

"BELL'S THEOREM AND FREE WILL"

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Bell's theorem reveals a profound tension between locality, realism, and the statistical predictions of quantum mechanics. A less discussed but equally fundamental assumption underlying Bell's argument is measurement independence, often interpreted as the experimenters' freedom to choose measurement settings. In my talk, I will discuss the role of all the three assumptions (locality, realism, and free will) in Bell's theorem, clarifying their operational meaning and its distinction from metaphysical notions of determinism. We show how relaxing measurement independence reshapes the space of classical explanations, and we discuss the implications for quantum nonlocality, causal structure, and interpretations of quantum theory.