



**Universitat
Pompeu Fabra**
Barcelona

Topics in Economic Theory II:

Behavioral Decision Theory–Part II

2023–2024 Academic Year
Master of Research in Economics, Finance and Management

1. Description of the subject

- Topics in Economic Theory II
 - Total credits: 3 ECTS
 - Type of subject: Optative
 - Department of Economics and Business
 - Teaching team: Larbi Alaoui
- Code: 32075
Workload: 75 hours
Term: 1st

2. Teaching guide

- **Introduction**

This class can be taken individually, or it can be taken as part of the [microeconomic theory track](#) or the [behavioral economics and decision making track](#). More information on these tracks is provided below, in section 3.

The traditional models of decision-making in economics are being seriously revised, in light of recent developments in psychology, behavioral economics and the neurosciences. In this course we cover some of the key theoretical developments in modeling non-standard decision-making.

This class is designed both for students with a theoretical, empirical and experimental inclination towards the understanding of individual decision-making, and for students with an interest in applying behavioral decision-making models to various economic settings.

This course is meant to be taken together with the course *Topics in Economic Theory I: Behavioral Decision Theory-Part I*, taught by Jose Apesteguia.

The Contents section below gives a short intro to each one of the four blocks that compose this course, and lists a number of key papers in the literature. In addition to the papers listed below, I will make available in the course Box folder the key recent papers in the field. These are the very last papers, the ones that are currently being presented in the relevant forums, and represent the state of the art in the field.

- **Teaching Methodology and Assessment**

The teaching methodology will consist in lectures, class discussions, and presentations of recent key papers. Students will select a paper to be presented in class, either from the reading list below or from the papers posted in the course Box folder.

The core of the evaluation will be based on one research project for Parts I and II of the Topics in Economic Theory courses, to be presented at the end of the course and turned in. The research project should consist of an original idea that could potentially be converted into a research paper. The content can be theoretical, empirical, or experimental, or a combination of these approaches. Each student must meet with both Jose and me during the term for approval of the chosen topic. Students can turn in the paper during the second term (specifically, on January 30th), but they can ask for additional time if they require an extension to delve deeper into the topic.

Class participation is also an important component of the course and is highly valued.

- **Contents**

1 Review of the classical foundations for decision-making under uncertainty. We begin with a review of the seminal models of decision-making under uncertainty, which serve as a foundation for subsequent frameworks.

Main reference: Kreps, David. Notes on the Theory of Choice, Underground Classics in Economics 1988.

Others:

Camerer, Colin; Loewenstein, George and Rabin, Matthew. *Advances in Behavioral Economics* (Princeton University Press, 2004).

Gilboa, Itzhak. *Theory of Decision under Uncertainty*, (Cambridge University Press, 2009).

Kahneman, Daniel and Amos Tversky. *Choices, Values and Frames* (Cambridge University Press, 2000).

Mas-Colell, Andreu, Michael Whinston and Jerry Green, *Microeconomic Theory*. Oxford University Press, Oxford 1995. Chapter 1, 2 and 3.

Rubinstein, Ariel. *Bounded Rationality* (arielrubinstein.tau.ac.il/book-br.html).

2 Limited attention and thinking. The study of limited attention and reasoning has grown significantly in recent years, and remains an important topic. We study some of the key contributions in this field.

References:

Abel, A., J. Eberly, and S. Panageas (2007), "Optimal Inattention to the Stock Market," *American Economic Review* 97(2): 244-249.

Alaoui, L. and A. Penta (2020), "Cost-Benefit Analysis in Reasoning," mimeo.

Caplin, A. and M. Dean (2015), "Revealed Preference, Rational Inattention, and Costly Information Acquisition", *American Economic Review* 105(7): 2183-2203.

Gul, F, W. Pesendorfer, and T. Strzalecki (2012). "Behavioral Competitive Equilibrium and Extreme Prices," mimeo.

Lipman, B. (1991) "How to Decide How to Decide How to...: Modeling Limited Rationality," *Econometrica*, 59(4): 1105-1125.

Mackowiak, B. and M. Wiederholt (2009), "Optimal Sticky Prices under Rational Inattention," *American Economic Review* 99(3): 769-803.

Sims, C. (2003), "Implications of Rational Inattention," *Journal of Monetary Economics* 50(3): 665-690.

Sims, C. (2006), "Rational Inattention: A Research Agenda."

Wilson, A. (2014). "Bounded Memory and Biases in Information Processing," *Econometrica* 82(6): 2257-2294.

3 Bounded rationality in games. We look at models of strategic behavior that do not assume rationality or common knowledge of rationality. In these frameworks, agents can have cognitive limitation and they can believe that others are cognitively limited.

References:

Alaoui, L. and A. Penta (2016). "Endogenous Depth of Reasoning", *Review of Economic Studies*, Vol 83, Issue 4, 1297-1333.

Alaoui, L., K. Janezic and A. Penta (2020). "Reasoning About Others' Reasoning", *Journal of Economic Theory*, Vol 189.

Bosch-Domenech, A., J. Garcia-Montalvo, R. Nagel, and A. Satorra (2002). "One, Two, (Three), Infinity...: Newspaper and Lab Beauty-Contest Experiments," *American Economic Review*, Vol 92, No. 5, 1687-1701.

Costa-Gomes, M. and V. Crawford (2006). "Cognition and behavior in Two-Person Guessing Games, an experimental study," *American Economic Review*, Vol 96. No. 5, 1737-1768.

Camerer, C., T. Ho and J. Chong (2004). "A Cognitive Hierarchy Model of Games," *Quarterly Journal of Economics*, 119(3): 861-898.

Crawford, V., Costa-Comes, M. and N. Iriberry (2013). "Structural Models of Nonequilibrium Strategic Thinking: Theory, Evidence, and Applications", *Journal of Economic Literature* 51: 5-62.

Ergin, H. and T. Sarver (2010). "A Unique Costly Contemplation Representation," *Econometrica*, 78(4): 1285-1339.

Fragiadakis, K. and M. Niederle (2013). "Identifying Predictable Players: Relating Behavioral Types and Subjects with Deterministic Rules," mimeo.

Goeree, J. and C. Holt (2004). "A Model of Noisy Introspection," *Games and Economic Behavior* 46(2): 365-382.

Kneeland, T. (2015). "Identifying Higher-order Rationality," *Econometrica*, 83: 2065-2079.

Nagel, R. (1995). "Unraveling in Guessing Games: an Experimental Study", *American Economic Review*, 85(5): 1313-1326.

Gill, V. and D. Prowse (2016). "Cognitive ability, character skills, and learning to play equilibrium: A level-k analysis", *Journal of Political Economy*, 124(6): 1619-1676.

4 Temporal inconsistency, self-control, relative preferences and overconfidence. We introduce time more explicitly. In particular, we consider another manifestation of internal conflict, namely temporal inconsistency. We specifically focus on models of hyperbolic discounting. In addition, we consider the connection between temporal inconsistency and models of overconfidence and self-image. We also analyze relative preferences, including habit-formation, keeping up with the joneses and caring about relative feedback.

References:

- Akerlof, G. and W. Dickens (1972), "The Economic consequences of Cognitive Dissonance", *American Economic Review*, 72(3): 307-319.
- Augenblick, N., M. Niederle and C. Sprenger (2015), "Working Over Time: Dynamic Inconsistency in Real Effort Tasks", *Quarterly Journal of Economics*, 130 (3): 1067-1115
- Benabou, R. and J. Tirole (2002), "Self-confidence and personal motivation", *Quarterly Journal of Economics*, 117(3): 871-915.
- Brunnermeier, M. and J. Parker (2005), "Optimal expectations", *American Economic Review*, 95(4):1092–1118.
- Caplin, A. and J. Leahy (2001), "Psychological expected utility theory and anticipatory feelings" *Quarterly Journal of Economics*, 116(1): 55-79.
- Carillo, J. and T. Mariotti (2000), "Strategic ignorance as a self-disciplining device", *Review of Economic Studies*, 67:529-544.
- Fudenberg, D. and D. Levine (2006). "A Dual-Self Model of Impulse Control," *American Economic Review*, 96, 1449-1476.
- Gul, F. and W. Pesendorfer (2001). "Temptation and Self Control," *Econometrica*, 69 (6), 1403-1435.
- Hopkins, E. and Kornienko, T. (2004), "Running to Keep in the Same Place: Consumer Choice as a Game of Status", *American Economic Review* 94(4), 1085-1107.
- Koszegi, B. (2006). "Ego utility, overconfidence and task choice", *Journal of the European Economic Association*, 4(4): 673-707.
- Kremer, M., S. Kaur, and S. Mullainathan. 2015. "Self Control at Work." *Journal of Political Economy*, 123(6): 1227-1277.
- Santos-Pinto, L. and J. Sobel (2005). "A Model of Positive Self-Image", *American Economic Review*, 95(5): 1386-1402.
- O'Donoghue, T. and M. Rabin (1999). "Doing it Now or Later", *American Economic Review* 89(1), 103-124.
- Rozen, K. (2010). "Foundations of Intrinsic Habit Formation," *Econometrica*, 78(4), 1341-1373.

5 Further topics. Time allowing, we will consider other topics based on student preferences. These may include:

- (i) more on costly reasoning
- (ii) fairness/reciprocity
- (iii) regret/disappointment
- (iv) ambiguity aversion
- (v) more on temporal inconsistency, self-control, cognitive dissonance.

3. Tracks

- **Microeconomics track**

Fall term (September – December)

- Topics in Economic Theory: Behavioral Decision Theory (I and II, taught by [Larbi Alaoui](#) and [Jose Apesteguia](#)).
- Topics in Economic Theory III (taught by [Antonio Penta](#)).

Winter term (January – March)

- Readings in Economic Theory (taught by [Alex Frug](#)).

Spring term (April – June)

- Industrial Organization (taught by [Rosa Ferrer](#) and [Sandro Shelegia](#)).
- Environmental Economics: Climate Change (taught by [Humberto Llavador](#)).



Behavioral economics and decision making track

Fall term (September – December)

- Topics in Economic Theory: Behavioral Decision Theory (I and II, taught by [Larbi Alaoui](#) and [Jose Apesteguia](#)).

Winter term (January – March)

- Behavioral Decision Making I: Attention, Experience and Influence (taught by [Gaël Le Mens](#))

Spring term (April – June)

- Behavioral Decision Making II: The Psychology of Economics Decisions (taught by [Daniel Navarro-Martinez](#)).
- Experimental Economics (taught by [Rosemarie Nagel](#)).