Why More is less:
Info-Gap Explanation for Robust-Satisficing Behavior

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Abstract

In this talk we discuss the questions: why, and when, and in what form, a satisficing strategy is a better bet for survival, than a strategy which uses the best available information in attempting to optimize the outcome. We discuss theorems asserting that, under severe uncertainty, a robust-satisficing decision has a better probability of survival than a best-model outcome-optimizing decision. These theorems are based on non-probabilistic info-gap decision theory, which provides a quantification of Knightian uncertainty. These theorems are applicable to Bayesian mixing of two models, allocation between a risky and a risk-free asset, foraging behavior, explaining Ellsberg's paradox, satisfying multiple requirements, forecasting in dynamical systems, and managing exogenous uncertainties.

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More references, links to international workshops on info-gap theory, and other sources, can be found on my website: http://www.technion.ac.il/yakov

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