

## EXTRACTION OUT OF NP REVISITED

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**Abstract:** The extraction of genitive complements out of DETP in European Portuguese does not support the idea that extraction is only possible through an empty Spec position within DETP; instead, a direct raising to the target will be proposed. The fact that PPs may be extracted out of DETP seems to be the stronger empirical argument in favour of this proposal. Moreover, the idea that movement must be done through an intermediate Spec position seems not to be necessary in minimalist terms. As for wh movement, it induces a weak "opacity effect" when an argument of the N share category (nominal) and case (genitive) features with the wh morpheme. The different acceptability of simple interrogatives, interrogatives with complex wh phrases and relatives will be explained by an interface mechanism related with the nature [+ - discourse linked] of the wh morpheme. As for *en* or *ne* cliticization and the movement of *sua* over a referential adjective, they provoke a clear minimality violation, because the crossed morpheme and the moved constituents share a relevant feature, precisely the feature that is attracted by the target of the movement.

**Keywords:** conditions on movement, extraction, NP, DETP, opacity, minimality, discourse linking, interface mechanisms.

## 1. INTRODUCTION<sup>1</sup>

The phenomenon of extraction of complements out of NP has given rise in Generative Grammar to two main approaches: a formal approach, which tries to explain the ungrammaticality of certain constructions and the “opacity effect” from the violation of formal conditions and principles of grammar: “Specified Subject Condition” (Chomsky 73, Ruwe 72, Milner 82, Cinque 80); “Principle A of Binding Theory” (Aoun 81); “Empty Category Principle” (Giorgi & Longobardi 91, Rizzi 90); “Subjacency” (Demonte 85, Pollock 89, Sportiche 89, Stowell 91). Due to certain problems with a formal explanation, there were attempts to derive the consequences of extraction out of NP from lexical and semantic conditions (Pollock 89, Godard 92, Sag et Godard 94, Kolliokou 96).

In this paper I will propose that a formal explanation of extraction of complements out of NP is still possible, because it is the presence of certain features “on the way” of the extracted element that explains the asymmetries; at the same time, I will propose that there can be interface mechanisms that explain the acceptability of certain constructions which would be ungrammatical. The argumentation will be based on data from European Portuguese.

## 2. SOME DATA OF EXTRACTION OUT OF NP HEADED BY PICTURE NOUNS

Let us present some data of extraction out of NPs headed by picture Ns in European Portuguese:

- (1)(a) De quem é que tu viste o desenho do Porto?  
(Of whom did you see the drawing of Oporto?)
- (b) De que pintor é que viste o desenho do Porto?  
(Of which painter did you see the drawing of Oporto?)

See now the examples (2):

- (2)(a) ?? De que é que tu viste o desenho do Júlio Resende?  
(Of what did you see the drawing of Júlio Resende?)
- (b) ? De que lugar / objecto / pessoa é que viste o desenho do Júlio Resende?  
(Of which place / object / person did you see the drawing of Júlio Resende?)

The corresponding relative clauses are shown in (3):

- (3)(a) A Ribeira, de que acabámos de ver o desenho do Júlio Resende, pertence à zona considerada património mundial.  
(The Ribeira, of which we have just seen the drawing of Júlio Resende, belongs to the zone considered world heritage).

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<sup>1</sup> I thank Inês Duarte, Jacqueline Guéron, Gabriela Matos and the audience of the 16th International Congress of Linguists, Paris, July 1997, for criticisms on a previous draft of this text; all errors are mine.

- (b) O Júlio Resende, de que acabámos de ver o desenho da Ribeira, é um grande pintor.  
 (Júlio Resende, of whom we have just seen the drawing of the Ribeira, is a great painter.)
- (c) O museu de Serralves, de que acabámos de ver aquele desenho do Júlio Resende, é um museu magnífico.  
 (The Museu de Serralves, of which we have just seen the drawing of Júlio Resende, is a wonderful museum.)
- (d) Júlio Resende, de que acabámos de ver o quadro do Museu de Serralves, é um grande pintor.  
 (Júlio Resende, of whom we have just seen the painting of the Museu de Serralves, is a great painter.)

We see that the extraction of a complement of the N interpreted as an object over an agent (as in (2a)) is not totally acceptable, whereas the extraction of an agent over an object (as in (1a)) is grammatical.

In interrogatives involving complex wh phrases formed by a wh morpheme and a noun (as in (1b) and (2b)) and in relatives (as in (3)), the corresponding extractions are always better than those with a simple wh morpheme, even when one moves an object over an agent or a possessor.

In all the examples, a wh phrase is extracted out of NP and is attracted by a wh feature in COMP. How can one explain the differences between (1a) and (2a)? And why are (1b), (2b) and (3) better than (2a)?

### 3. ANALYSIS OF EXTRACTION OF GENITIVES OUT OF NP

As I have said, several attempts have already been made to explain these “subject-object” asymmetries.

One of the formal approaches to this phenomenon was the one by Cinque 80. Based on examples from Italian, Cinque proposed a relationship between possessivization and extraction, and considered that the movement of the clitic *ne* or of a wh morpheme must be done through the Spec position of NP, as it is represented in (4); the same kind of explanation was proposed for French by Milner 82:

(4) ... ne/ wh<sub>i</sub> ... [ t<sub>i</sub> ... N [ ... t<sub>i</sub> ... ]].

But there is at least one counter-argument against the relationship between possessivization and extraction, suggested by Godard 92: pp. 242-243. It is possible to extract a complement from a partitive construction containing a measure N, as in (5), although it is impossible to have the corresponding possessive, as in (6):

(5) Os poemas de Eugénio de Andrade, de que eu li metade / a maior parte / um terço são  
 realmente lindos.

(The poems of Eugénio de Andrade, of which I have read a half / most / a third are very beautiful)

(6) Acabei de ler o último livro de poemas de Eugénio de Andrade.

\* A sua metade / \* a sua maior parte é linda.

(I have just read the last book of poems of Eugénio de Andrade. \* Its half / \* its great part is beautiful)

Giorgi and Longobardi 91 tried to derive Cinque's view from a requirement on government on empty categories: it is in the intermediate position of Spec of NP, as it is represented in (4), that the trace must be governed by an external governor.

Rizzi 90 developed the idea that the good cases of extraction are the ones where the moved constituent goes to a Spec position. In his framework what explains the asymmetry in extraction is the incapacity of Ns to be adequate governors of empty categories. But if the complement goes through a Spec position there is a spec-head agreement and "this process seems to have the capacity to convert an intrinsically inadequate head into an element appropriate for fulfilling the head-government requirement on traces." (p. 107). It is important to emphasize that in Rizzi's framework the asymmetries in the extraction out of NP in interrogatives and in relatives cannot be explained in terms of "antecedent government" or of a "relativized minimality" violation, because the interfering morpheme (a genitive NP or a possessive determiner) has no wh feature and so it cannot create any minimality violation.

With the development of DETP analysis, according to which a referential nominal expression is the syntactic projection of DET, it was proposed that in extraction out of NP the movement is through the Spec of DETP, if this position is empty (Giorgi & Longobardi 91, p. 204, Sportiche 89, pp. 71-74, Stowell 91, Sleeman 96, pp. 103-108, Miguel 92, chap. 3).

So, in this framework, the "escape hatch" is not Spec of NP but Spec of DETP or Spec of other functional categories inside DETP.<sup>2</sup>

Combining the DETP analysis and the idea proposed in the Minimalist Program that movement takes place because of feature checking, the proposal that an extracted complement goes through Spec of DETP could be reformulated. We could perhaps say that the genitive feature of the

<sup>2</sup> Using *Barriers* framework and DETP analysis, Stowell 91 proposed an explanation about English data illustrated in (i) and (ii):

- (i) What did you read a book about ?
- (ii) \* What did you read Mary's book about ?

"If *what* moved directly to Spec of CP (...) it would cross two barriers, NP (which is not L-marked) and DETP (which dominates NP and is therefore a barrier by inheritance). Thus direct movement would violate Subjacency. On the other hand, if *what* first moves to the Spec of DETP, it crosses just one barrier (NP); subsequent movement out of DP crosses no barrier, since DETP is L-marked and hence not an intrinsic barrier (...) Movement through the empty Spec of DETP is possible in (i) but not in (ii), where this position is occupied by *Mary's*. " (p. 44) (See Sleeman 96, p. 104, for some criticism on an analysis based on the notion of barrier).

complements of NP, being a case feature, would have to be checked in a Spec position and that would be only possible if Spec position is empty (in languages like French the genitive feature of D seems to be an optional feature and for this reason it is only used as an intermediate landing site and is not a terminal landing site, unlike English) (Sleeman 96: pp. 105-106)). According to Sleeman, this explains why non-genitive phrases like the French example (7):

(7) \* Contre quel fléau ont-ils poursuivi la lutte?

cannot be extracted out of DP. According to her, since, in an extraction of PP, the PP bears a nominal feature, it has to pass through Spec DETP. But since it does not bear a genitive feature, the derivation crashes (pp. 104-105) (on extraction of PPs in Portuguese see next paragraph).

#### 4. A PROPOSAL

Although the proposal that the extraction of complements out of DETP is made through a position of Spec seems attractive and necessary in a framework based on Subjacency, I would like to suggest that there may be alternatives, and specifically that there can be a direct extraction of complements out of DETP and that the explanation for the asymmetries is not due to the occupation of Spec of DETP or Spec of other functional categories by lexical determiners or by a genitive (as in English). I will try to justify my proposal both with empirical data and theoretical reasons.

1 - In the first place look at the following examples with different determiners in Portuguese:

(8)(a) \* De quem é que viste a tua fotografia?

(Of whom did you see your photograph?)

(b) ?? De que pessoa é que viste a tua fotografia?

(Of which person did you see your photograph?)

As (8a) and (8b) show, a possessive (ambiguous between an agent or a possessor reading) blocks the extraction out of NP, as it is always referred. In nominal expressions as in (8a) and (8b) the possessive occupies a Spec position (presumably the position of Spec of PossP inside DETP) and the definite article occupies the head position of DET.<sup>3</sup> So a Spec position remains empty for the intermediate landing site of the genitive complement. We can conclude that the ungrammaticality of (8a) and (8b) is not explained by the hypothesis that the genitive has no available Spec position as an intermediate landing site.

In contrast with possessives, definite or indefinite articles do not block the movement of wh phrases:

(9)(a) De quem / de que pessoa é que viste a fotografia?

(Of whom / of which person did you see the photograph?)

(b) De quem / de que pessoa é que viste uma fotografia?

(Of whom / of which person did you see a photograph?)

<sup>3</sup> In Portuguese, contrary to what happens in French and English, articles co-occur with possessives. So it is justified to distinguish DETP and POSSP.

But now let us look at some examples of extraction with demonstrative determiners; according to my own judgements, the presence of demonstratives does not create an absolute ungrammaticality and moreover they seem not to behave uniformly in relation to extraction of genitive complements over them:

- (10)(a) ?? De quem / de que pessoa é que viste esta fotografia?  
 (Of whom / of which person did you see this photograph?)
- (b) ?? De quem / de que pessoa é que viste essa fotografia?  
 (Of whom / of which person did you see that photograph (near the addressee)?)
- (c) ? De quem / de que pessoa é que viste aquela fotografia?  
 (Of whom / of which person did you see that photograph (near a third person)?)

Let us suppose that demonstratives are the head of DETP and that they do not occupy a Spec position. This seems the right solution for European Portuguese, as demonstrative and articles are always in complementary distribution. So, we cannot use the idea that the ungrammaticality of the examples is due to the impossibility of movement to an intermediate Spec position in DETP, because this position would be available.<sup>4</sup>

The observation of these examples seems to suggest that it is the feature [+deictic] present in *esta* and *essa* (and in a weak form in *aquela*) that interferes in the extraction of a wh phrase out of NP. We could formulate an alternative hypothesis, according to which it is the feature [+ specific] that is involved in examples (10a) and (10b) (suggested to me by Jacqueline Guéron). But this hypothesis is problematic: the feature specific is already present in (9a); moreover see (11):

- (11) De quem / de que pessoa é que andas à procura de uma fotografia?  
 (Of whom / of which person are you looking for a photograph?)

(11) is ambiguous between a specific and a non-specific interpretation and it is grammatical in both readings; therefore it is not the [+specific] feature present in demonstratives that explains the non acceptability of (10a) and (10b).

2 - In the literature it is normally accepted that true PPs cannot be extracted from NP: the ungrammaticality of French examples like (12) - (13) and (7), repeated here as (14), are illustrative of that impossibility (see Godard 92):

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<sup>4</sup> Brugè & Giusti 96 proposed that Demonstratives are maximal projections in a functional Spec on a par with other modifiers of the Noun; the authors base their proposal on the fact that demonstratives can co-occur with articles in some languages. This is impossible in Portuguese: \*os aqueles livros, \*os livros aqueles. If we would adopt the authors' proposal, we had to say that Demonstrative move to Spec DETP, but we were obliged to say that, in this circumstances, D could not be filled. In this solution, Spec of DETP is indeed filled and the explanation about extraction of genitives through an available Spec position could be maintained. But we could never explain why demonstratives do not behave uniformly in extraction out of DETP in Portuguese. For this reason I propose in the text, perhaps in a provisional way, that demonstratives are heads of DETP.

(12) \* Le village auquel la descente est difficile est encore assez loin.

(The village to-which the descent is difficult is still rather far)

(13) \* Le chômage contre lequel la lutte n'a pas donné les résultats espérés va encore persister quelque temps.

(The unemployment against which the fight has not given the expected results will last for some time)

(14) \* Contre quel fléau ont-ils poursuivi la lutte? (Sleeman 96, p. 105)

(Against which misfortune did they continue the fight?)

According to my judgements, the corresponding examples of extraction of PP in Portuguese are grammatical:

(15) A aldeia, em direcção à qual a descida é difícil, fica ainda longe.

(The village, to which the descent is difficult, is still rather far)

(16) O desemprego, contra o qual a luta não tem dado os resultados esperados, vai durar mais algum tempo.

(The unemployment, against which the fight has not given the expected results, will last for some time)

We could think that the acceptability of these examples is due to the fact that they contain (appositive) relatives (see paragraph 5.). But now see examples of interrogatives:

(17)(a) Por quem é que o João demonstrou respeito?

(b) Por que pessoa é que o João demonstrou respeito?

(For whom / which person did John show respect?)

(18)(a) Em que é que o João tem especial orgulho?

(b) Em que artigo o João tem especial orgulho?

(Of what / which article is John particularly proud?)

(19)(a) Contra o quê devemos continuar a luta?

(b) Contra que perigos devemos continuar a luta?

(Against what / which dangers shall we go on fighting?)

They are all grammatical. So, we cannot say for Portuguese what Sleeman says for French: the impossibility of extraction of PPs in French is an argument in favour of the proposal that the extraction is made through an intermediate Spec position; if a non-genitive goes to a Spec position it cannot verify its genitive feature and the derivation crashes, explaining the ungrammaticality of the examples in that language (Sleeman 96, p. 105).<sup>5</sup>

All this means is that in Portuguese we can extract prepositional complements out of DETP, they do not go through the position of Spec of any functional category and they go directly to Spec of

<sup>5</sup> This explanation seems problematic in minimalist terms because there is no feature in DET which could attract the PP. See below.

CP, attracted by a [+wh feature].

3 - Moreover, if one considers Chomsky's recent ideas, where the definition of "attract / move" incorporates the Minimal Link Condition and Last Resort, the proposal that the complements extracted out of DETP go through the position of Spec of DETP or of any functional category is problematic because there is no reason to attract the wh morpheme to those positions (Cf. Chomsky 95, cap. 4). Economy conditions seem to block this sort of movement (see also Brito 97).

Let us return to our examples (1a), (1b), renumbered as in (20), and (2a) and (2b), renumbered as in (21):

(20)(a) De quem é que tu viste o desenho do Porto?

(Of whom did you see the drawing of Oporto?)

(b) De que pintor é que viste o desenho do Porto?

(Of which painter did you see the drawing of Oporto?)

(21)(a) ?? De que é que tu viste o desenho do Júlio Resende?

(Of what did you see the drawing of Júlio Resende?)

(b) De que lugar / objecto / pessoa é que viste o desenho do Júlio Resende?

(Of which place / object / person did you see the drawing of Júlio Resende?)

In all the examples, we have a nominal expression with an interrogative phrase as a complement. By movement, the interrogative phrase occupies the position of Spec of CP, attracted by a [+wh feature] in COMP. The representation of (20a) and (20b) is the following:

(22) CP[[de que pintor; / de quem] +wh IP[...VP[...[ver DETP[o desenho<sub>j</sub> NP[t<sub>i</sub>]]][N[t<sub>j</sub> DETP[(d)o Porto]]]]]]]

As (22) shows, COMP attracts the wh phrase *de que pintor / de quem*, which is "the closest feature that can enter into a checking relation with (a sublabel of) CP (Chomsky 95, pp. 296-7). In (22) the movement of the N to the head of a functional projection is also represented.

As for (21a) and (21b), the structure seems to be like (23):

(23) CP[[de que<sub>i</sub>] +wh IP[...VP[...[ver DETP[o desenho<sub>j</sub> NP[(d)o Júlio Resende<sub>j</sub> N[t<sub>j</sub> DETP[t<sub>i</sub>]]]]]]]]]

In (23), the movement of *de que* to Spec of CP is represented; this wh phrase crosses a filled Spec of NP (*do J. Resende*). This phrase has no wh feature and, in these circumstances, it would not concur with a wh morpheme as far as movement is concerned (Rizzi 90, Chomsky 95).

However *do J. Resende* shares category features (nominal) and case (genitive) with the wh morpheme. So this DETP in Spec of NP seems to provoke an effect similar to a minimality violation, creating a weak "opacity effect", because it shares some features with the wh morpheme, and it is closer to CP than the wh morpheme.

The same reason seems to explain the data in (8a) and (8b), with the extraction of a wh morpheme over a possessive, because possessives also have nominal and genitive features.

If the extracted morpheme has the same relevant feature as the phrase it crosses, the extraction

creates a minimality violation, explaining the strong "opacity effect".

This happens in the extraction of possessives over referential adjectives, as in (24a) in contrast with (24b):<sup>6</sup>

(24)(a) \* Os jornalistas assistiram à sua destruição russa.

(The journalists saw its Russian destruction)

(b) Os jornalistas assistiram à sua destruição pelo exército russo.

(The journalists saw its destruction by the Russian army)

In (24a) *sua* is a complement of *destruição* and is probably attracted by a POSS head in order to check its nominal / genitive features; *russa*, being a referential / thematic adjective has a feature [+nominal] and receives an agent reading, which blocks the movement of *sua*. This referential adjective, being closer to the target than *sua*, would be a potential raised element, violating the minimality link condition on movement.<sup>7</sup>

Notice that the traditional idea that (24a) is ungrammatical because the Spec of NP is occupied by the referential adjective cannot be maintained by adopting DETP analysis, because in DETP there would be always an "escape hatch" for the movement (Spec of DETP).

On the contrary, *pelo exército russo* in (24b) is an adjunct and so it is not crossed by the movement of *sua* (Cinque 80, Giorgi and Longobardi 91, p. 62; Brito e Oliveira 97).

An apparent argument against this sort of explanation is the behaviour of other adjectives, which do not block extraction of genitive complements:

(25) De que / que sítio é que tu viste o lindo desenho?

What (25) shows is that non-referential adjectives do not block any extraction; only adjectives with a theta role block extraction out of DETP; we can even propose that this sort of adjectives has an intrinsic genitive case feature.

<sup>6</sup> The corresponding sentences with wh movement are more acceptable than (24a) because the moved constituent has a wh feature and *russa* has a nominal feature:

(i) ?? De que é que viste a destruição russa?

(ii) ? De que cidade é que viste a destruição russa?

(Of what / which city did you see the Russian destruction?)

(iii) A cidade, de que / da qual os jornalistas recordam a destruição russa, é a capital da Tchetchénia.

(the city of which the journalists remember Russian destruction is the capital of Chechenia).

In all these examples it is presupposed that the referential adjective is generated in the position of Spec of NP and that the superficial word order is obtained by movement of the N to a functional category, presumably NUMP.

<sup>7</sup> Adopting this analysis we can say that in the Portuguese constructions *a minha fotografia tua / de ti* (my picture of you), *tua* or *de ti* occupy a lower position and only *minha* moves to a high position (Spec of POSSP).

In *en* cliticization in French or in *ne* cliticization in Italian, clear "opacity effect" can take place, as others have repeatedly shown. It has been proposed that *en* / *ne* have nominal features that are attracted by AGR; if there is another constituent with the same features that is closer to AGR than the clitic, there is again a minimality violation: this happens in (26a) and (27a) in contrast with examples (b):

- (26)(a) \* J'en ai vu *ta* photo.
- (b) J'en ai vu *la* photo. (Milner 82)
- (27)(a) \* Ne ho sporcato la *tua* fotografia.
- (b) Ne ho sporcato *la* fotografia. (Cinque 80)

I am using the definition of "attract / move" proposed in (28):

- (28) "K attracts F if F is the closest feature that can enter into a checking relation with a sublevel of K." (Chomsky 95, p. 297)

And the notion of "closer", as in (29):

- (29) "... b is closer to the target K than a if b c-commands a" (Chomsky 95, p. 358).<sup>8</sup>

So, our analysis shows that what explains the difficulty / impossibility of extraction out of NP is not the fact that a Spec position within DETP is occupied by lexical determiners; it is the nature of certain features present "on the way" that hinders or blocks extraction.

(i) If what interferes in the extraction is a constituent which shares just categorial / case features with the one which is extracted or if it has a deictic feature, we have a weak "opacity effect" but no violation of minimality, what explains that the examples are not totally ungrammatical in European Portuguese.

(ii) If the same features of the extracted constituent are "on the way" we have a strong "opacity effect" and ungrammaticality, as expected under the definition of "attract / move". It is the case of the extraction of *ne* / *en* and extraction of *sua* over referential adjectives ( where a [+nominal] feature is associated to a theta role);

The proposed framework suggests that a formal analysis about extraction out of DETP is still

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<sup>8</sup> According to this analysis, the Spec of NP and the object are not equidistant from CP, the former being closer to CP than the object. But it is not the notion of non-equidistance, by itself, that explains the asymmetry in extraction out of NP; rather, as I propose in the text, the existence of certain features "on the way" of the moved constituent, in particular category and case features. An argument in favour of the idea that the non-equidistance is not the real reason for the asymmetries is given by the domain of the sentence (TP). In fact, the extraction of a subject or of a complement does not create any asymmetry:

- (i) Quem deu o livro ao João?
- (ii) A quem deu o Pedro o livro?
- (iii) Que livro deu o Pedro ao João?

It is interesting to say that, according to Chomsky 95, ch. 4, the Spec of NP and the object of NP are equidistant from the head *N* and so they would be both available to theta-marking (either there is *N* movement within DETP or not).

possible: this sort of movement must conform with the requirements of Minimal Link Condition and Last Resort included in the definition of "attract / move" (instance (ii)). As for (i) it is difficult to explain them in the framework which is proposed nowadays for movement; nevertheless we can understand why they are not totally ungrammatical in European Portuguese, because they do not represent any case of minimality violation.

At the same time, there are phenomena (some of them referred to in the literature) that also show that interface mechanisms which are related to Full Interpretation are justified.

As Pollock 89 and Safir 87 showed, there are grammatical examples in English with extraction over a "subject" of NP:

See Pollock's examples (30) and (31):

(30) Which symphony do you hate Karajan's interpretation of?

(31) \* Which actress did you buy Picasso portrait's of?

According to Pollock, (30) is acceptable, but (31) is ruled out; Pollock suggests that in (30) our "pragmatic knowledge associated with nouns like *interpretation*, *reporting* or *version* allows" that the genitive may be possessor (perhaps assigned by 's) contrary to (31), where the genitive is always agent (p. 160).

I would like to suggest, following Kolliokou 96, that the more a genitive is interpreted as a property noun, corresponding to an intersective adjective (as in (30)), the more the sentences are grammatical; the sentences where the genitive is interpreted as an individual as in (31) are ungrammatical.

In the next paragraph we will see another interface mechanism that seems to me crucial for extraction out of DETP and that has very seldom been referred in the already long bibliography about this phenomenon.

## 5. RELATIVES, INTERROGATIVES AND THE NOTION OF "DISCOURSE LINKING"

We have seen that in extraction out of DETP by wh movement there is a systematic difference of acceptability between interrogatives like (2) and relatives like (3).

As is well known, a relative clause is a form of predication about a nominal expression. Through the co-indexation between the antecedent and the relative operator, the lexical meaning of the antecedent is assigned to the relative morpheme.

In a single interrogative (introduced by *de que* / *de quem*), one does not know the value of the variable and one can only infer that someone asks for the identification of a [+ / - human] variable. But if someone asks: *De que pintor?* (of which painter?), *de que coleccionador?* (of which collector?), *de que objeto?* (of which object?), the meanings of agent, possessor, object are given by the wh phrase.

What is common to this second type of interrogative and headed relatives in general is that they are more informative than simple wh interrogatives. They are [+ discourse linked] using the terminology of Pesetzky 87. In these circumstances, we obtain interrogatives and relatives which are acceptable. It seems that at the level where interpretation takes place, LF, there is some sort of "conceptual" mechanism related to the assignment of a semantic value to the wh operator, due to the relative construction and the type of [+discourse linked] interrogative morphemes.<sup>9</sup>

Notice that a context which brings a "discourse linking" as in topicalization does not modify the status of *en* / *ne* cliticization, as we can see in (32) and (33), because in these cases there is a clear minimality violation:

- (32)(a) \* Et cet album, tu *en* as vu *sa* couleur?
- (b) Et cet album, tu *en* as vu *la* couleur?
- (33)(a) \* Il vestito, non *ne* conosco il *suo* colore.
- (b) Il vestito, non *ne* conosco *il* colore.

## 6. CONCLUSIONS

In this paper I have examined several instances of extraction of complements out of DETP.

I have proposed that the data from Portuguese do not support the idea that extraction is only possible if there is an empty Spec position within DETP. The fact that PPs may be extracted out of DETP seems to be the stronger empirical argument against that proposal. Moreover, the idea that movement must be done through an intermediate Spec position seems not to be necessary in minimalist terms. These two main reasons lead to the suggestion of a direct raising to the target (Spec of CP) and an explanation of the impossibility of extraction out of DETP based on the existence of features that block or difficult the movement.

As for wh movement, it may induce what I called a weak "opacity effect" when a genitive wh morpheme crosses another genitive or a possessive; this seems to happen because the extracted morpheme and the one which is crossed by movement share some features, in particular categorial (nominal) and case (genitive) features. In order to explain the different acceptability of simple interrogatives, interrogatives with complex wh phrases and relatives, I proposed an interface mechanism related with the nature [+ - discourse linked] of the wh morpheme.

As for *en* or *ne* cliticization and the movement of *sua* over a referential adjective, these movements provoke a clear minimality violation, because the crossed morpheme and the moved constituents

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<sup>9</sup> In GB theory it was proposed by Cinque 90 that there is a difference between [+ / - referential] wh morphemes or [+ / - Discourse linked] morphemes: the wh morphemes [- D linked] are operators, their traces are variables and they are moved in LF; the wh morphemes [+ D linked] are not operators, their traces are not variables and most probably they are not moved in LF. This would have as a consequence that the former are more sensitive to conditions on movements than the latter (I thank J. Guéron for this suggestion).

share a relevant feature, precisely the feature that is attracted by the target of the movement; in this case, a strong "opacity effect" is created and no other conceptual mechanism interferes with the interpretation of the sentences.

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