

There is reconstruction for Condition C in English questions

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Richard Stockwell
Aya Meltzer-Asscher
Dominique Sportiche

Christ Church, University of Oxford
Tel Aviv University
University of California, Los Angeles

Although Condition C reconstruction of preposed DPs underlies a substantial amount of research (Barss 1986, Heycock 1995, Fox 1999, Takahashi & Hulsey 2009, i.a.), recent experimental work has questioned its existence in English (Bruening & Al-Khalaf 2019 [B+]), especially at a distance (Adger et al. 2017 [A+]). This paper reports a formal, large-scale acceptability rating experiment which supports the claim that there is always Condition C reconstruction in an English question like (0):

(0) *Which picture of Harry_i did <Meghan say> he_i frame<d> *t* ?

Design. The design was 2x2x2. (I) CONDITION C: (i) YES, with the base-position of A-bar movement c-commanded by the pronoun, potentially giving rise to a Condition C effect; vs. (ii) NO, with the base-position higher than the pronoun. (II) DISTANCE: (i) SHORT, monoclausal; vs. (ii) LONG, biclausal sentences, with the pronoun as lower clause subject. (III) RESPONSE: (i) NAME, coreference for the pronoun; vs. (ii) ELSE, reference to someone else.

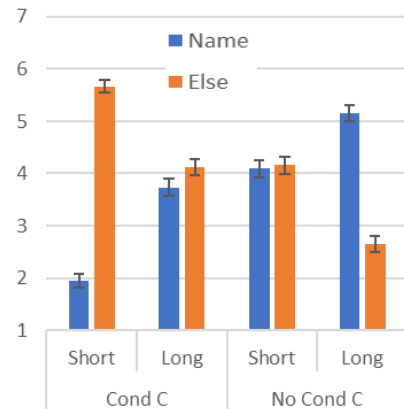
Items. We ran 12 sets of items of the form in the table in a Latin square design across four lists. The target sentence was always a wh-question (presented without bolding, traces, etc.). We controlled for: distance between name and pronoun, which were separated by the same number of words and syllables within Short (*did/made*) and Long (*did/made Name say*) items; and away from intensionality, with all DP-taking verbs failing Moltmann's (1997) tests. A further 12 baseline items were seen by every participant; six uncontroversially good with coreference, with a name c-commanding a pronoun across a clause boundary; and six uncontroversially bad with coreference as straightforward Condition C violations:

CONDITION C YES	SHORT	(1) [Which picture of Harry] did he frame <i>t</i> ? a) A picture that Harry framed. b) A picture that someone else framed.
	LONG	(2) [Which picture of Harry] did Meghan say he framed <i>t</i> ? a) A picture that Harry framed. b) A picture that someone else framed.
CONDITION C NO	SHORT	(3) [Which picture of Harry] <i>t</i> made him laugh? a) A picture that made Harry laugh. b) A picture that made someone else laugh.
	LONG	(4) [Which picture of Harry] <i>t</i> made Meghan say he has good taste? a) A picture that suggests Harry has good taste. b) A picture that suggests someone else has good taste.
GOOD		(5) [Which statue] did Flo say she bought <i>t</i> ? a) A statue that Flo bought. b) A statue that someone else bought.
BAD		(6) [Which statue] did he say Carol made Gary sell <i>t</i> ? a) A statue that Gary was speaking about. b) A statue that someone else was speaking about.

Task. Participants were asked to imagine that they were entering an ongoing conversation at a party, so as to provide a neutral context without any established discourse referents. The target item, the prompt “What is this sentence asking about?”, and the NAME (a in the table above) and ELSE (b) responses were presented simultaneously. Participants were instructed to rate the naturalness of each option on separate 1-7 sliding Likert scales.

Results. Data from 223 native English-speaking undergraduates were analysed with mixed effects models using the lmerTest package in R. The baselines confirmed that our experiment was sensitive to straightforward Condition C effects: GOOD: NAME 6.29, ELSE 1.94; BAD:

NAME 1.61, ELSE 5.79. Mean ratings for the four main conditions are plotted below (with ± 1 standard error of the mean). There was a significant two-way CONDITION C x RESPONSE interaction: in CONDITION C YES, ELSE responses increased ratings (ELSE 4.9; NAME 2.84); whereas in CONDITION C NO, ELSE decreased ratings (ELSE 3.4; NAME 4.62). We take this to be strong evidence that there is Condition C reconstruction of DPs in English. Further, the effect persists at a distance. There was a significant three-way interaction between CONDITION C, DISTANCE and RESPONSE: in CONDITION C NO, participants are equally happy with a NAME or ELSE interpretation in SHORT ($p = 0.616$), and prefer NAME in LONG ($p < .001$); whereas in CONDITION C YES, participants very strongly prefer ELSE ($p < .001$) in SHORT, and continue to prefer ELSE in LONG ($p = .0013$). That is, while the effect of Condition C reconstruction lessens with distance, it remains strong enough to flip the preference from NAME to ELSE in LONG.



Comparison. Our study differs from previous investigations on English, which did not find robust evidence for Condition C reconstruction of DPs (B+), especially at a distance (A+). For one, our greater number of participants (223 vs. 53/91/89 across the three experiments in A+; 75/75/70 in B+) provides greater statistical power; important considering many of the contrasts in B+ trend towards significance.

Moreover, we used a different methodology, which may be more sensitive to Condition C reconstruction. A+ forced a Yes/No response as to whether name-pronoun co-reference was possible; but the desire to resolve pronoun reference, and the absence of any other salient reference options, may have led to an overrepresentation of Yes responses; and the directness of the task question may have encouraged shallow processing of phi-feature match, ignoring structure. B+ forced a choice between two intra-sentential referents for the pronoun, thus probing referential preferences rather than possibilities in sentences complex enough to house two potential antecedents. By contrast, our task posed separate questions about possible referents. The ELSE response offers a choice of referents while keeping the target sentences relatively simple (unlike B+), and raises the option of disjoint reference to salience (unlike A+). Such pairwise presentation has also been found to be more sensitive and more statistically powerful than gathering ratings for sentences in isolation (Sprouse et al. 2013: 225, 228). Thus our task was similar that in Georgi et al. (2018) [G+], who found robust Condition C reconstruction in German (except with forced choice questions rather than Likert scales).

Finally, presenting the items in a neutral ‘eavesdropping’ context invited no special accent on the pronoun. Since G+ found no evidence for Condition C reconstruction with German strong demonstrative pronouns, we suspect that accent may play a role in alleviating reconstructed Condition C effects in English. And indeed, Yoshida et al. (2019), while making claims about island repair, report clear experimental evidence of Condition C reconstruction in stripping examples like (7); non- vs. c-commanding pronouns contrast, while $\langle\langle\text{ellipsis}\rangle\rangle$ precludes any accent on them:

- (7) A: {She_i / Her_i friends} reported that the manager wrote to John.
 B: No, to Mary_i $\langle\langle\{ *she_i / \checkmark her_i \text{ friends} \} \text{ reported that the manager wrote } t_i \rangle\rangle$.

Conclusion. Where previous work has questioned the existence of Condition C reconstruction with preposed DPs in English, this paper shows that it is experimentally observable, even at a distance, plausibly validating the large theoretical literature that relies on its existence.

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