Measurement Outcomes and Probability in Everettian Quantum Mechanics

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Abstract

The decision-theoretic account of probability in the Everett or many-worlds interpretation, advanced by David Deutsch and David Wallace, is shown to be circular. Talk of probability in Everett presumes the existence of a preferred basis to identify measurement outcomes for the probabilities to range over. But the existence of a preferred basis can only be established by the process of decoherence, which is itself probabilistic.

Commentary on:	Wallace, David (2002) Quantum Probability and Decision Theory, Revisited.
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Commentary/Response Threads

- Wallace, David. Quantum Probability and Decision Theory, Revisited. (deposited 18 November 2002)
  - Greaves, Hilary. Understanding Deutsch's probability in a deterministic multiverse. (deposited 03 May 2004)
  - Baker, David. Measurement Outcomes and Probability in Everettian Quantum Mechanics. (deposited 21 May 2006) **[Currently Displayed]**