Active cataphor resolution skips some positions

Dave Kush (University of Toronto; dave.kush@utoronto.ca) & Brian Dillon (University of Massachusetts, Amherst; brian@linguist.umass.edu)



BACKGROUND EXPERIMENT 1 (N_{SUBJ}=93, N_{ITEM}=24)

• Encountering a cataphor triggers active expectation for an antecedent [1].

(1) After **she** went to the store, **the boy**

Gender-Mismatch Effect (GMME)

- Why? Two ideas:
 - Interpret pronoun as quickly as possible ("Diagnostic Locality" [2]):
 - Parser posits coreference with linearly closest NP.
 - Anticipation of prominent referent ("Targeted Prediction" [3]):
 - Parser posits coreference with main subject NP because:
 - Subject NPs are predictable (all clauses have them)
 - Subjects are prominent (pronouns prefer prominent antecedents)
- · Active resolution at Main Subject in (1) does not distinguish hypotheses.
 - Subject is both linearly closest and most prominent position for an antecedent.

Key finding Active search for cataphors targets **prominent** positions over **linearly close** positions, consistent with **Targeted Prediction**.

OUR STUDY: DISSOCIATING LINEAR ORDER AND PROMINENCE IN CATAPHOR SEARCH

- Cataphor in preposed adjunct and NAME as First NP in main clause.
 - First NP: NAME was either Main Subject or Possessor.
 - Gender Match: cataphor either match or mismatch NAME
- (2) After we saw him her Jonathan (3) After we saw her, Jonathan's
- · Expect GMME at NAME in Main Subject Position
- Key question: Do we see GMME at NAME when it is a possessor?
 - Diagnostic Locality predicts GMME
 - Targeted Prediction predicts NO GMME

Completion task norming:

While a parent drove him to school, Christopher's

- 100% possessive continuations

REFERENCES & ACKNOWLEDGMENTS

[1] van Gompel & Liversedge. 2003. *JEP:LMC*. [2] Aoshima et al. 2004. *JML*. [3] Kush & Dillon. 2021. *JML*.

Thanks to Fahim Kanchan and Erica Eng for assistance with materials creation. This work was supported by a U of T SIG to DK and by NSF BCS-1941485 to BD.

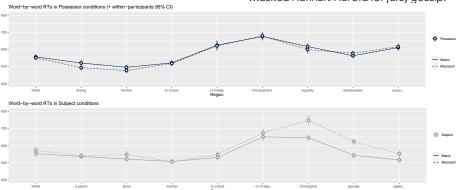
Main Subject

While a parent drove **her** to school on Friday, **Christopher** typically ... While a parent drove **him** to school on Friday, **Christopher** typically ...

Possessor

While driving **her** to school on Friday, **Christopher's** typically disinterested cousin... While driving **him** to school on Friday, **Christopher's** typically disinterested cousin...

...asked Hannah/Harold for juicy gossip.



EXPERIMENT 2 (N_{SUBI}=70, N_{ITEM}=24)

Main Subject

While a parent drove **her** to school on Friday, **Christopher** typically ... While a parent drove **him** to school on Friday, **Christopher** typically ...

Possessor

While a parent drove **her** to school on Friday, **Christopher's** typically ... While a parent drove **him** to school on Friday, **Christopher's** typically ...

