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Beyond Rewards: How Information Value and Time Horizon Shape Exploration

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Abstract

Prior research has shown that American children (ages 3 to 8) explore uncertain options at strikingly high rates — even when it comes at a cost to reward maximization, when explicitly instructed to seek rewards, and whether they are choosing for themselves or others. In contrast, adults explore significantly less, showing greater sensitivity to cost. What drives this developmental difference? In a series of studies, we test whether children's exploration is motivated by information value rather than reward value and whether adults also incorporate information value into their decisions. We also examine the role of time horizon in the explore-exploit tradeoff. Our findings reveal that both children and adults consider information value and time horizon when deciding whether to explore or exploit.

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