

# Cross-linguistic syntactic priming in Polish-English bilingual children

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## Background

- Evidence for cross-linguistic priming in bilingual children is still sparse, but children – like adults (Hartsuiker et al., 2004; Hartsuiker & Bernolet, 2017) can also be primed across languages (Gámez & Vasilyeva, 2020; Vasilyeva et al., 2010; Wolleb et al., 2018).
- Syntactic constructions used so far (passives in Spanish and English, ditransitive constructions in Norwegian and English) have been syntactically identical across languages.
- Not all child studies have investigated bi-directional priming.
- The role of proficiency in predicting syntactic priming in bilingual children is not yet clear.

## Research questions

1. Do priming effects vary as a function of structural overlap?
2. Are there effects of directionality on priming?
3. Does language proficiency predict priming?

## Materials

- Baseline picture descriptions (no primes)
- 'Snap' priming task – 48 prime-target pairs (8 'Snap' fillers)
  - Cross-linguistic priming: English > Polish; Polish > English
- Expressive vocabulary (CELF-4 or ZNO)
- Sentence repetition (COST-LITMUS, Polish and English)
- Quantifying Bilingual Experience (Q-BEx) parent questionnaire

## Participants

- 48 Polish-English bilingual children (24 girls)
- Ages 60 – 137 months (M=92 months, SD=16.65)
- All living in the UK and attending UK school/preschool for > 1 year
- At least some Polish was spoken at home:
  - 77% spoke Polish with both parents
  - 23% spoke Polish with only one parent
    - Other parent spoke English (15.3%) or a third language (7.7%)

## Procedure

- Online testing via Teams video conference
- Baseline > 'Snap' > Expressive Vocabulary > Sentence repetition
- Order of languages (English, Polish) counter-balanced between-subjects

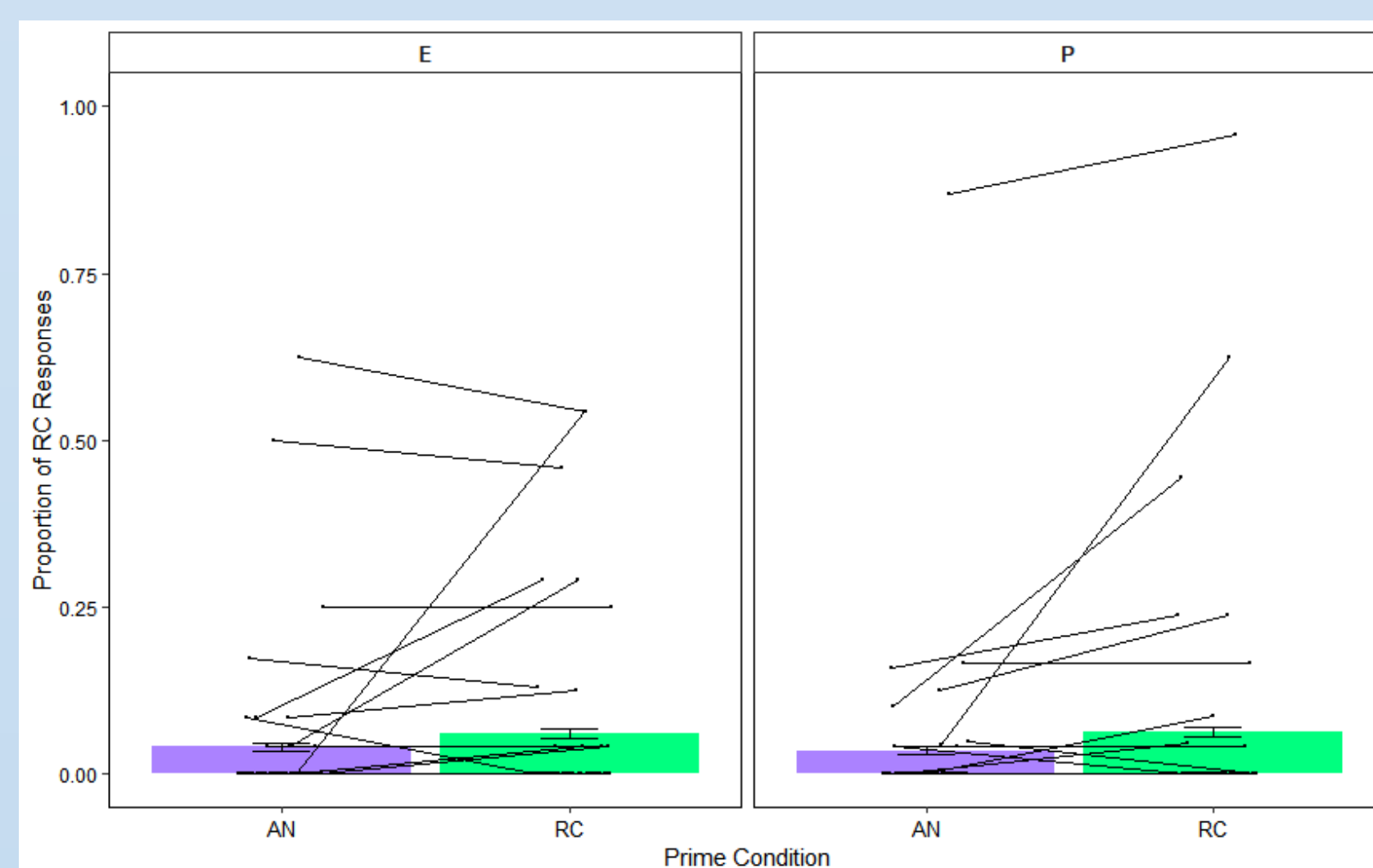
## STUDY 1: Adjective-Noun Phrases (AN) vs Relative Clauses (RC)

48 prime-target pairs:  
12 target nouns x 4 colours  
12 prime nouns x 4 colours



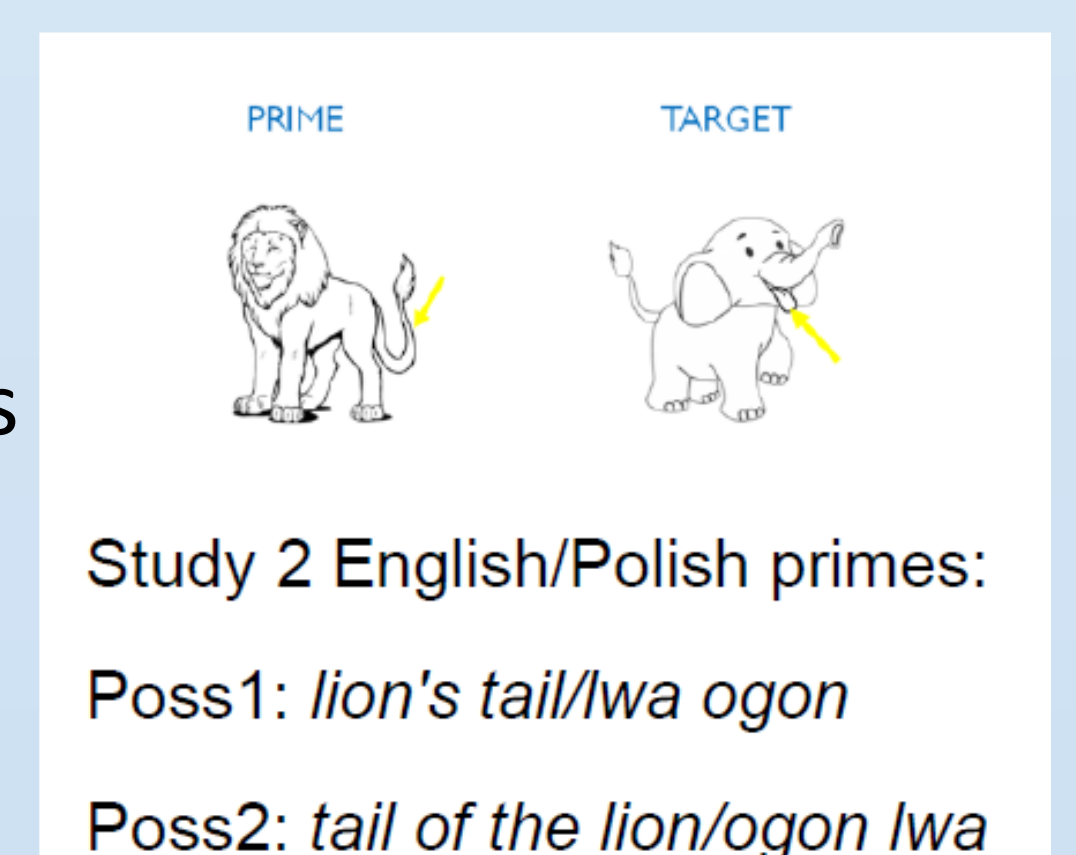
### Results:

- Very few RCs in either language
- No significant effect of priming ( $Z=1.02, p>.05$ ) in either direction ( $Z=.05, p>.05$ )
- No effect of proficiency (English  $Z=-0.13, p>.05$ ; Polish  $Z=0.20, p>.05$ )
- Weak syntactic representations for RCs may have affected the parsing of the prime and/or the computation of the target.



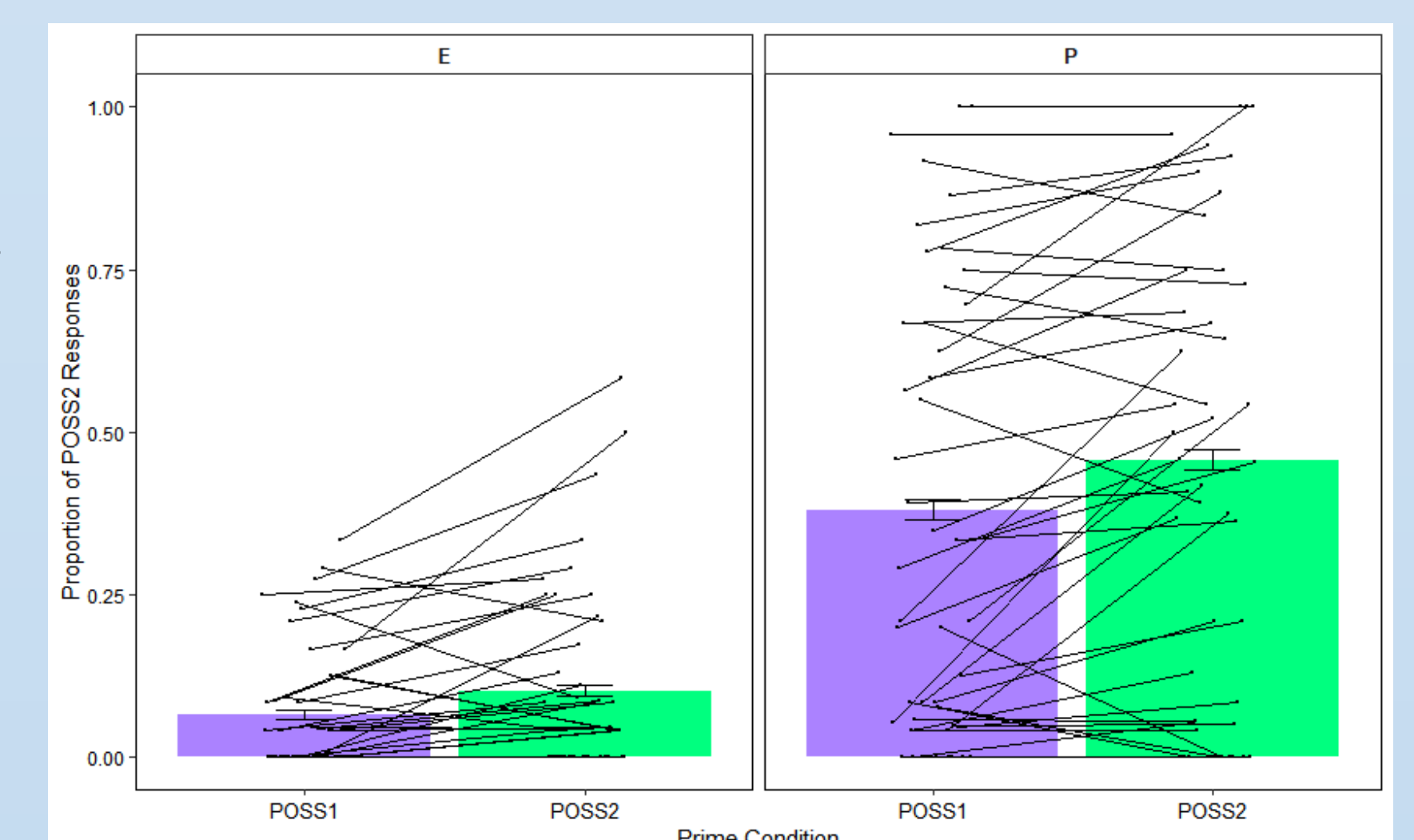
## STUDY 2: Possessor first vs. possessor second constructions

48 prime-target pairs:  
24 inalienable possession animals and body parts  
24 human characters with inanimate objects



### Results:

- More Poss2 in Polish than English ( $Z=7.05, p<.001$ )
- Significant effect of priming ( $Z=5.05, p<.001$ ) in both directions ( $Z=-0.71, p>.05$ )
- No effect of proficiency (English  $Z=1.14, p>.05$ ; Polish  $Z=0.44, p>.05$ )
- What is being primed? Not a syntactic structure, but the word order of semantic role of possessor.



## In conclusion

1. No priming effect with full structural overlap across languages (Study 1), but we found a bi-directional priming effect with non-identical structures (Study 2) > priming of structure or of construction (Hwang et al., 2018).
2. No effect of proficiency even when we reported a significant priming effect (Study 2).
3. A few instances of crosslinguistic influence from English *of*-constructions to Polish (Study 2).
4. Follow up studies to test the role of the complexity of RCs: within languages with children of the same age range, and across languages with older children.

