Speakers *do* prime themselves
Syntactic priming occurs from production-to-production

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Syntactic priming is robust, but self-priming is more elusive

Different models of syntactic production make different predictions about self-priming

- Error-driven learning models (Chang, Dell, & Bock, 2006)
- Activation-based models (Reitter et al., 2011; Jaeger & Snider, 2013)

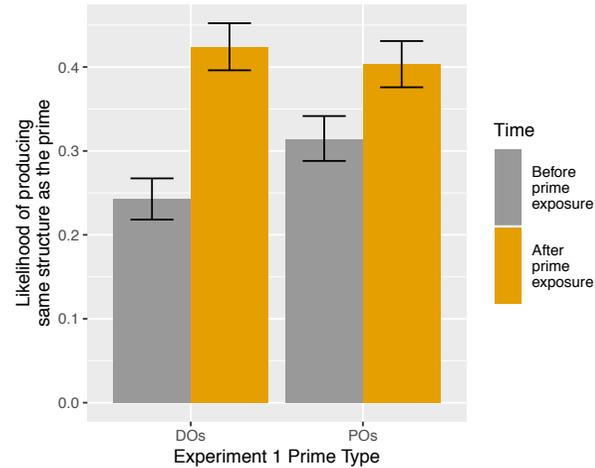Some evidence for self-priming in corpora (Gries, 2005) – little in the lab

Do speakers prime themselves in controlled experiments?
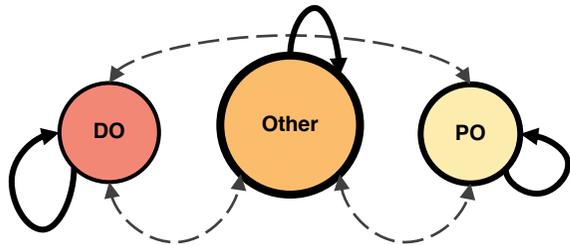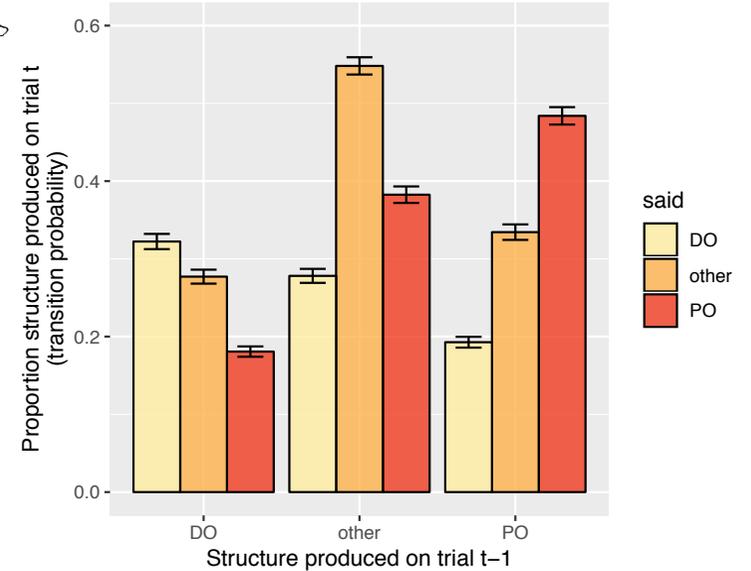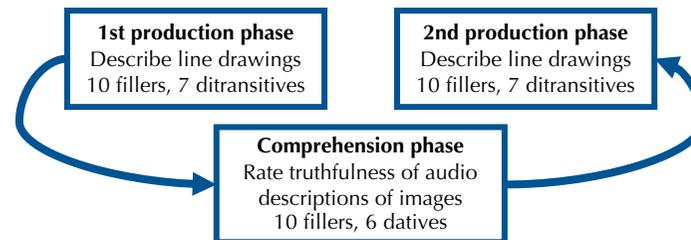

Self-priming as auto-correlation

Syntactic selections can be treated as transitions between states

Figure 1: Speakers show DO and PO priming from comprehension

Method and Procedure

- 360 participants recruited on Amazon Mechanical Turk
- Experiment conducted as Qualtrics survey
- Double object (DO), prepositional object (PO), or Other
- *Assess self-priming with novel **multinomial mixed effects model***

1st production phase
Describe line drawings
10 fillers, 7 ditransitives

2nd production phase
Describe line drawings
10 fillers, 7 ditransitives

Comprehension phase
Rate truthfulness of audio descriptions of images
10 fillers, 6 datives

Figure 2: Speakers are more likely to reuse the same structure from the previous trial

Conclusion

- Novel computational approach provides *first experimental evidence of self-priming*
- Speakers are sensitive to both comprehended and produced input
- Self-priming is not just an artifact of discourse constraints, conversation topic
- *Activation-based*, rather than error-based, models best explain pattern of results

References
[1] Gries, S. T. (2005). *Journal of Psycholinguistic Research*. [2] **Jacobs, C. L., Cho, S-J., & Watson, D. G. (forthcoming in *Cognitive Science*).** [3] Jaeger, T. F., & Snider, N. E. (2013). *Cognition*. [4] Reitter, D., Keller, F., & Moore, J. D. (2011). *Cognitive Science*.