

A PP/DP asymmetry in extraction*

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“She is the person [of whom] [papers t] influenced us most...”

0. The problem

Chomsky (1986, 32) attributes to Adriana Belletti the observation that unexpected PP vs. DP asymmetries emerge in cases of apparent extraction from islands. In this work we are concerned with extraction from preverbal subjects, where stranding the preposition *of* – (1a) – yields a more deviant result than pied piping it – (1b):

- (1) a. the man who [pictures of t_{DP}] are on the table
b. he is the person of whom [pictures t_{PP}] are on the table
(Chomsky 1986, (61a), (64))

This contrast is mysterious if preverbal subjects are absolute islands, as in the classic CED account (Huang 1982) and its recent minimalist reinterpretations (Takahashi 1994); as a matter of fact, this contrast has been either ignored or explained away as involving only apparent extraction (Longobardi 1991, Jurka 2010). We argue instead that (1b) is a real instance of *wh*-extraction, since it is sensitive to the nature of the subject: it is only possible to extract out of non-presuppositional subjects of stage-level predicates, but not out of presuppositional subjects of individual-level predicates (Bianchi & Chesi to appear, building on Ladusaw 1994).

1. A solution

Despite its subtlety, the pied-piping vs. P-stranding opposition is quite robust, as shown by Jurka’s (2010) experiments. We refined this evidence by testing grammaticality judgment with stage- vs. individual-level predicates, both with pied-piping and P-stranding. Two main effects emerge: (i) pied-piping vs. P-stranding is

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strongly significant ($F(1, 22) = 22.204$ $p < 0.01$); (ii) non-presuppositional subjects of stage-level predicates are much more transparent for extraction than the categorical subjects of individual-level predicates (Paired t-test on pied-piped items: $t = -2.8089$, $df = 21$, $p = 0.01$). This suggests that a real grammatical constraint is involved. Unfortunately, the standard bottom-up view of the syntactic derivation gives us no hint of what the relevant constraint could be.

We show that the DP/PP asymmetry in extraction follows if we assume a top-down, left-to-right derivation (Chesi 2012; Bianchi & Chesi 2006, to appear), in which a moved phrase is first computed in the ‘displaced’ (non-thematic) position, it is subsequently stored in a memory buffer, and it is re-merged in the structure as soon as a selectional requirement is computed which triggers the projection of the corresponding thematic position. The main points of the analysis are the following:

- i. Preverbal subjects are absolute islands: this is because they constitute computationally nested phases, and as such, they cannot inherit a wh-dependency from the memory buffer of the containing (matrix) phase.
- ii. The acceptability of extraction is contingent upon the possibility of delaying the completion of the subject DP until after the latter has been re-merged in the thematic position (this is our reinterpretation of “reconstruction”): the phase in the thematic position is not computationally nested, and can inherit the wh-dependency of the matrix phase, allowing for re-merge of the extracted wh-PP.
- iii. P-stranding within the preverbal subject DP is incompatible with delayed completion: this accounts for the robust prohibition against P-stranding.
- iv. Delayed completion, however, is only allowed when the subject receives a thematic interpretation (cf. Ladusaw 1994), i.e. it is the non-presuppositional subject of a stage-level predicate, which is totally reconstructed and is ultimately interpreted within the predicative nucleus of the clause (Bianchi & Chesi to appear).

References

- Bianchi V. & C. Chesi (2006). Phases, left branch islands, and computational nesting. UPENN Working Papers in Linguistics 12.1: 15–28.
- Bianchi V. & C. Chesi (to appear). Subject islands, reconstruction, and the flow of the computation. *Linguistic Inquiry*.
- Chesi, C. (2012). *Competence and Computation: toward a processing friendly minimalist Grammar*. Padova, Unipress. (Revised version of 2004 doctoral dissertation).
- Chomsky, N. (1986). *Barriers*. Cambridge, MA: The MIT Press.
- Huang C. T. J. (1982). *Logical Relations in Chinese and the Theory of Grammar*. Cambridge, MA: MIT dissertation.
- Jurka J. (2010). *The importance of being a complement*. Ph.D thesis, University of Maryland.
- Ladusaw, W. (1994). Thetic and categorical, stage and individual, weak and strong. In *Proceedings of the 4th Semantics and Linguistic Theory Conference (SALT)*, ed. by Mandy Harvey and Lynn Santelmann, 220–229. University of Rochester.
- Longobardi G. (1991). Extraction from NP and head government. In: A. Giorgi & G. Longobardi, *The Syntax of Noun Phrases*, Cambridge University Press, 57-112.
- Takahashi, D. (1994). *Minimality of movement*. Ph.D. dissertation, University of Connecticut.