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A growth curve analyses of the English passive in a dense corpus: what can it tell us about syntactic learning mechanisms?

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Abstract

Children's early grammatical constructions exhibit a learning curve characterised by decreasing intervals between usage events. This curve reflects psycholinguistic processes in construction-learning. Moreover, it can potentially elucidate whether children have early access to abstract representations. This is a key point of contention between generative and usage-based approaches to syntactic acquisition. The current pre-registered study builds upon Riches' (2023) analysis of Spanish se-constructions. This found (a) a similar developmental trend for type and token frequencies, (b) a late emergence of hapax legomena, i.e. verb lexemes occurring once within the construction. The former may reflect a retrieval-based practice effect such that initial retrievals of the construction facilitate subsequent retrievals. Importantly, the growth curve has relatively little to say regarding abstract representations. However, the late emergence of hapax verbs suggest emergent rather than instant generalisation.

The current study replicated the above methodology, investigating passives in a dense corpus of a single child acquiring English (Thomas from the Manchester Corpus). It aimed to determine whether (a) the curve reflects retrieval-based practice, and (b) whether generalisation is early or late. Initially, passives were broadly operationalised as auxiliary be/get plus past participle. This coding scheme identified both event passives and sentences with stative readings, e.g. "he was tired". Polynomial models predicted cumulative type/token frequency as a function of age. Analyses corroborated the role of token frequency, thereby implicating retrieval-based practice. Hapax legomena closely mirrored type and token frequencies suggesting instant rather than emergent productivity.

The coding scheme was further refined to identify event passives via (a) perfective or progressive marking on the auxiliary, e.g. "he's getting squashed" (b) presence of participles which frequently occur with by-phrases, according to the enTenTen21 corpus. When coded this way, hapax legomena were late to emerge.

The study finds further evidence for retrieval-based practice. It finds instant generalisation for passives defined broadly, but relatively late generalisation for event passives. This may reflect the relative complexity of event passives with their implied argument movement. The findings suggest that children do not have early access to abstract representations. Nonetheless, the pace of generalisation is faster than predicted by many usage-based accounts.