

THE RESOLUTION OF PRONOUNS AND REFLEXIVES IN L2 ADVANCED SPEAKERS OF ENGLISH

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Introduction

- Second language ultimate attainment
- Very advanced L2 speakers may converge with native speakers with regard to some structures, but not others.
- The Interface Hypothesis (Sorace & Filiaci, 2006)

- In English, it is commonly assumed that
- reflexives – structural (syntactic) factors
- pronouns – non-structural (semantic/pragmatic) factors

Introduction

- Aim of the study
- The purpose of this study is to investigate the resolution of pronouns and reflexives by advanced L2 speakers of English.

Literature review

- The Interface Hypothesis (IH) (Sorace & Filiaci, 2006)
- Criticism of the original IH
 - a) are there structures require only syntactic computations?
 - b) many structures are sensitive to multiple conditions
- Later development of IH
 - Internal interfaces (e.g. syntax-semantics)
 - External interfaces (e.g. syntax-pragmatics)(Sorace & Serratrice, 2009)
 - Categorical distinction → gradient differentiation (Sorace 2011)
- Integrating multiple types of information at interfaces

Literature review

- The picture Noun Phrase construction (PNP) (see Kaiser et al., 2009)
e.g. Leonard gave Sheldon a picture of him/himself.
- Structural bias in the PNPs
- Principle A: a reflexive must be bound in a local domain. (Chomsky 1981)
- Principle B: a pronoun can have antecedent, as long as it is not local. (Chomsky 1981)
- (1) Sheldon₁ saw the picture of him_{*1}/himself₁.
- (2) Sheldon₁ told Leonard₂ about the picture of himself_{1/?2}.
- (3) Sheldon₁ heard from Leonard₂ about the picture of himself_{1/?2}.
- (4) Sheldon₁ told Leonard₂ about the picture of him_{?1/2}.
- (5) Sheldon₁ heard from Leonard₂ about the picture of him_{?1/2}.

Literature review

- Non-structural bias in the PNPs
- *The source hypothesis*
- Reflexives in PNPs prefer antecedents that are sources of information. (Kaiser et al., 2009)
- (2) Sheldon told Leonard about the picture of himself.
- (3) Sheldon heard from Leonard about the picture of himself.
- *The perceiver hypothesis*
- Pronouns in PNPs prefer antecedents that are perceivers of information. (Kaiser et al., 2009)
- (4) Sheldon told Leonard about the picture of him.
- (5) Sheldon heard from Leonard about the picture of him.

Research questions

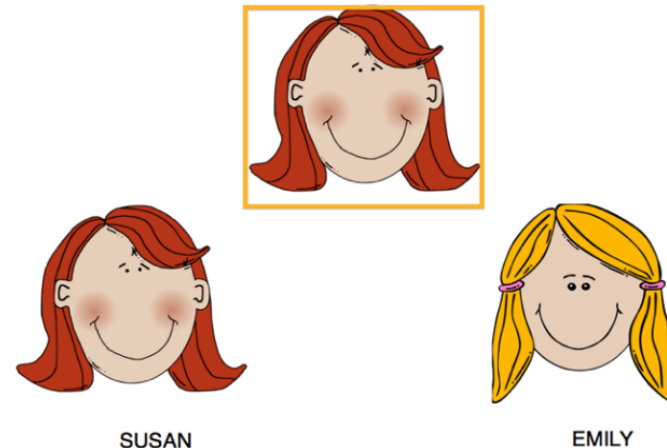
- 1) Do L2 speakers acquire the sensitivity to structural bias for pronouns and reflexives?
- 2) Do L2 speakers acquire the sensitivity to non-structural bias for pronouns and reflexives?
- 3) How do L2 speakers respond if structural and non-structural preferences diverge?

- Predictions:
 - a) L2 speakers would show greater convergence with native speakers with respect to reflexives compared to pronouns.
 - b) More differences between the two groups would be found in their interpretation of sentences with *hear* than in sentences with *tell*.

Method

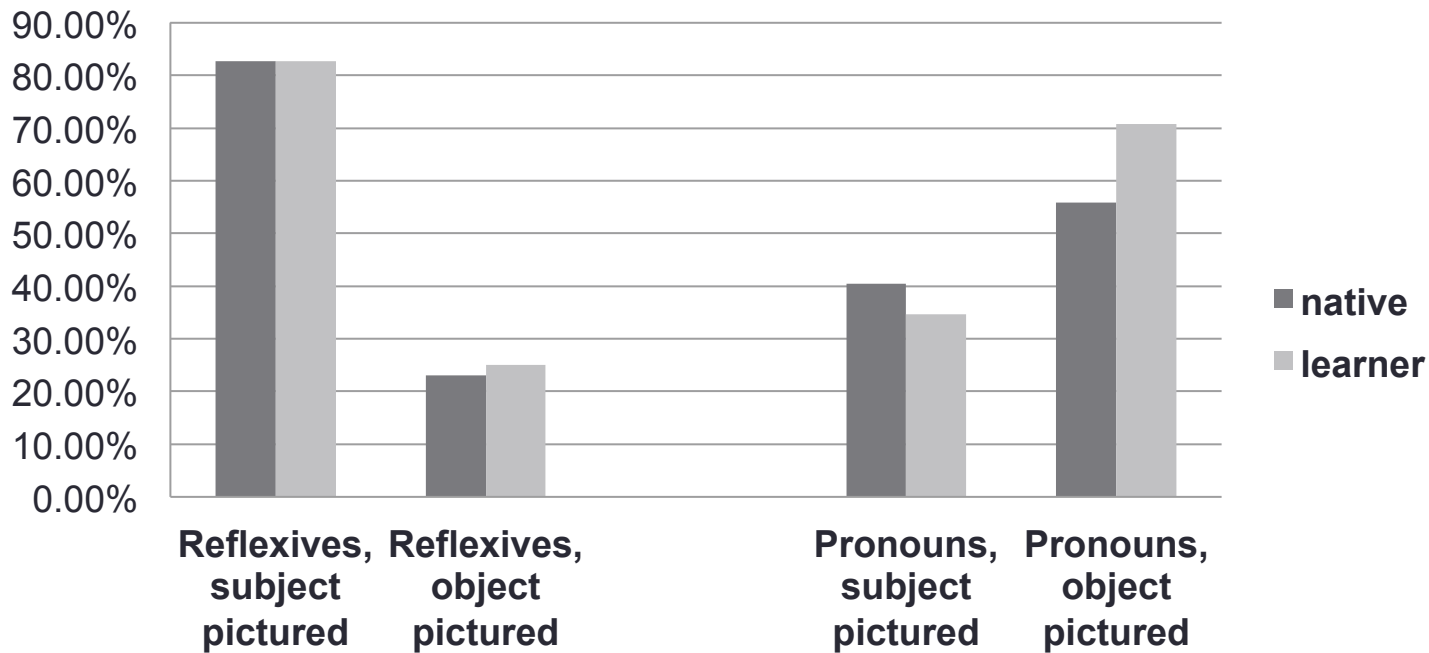
- Participants
 - Experimental group: n=18, L1 Mandarin advanced English speakers
 - (based on recent English language test scores, e.g. IELTS 7.5 or above)
 - Control group: n=13, native English speakers
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- Materials
 - Picture Verification Task
 - (whether the picture matches the sentences- yes/no)
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- 32 target items, 8 conditions
 - Verb type (tell/hear)
 - Anaphoric form (him/himself)
 - Visual display (picture of subject/ object)

Susan heard from Emily about the picture of her on the wall.



Results

Fig. 1 Percentage of 'yes' answers in picture verification task



Results

- Mixed-effect logistic regression model
- Function: the proportion of 'yes' responses
- Fixed factors: Anaphor type (reflexive/pronoun), Role (source/perceiver), and Picture (subject/object)
- Random factors: participant and item

- Native speakers:
 - Picture*** ($\beta=.61, p<.001$)
 - Picture: Anaphor*** ($\beta=1.01, p<.001$)
 - Anaphor: Role*** ($\beta=.80, p<.001$)

- L2 speakers:
 - Picture*** ($\beta=.76, p<.001$)
 - Picture: Anaphor*** ($\beta=1.60, p<.001$)
 - Anaphor: Role*** ($\beta=1.26, p<.001$)

Native speakers

Fig. 2 Percentage of 'yes' answers by native speakers (sorted by subject/object)

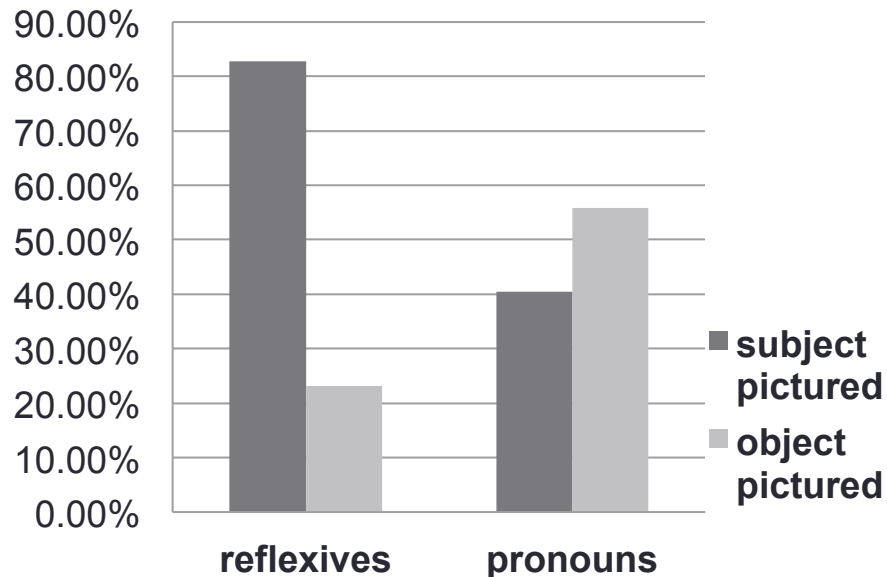
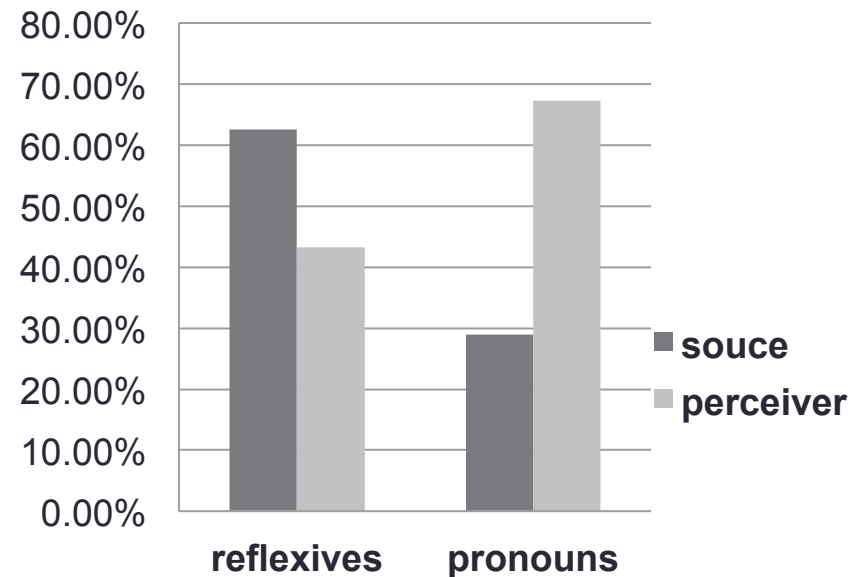


Fig. 3 Percentage of 'yes' answers by native speakers (sorted by source/perceiver)



Reflexives: Picture^{***}($\beta=1.56, p<.001$), Role^{***}($\beta=.70, p<.001$)
Pronouns: Picture^{*}($\beta=-.39, p=.049$), Role^{***}($\beta=-.91, p<.001$)

L2 advanced learners

Fig. 4 Percentage of 'yes' answers by advanced learners (sorted by subject/object)

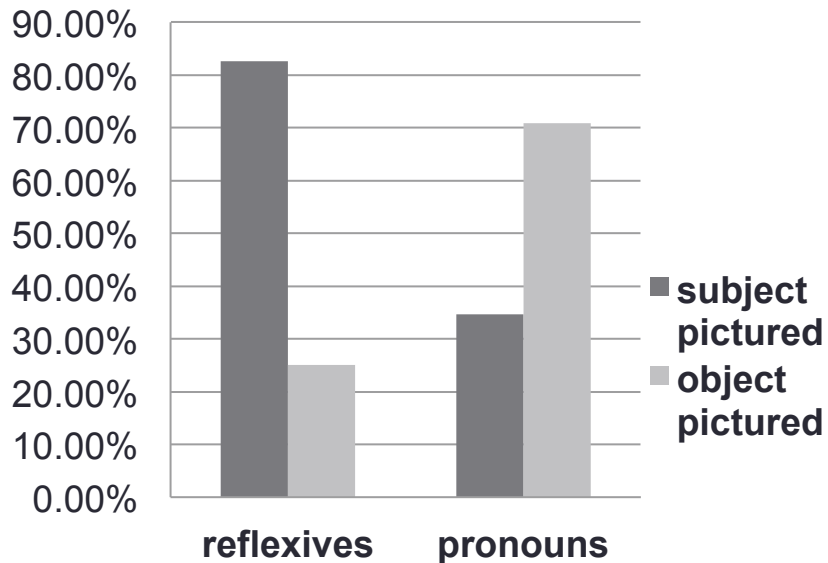
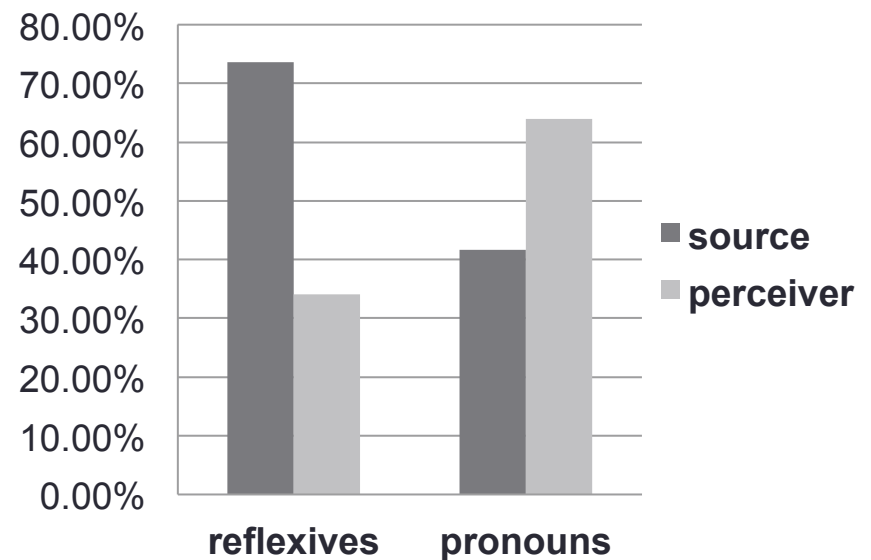


Fig. 5 Percentage of 'yes' answers by advanced learners (sorted by source/perceiver)



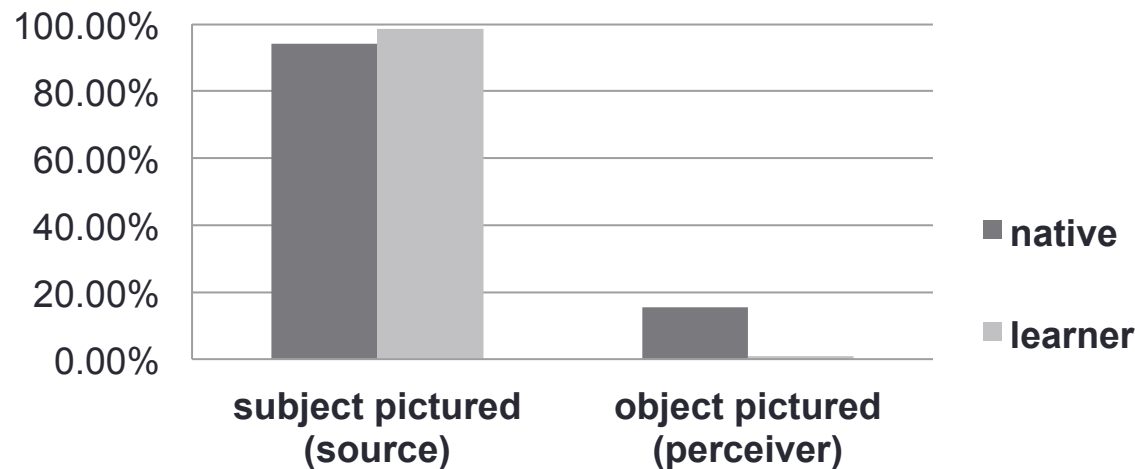
Reflexives: Picture*** ($\beta=2.32, p<.001$), Role*** ($\beta=1.26, p<.001$)

Pronouns: Picture*** ($\beta=-.92, p<.001$), Role*** ($\beta=-.93, p<.001$)

Comparison

- Group: Anaphor: Picture* ($\beta=.30, p<.05$)
- Group: Anaphor: Role* ($\beta=.12, p<.05$)
e.g. **John told Peter about the picture of himself.**

Fig. 6 Percentage of 'yes' answers in reflexive conditions with tell

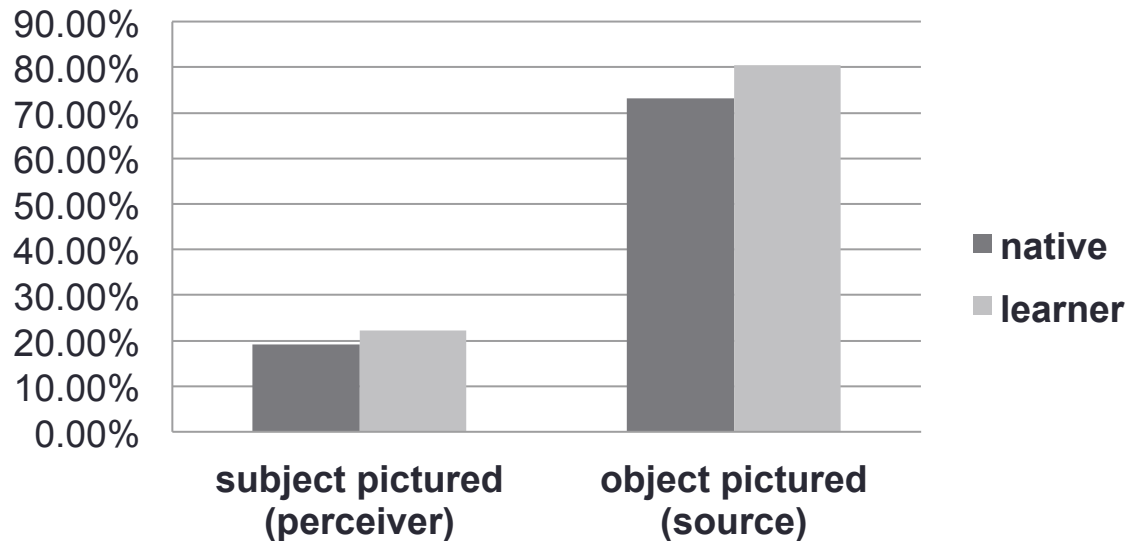


Picture*** ($\beta=3.43, p<.001$), Group: Picture* ($\beta=-.99, p=.011$)

Comparison

e.g. John told Peter about the picture of him.

Fig.7 Percentage of 'yes' answers in pronoun conditions with tell

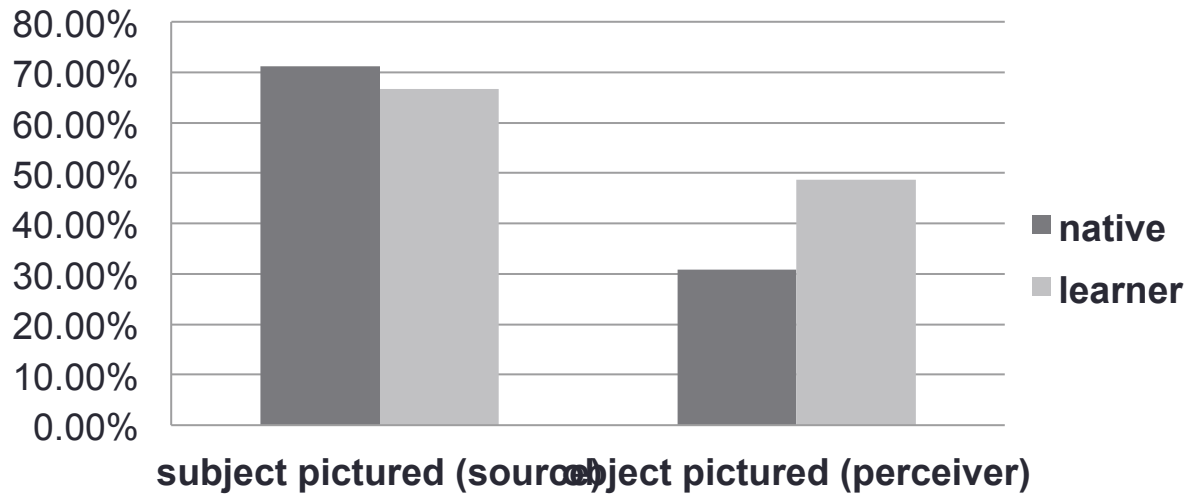


Picture***($\beta=-1.51, p<.001$), Group: Picture ($\beta=.09, p=0.60$)

Comparison

e.g. John heard from Peter about the picture of himself.

Fig. 8 Percentage of 'yes' answers in reflexive conditions with hear

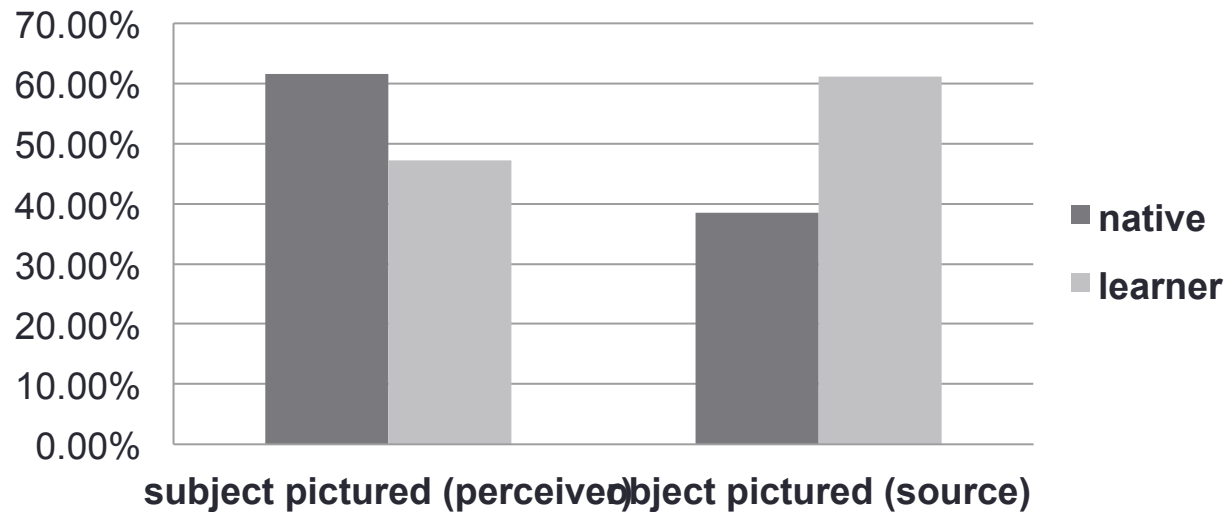


Picture*** ($\beta=.58, p<.001$), Group: Picture ($\beta=.24, p=.08$)

Comparison

e.g. John heard from Peter about the picture of him.

Fig. 10 Percentage of 'yes' answers in pronoun conditions with hear



Picture ($\beta=.04, p=.78$), Group: Picture** ($\beta=.39, p=.003$)

Discussion

- The overall results support the two predictions.
- Kaiser et al. (2009) found that for native speakers, the structural constraint has a significant influence on the interpretation of pronouns in the PNPs.
- The results of the present study suggest that native speakers only have a marginally significant structural preference in the interpretation of pronouns. However, the results are provisional and may be due to the lack of statistical power of a small sample.

Discussion

- Anaphor: Picture → sensitivity to the structural information
- Anaphor: Role → sensitivity to the non-structural information
- Advanced learners exhibit a similar pattern of asymmetrical sensitivities to structural information in their interpretation of pronouns and reflexives with native speakers. However, learners do not reach the same level of sensitivity of non-structural bias as native speakers at the pronoun conditions.

Discussion

- Sentences with *hear* yielded more structurally-unexpected answers.
- One possible explanation: in sentences with *hear*, the structural and non-structural factors have different preferences for antecedents, whereas in sentences with *tell*, the two types of factors have the same preferred antecedents. Thus, conditions with *hear* require extra processing effort and are more likely to exhibit optionality.

Discussion

- Learners show a structurally-expected preference in the resolution of reflexive sentences with *hear*, but this preference for structural bias is not as determined as native speakers.
- In the pronoun conditions with *hear*, native and learners show different preferences to resolve the conflicts of structural and non-structural information. Native speakers rely mainly on non-structural information while learners choose to follow the structural bias.

Conclusions

- Learners seem to acquire the sensitivity to structural bias for pronouns and reflexives.
- Learners also show sensitivity to the non-structural bias for pronouns and reflexives, but do not reach the same level of determinacy as native speakers, particularly in the pronoun conditions.
- In conditions where the structural and non-structural biases diverge, learners exhibit non-convergence with native speakers.
- Greater convergence with native speakers is shown in the interpretation of reflexives compared to that of pronouns.

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Acknowledgement

- *I want to express my special thanks to*
- Antonella SORACE
- Hannah ROHDE
- Daniel LAWRENCE
- Patrick ELLIOTT
- FANG Xiaohui
- CHEAK Ching Hui
- and all my participants!

Thank
you 谢谢