Quantum Physics

Problems with Probability in Everett's Interpretation of Quantum Mechanics

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In the many-worlds interpretations (MWIs) of Everett and others, if I am the observer, there are several versions of me but no version is singled out as the one corresponding to my perceptions. However, it can be shown that the probability law implies one version must be singled out. Thus MWIs do not provide a sufficient basis for probability. If we are to have an acceptable description of the physical universe, MWIs must be supplemented by some mechanism, such as hidden variables or collapse, that singles out one version of the observer as the perceiving version.

Comments:	8 pages. The main objections to MWIs have been simplified and clarified in version 3. A more thorough description of other lines of reasoning is given in version 2
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