

HOW EVENT ENDSTATES ARE CONCEPTUALIZED

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Many event descriptions are true only when the event comes to its natural end point. For example, an event of “feeding the baby” culminates only when the baby has eaten, and not simply when food is put on a spoon. A “throwing” event ends when the ball leaves the thrower’s hand, while a “catching” event ends when it lands in the recipient’s. How are the endstates of events conceptualized? In other words, when people view some event and construct a mental representation of it, how is the event endstate represented – as a critical component that defines the event category, or as a perceptual aspect, altering which doesn’t change the category? In this paper, we report a study with English-speaking adults that suggests endstates are conceptualized as critical event components. We also delineate the design of an ongoing pilot study with English-learning infants that will reveal the origin of the adults’ conceptualization. At the end, we discuss the insights this pursuit may provide on a bigger cross-linguistic picture.

In the current study with English-speaking adults, we ask: provided two events with the same ACTION but different ENDPOINTS, one ending with a naturally expected result (i.e. [+complete]), the other only partially achieved (i.e. [-complete]), do they perceive them as similar (and thus, likely to be members of the same event category) or different (and thus, likely to be different categories)? We used a Similarity Judgment Task, in which adult participants ($n = 32$) were shown pairs of scenes and asked to rate their similarity on a scale from 1 (most dissimilar) to 7 (most similar). In the *Experimental condition*, one scene depicted an action coming to its expected endpoint (e.g. a ball rolls into and completely knocks over a block tower), and the other depicted the same action but without achievement of the endstate (e.g. only some blocks are knocked over). In the *Control condition*, the ball rolled either behind or in front of the tower – a perceptually salient difference, but not related to endstate. *Filler trials* included two scenes that were identical, completely different (e.g., a girl dances vs. a boy waves), or had one salient change (e.g., a boy tosses a ball vs. an apple). The events were all presented in the absence of linguistic information.

We found that adults were more sensitive to changes relating to endstate than to perceptually salient differences unrelated to endstate, as reflected in a lower average rating score in the *Experimental* than in the *Control condition*; see Figure 1. These results suggest that different types of changes are registered differently in English-speaking adults’ mental representations. Importantly, the difference between a complete and incomplete event is indeed registered, and carries more psychological weight than a mere perceptual difference.

To identify the developmental origin of such conceptualizations of event endstates, we have also designed an experiment for 14-month-old English-learning infants. We use a Habituation-Switch paradigm, in which we habituate infants to one event and switch it to the other to test for dishabituation. Infants are habituated to an event coming to its expected endpoint; in the *Experimental condition*, they are tested with an event with the same action but without achievement of the endstate, whereas in the *Control condition*, they are tested with an event with the same action and endstate but differing in some perceptually salient aspect. Dishabituation in the *Experimental condition* but not in the *Control condition* will suggest an adult-like conceptualization of event endstates.

This current investigation focuses on the English-speaking population. We should also be aware of the cross-linguistic differences in how event endstates are realized. In English, and some other languages (e.g., German), change-of-state predicates *entail* that the change of state

is complete; while in others (e.g., Hindi, Tamil), event completion is only *implicated*, thus allowing cancellation of the endstate (Arunachalam & Kothari, 2011; Ikegami, 1985; Pederson, 2007; Wittek, 2002). For example, in Hindi, it is possible to say ‘Maya ate the apple’ even if Maya only ate some of the apple, or to say ‘Maya killed the fly but it isn’t dead’ (the fly is merely wounded), while these are notably odd in English. So, the semantic spaces of different languages are carved up in different ways: it seems English packages [+complete] and [-complete] into distinct lexical items, whereas Hindi merges them into a single lexical item. In the face of this cross-linguistic difference, a bigger research agenda emerges: in what ways are the conceptual spaces of speakers of different languages carved up; to what extent does the way the conceptual space is organized match the way the language’s semantic space is organized; and how do these conceptual spaces develop? Our data in this study provides partial answer to this big question: the conceptual space of English-speaking is carved up in a way that places [+complete] and [-complete] events in distinct categories, matching up with the way English semantic space is carved up, and thus may provide a conceptual basis for English to package the ENDPOINT information into its predicates. Future work should also include speakers and learners of languages like Hindi to round out this investigation.

In sum, this study sheds light on the relation between language and cognition – in particular, how an understanding of event representation and non-linguistic cognition can inform us about the nature of linguistic representations, what the conceptual underpinnings are for the linguistic packaging of event components, and how these develop from infancy to adulthood.

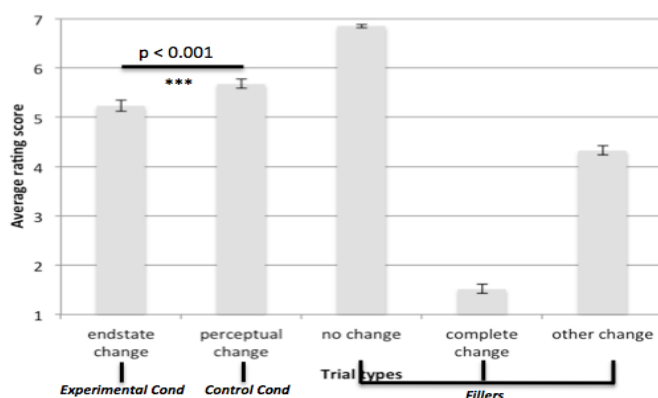


Figure 1
English-speaking
adults' ratings of
similarities between
scenes

References

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