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Space Matters: Investigating the influence of spatial information on subjective time perception

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Abstract

Although understood that time perception is subjective, the underlying cognitive mechanisms are not well described. Event segmentation theories propose that spatial information serves to segment experienced information in discrete units which then can be used to estimate time. Based on this theory, we explored whether subjective time perception is influenced by the amount of perceived spatial information. A group of young participants viewed short videos of episodes that included a spatial change (e.g., moving through doorways) or no spatial change. In one experiment, participants were asked to estimate a given time duration while viewing the video and in a second experiment, participants estimated the time of the video after viewing. Across experiments, videos with spatial change were associated with more accurate time perception estimates than those without spatial changes. These results highlight the important role of spatial processing in directing the experience of time.