What causes enhanced processing of high-value items?

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Abstract

Recent work has revealed that people are better at making decisions between high-value options than low-value options. One explanation for this puzzling result is that arousal increases when people expect to earn large rewards. Here, we test this hypothesis using two versions of the same color discrimination task with different incentives, one with fixed rewards (accuracy-based) and one with rewards that scale with value (value-based). Online data collection is ongoing; our target sample is n=30. We will use the drift-diffusion model (DDM) to study the relationship between accuracy and overall value. We hypothesize that there will be a positive relationship between option values and accuracy in the value-based condition, but not in the accuracy-based condition, as the fixed reward provides no incentive to respond more accurately to higher-value options. These results would indicate that value-based discrimination is primarily driven by goal-based factors.