(A)telic Diversity: Evidence from a Novel Meaning Categorization Task

Introduction: Aspectual theories distinguish between telic phrases, denoting bounded events with inherent endpoints (e.g., *fold a napkin*), and atelic phrases, denoting unbounded events lacking such endpoints (e.g., *fold napkins*; Filip, 2012; Krifka, 1998). Past research has established that object quantization, adverbials and other factors influence telicity (Jackendoff, 1991; Kennedy, 2012; Verkuyl, 1993), but most existing theories treat telicity as simply a binary distinction. Building on compositional theories of aspect (Krifka, 1998; Verkuyl, 1993) and recent work demonstrating fine-grained sensitivity in event representation (Ji & Papafragou, 2020), we hypothesize that different linguistic devices for expressing quantization would show systematic variation in how strongly they promote bounded/unbounded event construals, and hence (a)telicity (see also Smith, 1991; Pustejovsky, 1995; Schmitt, 1996). Using a novel experimental paradigm that combines visual event categorization with linguistic judgment tasks, we tested this hypothesis. This paradigm allows us to directly test comprehenders' commitment to (un)boundedness in aspectual interpretations in ways that go well beyond reading time or lexical decision tasks traditionally used to probe aspectual composition (see Bott, 2010 for review).

Methods: We trained English-speaking adults (N=38) to categorize visual events into A and B folders corresponding to boundedness and unboundedness following Ji and Papafragou (2020) (see Fig.1). Training consisted of three videos showing actions with clear endpoints (e.g., folding one napkin) versus three without endpoints (e.g., waving a napkin), after which participants had to demonstrate successful generalization to six new videos. Then, participants read 16 incremental theme sentences and had to place each into one of the folders, thereby capturing their (un)bounded interpretations. Sentences included four quantization types (within subjects): two traditionally atelic - "did some Ving" constructions ("John did some drawing") and bare plurals ("John drew balloons"), and two telic - indefinites ("John drew a balloon") and numbers ("John drew one balloon"). On the atelic side, we predicted that "did some Ving" would favor unbounded readings more strongly than bare plurals, since the former includes no object/ specified ending (but the latter includes an indefinitely long chain of individually bounded events). On the telic side, we predicted that numbers would provide clearer, more precise bounded-event cues than indefinites (Krifka, 1998). If confirmed, these patterns would reveal (a)telic diversity.

Results: At test, participants successfully placed novel videos into the bounded/unbounded (A/B folder) (mean accuracy 87%; 8 participants performing at or below chance excluded). Sentence categorization revealed a strong effect of quantization type ($\chi^2(3)=124.24$, $p<0.0001$, Fig.2). Number-quantized phrases elicited 82% Bounded Events-folder selections (SE=0.051), followed by indefinite-quantized phrases (69%, SE=0.051), bare plurals (49%, SE=0.054), and "did some Ving" constructions (28%, SE=0.054). Compared to chance, number-quantized and indefinite-quantized phrases were clearly bounded (both $ps<0.001$), bare plurals showed no bias ($p=0.88$), and "did some Ving" constructions were clearly unbounded ($p<0.001$). Pairwise comparisons revealed a clear gradient: each condition differed significantly from its neighbors ("did some Ving" vs. plurals: difference=-0.217, $p<0.001$; plurals vs. indefinites: difference=0.198, $p<0.001$; indefinites vs. numbers: difference=0.126, $p=0.009$).

Conclusion: Our results reveal previously unnoticed diversity in aspectual interpretation: while both number-quantized and indefinite-quantized phrases triggered bounded/telic construals, the former yielded stronger commitment to boundedness. Moreover, "did some Ving" constructions more reliably triggered unbounded/atelic interpretations compared to bare plurals (with the latter being ambiguous). These findings show that both the presence versus absence of an object NP, as well as the specifics of quantization, critically shape aspect-driven event construal. Beyond treating (a)telicity as a simple binary distinction, these results reveal rich and subtly different event construals within and across the (a)telic class.

Figure 1: Overview of the experimental paradigm. Left: Presentation of a sample video in the training phase. Right: Sample folders (A and B) used in the categorization task. After learning to associate bounded and unbounded events with these folders in training, participants sorted new event videos (and later, sentences) into them during testing.

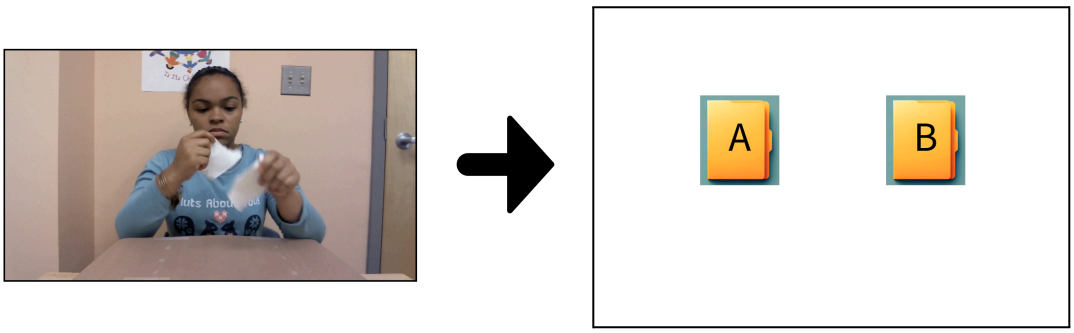
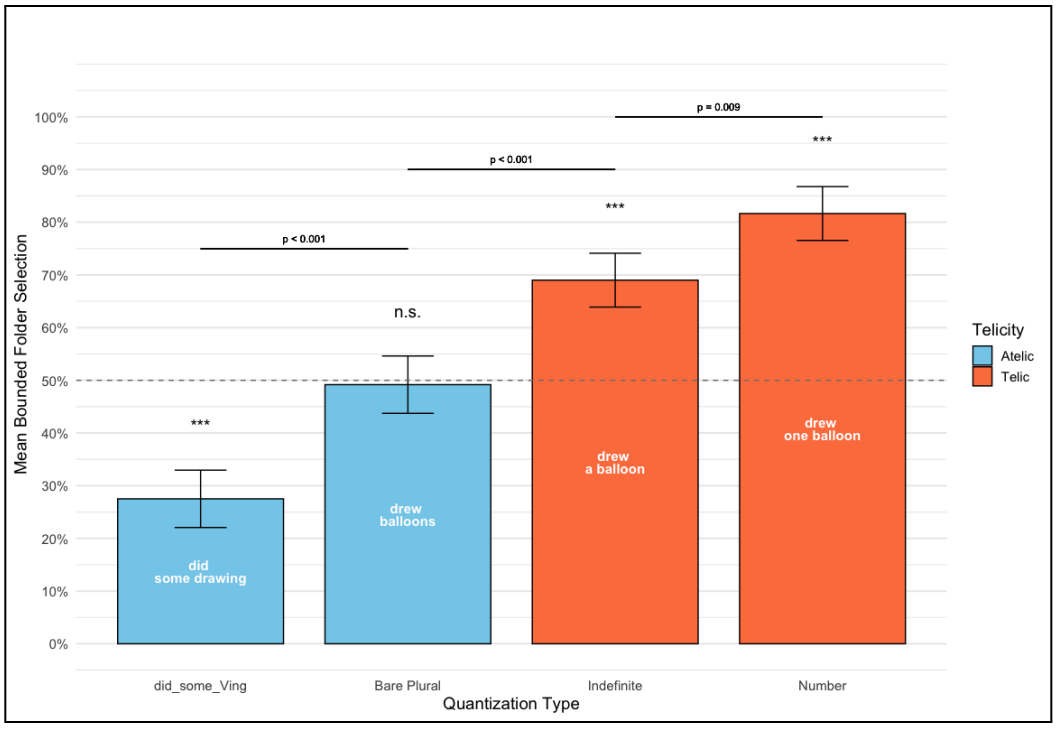


Figure 2: Mean Bounded Events-folder selection rates across different quantization types. Asterisks indicate significant differences from chance level (50%, shown by dashed line): ***p<0.001, n.s.=not significant. Horizontal lines with p-values show significant differences between adjacent conditions. Error bars represent standard errors.



References Bott, O. (2010). *The processing of events*; Filip (2012), *The Oxford Handbook of Tense and Aspect*; Ji & Papafragou (2020), *Cognition* 197; Kennedy (2012), *Telicity, change, and state*; Krifka (1998), *Events and grammar*; Schmitt, C. (1996). *Aspect and the syntax of noun phrases*; Smith (1991), *The parameter of aspect*; Verkuyl (1993), *A theory of aspectuality*.