Modelling Noise and Imprecision in Individual Decisions

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Abstract

When individuals take part in decision experiments, their answers are typically subject to some degree of noise / error / imprecision. There are different ways of modelling this stochastic element in the data, and the interpretation of the data can be altered radically, depending on the assumptions made about the stochastic specification. This paper presents the results of an experiment which gathered data of a kind that has until now been in short supply. These data strongly suggest that the 'usual' (Fechnerian) assumptions about errors are inappropriate for individual decision experiments. Moreover, they provide striking evidence that core preferences display systematic departures from transitivity which cannot be attributed to any 'error' story.