

Structure Doesn't Have the Final Word: What Experiments Tell Us About Coreference

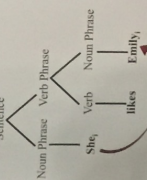
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Background

Pronouns like he or she depend on an antecedent, like a name, for their interpretation. These words are said to stand in a coreference relation. However, there are constraints on this relation. Chomsky proposed the following *binding constraint*.

Principle C: a name should not be c-commanded by a co-indexed antecedent.
This constraint is illustrated in the following tree.



But this does not mean that a name can *never* corefer with a pronoun or name. The antecedent precedes it! And sometimes this can happen, even when there is a Principle C violation, as seen in (1).

- (1) a. After she finished her exam, Emily went rock climbing. (no violation)
b. Even Emily is disappointed in Emily!
c. (at a restaurant)
d. I'm talking about a guest I think that's Emily. She just put her (violation) favorite dessert, so it must be!

In this research, we ask the following question:

What other factors contribute to coreference apart from Principle C?

Based on previous work, we propose two potential factors:
1. *plausibility of coreference*
2. *plausible status of the proposition*

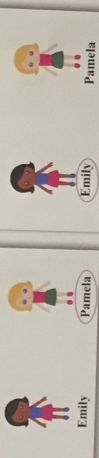
Experiment

Participants: 48 undergraduates (native English speakers) enrolled in Linguistics or Cognitive Science courses, receiving extra credit for participation

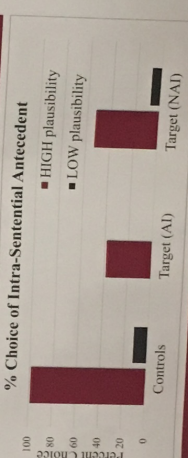
Design: The experiment was administered on Superlab. Participants read sentences containing a pronoun and a name it c-commanded. They were asked to choose between a sentence-internal or sentence-external referent of the same gender (responses circled).

Conditions: Plausibility (High v. Low) based on association of object to person in world. At-Issue-ness (NAI v. AI) based on appearance in temporal or matrix clause.

After sending her Pamela's visa, the consulate issued an invoice for their services.



Results



Targets with HIGH plausibility → HIGH % of coreference
Targets with content in NOT At-Issue clause → HIGHER % coreference
CONCLUSION: Plausibility is not the only determinant for coreference!

Conclusions

- Principle C is not the only factor determining coreference between a pronoun and a name it c-commands.
- Plausibility of coreference in all Target items would be a factor.
- Finally, we find that the two factors we manipulated matter:

Plausibility of coreference
Appears in (Not-)At Issue Content
Appears in (Not-)At Issue Content
Violation is higher for cases where coreference is conceptually plausible and where the pronoun and name are in a Not-At-Issue clause.

Syntactic constraints do not have the last word in restricting coreference relations. Instead, they interact with other factors!

Implications: These results invite us to reconsider the role of Principle C in the interpretation of sentences in natural language.

Acknowledgements

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References

Gor, V., & Syrett, K. 2018. Beyond Principle C: *At-issue-ness* influences the acceptability of coreference. Talk presented at the 54th Annual Meeting of the Chicago Linguistic Society.

