Symmetric priming of enrichment in aspectual and intensional constructions

Sentence meanings sometimes require enrichment operations, like coercion, to compose their meanings, causing these sentences to carry implicit meanings. Aspectual verbs (begin) and intensional verbs (want) both select for event-denoting complements either as VPs (begin/want to read the book) or NPs (begin/want the reading), and acquire an implicit meaning when their NP complement denotes an entity (e.g., ‘reading’ in begin/want the book). Linguistic theory posits two different types of enrichment: enrichment by semantic type shift with aspectual verbs, and enrichment by covert syntactic insertion with intensional verbs (Pylkkänen, 2008). We hypothesised that such operational differences could be detected by investigating the process of constructing enriched structures. Thus, we conducted a structural priming study to tap into the construction of enriched structures in aspectual and intensional constructions (Raffray, Pickering, Cai, & Branigan, 2014).

Native English speakers (N=32) saw sentence fragment + picture pairs, and were instructed to complete each fragment to describe the picture. In prime trials, the sentence fragment induced participants to produce either an NP complement (e.g., The mouse began/wanted the__) or VP complement (e.g., The mouse began/wanted to eat the__). We coded prime fragment completions as either entity- or event-denoting. In target trials, the sentence fragment could be completed with either an NP or VP (e.g., The woman began/wanted__). We coded target fragment completions as either enriched or unenriched.

In prime trials, when participants produced an NP complement, they were more likely to produce an Entity-denoting noun than an Event-denoting noun for intentional verbs (87%) compared to aspectual verbs (60%) (z=6.3, p<.001). In target trials, participants were more likely to produce Enriched vs. Unenriched structures for intensional verbs compared to aspectual verbs (z=7.6, p<.001) even though these were not related to whether primes had been NP completions (42%) or VP completions (35%), (p=.64). Critically, when participants’ primes were Entity-denoting nouns (requiring enrichment) vs. Event-denoting nouns (no enrichment), they were more likely to produce an Enriched structure (48%) than an Unenriched structure (24%) (z=2.6, p<.05), regardless of whether this was with an intensional or aspectual verb (p=.39) (see Figure below).

These results suggest that the magnitude of enrichment priming is equivalent for aspectual and intensional verbs. Target trials following enriched entity-denoting NP prime completions were 14% more likely to have enriched completions for both aspectual and intensional verbs, suggesting that enrichment (whether by semantic type shift or syntactic insertion) may involve similar cognitive processes. The distinction between these verb types is confined to the proportion of producing an enriched structure in target trials, reflecting a grammatical distinction: event-denoting nouns are acceptable with aspectual verbs but dispreferred with intensional verbs.

Figure. Proportion of Enriched (pink, with the proportion) and Unenriched completions (blue) in target trials after each type of prime completion.

References.