

Objective ambiguity

Miklós Pintér

Institute of Mathematics, BME, Budapest

pinter@math.bme.hu

Uncertainty is a prevailing phenomenon in social and natural situations. There is no uncertainty if the state of the world is known, otherwise the decision maker faces uncertainty. We distinguish three types of uncertainty: (1) risk, when the uncertainty can be described with a probability distribution (more precisely by a probability measure space), (2) ambiguity, when there is an event such that its "probability" is (described by) an interval, and (3) unawareness, when even some events are not known, more precisely, not known that not known and so on by the considered decision maker(s). In this talk we consider ambiguity.

The possibility of gaining advantage in strategic situations by using ambiguity is well documented in the literature (Greenberg, 2000; Riedel and Sass, 2014). However, so far there is not known any method or procedure to generate objective ambiguity, that is, there is not known such "coin tossing" which produces ambiguous outcomes.

In this talk we introduce a procedure which – like coin tossing in the case of probability distributions – can generate objective ambiguity. The procedure is based on the random set approach of ambiguity (Choquet, 1954; Nguyen, 1978; Castaldo et al. 2004).

References

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