

V-Seminar

Cognitive Biases and Behavioral Economics

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Course abstract

Inspired by findings from psychology regarding how an individual or her brain processes information and makes decisions, philosophers and economists have independently conceptualized these findings in their respective fields. The seminar will look at biases and heuristics used by individuals in decision making from both a philosophical and an economic perspective. There will be discussions of broader, rather philosophical questions, e.g. to which extent the usage of heuristics is irrational and how they can be carried out by the individual's mind, as well as more applied – economic – questions, e.g. how do these biases affect tradeoffs between short run benefits and long-run goals (savings for retirement).

Organizational Issues

Dates and deadlines

- **Introduction and organization session:** Tuesday April 11th, 2018, 2:00pm. Room will be announced on short notice.
- **Deadline for Registration:** Monday April 16th, 2018.
- **Seminar:** Friday May 25th till Sunday May 27th.
- **Submission of term papers:** Monday June 18th, 2018 (in print and as a pdf-document via e-mail.)

Target group

Advanced bachelor's students from P&E, Economics, and IWE.

Enrollment and seminar places

At most 20 students are accepted for the seminar. Students can enroll for the course on the *CampusOnline* platform. The topics will be assigned to students on Tuesday April 17th. The procedure will be explained at the "Introduction and organization session".

Course language

Presentations should be held and term papers should be written in English.

Assessment

Each student has to give a presentation, to actively take part in the discussion, and to write a term paper. The term paper should have a length of 8-9 pages, not counting appendices. The length of each presentation should be approximately 30 minutes followed by 20 minutes of discussion. If we have more than 10 students enrolled, presentations will be done in groups.

- **Philosophy & Economics:** 6 cp, V3.
- **Economics:** 5cp, Seminar “Institution und Governance“, „Mikrotherotisches Seminar“.
- **Internationale Wirtschaft und Entwicklung:** Spezialisierung IGME, VET.

Seminar Topics

1. Cognitive Biases and Heuristics

- *Objective:* To be acquainted with the experiments and the generated data. Understanding the heuristics and rule of thumps that individuals use in order to form beliefs and to make decisions.
- *Questions:* (i) Why and how such judgments are formed, given that we have access/know the “right” principles and paths to be applied; (ii) are those judgments biased, i.e., mistaken or irrational?
- *Literature:*
 - Tversky, A. & Kahneman, D. (1974). Judgement under Uncertainty: Heuristics and Biases. *Science*, 185, 1124-1131.
 - Tversky, A. & Kahneman, D. (1983). Extensional vs. Intuitive reasoning: The Conjunction Fallacy in Probability Judgement. *Psychological Review*, 90. 293-315.
 - Bordalo, P., Coffman, K., Gennaioli, N., & Shleifer, A. (2016). Stereotypes. *The Quarterly Journal of Economics*, 131(4), 1753-1794.

2. Dual Process Theories

- *Objective:* To discuss one theory about the mind that makes sense of the existence and prevalence of cognitive biases and heuristics. Thereby addressing/discussing question (i) from topic #1.
- *Questions:* (i) Why should we suppose that the mental state guiding/generated by System 1 is a belief state rather than any other type of mental state (since it seems to follow different norms, may have a different content structure, etc.); (ii) why only 2 levels of processing rather than perhaps a graded view on information processing?
- *Literature:*
 - Evans, J. and K. Stanovich (2013), “Dual-Process Theories of Higher Cognition: Advancing the Debate”, *Perspectives on Psychological Science*, 8(3): 223–241.

- Stanovich, K. E. (2009) “Distinguishing the reflective, algorithmic, and autonomous minds: Is it time for a tri-process theory?”, in: Evans, J., and K. Frankish (eds.), *In Two Minds: Dual Processes and Beyond*, Oxford: Oxford University Press: 55-88.

3. Implicit Attitudes and Implicit Bias

- *Content*: To get acquainted with the experiments and the generated data. To see a further application of dual process theories (since implicit attitudes very often contrast with explicit ones).
- *Questions*: (i) In which way implicit attitudes connect (guide and/or are generated from) cognitive biases and heuristics? (ii) are the findings about implicit attitudes complementary to the findings in cognitive biases, or rather, are they competing explanations?
- *Literature*:
 - Nosek, B; Hawkins, C and Frazier, R. (2011), “Implicit social cognition: From measures to mechanisms”, *Trends Cognitive Science* 15(4): 152–159.
 - di Bella, L.; Miles, E and Saul, Jennifer (2016) “Philosophers explicitly associate philosophy with maleness: an examination of implicit and explicit gender stereotypes in philosophy”, in: *Implicit Bias and Philosophy* (Vol. 1), edited by Michael Brownstein and Jennifer Saul, Oxford: OUP, 283-308.
 - Maison, D., et al. (2004), “Predictive validity of the Implicit Association Test in studies of brands, consumer attitudes, and behavior”, *Journal of Consumer Psychology* 14 (4): 405–415.

4. The Nature of Implicit Attitudes

- *Content*: To discuss some alternative philosophical accounts to the nature of implicit attitudes and perhaps about “automatic” processing of information.
- *Questions*: (i) What are the requirements of beliefs (e.g., should they be sensitive to evidence; be correctly updated; etc)? (ii) are cognitive biases mere heuristics that employ beliefs, or are they a different species of processing that involve different types of mental states?
- *Literature*:
 - Gendler, T., (2008), “Alief and Belief”, *Journal of Philosophy*, 105(10): 634–63.
 - Schwitzgebel, E. (2010), “Acting Contrary to Our Professed Beliefs, or The Gulf Between Occurrent Judgment and Dispositional Belief”, *Pacific Philosophical Quarterly* 91 (4): 531-553.
 - Frankish, K. (2016), “Playing Double: Implicit Bias, Dual Levels, and Self-Control”, in: *Implicit Bias and Philosophy* (Vol. 1), edited by Michael Brownstein and Jennifer Saul, Oxford: OUP, 23-46.

5. Two-Modules View of the Brain

- *Content:* There is an old literature in psychology in which the brain is viewed as comprising of two modules: an emotional and a cognitive module (Schneider and Shiffrin, 1977). This idea has been used by economist to model the behavior of individuals as the outcome of competition between the two modules (game-theoretic equilibrium).
- *Questions:* (i) What are the different objectives of the doer and the planner? (ii) How do the conflicting interest of the doer and the planner affect behavior over the life-cycle and consumption of addictive goods?
- *Literature:*
 - Shefrin, H.M., & Thaler, R.H. (1988). The Behavioral Life-Cycle Hypothesis. *Economic Inquiry*; 26(4), 609- 643.
 - Fudenberg, D., & Levine, D. K. (2006). A dual-self model of impulse control. *American Economic Review*, 96(5), 1449-1476.
 - Bernheim, B. D., & Rangel, A. (2004). Addiction and cue-triggered decision processes. *American Economic Review*, 94(5), 1558-1590.

6. Mental Accounting

- *Content:* To discuss a theory that takes into account that individuals do not take all interrelations into account when making decisions; i.e., individuals group decisions in certain categories and make tradeoffs only within a category.
- *Questions:* (i) What is the psychological principal behind the idea of mental accounting, (ii) how does it relate to the theory of loss aversion?
- *Literature:*
 - Thaler, R. (1985). Mental accounting and consumer choice. *Marketing Science*, 4(3), 199-214.
 - Prelec, D., & Loewenstein, G. (1998). The red and the black: Mental accounting of savings and debt. *Marketing Science*, 17(1), 4-28.
 - Tversky, A., & Kahneman, D. (1991). Loss aversion in riskless choice: A reference-dependent model. *Quarterly Journal of Economics*, 106(4), 1039-1061.

7. Judgements under Risk – Prospect Theory

- *Content:* To get acquainted with the experiments and the data that document violations of the von Neumann and Morgenstern axioms. To understand the fundamental assumptions on which Prospect Theory is based.
- *Questions:* (i) What are the drivers behind the Allais paradox? (ii) Why are certain outcomes fundamentally different from risky prospects?
- *Literature:*
 - Kahneman, D., & Tversky, A. (1979). Prospect Theory: An Analysis of Decision under Risk. *Econometrica*, 47(2), 263-291.

- Tversky, A., & Kahneman, D. (1992). Advances in prospect theory: Cumulative representation of uncertainty. *Journal of Risk and Uncertainty*, 5(4), 297-323.

8. Judgements under Risk – Regret Aversion

- *Content:* To get acquainted with the experiments and the date that is not in accordance with Prospect Theory. To understand the importance of juxtaposition effects for decisions under risk.
- *Questions:* (i) Why does Prospect Theory fail to explain juxtaposition effects?
(ii) How does Regret Theory take these juxtaposition effects into account?
- *Literature:*
 - Bell, D.E. (1982). Regret in Decision Making under Uncertainty. *Operations Research*, 961 – 981.
 - Starmer, C. & Sugden, R. (1989). Probability and Juxtaposition Effects: An Experimental Investigation of the Common Ratio Effect. *Journal of Risk and Uncertainty*, 2, 159-178.