Cumulative Prospect Theory in the Laboratory: A Reconsideration

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Abstract

We take Cumulative Prospect Theory (CPT) seriously by rigorously estimating structural models using the full set of CPT parameters. Much of the literature only estimates a subset of CPT parameters, or more simply assume CPT parameter values from prior studies. Our data are from substantial laboratory experiments with undergraduate students and MBA students facing real incentives and losses. We also estimate structural models from Expected Utility Theory, Dual Theory, Rank-Dependent Utility (RDU) and Disappointment Aversion for comparison. Our major finding is that a majority of individuals in our sample locally asset integrate. That is, they see a loss frame for what it is, a frame, and behave as if they evaluate the net payment rather than the gross loss when one is presented to them. This finding is devastating to the direct application of CPT to these data for those subjects. Support for CPT is greater when losses are covered out of an earned endowment rather than house money, but RDU is still the best single characterization of individual and pooled choices. Defenders of the CPT model claim, correctly, that the CPT model exists "because the data says it should." In other words, the CPT model was borne from a wide range of stylized facts culled from parts of the cognitive psychology literature. If one is to take the CPT model seriously and rigorously then it needs to do a much better job of explaining the data than we see here.

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