How interference guides the missing VP effect in German

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Multiple center-embeddings lacking one of the verbs are occasionally perceived as grammatical. There has been much debate about the underlying mechanisms leading to this missing-VP effect in sentence processing. Various models account for this effect, blaming memory overload and structural forgetting (Gibson & Thomas, 1999), language statistics (thereby accounting also for cross-linguistic differences, Vasishth et al, 2010, Frank et al, 2016) or interference during integrating the clause-final verbs (Häussler & Bader, 2015).

Investigating the missing-VP effect in German, we conducted an eye-tracking reading study. The sentences contained a cascade of three verb-final clauses: [

\[
\text{CP1 [CP2 [CP3 ... VP3] VP2] VP1].}
\]

Sentences were either fully grammatical or lacked either VP2 or VP1. To investigate whether subject number agreement can help verb integration, the highest subject and the corresponding VP1 were either singular or plural.

We found longer reading times in ungrammatical sentences missing a VP during later processing. Further differences in the reading times between the ungrammatical conditions suggest that readers found it harder to detect a missing VP2 than a missing VP1.

Interestingly, 25 of our 48 participants stated post-experiment that a part was missing and the sentence was ungrammatical. While there was no main number effect, this group showed susceptibility to the number manipulation. For the grammatical and the missing-VP2 sentences, plural conditions were read faster than singular conditions suggesting that the plural specification of VP1 speeds up the identification of the attachment site. We will discuss how these findings are best explained in terms of interference accounts.

Keywords: missing VP effect, sentence processing, eye-tracking.