

# Valence vs. Value in Decision-Making in Depression

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**Abstract:** Individuals with elevated symptoms of depression exhibit deficits in decision-making. Depressed individuals show decreased sensitivity to rewards, but increased sensitivity to punishments. This may be critical to understanding depression-related decision-making deficits, yet the computational nature of these effects is poorly understood. Participants (N=161) completed a decision-making task wherein they chose between two options on each of 150 trials. Rewards for both options were drawn from skewed-normal distributions with mean reward values of 0 points. For one option the reward distribution was positively skewed—more frequently giving losses than gains. For the other option the reward distribution was negatively skewed—more frequently giving gains than losses. Preference for the negatively-skewed option increased linearly as a function of the degree of depressive symptoms. Modeling analyses indicate that depressive symptoms are associated with less effective processing of reward magnitude and greater reliance on reward valence (gains vs. losses) in decision-making.