

No ambiguity in the acquisition of adjunct control

Juliana Gerard & Jeffrey Lidz
University of Maryland



4-5 year old children are reported to exhibit non-adultlike control into adjuncts:

(1) John₁ bumped Mary₂ after PRO_{1/*2} tripping on the sidewalk
Who tripped on the sidewalk?

- Adults: John (subject)
- Non-adultlike answers given by 4-5 year olds:
 - John, Mary, Bill, ... (free reference of PRO) [1-4,6-9]
 - John or Mary (free internal reference) [1-4, 6]
 - Only Mary (strict object control) [1-4, 6]

What is responsible for children's non-adultlike behavior?

1. Non-adult grammar
2. Performance errors
3. Flaws in previous methodology

Current Study:

- Are children's errors due to a non-adult grammar?
- Do children treat (1) as ambiguous?

⇒ No. Children have a subject preference for (1) (Exp 1) and treat (1) differently from truly ambiguous sentences (Exp 2)

Experiment 1: PRO + non-finite adjunct



"Dora carried Diego after PRO putting on a bandaid."

PRO = Dora ⇒ false (adultlike)
PRO = Diego ⇒ true (non-adultlike)

Experiment 1 Design

CONTEXT	PRO = subject (adultlike)	PRO = object (non-adultlike)
SUBJECT-TRUE (OBJECT-FALSE)	true	false
OBJECT-TRUE (SUBJECT-FALSE)	false	true

- roles of Diego (subject) and Dora (object) counterbalanced across items and lists

Experiment 1 Predictions

With adult grammar:

- Accept SUBJECT-TRUE context
- Reject OBJECT-TRUE context

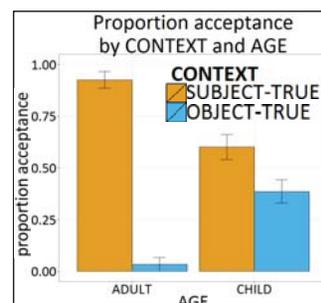
If (1) is ambiguous:

- Accept SUBJECT-TRUE context
- Accept OBJECT-TRUE context

- Controls made sure kids could accept and reject sentences with "before" and "after"

Experiment 1 Results

- 40 children, 4;0-5;3, (m=4;7.9)
- 20 adults
- 2x2 ANOVA, $p < .001$:
 - CONTEXT (SUBJECT-TRUE/OBJECT-TRUE)
 - AGE (CHILD/ADULT)*CONTEXT

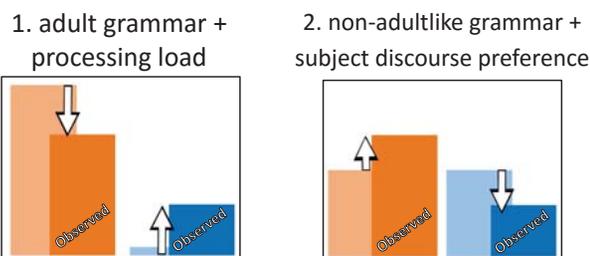


Experiment 1: Main effect of CONTEXT

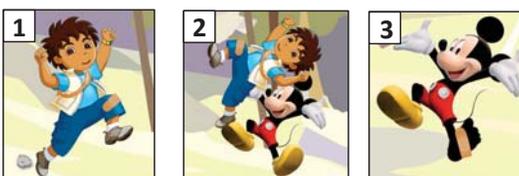
- For both children and adults:
 - More likely to accept SUBJECT-TRUE
 - More likely to reject OBJECT-TRUE
- Inconsistent with ambiguous interpretation of (1), consistent with adult grammar

Experiment 1: AGE x CONTEXT interaction. Why?

- Adults - interpretation due to adult grammar
- Children - interpretation due to:



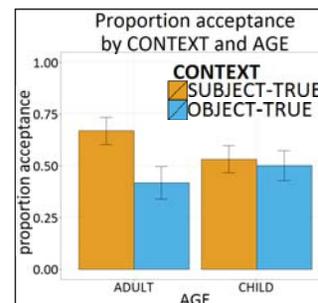
Experiment 2: ambiguous pronoun + finite adjunct



"Mickey carried Diego after he put on a bandaid."

Same design as in Experiment 1

Experiment 2 Results



- 32 children, 4;6-5;5 (m=4;11.3)
- 24 adults
- 2x2 ANOVA:
 - CONTEXT: $p = .08$
 - AGE*CONTEXT $p = .13$

Different behavior in Experiment 2

- Children and adults distinguished between adjunct control (Experiment 1) and ambiguous pronouns (Experiment 2)
- Children don't have the same ambiguous interpretation for PRO as for an ambiguous pronoun

CONCLUSIONS

1. Children show a subject preference for (1), consistent with the adult grammar, BUT make more errors than adults.
2. These errors are NOT due to a grammar that allows for an ambiguous interpretation of PRO.

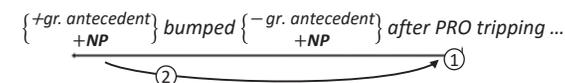
Future directions: what else can account for non-adultlike adjunct control?

Some other non-adultlike grammar?

- Misattachment of adjunct to main clause?
- Misanalysis of adjunct as a nominal?

*John bumped Mary after [the tripping on the sidewalk]
John bumped Mary after somebody tripped on the sidewalk*

Noise in online antecedent retrieval?



References:

[1] Goodluck (1981) *Language Acquisition & Linguistic Theory*
 [2] Hsu, Cairns, & Fiengo (1985) *Cognition*
 [3] Hsu, Cairns, Eisenburg, & Schillessburg (1989) *JCL*
 [4] McDaniel, Cairns, & Hsu (1991) *Language Acquisition*
 [5] Wexler (1992) *Control and Grammar*
 [6] Cairns, McDaniel, Hsu, & Rapp (1994) *Language*
 [7] Brothier & Wexler (1995) *MITWPL 26*
 [8] Goodluck (2001) *Language*
 [9] Adler (2006) MIT Linguistics dissertation