Conceptual Foundations of Telicity:
Viewers' Spontaneous Representation of Boundedness in Event Perception

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Foundational semantics literature distinguishes between *telic* verb phrases denoting *bounded* events with an inherent endpoint (e.g., *fix a car*) and *atelic* verb phrases denoting *unbounded* events that lack an inherent endpoint (e.g., *drive a car*; Bach, 1986, Krifka, 1998). Telicity is frequently assumed to build on conceptual notions (Filip, 1993; Ji & Papafragou, 2020), but little research has explored sensitivity to a cognitive bounded-unbounded distinction. Here we fill this gap. Building on the finding that endpoints are critical components in both memory and language (e.g., Lakusta & Landau, 2012; Gold et al., 2017; Papafragou, 2010), we hypothesize that the salience of endpoints should only characterize bounded events; in unbounded events, endpoints should be treated largely similarly to other time points. To test this hypothesis, we inserted a brief interruption into videos that were biased towards a bounded vs. unbounded event construal. Viewers of bounded events would be more likely to neglect an interruption close to the endpoint since the developments near the endpoint would draw their attention and the external interruption would be missed. For viewers of unbounded events, the placement of the interruption should not make a difference: these events do not have canonical endpoints - they stop, but do not culminate.

We created 20 pairs of videos containing events that encouraged either a bounded or an unbounded construal (see Figure 1). These construals were confirmed in a norming study where "bounded" videos were more likely to depict "something with a beginning, midpoint and specific endpoint" than unbounded ones. Each video was then edited to place a visual interruption of .03s at the temporal point corresponding to either 50% of the video (mid-interruption) or 80% of the video (late-interruption). In Exp.1, 64 adults watched 10 test videos drawn from either the Bounded or the Unbounded construal group, half with a mid-interruption and half with a late-interruption (along with 10 filler videos without any interruption) and indicated whether they detected an interruption after watching each video. A significant interaction between Interruption Placement (Mid vs. Late) and Event Construal (Bounded vs. Unbounded) was found (z=2.70, p =.007; Figure 2a). As expected, participants processing bounded event representations had more difficulty detecting late-interruptions (M=79.7%) compared to mid-interruptions (M=95.3%; z=-3.53, p<.001), but this difference disappeared among viewers representing unbounded events (for late-interruptions, M=95.8%; for mid-interruptions, M=93.8%; p > .581). Exp.2 was identical but participants had to press a key as soon as they detected an interruption during a video. An analysis of response times revealed an interaction between Interruption Placement and Event Construal (t=-1.97, p=.049; Figure 2b). Participants watching videos construed as bounded events had longer response times for late-interruptions (M=882 ms) compared to mid-interruptions (M=760 ms; t=5.27, p<.001) but the difference was smaller for unbounded events (for late-interruptions, M=710 ms; for mid-interruptions, M=669 ms; t =3.10, p =.002).

Together, our data show that viewers spontaneously compute boundedness, or the temporal texture of dynamic events, during event perception. This finding supports the homology between aspect and event cognition and speaks to the language-cognition interface.

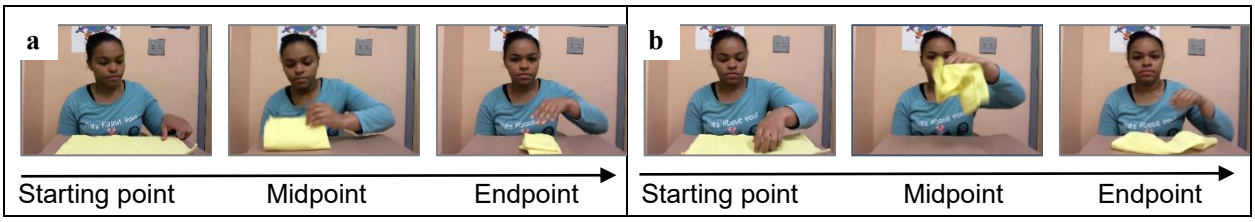

Figure 1. Examples of (a) a bounded construal (fold up a handkerchief), (b) an unbounded construal (wave a handkerchief).

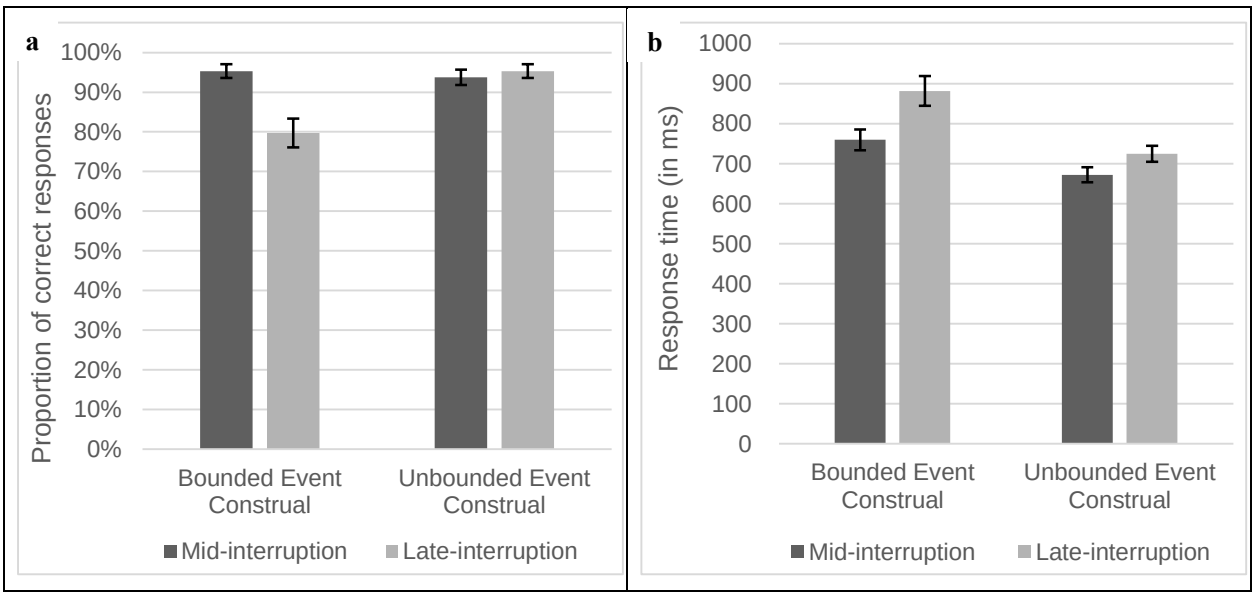

Figure 2. (a) Proportion of correct responses in Experiment 1. Error bars represent ±SEM. (b) Response time (in ms) for correctly identifying an interruption in Experiment 2. Error bars represent ±SEM.

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