

Why do we shorten repeated words? Evidence against the production priming account

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What is reduction?

Words get shorter, quieter, and less prominent [1, 2, 3]. Happens for words that are repeated, given, or predictable.

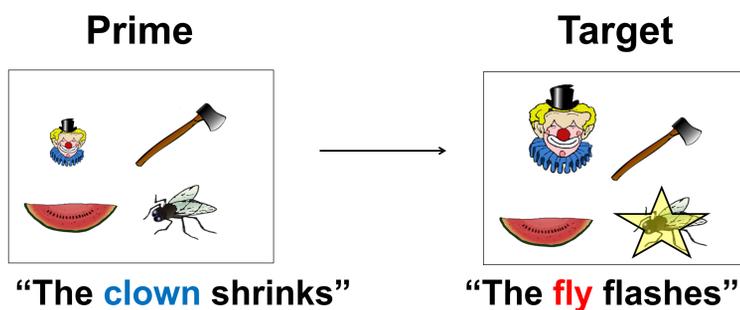
How does reduction arise?

- Facilitation of the production system [1, 2]
 - Recent lexical access [1, 2]
 - Auditory feedback [2]
- Audience design and comprehensibility [2]

What is inner speech?

- Unmouthed inner speech:
 - No overt muscle movements
 - May be phonologically impoverished [4, 5]
- Mouthed inner speech
 - Articulated without sound
 - Seems to be phonologically rich [4, 5]

Experiments 1 & 2 Design



Discourse Manipulation (**GIVEN** vs **NEW**)
The **clown**/fly shrinks
The **fly** flashes

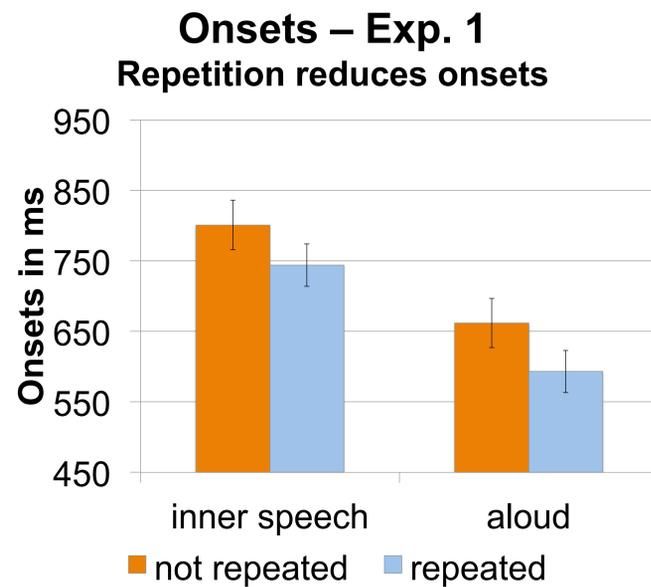
Speech Style Manipulation

The prime sentence is either spoken **aloud** (Control), produced as **inner speech** (Exp. 1), or produced as **mouthed speech** (Exp. 2). The target is always spoken aloud.

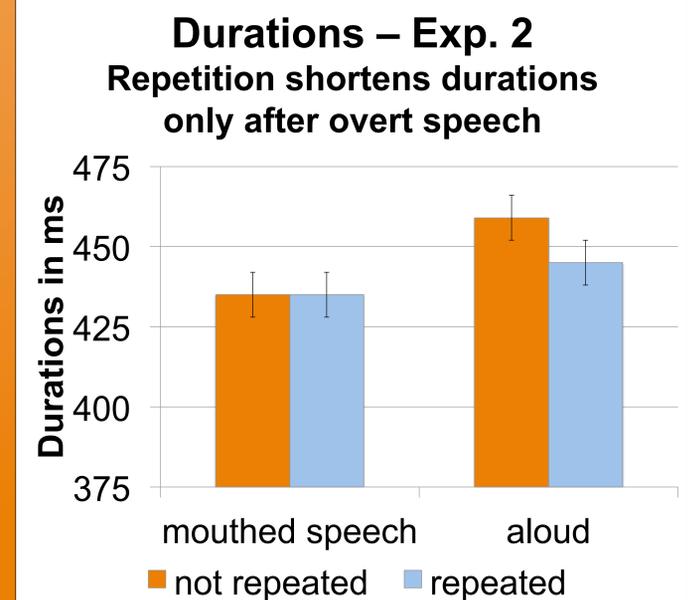
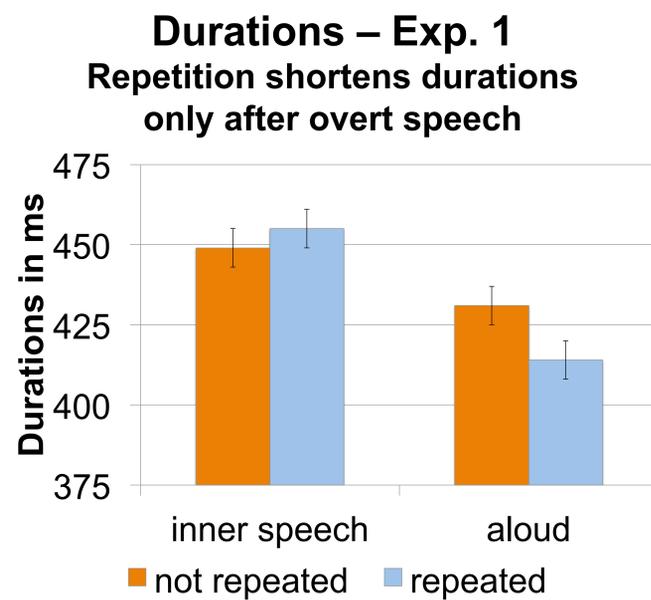
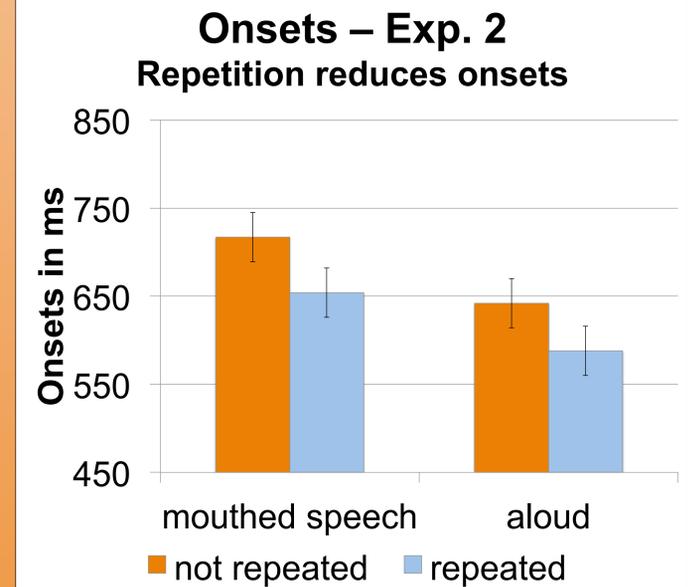
Predictions

If general priming of the production system leads to reduction, there should be reduction in all conditions.

Experiment 1 – Inner speech Results



Experiment 2 – Mouthed Results



Discussion

A word that is produced in inner speech (whether it is articulated or not) primes production leading to quicker *onsets* for repeated items.

However, this priming only leads to reduced *durations* for repeated items when the first utterance is overt.

Priming the production system is not the mechanism for the reduction of duration in repeated items.

References

- [1] Kahn & Arnold (2012). Speaker-internal processes drive durational reduction. *JML*.
- [2] Kahn & Arnold (2013). Articulatory and lexical repetition effects on durational reduction: speaker experience vs. common ground. *LCP*.
- [3] Lam & Watson (2014). Repetition reduction: Lexical repetition in the absence of referent repetition. *JEP:LMC*.
- [4] Oppenheim & Dell (2007). Inner speech slips exhibit lexical bias, but not the phonemic similarity effect. *Cognition*.
- [5] Oppenheim & Dell (2010). Motor movement matters: The flexible abstractness of inner speech. *Mem. & Cog.*