Validating a Model of Time Perception with Variations of a Counting Task

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Abstract: An approach of prospective time estimation is introduced, which explains influences of cognitive task load by means of memory processes. The approach was integrated into a cognitive architecture and has previously been tested successfully. In the counting task participants have to count the number of targets that appear in lists, either under low or high task load. The participants had to stop each of 8 trials after the duration of 100 seconds (altered reproduction method) and received feedback. The duration was previously presented in a sample trial. The task demands either increased or decreased after a number of trials of equal task load. Consistend with the model predictions, empirical data of two experiments show overestimations if the demands increased. The predicted underestimates for the decrease in demands turned out only if participants expected such a switch. The results show consistent predictions by the assumed model.