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Choosing while Losing: The Effects of Valence and Relative Magnitude on Decision Dynamics.

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Abstract: Framing decision options as gains or as losses affects how we evaluate those options. The current study assessed the effects of gain- and loss-framing on the acquisition of outcome values across decisions and on the dynamics of computer mouse responses to those decisions. In a series of 36 decisions per block, four arbitrary symbols were presented, two of which were assigned high points (e.g., 20) and two of which were assigned low points (e.g., 5). Participants (N=86) learned to choose high values and avoid low values when values were positive and to choose low values and avoid high values when they were negative. Loss-framed outcomes (i.e., negative valence) were learned faster and more reliably. Response trajectories following acquisition were slower, more curved and exhibited greater vacillation when choosing between two poor outcomes. These effects were stronger when poor outcomes were negatively valenced.