

**Abstract**

An agent makes a stochastic choice from a set of lotteries. She infers the outcomes of her options using a subjective causal model represented by a directed acyclic graph, and consequently may misinterpret correlation as causality. Her choices affect her inferences which in turn affect her choices, so the two together must form a personal equilibrium. We show how an analyst can identify the agent's subjective causal model from her random choice rule. In addition, we provide necessary and sufficient conditions that allow an analyst to test whether the agent's behavior is compatible with the model.