

Syntactic priming in language production: Evidence for separate mechanisms for syntactic structure and verb repetition

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Introduction

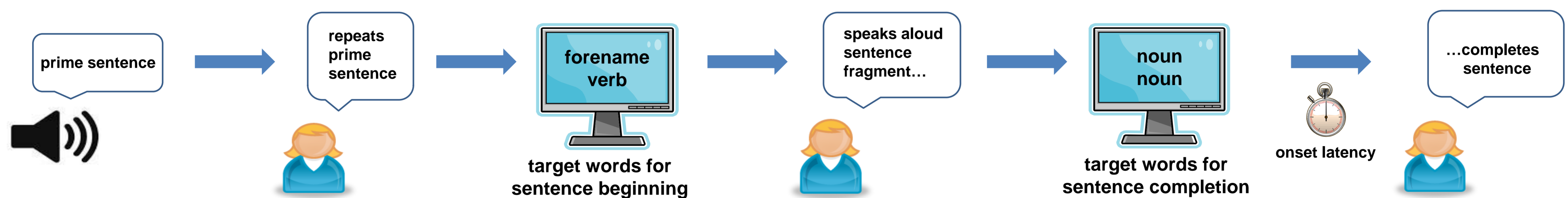
Syntactic priming in language production refers to the phenomenon that speakers tend to reuse a previously processed construction although having structural alternatives which convey the same meaning. The repetition of words, especially of the verb, boosts this tendency (cf. Pickering & Ferreira, 2008).

Current debate is whether or not the *lexical boost* by verb repetition is caused by the same mechanism which is responsible for the verb-independent persistence of the abstract syntactic structure (cf. Bock & Griffin, 2000; Chang et al., 2006; Jaeger & Snider, 2013; Segaert et al., 2016).

Aim

I conducted a sentence production experiment within the German dative alternation to test for a dissociation of verb repetition-bound and structure-bound mechanisms in syntactic priming. Choice of construction and onset latency served both as dependent measures.

Trial procedure



Example item*

PO, diff. / same verb: The mechanic rents / delivers the car to the customer.

control: The balloon went up quickly.

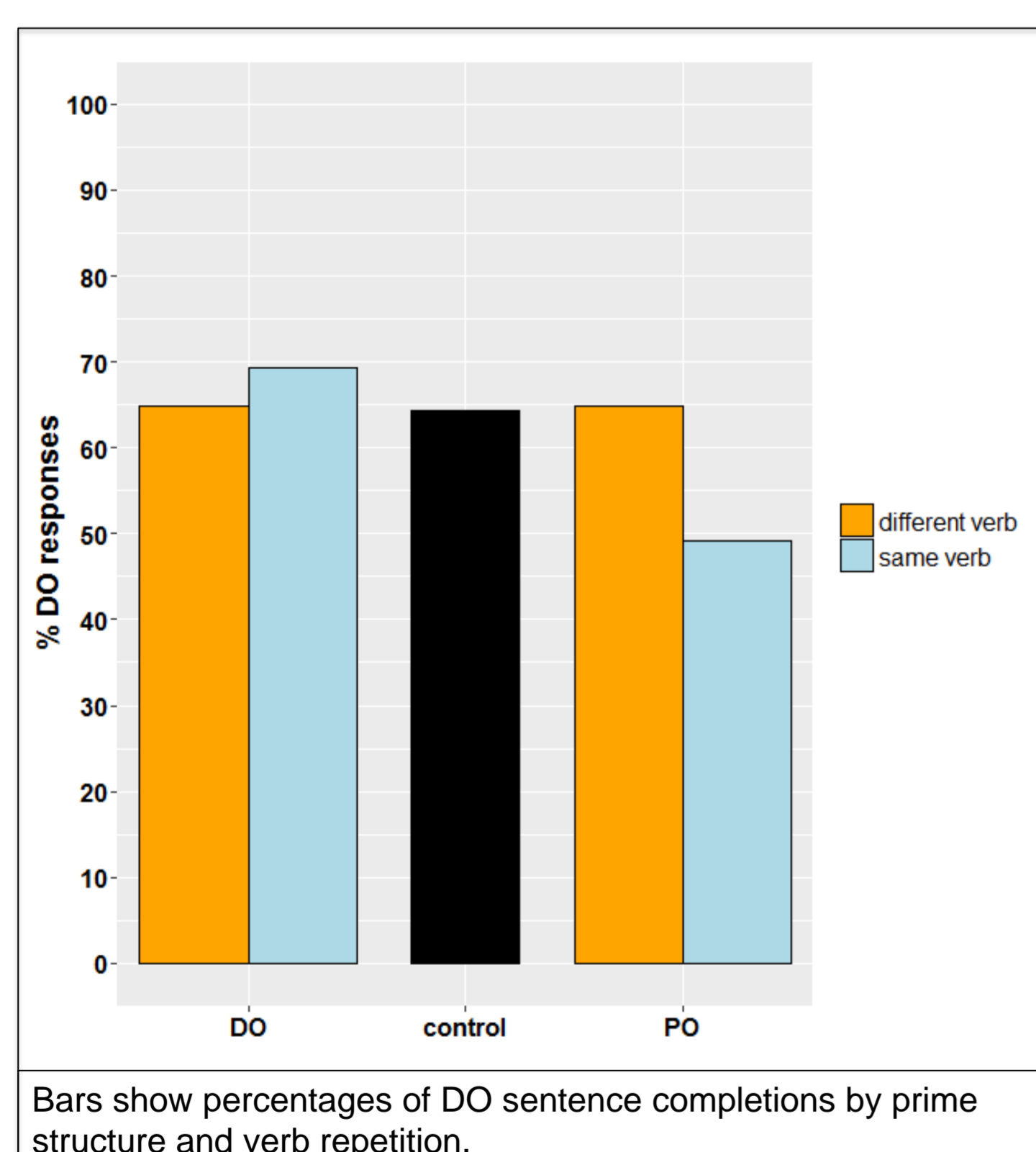
DO, diff. / same verb: The mechanic rents / delivers the customer the car.

Target: Stefanie deliver documents state's attorney

*English translation

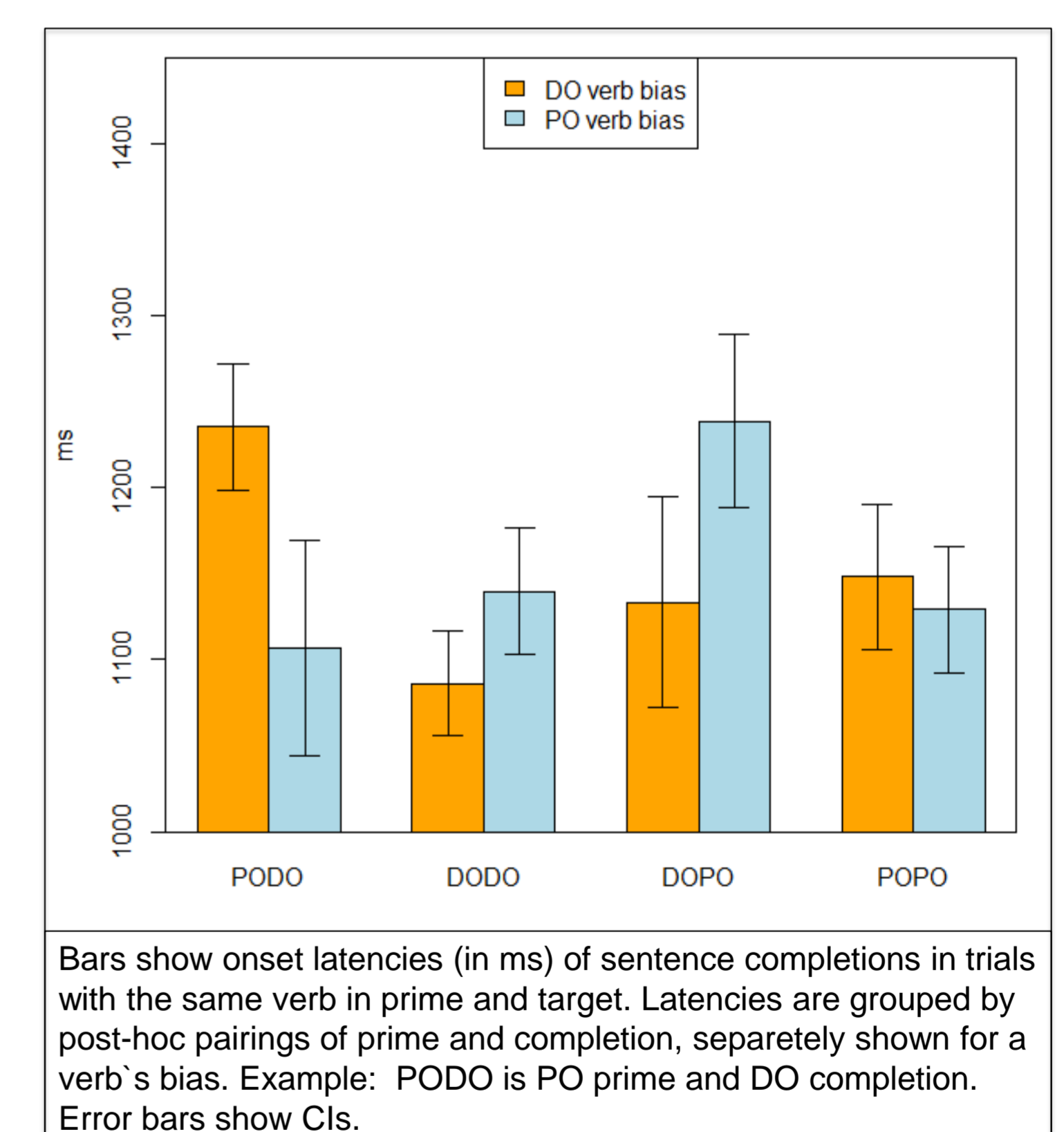
Results – choices of completions

- Main effect of prime structure in same verb trials (inverse preference priming effect for PO relative to the control)
- No syntactic priming in different verb trials



Results – latencies of completions

- Speed up for DO and PO completions after a parallel prime structure (vs. opposite prime structure) with same verb
- Precondition: Verb's bias matched the structure, mismatch slightly increased latencies (increase: $p > .05$)



Discussion

The finding that the repetition of the verb is necessary for the persistence of the prime structure (in the interrupted production process of the sentence completion task) but this priming is independent of a verb's bias points to an activation of a verb-structure association in short term memory for which the verb in the target sentence fragment serves as a recall cue. On the other hand, the verb bias moderated onset latencies of the completions in same verb trials can count as evidence that lexical-syntactic representations are not simply bypassed by the recall mechanism.

Conclusion

The lexical boost in syntactic priming is due to a verb-structure association in short-term memory. Nevertheless, sentence production targets verb-specific syntactic representations. The findings are in line with separate mechanism accounts of syntactic priming (e.g. Chang et al., 2006), but to be fully compatible a mechanism for predicting latencies has to be included (e.g. Reitter et al., 2011; Segaert et al., 2016).

- First demonstration of a verb bias moderation of onset latencies in a syntactic priming paradigm with the same verb in prime and target

Further work should:

Try to disentangle factors determining structure choice and latency effects in sentence production, e.g. with different experimental designs.

References

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