Condition C reconstruction in German A’-movement: experimental results
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Background

Previous theoretical claims on Condition C reconstruction in English:
- argument-adjunct asymmetry: only R-expressions inside arguments trigger Condition C effects. R-expressions inside adjuncts don’t (Freidin 1986, Lebeaux 1988, Fox 1999, Safir 1999)
- predicate-argument asymmetries (Huang 1993, Heycock 1995): predicates obligatorily reconstruct, arguments do not; Condition C effects decrease with increasing distance between R-expression/pronoun under embedding with arguments but not with predicates

Previous empirical claims:
- English: Condition C effects under A’-movement questioned quite generally: experimental work (Adger et al. 2017, Bruening & Al Khalaf 2018): Condition C effects systematic only with adjectival predicates, but partially absent with nominal arguments; only weak argument-adjunct asymmetry.
- German: Principle C effects are robust in wh-movement/topicalization but weak/absent in relativization (Salzmann 2006, 2017)

Our contribution: 1st experimental investigation of Condition C reconstruction in German A’-movement.

Method and participants

Mary tells us how proud of Anna ▶ is.

Can this sentence be interpreted such that...
...Mary is proud? (Q1) □ Yes □ No
...Anna is proud? (Q2) □ Yes □ No

- forced-choice task, inspired by Bruening and Al Khalaf (2018): provide two potential referents (in local/higher clause)
- innovation: we explicitly asked for each of the readings whether it is possible or not → optionality can be captured
- web-based questionnaires (Socr Survey, Prolific)
- five experiments, 32/48/36/32/36 participants
- Latin Square Design
- 1:1 items-fillers ratio

Design and stimuli

Factors:
1. in situ vs. moved
2. DPs (arguments) vs. APs (predicates)
3. R-expression inside argument vs. R-expression inside adjunct (DP-arguments only)
4. distance between pronoun and R-expression (linear and structural)
5. wh-movement vs. relativization

Sample item set: (see handful for original German items)

(1) APs (predicates)
   a. Mary tells (us) that ▶ is very proud of Anna (and the teams).
      ▶ in situ
      ▶ moved
      ▶ Principle C predicts: coreference between she and Anna impossible
   b. Mary tells (us) ▶ how proud of Anna (and the teams) ▶ is ▶ moved

(2) DPs – R-expression inside argument
   a. Mary tells (us) ▶ saw a statue of Anna.
      ▶ in situ
      ▶ moved
      ▶ Principle C predicts: coreference between she and Anna impossible
   b. Mary tells (us) ▶ which statue of Anna ▶ saw ▶ moved

Additional factors:

(3) DPs – R-expression inside adjunct
   a. Mary tells (us) in situ ▶ that ▶ saw a statue on the desk of ▶ Anna.
   b. Mary tells (us) ▶ which statue on the desk of ▶ Anna ▶ saw ▶ moved
      ▶ Late merge predicts: coreference between she and Anna is possible

(4) structural distance – R-expression and pronoun clause-mates?
   a. Mary tells (us) ▶ which statue of ▶ Anna ▶ thinks ▶ you ▶ saw ▶ moved
   b. Mary tells (us) ▶ which statue of ▶ Anna ▶ you ▶ think ▶ that ▶ saw ▶ moved
      ▶ Ellipsis predicts: R-expression in antecedent can correspond to pronoun in ellipsis site
      ▶ Vehicle Change approach (Safir 1999) predicts: Principle C effect vanishes with nouns & adjectives; ‘embedding 2’: Principle B effect arises with adjectives (not with nouns)

(5) wh-movement vs. relativization:
   a. Peter ▶ mentioned ▶ every ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ∘ ▶ saw ▶ moved
   b. Peter ▶ mentioned ▶ which statue ▶ of ▶ Robert ▶ saw ▶ wh-movement

Results and Discussion

Wh-movement – adjectival predicates:

- ▶ reconstruction for Principle C is very robust, with both adjectival predicates and nouns
- ▶ no support for predicted argument-adjunct asymmetry.
- ▶ argues against a late-merger approach to adjuncts
- ▶ no significant effect of linear distance
- ▶ significant effect of embedding
- ▶ pattern goes against predictions of Vehicle Change approach

Wh-movement – nouns:

Coverage ofpron-body
...Mary tells (us) ▶ which statue on the desk of ▶ Anna.
...Anna is proud?

Main findings on wh-movement:

- ▶ reconstruction for Principle C is very robust, with both adjectival predicates and nouns
- ▶ no support for predicted argument-adjunct asymmetry.
- ▶ argues against a late-merger approach to adjuncts
- ▶ no significant effect of linear distance
- ▶ significant effect of embedding
- ▶ pattern goes against predictions of Vehicle Change approach

Conclusions and outlook

Summary: robust reconstruction for Principle C in wh-movement, less robust in relativization; no pred-arg-asymmetry; no arg-adj-asymmetry

- movement-type-asymmetry: argues for a full representation of the antecedent of wh-movement in the bottom position and for the Matching analysis (with optional deletion/vehicle change of the lower copy) of RCs → no full instance of the external head inside the RC
- ▶ no arg-adj-asymmetry: argues against late merger approaches to adjunction; no pred-arg-asymmetry: argues against a silent PRO/φ trace of the subject in predicates
- ▶ embedding effect: suggests that non-syntactic factors play an important role as well
- ▶ more robust Condition C reconstruction than in recent experimental work on English → due to different methods, or differences between the languages?
- ▶ the results for long-distance relativization (marked strategy) are similar to those for prolepsis (unmarked strategy, part of the fillers) (Salzmann 2006, 2017)

Selected references: