

Title: A Quantum Probability Approach to Causal Reasoning

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Abstract: Much of the research on human causal reasoning has focused on elemental causal induction - learning the relationship between a single cause and effect. However, most real world causal structures are more complex. For example, there can be multiple interacting causes for a single effect. When faced with complex problems such as this, how do people make causal judgments? There is evidence that people's judgments about complex causal systems often deviate from the normative rules of classic probability theory (Sloman & Fernbach, 2011; Trueblood & Busemeyer, 2012). In this talk, I will demonstrate that quantum probability theory provides a viable new direction toward the possibility of developing a unified and principled theoretical framework for human causal reasoning.