

# Speakers do not self-prime

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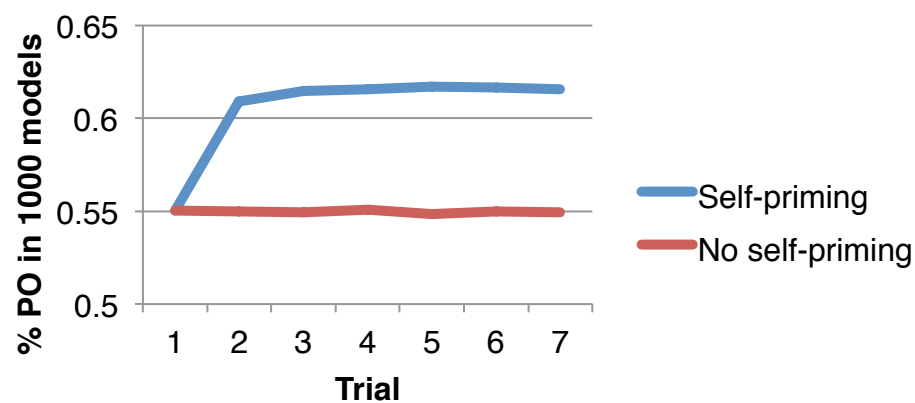
## Do speakers prime themselves?

- **Comprehension to production priming**
  - Memory, sentence completion tasks elicit production priming (Bock, 1986; Kaschak, 2007)
- **Comprehension = production?** (Chang, Dell, & Bock, 2006; Pickering & Garrod, 2013; Jaeger & Snider, 2012; Reitter & Moore, 2014)
- **Production-to-production (self-) priming**
  - Corpus linguistic evidence of syntactic priming (Gries, 2005; Jaeger & Snider, 2012; Healey et al., 2014)
  - Little experimental evidence

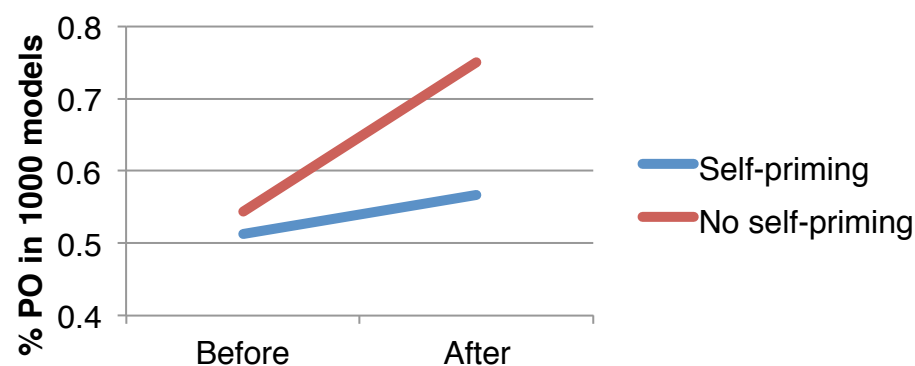
## Syntactic priming model

- 200 “participants” in 1000 simulations of a Bayesian belief-updating model
- Syntactic choices are samples from Binomial of double object dative construction using probabilities from behavioral experiment
- Comprehension input incrementally adjusts  $p(\text{PO})$ 
  - **Self-priming model** input adjusts  $p(\text{PO})$  after production
  - **No self-priming model** does not consider production input

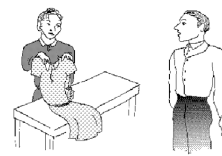
## Self-priming leads to greater use of more probable structure over time



## Self-priming in a model weakens comprehension priming since prior representations are stronger



# Syntactic priming experiments



**Dative Alternation:**  
The woman shows the dress / to the man: **PO**  
the man / the dress: **DO**

**Stage 1: Production:** 7 descriptions of dative pictures

**Stage 2: Comprehension:** 6 descriptions with prime

**Stage 3: Production:** 7 descriptions of dative pictures

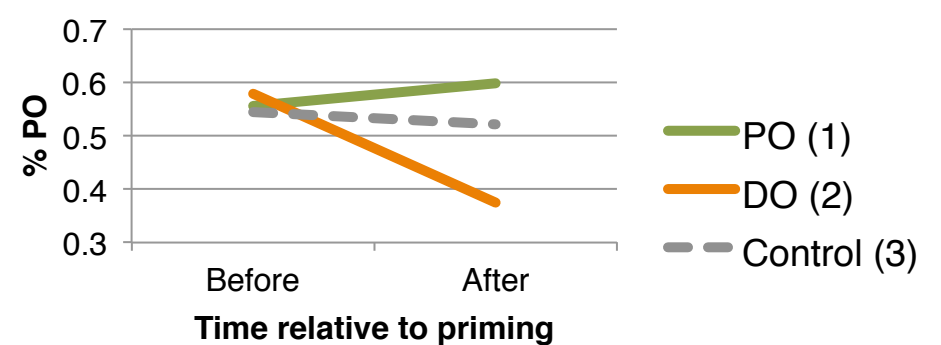
600 participants from Mechanical Turk, 3 conditions

**Condition 1:** PO primes

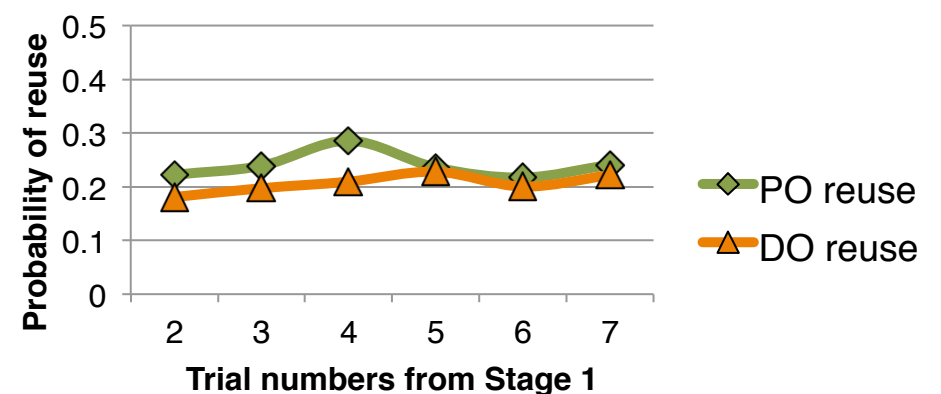
**Condition 2:** DO primes

**Condition 3:** Control, passive “primes”

## People are primed to use the structures they hear. Priming bigger for less common structure



## People are NOT primed to repeat structures they produced themselves



## Conclusion

- If comprehension and production affect production equally, then self-priming should be detectable
- Structure reuse in people does not increase or decrease, contrary to the model
- Comprehension and production feedback are not weighted equally in learning

## References

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