

ON REFLEXIVE SUBJECTIVE PROBABILITY

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A *reflexive* subjective probability statement is a statement in which the notion of subjective probability occurs in the scope of an occurrence of the subjective probability predicate. For example:

*It seems highly likely to me that
if I am very confident that I will get the job,
I will perform well at the interview and will be offered the job.*

Questions about such statements play an increasingly important role in formal epistemology.

An analogy with reflexive (or typefree) truth suggests itself. Reflexive truth has been studied intensively over the past decades, both from a proof-theoretic and from a model-theoretic perspective. In this context it is clear that we must somehow deal with the semantic paradoxes, but we have been relatively (albeit not totally!) successful with doing so. For starters, on the proof theoretic side, we have a fairly good idea of what should count as incontrovertible basic principles of typefree truth.¹

In the case of reflexive subjective probability, analogues of the semantic paradoxes have to be confronted. But surprisingly little work has been done in this area.² It is at present not even very clear what the axiomatic core of a theory of reflexive subjective probability, i.e., the analogue of Kolmogorov's axioms for typefree probability, looks like. To address this question is a primary aim of my talk. Against a resulting background core system, I will then consider less elementary principles such as infinite additivity principles and probabilistic reflection principles.

REFERENCES

- [1] C. Campbell-Moore. *Self-Referential Probability*. PhD thesis, Ludwig-Maximilians-Universität München, 2016.
- [2] H. Friedman and M. Sheard. An axiomatic approach to self-referential truth. *Annals of Pure and Applied Logic*, 33, 1–21, 1987.

¹See for instance [2].

²Exceptions are [3] and [1].

- [3] H. Leitgeb. From type-free truth to type-free probability. In: G. Restall and G. Russell, eds., *New Waves in Philosophical Logic*, pp. 84–94. Palgrave Macmillan, 2012.

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