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A SYMMETRIC THEORY OF ANAPHORIC RELATIONS \*

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1) Presentation

Anaphors such as reciprocals and reflexives are nominal expressions which must be related to a c - commanding antecedent in an argument - position ( A - position ) . Roughly, an argument - position is a position that receives a grammatical function-subject, object ... - . A non - argument position (  $\bar{A}$  - position ) on the other hand does not receive a grammatical function . According to this characterization, COMP position is an  $\bar{A}$  - position . To illustrate, consider the following sentences :

- 1- a) John<sub>i</sub> likes himself<sub>i</sub>
- b)\* which man<sub>i</sub> does himself<sub>i</sub> like .

In (1a), the anaphoric relation between the reflexive himself and the name John is licit since the antecedent is an A - position . In (1b) , the anaphoric relation between the reflexive and which man is illicit since the wh - element is in an  $\bar{A}$  - position .

The relation between the anaphoric expression and the antecedent is constrained by the binding theory which defines an opaque domain in which these anaphors must be bound - i.e. must have a c - commanding antecedent - . This opaque domain may, informally , be characterized as the minimal clause S or noun phrase NP containing the anaphoric expression and a subject - specified subject condition (SSC) - or an agreement marker which happens in English to occur in tensed clauses only: this opaque domain is referred to as governing category . Thus , consider

- 2- a)\* They<sub>i</sub> said that each other<sub>i</sub> AGR left  
 b)\* They<sub>i</sub> want John to love each other<sub>i</sub>

In (2a), the opaque domain in which the reciprocal must be bound is the embedded clause; it is the minimal clause containing the anaphoric expression and the agreement marker. In this clause , the reciprocal is free - does not have an antecedent -; the representation will be ruled out by the binding theory. Similarly, in (2b), the minimal clause containing the reciprocal and the subject John is the embedded clause. In this opaque domain, the reciprocal is free; thus , violating the binding requirement. For a more precise formulation of the notions presented so far, the reader is referred to Chomsky(1981); henceforth PL .

In this paper , I will suggest the existence of another kind of anaphoric relation; the anaphoric relation which holds between an anaphoric expression and an antecedent in an  $\bar{A}$  - position. We will refer to anaphors which need an antecedent in an A - position as A - anaphors and anaphors which need an antecedent in an  $\bar{A}$  - position as  $\bar{A}$  - anaphors. Two anaphoric systems will thus be distinguished : the A - anaphoric system whose members are A - anaphors and the  $\bar{A}$  - anaphoric system whose members are  $\bar{A}$  - anaphors. To establish the existence of the two anaphoric systems, to study their behavior and to explore the consequences of their incorporation in the grammatical theory will be our main concern .

In particular, we will indicate that the distribution of A - anaphors and  $\bar{A}$  - anaphors is constrained by the binding theory which, thus, will be generalized from a theory of A - binding - i.e. from a theory constraining A - anaphors - to a theory of A - and  $\bar{A}$  - binding. We, also, will suggest that there are four types of A - anaphors and that for each type of A - anaphors, there exists a corresponding  $\bar{A}$  - anaphors. In this sense, the theory of anaphora we are advocating may be characterized as a symmetric theory of anaphoric relations .

### 1. Reciprocal Constructions in Italian

In this section, we will study the behavior of reciprocal constructions in Italian. It will appear that in order to correctly account for the distribution of reciprocal elements in Italian, the notion of  $\bar{A}$  - anaphoric relation must be incorporated in the grammar .

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The discussion of the Italian constructions is based on Belletti (1982) although the analysis that will suggest differs in some respects from the one argued for in Belletti's work .

Reciprocals in Italian are expressed either by the clitic form si , homophonous with the reflexive clitic, or by the discontinuous expression l'uno ... l'altro (lit. the one ... the other). We will be concerned by the latter case .

The two members of the discontinuous reciprocal expression must be separated by a preposition -cf. (1) - or by a NP - cf.(2) - :

- 1- a) I miei amici parlano l'uno dell'altro  
my friends speak one of the other  
" my friends speak of each other"
- b)\* I miei amici parlano dell'un(o) l'altro  
"my friends speak of one the other "
- 2- a) hanno criticato l'uno le idee dell'altro  
they criticized one the ideas of the other  
"they criticized each other's ideas"
- b)\* hanno criticato le idee dell'un(o) l'altro  
"they criticized the ideas of each other "

The members of the reciprocal expression seem to enter into a binding relation :

- 3- a) Quei reporters ammiravano l'uno<sup>[NP</sup> le foto dell'altro]  
those reporters admired one the pictures of the other  
"those reporters admired each other's pictures"
- b)\* Quei reporters ammiravano l'uno<sup>[NP</sup> le tue foto dell'altro]  
those reporters admired one your pictures of the other

The contrast between (3a) and (3b) illustrates a standard SSC effect. In (3b), the association between l'uno and l'altro is blocked by the subject of the NP in which l'altro occurs .

The reciprocal expression as a whole - or alternatively l'uno cf. infra- must be related to an antecedent in an A - position as illustrated in the paradigm (4) which is the standard paradigm illustrating the behavior of anaphors :

- 4- a) I miei amici hanno parlato l'uno dell'altro per tre  
giorni  
"my friends spoke about each other for three days "
- b)\* Mario ha parlato l'uno dell'altro  
"Mario spoke about each other"
- c) Mario ha sostenuto che i miei amici parlarono l'uno  
dell'altro  
"Mario said that my friends spoke about each other"
- d) \* I miei amici sostennero che Mario parlò l'uno dell'altro  
"My friends said that Mario spoke about each other"
- e)\* I miei amici mi hanno costretto a parlare l'uno dell'  
altro  
"my friends convinced John to speak about each other"

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- f) Ho costretto i miei amici a parlare l'uno dell'altro  
 "I convinced my friends to speak about each other"

The ungrammaticality of sentences (b), (d) and (e) is straightforwardly accounted for by the binding theory. In all these sentences, the reciprocal expression does not have an antecedent in the opaque domain - governing category - in which it occurs. In (4b), the reciprocal does not have an antecedent. In (4d) and (4e), the reciprocal does not have an antecedent in its governing category which is the embedded clause. Therefore (4b), (4d) and (4e) will be ruled out by the binding theory. In (4a), (4c) and (4f) no binding theory violation occurs.

In brief, in the reciprocal constructions of Italian, two anaphoric relations are at work :

- R1 : the anaphoric relation between l'uno and l'altro  
 R2 : the anaphoric relation between l'uno and an antecedent

Alternatively, (R2) may be formulated as the anaphoric relation between l'uno ... l'altro as a whole and an antecedent.

I will now argue that (R1) is an instance of an  $\bar{A}$  - anaphoric relation. That is, for (R1), l'uno, - the antecedent of l'altro - is in an  $\bar{A}$  - position and for (R2) the antecedent of l'uno is an A - position :

- R1 is an  $\bar{A}$  - anaphoric relation: l'uno is the  $\bar{A}$  - antecedent of l'altro  
 R2 is an A - anaphoric relation: l'uno needs to be related to an A - antecedent

The fact that (R2) is an A - anaphoric relation is obvious: in (4a), (4c) and (4f), the antecedent of l'uno is in a subject position - A - position-. In order to establish that (R2) is an A - anaphoric relation, we need to show that l'uno - the antecedent of l'altro - is in an  $\bar{A}$  - position. In this respect, it is to be pointed out that when l'uno is in an A - position, the association between l'uno and l'altro is not anymore constrained by the binding theory as evidenced by (5) which directly contrasts with (3b) :

- 5- l'uno ammira le tue foto dell'altro  
 "One admires your pictures of the other"

In (5), l'uno is in an A - position - a subject position - . The association between l'uno and l'altro is not blocked by the subject of the NP in which l'altro occurs. In short, when l'uno is in an  $\bar{A}$  - position as in (3b), the association between l'uno and l'altro is subject to the SSC - the binding theory - . However, when l'uno is in an A - position, the association between l'uno and l'altro is not subject to the SSC. Sentences such as (5) also, indicate that not only the anaphoric relation (R1) but also the anaphoric relation (R2) ceases to exist when l'uno is an A - position: in (5) and (5a) there is no antecedent for l'uno :

- 5- a) confondo sempre l'uno con l'altro  
 " I always confuse one with the other"

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Since (R1) - and for that matter (R2) - exist when l'uno is in an A - position and since for (R1) l'uno is the antecedent of l'altro, (R1) is an instance of an A - anaphoric relation : l'uno is the A - antecedent of l'altro .

2. ne ... personne constructions in French

Other constructions which illustrate the relevance of the notion A - anaphor are negative ne ... personne (nobody) in French. Personne in French is a polarity item which needs to occur in the same environment as ne . When ne and personne occur in the same clause, no restriction exists; personne can appear in any position : subject, object....:

- 1- a) Jean ne voit personne  
 Jean neg sees body  
 "Jean sees nobody"  
 b) personne ne voit Jean  
 body neg sees Jean  
 "nobody sees Jean "

However, when ne and personne are in different clauses as in (2) , personne can only appear in object position :

- 2- a) ? Jean n'exige que Pierre voit personne  
 Jean neg wants that Pierre sees body  
 "Jean wants Pierre to see nobody"  
 b) \* Jean n'exige que personne vienne  
 Jean neg wants that body comes  
 "Jean wants nobody to come"

In Kayne (1981), the subject / object asymmetry illustrated in (2a-b) is accounted for by the Empty Category Principle (ECP) which requires empty elements such as the trace left by a NP (NP - trace) or the - trace left by a wh - element (variable) to be properly governed. For the purpose of our discussion, it suffices to bear in mind that the subject of a tensed clause is not properly governed whereas the object position is properly governed by the verb . To illustrate consider the following sentences :

- 3- a) who<sub>i</sub> do you think that John saw x<sub>i</sub>  
 b)\* who<sub>i</sub> do you think that x<sub>i</sub> left

In (3a), the variable coindexed with the wh - element is properly governed by the embedded verb. In (3b), however, the variable which is in subject position is not properly governed; thus, violating the ECP, for a precise formulation of the ECP, cf. PL.

Returning to (2a-b) . Assuming with Kayne (1981) that personne undergoes quantifier - Raising in LF (cf. May 1977) and that ne is a scope marker indicating the clause to which personne is raised, the LF representations of (2a) and (2b) will essentially be similar to the representations of (3a) and (3b) respectively :

- 4- a) (personne)<sub>i</sub> Jean n'exige que Pierre voit x<sub>i</sub>  
 b) (personne)<sub>i</sub> Jean n'exige que x<sub>i</sub> vienne

In (2b), the variable is not properly - governed; thus, violating the ECP .

There, however, exists another dialect in French where personne is not treated as a variable . Rather, personne is treated as an anaphor which must be related to ne . In this dialect analyzed in Milner (1979), the distribution of personne is similar to that of reciprocals and reflexives . In particular, both (2a) and (2b) will be ruled out by the binding theory since personne does not have an antecedent in its governing category - the embedded clause - . On the other hand (1a) and (1b) or (5a) and (5b) will not involve a violation of the binding theory since personne is bound in its governing category by ne !

- 5- a) Jean requiert que Pierre ne voit personne  
 Jean requires that Pierre neg sees body  
 "Jean requires Pierre to see nobody"
- b) Jean requiert que personne ne voit Pierre  
 Jean requires that body sees Pierre  
 "Jean requires nobody to see Pierre"

Since ne is the antecedent of personne and since ne is not in an A - position, the relation between ne and personne will illustrate another instance of an  $\bar{A}$  - anaphoric relation : ne is the  $\bar{A}$  - antecedent of personne .

### 3. Symmetric anaphoric Systems

Having established the existence of  $\bar{A}$  - anaphoric relations in the preceding sections, I now would like to investigate some of their general properties . Note first that the binding theory as formulated in PL is a theory of A - binding; it is solely concerned with A - anaphoric relations . From the discussion of reciprocal constructions in Italian and negative constructions in French, it appears that this theory has to be generalized to constrain both A and  $\bar{A}$  - anaphoric relations .

In Government - Binding, A - anaphoric expressions may be overt or not : the reflexive in (1a) is an overt anaphoric expression whereas the empty category left by the extraction of a noun phrase - NP - trace - is not (cf. 1b) :

- 1- a) John<sub>i</sub> hit himself<sub>i</sub>  
 b) John<sub>i</sub> was hit t<sub>i</sub>

The anaphoric expression may also receive an independent thematic ( $\theta$  - role) or not . That is, it may or may not have an interpretation different from the one its antecedent has. In (1a), the reflexive anaphor is interpreted as the patient y that was hit by x and John is interpreted as the agent x that hit y . In this case, it happens that x = y . In (1b), the anaphoric trace does not seem to receive an interpretation distinct from its antecedent John . Since A - anaphoric expressions may be overt or not and since they may bear an independent  $\theta$  - role or not, they may be classified with respect to the features + overt , +  $\theta$  - role :

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- 2- a) +  $\theta$  - role + overt  
 b) -  $\theta$  - role + overt  
 c) -  $\theta$  - role - overt  
 d) +  $\theta$  - role - overt

Among the four possibilities, three are acknowledged in the literature. (2a) is fulfilled by reciprocals and reflexives, (2c) by NP-traces and (2d) by pronominal elements which are not phonetically realized; i.e. PRO. As for (2b), I would like to suggest that middle constructions illustrate case of overt anaphors which do not bear an independent  $\theta$ -role.

- which are not phonetically realized. →

- which do not bear an independent  $\theta$ -role

- 3- a) ce livre<sub>i</sub> se<sub>i</sub> vend bien  
 this book sells (itself) well

Assuming the analysis of these constructions suggested in Williams (1981), middle constructions display the same characteristics as passive constructions. Specifically :

The object does not receive a case - feature within VP.  
 The subject does not receive a  $\theta$  - role .

More precisely assuming that the non - referential anaphor se (itself) absorbs objective Case, the referential NP ce livre must end up in subject position where it receives Case. As Williams points out, the characterization of se as an anaphor predicts that a pronoun such as le cannot occur instead of the anaphor. The reason is that the pronoun would have to be disjoint from the antecedent ce livre. This prediction is fulfilled as illustrated by the ungrammaticality of (3b) :

- 3- b)\* ce livre<sub>i</sub> le<sub>i</sub> vend bien  
 this book sells it well .

If Williams' analysis is correct, middle constructions illustrate case (2b): se is an overt anaphor which does not bear a  $\theta$  - role independent from the one its antecedent ce livre receives .

At this point, it is interesting to wonder whether  $\bar{A}$  - anaphor may also be classified with respect to the features +  $\theta$  - role , + overt . In the preceding sections, we discussed instances of overt  $\bar{A}$  - anaphors which bear an independent  $\theta$  - role; they fulfil case (2a). In Aoun (1981), it is argued that cases (2b-d) are fulfilled for  $\bar{A}$  - anaphors. (2c) is fulfilled by the gap coindexed with a clitic - clitic - trace - . Case (2d) is fulfilled by wh - traces or variables. As for (2b), incorporating some insights of Safir (1982), it is suggested that it is fulfilled by there constructions . Lack of space prevents us from investigating this claim in detail cf. Aoun (1981). Note, however, if the above considerations turn out to be correct, the two anaphoric systems - A - anaphoric system and  $\bar{A}$  - anaphoric system - will be symmetric : for each type of A - anaphor, there exists a corresponding  $\bar{A}$  - anaphor .

#### 4. Conclusion

In the preceding section we have characterized an A - anaphor as an anaphor which must be related to an antecedent in an A-position





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In the preceding paragraph, we indicated that tutti in (1a-f) is to be treated as an anaphor. Clearly, this floated quantifier is not in an A - position. We, thus, have another instance of an A - anaphor which is in an  $\bar{A}$  - position .

Recapitulating, in this work, we suggested the existence of two anaphoric systems : the A - anaphoric system and the  $\bar{A}$  - anaphoric system . Anaphors which belong to the A - anaphoric system are related to an antecedent in an A - position and anaphors which belong to the  $\bar{A}$  - anaphoric system are related to an antecedent in an  $\bar{A}$ -position. Both anaphoric systems are constrained by the binding theory which, thus, has to be generalized to constrain A and  $\bar{A}$  - anaphoric relations. We also suggested that the two anaphoric systems are symmetric: for each type of A - anaphor, there exists a corresponding  $\bar{A}$  - anaphor. As for the anaphoric expression itself, we argued that it may occur in an A - position or in an  $\bar{A}$  - position <sup>2</sup>.

Footnotes:

\* I wish to thank A. Belletti and N. Chomsky

1

(5a) and (5b) will also be grammatical in the dialect analyzed by Kayne .

2

In Aoun (1981), various consequences of the incorporation of the notion of  $\bar{A}$  - anaphor are explored. In particular, it is suggested that the Empty Category Principle may be subsumed under the generalized binding theory. Lack of space prevents us from investigating these claims in detail .

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