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Consequences of Antisymmetry for the syntax of headed relative clauses

(dissertation abstract)

This dissertation examines the syntax of headed relative clauses in English and Italian in the light of Kayne's (1994) Antisymmetry theory.

The introductory chapter reviews some empirical arguments which suggest that the standard X-bar theory of the Principle and Parameters framework must be made more restrictive in various respect; then, it provides a synthesis of Kayne's theory, which attains the necessary restrictiveness on principled grounds.

The second chapter is devoted to the analysis of restrictive relative clauses proposed by Kayne (1994: chapter VIII). In this analysis, the restrictive relative is a CP selected by a determiner. The nominal "head" directly raises from within the relative clause to Spec,CP, where it comes to be related to the external determiner:

(1) [_{DP} the [_{CP} dissertation_i that [_{CP} I wrote t_i]]]

These two aspects of the analysis are discussed in turn: some traditional arguments in favour of the raising of the "head", due to Schachter (1973) and Vergnaud (1974), are reconsidered in the current syntactic framework, in particular, with respect to Chomsky's (1993) theory of reconstruction; some further arguments are added to the effect that the external determiner is not included in the raised "head".

The representation in (1) requires a new approach to relative pronouns. Kayne analyses them as the original determiners of the raised "head". Thus, the "head" originates as a complement to the relative determiner, but after the relative DP has reached Spec,CP, it moves out of the c-command domain of the relative D° in order to be governed by the external D°:

(2) [_{DP} the [_{CP} [_{DP}[_{NP} boy] [_{DP} who t_{NP}]]_i [I met t_i]]]

This approach to relative pronouns raises two problems. First, the NP "head" in (2) is related to two distinct determiners: this seems to constitute a violation of the Full Interpretation principle (Chomsky 1991). The solution to this problem is based on the hypothesis that the relative DP in (2) is an indefinite in the sense of Heim (1982) (cf. Reinhart 1987). Some evidence is provided to the effect that the relative determiner is syntactically and semantically indefinite, although in some languages it has a definite morphology.

The second problem concerns the syntactic relation between the external determiner and the NP "head" in (1)-(2): these two elements are not linked by the usual relation of complementation, but nevertheless, they regularly agree for ϕ -features. This syntactic relation is problematic in that the relative "head" is in the Spec of the relative CP, which is usually assumed to be a barrier.

This problem is examined within two distinct approaches to locality. Various possibilities within a Barriers approach are examined; the classical definition of barrier turns out to be hardly compatible with one aspect of the Antisymmetry theory, namely the adjunct status of the specifier position. Then, Manzini's (1994) alternative approach to locality, based on the notion of minimal domain, is shown to yield the desired results with respect to the relative structure in (2), allowing the NP "head" to fall in the minimal domain of the external D°, while also explaining the islandhood of the relative CP.

Having examined these basic aspects of the raising relative structure, the discussion turns to some consequences of the analysis concerning the typology and the diachronic evolution of relative clauses.

It is argued that the raising analysis of "externally headed" relative clauses of the English and Italian type allows a partial assimilation of them to more "exotic" relative clause types, namely internally headed relative clauses and correlative clauses; the standard adjunct analysis, instead, makes "externally headed" relative clauses incomparable to these. The partial assimilation of these relative structures is desirable, because they may be found in one and the same language

(e.g. in Hindi); moreover, from the diachronic viewpoint, it has been argued by some Authors - most notably Haudry (1973) - that externally headed relative clauses developed from an original correlative structure.

It is also argued that the raising analysis subsumes the so called “degree relatives”.

The analysis of relative pronouns as indefinite determiners, sketched in (2), motivates a brief examination of the typology of relative pronouns in the Indo-European languages. Various studies suggest that the *wh*-morphology of relative pronouns in many languages is determined by their having evolved from original indefinite pronouns. As for the complex relative pronoun consisting of a definite article and a *wh*-morpheme (e.g. Italian *il quale*), it is argued, following Kunstmann (1991), that the definite article is an expletive determiner that has reached the final stage of Greenberg’s (1978) “cycle of the definite article”.

The third chapter compares the behaviour of restrictive and appositive relatives with respect to a specific phenomenon, the reconstruction of the relative “head”. In Chomsky’s (1993) theory, the reconstruction of a constituent presupposes the presence of a trace of that constituent in the reconstructed position; therefore, the raising analysis in (1) predicts that the reconstruction of the “head” within the relative clause should be at least possible.

Some Italian data concerning binding, bound anaphora, and scope assignment are examined, discussing in detail various factors which interfere with the reconstruction effects. These data show that the reconstruction of the “head” is actually obligatory in restrictive relatives, whereas it is impossible in appositives. The asymmetry seems to imply that the raising analysis, although adequate for restrictive relatives, cannot be extended to appositives.

This problem is dealt with in the fourth chapter, which is devoted to the analysis of appositives. Various previous analyses, based on the “exceptional” attachment to the tree of the appositive relative, are shown to be incompatible with the Antisymmetry theory. Since the appositive relative does not fall in the restrictive term of the determiner of the “head”, it is assumed that it is not c-commanded by the determiner, at least in LF. This assumption can be implemented in two ways.

The first possibility is to generate a whole DP “head” outside the relative CP. Given the restrictiveness of the Antisymmetry theory, the relation between DP and CP must be mediated by an abstract functional head, as represented in (3):

(3) $[_{XP} [_{DP} \text{that boy}] [_{XP} X^{\circ} [_{CP} \text{who is very intelligent}]]] \dots$

But the nature of this abstract head is unclear; therefore, this solution appears to be stipulative.

The second possibility, proposed by Kayne (1994: chapter VIII), is to assume a raising derivation for the appositive relative, allowing it to move out of the c-command domain of the external determiner in LF. Specifically, Kayne argues that the IP constituent of the appositive relative moves to the Spec of the external DP, stranding the relative “head”:

(4) $[_{DP} [_{IP} \text{I met } t_i] [_{DP} \text{that} [_{CP} [_{DP} \text{boy} [_{\text{who}} t_j] [_{CP} C^{\circ} t_{IP}]]]]]$

This LF movement separates the restrictive term from the appositive material. It is argued that this process interacts with reconstruction, correctly predicting that in the appositive structure (4), the “head” cannot be reconstructed within the relative IP: in fact, this would leave the restrictive term of the external D° completely empty, giving an uninterpretable structure. On the other hand, the splitting of the restrictive term and of the appositive material forces the reconstruction of the material pied piped by the relative DP.

The fifth chapter is devoted to an apparently superficial aspect of the syntax of relative clauses, namely the distribution of relative pronouns and complementizers, and their interaction.

The standard analysis, based on the Doubly Filled Comp Filter, forces the deletion in Comp of either the relative pronoun or the complementizer; this filter is shown to be incompatible with the raising analysis. Other recent proposals, including Pesetsky’s (1994) theory of the “telegraphic effects” of natural languages, are also subjected to a critical examination.

Apart from pied piping, there are three types of relative clause in English: the *that*-relative (5), featuring the declarative complementizer; the *wh*-relative (6), featuring a relative pronoun; and the zero relative (7), lacking both of them:

- (5) the dissertation *that* I wrote
- (6) the dissertation *which* I wrote
- (7) the dissertation I wrote

Of these, only the *that*-relative is possible in contemporary Italian (cf. Cinque 1982).

The analysis of these relative structure starts from the comparison of (5) and (7), which raises the problem of the optional deletion of *that* in English. The analysis of this phenomenon is based on the assumption of a ‘split Comp’ structure containing various functional projections: in particular, a recursive Topic projection and a Focus projection, both lower than CP (Rizzi 1995). It is argued that the absence of the complementizer in (7) is not due to its deletion in the PF representation, but rather, to the omission of the CP level. In other terms, in the *that*-relative the relative DP targets Spec,CP, but in the zero relative its targets the Spec of a lower projection whose head is phonetically null. This is taken to be a Topic projection. This proposal implies that the ‘Comp area’ of English has two positions available for relativization: Spec,CP and Spec,TopicP.

This hypothesis also allows an account of the *wh*-relative in (6). It is argued, *contra* Kayne (1994), that the NP “head” cannot move to the Spec of the relative determiner, as represented in (2). Consequently, in (6) the “head” and the relative determiner cannot be in the same Spec position. It is proposed that the relative DP moves to the lower available landing site, Spec,TopicP, and it is stranded in this position by the further raising of the NP “head”, which moves to Spec,CP.

The derivation of the three types of relative clause (5)-(7) is reproduced in (5’)-(7’):

- (5’) $[_{DP} \text{the } [_{CP} \text{dissertation } [_{CP} \text{that } [_{IP} \text{I wrote } t]]]]]$
- (6’) $[_{DP} \text{the } [_{CP} \text{dissertation } [C^\circ [_{TOPP} [_{DP} \text{which } t] [Top^\circ [_{IP} \text{I wrote } t]]]]]]]$
- (7’) $[_{DP} \text{the } [_{TOPP} \text{dissertation } [Top^\circ [_{IP} \text{I wrote } t]]]]]$

The analysis in (5’)-(7’) also accounts for the fact that with respect to various phenomena, including local subject movement and embedded topicalization, the *that*-relative and the *wh*-relative pattern together and against the zero relative. These contrasts are reduced to the hypothesis that the former structures have the CP projection, whereas the latter lacks it.

The impossibility of the *wh*-relative and of the zero relative in Italian follows from the hypothesis that in this language the Topic position is not available for relativization. However, it is shown that earlier stages of the language displayed these types of relative clause: this is attributed to a diachronic change concerning the status of the Topic Phrase.

In (6’), the head C° is syntactically present, but it is omitted in the phonetic representation. Similarly, it is argued that in (5’) and (7’) the relative determiner is not syntactically omitted, but it fails to be spelled out. Both these deletion phenomena are derived from a principle of economy of the PF representation, which forces the PF deletion of functional heads under specific syntactic conditions. For the relative D° and C° , in particular, the proposed licensing condition consists in the incorporation to the external determiner. The two heads are only spelled out as a last resort, when the licensing condition cannot be satisfied.

The constraint against multiple adjunction to a head in the Antisymmetry theory implies that it is impossible to license the PF deletion of both the relative determiner and the complementizer in one and the same structure. In the *that*-relative (5’) and in the zero relative (7’), the relative D° incorporates to the external D° from Spec,CP and Spec,TopicP respectively. In the *wh*-relative (6’), on the contrary, the relative D° is not close enough to the external D° to incorporate to it; therefore, its PF deletion is not licensed, and it is obligatorily spelled out. In this structure, however, the incorporation of C° is possible, hence it is mandatory, by the PF economy principle.

In case of pied piping, e.g. (8) below, Kayne (1994) proposes that the NP “head” moves to the Spec of the pied piped constituent, as represented in (9):

- (8) il modo in cui agiva
the way in which he was acting
- (9) $[_{DP} \text{il } [_{CP} [_{PP} [_{NP} \text{modo}]]] [_{PP} \text{in } [_{DP} \text{cui } t_{NP}]]] [C^\circ [_{IP} \text{pro } agiva t_{PP}]]]]]$

Here too, the relative D° is prevented from incorporating to the external D° by the intervening preposition; thus, it is obligatorily spelled out. On the other hand, nothing prevents the incorporation of C°.

The second part of the chapter discusses some issues related to the previously proposed hypotheses.

The composition of the 'Comp area' in Old and Middle English is briefly discussed: it is argued that it contained a low complementizer-like head akin to the one that is found in various Romance languages; it is tentatively proposed that this head may be the ancestor of the Topic head involved in the zero relative (7') and in the *wh*-relative (6').

Finally, resumptive relativization is reconsidered in the light of the analysis of relative pronouns in (2). It is suggested that at least in certain cases, resumptive pronouns too can be analysed as determiners stranded by the leftward movement of their complement; this implies that the syntax of relative pronouns and of resumptive pronouns is much more similar than it is usually assumed. This is particularly interesting with respect to German *d*-pronouns, which act both as relative pronouns and as resumptive pronouns in left dislocation.

The sixth and last chapter is devoted to the phenomenon of heavy pied piping, exemplified in (10):

- (10) Those *reports*, [the height of the lettering on *which*] the government prescribes,
are tedious.

In the raising analysis, the relation between the NP "head" and the relative pronoun deeply embedded in the pied piped constituent must be one of movement. This movement, however, is sensitive only to some islands.

Two solutions to this problem are examined. The first possibility is to give up a raising derivation for (10) and to assume a relative structure akin to (3). It is assumed that in this structure the relative pronoun must reach the most prominent position within the relative clause in LF: this can be accomplished by having recourse to the mechanism of recursive LF pied piping, recently elaborated by Moritz & Valois (1994).

The second approach instead maintains a raising derivation for heavy pied piping and explains the selective island effects on the basis of Manzini's (1994) locality theory. It is argued that the stranded relative D° plays a crucial role in licensing the dependency of the raised NP "head"; the latter is thus allowed to cross some PP islands. If the second approach is tenable, the raising analysis can be extended to all headed relative clauses of English and Italian.

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