

Event descriptions, task demands and memory for event duration.

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Prior research on memory for event duration suggests that retrospective duration judgments depend on the number of event segments perceived at encoding (Faber & Gennari, 2015). When recalling past experiences, events with more segments are judged longer than those with fewer segments. Here, we examine whether event descriptions would bias the representations of events and their duration. Prior research suggests that language production, but not other tasks, may call attention to certain aspects of an event and, thus, may bias the event representations retrieved from memory (Papafragou et al., 2008, Sakarias & Flecken, 2021). We, therefore, hypothesised that attention driven by task demands might mediate language effects on memory.

In a series of studies, participants first learned 21 novel animated events showing geometric figures moving, as in Wang & Gennari (2019). A stimulus video showed, for example, a square moving up on the screen. Stimulus duration varied from 3 to 9 sec. To guarantee that animations were remembered well, the stimulus set was seen three times (each time in a different random order). A distraction task and a memory test followed learning. Representations of event duration were measured with an event reproduction task (replaying the animations in the mind's eye). An animation frame prompted participants to mentally replay each animation. Button presses at the start and end of the mental reproduction provided an index of event duration.

We manipulated two main factors: (1) Each animation during learning was either untitled or preceded by a descriptive title. The titles also varied in meaning: they either imply fast or slow motion. E.g., “a Chinese lantern raising up into the sky” vs “A firework rocket being launched” preceded the animation with a square moving up. The title thus changed the conceptualisation of the animations. (2) Learning instructions differed in that they advised participants to attend to the animations' events and either read or study the titles. We predicted that if language modulates duration reproductions irrespective of task demands, animations with fast-titles should be shorter than those with slow-titles, and these should differ from the untitled condition.

Results indicated that when titles were studied, fast-title animations elicited shorter reproductions than slow-title animations, and these differed from the untitled condition. When titles were not specifically studied, no effect of language was observed, even though the titles provided information about the nature of the objects (e.g., lantern vs rocket). These results suggest that language influences on memory for event duration are mediated by attention.

These results align with others in the literature (Loftus and Palmer, 1974, Wang and Gennari, 2019), showing that language does modulate memory-based judgments or duration reproductions when language prompts recollection. Together, these findings suggest that when task demands foreground language, they are likely to bias recollection. In contrast, when language simply accompanies event understanding, it might not bias memory as much. Possible underlying mechanisms are discussed.

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