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Learned-predictiveness, not valence, modulates time perception

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Abstract

It has been argued that attention and memory are influenced by motivational salience rather than valence/value. However, whether this holds for subjective time perception remains unclear. A two-phase study was conducted. First, in a value learning task, a set of neutral faces was imbued with different levels of motivational salience (high or low) crossed with two levels of value (gain, loss). Thus, a specific face could acquire, for example, high motivational salience and low value by repeatedly signaling an 80% chance of losing points. Faces with these learned associations were then presented as an oddball for a varying duration in a sequence of standard stimuli previously seen but predictive of no outcome. Participants assessed if the oddball was longer or shorter than the duration of the standard stimuli. Results showed that an oddball associated with a high predictable outcome was perceived to last longer than with a low predictable outcome.