

L2 Acquisition of English Relative Clauses by L1 Chinese Speakers

Subject-object asymmetries and the role of Relativized Minimality

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Introduction

Linguistic literature (e.g. Gordon et al. 2001, 2004) attests to a subject-object asymmetry in the comprehension and production of English relative clauses for native speakers of English. Subject relative clauses (SRCs) are read faster than object relative clauses (ORCs):

SRC	the girl ₁ [who [t ₁ [hugged the boy]]]
ORC	the girl ₂ [who [the boy [hugged t ₂]]]

Relativized Minimality (Rizzi 1990) is a possible account for this asymmetry. It is a theory of hierarchical government stating that for configuration

... X ... Z ... Y ..., where X dominates Z and Z dominates Y

X cannot govern Y if Z is the same type of potential governor for Y. In ORCs, the intervening subject may make it more difficult for the head noun to govern the object gap. Adani et al. (2010) have shown that for child L1 speakers of Italian, a mismatch in the number feature may reduce the intervention effect.

Match	the girl ₁ [who [the boy [hugged t ₁]]]
Mismatch	the girl ₂ [who [the boys [hugged t ₂]]]

Research Questions

This study examines the effect of the number feature on the comprehension of SRCs and ORCs for intermediate to advanced adult L2 English speakers from an L1 Chinese background.

- Do adult native speakers and L2 speakers show a subject-object asymmetry in English relative clauses?
- Do adult native English speakers process number-mismatched ORCs faster than number-matched ORCs?
- Do adult L2 English speakers process number-mismatched ORCs faster than number-matched ORCs?

References

- Adani, F., van der Lely, H. J.K., Forgiarini, M., & Guasti, M. T. 2010. Grammatical feature dissimilarities make relative clauses easier: A comprehension study with Italian children. *Lingua*, 120, 2148–2166. doi: 10.1016/j.lingua.2010.03.018
- Gordon, P.C., Hendrick, R., & Johnson, M. 2001. Memory interference during language processing. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 26(6), 1411–1423.
- Gordon, P.C., Hendrick, R., & Johnson, M. 2004. Effects of noun phrase type on sentence complexity. *Journal of Memory and Language*, 51, 97–114.
- Rizzi, L. 1990. *Relativized Minimality*. Cambridge, Massachusetts: The MIT Press.

Methodology*

Part A: Self-paced reading

This was a self-paced reading task in moving window format on E-Prime. The participant read sentences one phrase at a time on a laptop, pressing the spacebar to view the next phrase. After each sentence, s/he answered a true/false comprehension question.

Test items

There were 6 sets of sentences, each set consisting of 2 factors: relative clause type (SRC vs. ORC) x number match (match vs. mismatch), for 4 sentences per set and 24 overall. The sentences consisted of the phrase *I know* _____ followed by the relative clause head in matrix object position and a semantically reversible, singly embedded relative clause.

SRC match	I know the king who pushed the boy .
SRC mismatch	I know the king who pushed the boys .
ORC match	I know the king who the boy pushed .
ORC mismatch	I know the king who the boys pushed .

There were also 12 filler sentences, for a total of 36 sentences in the experiment.

Part B: Picture selection

This was a picture selection task on E-Prime. The same 36 relative clauses as Part A were used, but with *Show me* replacing *I know*. The entire sentence was displayed on a laptop, along with 4 pictures. The participant pressed a button corresponding to the picture that best fit the sentence.

Test pictures

Each set of 4 pictures had 1 picture illustrating each of the 4 conditions.

I know the king who pushed the boy.

I know the king who pushed the boys.

I know the king who the boy pushed.

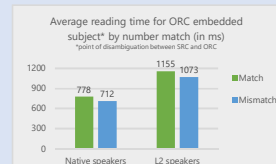
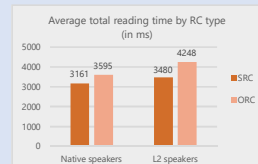
I know the king who the boys pushed.



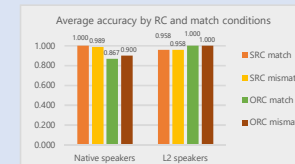
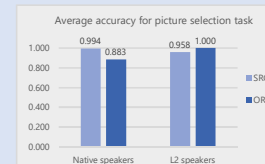
*Half the participants did Part A first; half did Part B first.

Preliminary Results (based on 15 native, 4 L2 English speakers)

Part A: Self-paced reading



Part B: Picture selection



Preliminary Conclusions

The data so far support a subject-object asymmetry for both groups. They also show that a mismatch in the number feature slightly improves processing and comprehension of ORCs for both native and L2 speakers, though it is unclear if the difference is significant. Further testing is ongoing.

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