

Temporal memory for complex events

Tuesday, September 24, 2024 10:00 AM (20 minutes)

Remembering when events occurred is a key component of episodic memory, but the neurocognitive mechanisms underlying this ability remain poorly understood. In a series of studies, we investigated the role of prior knowledge and event representation on temporal memory for complex events. Different groups of participants were asked to report when short video clips extracted from a previously encoded movie occurred on a horizontal timeline representing the duration of the video. When participants watched the entire movie, they were more accurate in placing the video clips. In contrast, watching the movie without the ending resulted in a systematic bias in temporal memory, with participants increasingly underestimating the time of occurrence of the video clips as a function of their proximity to the missing part of the episode. Further experiments show that the direction of this automatic effect depends on which part of the movie is deleted in the encoding session, consistent with the inferential structure of the memory schema, and does not depend on consolidation or reconsolidation processes. Finally, an EEG study aimed to identify the oscillatory dynamics underlying these processes in another group of participants performing the same type of task. Using multivariate analyses, we found an electrophysiological signature of temporal memory precision in the high beta/low gamma band, highlighting the contribution of a widespread network of right-lateralized regions. Overall, these findings shed new light on the underlying mechanisms that support temporal memory for complex events.

If you're submitting a poster, would you be interested in giving a blitz talk?

If you're submitting a symposium talk, what's the symposium title?

Time perception: from sensation to memory

If you're submitting a symposium, or a talk that is part of a symposium, is this a junior symposium?

Yes

Primary author: Dr FRISONI, Matteo (Università di Bologna)

Presenter: Dr FRISONI, Matteo (Università di Bologna)

Session Classification: Symposia