Decision-based Probabilities in the Everett Interpretation: Comments on Wallace and Greaves

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Abstract

It is often objected that the Everett interpretation of QM cannot make adequate sense of quantum probabilities, in one or both of two senses: either it cannot make sense of probability at all, or cannot explain why probability should be governed by the Born rule. David Deutsch has attempted to meet these objections. He argues not only that rational decision under uncertainty makes sense in the Everett interpretation, and that under reasonable assumptions, the credences of a rational agent in an Everett world should be constrained by the Born rule.

David Wallace has recently developed and defended Deutsch's proposal, and greatly clarified its conceptual basis. In this note I outline some concerns about the Deutsch argument, as presented by Wallace, and about related proposals by Hilary Greaves. In particular, I argue that the argument is circular, at a crucial point.

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