Long-lag morphological priming depends on form overlap

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Background: Long-lag priming

ł	nunte	er		
	W	ashir	Ig	



washing

doctor

 Facilitation almost always occurs when prime and target share a morpheme – even if the form of the morpheme is different

Same form:hunterhunt(tons of studies)Different forms:assumptionassume



rent torms:	assumption	•••	assume	(Fowler et al., 1985)
	sleep		slept	(Downie et al., 1985)
	rai[d]er		<i>rai</i> [r]er	(McLennan et al., 2003, 2005)
	[kuzin]		[kuzɛ̃]	(Kouider & Dupoux, 2009)

- But! These cases all have very similar forms
- What about morphological priming with minimal form overlap (like think ... thought)?

Previous studies

 Mixed findings from previous studies that examined morphological priming with less form overlap

Priming

- Stanners et al. (1979), e.g. swept...sweep
- Marslen-Wilson & Tyler (1998), little detail provided

No priming

Results (N=66 L1 English)



- Napps (1989), e.g. bought...buy
- Emmorey (1991), ASL verb primes with reciprocal inflection and targets in base form
- Stockall (2004), e.g. taught...teach
- Other limitations:
 - Form overlap in some studies is still pretty high
 - Some studies used relatively short lags (e.g. 6 trials)
 All the English studies used past-tense primes and present-tense targets, which might not reliably elicit priming even in other paradigms (Stockall & Marantz, 2006)

Methods

Stimuli and mean log frequency:

Related Unrelated

- Small priming for regular (95% CrI: [-19, 1])
- Small priming for irregular-high (95% CrI: [-27, -7])
- No priming for irregular-low (95% CrI: [-15, 21])



Regular (N=24) [mean log freq: 3.2]	KICKKICKEd	ridekicked
Irregular, high overlap (N=24) [3.2]	winwon	failwon
Irregular, low overlap (N=12) [3.9]	teachtaught	quittaught
Noun fillers (120)	carrot	
Pseudoword foils (240)	glod	

- Each verb target was presented with a related or an unrelated prime (balanced randomly across participants)
- Low-similarity items have to differ by more than one phone
- (so e.g. *freeze-froze* is not low-similarity)
- Lag of 20-58 trials (mean: 39) between prime and target
- Pre-registration: <u>https://osf.io/597kn</u>

 Conclusion: Suggestive evidence that longlag morphological priming only occurs when prime and target are similar in form

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