Evidence for second language co-activation during first language production



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INTRODUCTION

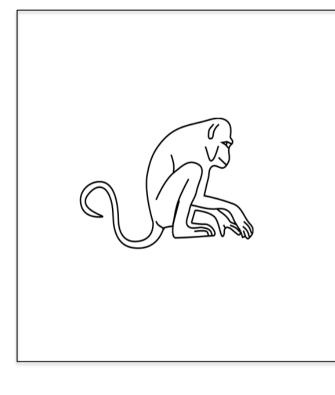
- previous research: evidence for both target-language specific and target-language non-specific lexical access in bilingual language production
- phono-translation effect (Hermans et al., 1998; Costa et al., 2003): longer naming latencies in the presence of a distractor word phonologically related to the L1 translation of the L2 target word → (more dominant) L1 cannot be suppressed and competes for selection during L2 production
- current study: reversed phono-translation effect
 - Does the phono-translation effect also hold in L1 production?
 - Is it modulated by the exogenous boosting of the L2?
 - Is it affected by L2 proficiency?
- control: direct phonological condition (L2 distractor phonologically related to L1 target) to measure general phonological activation

DESIGN

PARTICIPANTS

- 72 native Dutch speakers (11 m, mean age: 22 years)
- raised monolingually
- on average 9 years of English learning experience
- comparable L2 proficiency

PARADIGM





target response: "aap" [monkey]



distractors (SOAs -150 or 0ms) pho-rel: ark trans-rel: muscle trans-unr: licence pho-unr: pod

1000 ms

BOOSTING

- Exp. 1A: monolingual context: participants addressed in L1
- Exp. 1B: bilingual context: participants addressed in L2
- Exp. 2: native context: participants addressed in L1

PROFICIENCY -

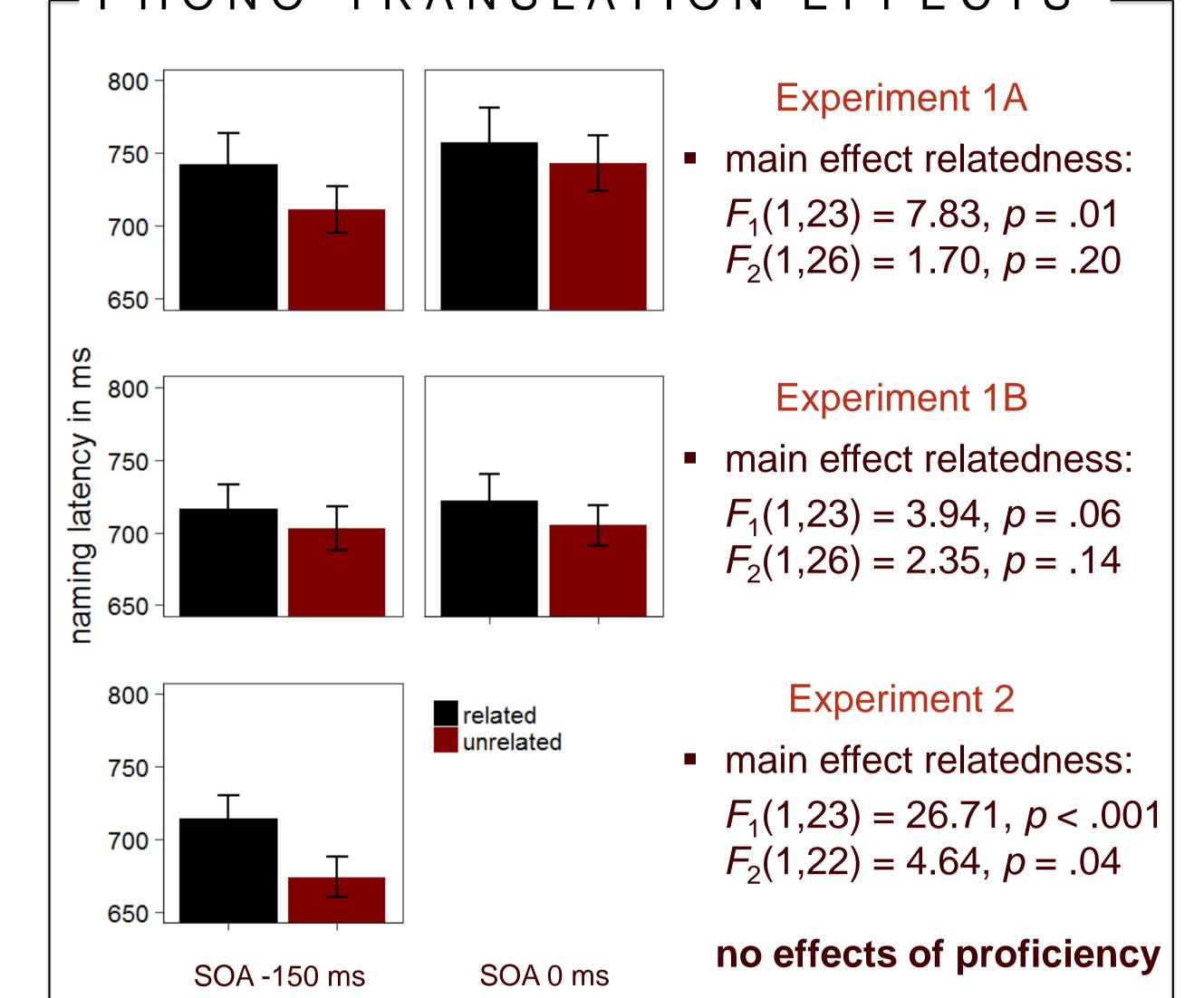
- item check: post-experimental L2 naming of target items
- reading comprehension (multiple-choice)
- grammar (multiple-choice)
- LexTALE (Lemhöfer & Broersma, 2012)

HYPOTHESES—

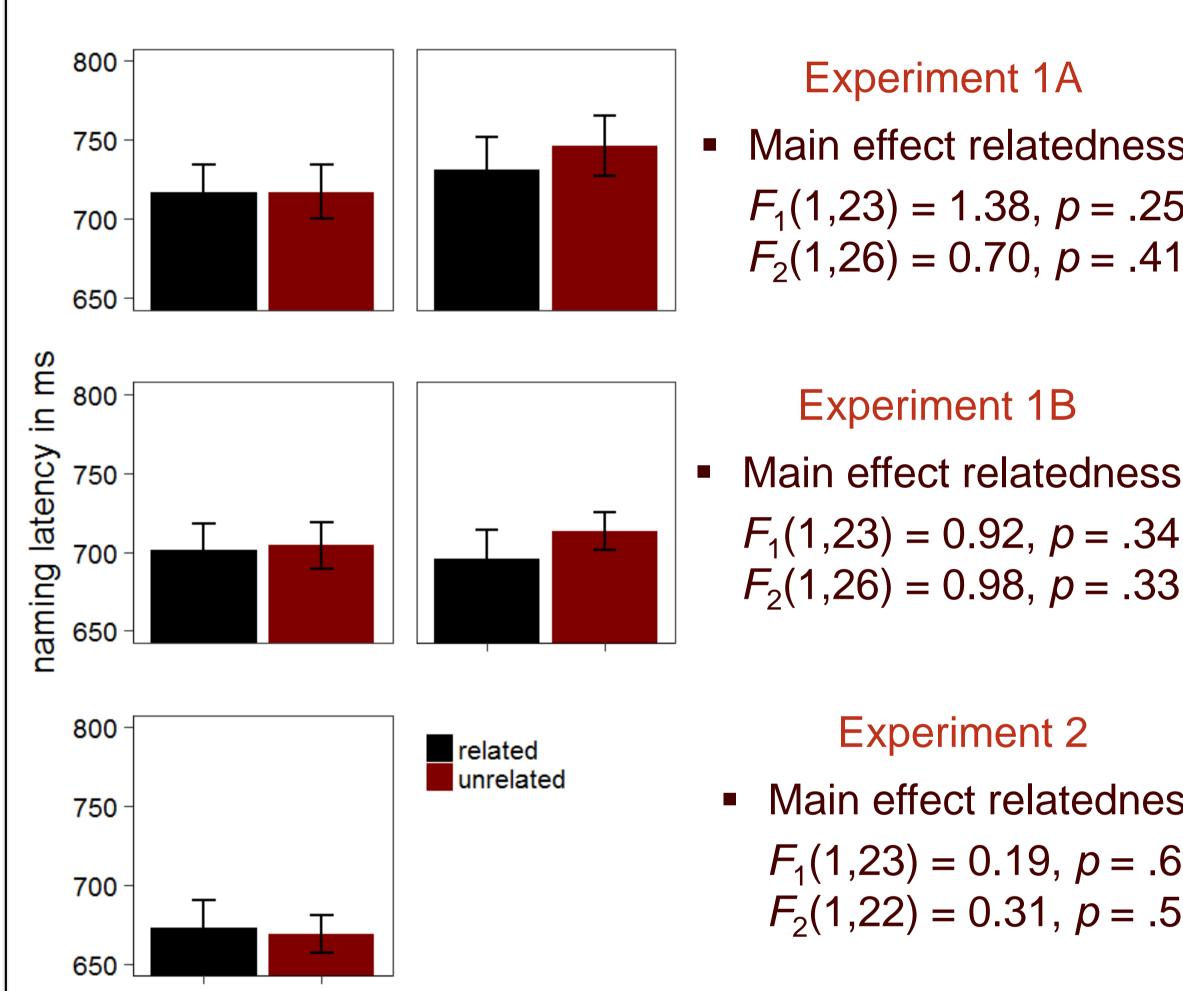
- if lexical selection is target-language non-specific regardless of language dominance: interference from translation-related distractors
- pre-activating the L2 may increase this effect because of stronger competition between L1 and L2
- proficiency may modulate the effect in two ways: higher proficiency = better parallel processing or more L2 interference?
- direct phonological condition: facilitation from related distractors

RESULTS

- PHONO-TRANSLATION EFFECTS



DIRECT PHONOLOGICAL EFFECTS -



Main effect relatedness: $F_1(1,23) = 1.38, p = .25$

Main effect relatedness: $F_1(1,23) = 0.92, p = .34$ $F_2(1,26) = 0.98, p = .33$

Main effect relatedness: $F_1(1,23) = 0.19, p = .67$ $F_2(1,22) = 0.31, p = .58$

CONCLUSIONS

SOA -150 ms

even during L1 (i.e., dominant language) production, speakers' less dominant L2 is activated up to phonological level

SOA 0 ms

- no difference between mono- and bilingual context and no moderating influence of L2 proficiency
- L1 phonological activation from direct phonological L2 distractors appears to be much trickier than expected...
- overall: further evidence for target-language non-specific lexical activation in bilingual language production

— REFERENCES —

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