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Ein analoges Verhalten repräsentieren ihrem Wesen nach deiktische Elemente (Determinatoren, Korrelate) gegenüber den an sie adjungierten, in Wort-, Phrasen- und Satzform ausgedrückten attributiven, komparativen und adverbialen Restriktionen des Phrasennukleus in Nominal-, Adjektiv- und Adverbphrasen. Diese Art geordnete Sequenz von deiktischen und nennenden Konstituenten, Pro-Elementen und ihren Bezugsgliedern im Satz könnte man u. U. als einen weiteren Typ disjunkter Kosignifikanz auffassen. Semantisch ließe sie sich ebenfalls als sukzessive Determination von Phrasennuklei, informationstheoretisch als sukzessive Entropieabnahme interpretieren.

Eine Sonderstellung kommt der Kosignifikanz der ihrem Wesen nach nominalen Kategorie der Person in Subjektfunktion zu. Sie konstituiert den Kommunikationsakt, indem die Mitteilung im Spannungsfeld zwischen Sender und Empfänger, mit event. Einfügung eines Hypersatzes, in der Domäne der 3. Person erscheint. Sie dient einer in anderen Funktionen der NP nicht erforderlichen zusätzlichen Kennzeichnung des prädikativen Rahmens (Satzkerns).

#### Anmerkung

<sup>1</sup> Vgl. Zur Nominalphrase im Deutschen und Polnischen, in: Kwart. Neofilolog. XXIV, 2–3, 1977, 174ff.

### On Extraction from NP, a Barriers Account\*

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#### 0. Introduction

The empirical basis of this work are those constructions in which a constituent is wh-extracted from within a NP in Spanish. With respect to them, we would like to explain the conditions in which such a movement is allowed and, more strictly, what principles of core grammar license the empty category which is left after this wh-movement from within an NP takes place.

The interest of this research is, in my view, twofold. On the one hand, its relevance comes from the fact that there appear to be significant differences among languages regarding extraction from NP. In English, for instance, these extractions are much more restricted than in the Romance languages; but, among the Romance languages, there are also interesting differences. On the other hand, its significance lies in the fact that two types of approaches have been used to explain the constraints on extraction from NP. Some solutions — Cinque, 1980, for instance — have assumed that this is a matter of constraints on movement; to be more precise: he assumes that it is the Opacity Condition (Chomsky, 1980) which provides the sufficient explanation. Later approaches have conjectured that what is relevant are the conditions for the government of the trace of wh-movement (this is, for example, Zubizarreta's, 1979, position). A third type of account (Torrego, 1985, for instance) combines both types of explanation.

This being the state of the art, the problem of extraction from within NP becomes an area very apt to test any account which tried to reduce to a single module the theory of movement and the theory of proper government. As is well known, this is the task undertaken in

Chomsky (1986)' *Barriers*; this reductionist approach will be the theoretical point of departure.

#### 1. Linguistic material and relevant generalizations

To start with, I want to present the relevant data, that is, I want to develop and briefly analyze the basic generalizations which underlie the analysis that I will develop in this short paper (but see Demonte, 1987b for an extended and exhaustively justified presentation of the solution that we sketch here).

The first significant observation that has to be made is that in Spanish only phrases introduced by the preposition *de* 'of' can be moved out of a nominal, as can be seen from the examples in (1):

- (1)a. \*[*De qué libro<sub>i</sub>*] *te gustó [la edición e<sub>i</sub>]*  
'Of which book did you like the edition'  
b. \*[*Por qué parque<sub>i</sub>*] *me contaste [tu paseo e<sub>i</sub>]*  
'Through which park did you recount your walk to me'

However, not all the prepositional phrases headed by *de* can be wh-extracted but only those that, in traditional grammar terms, are called genitive phrases, i.e. those phrases that can be also expressed by a possessive determiner located in SPEC. Sentence (2c) in the set of (2c) in the set of examples in (2), for instance, is ungrammatical because the *de*-phrase in it is not a genitive but an adverbial:

- (2)a. [*De cuál de tus hijas<sub>i</sub>*] *publicaron [unpoema<sub>e</sub>]* *en el periódico*  
'Of which of your daughters did they publish a poem in the newspaper'  
b. [*De qué artículo<sub>i</sub>*] *conseguiste finalmente [un resumen e<sub>i</sub>]*  
'Of what article did you finally get an abstract'  
c. \*[*De qué casa<sub>i</sub>*] *me contaste [la salida de Juan e<sub>i</sub>]*  
'Of which house did you tell me the moving out of Juan'

Another qualification that has to be made is that being a genitive is not the only property that limits the movements we are considering here. In fact, only subject and object genitives can be wh-extracted. (2a) above shows a case of an agentive subject that is moved out. In (2b) the displaced constituent is an object. Nevertheless, when the genitive phrase denotes the possessor of the material object the extraction cannot be made. Let us observe sentence (3):

- (3) *Me gustó el retrato [de Felipe IV] [de Velázquez] [de la famosa*  
*coleccionista]*      Ob—ect      Subject      Possessor  
Lit.: I liked the portrait of F. IV of V. of the famous collector  
'I liked the portrait of F. IV by V. belonging to the famous collector'

(3) illustrates, in the first place, that genitive phrases can have three semantic values: they can denote the agent, the patient and the possessor of the concrete thing referred to by the nominal. Now, as can be seen through the examples in (4), wh-extraction of the genitive of possession, in front of that of the subject and the object, respectively, in (4a) and (4b), gives deviant results:

- (4)a. [*De qué rey<sub>i</sub>*] *te gustó [el retrato e<sub>i</sub> [de Velázquez]]*  
'Of which king did you like the portrait of Velázquez'  
b. [*De qué pintor<sub>i</sub>*] *te gustó más [el retrato [de Felipe IV] e<sub>i</sub>]*  
'Of which painter did you like more the portrait of F. IV'

- c. ??]\*[De qué coleccionista<sub>i</sub>] te gustó [el retrato [de F. IV] e<sub>i</sub>]  
 'Of which collector did you like more the portrait of F. IV'

Up to this point, we could formulate a descriptive generalization which states that in Spanish there are no subject-object asymmetries in extractions from within a NP, and that the only visible constraint appears to be of a thematic nature, namely: possessive genitives cannot be moved out.

To set the data in a more strict way, however, we have to add two new qualifications. The first one is that, in fact, there are no subject-object asymmetries in extractions from NP's just in case the genitive phrases are moved out of nominals located either in single or complement sentences (observe that all the preceding examples illustrate movements out of single sentences). But when the genitive is in a nominal appearing in Wh-islands only objects, but not subjects, can be wh-extracted over those islands. Sentence (5a) illustrates movement of an object constituent, in (5b) what is moved is a subject:

- (5)a. [De qué cuadro<sub>i</sub>] no sabes [<sub>o</sub> si María quiere vender [una reproducción e<sub>i</sub>]]  
 'Of which painting don't you know whether Maria wants to sell a reproduction'  
 b.\*[De qué pintor<sub>i</sub>] no sabes [<sub>o</sub> si María quiere vender [un cuadro e<sub>i</sub>]]  
 'Of which painter don't you know whether Maria wants to sell a picture'

A final observational point to be stated is that it is not only the case that possessive genitives cannot themselves be moved. Actually, movement of any genitive is forbidden when a possessive genitive is present in the configuration. This is illustrated through the sentences in (6). In (6a) and (6b) we see that wh-extraction is possible over a subject or an object genitive. But the same movement produces more deviant results, almost ungrammaticality, when it is made over a possessive genitive.

- (6)a. [De qué autor<sub>i</sub>] leíste [algunas obras de teatro e<sub>i</sub>]  
 'Of which author did you read some plays'  
 b.?[De qué obra<sub>i</sub>] analizaste [varias ediciones de Pidal e<sub>i</sub>]  
 'Of which book did you read several editions of Pidal'  
 c.\*[De qué niño<sub>i</sub>] viste [la foto de su madre e<sub>i</sub>]  
 poss. genit.  
 'Of which child did you see the photo of his mother'

Those are, in my idealization, the more relevant generalizations concerning extractions from NP in Spanish, and I will try now to construct an explanation which could account for them in a more principled way. To be more precise, I will try to deduce from a single notion, namely from the idea that there are barriers to movement and government, all these complex sets of apparently unrelated data. The asymmetry in the asymmetry will be expected if proper government of traces of wh-movement in NP's is determined by the Minimality condition established by Chomsky (1986). The fact that possessive genitives are not extractable and, moreover, block movement of other constituents in the same projection, will follow if they are non-theta-marked PP's and as such they transmit barrierhood to the whole NP. Let us consider all these claims in a detailed way.

## 2. The analysis

### 2.1. The Minimality condition

In my opinion, there are two crucial points in the preceding generalizations. One is the fact that the only constituents that can be moved out from within a NP are those that can appear in the SPEC(ifier); the second relevant aspect is what I have called the asymmetry in the asymmetry. Both questions point to the same intuition, namely that what licenses (at

least in part) the correct constructions that we have observed are the conditions for the identification of the trace left by wh-movement. If it were a matter of conditions on movement, that is, a subjacency question, we would expect many more differences in grammaticality due to facts of internal structural differences among the nominals. Subjacency, in fact, will be important to explain the facts related to the genitive of possession.

The first claim that I want to justify, then, is that NP constituents have to be placed in SPEC to be able to move later to COMP, and that this intermediate movement is due to a necessity of external government. In this way, a possible ambiguity of government can be avoided.

More precisely, my proposal is that when a given constituent is wh-extracted from within a NP, it makes first either an adjunction or a substitution in SPEC in such a way that a configuration like the one in (7) is created. In this configuration X<sub>i</sub> will antecedent-govern the trace in SPEC. This statement will make sense, however, only if we assume with Belletti and Rizzi (1981) that if  $\alpha$  governs  $\beta$  it also governs the specifier and head of  $\beta$ :

- (7) ... X<sub>i</sub> ... [NP [SPEC<sup>t</sup><sub>i</sub>]]

The relevant question, now, is why it is necessary that the extraction be made in that way or, in other words, why it is necessary to create a structure like that in (7) or any other equivalent to it.

My hypothesis is that this movement, and the following effect that X<sub>i</sub> and SPEC share the same index (that is, that they establish a relation of proper government), is a consequence of the *Minimality condition*. In his attempt to unify the theory of Movement and the theory of Government through the notion of "barrier", Chomsky (1986) identifies two types of barriers. In a first conception, a barrier is a maximal projection that, due to inherent reasons (the major one to be non- $\theta$ -marked) or by inheritance, "protects" a given constituent and so avoids its movement (we will come back later on to this conception). A second conception involves "minimality" in the sense that a given  $\alpha$  will not govern a  $\beta$  when there is a "closer" or minimal governor. This requirement of "minimality" implies that in a structure like (8) (from Chomsky, 1986)  $\alpha$  does not govern  $\beta$  (even if it otherwise satisfies the conditions for government) if  $\delta$  is a X<sup>0</sup> category that is the head of  $\delta'$ :

- (8) ...  $\alpha$  ... [ <sub>$\delta'$</sub>  ...  $\delta^0$  ...  $\beta$  ...]

Observe that in (8)  $\delta^0$  is the correspondent of the N head of the NP in (7). If we consider that this N — like  $\delta$  in (8) — protects the following traces from external government the only way to explain that both subjects and objects are extracted from NP's in Spanish is assuming a strategy of movement to SPEC like the one we have just proposed. (This also embodies the assumption of a narrow version of the MC which allows the specifier of  $\delta$  to be governed from outside, in line, again, with Chomsky, 1986). Moreover, if genitives are first moved to the SPEC position, they will obtain proper government since the relation between X<sub>i</sub> and t' in (7) is a correct configuration of antecedent-government. Let us recall, to be rightly understood, the conception of proper government due to Lasnik and Saito (1984):

- (9) *Empty Category Principle*  
 $\alpha$  properly governs  $\beta$  iff  $\alpha$   $\theta$ -governs or antecedent-governs  $\beta$

Briefly stated, in all the grammatical examples of extraction that we have considered subjects and objects will satisfy the ECP since they will be antecedent-governed. In this way, then, the data will be correctly generated.



- (13) *Barrier* (Chomsky, 1986, p. 14)  
 $\gamma$  is a barrier for  $\beta$  iff (a) or (b):  
 a.  $\gamma$  immediately dominates  $\delta$ ,  $\delta$  a BC for B;  
 b.  $\gamma$  is a BC for  $\beta$ ,  $\gamma = IP$

According to definition (13), maximal projections can be barriers mainly for two reasons: first, due to their inherent properties (a non-lexically maximal projection is by nature a barrier), second due to the fact that they "inherit" barrierhood when they dominate a BC.

With these definitions in mind, and with the assumptions we have made in relation to the categorial nature of genitives of possession, we can develop an explanation for the generalization regarding extraction of and over possessive genitives.

In fact, if these genitives of possession are non-lexically-marked constituents they could qualify as inherent barriers. If we assume in addition that the segments of maximal projections that dominate them can inherit barrierhood from them, we will be in the position to say that when in a configuration like (11) a possessive genitive appears it will not be possible to extract it since the maximal  $N''$  (= NP) in (11) will be a barrier to movement.

Two crucial auxiliary hypotheses have to be made, however, for the solution we have just proposed to work out. The first less controversial one relates to the notion of "immediate" dominance used in definition (13). Recall that Chomsky (1986) sets a definition of dominance which precisely tends to avoid that in a configuration like (11), if  $P''$  is considered an adjunct constituent, NP could inherit barrierhood from  $P''$ . This result is obtained through the stipulation that a given  $\alpha$  is dominated by  $\beta$  if and only if it is dominated by all the segments of  $\beta$ . Since  $P''$  in (11) is not dominated by all the segments of  $N''$ , it would not be dominated by  $N''$  and so this  $N''$  (= NP) will not be able to inherit barrierhood. Without providing the empirical evidence which would be necessary to this effect (simply suggesting that this modification is compulsory if we want to say that inverted subjects are a barrier to movement), I will assume following Belletti and Rizzi (1986) that inherent barriers have different requirements than intrinsic ones. More specifically, I will suppose that adjunct segments can inherit barrierhood.

The second additional hypothesis is still more problematic. By definition, as can be seen through (13), an  $\alpha$  category which is not L-marked is a barrier for  $\beta$ , but it is not a barrier in itself. Briefly stated, what the notion of barrier intends to explain are the difficulties associated with movements out of non-subcategorized complements. Consequently, if we want to account for the facts we are concerned with under an analysis in terms of barriers, we have to hypothesize that in sentences like (4c) something internal to the PP is extracted out instead of the whole PP. Interestingly, this approach to the problem is not merely an *ad hoc* device. Actually, it can be duly justified if we observe the paradoxical behavior of prepositions compared to other lexical heads.

As a matter of fact, prepositional phrases can be extracted only from within O or VP (other conditions being satisfied) but not from NP or PP. Observe sentence (14) which correlates with (4c) and which shows how extraction out of a PP causes ungrammaticality (cf. Demonte, 1987a):

- (14) \**[De quién<sub>i</sub>] le quitaste una tachadura<sub>PP</sub> [al manuscrito e<sub>i</sub>]?*

'Of whom did you take off a scratch from the manuscript'

Kayne (1981) explains facts similar to that illustrated by (14) asserting that prepositions are never proper governors. We can conjecture that the reason for this peculiar behavior of prepositions is that they are thematically weak. Let us assume that, due to this condition, prepositions always have to reanalyze or combine with other lexical heads to be able to assign

case and so make argumental NP's visible for  $\theta$ -assignment. Let us conjecture in addition that it is only when this reanalysis has taken place that prepositions become true lexical heads and obtain categorial independence.

If the two preceding assumptions are on the right track we can now construct an explanation for (4c) and other similar structures. It is plausible, in fact, that if prepositions have to reanalyze to assign case, they could not use this possibility when they are in NP's since N's heads are not case assigners. For this reason, the preposition also will not be able to move out and so the NP governed by the possessive *de* will become the  $\beta$  element mentioned in the definition (13) for barriers to government and movement.

Summarizing, with the two auxiliary hypotheses that I have sketched we can account for (4c) in a simple way, and we can connect its deviance to the same source which causes only genitives to be moved out of NP's namely to the existence of barriers within NP's.

A last point that we need to clarify is whether the deviance of (6c), where a constituent is moved out of an NP where a possessive genitive appears, is also due to the existence of barriers. The answer is problematic, in fact. Observe, to start with, that the ungrammaticality effect in sentences like (6c) and their equivalents is not as strong as in the case of (4c). This allows us to conjecture that probably this weaker effect is due to the number of barriers which are in fact crossed. Since there are no reasons to assume that  $N''$  in (11) is a Blocking Category the only barrier to be crossed is the upper segment of  $N''$ , what we name NP in (11). As we have said this NP node is a barrier by inheritance from PP. Now, according to definition (13) the facts of (6c) are not to be expected unless we assume that  $N''$  qualifies as a non-L-marked element.

We cannot think of any uncontroversial explanation for these facts which did not take into account the necessity of reformulating either the notion of inherent barrier (allowing maximal projections to be barriers also for a  $\beta$  which they do not directly dominate) or that of intrinsic barrier (allowing L-marked constituents or parts of them to act sometimes as blocking categories).

Summarizing, the answer to the question above in relation to the cause of sentence (6c) deviance, is that it can be attributed to the same fact that causes the ungrammaticality of (4c), namely to a violation of subjacency, since in both cases the extraction of a given constituent will cross one barrier, the maximal NP barrier that has inherited barrierhood from the non-lexically marked genitive of possession.

In conclusion, what I have tried to show in this paper is that the double conception of a barrier as an intermediate lexical governor which blocks government, and as an unmarked maximal projection which transmits barrierhood to the projection by which it is immediately dominated, can explain in a unified way the complex pattern of data of extraction from NP in Spanish.

#### Note

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## Natürlichkeit in der Syntax

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### 1. Annahmen des Modells

1.1. Sprachliche Kategorien sind kognitiv grundgelegt; die „Abbildung“ Kognition ↔ Sprache ist nie eineindeutig oder auch nur subjektiv. Beide Bereiche sind jeweils nach Prototypen organisiert (Vagheit ist auch für Sprache konstitutiv).

1.2. Biologische Notwendigkeit führt zu Homomorphien zwischen Umwelt/Realität und bestimmten Bereichen des Organismus (z. B. Gedächtnis), damit und wegen Erfordernissen des Lernens ist auch eine Homomorphie Realität — Sprache (auf dem „Umweg“ über Geno- und Phänotyp) zu erwarten.

1.3. Es könnte evolutionärer Fortschritt sein, daß unsere Spezies die Welt in strukturierten Gestalten, „Szenen“/Situationen wahrnimmt (aber auch wahrnehmen muß!): Eine relativ kleine Menge alltäglicher Lebenssituationen liefert damit Muster für Kommunikationsvorgänge und sprachliche Kodierungen. Zusätzliche sprachliche Speicherung ist ebenfalls ein evolutionärer Vorteil.

1.4. Die eben genannten und die Notwendigkeiten des Lernens sowie ökonomische Prinzipien führen zu Strukturierung/Systematisierung auch der Kodierungsformen/des Sprachmaterials: Psychisch real sind zu Beginn der individuellen Sprachentwicklung nur kognitive Konzepte. Sprachliche Kodierungen sind Hilfsmittel zur Herstellung einer zumindest teilweise strukturerhaltenden Verbindung zwischen Realität und Nachricht (eigenen und sprachlich vermittelten fremden ZNS-Inhalten). Sortierung des Sprachmaterials nach kognitiv feststellbaren Eigenschaften und operativen Notwendigkeiten (Kommunikation, Lernen, Ökonomie) führt zu folgenden Typen offener „Klassen“: sprachliche Einheiten kognitiv unterteilt; kognitive Einheiten sprachlich unterteilt; sprachliche Einheiten kommunikations- und sprachsystembezogen unterteilt. Die Tendenz zu ökonomischer und uniformer Kodierung, vielfältige Konzepte in wenige „formale“ morphosyntaktische Kategorien einzuordnen, führt zu einer relativ niedrigen Anzahl sprachlicher Kategorien.