

# Why Basque doesn't Relativize Everything

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## Introduction

De Rijk (1972a, 1972b) has outlined and extensively discussed what I take to be a classical problem of the A'-Syntax in the tradition of Basque generative studies: the formation of relative clauses. According to his findings, there are two mainstream 'dialects' (where the concept must be understood in a broad, loose sense) with respect to relativization in Basque: in the restricted one, only true "NP"s, i.e. NPs whose morphological information is encoded in the auxiliary verb (= NPs marked ergative, absolutive and dative) can be gaps in the relative clause; in the main dialect, on the other hand, not only these NPs but also some postpositional phrases (locative, ablative, adlative or directional, instrumental) can be relativized; other PPs cannot be gaps. The following data illustrate the generalization:

- (1) Ainhoak Asierrek *e* erosi duen liburua irakurri du.  
buy aux-n book read aux  
Ainhoa has read the book that Asier (has) bought
- (2) Ainhoa *e* bizi den etxea urrun dago hemendik.  
live aux-n house far is here-abl  
The house Ainhoa lives ('in') is far from here
- (3) Ainhoak *e* inglesa irakasten duen eskola nahiko berria da.  
English teach aux-n school quite new is  
The school Ainhoa teaches English ('in') is quite new

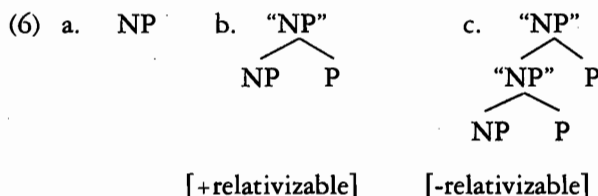
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(\*\*) The material presented here is based on chapters 1 and 2 of Artiagoitia 1990, earlier versions of which had circulated in a manuscript as "On the Existence of Null Operators in Basque". Sections 3, 5, (and 7), however, contain new material and/or proposals not formulated previously. I am thankful to H. Contreras and J. Emonds for their innumerable valuable comments on the earlier versions and on this one. This version has also considerably benefited from an informal discussion with A. Eguzkitza, J. Lakarra, J. Ormazabal, J. Ortiz de Urbina, and M. Uribeetxebarria, as well as from written comments by B. Oyharçabal. All my gratitude to Andolin Eguzkitza, Itziar Gomez Barrondo, Jose Ignacio Marķaida and Iñaki Markinez for discussing several aspects of the data. Thanks also to Perry Atterberry and Anxon Olarra for their moral support and for reading and commenting on this article.

- (4) \*Jon *e* ezkonduko den neska Bilbokoa da.  
 get-married aux-n girl -gen is  
 The young woman Jon will get married ('with') is from Bilbao
- (5) \*Jonek *e* hizkuntzalaritza ikasten duen jendeak jai bat antolatu du.  
 linguistics learn aux-n people party one  
 The people Jon studies linguistics ('with') have organized a party

(1) is grammatical in both systems. Sentences (2)-(3), where the gap (=e) in the relative clause corresponds to a locative PP (subcategorized for by the verb in (2), a plain adjunct in (3)), are grammatical sentences only in the main system. (4)-(5), where the gaps correspond to a comitative PP headed by *ekin* 'with' (a complement to the verb in (4) but again an adjunct in (5)), are ungrammatical in both systems. The paradigm is, to my mind, quite straightforward and widely motivated empirically.<sup>1</sup>

De Rijk's (1972a, 1972b) account of the facts posits a deletion rule of the relativized element inside the relative clause under identity with the head of the NP that contains the relative clause. He further observes that the "relativized" phrases have to have the structure in (6a) or (6b); phrases of the structure in (6c) can never be "deleted" (to use de Rijk's terms):



[PPs of type (6c) include benefactive, comitative, motivative, and the locative-/ablative/adlative postpositions used with [+human] nouns]

Under current assumptions in grammatical theory (Chomsky 1970, Jackendoff 1977, Stowell 1981), the quoted NPs are in fact PPs whose head is P (note that Basque is a head-final language, cf. Eguzkitza 1986); de Rijk's labeling is forbidden by the Endocentricity Principle of X'-theory.

In this paper I argue that it is the Bounding Theory of the Principles and Parameters approach to language that rules out sentences (4)-(5). In particular, I would like to claim that their ungrammaticality arises as a consequence of violating the Subjacency Condition as formulated, roughly, in Chomsky 1986b. The paper is organized as follows: first, an analysis of Basque relative clauses as involving the presence of an A'-chain headed by a null operator is motivated within the CP hypothesis, a possibility discussed (yet in my opinion not sufficiently exploited) by Ortiz de Urbina (1989) and Oyharçabal (1988, 1989). This analysis presupposes the existence

(1) Some (few) speakers tend to consider sentences like (2) slightly better than (3); these same speakers are occasionally reluctant to accept isolated examples where an adjunct PP (especially if headed by the ablative and the adlative/directional) is relativized. Nevertheless, my observations confirm that texts written in Standard Basque (journals, newspapers) and most speakers *systematically* relativize adjunct PPs of the type described by de Rijk. His generalization is hence correct.

of lexically null Ps mediating between the operator and the variable (e.g. in (2)-(5)), an assumption which I try to motivate in section 2 following Emonds's 1987 *Invisible Category Principle* (ICP). The consequences of and apparent problems for the Null Operator Hypothesis (NOH hereafter) are handled in section 3. In section 4, I provide a principled characterization of Subjacency phenomena in Basque, and show how the ungrammaticality of sentences (4)-(5) can be derived from the Bounding Theory with little or no stipulation. Section 5 addresses some predictions that the Subjacency account makes: in particular, the distribution of resumptive pronouns.

Finally, section 6 shows that the empirical coverage of my proposal extends beyond the scope of the data discussed originally by de Rijk himself.

In the remainder of the paper, I assume the correctness of Ortiz de Urbina's (1989) approach to the structure of CP in Basque: both the specifier of C and C precede IP despite the fact that Basque is a head-final language (See Ortiz de Urbina 1989: chp.4 for the motivations). This has the advantage of treating both wh-movement and focus movement (which take place by S-S and trigger V-2 phenomena in Basque) in a unified manner.<sup>2</sup> Unless otherwise stated and for the sake of making the argumentation as simple as possible, Chomsky's (1986b) definitions of  $\theta$ -marking, L-marking, barrier and the Empty Category Principle are assumed.

## 1. The Null Operator Hypothesis (NOH)

De Rijk's (1972a, 1972b) deletion rule is no longer acceptable under current assumptions in generative syntax in that it leads to a violation of the Projection Principle (Chomsky 1981); in the best case, that rule does not explain why (4)-(5) should be ungrammatical. Thus some revision is in order.

Intuitively it looks like we must rely on the existence of empty categories (ECs). The Projection Principle and the  $\theta$ -Criterion require and ensure that the subcategorization frame of the verbs in the embedded relative clause be satisfied at D-Structure and preserved throughout the derivation. If covert, the arguments must be syntactically present by means of some EC. If adjunct, the category must also be syntactically present for whichever mechanism adjuncts are licensed since *eskolan* 'in the school' is non-pragmatically understood inside the relative clause in (3). The EC in

(2) This is controversial since Ortiz de Urbina has to assume that complementizers originate in a pre-clausal position and are then cliticized to I; if I-to-C movement takes place in an embedded sentence (i.e. one that has an obligatorily overt complementizer), the C position is filled again. For the purposes of this paper, we could as well assume (with Laka and Uriagereka 1987 and Laka 1989) that the structure of CP in Basque is as in (i) with the sentence-final complementizer *-n* occupying the C position in a relative clause:

i. [<sub>CP</sub> SPEC [<sub>C</sub> IP C]]

Obviously, this position calls for an alternative explanation of the V-2 phenomena in Basque.

- (3)  $\theta$ -marking: " $\alpha$  directly  $\theta$ -marks  $\beta$  only if they are sisters" (Chomsky 1986b: 14).  
 $\theta$ -government: " $\alpha$   $\theta$ -governs  $\beta$  iff  $\alpha$  is an  $X^0$  that  $\theta$ -marks  $\beta$ , and  $\alpha$ ,  $\beta$  are sisters" (ibidem: 15).  
 L-marking: " $\alpha$  L-marks  $\beta$  iff  $\alpha$  is a lexical category that  $\theta$ -governs  $\beta$ " (ibidem: 15).  
 Blocking Category: " $\gamma$  is a BC for  $\beta$  iff  $\gamma$  is not L-marked and dominates  $\beta$ " (ibidem: 14).  
 Barrier: " $\gamma$  is a barrier for  $\beta$  iff (a) or (b):  
 a) if it immediately dominates  $\delta$ ,  $\delta$  a BC for  $\beta$ ;  
 b)  $\gamma$  is a BC for  $\beta$ ,  $\gamma \neq$  IP" (ibidem: 14).  
 ECP: " $\alpha$  properly governs  $\beta$  if  $\alpha$   $\theta$ -governs  $\beta$  or antecedent-governs  $\beta$ " (ibidem: 16).

question cannot be an NP trace because there is no NP-movement to any A-position (nothing could possibly trigger it). In (1) for instance, were the gap  $\epsilon$  coindexed with the head noun *liburua* to form an A-chain, this would be ill-formed: the two links would receive two  $\theta$ -roles and two cases (violating the  $\theta$ -Criterion). Moreover, the EC would also violate condition A of Binding Theory: it would be bound outside its Complete Functional Complex (the relative clause):

$$(7) * \dots [NP [CP e_i \text{ erosi } \dots] \text{liburua}_i] \text{ irakurri}$$

The EC under consideration cannot be PRO, because it would be governed by V in (1) and/or by empty postpositions (see section 2) in (2) and (4), regardless of which definition of government is adopted. If those null Ps are absent, we are led to the conclusion that PRO=PP (!); but even so PRO would still be governed by the verb in (2) and (4). The EC cannot be *pro* (even though Basque is a null-object language (cf. Eguzkitza 1986, Ortiz de Urbina 1989) because its licensing conditions are not met in (2)-(3) (and (4)-(5) for that matter); the material in Inflection is unable to identify a gap that corresponds to a PP. An alternative solution (proposed e.g. by Oyharçabal 1989) is to assume that the EC is indeed a variable-like *pro* in (1), but not in (2)-(3), where relativization is made possible by means of some other mechanism (e.g. "accessibility"). According to Oyharçabal, *pro* in (1) would function as a resumptive pronoun. Oyharçabal's analysis, however, misses an important generalization by proposing two different mechanisms that allow relativization (the second one of which is never explicitly defined). Besides, as Safir (1986) and Contreras (1989a) among others have noted, resumptive pronouns are usually non-subjacent or anti-subjacent to their A'-binder; this is clearly not the case in (1). If the EC were a resumptive *pro* in (1), we would expect a lexical pronoun to be possible since this is not a context where distributional differences obtain between lexical/null pronouns (cf. Luján 1985).<sup>4</sup> This is simply not the case:

- (8) *Ainhoa* *Asierrek* \**bera/e* *erosi* *duen* *liburua* *irakurri* *du*.  
 it  
*Ainhoa* has read the book *Asier* bought \**it/e*

Furthermore, there is crucial evidence that the gap in sentences like (1) is a true variable for it displays typical Weak Cross-Over effects for many speakers:<sup>5</sup>

(4) The argument would be somehow undermined if we took Luján's *Universal Precedence Constraint* (= Stressed pronouns cannot precede their antecedents) literally. Since the relative clause precedes its antecedent (its postcedent *strictu sensu*) in Basque, the ungrammaticality of (8) could strengthen the predictive power of the UPC; the *pro* analysis could still be maintained. Nevertheless, the generalization that Luján's constraint tries to capture is not intended to cover relative clause/head relationships. I will leave this open.

(5) WCO effects in restrictive relative clauses are a disputed fact. See Chomsky (1982) and Safir (1986). Interestingly, there is no syntactic difference in Basque between restrictive/non-restrictive relative clauses, a fact noted at least since de Rijk (1972a, 1972b); cf. also Eguzkitza (1986) (note that non-restrictive readings are forced by means of what de Rijk termed pseudo-extraposition). The lack of WCO effects for some speakers may be due to this. However, if a restrictive reading is forced, the sentences are awkward:

- i. *Ze* *diputatu* *joan* *da* *oporretan*?      ii. \**Bera/pro* *hiltzeko* *mehatxuak* *kezkatzen* *zuen*a.  
 Which deputy has gone on vacation?      The one that the threat to kill her/him worried

- (9) ?? Bera<sub>i</sub>-ren jabeak e<sub>i</sub> erre zuen etxea<sub>i</sub> salgai dago.  
 it-gen owner burn aux-n house on sale is  
 The house that its owner burned is on sale
- (10) ?? Bera<sub>i</sub> hiltzeko mehatxuak e<sub>i</sub> kezkatzen zuen diputatua<sub>i</sub>  
 s/he kill threat worry aux-n deputy  
 oportretan joan da.  
 on vacation go aux  
 The deputy that the threat to kill her/him worried has gone on  
 vacation

If WCO is accounted for by Koopman and Sportiche's (1982) Bijection Principle, which requires a one-to-one correspondence between operators and variables, the oddity of (9)-(10) follows straightforwardly: an operator in Comp is binding two variables: the variable left by operator movement, and the pronoun *bera*, which is contextually defined as a variable (it is a locally A'-bound pronoun in an A-position). Alternatively, if Safir's (1986) Parallelism Constraint on Operator Binding is the right approach to WCO, the conclusion must be drawn that an operator is binding both a pronominal variable (*bera*) and a non-pronominal variable, namely the trace of the operator. Either way, *e* in (9)-(10) (and in (1)) cannot be *pro*:

- (11) ?? ... [op<sub>i</sub> ... bera<sub>i</sub> ... e<sub>i</sub> ...] etxea<sub>i</sub>/diputatua<sub>i</sub> ...

Hence, we are left with what we might consider the null hypothesis in the analysis of relative clauses: across languages, the formation of a relative clause involves an operator-variable configuration. In the absence of overt wh-movement, I will assume that a null operator uniformly moves to the specifier of Comp in sentences (1)-(5).<sup>6</sup> In (2) through (5), the variable is an NP embedded in PPs headed by lexically null postpositions, the motivation of which is explored in the next section. This variable is subject to the Strong Binding Condition on Variables (Chomsky 1986a), which requires that a variable and a chain headed by a null operator be bound at LF by an overt argument (the postcedent of the relative clause) that will assign semantic content to it. The Visibility Condition and the  $\theta$ -Criterion are complied with: the verb in (1) and the empty Ps in (2)-(5) assign case and  $\theta$ -role to the operator prior to movement. Thus, the following configurations obtain:

- (12) (=1) ... [NP<sub>CP</sub> op<sub>i</sub> ... [NP e<sub>i</sub>] ...] N<sub>j</sub> ] ... (i=j)
- (13) (=2) ... [NP<sub>CP</sub> op<sub>i</sub> ... [[NP e<sub>i</sub>]  $\emptyset$  PP] ...] N<sub>j</sub> ] ... (i=j)
- (14) (=3) ... [NP<sub>CP</sub> op<sub>i</sub> ... [[NP e<sub>i</sub>]  $\emptyset$  PP] ...] N<sub>j</sub> ] ... (i=j)
- (15) (=4) ... [NP<sub>CP</sub> op<sub>i</sub> ... [[[NP e<sub>i</sub>]  $\emptyset$  PP]  $\emptyset$  PP] ...] N<sub>j</sub> ] ... (i=j)
- (16) (=5) ... [NP<sub>CP</sub> op<sub>i</sub> ... [[[NP e<sub>i</sub>]  $\emptyset$  PP]  $\emptyset$  PP] ...] N<sub>j</sub> ] ... (i=j)

(6) Or rather, it is generated there and then forms an A'-chain with the variable NP it c-commands and binds. I remain neutral on the issue. Note that my account is compatible with both.

We now have a unified treatment of relative clause formation, although we still lack an explanation for the ungrammaticality of (4)-(5). This explanation is the subject of section 4. We now turn to motivate the existence of null postpositions.

## 2. The Licensing of Null Postpositions

So far I have been assuming the existence of empty postpositions without specifically defining their licensing mechanism. The most principled account of empty Ps that I am aware of in the generative literature is that developed by Emonds (1985: ch.5) and subsequent work (1987, 1989). Emonds (1985, 1987) argues that closed categories (= Det, I, P, ...) bearing some kind of features can be null throughout a syntactic derivation as long as those features are alternatively realized in a phrasal sister of that category. For instance, in English the determiner may be null with a count noun only when the feature *plural* (generally a feature in Spec (N)) is alternatively realized in a sister noun, but not otherwise:

- (17) \*Student came / Students came

The same is claimed to be true of tense and the specifier of Adjectives, which can be alternatively realized in V and A respectively. This generalization is summarized by Emonds as the Invisible Category Principle:

- (18) *Invisible Category Principle*

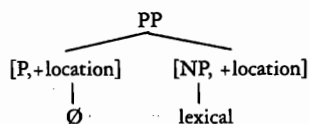
A closed category B with positively specified features  $C_i$  may remain empty throughout a syntactic derivation if the features  $C_i$  (save possibly B itself) are all alternatively realized in a phrasal sister of B. (Emonds 1987: 618)

Alternative realization can be understood as a productive morphological realization (such as an inflectional ending) or as a marked lexical realization, for example in the case of English adverbial NPs.<sup>7</sup>

As Emonds (1985) himself suggests, the ICP predicts that, in a language with no productive morphological case (say English, Spanish or French), where NPs do not contrast by virtue of being marked dative, ablative and so on, we do not usually expect to find cases of alternative morphological realization of properties of P in the NP (although lexical realization as in note 8 may be an option). Case inflecting languages like German, on the other hand, may allow empty Ps in general because there are minimal pairs of NPs marked as +/- dative with +P and -P.

(7) Emonds (1987) claims that the D-Structure of English bare adverbial NPs follows from the ICP on the reasonable assumption that the head noun of those NPs (which constitute a restricted subclass of nouns) are inherently marked with a lexical feature [+location] matching that of the preposition. Therefore, the ICP licenses a null P, making these NPs parallel to plain PPs:

- i. I saw Ainhoa [<sub>PP</sub>  $\emptyset$  [<sub>NP</sub>that day]]



With regard to inflectional case, Basque patterns together with German insofar as nouns can differ from each other by virtue of being marked dative, ergative and so on:

- (19) absolutive NP: etxea- $\emptyset$  the/a house  
 dative NP: etxea-ri to the/a house  
 ergative NP: etxea-k the/a house  
 locative PP: etxea-n in the/a house  
 ...

Thus, if we view Basque obliquely case-marked NPs as PP configurations where the features of the category P are systematically realized in the NP, it follows from the ICP that empty Ps may be licensed in Basque (perhaps this is also true of lexical NPs). In other words, when the features of P (dative, locative) are realized in the NP, postpositions can remain empty:<sup>8</sup>

- (20)
- ```

      PP
     /  \
  NP [+F $\alpha$ ]  P [+ $\alpha$ ]
   |         |
  null (lexical)  $\emptyset$ 
  
```

We can therefore conclude that the presence of empty Ps in (2)-(5) follows directly from the ICP, the different features of the postpositions being realized in the operator (or the variable): goal, location, motive, instrument, etc.<sup>9, 10</sup>

(8) Note, however, that the device of alternative lexical realization (i.e. the possibility of bare adverbial NPs) is not generally possible in Basque. This must be a direct consequence of the rich morphological case system of Basque (i.e. in Basque one could not distinguish bare NPs from "adverbials NPs").

(9) In the case of complex PPs, the relevant features can be borne by the upper P and then be transmitted to the lower one. Or, perhaps more plausibly, we can adopt Baker's (1988) abstract incorporation device so that the lower P incorporates into the higher one:

- i.
- ```

      PP
     /  \
    PP  P+Pi
   /  \
  NP  Pi
  
```

Crucially, the intermediate PP still counts as a barrier for Subjacency, although it must not count for government according to Baker's *Government Transparency Corollary*. This is consistent with Baker's view (1988: chp. 2) that the notion of government and barrierhood triggered by incorporation is not intended to account for Subjacency.

(10) A question remains unanswered in connection with the licensing of empty Ps in English and Basque: why sentences like (i) (i.e. = the English counterpart of (2) above) are ungrammatical:

- i. \*The house [OP<sub>i</sub> Mary lives [pp $\emptyset$  [NP<sub>e</sub>]]] is far away from here.

In other words, why can (i) not mean "the house Mary lives in is far away from here"? The explanation is straightforward: in English, unless a noun has the inherent lexical feature [+location], nothing forces the empty P to be interpreted as being "in". In Basque, however, locational relationships not expressed by the postposition *-n* must be expressed by means of a noun bearing the postposition *-n* itself preceded by a genitive PP; the Basque counterpart of "behind the house" is best translated as "in the back of the house". Therefore, a sentence like (2)-(3) with a non-lexical NP can never be interpreted ambiguously because there is only one P that could bear the feature [+location].

A final question with respect to PPs with empty heads is to ask whether such projections are subject to any other licensing requirement or subject to any other principle of the grammar. I shall not pursue this matter here, although I believe that these empty PPs may have to be governed by a head (= V).

### 3. Predictions and Apparent Paradoxes of the Null Operator Hypothesis

#### 3.1. *A prediction and ...a problem?*

As suggested in the introduction, the unified account of wh-movement and foci developed by Ortiz de Urbina (1989) is assumed in this article. By S-Structure both focused XPs and wh-phrases move to the spec of Comp triggering in general V-2 phenomena (analyzable as instances of I-to-C movement, cf. Chomsky 1986b) even in embedded clauses in the case of bounded movement:

(21) [<sub>CP</sub> Nora<sub>i</sub> [<sub>C</sub> uste duzu<sub>j</sub> [<sub>IP</sub> pro [<sub>CP</sub> t<sub>i</sub> joan dela<sub>k</sub> [<sub>IP</sub> Ainhoa t<sub>i</sub> t<sub>k</sub>] t<sub>j</sub>]  
Where do you think Ainhoa went t ?

(22) [<sub>CP</sub> ETXERA<sub>i</sub> [<sub>C</sub> uste dut<sub>j</sub> [<sub>IP</sub> pro [<sub>CP</sub> t<sub>i</sub> joan dela<sub>k</sub> [<sub>IP</sub> Ainhoa t<sub>i</sub> t<sub>k</sub>] t<sub>j</sub>]  
TO THE HOUSE I think Ainhoa went t

This seems to predict the following: if the specifier of Comp is occupied by a null operator in relative clauses, no wh-phrase or focused XP should be able to occur inside them: the Doubly Filled Comp filter would be violated otherwise. The prediction is borne out by the data in the unmarked case (with neutral intonation):

(23) \*Asierrek [Ainhoak nor deitu duen ordua] ahaztu du?  
who call aux-n time forget aux  
Asier forgot the time that Ainhoa called who?

(24) \*Asierrek [Ainhoak LAGUNA deitu duen ordua] ahaztu du.  
friend  
Asier forgot the time that Ainhoa called A/THE FRIEND

The strength of the prediction seems to be somewhat undermined by the fact, noted first by Ortiz de Urbina 1989, that wh-phrases in Basque can pied-pipe the whole island in which they are contained to the specifier of the matrix Comp. The strategy is not possible with focused elements:

(25) [<sub>CP</sub> [<sub>CP</sub> Nora [<sub>C</sub> joan dela Ainhoa [<sub>IP</sub> ...]]] [<sub>C</sub> uste duzu [<sub>IP</sub> ...  
(cf. (21))

(26) \* [<sub>CP</sub> [<sub>CP</sub> ETXERA [<sub>C</sub> joan dela Ainhoa [<sub>IP</sub> ...]]] [<sub>C</sub> uste dut [<sub>IP</sub> ...  
(cf. (22))

If the same clausal pied-piping strategy applies to sentences (23)-(24) and we generate the NP that contains the relative clause in the specifier of C of the matrix clause, we obtain:



- (27) (\*) [<sub>CP</sub> [<sub>NP</sub> [<sub>CP</sub> Ainhoak nor deitu duen] ordua] [<sub>C</sub> ahaztu du  
[<sub>IP</sub> Asierrek ... ]] ? (cf. (23))
- (28) \* [<sub>CP</sub> [<sub>NP</sub> [<sub>CP</sub> Ainhoak LAGUNA deitu duen] ordua] [<sub>C</sub> ahaztu du  
[<sub>IP</sub> Asierrek ... ]]<sup>11</sup> (cf. (24))

Clausal pied-piping is of no help for a focused phrase; this is expected since foci operators cannot pied-pipe the whole clause that contains them in complement clauses either (cf. (26)). (27), on the other hand, requires a more detailed analysis. Artiagoitia (1990) stars sentences like this on a par with (29)-(31) on the assumption that they violate the Doubly Filled Comp (at S-Structure):

- (29) (\*) [Umeari nork atera dion argazkia] izorratu da t ?  
child-dat who take aux-n picture spoil aux  
[The picture that who has taken of the child] has been damaged?
- (30) (\*) [Harria nori bota dion neska] atxilotu dute t ?  
stone who-dat throw aux-n girl imprison aux  
They put in jail [the young woman that threw a stone at who] ?
- (31) (\*) [Norentzat egin duzun pastela] jan du Asierrek t ?  
who-for make aux-n cake eat aux  
Asier ate [the cake that you made for whom] ?

It is indeed the case that many speakers (including myself) regard (27) and (29)-(31) as ungrammatical or as extremely odd questions. However, and as pointed out by de Rijk (1972a), other speakers do seem to accept these sentences, which he takes as evidence that Basque allows *wh*-phrases inside relative clauses in general.<sup>12</sup> Ortiz de Urbina (1989) finds this somewhat problematic for the null operator analysis of the relative clauses: either the Doubly Filled Comp filter has to be relaxed for Basque, or else we may assume that the null operator is in fact adjoined to IP (rather than in the spec of Comp). In what follows, I would like to suggest that the apparent problem posed by (speakers that accept) sentences (27) and (29)-(31) can be explained along the lines of Pesetsky 1987; moreover, once the necessary parallelism with other languages is drawn, one can claim that the problem for the NOH does not even exist.

(11) Interestingly, (28) may be made sound somehow better than (24) if the intonation is forced upon LAGUNA. This can be considered an instance of "extra emphasis by phonetic means" (Ortiz de Urbina 1989: 241), different from syntactic foci under discussion here. Note moreover that nothing would prevent the presence of two focused XPs in matrix and relative clause if the latter in Basque did not have a null operator in the spec of C. But such possibility is ruled out:

- i. \* ASIERREK ahaztu du Ainhoak LAGUNA deitu duen ordua.

The marginal contrast between (24) and (28) may thus be due to the pre-clausal character of the NP in the latter. In (24) phonetic emphasis of *laguna* would break the unmarked intonation pattern of the sentence right in the middle of it.

(12) Interestingly, he points out that such sentences are especially appropriate as echo questions. This is suspect. Nevertheless, I will still consider that those sentences are fully grammatical for some speakers without the echo interpretation.

### 3.2. *The problem is no problem.*

There is evidence that the set of sentences mentioned above is no threat to the NOH in that the wh-phrases inside them remain in-situ. For one thing, the V-2 phenomena that wh-phrases usually trigger in Basque is only apparent in (27), (29)-(31) for, if we take a triadic verb like *atera* or *bota* in (29) and (30), the more internal argument can follow the wh-phrase (i.e. in the unmarked order) and no contrast is found:

(32a) [[umeari nork atera dion] argazkia] izorratu da t ? (=29)

(32b) [[nork umeari atera dion] argazkia] izorratu da t ?

(33a) [[harria nori bota dion] neska] atxilotu dute t ? (=30)

(33b) [[nori harria bota dion] neska] atxilotu dute t ?

In the (a) examples, where the underlying order is not respected, we can assume that 'scrambling' has adjoined *umeari* and *harria* to CP leaving the wh-phrase in situ (thus producing the effect of V-2 phenomena). In the (b) examples, the arguments remain in their canonical, underlying position, and the wh-phrases are still in situ without V-2; no contrast is found between the (a) and (b) sentences. Hence, the V-2 effect of, not only (29) and (30), but also (27) and (31) is apparent and there is no reason to assume wh-movement of any kind by S-Structure on the basis of I-to-C movement.<sup>13</sup>

The second argument for analyzing wh-phrases in relative clauses as remaining in situ comes from Pesetsky's (1987 and references therein) discussion of the LF/Subjacency controversy in Japanese (see also Hasegawa 1984, 1985). In order to argue for the relevance of Subjacency at LF, Pesetsky shows that an answer to a non-D(is-course) linked wh-phrase inside a relative clause (or an adjunct for that matter) in Japanese has to recapitulate the entire island if the answer is to be felicitous (if the wh-phrase is D-linked, a short answer is possible). He assumes the following principle holds in Japanese:

(34) *Felicitous Principle*

A felicitous answer to a wh-question consists of a phrase structurally identical to the wh-phrase whose index is immediately dominated by the Comp of the question at LF. (Pesetsky 1987: 114)

Then, it follows that the answer to a wh-phrase inside a relative clause has to recapitulate the whole NP that includes the relative clause on the assumption that the *wh-phrase in situ* pied-pipes the whole NP to the specifier of Comp at LF:

(35a) Mary-wa [<sub>NP</sub> [<sub>S</sub> John-ni nani-o ageta] hito-ni] atta-no  
What did Mary meet the man who gave to John?

(13) Hence the actual representation of (27) and (31) can be this:

(27) [<sub>CP</sub> [<sub>NP</sub> [<sub>CP</sub> OP<sub>i</sub> [Ainhoak [<sub>PP</sub>[t<sub>i</sub>]Ø] nor deitu duen]] ordua] [<sub>C</sub> ahaztu du [<sub>IP</sub> Asierrek ... ]]

(31) [<sub>CP</sub> [<sub>NP</sub> [<sub>CP</sub> OP<sub>i</sub> [pro norentzat [[t<sub>i</sub>] egin duzun]] pastela] [<sub>C</sub> jan du [<sub>IP</sub> Asierrek ... ]]

(35b) Mary-wa [<sub>NP</sub> t<sub>i</sub>] atta-no [<sub>Comp</sub> John-ni nani-o ageta hito-ni];  
 (= LF representation)

(36a) \*/?? Konpyuutaa desu  
 It's a computer

(36b) Konpyuutaa-o ageta hito desu  
 It's the man who gave a computer

Moreover, Pesetsky notes (yet gives no explanation for the fact) that questions containing aggressively non D-linked phrases with *ittai* ('the hell') do not allow pied-piping at LF and are therefore ungrammatical:

(37) \*Mary-wa John-ni *ittai nani-o* ageta hito-ni atta-no  
 What the hell did Mary ...?

The interest of Pesetsky's analysis lies on the fact that the Basque data manifest a striking parallelism with Japanese, except that pied-piping takes place in Basque by S-S (and not between S-S and LF). First of all, speakers that accept sentences of the type (27), (29)-(31) cannot answer them with a short phrase that matches the wh-phrase but rather need to recapitulate the whole pied-piped structure. Thus, only (38b) is an appropriate answer for (29):

(29) [[ Umeari nork atera dion] argazkia] izorratu da t ?  
 [The picture that who took of the child] has been damaged?

(38a) \*amak  
 The mother

(38b) (umeari) amak atera dion argazkia  
 The picture that the mother took (of him/her)

Secondly, aggressively non D-linked wh-phrases are not allowed inside relative clauses by these same speakers, even if there is pied-piping:

(39) \*Ainhoak nor arraio deitu duen ordua ahaztu du Asierrek?  
 Asier forgot the time Ainhoa called who the hell?

Consequently, and assuming that the Felicitous Principle holds in Basque at S-Structure, the parallelism between Japanese and Basque is complete: Basque (at least for some speakers) allows for the presence of wh-phrases in situ inside relative clauses (and, according to Ortiz de Urbina 1989, adjuncts as well);<sup>14</sup> these wh-phrases need not move to the specifier of Comp for they are able to pied-pipe the whole syntactic island in which they are contained. Pied-piping takes place by S-Structure, and the correctness of the approach is shown by the absence of V-2 phenomena and by the fact that an answer to these questions has to recapitulate the whole pied-piped struc-

(14) As expected, if a wh-phrase inside an adjunct is pied-piped to the spec of Comp, the answer to the question has to recapitulate the whole adjunct:

i. Zer ikusi ondoren joan zinen hemendik?    ii. \*Filmea    iii. Filmea ikusi ondoren  
 After seeing what did you leave?    The movie    After seeing the movie

ture. Japanese, on the other hand, shows the same kind of phenomena at the level of LF.<sup>15</sup>

To summarize, I have explored in this section the consequences of the NOH in the analysis of relative clause formation in Basque. It was first shown that the prediction that neither *wh*-phrases nor foci are allowed inside relative clauses is confirmed in the unmarked case. In the case of clausal pied-piping to the specifier of *Comp*, some speakers still consider *wh*-phrases inside relative clauses ungrammatical due to their analyzing them as violations of the Doubly Filled *Comp* filter. The fact that some speakers accept these pied-piped structures was claimed to be consistent with and parallel to Pesetsky's (1987) analysis of clausal pied-piping in Japanese; crucially, we proved it to be the case that the *wh*-phrases remain in situ in these cases, so no conflict arises with the NOH. The dichotomy in the levels at which clausal pied-piping occurs is a reflection of the *wh*-parameter: *wh*-phrases move at S-S in Basque, at LF in Japanese.

#### 4. A Subjacency Account of Non-relativizable Postpositions

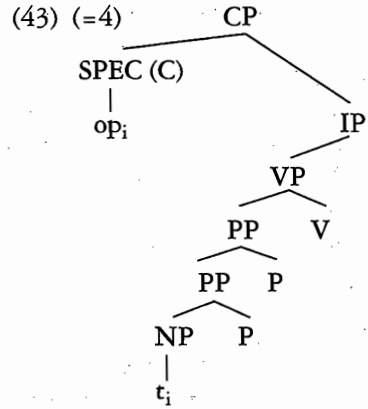
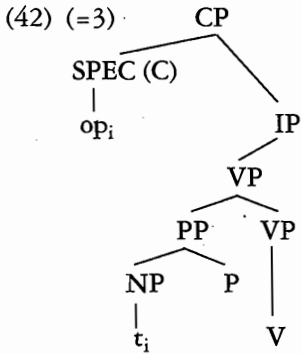
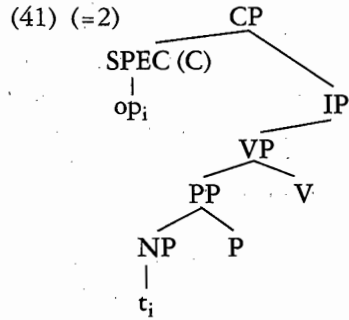
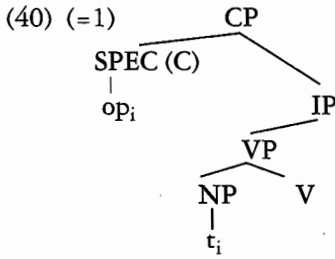
The NOH, though providing some insight into the relative clause formation in Basque, does not yet give an explanation of the central problem here: the ungrammaticality of (4)-(5) (= (15), (16)), as opposed to the grammaticality of (2)-(3) (= (13), (14)). The issue relates to the different configurations that we sketched in (12)-(16), repeated (and further expanded) here for convenience:

(15) Ortiz de Urbina (1989: 256) notes (citing Koldo Sainz) that there is a contrast between argument and adjunct *wh*-phrases inside relative clauses. (31), where the *wh*-phrase corresponds to an adjunct, and (2) below suggest that this is not a correct observation (point made to me by B. Oyharçabal (in lit.)). The only example provided by Ortiz de Urbina is with *zergatik* 'why', a reason adverbial:

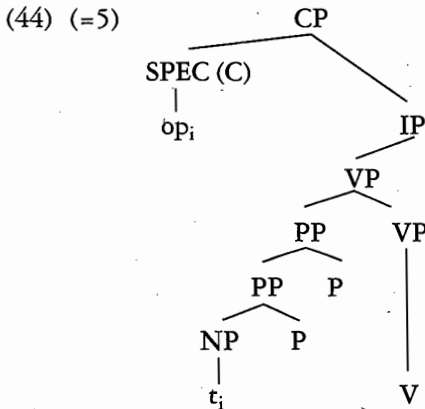
- i. [[Nora ihes egin duen] preso] atxilotu dute?  
They have put in jail [the convict [that fled where]] ?
- ii. \*[[Zergatik egin duan] lana] gustatzen zaizu?  
You like [the job [that I did why]] ?

Ortiz de Urbina assumes that *wh*-phrases in pied-piped structures undergo further movement at LF; the ungrammaticality of (ii) would follow from the disjunctive ECP (Chomsky 1986b) on the assumption that *zergatik* will fail to antecedent-govern its trace. Here, I assume no further movement at LF of *wh*-phrases in situ in pied-piped structures (Basque S-S = Japanese LF). In this framework, the ungrammaticality of (ii) (but not of sentences like (i), with non-sentential adverbials) is expected. As pointed out by Rizzi (1990: 46-51), "the only possibility of" "*wh*-movement" for a sentential adverbial will be direct generation in the spec of *Comp*" (and further movement from Spec to Spec). Since this position is occupied by the null operator, *zergatik* is forced to remain in situ: hence it cannot be interpreted as an operator. Even if we assumed further LF movement of *zergatik* and adopted Rizzi's version of the ECP, no head-government would be possible for it (reason adverbials are too high in the tree to be governed by V or Tense (if we accept the split INFL hypothesis (Pollock 1989), and Agr can only govern elements that are coindexed with it).

[+relativizable] (=NP, locative, adlative, ablative, instrumental PPs)



[-relativizable] (= benefactive, commitative, motivative PPs)



Contrary to what one might have expected, the asymmetry observed here is not one between complements (sentences (1/40), (2/41) and (4/43)) and adjuncts ((3/42) and (5/44)), as de Rijk (1972a: 92) already points out: "strict subcategorization is irrelevant to relativization". It seems then that the contrast between (2)-(3) (= (41)-(42)) and (4)-(5) (= (43)-(44)) should not be explained in terms of the ECP, but rather has to do more with the distance mediating between the null operator and the variable. In other words, I would like to claim that (4) and (5) are Subjacency violations in that the null operator crosses two bounding nodes when moved to the specifier of Comp, namely two PPs. This, in turn, amounts to saying that, in Basque, PPs, as well as NPs and CPs, must be bounding nodes, a result that will be shown to follow from the *Barriers* framework (see (4.2.) below). If the postpositional phrase is lexical, this statement is redundant because postposition stranding will then be ruled out by independently motivated principles of the grammar, say the Stray Affix Filter (Baker 1988: 140): there cannot be postposition stranding in Basque when the PP is lexical, because postpositions are bound morphemes and not independent words. The crucial difference, then, between (2)-(3) and (4)-(5) comes down to the number of nodes crossed. A Subjacency account has the advantage of being compatible with the fact that, in certain contexts, the ungrammaticality can arguably be overridden (cf. Oyharcabal 1986 cites some examples from literary texts); we would certainly not expect this if the ECP (a stronger principle of the grammar than Subjacency) were responsible for the ungrammaticality of the examples considered so far (cf. Chomsky 1986a).

#### 4.1. *Subjacency in Basque.*

In the beginning of this section, I have informally characterized PP, NP and CP (and not IP) as bounding nodes for Basque. This affirmation deserves some careful consideration. For one thing, Basque obeys, as noted by de Rijk (1972a), the Complex Noun Phrase Constraint, assumed by Chomsky 1986b to be a subcase of Subjacency:

- (45) \* $[_{CP} op_i [_{NP}[_{CP} op_j [_{IP} bost aldiz [_{NP} t_i] [_{NP} t_j] irakurri duen]]$   
 $apaiza_k]$  ezagutzen dudana] liburua $_i$ ... ( $i=k, j=1$ )  
 The book I know the priest that has read t five times

This, however, does not prove too much. What we need is to check whether Basque can violate the Wh-Island Constraint (cf. Rizzi 1982), so that it becomes clear that CP and not IP is the relevant bounding node. We see that indeed such a possibility exists in Basque:

- (46)  $[_{CP} Nora_j esan duzu_m [_{CP} t_j ez dakizula_i [_{CP} nork_i ihes egin duen_k$   
 $[_{IP} t_i t_j t_k] t_l] t_m]$ ?  
 Where did you say you don't know [who fled t]?  
 (47)  $[_{CP} Zein herritan_j esan du_m [_{IP} berriemaileak [_{CP} t_j ez dakitela_i$   
 $seguru [_{CP} zenbat jende_i hil den_k [_{IP} t_i t_j t_k ] t_l] t_m]$ ?  
 [In which village] did the reporter say that they don't know for  
 sure [how many people died t ]?

- (48) [<sub>CP</sub> Non<sub>j</sub> ez dakizu [<sub>CP</sub> nor<sub>i</sub> bizi den<sub>k</sub> [<sub>IP</sub> t<sub>i</sub> t<sub>j</sub> t<sub>k</sub>]]]?  
Where don't you know [who lives t ]? <sup>16</sup>

In (46)-(48), the overt wh-operator is forced to move past the CP headed by another operator and, apparently, no ungrammaticality results. Two IPs are crossed but one CP in the first 'jump'. Therefore, CP is the relevant bounding node. According to the informal characterization of Subjacency that we have made so far, movement of a null operator contained within a simple PP will yield ungrammatical results if extracted past the CP in which it is contained. That is to say, long extraction should be sensitive to whether the operator is overt and corresponds to the whole PP (as in (46)-(48)), or covert (= null operator) and corresponds to an NP. In the latter case, the null operator will have to cross one more node (a PP); thus, two bounding nodes will be crossed and the sentence should be ungrammatical. The prediction turns out to be correct:

- (49) \* [<sub>CP</sub> op<sub>k</sub> [<sub>CP</sub> nor<sub>k</sub><sub>i</sub> ihes egin duen<sub>j</sub> [<sub>IP</sub> t<sub>i</sub> [[t<sub>k</sub>] Ø<sub>PP</sub>] t<sub>j</sub>]] ez dakigun]  
herria<sub>i</sub>. (k=1)  
The town [op we don't know [who fled [[t] Ø<sub>PP</sub>]] ]
- (50) \* [<sub>CP</sub> op<sub>k</sub> [<sub>CP</sub> zenbat jende<sub>i</sub> hil den<sub>j</sub> [<sub>IP</sub> t<sub>i</sub> [[t<sub>k</sub>] Ø<sub>PP</sub>] t<sub>j</sub>]] seguru ez  
dakigun] herria<sub>i</sub>. (k=1)  
The village [op we don't know sure [how many people died [[t] Ø<sub>PP</sub>]] ].
- (51) (?) [<sub>CP</sub> op<sub>k</sub> [<sub>IP</sub> [<sub>CP</sub> nor<sub>i</sub> bizi den<sub>j</sub> [<sub>IP</sub> t<sub>i</sub> [[NP<sub>i</sub> t<sub>k</sub>] Ø<sub>PP</sub>] t<sub>j</sub>]] ez dakidan  
]] etxea<sub>i</sub>. (k=1)  
The house [op I don't know [who lives [[t] Ø]] ]

As we shall see in the next subsection, the special status of (51) has to do with the fact that the postpositional phrase that has been relativized is a true complement to the verb *bizi* 'live'; this makes the subcategorized PP transparent for movement.<sup>17, 18</sup>

(16) Sentences (i) and (ii) are also grammatical:

- i. Zer ez dakizu nor<sub>i</sub> idatzi duen<sub>j</sub>? ii. [op<sub>i</sub> nik/pro [nor<sub>k</sub> t<sub>i</sub> idatzi duen] ez dakidan] ipuina  
What don't know who wrote t? The story [op that I don't know who wrote t]

Again, the Wh-Island Constraint is not respected. As H. Contreras points out to me, the wh-phrase/operator may be base-generated and coindexed with *pro* (Basque is a null-object language) in the embedded sentence, thus undermining the argument of the Wh-Island violation. But see section 1 of this article.

(17) There seems to be some variation in the acceptability of (51); as suggested by Artiagoitia (1990: 33), this may be related to a similar phenomenon in English (Johnson 1988: 601): L-marked PPs resist extraction out of their complements. The Basque data here differs from English in that we do not extract a NP out of the complement to an L-marked PP, but rather the complement itself.

(18) One might wonder how the ECP is complied with in (46)-(47), sentences where adjuncts undergo long-distance movement across a wh-island. If the ECP reduces to head-government as assumed by Rizzi (1990: chp. 3), then government of the VP-internal adjuncts by the verb in (46)-(47) (*non* is a complement in (48)) is sufficient for the ECP to be respected. Note that other (non VP-internal) adjuncts yield ungrammatical sentences if they undergo the same kind of movement:

- i. ??/\* Nola esan duzu ez dakizula [nor<sub>i</sub> t ihes egin duen] ?  
How did you say you don't know [who fled t] ?
- ii. \*\*Zergatik esan duzu ez dakizula [nor<sub>i</sub> t ihes egin duen] ?  
Why did you say you don't know [who fled t] ?

The data seem to favor the claim that head-government is enough to abide by the ECP; movement would then be constrained by Subjacency (and by Binding and the Chain forming algorithms) (See Rizzi 1990: chp. 3).

#### 4.2. Subjacency in Terms of Barriers.

After having determined the bounding nodes for Basque in a rather tentative way, we now turn to the question of how this can be stated in terms of the *Barriers* framework developed by Chomsky (1986b), where Subjacency is defined as follows:

- (52)  $\beta$  is n-subjacent to  $\alpha$  iff there are fewer than  $\alpha+1$  barriers for  $\beta$  that exclude  $\alpha$  (Chomsky 1986b: 30)

Crossing two barriers (being 2-subjacent) yields, according to Chomsky, a considerable decrease in acceptability. We henceforth adopt Johnson's (1988) modification of the definition of L-marking whereby  $\alpha$  has to be a  $\theta$ -governor and a lexical category in order to be an L-marker (see Johnson 1988 for motivations).<sup>19</sup> Under this definition, P [-N, -V] cannot be an L-marker even though it is a  $\theta$ -governor. We are now in a position to propose a straightforward account for (2)-(5), the configurations of which were reproduced in (40)-(44). In (1), there is no barrier between the null operator and the trace in the NP (it is L-marked by V) after the former moves to the specifier of Comp (or when the chain is formed otherwise). The same holds of sentence (2), where the PP is L-marked (it is a complement to the verb *bizi*). In (3), the null operator will cross one barrier (the P is not an L-marker) and the sentence will still be grammatical assuming adjunction to VP.<sup>20</sup> In (6), however, the lower PP will constitute an inherent barrier (it is not L-marked). The higher PP will inherit barrierhood from it, and, even if we assume adjunction to VP, two barriers will be crossed. In (7), the sentence is ungrammatical because both PPs are inherent barriers (neither is L-marked). The resulting derivations are as follows (bold nodes = barriers):

- (53) [<sub>CP</sub> OP<sub>i</sub> [<sub>IP</sub> ... [<sub>VP</sub> [<sub>NP</sub>t<sub>i</sub>] V ]]] (=1, 40)  
 (54) [<sub>CP</sub> OP<sub>i</sub> [<sub>IP</sub> ... [<sub>VP</sub> [[<sub>NP</sub>t<sub>i</sub>]  $\emptyset$  PP] V ]]] (=2, 41)  
 (55) [<sub>CP</sub> OP<sub>i</sub> [<sub>IP</sub> ... [<sub>VP</sub> t<sub>i</sub> [<sub>VP</sub> [[<sub>NP</sub> t<sub>i</sub>]  $\emptyset$  PP] V ]]] (=3, 42)  
 (56) \* [<sub>CP</sub> OP<sub>i</sub> [<sub>IP</sub> ... [<sub>VP</sub> t<sub>i</sub> [<sub>VP</sub> [[[<sub>NP</sub> t<sub>i</sub>]  $\emptyset$  PP]  $\emptyset$  PP] V ]]]] (=4, 43)  
 (57) \* [<sub>CP</sub> OP<sub>i</sub> [<sub>IP</sub> ... [<sub>VP</sub>t<sub>i</sub> [<sub>VP</sub> [[[<sub>NP</sub> t<sub>i</sub>]  $\emptyset$  PP]  $\emptyset$  PP] V ]]]]] (=5, 44)

(19) The main empirical problem is that even  $\theta$ -governed PPs become barriers.

(20) This is the only type of adjunction discussed in *Barriers*. Note that extraction through the spec of PP is not possible because the PPs under discussion lack an intermediate projection (P') and a specifier. In principle, nothing in the framework would prevent adjunction to the highest PP in (56)-(57). However, I will limit adjunctions to VP (and perhaps to AP predicates):

- i. Adjunction is only possible to a lexical  $X^{max}$  that is not an argument.

If it were to allow adjunction to PP predicates, we could re-state (i) as

- ii. Adjunction is only allowed to an  $X^{max}$  that is not an argument if it has a subject (i.e.  $X^{max}$  = predicate)

The nature of (i/ii) is as stipulative as Chomsky's. I will not explore the consequences of (i/ii) any further and leave the issue open for investigation.



We thus now have a purely configurational explanation for the asymmetry between (4)-(5) and (6)-(7).<sup>21, 22</sup>

## 5. The Distribution of Resumptive Pronouns

A Subjacency based approach to the different behavior of the two types of Postpositional Phrases with respect to relativization makes a basic prediction: if we accept, as is standard practice in generative syntax (see inter alia Sells 1984, Safir 1986, Contreras 1989), that resumptive pronouns generally occur in syntactic wh-islands (inside relative clauses in the classical examples) to overcome Subjacency violations, then it follows that resumptive pronouns should be able to occur only inside those PPs that resist relativization; otherwise, a resumptive pronoun inside a relative clause where the variable is contained in a simple PP (= [[vbl]  $\emptyset$  PP]) will not be tolerated since the pronoun is subjacent to the operator (as shown in the previous section). Let us formalize the principle determining the distribution of resumptive pronouns as follows:

(58) *Antisubjacency Condition on Pronominal Variables*

A [+pronominal] variable must be nonsubjacent to its A'-binder.

(Contreras 1989a)

We are now in good shape to see that the data confirm the prediction made by our analysis in section 4: the impossibility of forming relative clauses of the type exemplified by (4)-(5) is overcome by the presence of resumptive pronouns, not tolerated otherwise:

- (59) Gaur ikusi dut [iaz op<sub>i</sub> bera<sub>i</sub>-re-kin/\*[[[t] $\emptyset$ ] $\emptyset$ ] haserretu ginen  
 today see aux last year he-with get-angry aux-n  
 mutila<sub>i</sub>. (i=j)  
 boy-A  
 I saw today the boy<sub>i</sub> that we got angry with him<sub>i</sub>/\* $\emptyset$  last year (i=j)
- (60) [op<sub>i</sub> oparia bera<sub>i</sub>-ren-tzat/\*[[[t] $\emptyset$ ] $\emptyset$ ] erosi genuen] irakaslea;  
 Present (s)he-for buy aux-n teacher  
 gaisorik dago. (i=j)  
 sick is  
 The teacher<sub>i</sub> that we bought a present for her/him<sub>i</sub>/\* $\emptyset$  is sick

(21) The ECP for the variable inside the deepest NP is satisfied locally via (head-)government by the empty postpositions.

(22) Note that under the *Barriers* approach to Subjacency, there is one barrier crossed in examples (46)-(47) (viz, the embedded tensed CP). This, although it makes the structure good for Subjacency, should be enough to prevent intermediate traces in adjoined positions to VP to be antecedent-governed (the wh-phrases are adjuncts) from the next trace in the higher VP (the most deeply embedded trace is head-governed by the verb; see note 18). Hence, it is either the case that these intermediate traces are not subject to Chomsky's (1986b) ECP, or that antecedent-government is not part of the ECP (the latter being reducible to a head-government requirement), and can be reduced somehow to Subjacency (see Lasnik and Saito forthcoming). A third possibility is that antecedent-government is possible across one barrier in Basque. This also bears on the

- (61) [op<sub>i</sub> Ainhoak (\*ber<sub>i</sub>-tan)/ [[t]Ø] inglesa irakasten duen] eskola,  
           it-in  
           berria da (i=j)  
           The school Ainhoa teaches English (\*at it) is new

In (59) and (60), the null operator binds the pronoun *bera*, which is contained in a PP headed by the committative and benefactive postpositions respectively. Since these two postpositions are of the complex type (i.e. =6c), the pronoun is antisubjacent to the operator. Without the resumptive pronoun, both sentences are ungrammatical, of course, because the variable contained in the PP is 2-subjacent to its operator. (61) shows the opposite effect with a locative (thus, simple) postposition: a resumptive pronoun is subjacent to the operator and the sentence is ungrammatical. With a non-pronominal variable contained in a PP headed by a null postposition, on the other hand, the sentence is grammatical because no Subjacency violation is involved. If the PPs in question are complements to the verb, the same results obtain, as expected:

- (62) [op<sub>i</sub> Asier ber<sub>i</sub>-re-kin/\*Ø ezkonduko den] neska; Bilbokoa da. (i=j)  
           she-with  
           The young woman Asier will get married *with ber/* \*Ø is from Bilbao
- (63) [op<sub>i</sub> Ainhoa (\*ber<sub>i</sub>-tan)/ [[t]Ø] bizi den] etxea; nahiko berria da. (i=j)  
           it-in  
           The house Ainhoa lives *\*in it/* Ø is quite new

*Bera* is still antisubjacent to the operator in (62): the embedded PP constitutes a barrier (it is not L-marked by the upper one), and the higher PP constitutes the second barrier (by inheritance) even though it is itself L-marked by the verb. In (63), on the other hand, the pronoun *ber* is 0-subjacent to the operator (the only PP is L-marked by the verb) and the sentence turns out to be ungrammatical; no deviance is found without the resumptive pronoun.

Therefore, the distribution of resumptive pronouns inside relative clauses turns out to be exactly as our Subjacency based account of the ungrammaticality of sentences (4)-(5) predicts.

## 6. Further extensions of the analysis.

So far in this article, we have established that the formation of relative clauses in Basque seems to uniformly involve the presence of an A'-chain headed by a null operator, even in cases where Postpositional Phrases are relativized. For these cases, the presence of empty Ps was motivated along the lines of Emonds's (1987) ICP. It was shown that the Null Operator Hypothesis is consistent with the possible presence/absence of focused XPs and *wh*-phrases inside relative clauses. In a final step, the impossibility of relativizing complex PPs was attributed to Subjacency, a diagnosis that was confirmed by the distribution of resumptive pronouns inside relative clauses. Ideally, if the solution to the data presented (for first time) in de Rijk (1972a) that I have sketched here is to be right, its predictive power should extend

over empirical domains not originally present in de Rijk's discussion. This, I would like to argue in this section, is indeed the case once we look into the phenomenon of tenseless relative clauses and the relativization of genitives. As for the first set of data, I argue elsewhere<sup>23</sup> that the three types of tenseless relative clauses that one finds in Basque follow step by step the paradigm of the tensed counterparts. This parallelism, although not certainly unexpected, is but occasionally investigated and hinted at in de Rijk 1972a and I shall not comment on it here. A brief discussion of the relativization of genitives constitutes the core of this section.

Following the arguments (and the terminology) brought forward by Anderson's (1984) work on English prenominal genitives, one can distinguish two types of genitives in Basque: the *lexical* genitive, where the genitive morpheme assigns case and  $\theta$ -role to the NP in the genitive phrase (a true PP according to Anderson), and the *structural* genitive inserted (for the purposes of case-assignment) in the context NP \_\_\_\_\_ [N'  $\alpha$ ] in cases where  $\alpha$  is a noun with a  $\theta$ -grid (either a derived/abstract nominal or a relational noun like *sister*).<sup>24, 25</sup> This straightforwardly accounts for the following contrast:

- (64) Etxe hau Ainhoa-ren-[<sub>N'</sub>  $\emptyset$ ]-a da.  
This house is Ainhoa's
- (65) \*Neba hau Ainhoa-ren-[<sub>N'</sub>  $\emptyset$ ]-a da.  
\*This brother is Ainhoa's
- (66) \*Erosketa liburua-ren-[<sub>N'</sub>  $\emptyset$ ]-a da  
\*The purchase is the book's
- (67) \*Liburuaren erosketa Ainhoa-ren-[<sub>N'</sub>  $\emptyset$ ]-a da.  
\*The purchase of the book is Ainhoa's

Assuming that an empty N' is licensed by virtue of being licensed by 's in English (Contreras 1989b) and by the article *-a* in Basque, (65)-(67) turn out to be ungrammatical due to a violation of the selectional restrictions of *neba* and *erosketa*; the sentences are construed as though the possessive assigned  $\theta$ -role and case to *Ainhoa* ((65), (67)) and *liburua* (66). Since the copula is transparent and only serves the purpose of attributing the property expressed by the possessive phrase to the subject, it turns out that the former is incompatible with the latter (just like in *\*Mary's reliance on friends is on the table* (Anderson's 13d)). Note that the sentences only make sense insofar as one can think of brothers and the act of purchase as being possessed. This conflict does not arise in (64) since *etxea* 'house' does not assign  $\theta$ -role to *Ainhoa*; thus, no conflict exists between it and the possessive phrase.<sup>26</sup>

issue of separating barrierhood for government from barrierhood for Subjacency, a proposal suggested by several researchers (see Baker 1988, Johnson 1988, Rizzi 1990).

(23) Artiagoitia (1990: chp.3) and Artiagoitia (in prep.). Tenseless relative clauses (though only one type of them) are randomly discussed by Ortiz de Urbina (1989).

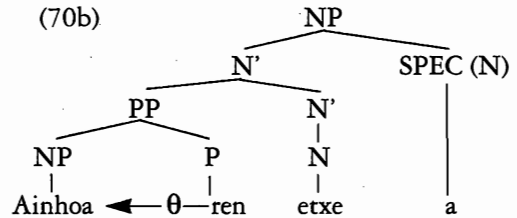
(24) The reader should bear in mind that in Basque the genitive is the only possibility for subjects and objects of derived and abstract nouns; thus, there is no Of-insertion/ Genitive alternation.

One crucial difference exists, however, between English and Basque: unlike in English, where according to Anderson lexical genitives count as PPs and structural genitives as NPs, both seem to have the status of PPs in Basque, the main evidence being that a genitive subject of an NP cannot bind an anaphor in the object position (or in any more embedded position). This can only be a consequence of the lack of c-command:<sup>27</sup>

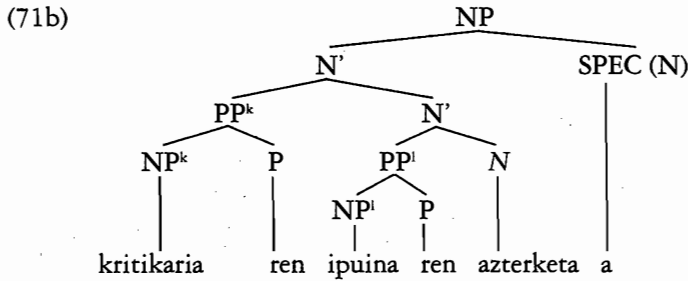
- (68) ?? Guraso-en elkarren argazkiak  
 Parents-gen each other-gen photos  
 The parents' photos of each other
- (69) ?? Nire lagun-en elkarri buruzko eritziak  
 my friends-gen each other-about opinions  
 My friends' opinions of each other

The structures, then, of an NP containing a lexical genitive (one where the genitive itself assigns  $\theta$ -role and case) and a genitive phrase that corresponds to the object and subject of a head noun that has a  $\theta$ -grid respectively look as follows:

- (70a) Ainhoa-ren etxea  
 -gen house  
 Ainhoa's house



- (71a) Kritikariaren ipuinaren azterketa  
 critic-gen tale-gen analysis  
 The critic's analysis of the tale



(25) Cf. Chomsky's (1986a) proposal of inherent case-marking by nouns at D-Structure, which is not adopted here. See Oyharçabal (forthcoming) on inherent case-marking in Basque, and Eguzkitza (forthcoming) for a study of the internal structure of the Noun Phrase in Basque under the DP hypothesis.

(26) Further tests for the distinction are discussed in Artiagoitia (1990: chp. 2).

(27) The other anaphor (*X-ren burua* 'X's head') seems to be possible inside NPs; nevertheless, there is evidence that it is not a bona fide anaphor (cf. Ortiz de Urbina 1989), and that it counts as an R-expression

(71) deserves some comment with regard to  $\theta$ -role assignment and case. Clearly, it is the head noun (N) the one that assigns  $\theta$ -role to  $\text{NP}^i$ ; N' assigns  $\theta$ -role to the subject (=NP<sup>k</sup>). The genitive is thus a dummy base-generated empty P, present for the purposes of satisfying the Visibility condition at D-Structure, that fills in the 'empty slot' at S-Structure. This is precisely an instance of what Emonds (1985: chp.1) refers to as *Indirect  $\theta$ -role assignment*.<sup>28</sup> No conflict arises with Chomsky's (1986b: 13-14) definition of  $\theta$ -marking as requiring sisterhood. This is defined in terms of *lexical projections* (and not maximal projections); but crucially we have already shown that P [-N, -V] must not be considered lexical (see section 4, Johnson 1988). Thus, NP<sup>i</sup> "is" or constitutes a sister to N in the relevant sense.

A close look at the structure in (70) clearly shows why relativization of lexical genitives should be disallowed: assuming that an empty P can be licensed by the ICP when the genitive PP is relativized and that this P is enough to  $\theta$ -govern the variable left by the operator, the genitive PP, not being L-marked —it is an adjunct—, will become a BC and a barrier; the dominating NP node will inherit barrierhood from it, thus yielding a Subjacency violation. Object genitive phrases (like PP<sup>i</sup> in (71b)) will yield the same kind of configuration because the genitive PP node is not L-marked (the embedded NP<sup>i</sup> is the one L-marked by the head noun); the dominating NP node will constitute a second barrier to movement (by inheritance). Relativization of a subject genitive phrase (i.e. PP<sup>k</sup> in (71b)), on the other hand, will additionally violate the ECP; NP<sup>k</sup> is not  $\theta$ -governed by N (it does not constitute a sister to it); and antecedent-government, if it plays a role at all in the ECP, is also ruled out by the blocking effect of the PP (not L-marked and hence a barrier) and the higher NP (a barrier by inheritance).<sup>29</sup> This is shown in (72)-(74):

(72a) \* [op<sub>i</sub> [<sub>NP</sub> [[t<sub>i</sub>]  $\emptyset$ ]<sub>PP</sub>] [<sub>N</sub>' txakurrak ] aginkatu nauen] baserritarra  
dog bite aux-n farmer

The farmer that the dog bit me

(72b) \* [op<sub>i</sub> pro [<sub>NP</sub> [[t<sub>i</sub>]  $\emptyset$ ]<sub>PP</sub>] [<sub>N</sub>' etxea ] ikusi dudan] neska  
house see aux-n

The young woman that I saw the house ('of')

(73) \* [op<sub>i</sub> pro [<sub>NP</sub> [<sub>N</sub>' [[t<sub>i</sub>]  $\emptyset$ ]<sub>PP</sub>] [<sub>N</sub>' azterketa ] ] irakurri dudan] ipuina  
analysis read aux-n tale

The tale that I read the analysis ('of')

(74) \*\* [op<sub>i</sub> pro [<sub>NP</sub> [[t<sub>i</sub>]  $\emptyset$ ]<sub>PP</sub>] [<sub>N</sub>' ipuinaren azterketa ] irakurri dudan] kritikaria  
tale-gen analysis read aux-n

The critic that I read the analysis of the tale ('by')

in many environments (cf. Oyarçabal 1989). Not surprisingly, it occurs sometimes in subject position (Itziar Laka p.c.):

i. Nire buruak nazkatzen nau  
Myself disgusts me (literally 'my head disgusts me')

This is impossible for *elkar*, a true anaphor.

(28) "If direct  $\theta$ -role assignment is not possible, a phrase Y<sup>k</sup> (k 2) subcategorized by a member of a lexical category L, possibly together with an introductory grammatical formative, can be assigned a  $\theta$ -role if it

If the Subjacency account is correct, once again we expect (72)-(74) to be grammatical with a resumptive pronoun; this is also true of (74) because a resumptive pronoun (a pronominal variable) is not subject to the ECP. The prediction is correct:

(75a) [op<sub>i</sub> [NP [[bera<sub>i</sub>]-ren PP] [N' txakurrak] ] aginkatu nauen] baserritarra  
dog bite aux-n farmer

The farmer that his/her farmer bit me

(75b) [op<sub>i</sub> pro [NP [[bera<sub>i</sub>]-ren PP] [N' etxea] ] ikusi dudan] neska  
house see aux-n

The young woman that I saw her house

(76) [op<sub>i</sub> pro [NP [N' [[bera<sub>i</sub>]-ren PP] [N' azterketa]]] irakurri dudan] ipuina  
analysis read aux-n tale

The tale that I read its analysis

(77) [op<sub>i</sub> pro [NP [[bera<sub>i</sub>]-ren PP] [N' ipuinaren azterketa] ] irakurri dudan] kritikaria  
tale-gen analysis read aux-n

The critic that I read his/her analysis of the tale

Hence, a Subjacency approach seems to account for more cases where relativization is also impossible<sup>30</sup> and correctly predict the distribution of resumptive pronouns. Actually, there is one more prediction that (72)-(77) make: if an NP inside a genitive phrase is indeed antisubjacent to an operator in the specifier of Comp, then resumptive pronouns inside a genitive phrase should also be possible in questions in matrix clauses. Not surprisingly, the prediction appears to be correct:

(78) Nor<sub>i</sub> / Ze baserritar<sub>i</sub> aginkatu zaitu bera<sub>i</sub>-ren txakurrak?  
Who/which farmer did his/her dog bite you?

(79) Ze idazle erosiko duzu bihar bera-ren azken liburua?  
Which writer will you buy her/his last book tomorrow?  
(Examples adapted from Artiagoitia 1991)

## 7. Final Remarks

In trying to answer the question that gives this article its title, I have deliberately left aside one aspect of the paradigm discussed by de Rijk (1972a) that is somehow troublesome for all competing analyses of relative clause formation in Basque: the fact that complex Postpositional Phrases can be relativized if (and only if) the head noun that the relative clause modifies is contained in a complex PP of the same type, what one might call the 'matching effect', an example of which is found in (81):

*constitutes a sister or subject of L*". (Emonds 1985: 39). 'Constitute' is defined as follows: "D constitutes a C<sub>i</sub> if and only if C<sub>i</sub> dominates D and the only terminal elements C<sub>i</sub> are under D" (ibidem: 38). Then both NPs in (71b) constitute a sister and a subject respectively, as required.

(29) Even if the ECP were reduced to head-government (see note 18) along the lines of Rizzi (1990), NP\* would still fail to be governed by a head (null P is a *bare grammatical formative* inserted at S-S with no semantic content —unlike the postpositions in (6b, c)— and does not count) in the relevant sense.

- (80) (=5) \*[ $op_i$  Jonek [[[ $t_i$ ]  $\emptyset_{PP}$ ]  $\emptyset_{PP}$ ] hizkuntzalaritza ikasten duen jendeak; jai bat antolatu du. (i=j)  
The people that Jon studies linguistics has organized a party
- (81) Ainhoak [ $op_i$  Jonek [[[ $t_i$ ]  $\emptyset_{PP}$ ]  $\emptyset_{PP}$ ] hizkuntzalaritza ikasten duen jendearekin; jai bat antolatu du. (i=j)  
Ainhoa has organized a party with the people Jon studies linguistics

(80) is ruled out by the Subjacency condition as explained throughout the article. (81), where the gap in the relative clause corresponds to a comitative PP ('with the people') just like in (80), turns out to be grammatical because the NP that contains the head noun is also embedded in a comitative PP in the matrix clause. Examples like (81) are systematically grammatical despite the fact that they a priori violate the Subjacency condition.

Any attempt to explain why (81) is good has to bear in mind that the grammaticality crucially depends on the morphological case of the strong binder, the head NP; since coindexation of the A'-chain headed by the null operator and the strong binder does not take place until LF, the mechanism that rescues (80b) must not be available until that level of representation. A solution could be proposed along the following lines: since the features of the empty Ps in the embedded relative clause are realized in the operator (or in the chain headed by it) via the ICP (cf. section 2), an operator whose features match those of its strong binder (e.g. provided that the features that the lexical Ps bear in the matrix clause are either transmitted to the NP or realized in the NP itself) may be allowed to move back to the head of its chain and attract the whole complex PP to the specifier of Comp (perhaps at LF' as part of reconstruction) as long as the operation is local, i.e. takes place within the same relative clause. This is shown in (82). Note that if the distance between the null operator and the head of the chain increases, the matching effect is lost:<sup>31</sup>

- (82a) Ainhoak [ $t_i$  Jonek [[[ $op_i$ ]  $\emptyset_{PP}$ ]  $\emptyset_{PP}$ ] hizkuntzalaritza ikasten duen] jendearekin; jai bat antolatu du. (i=j)
- (82b) Ainhoak [ [[[ $op_i$ ]  $\emptyset_{PP}$ ]  $\emptyset_{PP}$ ]<sub>x</sub> Jonek  $t_x$  hizkuntzalaritza ikasten duen jendearekin; jai bat antolatu du. (i=j)
- (83) \*Ainhoak [  $op_i$  nik [  $t_i$  Jonek [[[ $t_i$ ]  $\emptyset_{PP}$ ]  $\emptyset_{PP}$ ] hizkuntzalaritza ikasten duela] <sup>I</sup> uste dudana] jendearekin; jai bat antolatu du.  
that think aux-n  
Ainhoa has organized a party with the people I think Jon studies linguistics

(30) Oyharçabal (1986) argues that relativization of genitives is possible (at least in some cases). Most of these involve idiom-like predicates with the verb *egon* 'to be, to stay' that subcategorize for a genitive PP (and usually have a morphologically related transitive verb that subcategorizes for an NP). Artiagoitia (1990: chp.2) analyzes these cases as involving reanalysis (a case of abstract incorporation; see Baker 1988) of the genitive Postposition as part of the predicate, so that relativization takes place as though an object NP were

The ungrammaticality of (82) can be due to the fact that unbounded movement of the operator back to the head of its chain will leave the intermediate trace ungoverned, thus violating the ECP. I shall not pursue the consequence of this proposal any further.

In conclusion, the answer to the question why Basque cannot relativize everything seems to be that Subjacency constrains the distance between the null operator and the head of the chain they form. In order to reach this conclusion, I have motivated a unified treatment of relative clause formation that permits, modulo the Invisible Category Principle, the presence of empty postpositions under certain conditions. The analysis is compatible with what is known about the syntax of *wh*-phrases and focus in Basque and seems to correctly predict the distribution of resumptive pronouns.

### Bibliography

- Anderson, M., 1984, "Prenominal Genitive NPs", *The Linguistic Review* 3, 1-24.
- Artiagoitia, X., 1990, *A Unified Account of Relativization in Basque*. University of Washington MA thesis.
- , 1991, "Notes on Weak Cross-Over Effects and the Distribution of Resumptive Pronouns in Basque". University of Washington Ms.
- , (in prep.), "Aspects of Tenseless Relative Clauses in Basque". University of Washington Ms.
- , and Olarrea, A., (in prep.). "The Beauty Preservation Constraint". University of Washington Ms.
- Atterberry, P., (to appear), "On Blocking Categories". To appear in *LI*.
- Baker, M., 1988, *Incorporation*. Chicago: University of Chicago Press.
- Browning, M., 1987, *Null Operator Constructions*. MIT PhD dissertation.
- Chomsky, N., 1970, "Remarks on Nominalization". In *Readings in English Transformational Grammar*. Jacobs, R. and Rosenbaum, P. (eds.), Ginn., 184-221.
- , 1981, *Lectures on Government and Binding*. Dordrecht: Foris.
- , 1982, *Some Concepts and Consequences of the Theory of Government and Binding*. Cambridge, MA: MIT press.
- , 1986a, *Knowledge of Language*. New York: Praeger.
- , 1986b, *Barriers*. Cambridge, MA: MIT Press.
- Contreras, H., 1989a, "A Modular Approach to Syntactic Islands". University of Washington Ms.
- , 1989b, "On Spanish Empty N' and N\*". In *Studies in Romance Linguistics*. Kirschner, C. and De Cesaris, J. (eds.) Amsterdam: John Benjamins.
- Eguzkitza, A., 1986, *Topics in the Syntax of Basque and Romance*. UCLA PhD dissertation. Distributed by Indiana Linguistics Club.
- , (forthcoming), "Adnominals in the Grammar of Basque". In *Generative Studies in Basque Linguistics*, Hualde, J. I. and Ortiz de Urbina, J. (eds.). Philadelphia: John Benjamins.
- Emonds, J., 1985, *A Unified Theory of Syntactic Categories*. Dordrecht: Foris.
- , 1987, "The Invisible Category Principle", *LI* 18, 613-632.
- , 1989, "Projecting Indirect Objects". University of Washington Ms.
- Hasegawa, N., 1984, "Wh-Questions, Weak Crossover, and Null-Pronouns in Japanese". In *A Festschrift for Sol Saporta*. Contreras, H. and Newmeyer, F. (eds.)



- , 1985, "More Arguments for the Pied-Piping Analysis of Wh-Questions in Japanese". University of Massachusetts at Amherst Ms.
- Jackendoff, R., 1977, *X'-Syntax: A Study of Phrase Structure*. Cambridge, MA: MIT press.
- Johnson, K., 1988, "Clausal Gerunds, the ECP and Government", *LI* 19, 583-609.
- Koopman, H. & Sportiche, D., 1982, "Variables and the Bijection Principle", *The Linguistic Review* 2. 139-160.
- Laka, I., 1989, "Ezeztapena euskaraz". In *Sintaxi teoria eta euskara*. P. Salaburu (ed.). Donostia: Euskal Herriko Unibertsitatea.
- , and Uriagereka, J., 1987, "Barriers for Basque and Vice-versa". *Proceedings of NELS*, 394-408.
- Luján, M., 1985, "Binding properties of overt pronouns in null pronominal languages", *CLS* 21. 424-428.
- Ortiz de Urbina, J., 1989, *Parameters in the Grammar of Basque*. Dordrecht: Foris.
- Oyharçabal, B., 1986, "Erlatibakuntza: Perpaus erlatiboaren egitura; izen erlatibatuaren betekizuna haren barnean". In *Euskal sintaxiaren zenbait arazo*. Salaburu, P. (ed.), Bilbao: Euskal Herriko Unibertsitatea.
- , 1988, "Operatzaile isila euskarazko perpaus erlatiboetan", *ASJU* XXII-1, 93-97.
- , 1989, "The Pro-drop Parameter and the Resumptive Pronoun Strategy in Basque". *Configurationality. The Typology of Asymmetries*. Marác, L. and Muyskens, P. eds. Dordrecht: Foris.
- , (forthcoming), "Structural and Inherent Case Marking: Ergaccusativity in Basque". In *Generative Studies in Basque Linguistics*, Hualde, J. I. and Ortiz de Urbina, J. eds. Philadelphia: John Benjamins.
- Pesetsky, D., 1987, "Wh-in-situ: Movement and Unselective Binding". In *The Representation of (In)definiteness*, Reuland, E. and Ter Meulen, A. (eds.), Cambridge, MA: MIT press.
- Pollock, J.-I., 1989, "Verb Movement, Universal Grammar, and the Structure of IP", *LI* 20, 365-424.
- Rijk, R., de 1972a, *Studies in Basque Syntax: Relative Clauses*. MIT PhD dissertation.
- , 1972b, "Relative Clauses in Basque: A Guided Tour". In *The Chicago Which Hunt*.
- Rizzi, L., 1990, *Relativized Minimality*. Cambridge, MA: MIT press.
- Safir, K., 1984, "Multiple Variable Binding", *LI* 15. 603-638.
- , 1986, "Relative Clauses in a Theory of Binding and Levels", *LI* 17. 663-689.
- Stowell, T., 1981, *The Origins of Phrase Structure*. MIT PhD dissertation.