

How Representations of Knowledge Shape our Actions

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In many of our decisions we cannot consult explicit statistics telling us about the relative risks involved in our actions. In lieu of explicit statistics, we can arrive at proxy statistics by sampling from the payoff distributions that embody the alternatives they face. How competitive these proxies and our ultimate choices (actions) are depends on the size of the sample we take. Recent studies of decisions from experience observed that people tend to rely on genuinely small samples (knowledge) from payoff distributions. This frugality in information search exacts a cost: Converging findings show that in people's decisions from experience rare events tend to have less impact than they deserve according to their objective probabilities. Striking similarities in human and animal experience-based choices, ways of modeling these choices, and their implications for risk, rationality, and precautionary actions are discussed.