not be graded, and will receive a zero score. However, your worst homework grade for the semester will not count towards the final grade. You may also ask for your homework in advance if you know you are going to be busy in a particular week.

Midterm and Final

In addition to homeworks, there will be one midterm exam, and one final exam. The midterm will (likely) take place in class on 9th March and will cover material up to and including 7th March. The final exam is currently scheduled for Wednesday May 13th (though this is subject to change). All exams will be closed book, and there will be rescheduling of midterm exams only in extreme circumstances. The date of the final exam is set by the university and cannot be rescheduled.

Research proposal

Students will be expected to write a 10-15 page research proposal on one of the topics covered in the course. The proposal could be the description of a new an experiment, or the outline of a new model. A key part of the proposal will be a review of the current literature with respect to your proposal – explaining the way in which your research is novel relative to what has been done before. The writers of the best proposal will have the opportunity to run their experiment for real, or to develop their model into a full research paper. Depending on enrollment, proposals may be organized in groups.

Course Materials

By and large, the course will be based on academic papers (which are available online) and lecture notes (which I will make available). Many of the topics I discuss are covered in the recent Handbook of Behavioral Economics (volume 1 and 2) edited by Doug Bernheim, Stefano DellaVigna and David Laibson. These provide excellent surveys of the topics we will discuss. While you could buy the books, you will find most of the articles available for free on the author's websites

Resources

Most people will find this course tough at one stage or another. DON'T PANIC! There are plenty of resources available to help you, mainly through me and the course TAs. First, all of us will have **office hours** which you should make sure you attend if you have questions. Second there are the **recitations**. Here, the TAs will go through problems similar to, but not the same as the ones for the current homework assignment, so you should use them to get hints. Finally, the TAs will be available on **Piazza** (through Courseworks to answer your questions).

Course Policies

Regrading

Corrected assignments and exams will be available at most seven days after the deadline or the date of the test. Students then have at most seven days to introduce a complaint regarding a grade (that means exactly two weeks after the deadline or the date of the test or assignment submission). I deal personally with all complaints. Requests must be placed in my mailbox on the 11th floor of IAB. I expect them to be specific and motivated. This means that you must include a copy of the question(s) that need(s) to be re-graded, a copy of your answer(s) and the relevant section of the answer key, and an explanation as to why the question(s) need(s) to be re-graded. If I find the request motivated, then I will re-grade the

question(s) myself (which may possibly result in a lower grade if I find it justified). My decision is final. Please do not use either my or the TAs' office hours to complain about grades.

Academic Dishonesty

As members of an academic community, each of us has a responsibility to participate in scholarly discourse and research in a manner characterized by intellectual honesty and scholarly integrity, and cheating on exams is a very serious violation. Any suspected case of cheating will be reported to the university, and students who breach their intellectual responsibility in this regard should anticipate being asked to leave Columbia.

Disabilities

In order to receive disability-related academic accommodations for this course, students must first be registered with their school Disability Services (DS) office. Detailed information is available online for both the Columbia and Barnard registration processes.

Refer to the appropriate website for information regarding deadlines, disability documentation requirements, and drop-in hours(Columbia)/intake session (Barnard).

For this course, students are not required to have testing forms or accommodation letters signed by faculty. However, students must do the following:

- The Instructor section of the form has already been completed and does not need to be signed by the professor.
- The student must complete the Student section of the form and submit the form to Disability Services.
- Master forms are available in the Disability Services office or online:
<https://health.columbia.edu/services/testing-accommodations>

Class Conduct

Cell phone use is not allowed. Laptops are fine for taking notes, but please respect your classmates and instructor by limiting yourself to class-related activities. Though you may be a phenomenal multi-tasker, using a laptop for purposes other than taking notes is distracting to those around you

Topics

In the course we will cover the following topics. NOTE: The readings are suggested but not mandatory. However readings with a * are particularly useful

Introduction (1 lecture): Why do we need behavioral economics? A guide to what the course (and behavioral economics in general) can and cannot teach you

Utility Maximization (2 lectures): The most basic model in all of economics is that people make choices to maximize their utility. How can we test this model, and does it provide a good description of behavior? We will also discuss the relationship between 'utility' and 'happiness'.

Bounded Rationality (5 lectures): Economic models typically assume that decision makers have no important constraints on their ability to make rational decisions. What happens if we relax that assumption? We will focus on the possibility that the decision maker may not be fully aware of the alternatives they are choosing between and may have to pay cognitive costs in order to become better informed (models of 'rational inattention'). We will consider applications to discrimination and firm pricing.

Temptation and Self Control (4 lectures): Problems of temptation are ubiquitous: obesity, undersaving, smoking and drug use all appear to be related to a breakdown in self control. We discuss two approaches to modeling temptation, related to demand for commitment and preferences over time. We will discuss theoretical and empirical applications of these models to work contracts and firm behavior.

Risk And Uncertainty (5 lectures): In many cases we have to make choices amongst alternatives that lead to risky and uncertain outcomes. We will begin by describing the standard model of 'expected utility maximization,' before introducing some of the experimental evidence which suggests that these models are flawed, focusing on probability weighting, ambiguity aversion, and biases in statistical reasoning, including overoptimism. We will introduce models that can account for these behaviors, and consider applications to insurance and pricing

Reference Dependent Preferences (4 lectures): Several sources of evidence suggest that people tend to judge the value of alternatives relative to some reference point. People tend to be 'loss averse', weighting losses larger than gains. We will present evidence for reference dependent behavior, models that have been used to capture reference dependence, and applications to finance, labor supply and marathon running.

Other Regarding Preferences (3 lectures): Typically, economic models ignore motivations such as fairness and reciprocity. However, evidence suggests that these concerns are important in the laboratory and the field. We discuss this evidence, and introduce models of 'other regarding' preferences. We will consider applications to the labor market.

Approximate Timeline

1. **22nd Jan: Introduction and Overview:**
2. **27th Jan: Utility maximization 1: Testing models of utility maximization**
3. **29th Jan: Utility maximization 2: Failures of utility maximization**
4. **3rd Feb: Bounded Rationality 1: Introduction to bounded rationality and limited attention**
5. **5th: Bounded Rationality 2: Satisficing and Consideration sets**
6. **10th Feb: Bounded Rationality 3: Rational Inattention**

7. **12th Feb: Bounded Rationality 4: Level K thinking**
8. **17th Feb: Bounded Rationality 5: Applications**
9. **19th Feb: Temptation and Self Control 1: Introduction**
10. **24th Feb: Temptation and Self Control 2: Preference for Commitment**
11. **26st Feb: Temptation and Self Control 3: Time preferences**
12. **2nd March: Temptation and Self Control 4: Applications**
13. **4th March: Catch up and Summary**
14. **9th March: Midterm**
15. **11th March: Risk and Uncertainty 1: Expected utility and risk aversion**
16. **23rd March: Risk and Uncertainty 2: Non-expected utility maximization**
17. **25th March: Risk and Uncertainty 3: Subjective expected utility maximization**
18. **30th March: Risk and Uncertainty 4: Overconfidence and other statistical biases**
19. **1st April: Reference Dependence 1: Evidence for reference dependence**
20. **6th April: Reference Dependence 2: Loss aversion and prospect theory**
21. **8th April: Reference Dependence 3: Where do reference points come from?**
22. **13th April: Reference Dependence 4: Applications**
23. **15th April: Reference Dependence 4: Other context effects**
24. **20th April: Other Regarding Preferences 1: Introduction and Evidence**
25. **22nd April: Other Regarding Preferences 2: Inequality aversion**
26. **27th April: Other Regarding Preferences 3: Limits to the inequality aversion model**
27. **29th April: Other Regarding Preferences 4: Applications**
28. **4th May: Catch up and Summary**
29. **13th May: Final (Preliminary)**