Econ 980bb

Junior Seminar in Behavioral Economics, Fall 2017

Class time & location: Wed 2–4 pm, Science Center 222
Prof: Tomasz Strzalecki, tomasz_strzalecki@harvard.edu
Prof Office Hours: Thur 2–3pm in Littauer 322

Section time & location: TBD
TF: Krishna Dasaratha, dasarath@g.harvard.edu
TF Office Hours: TBD

Description

THE OBJECTIVE OF THE COURSE is for you to gain some experience doing research and prepare you for writing a senior thesis. We will study two important tools of behavioral economics: mathematical models of individual behavior and laboratory experiments.[1]

We will be trying to establish connections between models and experiments. To do that we will first need to understand the math well enough to realize what the models' predictions are. Then we will study the relationships between the models and the patterns of behavior that we can observe in the lab. We will design experiments to test various theories and also study the types of behavior for which we don't have good models yet and try to understand what a good model would look like. Prior knowledge of behavioral economics will be useful. The course will focus on analytical methods and therefore requires knowledge of probability theory and statistics.

[1] We will focus on the topics of **RISK**, **AMBIGUITY**, and **LEARNING**. Behavioral economics studies many other phenomena, which we will not cover. Field evidence will be mentioned only very sparingly. Whole other classes could be taught on that.

Schedule

	Class meetings	Your independent work
Sep 6	L: models and experiments	problem set is assigned
Sep 13	L: randomness	work on problem set
Sep 20	L: prospect theory 1	problem set 1 due, start preparing P
Sep 27	P: prospect theory 1, L: prospect theory 2	start a research journal
Oct 4	P: prospect theory 2, L: ambiguity	problem set 2 due
Oct 11	P: ambiguity, L: learning 1	paper prospectus due
Oct 18	P: ambiguity, L: learning 2	develop toy examples
Oct 25	P: learning 2, L: learning 3	figure out how to talk about it with others, prepare slides for R
Nov 1	P: learning 3, R	turn examples into fuller sketches
Nov 8	R	paper draft due
Nov 15	F	give feedback to each other
Nov 29	F	and write the report
Dec 9		**final paper due**

Legend: L–Lecture, P–Paper presentations (by students), R–Research project presentations, F–Final Presentations

Lecture Topics

1. **Introduction: Models and Experiments**
   - utility maximization models
   - observable consequences of assumptions
   - various ways in which the utility maximization model fails

2. **Choice under uncertainty**
   - probability theory
   - risk aversion, diversification, insurance
   - expected value vs expected utility
   - subjective probability
   - investments and portfolios

3–4 **Prospect Theory**
   - the Allais paradox, the common ratio effect
   - quantiles matter, value at risk
   - pessimism, optimism, and weighted expected utility
   - reference dependence, loss aversion
   - expectations as references

5 **Ambiguity**
   - taking bets, making investments, and speculating
   - the Keynes and Ellsberg Paradoxes
   - source preferences
   - maxmin

6–8 **Bayesian models of learning and evidence to the contrary**
   - conditional probability, Bayes rule
   - dynamic consistency
   - grain of truth
   - base rate fallacies and sample size fallacies

Grading

There will be two problem sets on the material covered in lectures (30%). You will read research papers and make an in-class presentation (15%). Your final project will be a 20 page paper; ideally, either a new model or a new experimental design (45%). Class participation is 10%.