

P2.8 – Working memory capacity for continuous events: The impact of event duration

Arya Gilles¹, Nathan Leroy¹, Steve Majerus¹, & Arnaud D'Argembeau¹

1 – Université de Liège, Belgium

Keywords: Episodic memory, working memory, temporal compression

Remembering the unfolding of a continuous event usually takes less time than the actual duration of the past episode, an effect that is referred to as the temporal compression of events in episodic memory. In this study, we evaluated whether such temporal compression also occurs for events held in working memory and to what extent it depends on the duration of continuous events. To do so, we presented 25 video clips each showing one (or several) person(s) performing a continuous action (e.g., turning a car jack, without interruption) that lasted 3, 6, 9, 12, or 15 s. For each video clip, participants had to carefully watch the action and then to mentally replay it as accurately and precisely as possible. We hypothesized that the remembering duration (RD, the time taken by participants to mentally replay a just seen video) would be shorter than the actual video duration when stimuli last 12 s or longer. Results showed that the RD increased with stimuli duration but not proportionally (non-linearly): RD appeared to be close to the actual stimuli duration for short videos, but smaller for longer videos (12 or 15 s). From a theoretical point of view, these results suggest that when the capacity limit of working memory is attained, the maintained event model no longer represents the entire unfolding of the current episode and thus temporal compression increases.