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The role of predictability and sense of agency in time estimation

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Abstract

Our perception of how time passes changes dynamically, and is influenced by psychological factors such as sense of agency (SoA), predictability, and attention. Using a reproducing time estimation task, this study investigates how predictability cues can influence time estimation by individuals with stable and unstable SoA. The results show that participants with stable SoA tended to estimate longer durations than participants with unstable SoA. Further, a cue to predictability led to even longer estimations by participants with stable SoA but made no difference in the time estimations of participants with unstable SoA. The study discusses the relationship between individual differences in SoA, predictability, and time estimation.