

Abstract Submitted
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Bell's Future Quantum Mechanics Interpretation DOUGLAS SWEETSER, quaternions.com — In 1935, Einstein, Podolsky, and Rosen proposed that variables hidden in the past lightcone could explain how quantum mechanics worked. The inherent uncertainty of quantum mechanics was traded for something more real, variables that are hidden. This proposal was not easy to dismiss given Einstein's stature. In the 1960s, John Bell found an inequality that could test if variables are hidden in the past lightcone or the entangled states of quantum mechanics were somehow real because quantum information was non-local. If one asks the same question the same way, both models make identical predictions. If questions are asked at a different angle, the hidden variable hypothesis is unchanged. Quantum mechanics says correlations between measurements become stronger. Experiments since the 1980s have always confirmed quantum mechanics is non-local. Hidden variable models are wrong. Events in the past light cone determine both the classical and relativistic future. My proposal is that quantum mechanics makes productive use only of events that are all outside the light cone, that all events are space-like separated from the observer. Such events can tell you nothing about here-now. They can predict the future odds of events happening at a particular place in space-time (future-here).

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