Using Principle C to rule out a low attachment account of adjunct control

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4-5 year old children are reported to exhibit non-adultlike control into adjuncts:
(1) John, bumped Mary after PRO tripping on the sidewalk
Who tripped on the sidewalk?
- Adults: John (subject)
- Non-adultlike answers given by 4-5 year olds:
  ¾ John, Mary, Bill, … (free reference of PRO) [1-4, 6-9]
  ¾ John or Mary (free internal reference) [1-4, 6]
  ¾ 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 reported errors due to a non-adult grammar?

Variable Attachment Hypothesis: Low attachment
- If the controller is the closest c-commanding NP, then object control is caused by attaching the adjunct inside the VP

Adult structure: Low attachment:
- Object doesn't c-command PRO
- Object does c-command PRO

Principle C can diagnose the position of the adjunct:
- Adult structure
- Low attachment

Current study: Tested attachment height hypothesis via its predictions regarding Principle C effects.

TVJT

"Dora picked him an apple before finding Diego's basket."
EITHER "him" = Diego (true)
OR "him" = Boots (false)

High Attachment (adult structure): "him" = Diego OR "him" = Boots
Low Attachment: "him" = Boots, but "him" ≠ Diego (blocked by Pr C)

Design

<table>
<thead>
<tr>
<th>CONTEXT</th>
<th>&quot;him&quot; = Diego</th>
<th>&quot;him&quot; = Boots</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRUE IF &quot;HIM&quot; = DIEGO</td>
<td>true</td>
<td>false</td>
</tr>
<tr>
<td>TRUE IF &quot;HIM&quot; = BOOTS</td>
<td>false</td>
<td>true</td>
</tr>
</tbody>
</table>

(roles of Diego (name) and Boots (external referent) counterbalanced across items and lists)

Results

- 40 children
  ¾ 4-5:6
  ¾ mean=4;11
- 37 adults
- 2x2 ANOVA
  ¾ AGE (CHILD/ADULT, p = .055)
  ¾ CONTEXT (TRUE IF "HIM" = DIEGO/ TRUE IF "HIM" = BOOTS, p < .001)

Justifications
TRUE IF "HIM" = DIEGO:
"Dora picked him an apple before finding Diego's basket."
- "Yes! Because Dora gave Diego the apple before she found his basket." (= Diego)
- "No! Because she got the basket and then she gave Boots an apple." (= Boots)
TRUE IF "HIM" = BOOTS:
"Dora picked him an apple after finding Diego's basket."
- "Yes! Because she found Diego's basket before she picked Boots an apple." (= Boots)
- "No! Because she gave the apple to Diego and then found the basket." (= Diego)

Interpretation of results
- Sentences accepted in both conditions
- Children let "him"= Diego, so this interpretation was not blocked by Principle C
- Adult attachment must be available

Optional vs. Obligatory Attachment
Data are consistent with optional low attachment, with:
- Principle C forcing high attachment
- Low attachment otherwise

Data are not consistent with obligatory low attachment:
- All justifications to rejected sentences cited order of events, not the referent of PRO.

Future research will address whether low attachment is a possible non-adult grammar.

Future directions:
What else could be responsible for the non-adultlike behavior observed in previous studies?
- Non-adult grammar, other than low attachment
  ¾ Agent control
  ¾ Misanalysis as a nominal
  ¾ Performance errors
- If children have the adult grammar, do they fail to link PRO with the grammatical antecedent while parsing the sentence?
- Future research will investigate how making this link online is modulated by feature overlap, by making the subject and object NPs more or less distinct.

References:

Optional vs. Obligatory Attachment