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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

Short – End	The scary house was brown [blue] with a golden CROWN painted over the door.
Short – Begin	He counted up to seven [eight] knights that could SEVER the 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 – Begin	Drinking the old paint [juice] caused Leif to experience lasting and severe stomach PAINS and he was rushed to the hospital.

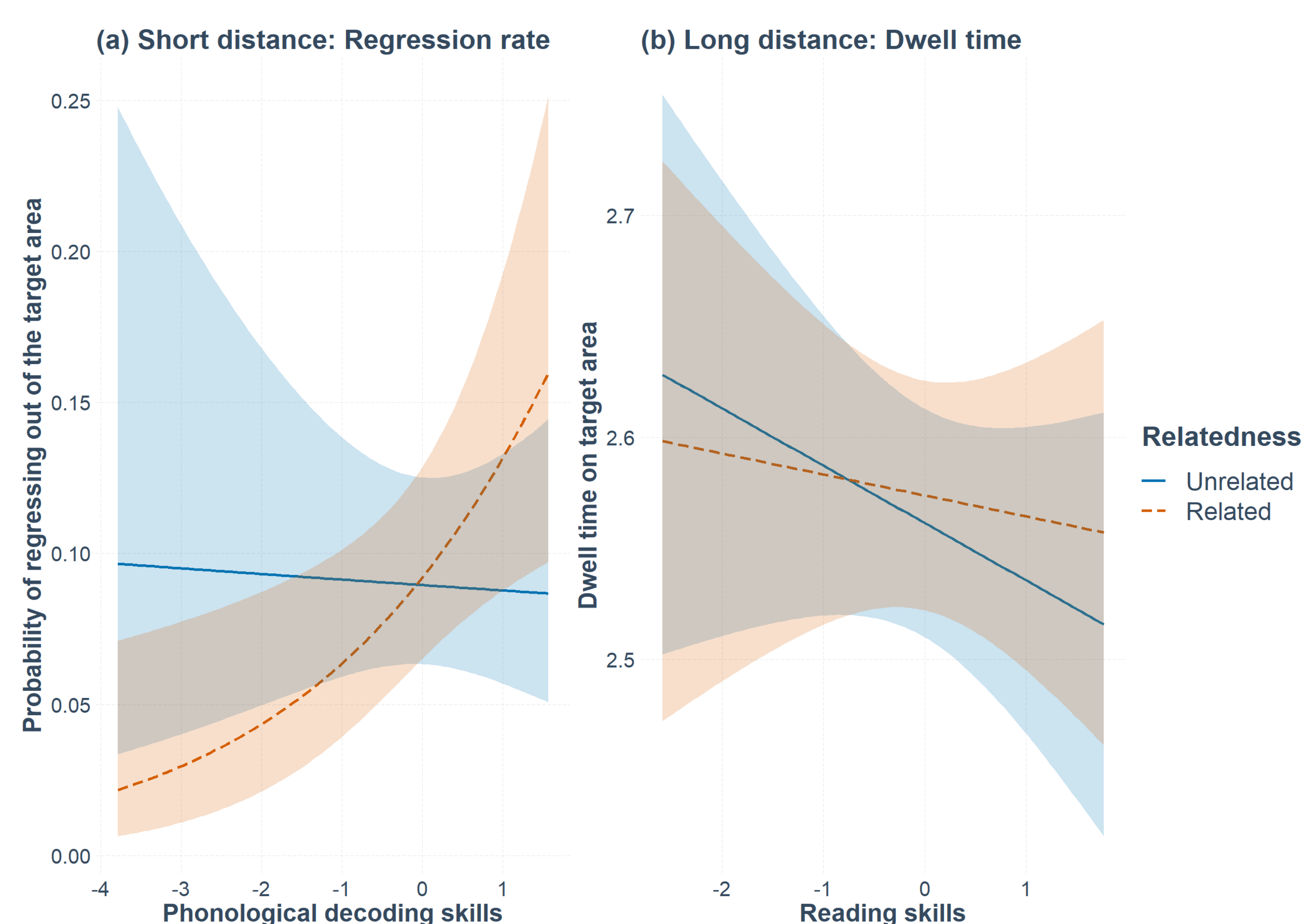


Eye-tracking while reading + proficiency measures

Reading skills ¹ (RS)	British Vocabulary Picture Scale 3 (Dunn et al., 1982)
	York Assessment of Reading for Comprehension (Snowling et al., 2009)
	Sentence acceptability judgment
Phonological decoding skills (PS)	Gray Silent Reading test (Wiederholt & Blalock, 2000)
	Non-word repetition test
	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 **form-related priming**.
- In short-distance condition, better phonological decoders show **earlier effects** (regression rate out of target area, PS x relatedness: $\beta = 0.42$, 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: $\beta = 0.02$, 95% CI [0.001; 0.031], $p = .03$; regression out of spillover area: relatedness x RS x overlap, $\beta = 0.56$, 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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