

Subjective Probability Judgements in Economic Games

PhD-/Master-Seminar im Wintersemester 2014/15

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Abstract

In many economic models, beliefs have a crucial role (just think of ‘rational expectations’ in equilibrium models, or of the role of expectations in business cycles or bubble formation). This seminar-type course focuses on the role of beliefs in the more abstract world of game theory, and in particular on how those beliefs can be measured experimentally. We start out by an intense review of design choices and challenges. Following this, participants select/find and start to work on a topic that is likely to be (but need not be) experimental in nature. I recommend that participants work in groups of two.

1 Organisation

- until mid-Oct Quiz (on ILIAS): the quiz will be short and will not enter participants’ marks. Its purpose is to give both participants and the lecturer a better impression on the level of participants’ background knowledge.
- 1st week of semester Kick-off meeting: this session will be a recap on 2.1 below presented by the lecturer.
- week 3 presentations on Schlag, Tremewan, and van der Weele (wp, 2014): all participants are required to prepare a short (5-20min) presentation on each of the parts of this review paper. The roll of a die will determine who gets to present which part.
- week 4 research ideas (presentation optional, participation compulsory): during this session, participants are given the opportunity to present and discuss their research ideas (presentations of max. 30min). Doing so is recommended, in particular for those participants coming up with their own research questions.
- week 6 Presentation of research plan (presentations of max. 30 min): participants present and discuss their proposed research.
- week 8 At the beginning of the week, participants hand in a two-page summary spelling out answers to ‘the five questions’, plus the experimental instructions. At the meeting, this ‘final’ state of the experiment is discussed in the group; each discussion is to be started off by a ‘discussant’. Depending

on the overall number of projects in the seminar, the discussant will be pre-determined or chosen by the roll of a die.

until Xmas improvements can be made taking into account the comments from week 8. Programming of experiments (use of z-Tree is recommended but not mandatory).

1st week of Jan Experiments

3rd week of Jan presentation of the results (max. 30min)

by 31st Mar term paper

2 Background

2.1 What beliefs can do

- ‘Rational’ beliefs and equilibrium (as a predictor)
- Equilibrium selection
- Gang-of-four-type arguments → Kreps et al. (JET, 1982)
- Psychological game theory
- Level- k

2.2 Measurement challenges

- Timing of measurement
- incentivisation: if and how (i.a. spill-over/order effects, hedging, scoring-rule properties)
- type of belief (probabilistic vs point estimates)
- belief elicitation may foster strategic thinking

3 Examples of topics

- Do non-incentivised beliefs ‘lead to’ more (measured) best-response play?
- The predictive power of elicited beliefs: a comparison of different ‘belief formats’
- Unveiling the nature of beliefs by intra-team communication
- The role of beliefs in feedback-free learning (→ Rick and Weber, GEB, 2010)
- Can belief elicitation foster the acquisition of iterated dominance (similar to, e.g., feedback-free learning)?
- Identity and the role of beliefs in a travellers’ dilemma
- Behaviour in 3x3 dominance-solvable games and beliefs in rationality