

How do emotions affect time perception? A meta-analysis

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The current meta-analysis investigates the impact of emotions on prospective time estimation. Emotions can be classified based on the dimensions of arousal and valence. Therefore, in the current analysis, the effects of both dimensions on time perception are examined separately. Prominent models of prospective time perception postulate an effect of arousal on time estimates: The higher the arousal of a person (caused by situational factors), the longer his or her estimate of a certain time interval. In contrast, the valence of an emotion could affect a second known factor of prospective time perception: attention. However, it is still unresolved how the emotional valence influences attentional processes. The aim of the current study was a systematic evaluation of the effects of both emotion dimensions on time perception. The current meta-analysis contains 35 studies, published between 1984 and 2017. Systematic effects on time estimation were obtained for both, arousal and valence: Increased arousal is associated with longer time estimates ($Ave(d) = .28$). In contrast, in situations with a positive emotional valence, time intervals are estimated as shorter compared to situations with neutral or negative emotional valence ($Ave(d) = -.25$). We will also report the impact of potential moderating factors like the method of time estimation or the duration of the time interval to be estimated. A further topic of the discussion will be potential restrictions of our findings due to publication bias and missing information.

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