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Three perspectives on decisions under risk and uncertainty: A comparative analysis of potential discrepancies and their explanations

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Abstract

Understanding and predicting the relevant risky choices of modern life is a key goal of the behavioral sciences and cognitive decision research specifically. However, do researchers study those choices that people actually face in their lives, or choices that at least capture the same cognitive processes? To address these open questions, we compare 214 risky choices from three perspectives (research, layperson, life outcomes) and use semantic embeddings extracted from a LLM to assess the similarity of choices between perspectives. Furthermore, by means of a Bayesian mixed effects model we examine the potential overlaps and gaps between the three perspectives regarding which cognitive mechanisms may be at play when people make the various choices. Our research informs theories of risk taking by revealing discrepancies of behavioral research with real-life choices, both regarding the choices that are considered timely as well as the cognitive underpinnings that influence these choices.