

Competition between form-related words in bilingual sentence reading: Effects of language proficiency

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Bilinguals are affected by form-related priming when reading sentences in L2.

Competition between form-related words in bilingual sentence reading: Effects of language proficiency.

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BACKGROUND

- Form-related priming leads to inhibitory effects in monolingual sentence reading (Paterson et al., 2009).
- These effects are affected by the distance between prime and target and by reading skills (Frisson et al., 2014).
- We extended this to bilinguals.

METHODS



48 Norwegian-English bilinguals (advanced)



128 sentence pairs with form-related or unrelated prime, manipulating target-prime distance and overlap

Siloit Liid	The seary house was brown [blac] with a golden chown
	painted over the door.
Short –	He counted up to seven [eight] knights that could SEVER the
Begin	dragon's head.
Long – End	The alarm had a red patch [stamp] that I noticed far too
	late after opening the HATCH to the cellar of the house.
Long –	Drinking the old paint [juice] caused Leif to experience
Begin	lasting and severe stomach PAINS and he was rushed to the
	hospital.

Short – End The scary house was brown [blue] with a golden crown

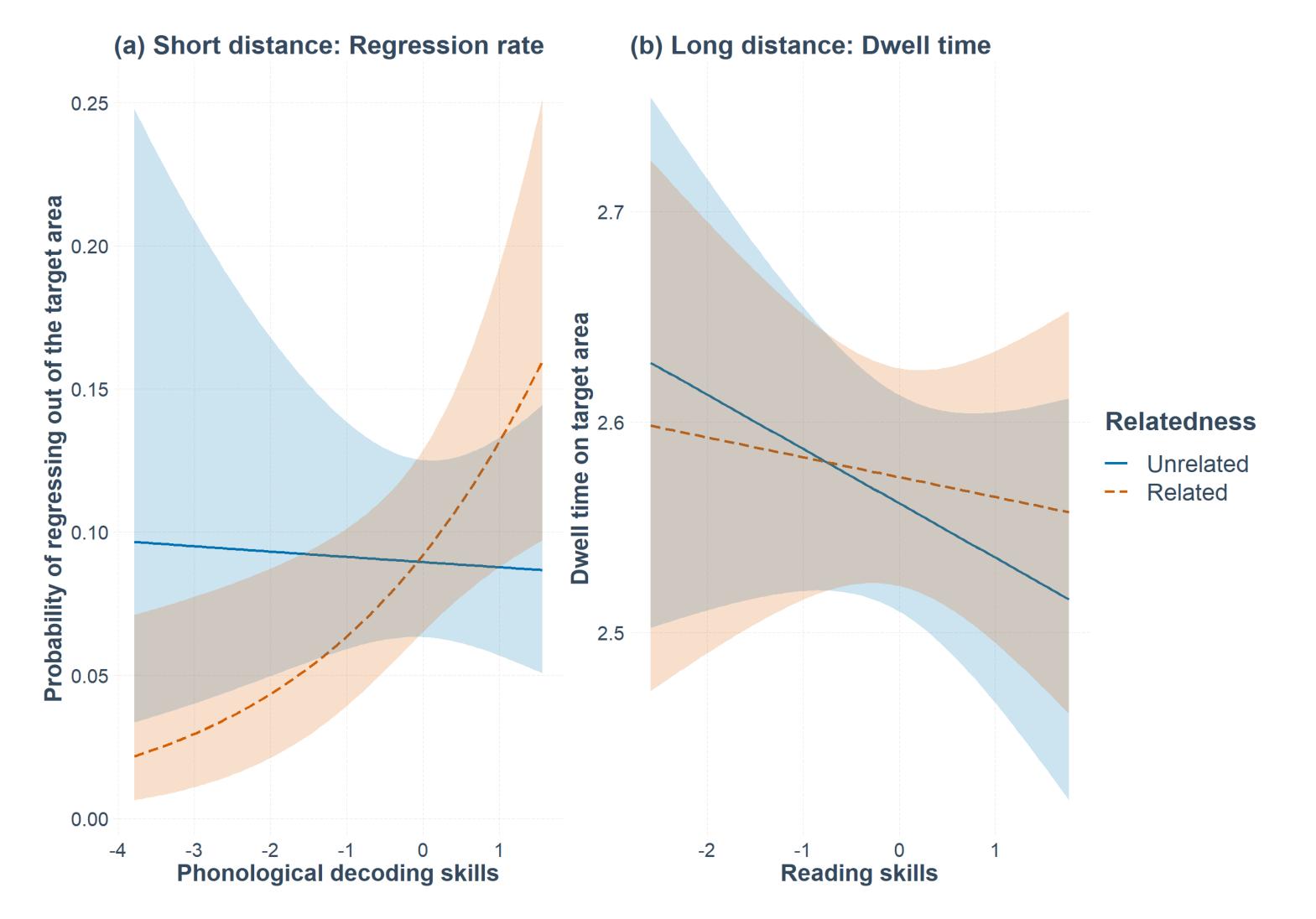


Eye-tracking while reading + proficiency measures

Reading skills ¹	British Vocabulary Picture Scale 3 (Dunn et al., 1982)
(RS)	York Assessment of Reading for Comprehension (Snowling et al., 2009)
	Sentence acceptability judgment
	Gray Silent Reading test (Wiederholt & Blalock, 2000)
Phonological	Non-word repetition test
decoding skills (PS)	Elision test

¹ Classification in 2 components obtained by PCA. Cumulative variance explained with two components: 0.71

Reading skills and phonological decoding skills affect priming effects in L2 reading.



RESULTS

- L2 readers are affected by formrelated priming.
- In short-distance condition, better phonological decoders show earlier effects (regression rate out of target area, PS x relatedness: β = 0.42, 95% CI [0.14; 0.70], p = .004)
- Only good readers show effects in long-distance condition (dwell time in target area, RS x relatedness: β = 0.02, 95% CI [0.001; 0.031], p = .03; regression out of spillover area: relatedness x RS x overlap, β = 0.56, 95% CI [0.029; 1.10], p = .04).

DISCUSSION

- Replication of monolingual results: form-related priming in sentence reading is a robust effect.
- Explained by competition models as competition between word candidates.
- The effect is influenced by reading skills, but phonological skills are also crucial.

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