

# No ambiguity in the acquisition of adjunct control

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

(1) John<sub>1</sub> bumped Mary<sub>2</sub> after PRO<sub>1/\*2</sub> 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

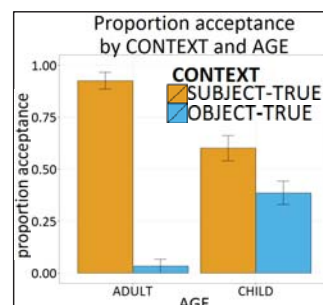
**If (1) is ambiguous:**

- 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

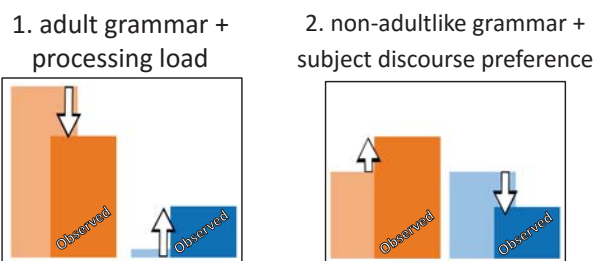


## Experiment 1: Main effect of CONTEXT

- 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:



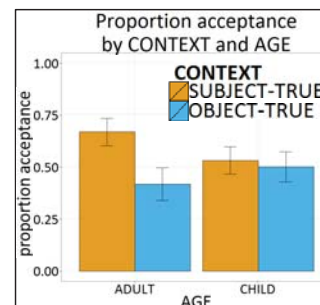
## Experiment 2: ambiguous pronoun + finite adjunct



**"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.

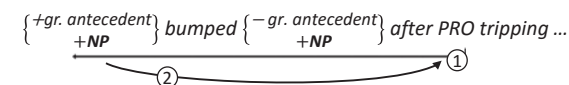
## Future directions: what else can account for non-adultlike adjunct control?

### 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:

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