Long-lag morphological priming depends on form overlap 🥦

Stephen Politzer-Ahles, Münir Özturhan, Lila Church, & Xuan Wang

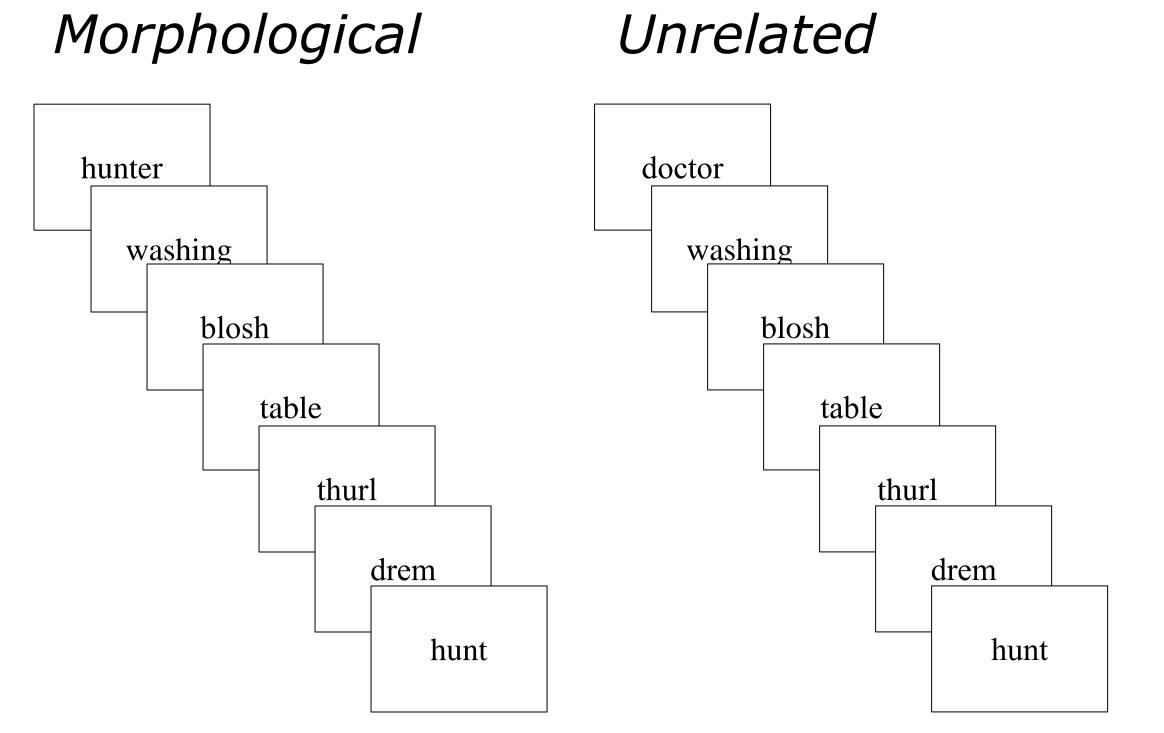
University of Kansas

Correspondence: sjpa@ku.edu

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Background: Long-lag priming



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

hunter ... hunt (tons of studies)

Different forms:

assumption...assume(Fowler et al., 1985)sleep...slept(Downie et al., 1985)rai[d]er...rai[r]er(McLennan et al., 2003, 2005)[kuzin]...[kuz $\tilde{\epsilon}$](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
 - Priming: Stanners et al. (1979), Marslen-Wilson & Tyler (1998)
 - No priming: Napps (1989), Emmorey (1991), Stockall (2004)
- Other limitations:
 - Form overlap still sometimes high
 - Some relatively short lags (e.g. 6 trials)
 - Past-tense primes with present-tense targets (see Stockall & Marantz, 2006)

Methods

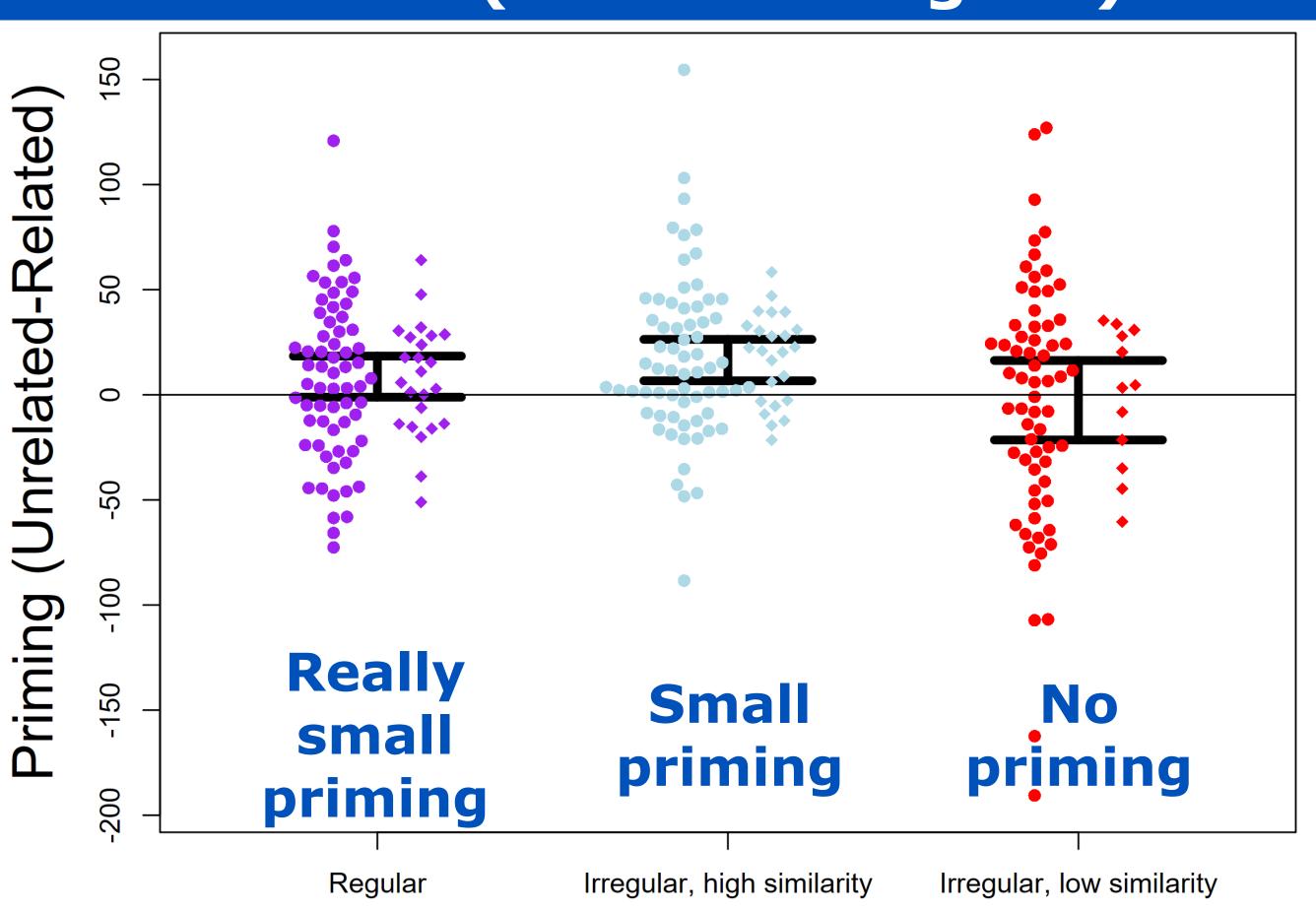
Stimuli and mean log frequency:

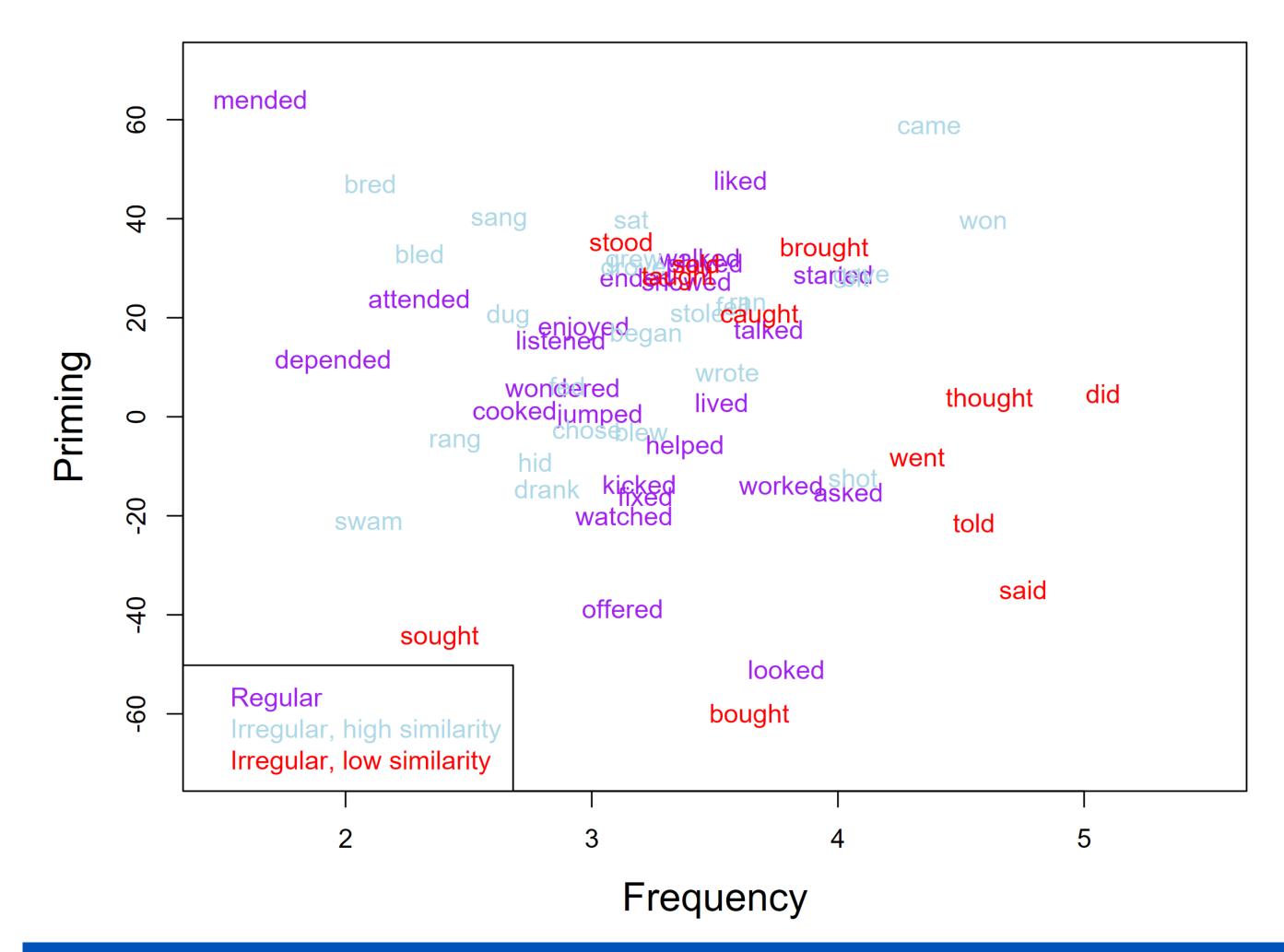
	Related	Unrelated
Regular (N=24) [mean log freq: 3.2]	kickkicked	ridekicked
Irregular, high overlap (N=24) [3.2]	winwon	failwon
Irregular, low overlap (N=12) [3.9]	teachtaught	quittaught
Noun fillers (120)	carrot	
Pseudoword foils (240)	glod	

Pre-registration: https://osf.io/597kn

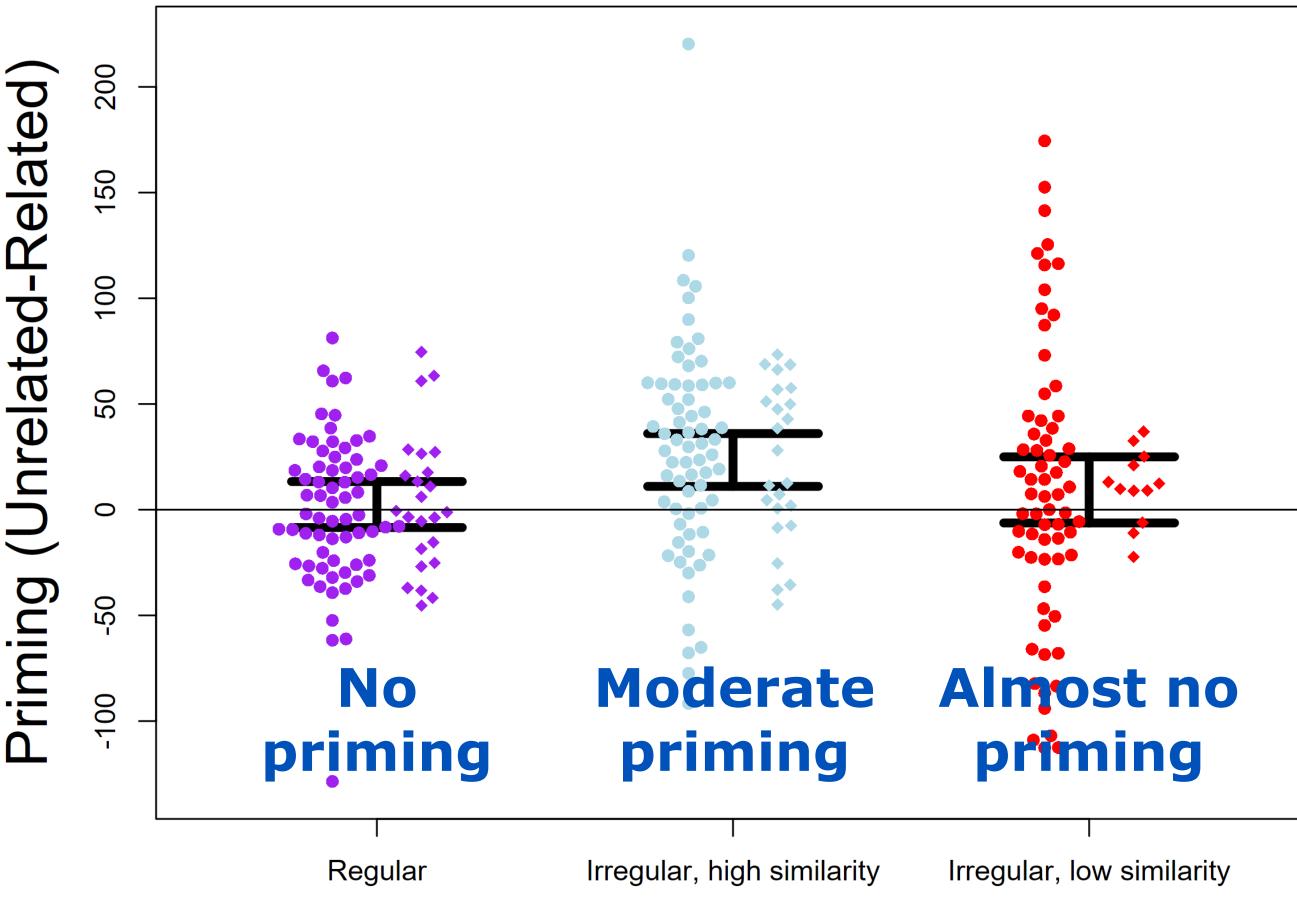
- Each verb target was presented with a related or an unrelated prime (balanced randomly across participants)
- Similarity rating criteria adapted from Stockall (2004) Lag of 20-58 trials (mean: 39) between prime and target

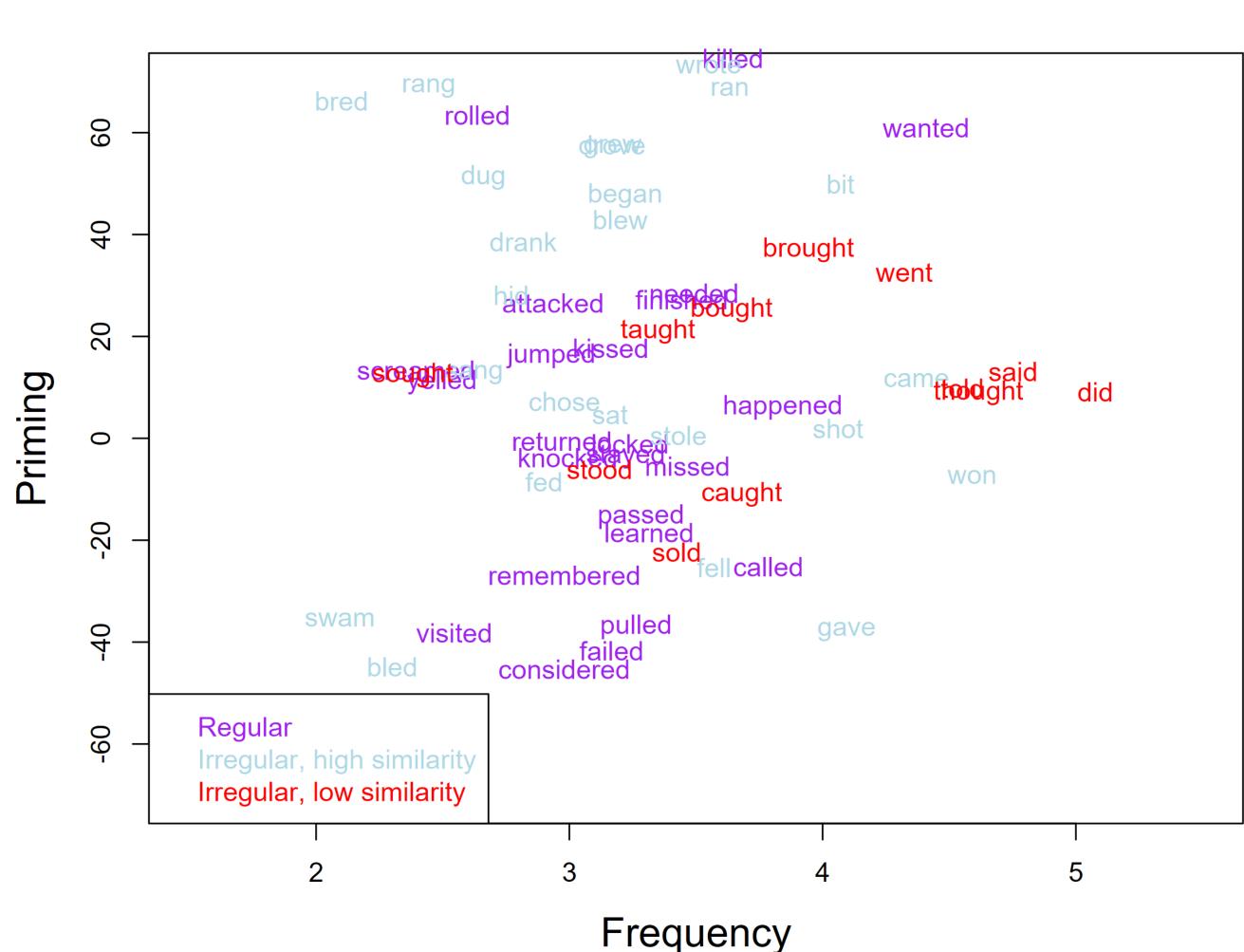
Results (N=65 L1 English)





Replication (N=68 L1 English)





Conclusions

- Long-lag morphological priming doesn't occur without sufficient form overlap.
- (Consistent with Bowers & Kouider, 2003)
- Why didn't we get priming for regular morphology?
 Maybe because of affix stripping (Stockall & Marantz, 2006)