Condition C, pronoun strength, and the raising analysis of relative clauses

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Overview

- A raising analysis must be available for relative clauses.
- Tensed relative clauses show some evidence of reconstruction for Condition C in English, experimentally.
- Infinitival relative clauses show strong reconstruction for Condition C in English and French, introspectively.
- We suggest that the differing strength of reconstruction is due to pronoun strength:
  - stronger pronouns have the potential to bear focus
  - when they do, Condition C is obviated via the structure of focal meaning
- Varying judgements on tensed relative clauses might arise from the pronoun being read as focused.

Condition C reconstruction

- Condition C reconstruction underpins a substantial amount of theoretical research (Barss 1986, Lebeaux 1988, Heycock 1995, Fox 1999, Hulsey & Sauerland 2006, i.a.).
- But does it exist? Ambivalent recent experimental findings on questions:
  - No: Adger et al. (2017) and Bruening & Al-Khalaf (2019) for English
  - Yes: Stockwell et al. (2021, 2022) for English, Salzmann et al. (2023) for German

Relative clause reconstruction

- Do relative clause heads reconstruct for Condition C?
- Competing analyses can make different predictions:

Raising – Yes (Schachter 1973, Vergnaud 1974, Kayne 1994, i.a.)

(1) *the [picture of Harry$_i$]$_k$ that he$_i$ framed [picture of Harry$_i$]$_k$

- The base copy of A-bar movement is c-commanded by a coindexed pronoun.

Matching – No (Safir 1999, Citko 2001, Chomsky 1973, Partee 1975, i.a.)

(2) the [picture of Harry$_i$]$_k$ that he$_i$ framed [picture of him$_i$]$_k$ / it$_k$

- Condition C can be circumvented by not representing the R-expression verbatim in the relativized position; e.g. vehicle change to a pronoun (Safir 1999).

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Experiment

- A formal, large-scale (n=293) acceptability rating experiment to investigate the acceptability of coreference in English tensed relative clauses.

Design 2x2(x2) (Not shown here: (III) DISTANCE, cf. Adger et al. 2017)

(I) CONDITION C: YES (3) vs. NO (4) – potential for; A' trace below vs. above pronoun

(II) RESPONSE: NAME (a) vs. ELSE (b) – co- vs. disjoint reference for the pronoun

(3) the [statue of Elizabeth] that she unveiled *t* CC YES

a) a statue that Elizabeth unveiled b) a statue that someone else unveiled

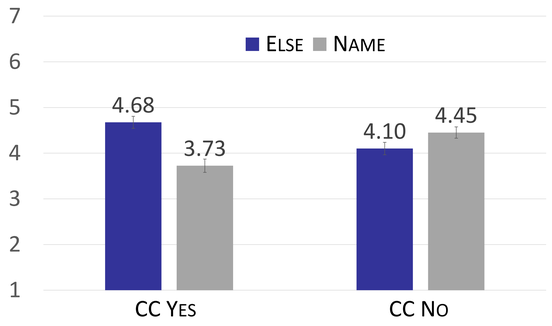
(4) the [statue of Elizabeth] that *t* made her smile CC NO

a) a statue that made Elizabeth smile b) a statue that made someone else smile

- Item, prompt "What is this about?", and both responses appear simultaneously.
- Task: rate the naturalness of each option on separate 0-7 sliding Likert scales.
- 12 sets of items; Latin square, four lists.

Results

- Baselines confirmed that our experiment was sensitive to Condition C effects: GOOD – NAME 6.21, ELSE 2.17; BAD – NAME 1.77, ELSE 5.56.
- Mixed-models regression; lmerTest (Kuznetsova et al. 2017), R (Core Team 2015)
- Main effect of RESPONSE: ELSE rated higher than NAME ($p < .001$).
- Crossover interaction between CONDITION C and RESPONSE ($p < .001$):
  - ELSE preferred over NAME in CC YES (cf. Salzmann et al. 2023 for German)
  - NAME somewhat preferred over ELSE in CC NO
- Mean ratings are plotted with +/- 1 standard error of the mean.
- Visually, Condition C reconstruction flips the preference for NAME over ELSE in CC NO to a preference for ELSE over NAME in CC YES:



Discussion

- How to interpret these results, in light of:
  - varying introspective judgments of (1/2) (e.g. Schacter 1973, Vergnaud 1974 vs. Hulsey & Sauerland 2006);
  - and, perhaps, the effect being significant but not large?

Against ambiguity

- Possible explanation for experimental results: relative clauses are ambiguous between matching and raising (Bhatt 2002, Hulsey & Sauerland 2006).
- Participants pick a varying analysis on each item and responding accordingly. (cf. Stockwell et al. 2022)
- But the clear Condition C effects to follow in (6)-(9) support the raising analysis, and would be puzzling if matching analyses were available for relative clauses at all, even ambiguously.

Pronoun strength

- The weaker the pronoun c-commanding a copy of a name, the clearer the Condition C reconstruction effect:

(5) PRO, pro, elided > (weak French) il > he > himself, lui (même)

Silent pronouns – clear Condition C effects

- **pro** in Italian finite relative clauses (Bianchi 1999):

(6) Quelle e l' [amico di Gianni$_j$] a cui { *pro$_j$ / ✓lui$_j$ } ha offerto un lavoro *t*.
this is the friend of Gianni to whom (he) has offered a job

- **PRO** in English and French infinitival relatives: (cf. ??*she$_i$ should* in place of *PRO$_i$*)

(7) La [photo d'elle$_i$/*Anna$_i$] à PRO$_i$ utiliser *t* sur sa page Web est celle-ci.
The [photo of her$_i$/*Anna$_i$] PRO$_i$ to use *t* on her webpage is this one.

(8) Les meilleures [photos d'elle$_i$/*Anna$_i$] à PRO$_i$ prendre *t* avec elle$_i$ sont ici.
The best [pictures of her$_i$/*Anna$_i$] PRO$_i$ to take home *t* with her are here.

- **Elided** pronouns (<<ellipsis>>) (Yoshida et al. 2019):

(9) A: {She$_i$ / Her$_i$ friends} reported that the manager wrote to John.
B: No, to Mary$_i$ <<{*she$_i$ / ✓her$_i$ friends} reported that the manager wrote *t* >>.

Stronger pronouns – weaker Condition C effects

- Italian (6) (Bianchi 1999:112-115; Cinque 2020:ch.2, fn.9); French and Greek (Angelopoulos & Sportiche 2021).
- German strong (*diese*, etc.) vs. weak (*er*, etc.) pronouns (Georgi et al. 2019).

Focused pronouns – no Condition C effects (cf. Evans 1980, Reinhart 2006, i.a.)

- Focus amnesties Condition C effects, even in non-movement configurations:

(10) Only SHE$_i$ (HERSELF$_i$) still thinks that Mary$_i$ is nice.

- In relatives, too, coreference improves with emphatic reflexives and focused or otherwise contrastive pronouns (11):

(11) The [portrait of him$_i$ / (?)John$_i$] that { he$_i$ himself$_i$ painted *t* / only he$_i$ painted *t* / he$_i$ painted *t* himself$_i$ } sold for $1m.

Focal structure

- Generalization: Condition C reconstruction is clearer with weaker pronouns.
- Correlation: morpho-syntactic pronoun strength (as in Cardinaletti & Starke 1999) correlates crucially with the potential to bear contrastive focal accent.
- Explanation: Condition C is obviated by structural aspects of focal meaning (inspired by but different from Heim 2009).
- Proposal: focus on a pronoun generates alternatives to its referent, yielding an embedded conjunction-like structure; e.g. for (10) as in (12):

(12) [Nobody (relevant) but her$_i$] still thinks that Mary$_i$ is nice.

- Thus (10) vs. (9) comes to mirror the contrast in (13):

(13) (a) Nobody but her$_i$ praised Mary$_i$. (b) *She$_i$ praised nobody but Mary$_i$.

Conclusion

- The structure of focal meaning obviates Condition C.
- With silent pronouns, there is no possibility for focal stress, so no obviation.
- Hypothesis for future work: varying judgements in the literature and the effect size in our experiment arise from the pronoun being read as focused in finite relative clauses.