

5082. The Temporal Compression of Continuous Events in Memory

Saturday, November 18, 2023

6:00 PM - 7:30 PM

Room: Grand Ballroom

Nathan Leroy - University of Liege

Arnaud D'Argembeau - University of Liege

Remembering the unfolding of past episodes usually takes less time than their actual duration. In this study, we evaluated whether such temporal compression emerges because of working memory capacity limit in representing continuous events. Fifty participants were asked to watch and then to mentally replay videos depicting continuous events (e.g., turning a car jack) lasting 3, 6, 9, 12, or 15 s. The time needed for remembering the unfolding of each event was measured and the time needed to initiate remembering (i.e., to mentally visualize the starting point of events) was estimated in another task to have a more precise measure of mental replay durations. The results showed that corrected mental replay durations were close to the actual stimuli duration for 3-s events but smaller for longer events, showing a non-linear relation between event and mental replay durations. These results suggest that working memory is limited in its capacity to represent continuous events, leading to the emergence of temporal compression when events exceed 3 s.