Experimental economics: 
Documenting social preferences and cognitive biases

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Office Hours: 
By appt. (e-mail: christophe.heintz@gmail.com); or just pop in!

Type: CogSci research course, fall term, 2020
Level: Research course, 2 credits
Class: Thursdays, 3:30 pm – 5:10 pm
October 6th u., 7. First floor; room 226 … or Zoom

Course description

In this course, we will read and discuss papers about the psychological factors that underpin decision-making, focusing on decisions taken when interacting with others.

The course will have three parts:

1. An introduction to decision theory and behavioural economics

   Behavioral game theory is a subfield of behavioral economics, in which behavior is analyzed in terms of the costs and benefits it brings about. We will dedicate the first sessions to explaining the framework and its key notions, such as ‘bounded rationality’ and ‘cognitive biases’.

2. Studies on cognitive biases

   We will review the experimental literature documenting some of the most important cognitive biases: decoy effect, sunk cost effect, ambiguity aversion.

3. Studies on other-regarding preferences and strategic decision making

   We will then look at choices in strategic contexts: that’s where game theory is relevant, because the benefits of the choices made also depend on what others’ choose. We will see that these decisions depend on social preferences, which we will attempt to specify. Also, the decisions taken when interacting with others also depend on how others are predicted to behave. We will investigate how these predictions are formed and their effects on decision-making.

Learning outcome
• Acquaintance with the problems and methods of experimental economics, especially concerning
  - the study of pro-social motives
  - bounded rationality (biases and adaptive heuristics)
• Knowledge about the psychological bases of economic behaviour

At the end of the course, students should master a number of concepts and models used in decision sciences and game theory, such as ‘preference’, utility function, maximisation of expected utility, and Nash equilibrium. They will know about a number of findings in behavioural economics: the most famous biases, such as the ‘sunk cost fallacy’, and theories of social preferences, such as inequity aversion. Last, they will become familiar with the experimental method used in experimental and behavioural economics.

Course requirements
• Two one-page essays: the essays will consist of an empirical hypothesis about motivation and/or cognition at work when taking a decision, and an experimental protocol (or the description of a computer simulation, or a mathematical model) meant to test the hypothesis. 60% of the final grade.
• Articles presentations: students will be asked to write hands-out and stimulate discussion during two sessions with discussion format. 20% of the final grade.
• Participation to the class and homework: students are expected to actively engage with the questions raised in the course, challenge or defend the psychological theories presented in the readings, question the methodology, etc. Students will also be asked to solve some exercises in decision and game theory. 20% of the final grade.

Homework due: Exercises will be due the week after they are given. The two one-page essays should be handed in before week 12.

COURSE SCHEDULE

Part 1: Intro to the method and theoretical framework of experimental economics

1. Decision theory: a crash course

Goal: introduce the model of rational decision making, or homo economicus and specify the interest of the model for psychologists. We will review the following issues:
• The role of incentives and cost-benefit analysis
• Theory of revealed preferences: explicit goals, implicit motivations, or mere dispositions (evolutionary function)?
• Taking risks into account
Main readings:
p.15-33 from:

Chapter 1 of:

To go further:
Any introductory textbook on micro-economics. Including:

2. Some key results in behavioural economics

Goal: Illustrate the work of behavioural economics with a set of examples showing "predictable irrationality" and ways to test and theorise such departures from rational choice.

- Ignorance of the base rate
- Conjunction fallacy
- Loss aversion (is not risk aversion)
- The attractiveness of "free"
- Hyperbolic discounting
- Crowding out: an intro to social preferences

Main reading
Chapter 3 of:

To go further

Part 2: The psychological bases of ‘cognitive biases’

3. Sunk cost fallacy: theories and experiments

Main reading

To go further


### 4. Decoy effect

**Main reading**

**To go further**


### 5. Attitude towards risk and ambiguity aversion

**Main reading**

**To go further**

Part 3: Social preferences and strategic choices

6. Models of social preferences: inequity aversion, social welfare, competition

Goal: introducing the standard methods for investigating pro-social preferences, and the main models specifying these preferences with utility functions.

Main reading

Supplementary readings:


Camerer (2003) p. 43 to 101

7. The evolution of prosociality

Goal: introducing the problem of cooperation, from an evolutionary perspective. Specifying the ultimate causes and proximate mechanisms of prosocial choices, including Strong Reciprocity.

Main reading

Supplementary readings
- Outcome vs. intention-based preferences


- Strong vs. weak reciprocity

- Evolutionary considerations


8. Aversion to disappointing
Goal: introducing the idea of mind-directed preferences and their consequences on social behaviour.

Main reading

Supplementary readings


To go further: models

9. Attitudes towards social norms

**Main readings**
Available: [https://seop.illc.uva.nl/entries/social-norms/](https://seop.illc.uva.nl/entries/social-norms/)

**Supplementary readings**

10. Beliefs in social interactions

**Main reading**

**Further readings**

11. How to coordinate: Shelling games

**Main reading**

**Further readings**


12. Group decision-making or a topic to the choice of the students

Main reading
