

A Subjective Spin on Roulette Wheels

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Abstract

We provide a behavioral foundation to the notion of ‘mixture’ of acts, which is used to great advantage in the decision setting introduced by Anscombe and Aumann [1].

Our construction allows one to formulate mixture-space axioms even in a fully subjective setting, without assuming the existence of randomizing devices. This simplifies the task of developing axiomatic models which only use behavioral data. Moreover, it is immune from the difficulty that agents may ‘distort’ the probabilities associated with randomizing devices.

For illustration, we present simple subjective axiomatizations of some models of choice under uncertainty, including the maxmin expected utility model of Gilboa and Schmeidler [11], and Bewley’s model of choice with incomplete preferences [2].

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