
Effects of individual variation and cue type on the production of non-canonical sentences

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Background: Speakers tend to produce active sentences when asked to describe a visual scene depicting an agent acting on a patient. However, when the patient is made more prominent (e.g. by means of a visual cue preceding the depicted patient), speakers are more likely to produce non-canonical sentences (e.g., Gleitman et al., 2007). Concerning the effect of visual cueing on patient prominence, a number of issues remain unresolved: Are different types of cues equally effective or do they differ in the extent to which they affect speakers' sentence production strategies? Second, are there individual differences concerning speakers' aptitude to produce non-canonical structures?

Methods: We report the results of three sentence production studies that employed eye-tracking. German-speaking participants (total $n = 136$) were asked to describe scenes depicting an agent acting on a patient. Prior to scene onset, three different types of cues were examined: A meaningless red dot was either presented very briefly (70 ms) or for a longer duration (700 ms) at the location where the patient was about to appear. Alternatively, a preview of the patient character was presented in the center of the screen (referential cue).

Results: Whereas the short cue did not affect speakers' rate of passive production compared to baseline, the other two cue types led to an increase in participants' aptitude to produce passives. There were also significant differences between the referential cue and the short cue, and the referential cue vs. the long cue, but no difference between the short and the long cue concerning the likelihood of passive production. Furthermore, we observed remarkable individual variation regarding speakers' propensity to produce passives. A substantial number of participants did not produce passive sentences at all (short cue: 30/44, long cue: 26/45, referential cue: 16/47 participants).

Conclusions: We find that different types of cues are differently effective in modulating speakers' tendencies to produce non-canonical structures. Furthermore, the overall propensity to produce passives also varies by individual. Rather than being a general linguistic phenomenon, prominence appears to be modulated by the specifics of the stimuli (i.e., cue type) and also seems subject to individual variation.

References: Gleitman, L. R., January, D., Nappa, R., & Trueswell, J. C. (2007). On the give and take between event apprehension and utterance formulation. *Journal of Memory and Language*, 57, 544–569. <https://doi.org/10.1016/j.jml.2007.01.007>