

Extraction from predicative noun phrases: a case study in the labelling algorithm.

Extraction from predicative noun phrases as opposed to argumental noun phrases is a challenging phenomenon and gives rise to many empirical contrasts. For example, the following asymmetries can be detected in Italian:

1. a. Gianni ne_i conosce [_{DP} un ammiratore t_i]
Gianni of-them/him_{cl} knows an admirer
‘She/he knows an admirer (of them)’
- b. (di ammiratori) Gianni ne_j conosce [_{DP} uno t_j]
(of admirers) Gianni of-them_{cl} knows one_{m.sing}
‘She/he knows one (of the admirers)’
- c. Gianni ne_k è [_{DP} un ammiratore t_k]
Gianni of-them/him_{cl} is an admirer t_k
‘Gianni is an admirer of them/him’
- d. *(di ammiratori) Gianni ne_z è [_{DP} uno t_z]
(of admirers) Gianni of-them/him_{cl} is one
‘Guanni is one of them (=of the admirers)’

The clitic *ne* (of-it) can be originated either as a head of a noun phrase or as its complement. Extraction is possible in either case with an argumental noun phrase (1 a-b), whereas it is selectively banned when it is the head of a predicative noun phrase (1 c-d). In other words, objects behave differently from predicative noun phrases. In the present work, we update the analysis of this phenomenon in Moro (1997), which accounted for the difference in terms of the referentiality of the extracted element, through the introduction of the labelling algorithm that allows to label the object but not the small clause from where the predicative noun phrase moves.

This contrast, noticed in Moro (1997), was explained in terms of referentiality of the extracted element (the head of an A-chain) and consequent locality restrictions essentially reproducing the argument by Rizzi (1985) to explain the following contrast with raising from a small clause (SC):

- 2 a. loro_i gli_k sono [_{SC} t_i simili_i t_k]
they to-them-him_{cl} are similar_{m.pl.}
‘They are similar to them’
- b. *loro_j si_j sono [_{SC} t_j simili t_j]
they to-themseleves_{cl} are similar_{m.pl.}
‘They are similar to themselves’
- c. *(di ammiratori) Gianni_z ne_z è [_{SC} t_z [_{DP} uno t_z]]
(of admirers) Gianni of-them/him_{cl} is one
‘Gianni is one of them (=of the admirers)’

The essential idea was that in (2b) the two chains, the subject and the clitic anaphor, convey the same referential index yielding a failure of θ -assignment. Similarly, in copular constructions the two chains carry the same referential index because of the predicative link (Geach 1962, Williams 1980). Transitive constructions, obviously, do not involve subject raising nor coindexing, so (1b) is fully grammatical.

Any explanation involving referential indexes is incompatible with the minimalist framework however, two novel competing explanations are now potentially available: one based on phase theory, essentially distinguishing argument vs. predicative DPs in terms of their capacity of being phases; another based on the notion of labelling (Chomsky 2013, Cecchetto-Donati 2015). We would like to suggest that the second line of reasoning is the correct one and show how it leads to an empirically successful solution. The first potential solution, analyzing predicative DPs on a par with vPs must be discarded a priori on empirical grounds because *ne*-extraction is just selectively blocked when it is the head of the noun phrase.

As for labelling, the crucial fact is that copular SCs of the type {XP,YP} are unstable structures: the symmetry instantiated by the two XPs generates a conflict and the SC remains unlabeled. To solve this the

symmetry must be broken: raising of either XP to provide SC with label since the raised element is a discontinuous chain and as such it cannot project from the lower copy (Chomsky 2013, Rizzi 2016 relying on Moro 2000, 2009 principle of Dynamic Antisymmetry). Formally, let β be the features of the head Y projecting YP, the structure of a copular sentences can be represented as follows:

(4) $XP V^{\circ} \{_{\beta} XP, YP_{\beta} \}$

The ungrammaticality of (1d), accordingly, follows from the fact, being *ne* uninflected, and there are no features left in situ to label the SC; more explicitly, extraction of the head of a predicative noun phrase crashes for the lack of a label.

This solution also offers an explanation for another challenging fact (noticed also in Moro, 1997) exemplified by the following case:

- (5) a. Maria è [SC t_i [la causa del litigio]]
 Mary is the_{f.sing.} cause_{f.sing.} of-the quarrel
- b. Maria lo_j è [SC t_i [DP D° [NP ~~causa del litigio~~]_j]]
 Mary it_{neuter.sing} is
- c.* Maria la è [SC t_i [DP ~~la causa del litigio~~]_j]]
 Mary it_{f.sing} is

A predicative DP can be cliticized only by the neuter, *qua* non-inflected, clitic *lo* as shown in the contrast between (5b) and (5c). For independent reasons, Moro (1997) proposed that while *lo* must be associated with a bare N° full inflected clitics are rather associated with full D°s (paralleling the distinction between *what* and *which*). The fact that only neuter clitics can occur as propredicates can be explained *on a par* with the ungrammaticality of (2 c): D° is still able to label the SC instantiating the symmetry breaking structure in (4). On the other hand, (5c) is ruled out because the entire DP is raised, thus depriving the structure with those features which could label the SC.

All in all, the labeling account proposed here does not only explain the asymmetry in extraction from object vs. predicative DPs it also explains the otherwise mysterious fact that propredicative clitics must not be inflected.

References

- Cecchetto, C., Donati, C., 2015. *(Re)labelling*, Linguistic Inquiry Monographs, MIT Press, Cambridge MA.
- Chomsky, N., 2013. 'Problems of projections.' *Lingua* 130. 33-49.
- Geach, P. 1962. *Reference and Generality*, Cornell University Press, Ithaca, NY.
- Moro, A., 1997. *The Raising of Predicates: Predicative Noun Phrases and the Theory of Clause Structure*. Cambridge: Cambridge University Press.
- Moro, A., 2000. *Dynamic Antisymmetry*. MIT Press, Cambridge, MA.
- Moro, A., 2009. 'Rethinking Symmetry: A Note on Labelling and the EPP.' In *La grammatica tra storia e teoria: Scritti in onore di Giorgio Graffi*, edited by P. Cotticelli Kurras and A. Tomaselli, 129–31. Alessandria: Edizioni dell'Orso; also at <http://www.ledonline.it/snippets/allegati/snippets19007.pdf>.
- Rizzi, L., 1985. 'Conditions de bonne formation sur les chaînes', *Modeles Linguistiques*, 7, pp. 119-59.
- Rizzi, L., 2016. 'Labeling, maximality and the head – phrase distinction.' *The Linguistic Review* 2016; 33(1): 103–127
- Williams, E., 1980. 'Predication.', *Linguistic Inquiry*, 11, p. 203-238.