Title:
How Categorization Shapes the Probability Weighting Function

Abstract:
The shape of the probability weighting function is one of the most well-known empirical observations in judgment and decision-making research and has applications within marketing, finance, and across the behavioral sciences. The tendency to overweight low probability events and underweight high probability events stems from the categorical distinction between "not happening" and "a chance" and "happening." We reconsider the nature of how individuals categorize uncertainty. Using experiments and modeling, we demonstrate that individuals categorize uncertainty differently across contexts and across modes of expression (i.e., numeric risks, visual expressions of probability, verbal labels of uncertainty). We show that probability sensitivity, and thus the shape of the probability weighting function, depends crucially on these categorical boundaries.