

Negation in Syntax: On the Nature of Functional Categories and Projections*

ITZIAR LAKA
(M.I.T.-Rochester)

1. The tense c-command condition

1.0. Introduction

In this chapter, I explore certain syntactic phenomena induced by sentence negation in Basque and English, and I attempt to provide a unified account of them, based on a universal requirement on functional heads. This requirement, which I will refer to as the *Tense C-command Condition*, is stated in (1). It requires that all functional heads in the clause that are propositional operators be c-commanded by the head Tense at S-structure.

(1) TENSE C-COMMAND CONDITION

Tense must c-command at S-structure all propositional operators of the clause.

The TCC is not a requirement on sentence negation only, but on the dominance relations holding between Tense and all other functional heads that operate on the clause. In this chapter, however, I will present evidence for the TCC based solely on sentence negation. More specifically, I will argue that apparently unrelated syntactic phenomena surfacing in sentence negation in languages like Basque, English and modern Hebrew are directly induced by the TCC, given the different parametric settings of these languages.

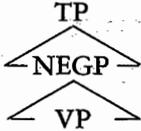
A second point to be argued for will be that there is a parametric choice regarding the placement of Negation at D-structure. I will argue that Negation can be generated TP (=IP)¹ internally or TP externally in different languages. Ultimately, then, I am claiming that (at least some) functional heads may vary in their selectional properties across languages.

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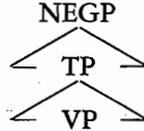
(¹) I will identify TP (Tense Phrase) with IP (Inflectional Phrase), following Pollock (1989). Distinctions between IP and TP will be made only when relevant in the discussion.

In particular, I claim that whereas in languages like English negation is generated below TP (as in Pollock 1987 and Chomsky 1989), there are languages like Basque where negation is generated above TP. This is schematized in (2):

(2) ENGLISH



BASQUE



Given phrase structures like (2), Grammars rely solely on UG operations to arrive at the unique solution (1) imposed on them by UG. If this approach is correct, the only place where there is room for language variation is in the inherent properties of functional items, which will differ in their selectional properties in such a way as to generate different functional structures.

The material presented in this chapter, hence, strongly supports the view of parametrization put forward by Chomsky (1989) and references therein: parameters are reduced to the non-substantive part of the lexicon.

Based on these two premises, the Tense C-command Condition and the parametric choice given in (2), negation-induced phenomena in English and Basque are explained rather simply, given parametric differences independent of negation.

I will first present an analysis of Basque sentence negation, where the TCC forces movement of Infl to Neg, thus inducing the 'dislocated' word order characteristic of negative sentences in this language. Evidence from deletion and Negative Polarity Items will be presented, supporting the claim that NegP dominates TP in Basque, unlike in English or French (Pollock 1989). Next, I will discuss the asymmetry between main and embedded sentence negation in Basque. This asymmetry will be shown to involve movement to the head Comp in embedded sentences.

I will then turn to English and argue that the Tense C-command Condition provides a more satisfactory explanation for *do* support than previous analyses in the literature, particularly those of Pollock (1989) and Chomsky (1989). I will first show how these analysis fail to account for the phenomena of *do* support, and I will then present the alternative analysis in terms of the TCC.

The case of sentence negation in Southern Romance and the distribution of negative morphemes in Modern Hebrew will also be discussed, and their relevance for the TCC hypothesis will be shown. Finally, I will discuss the nature of the TCC as a constraint on syntactic representations.

1.1 . Preliminaries: on Basque grammar.

Before discussing the data from Basque sentence negation, I will consider some general properties of Basque, with particular reference to those that are particularly relevant for our discussion.

1.1.1. On Maximal Projections.

A. Case Marking.

Basque has an ergative case marking system. Descriptively speaking, this means that subjects of one-argument verbs and objects of two-argument verbs share absolutive case, whereas transitive subjects display ergative case marking. All arguments that are complements of the verb at D-structure surface with absolutive case, whereas those arguments that are subjects already at D-Structure display ergative case marking².

Hence, subjects of unaccusative verbs like *etorri* 'arrive' or *erori* 'fall' have absolutive case, like the objects of transitives like *ikusi* 'see' or *jan* 'eat'. The subject of intransitive verbs like *hitz egin* 'speak' or *lo egin* 'sleep' shares ergative case with transitive subjects in Basque. This Case-marking system is illustrated in (3):

- (3) a. Ume-a etorri da b. Ume-a-k sagarr-a jan du
 Kid-the arrived has Kid-the-E apple-the eaten has
 'The kid has arrived' 'The kid has eaten the apple'
- c. Ume-a-k hitz egin du
 Kid-the-E word make has
 'The kid has spoken'

(3a) illustrates the unaccusative verb *etorri* 'arrive', the subject of which has absolutive case; (3b) shows the transitive verb *jan* 'eat', which marks the subject with ergative case (E), and the object with absolutive case³. Finally (3d) is an example of an intransitive verb, *hitz egin* 'speak', whose subject is again marked with ergative case⁴.

It is well known that most languages morphologically marking ergativity do not display syntactic ergativity, in that syntactic processes or properties that make reference to 'subjects' or their structural correlates apply to the same set of arguments as in accusative languages (Cf. Anderson 1976, Levin 1983 and Ortiz de Urbina 1989) have argued convincingly that Basque is not syntactically ergative. Unlike languages like Warlpiri (Hale 1981, 1983) where arguments are marked in an ergative pattern but agreement markers follow an accusative system, Basque consistently shows ergative morphology both on overt arguments and the agreement system.

B. Agreement and Word Order.

There are three grammatical cases: Ergative, Dative and Absolutive. They are marked on the arguments by the following morphemes: *-k* for the ergative, *-(r)i* for the dative and zero for the absolutive. The empty category *pro* is licensed in all three verbal arguments (Salaburu 1986, Ortiz de Urbina 1989), plausibly in relation to

(²) For a detailed discussion of ergativity, unaccusativity and case marking in Basque, see Levin (1983) Ortiz de Urbina (1989), and Oyharçabal (1990).

(³) For a recent account of Case in Basque where absolutive is not taken to be a single case but rather two different cases (nominative in (3a) and accusative in (3b)), see Oyharçabal (1990).

(⁴) Uribe-Etxebarria (1989) presents a detailed discussion and analysis of intransitive verbs in Basque, deriving them from transitive structures that undergo noun incorporation.

the fact that Basque Inflection (henceforth Infl) shows agreement with all of them: ergative, absolutive and dative, as illustrated in (4)⁵:

- (4) a. Irune-k Ibon-i etxe-a eman dio
 Irune-E Ibon-D house-the given has(3A-3D-3E)
 'Irune gave the house to Ibon'
 b. pro pro pro eman dio
 given aux(3A-3D-3E)
 's/he gave it to her/him'

It is the agreement morphemes encoded in the auxiliary verb which identify the empty pronominals; thus, a change in the morphemes of the auxiliary will convey a different meaning:

- (5) a. pro pro pro eman diguzu b. pro pro pro eman dizkidate
 give aux(3A-1pl-2E) give aux(3plA-1D-3plE)
 'You gave it to us' 'They gave them to me'

Following Uriagereka (1986) and Laka & Uriagereka (1987), I will assume that it is the licensing of *pro* in these positions what makes it possible to generate left or right dislocated arguments, parallel to the way in which Romance languages that license *pro* in the Specifier of IP can right or left dislocate the subject. I will assume that the 'free word order' displayed by Basque is in fact a consequence of these multiple dislocations. Thus, consider the following sentences (6), and compare them to those in (1):

- (6) a. [IP pro_i pro_j pro_k eman dio] Irunek_i Iboni_j etxea_k
 b. [IP pro_i pro_j pro_k eman dio] etxea_k Iboni_j Irunek_i
 c. etxea_k Iboni_j [IP Irunek pro_j pro_k eman dio]
 d. [IP pro_i Iboni pro_k eman dio] etxea_k Irunek_i

The examples in (6) show only some of the possible combinations. In fact, all arguments can be combined freely among themselves, as well as with pro-dropped arguments, multiplying the number of possible sentences. The order variations are not semantically identical; for instance, the preverbal argument can be interpreted as focus under the right intonation pattern, and the right dislocated constituents are interpreted as topics (Altube 1929, Mitxelena 1981, Ortiz de Urbina 1989)⁶.

Given the freedom displayed by maximal projections in Basque, arguments for clause structure and dominance relations cannot be straightforwardly based on the surface order of the verbal arguments. Rather, the relevant evidence must be drawn from processes or phenomena that exhibit ordering constraints.

(⁵) The conventions for the glosses are: E=ergative case; D=dative case; Absolutive agreement is only glossed in the auxiliary verb; its marker is empty in the argument. Agreement elements in the auxiliary verb are encoded by a number for the person (1=first person, 2=second person, etc...), followed by the case to which it corresponds.

(⁶) Subject inversion in Romance isn't semantically inert either. See Contreras (1976) for Spanish, Calabrese (1985) for Italian, Raposo (1987) for Portuguese, and Bonet (1989) for Catalan.

1.1.2. On heads: Verb, Aspect, Inflection.

Contrasting sharply with the freedom of order of verbal arguments, the verb and Inflection have very strict ordering constraints in Basque. In declarative sentences, the inflected auxiliary must follow the lexical verb:

- (7) a. *Etxea erori da*
house fallen has
'The house fell down'
- b. **Etxea da erori*
house has fallen
'(The house fell down)'

The first example, (7a), is a well formed declarative sentence, where the lexical verb precedes the inflected auxiliary. (7b), however, is not a licit order in a declarative sentence; a sequence like the one in (7b) is only acceptable in emphatic sentences (see chapter 2, sections 2.0 and 2.3 for an account of this emphatic construction).

On top of this precedence requirement, there is also a strict adjacency requirement: no constituent can intervene between the verb and the inflected auxiliary,⁷ as illustrated in (8):

- (8) a. *Etxea erori da*
house-the fall-down has
'The house fell down'
- b. **erori etxea da*
fallen house-the has
'(The house fell down)'

Considering these data, it could be argued that verb raising to Infl takes place at S-structure (as in Emonds 1976), thus yielding a single X⁰ constituent.

I will not take this position for reasons that will become more clear when negation facts are discussed below. Instead, I will argue that V does not raise to Infl. Under this view, then, the reason why no constituent may intervene between V and Infl has to do with the impossibility of adjunction to VP (Mahajan 1990).

1.1.2.1. On Verb-raising.

Empirical evidence for the claim that there is no Verb raising to Infl in cases like (7a) and (8a) is found in a small set of verbs traditionally called synthetic, for which the description given so far does not hold completely.

Whereas most verbs in Basque consist of a lexical verb marked for aspect and an auxiliary that carries the inflectional morphology, as in (7a) and (8a), synthetic verbs are inflected as a single unit, where both the lexical verb and the inflectional morphology merge together.

(⁷) The only elements that can intervene are certain modal particles, which appear cliticized onto Infl:

- (i) *Ibonek hori esan omen zuen*
Ibon that said allegedly had
'Ibon had allegedly said that'
- (ii) *Ibonek hori esan ohi zuen*
Ibon that said use had
'Ibon used to say that'

Hualde & Ortiz de Urbina (1987), argue that these particles are generated in Infl itself.

Thus, compare the verbal forms in (9): (9a) is a non-synthetic form, like the ones we have seen in previous examples; (9b) is a synthetic form of the same verb *ekar* 'to bring'²⁸:

- (9) a. *ekarr-i na-u-zu* b. *na-kar-zu*
 bring-perf me-have-you me-bring-you
 'You have brought me' 'You bring me'

The morphological difference between these two types of verbal forms cannot be left to a late Phonetic Forms readjustment, because certain syntactic phenomena (like negation, see section 2. in this chapter, or emphatics as shown in chapter 2) separate the verb and the inflection in (9a), but never in (9b). Hence, the difference illustrated in (9) is syntactic in nature, because syntactic phenomena are sensitive to it.

1.1.2.2 The Aspect Projection.

The contrast between synthetic (9b) versus non-synthetic (9a) verbal forms is very simply accounted for if we assume that Verb raising to Infl has taken place at S-structure in (9b), but not in (9a). Hence, the different morphological shape of synthetic verbs as opposed to non-synthetic ones is the result of raising versus non-raising of the Verb to Infl.

The crucial factor determining when a verb of the synthetic class raises to Infl is the aspectual morphology. A verb of the synthetic class will display a synthetic form only when aspect is non-perfective and non-habitual. Perfective and habitual forms show an overt aspect marker attached to the lexical verb (9a); synthetic forms have a punctual aspect meaning, but no overt aspect marker (9b). Thus, the generalization is that an overt aspect marker prevents raising of the verb to Infl. If no overt aspect marker is present, the verb will raise to Infl⁹.

(⁹) In the history of the language, the number of synthetic verbs and the usage of the synthetic forms has been declining significantly in favor of periphrastic forms. Thus, from approximately 60 verbs that were inflected synthetically in the XVI century (Lafon 1943), the grammar of *Euskaltzaindia* (1987) lists only 24. There does not seem to be any semantic or syntactic property that determines what verbs belong in the synthetic class; rather, this looks like a lexical idiosyncrasy. For the benefit of the interested reader, the verbs nowadays subject to synthetic inflection are the following: *egon* stay, *etorri* come, *ibili* walk, *joan* go, *atxeki* hold, *erion* drip, *erzan* lie, *jarrai* follow, *eduki* have, *ekarri* bring, *erabili* use, *eraman* bring, *eroan* take, *jakin* know, *entzun* hear, *eritzi* to seem to x, *erran* say, *ezagutu* meet, *ihardun* engage, *ikusi* see, *iraun* last, *irudi* look like.

(⁹) In the case of modals, we find non-incorporated forms that do not display any overt aspect marker:

- (i) *ekar na-za -ke -zu*
 bring me-root-mod-you
 'you can bring me'

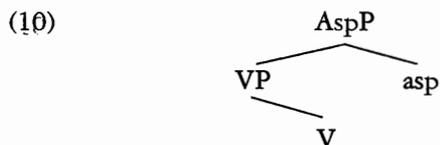
There are also incorporated forms, (although they are quite literary and nearly archaic):

- (ii) *na-+KAR+ -ke -zu*
 me-bring-mod-you
 'You can bring me'

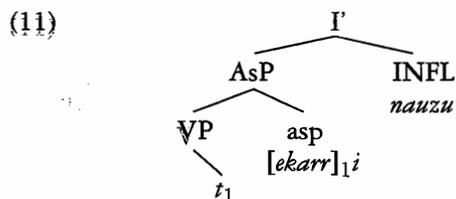
Presumably, there are two ways to construct modals in modern Basque: one of them, the oldest one, nearly gone from spoken language, is the one illustrated in (ii), where the verbal root raises to Infl; the other one, more active in modern Basque, has an empty aspect marker preventing the verb from raising. This hypothesis is supported by western dialects of Basque, where modals do display an overt perfective aspectual marker on the verb:

- (iii) *ekarri-i n -ei -ke -zu*
 bring-perf me-root-mod-you
 'you can bring me'

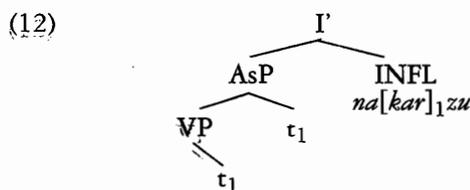
These facts are accounted for under the hypothesis that Basque has an Aspect Phrase, headed by the aspectual morpheme itself:



In non-synthetic forms, the verb raises to aspect and the morphological unit [verb-aspect] is created at S-structure; no further raising to Infl takes place. This accounts for forms like (9a) where the lexical verb and aspect are distinct from the inflected auxiliary:



Let us assume that Basque lexical verbs are bound morphemes that need to attach to a base by S-structure¹⁰. In a case like (11), aspect is providing such a base. However, if the aspect head is empty, as in (12), the verb still lacks a morphological base after raising to it. Thus, the verb raises further to Infl, generating a single inflected unit in the overt syntax:



Whenever there is a process involving the inflected auxiliary but not the lexical verb, a synthetic form will show the same pattern as the auxiliary. This is expected under the analysis given above, since any syntactic process involving the head Infl will affect equally inflected auxiliaries and synthetic forms. In what follows, then, it should be kept in mind that when I refer to the inflected auxiliary, synthetic verbs are also included.

This aspectual projection is of course not particular to Basque; several independent works have claimed the existence of an Aspect Phrase, based on different kinds of evidence from a wide variety of languages. See, for instance Manfredi (1988), Cheng (1989) for Chinese, Demirdache (1989) for Egyptian Arabic, Iatridou (1989)

⁽¹⁰⁾ Following the morphological filter in Lasnik (1981): 'A morphologically realized affix must be realized as a syntactic dependent at Surface structure.' See also Chomsky (1989), where *do* support in interrogatives is explained by the requirement that the affix Q in Comp be 'completed' in overt syntax by X⁰ raising.

for English and French, Ihionu (1989) for Igbo and Hendrick (1990) for Irish and Breton. See also Laka 1991 for an AspP in Spanish, which accounts for the auxiliary-participle forms as opposed to the inflected forms lacking auxiliary verbs.

1.2. Basque sentence negation.

1.2.1. The Phenomenon

The occurrence of the sentence negation *ez* 'not' induces radical changes in the surface order of the sentence in Basque. First, the requirement that the verb precede the inflected auxiliary (7a) is reversed. In negative sentences, the inflected auxiliary must precede the lexical verb, as shown in (13):

- (13) a. **etxea erori ez da* b. *etxea ez da erori*
 house-the fallen no has house-the no has fallen
 ('The house didn't fall down') 'The house didn't fall down'

Furthermore, the adjacency requirement, by which no constituent could intervene between V and Infl does no longer hold in negative sentences. The examples in (14a) illustrates this point: the subject *etxea* is intervening between the auxiliary and the verb.

- (14) *ez da etxea erori*
 no has house-the fallen
 'The house didn't fall'

In fact, any kind and number of constituents can intervene between the inflected auxiliary and the verb when the sentence is negative, as illustrated in (15), where the subject *Irunek*, the dative argument *Iboni* and the direct object *etxea* all three appear in between the auxiliary and the verb:

- (15) *ez dio Irunek Iboni etxea eman*
 no has Irune Ibon-to house-the given
 'Irune hasn't given the house to Ibon'

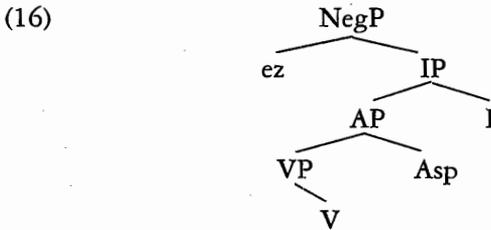
The pattern that emerges in negative clauses is thus the exact opposite of the pattern followed by declarative clauses. In declarative clauses the verb must precede the auxiliary; in negative clauses the auxiliary must precede the verb. In declarative clauses the verb and the auxiliary must be strictly adjacent; in negative clauses there is no adjacency requirement at all, and any number of constituents can occur in between the auxiliary and the verb.

1.2.2. The Analysis.

Following recent work by Pollock (1989) on negation in English and French, I will assume that *ez* 'not' in Basque is a head projecting a Negative Phrase (henceforth NegP).

Unlike the unmarked case in this language, though, Neg is an initial head, instead of final, and unlike French and English, where NegP is the complement of I, Neg takes IP as a complement in Basque. That is to say, French and English have IP internal negation, whereas Basque negation is external to IP. We will later see that this different placement of negation has certain empirical consequences.

A negative sentence in Basque is generated in D-structure as in (16):



In this configuration, Negation and Infl sit at the two opposite edges of the Phrase Marker; however, as we have seen in previous examples, negation occurs attached to the left of the auxiliary. Hence, Negation and Infl must eventually merge together, at some level of representation.

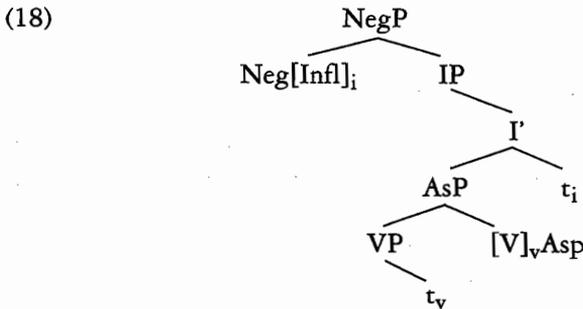
I claim that the merging of Negation and Infl results from raising of Infl to Neg. This movement satisfies the Head Movement Constraint (Travis 1984):

(17) Head Movement Constraint (HMC)

An X^0 may only move into the Y^0 which properly governs it.

In the case under consideration, Infl is moving to the head immediately dominating it; in this configuration, the trace (t) left behind is governed by its antecedent (Baker 1988). In fact, it is a standard instance of head-to-head movement.

Let us assume, hence, that the merging of negation and the inflected auxiliary takes place in the mapping from D-structure to S-structure by raising of Infl to the Neg head. This movement results in the S-structure representation illustrated in (18)¹¹:



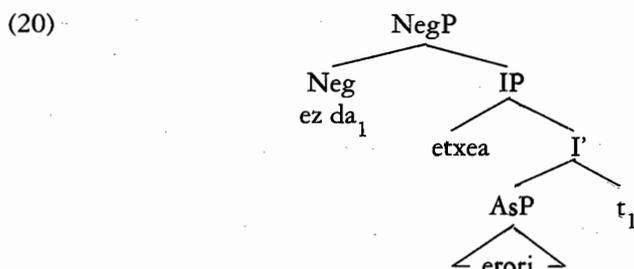
¹¹ If we were to claim that Neg lowers onto Infl, the trace left at S-structure would satisfy the ECP at LF provided the head [Infl[Neg]] raises at LF, parallel to the way Tense raises in English after S-structure affix-lowering onto the verb (Chomsky 1989). Under this hypothesis, however, a sentence where the lexical verb precedes [Neg-Infl] should be grammatical; as illustrated in (9a), however, this is not the case. In order to rule out (9a) we would have to postulate that the lowering of negation forces a further movement of the verb somewhere to the right of Infl. This hypothesis is problematic in that it is difficult to imagine why the lowering of Negation would force the verb to move rightwards obligatorily. Moreover, the differences in deletion and Negative Polarity Item licensing in sections 1.2.3. and 1.2.4. below would find no explanation.

It is this head movement that causes the dislocated pattern of negative sentences illustrated in (13a) and (14), repeated here as (19a, b):

- (19) a. *etxea ez da erori* b. *ez da etxea erori*
 house-the no has fallen no has house-the fallen
 'The house hasn't fallen down' 'The house hasn't fallen down'

We can now account for this pattern: (19a, b) are both instances of adjunction of Infl to Neg, the only difference between the two sentences being the fact that the former has a left dislocated argument (Cf. section 1.1.).

The S-structure representation of (19b) is given in (20):



As discussed above, movement of Infl to Neg does not violate any principle of the Grammar, and it gives the desired results in terms of the data to be accounted for. It therefore appears to be the right analysis of the phenomena¹². Note though that we haven't established yet whether this movement takes place at S-structure, as opposed to, say, Phonetic Form; and, so far, no explanation has been provided as to what in the Grammar induces a movement like this. The two main claims made in this analysis are:

- a) Neg is generated above IP in Basque
- b) Infl is forced to move to Neg by S-structure.

In the following sections, I will provide further evidence in favor of these two claims. First, I will argue for (a), based on comparative evidence from Deletion (section 1.2.3.) and Negative Polarity Item licensing (section 1.2.4.), both in English and Basque. Secondly, in section 1.2.5. I will argue that (b) is a direct result of the Tense C-command Condition, a universal requirement.

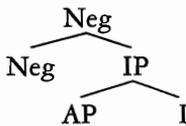
1.2.3. Evidence from Deletion.

The first piece of independent evidence supporting the claim that the relative position of the Negative Phrase with respect to Tense is different in Basque and English comes from deletion. The structure of Basque negative clauses proposed here is rep-

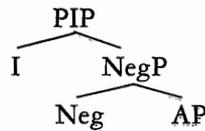
⁽¹²⁾ Although it is orthographically separated from the inflected verb, the negative element is a clitic on the auxiliary, and it induces a series of phonological changes in it (cf. Hualde 1988 and references therein).

eated in (21a), whereas (21b) illustrates the structure of an English negative clause (Pollock 1989, Chomsky 1989):

(21) a. Basque



b. English



According to (21), it should be possible to delete IP in Basque, leaving NegP intact, but the same syntactic operation should be impossible in English, because NegP is 'nested' in between IP (=TP) and AP¹³.

The prediction, therefore, is that in a case of conjunction-induced deletion, where one conjunct is declarative and the other one is negative, different results should obtain in Basque and English: in Basque, it should be possible to delete the IP and leave only the NegP, which would not be recoverable; in English, though, this strategy would not be available, because NegP is dominated by IP, and thus IP could not be deleted without deleting with it the non-recoverable NegP. This prediction is borne out.

A conjunction like the one just described has the following behaviour in English: it is not possible to leave undeleted *only* those elements that are not recoverable (22):

(22) *Mary bought a book and Peter not

Rather, it is necessary to leave undeleted the supporting *do* as well, as in (23a):

(23) a. Mary bought a book and Peter didn't

b. Mary has bought a book and Peter hasn't

Similarly, auxiliary verbs (which do raise to Infl and thus do not trigger *do support* (Emonds 1976) cannot be deleted, as shown in (23b). The paradigm in (23) therefore illustrates the fact that IP cannot be deleted when sentence negation is not recoverable.

Note that this phenomenon does not follow from some general condition that disallows adverbs from occurring by themselves in conjunction structures, nor from some prohibition against deletion of Tense. Thus, it is perfectly possible to have sentences like (24):

(24) Mary bought a book, and Peter too.

Where Inflection has been deleted¹⁴. Now, if we turn to Basque, we find that the exact correlate of (22) is perfectly grammatical, as shown in (25):

⁽¹³⁾ AP here is used as a cover term for the projection under IP/TP. Under the analysis of Basque presented here, AP stands for Aspect Phrase. However, under Pollock (1989) AP in English stands for Agreement Phrase, and under Chomsky (1989) it stands for Object Agreement Phrase. What the name or nature of that projection is will not affect, I believe, the conclusion of this argument. It has been argued that English AP is actually an Aspect Phrase (Iatridou 1988. For evidence that the AP in Basque could not be any kind of Agreement Phrase, see Laka (1988) and Cheng & Demirdash (1990).

⁽¹⁴⁾ It is also possible to have: (i) Mary bought a book and Peter *did* too.

Presumably, the adverb in (i) is modifying the proposition, but in the example in the text it only modifies the subject argument. As far as the point made in the text is concerned, it is enough to show that there is no prohibition against selecting Tense in English.

- (25) Marik liburua erosi du eta Peruk ez
 Mari book-the bought has and Peter no
 'Mary has bought the book and Peter hasn't'

The sentence in (25) is not a case of constituent negation on the subject. That is, it does not mean "Mary bought the book, not Peter". Constituent negation of the subject would place the negative morpheme preceding the subject, not following it¹⁵.

The explanation of why English and Basque behave differently with respect to IP deletion in these cases is straightforward under the proposal presented here: in English, deletion of IP could not take place without deletion of NegP as well, under the assumption that deletion cannot affect discontinuous chunks of the Phrase Marker. However, nothing prevents deletion of IP in Basque in these cases, because NegP is not dominated by IP, and thus it can be left intact after deleting the entire IP.

Note finally that it cannot be argued that the English example in (22) is parallel to the Basque case in (25). That is, it cannot be the case that the negative *not* in (22) is the head of a NegP generated above TP. If this were the case, the *not* in (22) should behave like a sentence negation, not like a constituent negation on the subject. However, (22) is ungrammatical if the object *a book* is focalized (or alternatively, it would mean that Mary did not buy a book but she bought Peter instead). In the Basque example in (25), on the other hand, the object *liburua* can in fact be focalized and the sentence is perfectly grammatical, meaning 'Mary bought A BOOK, Peter didn't'. This contrast follows naturally from the fact that *not* is a constituent negation attached to the subject, whereas (25) is truly a case of sentence negation, where the negative element heads a NegP above TP.

1.2.4. Negative Polarity Item Licensing.

The second piece of evidence supporting the claim that NegP dominates IP in Basque comes from Negative Polarity Item (NPI) licensing by negation. NPI licensing is an extensively studied topic, and I do not intend to consider it in its whole here. Rather, I will be concerned with NPI licensing by negation; to be more specific, the cases to be discussed are those in which, as a result of a 'nearby' sentence negation, the NPI is interpreted as *no[x]*¹⁶.

It is a well known fact that English displays a subject-object asymmetry with respect to NPI licensing, in that sentence negation does not license subject NPIs, but it licenses object NPIs:

- (27) a. *Anybody didn't come b. Mary didn't see anything

These facts are accounted for by assuming that negation licenses NPIs under c-command at S-structure. Early works on the topic took essentially this position. Thus, Klima (1964) proposed a suppletion rule deriving NPIs from underlying posi-

⁽¹⁵⁾ The sentence would look like: (i) MARIK erosi du liburua, ez PERUK

Where both subjects are focalized. Constituent negation in Basque precedes the constituent it has scope over.

⁽¹⁶⁾ That is, cases like 'anybody could do that' or 'has anybody seen Mary?' where the NPI is not interpreted as *no[x]* are not relevant to this discussion.

tive counterparts, which applied to expressions preceded and commanded by an overt negation¹⁷. In a configuration like the one proposed here for Basque (21a), negation c-commands all arguments in IP. This correctly predicts that Basque will allow NPIs in subject position, as illustrated in (27):

- (27) a. Ez dio *inork* Iboni etxea eman b. Ez da *inor* etorri
 no has anybody Ibon-to house-the given no has anybody come
 'Nobody has given the house to Ibon' 'Nobody came'
 (Lit: anybody hasn't given the house to Ibon) (Lit: anybody didn't come)

The examples in (27a) and (27b) show ergative and absolutive subject NPIs respectively. In both cases negation licenses the Polarity Item; hence, the licensing has nothing to do with the position of the arguments at D-structure¹⁸. The example in (28) shows that these lexical items are indeed Negative Polarity Items: in this example *inor* is not in the domain of a licenser, and thus the sentence is ungrammatical:

- (28) **inor* etorri da
 anybody come has

That there is no adjacency requirement in the licensing is shown by the example in (29), where the ergative subject intervenes between negation and the NPI:

- (29) Ez dio; [_{IP} Ibonek *inori* etxea eman t_i]
 no has Ibon anybody-to house-the given
 'Ibon hasn't given the house to anybody'

There are two cases of negation in English that have the same effects that Basque sentence negation does, because they also c-command the whole IP at S-Structure.

The first case is the *no way* colloquial negation used in some registers and varieties of English¹⁹. This kind of negation does indeed license subject NPIs in English, as (30) illustrates:

- (30) No way anybody is gonna tell me what to do

(¹⁷) Klima's rule applied if the item was 'in construction with' sentence negation. A constituent is 'in construction with' another constituent if the former is dominated by the first branching node that dominates the latter. The concept is thus the converse of the c-command notion.

(¹⁸) In this respect, NPI licensing differs from partitive case assignment. Partitive Case resembles NPIs in that it requires a licenser:

- | | |
|--|---|
| (i) <i>ez</i> du <i>etxerik</i> erosi
no has house-part bought
'she hasn't bought any house' | (ii) * <i>etxerik</i> erosi du
house-part bought has
(*she has bought any house) |
| (iii) <i>etxerik</i> erosi du?
house-part bought has
'Has she bought any house?' | (iv) <i>etxerik</i> erosiko balu
house-part bought if-would
'If she bought any house' |

However, partitive differs from NPI licensing in that only D-structure objects can be assigned this case (Levin 1983):

- | | |
|--|--|
| (v) <i>ez</i> da <i>umerik</i> etorri
no has kid-part arrived
'No kid has arrived' | (vi) * <i>ez</i> du <i>umerik</i> hori egin
no has kid-part this done
'(No kid has done this)' |
|--|--|

This Case Theoretic restriction prevents partitive NPIs from appearing in place of ergative or dative arguments, thus make them unsuitable to determine purely the scope of Neg.

(¹⁹) Thanks D. Pesetsky for bringing these facts to my attention.

The negative adverb *no way* is in a presentential position, either adjoined to IP or at some higher position. For the purposes of this argument it is enough that it be c-commanding IP at S-structure, which I take to be uncontroversial, given that it precedes the subject of the sentence.

The second case is found in the phenomenon that Klima (1964) called "Neg-preposing": a negative constituent is fronted to sentence initial position, triggering aux-inversion. In cases of "Neg-preposing" also, subject NPIs are licensed in English, just like in Basque. The first sentence of Gould's *Wonderful Life* illustrates this fact:

- (31) Not since the Lord himself showed his stuff to Ezekiel in the valley of dry bones had *anyone* brought such grace to the reconstruction of animals from disarticulated skeletons.

Negative Polarity Item licensing data, then, provide further empirical support for the analysis proposed: Negation is generated above IP in Basque. Moreover, it does not lower to Infl at S-structure; instead, it stays in a position where it c-commands the external argument of IP.

1.2.5. The Tense C-command Condition.

The only main point in the analysis of Basque negation presented here that does not have a principled explanation yet is why it is that Infl must raise to neg by S-structure. Notice that nothing in our Theory of Grammar would go wrong if negation and Infl stayed separate also at S-Structure, as they are at D-structure. The question, hence, is what rules out an S-Structure like (32), where Neg and Infl stay separate:

- (32) *[_{NegP} ez [_{IP} Ibon etorri da]]
(‘Ibon hasn’t arrived’)

My claim will be that this S-structure representation does in fact violate a universal constraint: the Tense C-command Condition, presented at the beginning of this chapter.

Recent work on the nature of Inflection (Pollock 1989, Mahajan 1988, Ritter 1988, Laka 1988b among many others) indicates that what has standardly been assumed to be a unified syntactic category Infl is structurally more complex. In particular, the works mentioned follow the idea in Pollock (1989) that Tense heads its own syntactic projection.

In his analysis of English and French negation, Pollock (1989) suggests in a footnote a universal requirement stating that negation must be c-commanded by Infl at S-structure. I will take up this suggestion and make it more general: it is a broader constraint on the syntactic relations that must hold within the inflectional complex, which is constituted of as many projections as inflectional elements there are.

Higginbotham (1985) argues that verbs include in their grid an event argument (e) that must be saturated by the Infl head in the syntax. If the elements previously grouped under the category Infl do indeed have a more articulated structure than it has been assumed, one question that arises concerns the saturation of the (e) position in the syntax. Since the label "Infl" may refer to more than one syntactic projection,

the mechanism by which (e) is saturated must be reviewed. There are two possibilities: On the one hand, if only one of the inflectional heads is responsible for the saturation of (e), it must be determined which one it is. If the saturation is done by means of percolation of the (e) position up to last inflectional projection (similarly to the way in which subject-roles percolate outside VP), it is necessary to spell out the mechanisms of this percolation.

The position I want to take is that the role of Infl as the saturator of (e) in Higginbotham (1985) and (1987) is done by Tense. The (e) argument percolates up in the inflectional structure up to TP, where it is saturated.

The Tense C-command Condition can thus be thought of as the way to ensure that all inflectional elements that operate on a given clause are dominated by the element that saturates the event position of that clause. Thus the Tense C-command Condition holds of all functional heads that operate on the proposition, and that negation is just a particular case of this more general requirement²⁰.

Stating the condition in terms of Tense gives us a way of capturing the fact that this element tends to be the highest functional head among the inflectional projections, as well as for why modals, sentence negation and agreement markers occur generally as structurally lower inflectional heads or as particles adjoined to Infl. Under Pollock's Analysis of English and French negation, Tense is the highest inflectional projection; the same is true in Mahajan's (1988) work on Hindi agreement and in Ritter's (1988) work on Hebrew. Chomsky (1989) claims (following Belletti 1988) that subject Agr is projected higher than Tense. Nevertheless, he also assumes that Tense raises to it by S-structure. Basque inflectional morphology also provides strong evidence for Tense C-commanding all other inflectional heads (Laka 1988)²¹.

Let us now recall our analysis of Basque sentence negation under a condition like the TCC. In a configuration like the one proposed for Basque (13), the c-command relation demanded by the TCC does not hold at D-structure, since the Neg is c-commanding IP. The only way in which Tns can c-command Neg at S-structure is by adjoining to it, as in (14).

1.2.6. Negation in embedded sentences.

The generalizations about Basque sentence negation presented in the previous sections hold of matrix negative sentences, but not of embedded ones. Thus, for example, relative clauses show the opposite pattern of (10), as illustrated in the following examples:

- (33) a. [erori ez den] etxea b. *[ez den erori] etxea
 fallen no has-that house-the no has-that fallen house-the
 'The house that didn't fall-down' ('The house that didn't fall')

In these examples, the lexical verb must precede the negated auxiliary (33a), otherwise the sentence is ungrammatical (33b). This paradigm is exactly the opposi-

⁽²⁰⁾ Evidence that the Tense C-command condition holds if heads that are not negation will be presented in the second chapter of this work.

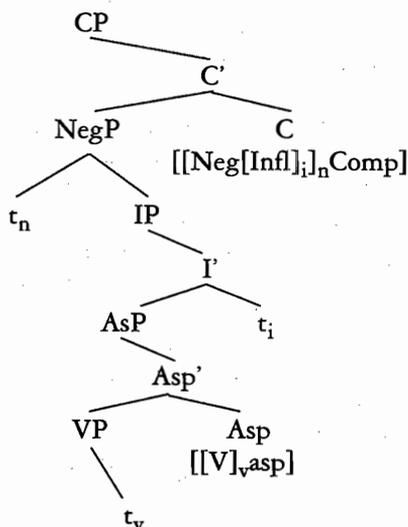
⁽²¹⁾ There is one functional head that doesn't appear to obey the TCC: the complementizer. I assume that this head does not modify the event in Infl, but establishes a relation between that clause and some other clause.

re of matrix sentence negation, where the negated inflected auxiliary must precede the lexical verb (9a,b).

Appart from the negation facts just illustrated, the only overt difference between root and embedded clauses is the occurrence of a Comp marker in the latter. The Complementizer is a bound morpheme, and it occurs attached at the end of the inflected auxiliary. It is then natural to assume that it is the head of Comp that is making the difference in embedded sentence negation.

I will argue that in embedded clauses the same processes discussed in the previous section take place, and that what makes root and embedded clauses diverge with respect to negation is a further movement: the complex head [Neg-Infl] adjoins to Comp in embedded clauses²². The derivation is illustrated in (34) (ignoring X' levels):

(34)



Two successive movements are involved in (34):

(i) as in root clauses, and for the same reasons as in main clauses (that is, to satisfy the TCC), Infl raises to negation also in embedded clauses.

(ii) The head of C is filled by a bound morpheme that has to be attached to Infl at S-structure; therefore, the head [Neg-Infl] further raises to Comp.

Note that this latter movement does not alter the S-structure scope properties of the negation head, since from that position it still c-commands IP. That the scope of negation is not altered in embedded clauses is shown by the fact that Subject Polarity Items are also licensed in embedded clauses:

- (35) [*inork eman ez dion*] etxea
 anybody given no has-that house-the
 'The house that nobody gave him'
 (Lit: the house that anybody didn't give him)

⁽²²⁾ Not all embedded clauses behave alike with respect to negation. Some of them may optionally behave like matrix clauses. See Laka (1988a) for more detailed discussion.

Note that adjacency or precedence requirements play no role, since arguments can intervene between the Polarity Item and Neg without affecting the licensing²³:

- (36) [*Inork* Iboni eman ez dion] etxea
 anybody Ibon-to give no has-that house-the
 'The house that nobody gave to Ibon'

Under this analysis, both surface morpheme ordering and negative polarity licensing are accounted for straightforwardly, assuming standard c-command relations and head-movement. Thus, movement of the complex head [Neg-Infl] to Comp yields the surface order of negative embedded clauses illustrated in (33), and no further stipulation is needed to account both for surface constituent ordering and NPI licensing.

1.2.7. A Further Note on Polarity Licensing by Negation.

The subject NPI licensing test can be independently shown to be crucial when determining the position of negation and its S-structural relation with the external argument of IP.

Consider English sentence negation. Negation in English is generated inside IP. Under Pollock's analysis, for instance, it is a head projecting a NegP, complement of I. Whatever the particular instantiation, negation is structurally lower than Infl. This accounts for the fact that NPIs in the specifier of IP are not licensed by negation (Cf. examples 15a, b).

However, if negation cliticizes onto Infl and moves along with it to Comp, it will be placed in a position where it c-commands the external argument of IP. Crucially, it is precisely in these cases when subject NPIs are licensed by negation in English:

- (37) a. Who doesn't anybody like b. Who does anybody not like

In (37a), the question means 'Who is the person such that nobody likes that person', whereas this interpretation is not possible in (37b). It could be argued that the licensing of the Polarity Item in (37a) is due to the interrogative environment (presumably the head of C or the operator in its Specifier), and that the interpretation of *anybody* in conjunction with *not* is brought about independently, in Logical Form. But this would fail to explain why this interpretation of *anybody* is not available in (37b), where the Polarity Item is licensed by the interrogative environment.

The only difference between the two examples is the placement of negation, therefore it must be the fact that negation has moved (along with Infl) to Comp that accounts for the different interpretation. Note that if cliticization of Neg were to take place at Phonetic Form, we would expect no difference in interpretation between (37a) and (37b), given that this level of representation does not feed Logical Form. It must then be the case that the different configuration of the scope of Neg is established at S-structure for the facts to obtain.

²³ Ladusaw (1980) presents a scope principle for English where precedence is required, if licenser and NPI are clausemates. If we try to extend this scope principle to Basque, this precedence requirement is problematic. Even if we change the precedence requirement to a 'followed by' requirement according to the head parameter, the Basque case is still problematic, since both when preceded or when followed is the NPI licensed, provided that c-command is met.

There is a similar case which does not involve interrogative environments but displays the same effect. In a variety of Southern American English, modals may precede the subject, as in the following examples²⁴:

- (38) Can you do that
'You can do that'

When the modal sentence is negative, subject polarity items are licensed only if negation cliticizes onto the modal, parallel to (37a). If negation does not cliticize, the negative licensing does not take place. The contrast is illustrated in (39):

- (39) a. Can't anybody do that b. Can anybody not do that
'Nobody can do that'

The only available reading of (39b) is that of 'free choice' *any*, which is commonly induced by modals. Let us assume that modals in this particular dialect of English are placed in the head of Comp²⁵; the only way to bring about the different interpretation between (39a) and (39b) is by assuming that Neg is also placed in the head of Comp by S-structure. Thus, the pairs in (37) and (39) illustrate the relevance of the interpretation of NPIs to determine S-structural relations; it also illustrates minimally that an S-structure requirement crucially governs negative NPI licensing²⁶.

1.3. English sentence negation: *do support*.

1.3.0. Introduction.

The most obvious syntactic effect induced in English by sentence negation is what is called *do support*: the insertion of a dummy auxiliary which supports the inflectional morphemes, as illustrated in (40a, b):

- (40) a. Mary didn't go b. *Mary not went

It is this phenomenon that I will focus on in this section. First, I will review two recent analyses of English negation, namely those of Pollock (1989) and Chomsky (1989). These two proposals diverge on the question of what it is that forces *do* insertion in the presence of negation. Pollock (1989) attributes the phenomenon to the quantificational, operator-like properties of Tense, while Chomsky (1988) argues that it results from the interaction of the Empty Category Principle (ECP) and the Principle of Economy of Derivation.

I will discuss these accounts of *do support* and argue that both of them overgenerate. I will then provide an alternative account in which *do support* is argued to be a

⁽²⁴⁾ The following sentences need a certain context and a certain emphatic intonation which is not relevant for the purposes of this argument (p.c. Jim Harris and Ken Hale).

⁽²⁵⁾ For the purposes of this argument, it is not crucial that the modals be in the head of Comp; it is enough that they be sitting in some place higher than the subject (if, for instance, one were to maintain that the subject remains within the VP, in the spirit of Pesetsky 1989), whereas the modal sits in Infl.

⁽²⁶⁾ Linebarger (1987) claims that for an NPI to be licensed by negation it suffices that the NPI occurs in the immediate scope of negation at LF. She assumes that negation raises at LF. Notice that in such a configuration the specifier of IP is in the immediate scope of negation; therefore, Linebarger (1987) predicts that an NPI in the specifier of IP should be licensed in English.

direct consequence of the Tense C-command Condition. Essentially, the argument to be presented is as follows: given that there is no verb raising to Inflection in English, and given that Tense is a bound morpheme, the Tense affix-hops onto the lexical verb in cases like (41):

(41) Mary left

When Neg is present, however, lowering of Tense would leave Neg not c-commanded. Insertion of the 'dummy' verb *do* is the strategy available in English to ensure that the Tense C-command Condition is satisfied.

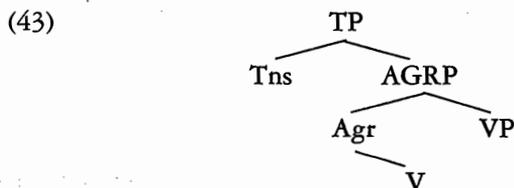
1.3.1. Pollock (1989).

Pollock (1989) explores and discusses extensively the properties of verb movement in English and French. His comparative analysis relies crucially on two subtheories of Universal Grammar: Theta Theory and Quantification Theory. Theta Theory constrains verb movement, whereas Quantification Theory makes it mandatory. It is the tension between these two subtheories, Pollock argues, that induces a phenomenon like *do* support in English. Let us review his argument in more detail.

Based on comparative data on adverb placement in English and French, Emonds (1976), (1978) concluded that French has an obligatory rule of Verb-Raising to Aux (Infl), whereas in English this rule was restricted to auxiliary verbs (Jackendoff 1972, Emonds 1976). The presence versus absence of this rule accounted for adverb placement paradigms like (42), assuming that adverbs are generated in the same position in both languages:

- (42) a. *Mary kisses often John
 b. Marie embrasse souvent Marie
 c. Mary often kisses John

Pollock (1989) provides a new formulation of Emonds analysis, which attempts to give a principled explanation of *why* all French verbs must raise to Infl, while only some of them do so in English. Pollock proposes a more articulated Phrase Structure, where Infl is split into two separate heads: Tense, heading its own projection TP, and Agreement, heading an AgrP, as illustrated in (43), where Specifier positions and one-bar levels are ignored for simplicity:



Verb-Raising to Infl consists now of two steps: first, movement of V to Agr, and second, movement from Agr to Tense. Pollock argues that it is the first step (V-Agr) that distinguishes French and English, due to the different nature of Agr in these languages. Pollock claims that there is a correlation between the strength of the

agreement and the ability of the verb to percolate its theta-grid through agreement once V to Agr movement has taken place. Thus, French agreement is strong enough as to allow the verb to percolate its Theta-grid down to its trace, after the verb has raised to Agr. That is, French agreement is transparent to theta marking. On the contrary, English agreement is not strong enough as to allow percolation of the Theta-grid of the raised verb: it is opaque to theta marking. This makes it impossible for any Theta-grid bearing verb to raise to Agr, since by doing so it would fail to satisfy the Theta Criterion. Only verbs that do not have theta-roles to discharge (*have/be*) will be able to raise to Agr in English.

Whereas Theta Theory and the nature of Agr constrain Verb movement, Quantification Theory makes it obligatory in tensed sentences. Pollock assumes that [+finite] (i.e. [+/- Past]) tense is an operator. Like any other syntactic operator, then, it must bind a variable. What constitutes a variable for [+finite] tense is defined as in (44):

(44) @ is a variable for [+/- Past] iff @ = [_v e] bound by [+/- Past]

Unlike other syntactic operators, which bind a variable left by their own movement to an A' position either at S-structure or at LF, Tense must bind a verbal variable; that is, a trace left by Verb movement. Thus, for instance, whereas in Wh-movement it is the operator itself which creates its variable via A' movement, in the case of Tense it is movement of V to Infl that provides the relevant trace. Under Pollock's analysis, Tense is strictly an S-structure operator. LF raising of Tense is therefore ruled out in this approach, since the relevant operator-trace configuration is already created by S-structure. This view of Tense as an operator makes Verb-Raising obligatory, and thus it accounts for the obligatoriness of verb movement to Tense in French. But, as Pollock notes, it seems to lead us to a dead end in the case of English, where Theta Theory bars movement of V to Agr.

Given the universal status of Quantification Theory, Pollock argues that UG leaves two ways out of this problem: either to get rid of the Agr entirely, or to allow an auxiliary verb generated beyond the VP barrier to count as a substitute for the immovable main verb in the VP. English, argues Pollock, has taken the later option. Thus, there is always an auxiliary verb higher than VP, which raises to Tense and creates the variable this operator needs in order to satisfy Quantification Theory.

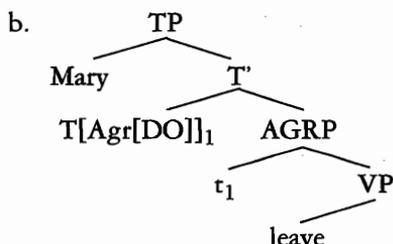
Overt auxiliaries in English do raise to Tense, creating the required Operator /-variable configuration (45a). When there is no auxiliary available, English resorts to the 'dummy' verb *do* (45b):

(45) a. Mary wouldn't do that b. Mary didn't do that

Since this account of *do* insertion is not contingent on the occurrence of negation, but rather on the presence of a [+finite] Tense, Pollock must assume that in present tense indicative sentences like the ones in (46):

(46) a. Mary leaves b. Mary left

(50) a. *Mary did leave



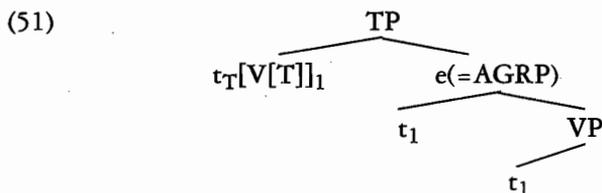
Quantification Theory is satisfied, in that Tense is binding a verbal variable left by [Agr+*do*]. ECP is not violated, given that no barriers intervene between the antecedents and their traces.

Thus, there is no independent principle of the Grammar that will rule this derivation out, therefore Pollock's account predicts it to be grammatical.

1.3.2. Chomsky (1989).

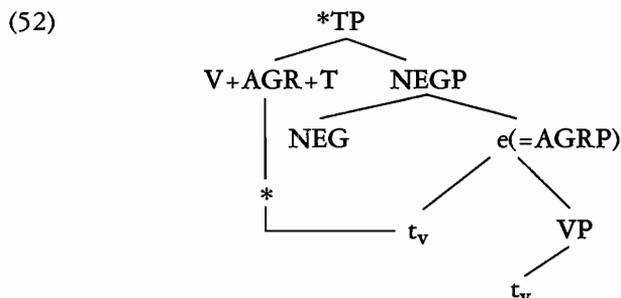
Chomsky (1989) argues that *do* insertion is forced by the ECP and the principle of Economy of Derivation (ED). This Principle states that there is a 'least effort' condition, by which UG principles apply wherever possible, favoring the shortest derivation, and that Language Particular devices are put to use only as a last resort. In this respect, Chomsky argues, move alpha is a UG operation, and *do* support is a language particular device. Thus, *do* support will only take place whenever move alpha is not enough to save a given D-structure. Based on this leading idea, Chomsky proceeds to reinterpret Pollock's analysis.

Chomsky (1989) follows Pollock in assuming that IP has an articulated structure, where Agreement and Tense head separate projections. He argues that in affirmative sentences like the ones illustrated in (46), the heads Tense and Agr lower onto the verb at S-structure. Subsequently, Agreement and the trace left by it are deleted at Logical Form, thus leaving the Agreement Projection empty. The trace left by Tense, on the other hand, satisfies the Empty Category Principle by means of raising of the inflected verb to the head Tense, creating a configuration where the trace is properly governed. This LF derivation is illustrated in (51):



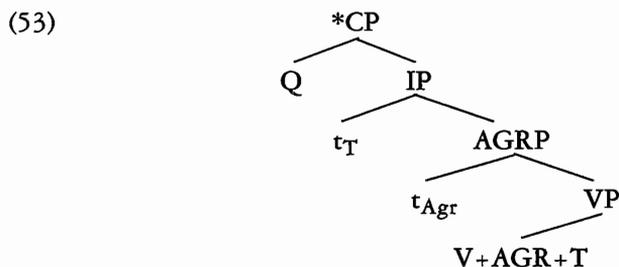
In the case of negative sentences, Chomsky follows Pollock in assuming the existence of a Negative Projection between AgrP and TP, headed by *not*. Given this structure, an attempt to proceed as in the declarative clause will induce an ECP violation, Chomsky argues. Let us see why: if Tense and Agr lower to V at S-structure; Agr deletes at LF, but Tense must raise all the way up to its original position in order to govern its own trace. This raising induces an ECP violation, because the head

Neg prevents the intermediate trace left by the verb from being antecedent governed, as shown in (52):



In order to salvage the derivation, Chomsky argues, English resorts to *do* insertion at S-structure. *Do* is inserted in the modal position²⁷ and then raises to Tense. This way, Tense, which is a bound morpheme in English, does not have to lower to the lexical verb, and thus LF raising from V to Agr is no longer necessary. Consequently, the ECP violation is avoided.

Consider now the account given by Chomsky to explain *do* insertion in matrix interrogative sentences. Assume that a phonologically empty Q morpheme (basically the same Q morpheme proposed originally by Katz & Postal 1964) sits in the head Comp; lowering of Tns/Agr to V, as in affirmative sentences, would leave the interrogative morpheme unattached at S-structure, as shown in (53):



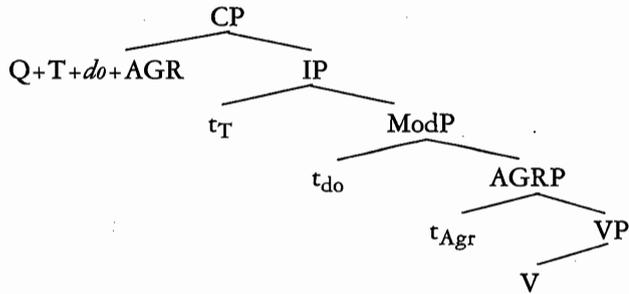
Chomsky assumes there is an S-structure requirement that affixes be attached to a base, which is violated in (53). This requirement is essentially that of Lasnik (1981): "a morphological affix must be realized as a syntactic dependent at surface structure."

The only way to rescue the D-structure, Chomsky argues, is to resort to *do* insertion, as in (54)²⁸:

⁽²⁷⁾ Chomsky does not make this position explicit in the phrase structure representation.

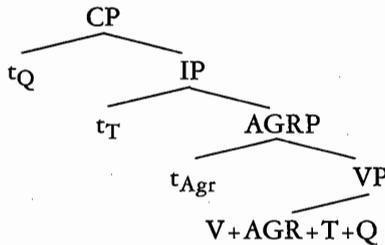
⁽²⁸⁾ Following Laka (1988) I will assume that the modal position where Chomsky claims that *do* is inserted is a Modal Phrase, generated between TP and NegP. This assumption makes correct predictions for English. As for Spanish, see Laka 1991.

(54)



Notice, however, that it is left unexplained why it is not possible to have a derivation like the one in (55), where the interrogative morpheme, parallel to the Tense and Agr morphemes also lowers to the lexical verb:

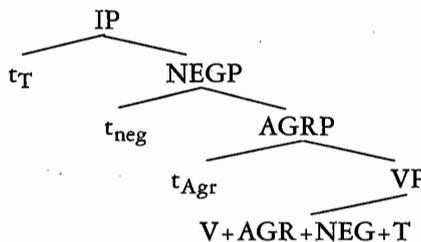
(55)



At the level of Logical Form, the verb would raise to Tns and Comp, parallel to the derivation given in (51), thus satisfying the ECP. In fact, following the spirit of the Principle of Economy of Derivation, a derivation like (55) is less costly than the one in (54), because it resorts only to move alpha (lowering at S-structure and subsequent raising at LF), and it does not involve any Language Particular device like *do* insertion²⁹.

This very same question arises in the case of the account given to explain *do* support induced by negation; in principle, no independent principle of Universal Grammar rules out a derivation like the one in (56), where Neg, along with Tense and Agr, lowers to V:

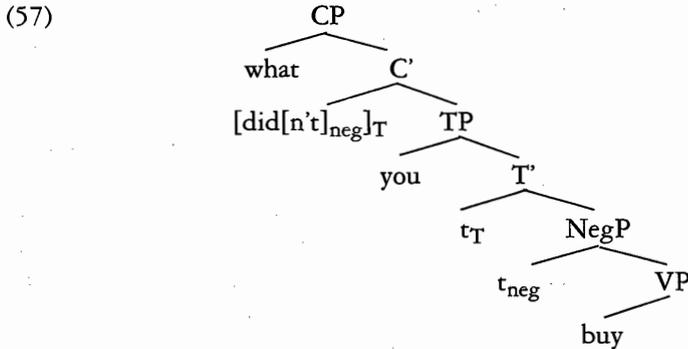
(56)



⁽²⁹⁾ I could be objected that, in an embedded clause, lowering of the morpheme Q would induce a violation of the selectional restrictions of the matrix verb, which demands there to be a [+wh] element in the head of the CP it selects. Although this fact could independently give a reason why Q cannot lower in these cases, the question still stands for the case of matrix sentences, and, moreover, for the case of negation, which is our focus here.

Once again, subsequent raising of the inflected verb at LF would ensure government of the traces left at S-structure.

The question of why Neg cannot undergo a lowering movement as Tense becomes even more interesting given the fact that, unlike French *pas*, English *not* does undergo head movement at S-structure. Thus, it moves along with Inflection to the head of Comp. One example of such a case is illustrated in the S-Structure representation in (57):



That this movement takes place at S-structure is shown by data on Negative Polarity Items. As we have seen before (cf. section 1.2.6.), the only cases where a Negative Polarity item in the Spec of IP may receive an interpretation under the scope of negation is precisely when negation moves to the head of Comp along with Inflection, as illustrated by the pair in (58):

- (58) a. *anybody doesn't like him b. who doesn't anybody like
 *no(x) [x likes him] what(y) [no(x) [x likes y]]

A possible account as to why negation cannot lower onto V at S-Structure could be constructed based on the distinction between the phonologically free standing form *not* and the phonologically dependant *n't* clitic. That only the cliticized form occurs when negation has moved to the head of Comp can be argued given the minimal pair in (59):

- (59) a. What doesn't Mary like b. *What does not Mary like

It is also true that not all inflected forms allow the clitic form of the negative marker, as illustrated by the following ungrammatical forms:

- (60) a. *I amn't tired b. *You mayn't go

Given these facts, then, it could be argued that negation could not lower onto the lexical verb because it would have to surface as the clitic *n't* and this would yield ill-formed outputs like **leftn't*, or **arrivedn't*.

However, this answer is not a sufficient one. Take a sentence whose main verb is *do*. The clitic *n't* is allowed to occur attached to auxiliary *do*. Since the restrictions on the clitic are not based on syntactic or semantic features but on morphophonological ones, under which both instances of *do* are identical (they inflect identically, for ins-

tance), nothing would prevent a sentence like (61) under the hypothesis we are considering:

(61) *I didn't a mistake

There are thus two main questions begged in the analysis:

(i) Why are negation and the Q morpheme incapable of lowering to V at S-structure and be rescued by LF?

(ii) Why is it that movement of the verb at LF must skip negation?

The second question becomes even more forceful when we recall that negation in English, unlike French *pas* does undergoe head movement at S-structure, as shown in (57).

The first question raised concerns both the interrogative morpheme and negation. In light of the data, it seems to be the case that there is a crucial difference between the head Tense and these two other heads, in that the former can lower at S-structure but the latter two cannot. I want to relate this to the fact that both Wh-movement and Negative Polarity Licensing are S-structure operations in English. Under the view that Wh-movement to the Specifier of CP provides the Wh-element of the required clausal scope, it is reasonable to think of the interrogative morpheme in the head of Comp as some sort of scopal element, signaling the scope of the question.

Given that Wh-movement in English takes place at S-structure, we can assume that the morpheme in the head of Comp must signal its scope also at S-structure, and that lowering of this morpheme would alter its scopal properties. Similarly, in the case of negation, there is a correlation between the fact that Polarity items are licensed by negation at S-structure, and the impossibility of lowering this head.

Both the interrogative morpheme and negation, then, have S-structure scopal requirements that make them unable to lower at this level of representation. In this respect, these two heads behave like other adverbs (Cf. *only*), or like floating quantifiers, whose scope is also determined by their S-structure position.

Assuming this to be correct, the first objection to Chomsky's analysis can be explained away. The reason why derivations like (55) and (56) are out is because they alter the S-structure scope of the morpheme Q and negation.

Let us now turn to the second question. Even if negation cannot lower to the verb at S-structure, I have presented evidence that it undergoes head movement to Comp along with Tense. If this is the case, then, we must explain what is it that prevents a derivation like the following, where:

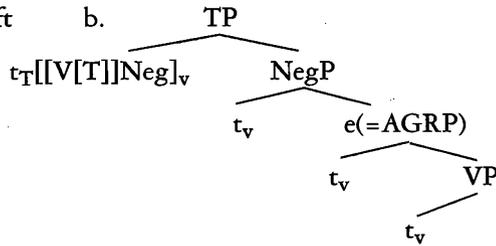
a) At S-structure, Tense lowers onto V, skipping Neg;

b) At LF, the inflected V raises to Agr and then to Neg, and then to Tense.

A derivation like this would give us a sentence like (62a), where the lexical verb is inflected for tense and agreement, and negation is left in its place.

The LF representation of this derivation, where the inflected verb raises step by step through each of the available heads, including Neg, is shown in (62b):

(62) a. Mary not left



Let us consider this LF derivation in more detail. In the first step, the verb, which has Tense attached to it, raises to the empty projection e , left by the deleted Agr. From this place it can govern the trace left in the original position. In the next step, $[V[T]]$ adjoins to Neg, and subsequently $[[V[T]]Neg]$ adjoins to the trace left by Tense. The trace left in the position of Neg is properly governed in this configuration. The question to be answered is whether the trace of Tense is governed in the last step of (62).

In this last step we have a complex head, created by X^0 movement. This complex head consists of three elements, and we want to know whether the deepest one (tense), is able to govern its trace, to which the complex head is adjoined. The configuration is as follows:

(63) $[[[[x] y] z] t]$

Where the whole structure is a head (X^0), created by means of successive head movement. Let us consider in detail how the government relations work in this configuration. The definition of Government is stated in (64):

(64) A governs B iff A c-commands B and there is no category C such that C is a barrier between A and B. (Chomsky 1986).

As discussed by Baker (1987), the first requirement in the definition is met: a head A adjoined to a head B c-commands all elements that *y* itself c-commands³⁰. This assumption is also made by Chomsky (1989), although no precise formulation of it is provided.

In a configuration like (63), then, all elements c-command each other, thus x in particular c-commands its trace t . Are there any barriers intervening between x and its trace? No, unless the other two segments of the head (y and z) are taken to be barriers.

Chomsky (1989) assumes that one intervening segment in a complex head does not constitute a barrier for government. That is, in (63), y is not a barrier for x and similarly z is not a barrier for y , or t a barrier for z . Given that barrierhood inheritance applies only to maximal projections, we can conclude that there are no barriers intervening between x and its trace.

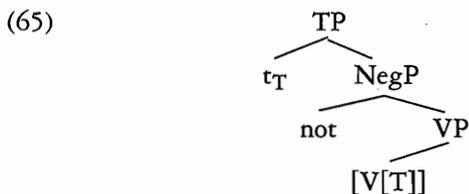
⁽³⁰⁾ This result can be brought about in two different ways: either by assuming Aoun and Sportiche's (1983) definition of c-command in terms of maximal projections, as Baker (1987) does, or, alternatively, by assuming with May (1985), Chomsky (1986), that adjunction nodes do not count for c-command relations. Given that the head movements under discussion here involve adjunction, all elements in the head have the same c-command domain.

1.4. Do support as a consequence of the TCC.

I will now argue for an alternative account of *do* support that does not run into the overgeneration problems faced by Pollock (1987) and Chomsky (1988). In this account, *do* support is viewed as a direct consequence of the Tense C-command Condition.

I assume here Chomsky's (1989) analysis of affix hopping in English: Tense and Agr lower to the lexical verb in affirmative sentences where no auxiliary verb is present, and subsequent raising at LF satisfies the ECP. In negative sentences, lowering of Neg onto the verb is ruled out because the scope of Neg must not be altered at S-structure, as argued in the previous section.

The sentence we want to rule out is (62a), where Tense has lowered leaving Neg behind. If we consider this sentence in the spirit of the TCC, it is immediately ruled out at S-structure since Neg, a functional head operating on the event, is no longer C-commanded by Tense:



Verb raising is not available in the grammar of English, and LF raising will not rescue (65) because the requirement holds at S-structure. Therefore, the only way to salvage the derivation is the insertion of *do* at S-structure, in order to maintain the C-command relation.

By assuming the TCC to be the UG principle forcing *do* insertion, the correct set of data are predicted and the problematic cases in Pollock (1987) and Chomsky (1989) are explicitly ruled out. Further, the apparently unrelated effects induced by negation in both English and Basque find a unified explanation, rooted in Universal Grammar.

1.5. When tense is not there: infinitivals

The TCC is a requirement on Tense: It states that this syntactic category must c-command the inflectional heads that operate on the clause. It is this property of UG that explains why in Basque the auxiliary fronts, and in English *do* is inserted when negation is generated in Inflection. If it is the head Tense that is crucially involved in these syntactic phenomena, we expect that clauses lacking Tense may not display such phenomena. I will now argue that this prediction is indeed borne out. The relevant evidence is found in non-finite clauses.

Under the assumption that non-finite clauses lack Tense, we expect that no fronting will take place in Basque, and no *do* support in English, when negation is present in clauses lacking Tense.

Consider the following Basque infinitival sentences.

- (66) a. *ez* *gezurrik esan* b. *mila bider agindu dizut [ez ardorik edateko]*
 no lies-part say thousand times ordered I-have-you no wine-part drink-to
 'do not say lies' 'I have told you one thousand times not to drink wine'

Notice that the object of the infinitival clause intervenes now between the negation *ez* and the infinitival *esan* in (66a) and *edateko* in (66b). Recall that *no element* could intervene between the negative morpheme and the auxiliary in finite clauses.

The examples in (67) illustrate that it is not only the object that can intervene between negation and the infinitival verb: in (67a) we see a dative and the object, both in between *ez* and *esan*. In (67b) we see a time adjunct *igandean* 'on Sunday' and the object, placed between *ez* and the embedded infinitival *edateko*:

- (67) a. *ez umeari gezurrik esan*
 no kid-to lie-part say
 'do not tell lies to the kid'
 b. *izekok eskatu dit [ez igandean ardorik edateko]*
 aunt asked has-me no sunday-on wine-prt drink-to
 'auntie has asked me not to drink wine on Sunday'

Non-finite clauses are the only cases in Basque where the sentence negation morpheme can surface unattached. Under the TCC hypothesis, why this is so is trivially explained: there is no Tense head in the clause, and thus there is no requirement to be met.

Note that this evidence shows that the effects induced by the TCC cannot be reduced to a morphological requirement governing inflectional morphemes. Negation could not be marked in as a bound morpheme in the lexicon. If that were the case, it would have to cliticize onto some other elements in the examples in (66) and (67), and it would not be able to occur as a free standing form. Its morphological status is therefore not marked in the lexicon. Let us assume that Neg is marked for its X^0 status. It is independent principles of UG, like the TCC, that determine whether some other element will move to that X^0 position.

Now consider English non-finite clauses. Recall that the account of *do*-support put forward here is crucially linked to the presence of Tense: because Tense must c-command negation at S-structure, it cannot lower onto V and it must remain in the head of TP. The dummy verb *do* is inserted to support Tense. In an infinitival clause, however, *do* support will not take place because there is no Tense, and hence the TCC does not apply in that clause. This expectation is indeed borne out: there is no *do*-support in English infinitival clauses:

- (68) a. I told you not to go b. Auntie asked me not to drink wine on Sundays

Whatever the syntactic status of the infinitival maker *to*, it is clear that it lacks temporal specification (Zagona 1988). Thus, it is not a Tense head. This is why it need not c-command the negative marker, as in (68).

Note that these examples are parallel to the ones in Basque: infinitival sentences differ considerably from finite sentences in their syntactic behavior when negated.

The negative head appears to be the same; the crucial difference is thus the presence versus absence of Tense.

Note also that the notion of Tense that the TCC refers to is strictly syntactic, not semantic. Thus, for instance, it is standardly assumed that imperative sentences lack a Tense interpretation. However, natural languages display both tensed and untensed commands, and whereas tensed imperatives must meet the TCC, untensed ones do not.

Both English and Basque provide relevant evidence that confirms this claim. Consider English first: imperatives in English behave exactly like any other tensed sentence, in that the presence of negation induces *do*-support, as illustrated in (69)³¹:

- (69) a. come here b. *not come here c. do not come here

In embedded context, imperatives change into infinitivals in English. As a result, they stop triggering *do* support, as the examples in (68) already illustrate.

Consider now the case of Basque: as shown in the examples in (67a) and (67b), infinitivals can be used to convey commands. There is, however, a specific imperative inflection, illustrated in (70):

- (70) a. etor hadi hona
 come do-you here
 come here (you)

When these imperative forms are negated, they again behave like indicative inflected sentences: the inflected auxiliary must raise to the head Neg, otherwise the result is ungrammatical:

- (71) a. ez hadi etor hona b. *ez etor hadi hona
 no do-you come here
 'do not come here'

This contrast between (67) and (71) can be easily explained in the same way the English contrast is: imperative inflection involves a Tense head in the syntax, and therefore these sentences are subject to the Tense-C-command Condition. This is why inflected imperatives display the same phenomena that other tensed sentences do, whereas infinitival commands do not.

1.6. A corollary on the tense c-command condition: Hebrew

Under the assumption that the TCC holds universally, the prediction made is that no language will allow a non c-commanded sentence negation in a tensed sentence. However, a non c-commanded negation could be allowed in a non-tensed sentence.

⁽³¹⁾ As for imperatives that display a *do* in non negative forms, like (i) (i) do come here I assume that they have an emphatic element, just like emphatic indicative sentences like (ii):
 (ii) I did go there

I argue in chapter 2 that these cases are essentially identical to the negative case, except that the only phonological content of the emphatic morpheme is stress, as in Chomsky (1957). Chomsky (p.c.) points out that there is indeed a difference in meaning between imperatives like (i) and normal positive declaratives.

A possible counterexample for the TCC, then, would be a language allowing a structure like [Neg XP V/I] in a tensed clause. Hebrew sentence negation appears to be this case³².

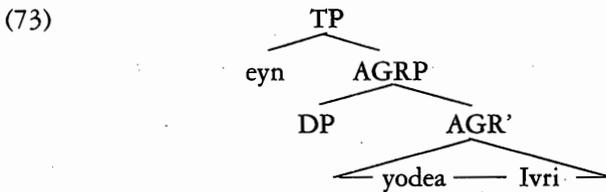
Hebrew has two different negation particles, *eyn* and *lo*, with the following distribution (examples from Ritter 1988):

- | | |
|--|--|
| <p>(72) a. <i>Eyn</i> Dani <i>yodea</i> Ivrit
 neg Danny knows Hebrew
 'Danny doesn't know Hebrew'</p> <p>b. *<i>Eyn</i> Dani <i>yada</i> Ivrit
 neg Danny knew Hebrew
 ('Danny didn't know Hebrew')</p> | <p>c. *<i>Lo</i> Dani <i>yada</i> Ivrit
 neg Danny knew Hebrew
 ('Danny didn't know Hebrew')</p> <p>d. Dani <i>lo yada</i> Hebrew
 Danny neg knew Hebrew
 'Danny didn't know Hebrew'</p> |
|--|--|

Example (72a) looks like a direct counterexample for the TCC. Interestingly, though, the distribution of *eyn* and *lo* is determined precisely by the presence versus absence of Tns in the sentence. The negative element *eyn* only occurs in infinitives, gerunds and what are called 'benoni' verbs.

Berman (1978) distinguishes Hebrew verbs in terms of the feature [Tense]: past and future finite forms are [+Tense], infinitives and gerunds are [-Tense], and 'benoni' verbs are [0 Tense]. Doron (1984) and Rapoport (1987) claim that the functional head (Infl) of benoni verbs contains Agr but not Tns.

Under an analysis along the lines of Pollock's work, where Agr and Tns are two different heads, Ritter (1988) argues that *eyn* occupies the head Tns as in (73):



Therefore, the example in (72a) does not violate the TCC, since either there is no Tense in the sentence, or *eyn* itself bears the Tense features of the clause. The case of the negative element *lo* is more similar to negation in English: it is an adjoined particle c-commanded by Tense at S-structure, thus the ungrammaticality of (72c), where it is not c-commanded by Tense, in violation of the TCC.

1.7. On LF raising of Neg above Tense.

It is customary in the semantic literature to regard propositional operators like negation as taking scope over the entire proposition at Logical Form. Hence, any negative sentence like (74a) is represented at Logical Form in the form of (74b):

- (74) a. Mary didn't leave b. no [Mary left]

Where the negative operator has scope over the whole clause. Under this assumption, it is rather surprising that there should exist a syntactic requirement like the

⁽³²⁾ The following Hebrew paradigm was provided by Betsy Ritter, who pointed out its relevance for the TCC.

Tense C-command Condition, which requires not that Negation c-command Tense, but, rather, that Tense c-command Negation.

It is not logically impossible that natural languages are such that syntax and semantics simply do not conform to each other. Thus, it could certainly be the case that universal syntax must meet certain requirements that have absolutely no reflex in the semantic component.

The evidence presented in this chapter in favor of the existence of a syntactic requirement like the TCC is solely based on syntactic processes: it looks like some deep rooted property of our language faculty is such that it requires the TCC to be met. The kind of evidence and arguments presented are, I think, enough and self-contained, even if nothing in the semantics of Tense and propositional operators in natural languages seem to bear any relation to the properties of Tense and Neg as a syntactic objects.

Nevertheless, a second alternative is certainly worth wondering about. It could also be the case that a condition on the relative position of Tense and other propositional operators at S-structure bears some tight relation to the way in which they are mapped onto Logical Form.

It is well known that elements under the scope of negation that are focalized get a contrastive focus reading (Jackendoff 1972):

- (75) a. Mary didn't BUY a book yesterday, she STOLE it
 b. Mary didn't buy A BOOK yesterday, she bought A HORSE
 c. Mary didn't buy a book YESTERDAY, she bought it TODAY

In these sentences, what is negated is that constituent that is focalized, somehow. Without entering into an analysis of this phenomenon (see Jackendoff 1972, Rochement 1978), I want to consider some implications for the traditional way of representing negation in Logical Form.

Recall the semantic representation of a simple negative sentence like (74a), given in (74b), which is repeated in (76):

- (76) NO [PAST, Mary leave]

There is no reading of a simple negative sentence where it is the Tense that is focalized and as a consequence acquires a contrastive focus reading. The sentence would be like:

- (77) Mary DIDN'T leave

And the reading that we are considering would be something like: "it is not in the past that Mary left". But If something like (76) is the semantic representation of (77), it is not clear why this reading is not available. Notice that there is nothing implausible about this reading, and, further, that it is available in negative sentences that do not involve the head of NegP:

- (78) a. Nobody HAS a car, we HAD it
 b. No student BOUGHT a book, they WILL buy it

The impossibility of contrastively focalizing Tense under Negation is rather surprising under the standard view of Negation as a propositional operator that takes scope over the entire proposition.

Let us consider an alternative that would predict the phenomena just considered. Let us assume that the LF representation of a negative sentence like (74a) is (79):

(79) PAST [NO [Mary leave]]

Here it is the Tense that has scope over the proposition, and also over the negative operator. The fact that one cannot make a negative sentence mean "It is not in the past that..." now follows from standard considerations about the scope of negation.

2. The Σ projection

2.1. Similarities between negation and affirmation.

Consider the following two parallel paradigms, from English and Basque respectively:

- | | |
|--------------------------|---|
| (1) a. Mary left | (2) a. Mari joan da
Mary left has
'Mary has left' |
| b. Mary didn't leave | b. Mari ez da joan
Mary not has left
'Mary hasn't left' |
| c. *Mary did leave | c. *Mari da joan
Mary has left
('Mary has left') |
| d. Mary <i>did</i> leave | d. Mari da joan
Mary has left
'Mary has left' |

Examples (1a) and (2a) both illustrate declarative sentences from English and Basque. The English sentence has a single inflected verb. The Basque sentence shows a non inflected lexical verb followed by an inflected auxiliary.

(1b) and (2b) are negative sentences. The English sentence displays *do support*, and the Basque sentence shows an alteration of the normal verb-auxiliary order given in (2a).

Examples in (1c) and (2c) show that it is not possible to have *do-support* in a declarative sentence, in the case of English, and that it is not possible to front the auxiliary in a declarative sentence in Basque.

In examples (1d) and (2d) we can see that, in the case of an emphatically affirmative sentence, both languages resort to the same mechanism they used in the case of sentence negation: *do-support* in English, and auxiliary fronting in Basque.

The particular strategies to which these two languages resort are very different in nature: English resorts to lexical insertion ("do-support"), whereas Basque appeals to syntactic movement (fronting of the auxiliary). Nevertheless, the fact that the same strategy is used both in negative and affirmative constructions and prohibited in

declarative sentences is rather striking, even more so given that Basque and English are typologically very different languages.

In the first part of this chapter, I will argue that the paradigm illustrated in (1) and (2) is not a coincidence. I will follow the idea put forward by Chomsky (1957) that there is a morpheme *Aff* (for affirmation) which induces *do-support* in the exact same way in which negation does. I will adapt this idea to the current theoretical framework and some recent proposals in the literature. In particular I argue here that, similarly to the way in which the head *Neg* can head its own functional projection (Kitagawa 1986, Pollock 1989), there is also a X^0 *Aff*, which projects an Affirmation Phrase. These two heads (*Neg* and *Aff*) are further argued to belong in the same syntactic category, which I will call Σ^1 . Thus, both *NegP* and *AffP* are claimed to be different instantiations of a more abstract projection: the Σ *Phrase*.

If this view is correct, Negation is not a syntactic category of its own in natural languages. Rather, that aspect of negation which is encoded by (at least some) natural languages as a functional head is an element of a broader syntactic category. Similarly, that aspect of emphatic affirmation that (at least some) natural languages build in as a functional head would belong in the same syntactic category as negation.

It should be kept in mind that this syntactic category that includes negation and affirmation doesn't cover the topic of negation and affirmation or emphasis in natural languages. It is well known that negation is a pervasive phenomena, and that its instantiations go beyond the case of sentence negation. Thus, in the following examples,

- (3) a. I didn't read any book b. I read no book

Only (3a) is an instance of sentence negation (*NegP*), although both examples have roughly the same meaning. The second example presents a negated DP, and thus it does not induce *do support*, for example, which is a clear symptom of the presence of sentence negation. In assuming that (3a) and (3b) have different D-structures, I depart from Klima (1964), who derives both from the same base structure. Similarly, emphatic affirmation can be instantiated by means other than the *aff* head, as (4a) and (4b) illustrate:

- (4) a. I *did* read the book b. I read *the* book

As in the case of negation, I do not assume that these two sentences share identical D-structures. Only some instances of emphatic affirmation involve the *aff* head.

2.2. Evidence from English.

The idea that (1b) and (1d) are intimately related constructions is an old one within the generative tradition, although it has not prevailed in the literature thereafter. It was first proposed by Chomsky (1957), who argued that there existed in the grammar of English a morpheme *A*, which was responsible for emphatic constructions like (1d):

(¹) The name Σ was suggested to me by Pesetsky, and it suggests the notion of *Speech Act* (affirmation and denial).

In treating the auxiliary verb phrase we left out of consideration forms with the heavy stressed element *do* as in "John does come", etc. Suppose we set up a morpheme *A* of contrastive stress to which the following morphophonemic rule applies.

- (45) ..V. + A Æ ..V"., where " indicates extra heavy stress.

We now set up a transformation *TA* that imposes the same structural analysis of strings as does *Tnot*, and adds *A* to these strings in exactly the position where *Tnot* adds *not* or *n't*. Then just as *Tnot* yields such sentences as

- (46) (i) John doesn't arrive (from John#S+n't#arrive, by(40))
 (ii) John can't arrive (from John#S+can+n't#arrive)
 (iii) John hasn't arrived (from John#S+have+n't#en+arrive)

TA yields the corresponding sentences

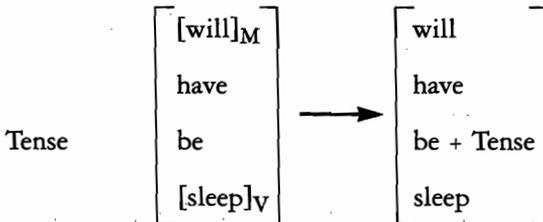
- (47) (i) John does arrive (from John#S+A#arrive, by (40))
 (ii) John can arrive (from John#S+can+A#arrive)
 (iii) John has arrived (from John#S+have+A#en+arrive)

This *TA* is a transformation of 'affirmation' which affirms the sentences "John arrives". "John can arrive", "John has arrived", etc, in exactly the same way as *Tnot* negates them. This is formally the simplest solution, and it seems intuitively correct as well." (Chomsky 1957: 65)

Chomsky (1957) makes a clear parallel between the two elements *not* and the stress morpheme *A*: one of them negates the kernel sentence and the other one affirms it. They are identical operations with opposite semantic values.

Klima (1964), later argued for a similar idea: the existence of an empty morpheme *Emph*, which had the same distributional characteristics as the morpheme *Neg* and thus induced the same syntactic effects (i.e. *do-support*). The rule of Tense-attachment attached Tense to the immediately following verbal form; this verbal form could either be a modal, and auxiliary verb or a lexical verb, as shown in (5):

- (5) II. Tense-attachment (Klima 1964: 256)



The particle *not* was generated immediately after *aux*, which did not include lexical verbs like *sleep*. When the *aux* consisted only of one element (Tense), the presence of *not* produced the string [Tense-not-V], which didn't satisfy the structural description required by the rule in (5), thus blocking its application. Any unattached Tense would then trigger insertion of *do* as a support. Thus Klima (1964), similarly to Chomsky (1957), also postulates the existence of a particle whose only phonological

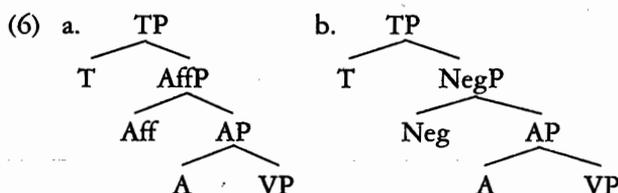
content is stress. However, there is no specific claim about whether these particles and *not* belong in the same syntactic category.

What follows here takes up Chomsky's (1957) original idea and reinterprets it within the current framework; more specifically, in terms of X-bar Theory and head movement.

I will assume with Chomsky (1957) that there is a positive *Aff* morpheme, which is the counterpart of the negative head *Neg*.

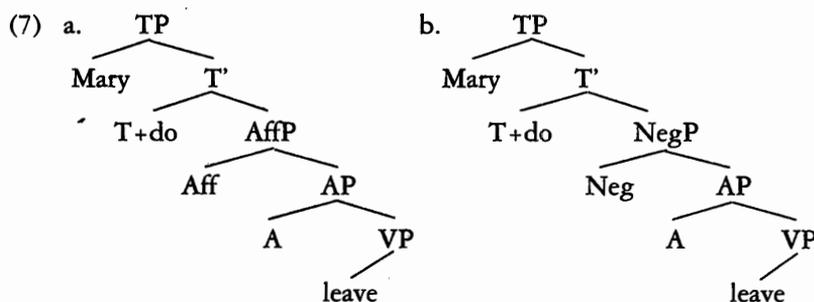
What I will argue is that this positive morpheme *Aff* is a functional head, generated below Tense and Modals in English, and that it projects a functional phrase exactly like *Neg* does².

This is shown in (6a), which can be compared to a negative structure like (6b):



Aff is an inflectional head, which has its own syntactic projection. Therefore, *Aff* is subject to the Tense C-command Condition (TCC), in the same way *Neg* is.

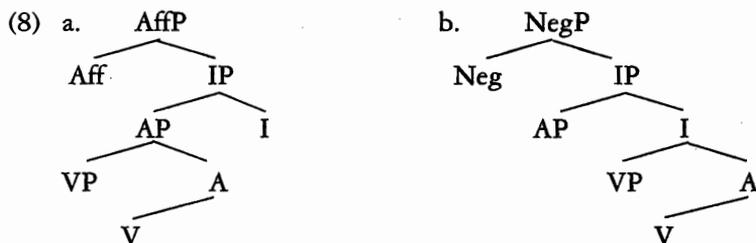
As argued in the first chapter, in a configuration like the one in (6), the only way in which English can satisfy the TCC when there is no auxiliary or modal in the sentence is by inserting a dummy *do*. This prevents the Tense morpheme from lowering onto the Verb at S-structure, thus avoiding a violation of the TCC. Hence, the derivation of (1d) is identical to the derivation of (1b), as shown in (7):



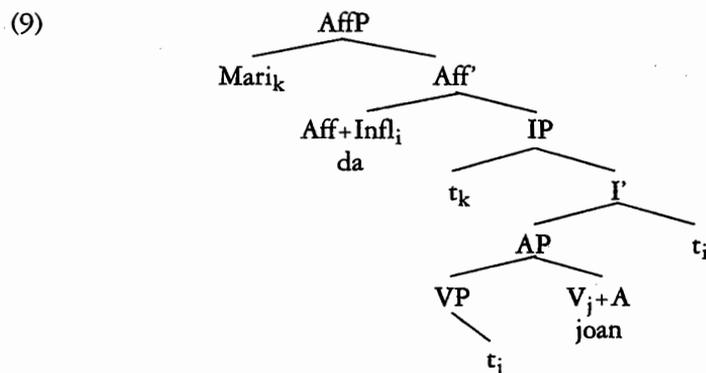
2.3. Evidence from Basque.

I will argue that the picture that arises in English also obtains in Basque, modulo language particular differences. The emphatic construction in (1d) involves an *Aff* head, which projects a Phrase, the same way *Neg* does. Similarly to *Neg*, the *Aff* head is initial instead of final, as illustrated in (8):

(²) Pollock (1989) speculates in a footnote on the existence of an Ass(ertion) Phrase headed by an 'emphatic *do*'. In sentences like (i) *He did so faint* the element *so* would be sitting in the Spec of this Assertion Phrase. In sentences like (ii) *He did faint* the specifier of the phrase would be null.



Given that the Affirmative Phrase is also generated above IP, it triggers raising of Infl as the only way to satisfy the Tense C-command Condition. The derivation of (1d) is illustrated in (9):



Thus, the paradigms in (1) and (2) are explained in a uniform way, under the assumption that Negation and Affirmation are generated in the same projection both in English and in Basque. Moreover, the behavior of these emphatic constructions provides further evidence for the Tense C-command Condition, and for the claim that this UG requirement does not only apply to negation, but to other functional heads as well.

2.4. Neg and Aff are in complementary distribution.

The two functional heads *Neg* and *Aff* are in complementary distribution, both in English and in Basque. That this is the case for English is shown by the following paradigm³:

- (10) a. I didn't, as Bill had thought, go to the store
- b. I *did*, as Bill had thought, go to the store
- c. *I *did* not, as Bill had thought, go to the store

The examples in (10) are all cases of sentence negation; the parenthetical phrase has been inserted between Infl and the verb in order to block constituent-negation readings where negation is attached to the lexical verb and does not take scope over the sentence.

(³) I am indebted to Michael Hegarty and Chris Tancredi for pointing out these facts to me.

(10a) is a case of sentence negation, where there is no special stress placed on the auxiliary verb. (10b) is an instance of the emphatic construction that involves the head *Aff*. The example (10c) has both together: the auxiliary verb is stressed and followed by sentence negation. The sentence results in ungrammaticality.

A similar paradigm obtains in Basque. In Eastern Dialects (where the type of positive declarative construction shown in (1d) is more frequently used), there is a construction that involves both affirmative fronting and negation (Laffite 1944). This construction is illustrated in (11):

- (11) Nik diot Mariari trikota ez eman
 I have to-Mary sweater-the not given
 'I have not given the sweater to Mary'

If it is true that the affirmative construction involves an empty *Aff* morpheme which is in complementary distribution with the morpheme *Neg*, then we expect that, similarly to the English examples in (10), the example in (11) involves constituent negation of the verb *eman* 'give', and not sentence negation as in (2b).

Recall that sentence negation in Basque has S-structure scope over the entire IP (cf. chapter 1). As a consequence of this fact, subject Negative Polarity Items are licensed by *Neg* in Basque (unlike in English, cf. section 1.2.3.). If the negative morpheme in (11) were an instance of sentence negation, we would expect it to license subject Negative Polarity items. However, this kind of negation is unable to do so, as shown in (12):

- (12) a. *Mariri dio inork trikota ez eman
 to-Mary has anybody sweater not given
 ('Nobody has given the sweater to Mary')
 b. *Nik diot inori trikota ez eman
 I have anybody-to sweater not-given
 ('I haven't given the sweater to anybody')

Negative Polarity Items in Basque are licensed in all verbal arguments, given that *Neg* has S-structure scope over the whole IP⁴. Thus, the data in (12) supports the claim that the examples in (11) and (12) are cases of constituent negation, and the negative morpheme is not heading a NegP.

Oyharçabal (1984) presents evidence that further distinguishes the constituent negation case in (11) from a sentence negation case like (2b). Sentence negation can take wider scope than a universal quantifier in subject position, but constituent negation cannot. Consider the following pair:

(*) There are examples where it would look like the negation is licensing a Negpol:

- | | |
|--|--|
| (i) Nik diot deusik ez eman
I have anything not given
'I have given her/him nothing' | (ii) Nik diot inori ez eman
I have anybody-to not given
'I have given it to anybody' |
|--|--|

But this illusion disappears when we introduce some element between the Negpol and the negation, as in (9). The reason why sentences like (i) and (ii) are good is because their structure is as in (iii, b):

- | | |
|---|---|
| (iii) a. Nik diot pro [deusik ez] eman
I have [not anything] given | b. Nik diot [inori ez] pro eman
I have [not to anybody] given. |
|---|---|

- (13) a. [_{NegP} ez dira_i [_{IP} denak etorri t_i]
 not-have all come
 'All didn't come'
 b. [_{NegP} denak_i [_{Neg} ez dira_j [_{IP} t_i etorri t_j]
 all not-have come
 'All didn't come'

Both (13a) and (13b) are instances of sentence negation: (13a) shows the auxiliary having moved to Neg at S-structure, in order to satisfy the TCC. (13b) is identical to (13a), except for the position of the subject: the subject *denak* is outside of IP, presumably sitting in the specifier of the NegP. Both these sentences have as their most salient (and for many speakers only) reading the equivalent to 'Not all came'.

Consider now (14), which is identical to (12) in all relevant respects:

- (14) [_{AffP} denak_j dira_i [_{IP} t_j [_{vP}ez etorri] t_i]
 all have not-come
 'All did not come'

The only available reading for this sentence is 'All of them where such that they didn't come', where negation does not take scope over the universal quantifier. This further confirms the claim that the negative morpheme that occurs in emphatic sentences like (12) is not heading a Negative Phrase, and that it is not an instance of sentence negation⁵.

The contrast noted by Oyharçabal (1984) for Basque also obtains in English: only sentence negation can take wider scope over a subject universal quantifier. Whereas (15a) can be interpreted as 'Not all of them went to the store', this reading is not available in (15b). The only interpretation available in the case of (15b) is 'All of them were such that they didn't go to the store'.

- (15) a. All of them didn't go to the store. b. All of them *did* not go to the store

Therefore, I conclude that *Neg* and *Aff* are in complementary distribution.

2.5. The Σ category and the Σ projection.

The material presented above strongly suggests that there is a deep syntactic similarity between Negation and Affirmation, which goes beyond the particulars of English or Basque Grammar. More specifically, the data discussed indicate that the functional head *Neg* and the functional head *Aff* have many properties in common: They head a separate functional projection, and this projection is generated in the same position in the Phrase Marker. Moreover, this position is subject to parametric variation: below Tense, as in English, or above Tense, as in Basque.

Similar syntactic behavior and complementary distribution are quite reliable symptoms when determining whether two given items belong in the same syntactic

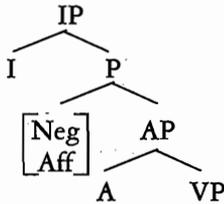
(⁵) Pesetsky (p.c.) points out a problem posed by the mere existence of what we are here calling constituent negation. So far, nothing we know of prevents a sentence like (i): (i) Mary not left.

Where *not* is an instance of constituent negation. Note further that nothing prevents the following sentences either: (ii) that not [_{IP} Mary left], (iii) not [_{CP} that Mary left early] worries me.

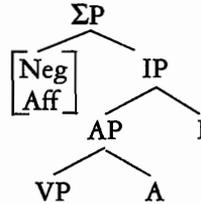
category. Given that the heads *Neg* and *Aff* do exhibit both of these symptoms, we can conclude that they are elements of a broader set, rather than categories of their own.

I will conclude that both these heads belong in a more abstract category, which I will call Σ . This category projects a *Phrase*, as schematized in (16):

(16) a. English



b. Basque



The claim made here is that natural languages do not have a separate syntactic category for negation, but rather include this element in a broader, more abstract category. One other element of this category, as I have argued, is emphatic affirmation.

2.5.1. Elements in Σ .

Are there more elements that belong in Σ ? I will now argue that the answer to this question is affirmative: there is at least one more element, both in English and in Basque that belongs in this Σ category.

In English, the element to consider as a possible candidate for Σ is emphatic *so*. Klima (1964) notes that

...with certain minor differences as to permissible environments, the rules for describing the particle *so* duplicate those of *not*. Their placement in the finite verb chain is the same and both occasion a supporting *do* in the same way. (Klima 1964: 257)

This behavior of *so* is illustrated in the paradigm in (17), taken from Klima (1964):

- (17) a. The writers could so believe the boy
 b. *The writers so believed the boy
 c. The writers did so believe the boy

The meaning of this particle is tightly linked to negation and affirmation. Thus, the context in which emphatic *so* is one where the speaker wishes to deny a denial, as in the following interaction:

- (18) A: Peter left early
 B: Peter didn't leave early
 C: Peter did *so* leave early

Where A, B and C stand for different speakers. The complementary distribution between *Neg*, *Aff* and *so* is again straightforwardly accounted for under the assumption that they head the same syntactic projection:

- (19) a. *The writers *did* so believe the boy
 b. *The writers didn't so believe the boy

Also in Basque, there is one more candidate for the category Σ , which also involves emphatic affirmation of the event: the particle *ba*⁶. Ortiz de Urbina (1989) has already pointed out a number of similarities between the negative particle *ez* and this affirmative element *ba*, suggesting that the later may be subject to a treatment along the lines of negation. Indeed, I will argue that the syntactic similarities derive from the fact that both belong in the same category. Emphatic *ba* induces the leftwards movement of the auxiliary, like *neg* and *aff* do:

- (20) a. Jon *ez* da etorri b. Jon *ba* da etorri
 Jon not has arrived Jon so has arrived
 'Jon hasn't arrived' 'Jon has so arrived'

Similarly to English *so*, the contexts in which the use of this particle is felicitous involves the denial of a denial, that is, a context like the one in (18). The particle *ba* is described as an affirmative marker in the Grammar edited by the Academy of the Basque Language, in opposition to the negative morpheme:

The first set of elements that are placed next to the inflected verb is constituted by those that have to do with the *truth value* that the speaker attaches to the utterance, in particular the particles *ba* and *ez*.

(Euskaltzaindia 1987: 488).

Both *ba* 'so' and *ez* 'not' are in complementary distribution; we have already argued that the empty *aff* cannot coocur with *neg* neither in Basque or English. Given the fact that the only phonological content of [Aff] is stress, arguments for complementary distribution must be indirect, like the one presented above.

There is evidence in Basque showing that *aff* and *ba* are also in complementary distribution. Consider the sentences in (21):

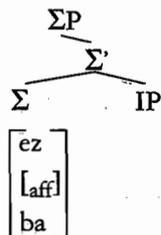
- (21) a. Irune [Aff]da etorri b. Irune bada etorri
 Irune [Aff]has arrived Irune so-has arrived

There is a difference in interpretation between (21a) and (21b). In the case of the empty *aff* morpheme, the emphatic affirmation is placed on the element in the specifier of P, whereas in the case of *ba*, the emphatic affirmation remains on the inflected verb. If it were possible to have both [Aff] and *ba* in a single sentence, the output would be something like 'MARY did read the book'. However, as noted in the Grammar of Euskaltzaindia (1987), the use of the particle *ba* precludes focalization of the preceding element. Under our proposal, this fact has a simple explanation: [Aff], *ba* and *neg* cannot coocur because they belong in the same category:

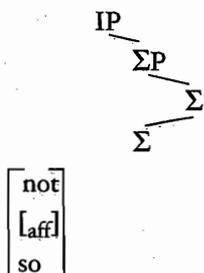
(⁶) As noted by many traditional grammarians, this particle is in fact a contracted *bai* 'yes'. It is also possible to use the complete form *bai* instead of *ba*:

- (i) Jon baida etorri
 Jon yes-has arrived
 'Jon has so arrived'

(22) a. Basque



English



The picture that arises from the discussion of both Basque and English is hence that has a very sharply determined semantic nature: The type of elements that constitute the category Σ all relate to the truth value of the sentence: they either reverse the truth value (neg), or they affirm it (aff), or they deny that it is false (*so, ba*).

Alternatively, we could characterize the nature of Σ in terms of the speaker's presuppositions: *Neg* cancels an affirmative presupposition, *Aff* cancels a negative presupposition, and *so/ba* cancels the cancelation of an affirmative presupposition.

2.6. Negative fronting in Romance.

The phenomenon I want to consider now is illustrated in (23):

- | | |
|--|---|
| <p>(23) a. no vino nadie
not came anybody
'Nobody came'</p> <p>b. nadie vino
nobody came
'Nobody came'</p> | <p>c. *vino nadie
came anybody
'(nobody came)'</p> <p>d. nadie no vino
nobody not came
'nobody didn't come'</p> |
|--|---|

The paradigm in (23) illustrates a very well-known phenomenon in Romance, which is not restricted to Spanish, from where the examples are taken; this phenomenon is present also in Standard Italian, Catalan, Portuguese, and many other Romance dialects.

What is puzzling about the paradigm in (23) is that the constituent *nadie* seems to behave as if it had a double nature: in half of the cases (23a) and (23c), it behaves like a standard polarity item (cf. *anybody*), in that it needs negation to be licensed. In the other half of the cases, however, it behaves like a universal negative quantifier (cf. *nobody*), carrying a negative meaning of its own.

There is a whole set of elements that behave in this fashion: *nadie* 'anybody', *nada*, 'anything', 'at all', *ningún* 'any', *nunca* 'ever', *ni* 'either'... Given that most of them begin with 'n-', I will refer to this set of elements as *n-words*⁷.

(⁷) Not all of them do, however. There set of elements that behave like *nadie* in (15) also include *apenas* 'hardly', *en modo alguno* 'in any way' and *en la vida* 'in my life', as noted in Bosque (1980). It should also be noted that *nada* 'anything' and *nadie* 'anyone' do not originate from negative words, but from positive ones. Thus, *nada* has its origin in Latin *res nata* 'born thing', a phrase of very frequent use that eventually became a Polarity Item; similarly, *nadie* originates in (*homines*) *nati* 'born (men)' (cf. Coromina 1954-57).

declarative _____ universal negative
n-word (*nobody*)

The problems with this partition is that the wrong kind of n-word can occur in the wrong kind of environment. Thus, it is possible to have n-words with a universal negative meaning in questions, and it is possible to have n-words with an existential import in non-interrogative environments.

The first case is illustrated in (27)^a:

- (27) a. Me preguntaron si nadie sabía la respuesta
'They asked me whether nobody knew the answer'
b. quién derribó el nunca terminado puente de la Magdalena
'Who demolished the never finished bridge of Magdalena?'

According to Zannuttini's partition, the *nadie* and *nunca* present in (27a) and (27b) respectively, should be of the existential kind. However, as can be deduced from the glosses, the meaning of these two items in each of the examples is not existential, but universal negative. That is, they do not translate as English 'anybody' or 'ever', but rather, as English 'nobody' and 'never'.

It is also possible to have existential n-words in non-interrogative environments. Consider (28):

- (28) Pedro duda que venga nadie
'Peter doubts that anybody will come'

The embedded clause contains a n-word, which nevertheless is not a universal negative, but an existential quantifier. That is, it is not equivalent to English *nobody*, but to English *anybody*.

Given this evidence, we can conclude that even if there were two sets of n-words, it would not be possible to distinguish them in terms of interrogative versus declarative contexts.

The data presented so far indicates that n-words behave like Negative Polarity items in all environments except in one: only when they occur preverbally do they seem to behave like Universal Negative Quantifiers. In fact, these items are licensed in all environments where English Negative Polarity items are licensed: questions (25a), (27a,b), conditionals (25b), and negative environments (23a,c), (28). They are also licensed in comparatives, as shown in (29):

- (29) María canta mejor que ninguno de vosotros
'Mary sings better than any of you'

And in all other predicates that typically involve Polarity licensers, as discussed at length in Bosque (1980). Some further examples are given in (30) (from Bosque 1980):

(^a) Actually, (27a) is ambiguous. The preverbal n-word can be interpreted as 'anybody' or 'nobody'. This ambiguity is explained in Laka 1991. Note that for the purposes of this argument, it is enough that (27a) *can* have an interpretation like the one given in the translation.

- (30) a. Antonio estaba en contra de ir a *ninguna parte*
 'Anthony was against going anywhere'
 b. Perdimos la esperanza de encontrar *ninguna salida*
 'We lost hope of finding any way out'

We also find n-words inside DPs headed by a universal quantifier, a domain in which NPIs are licensed in English (Ladusaw 1980):

- (31) En esta reunión, todo aquel que tenga *nada* que decir tendrá ocasión de hablar
 'In this meeting, everyone who has anything to say will have a chance to talk'

Zannuttini (1989) claims that the behavior of postverbal n-words in negative sentences is that of a universal negative quantifiers. The central test presented in support of this claim is the following: it is argued that Polarity items cannot be modified by *quasi* 'almost', whereas negative quantifiers can. The contrast is illustrated in (32) (from Zannuttini 1989):

- (32) a. *Quasi nessuno* ha telefonato b. Non ha telefonato *quasi nessuno*
 'Almost nobody has called' 'Almost nobody called'
 c. *Ha telefonato *quasi nessuno*?
 ('Has almost anybody called?')

The point of the paradigm is to show that, whereas the *nessuno* in the interrogative (32c) cannot be modified by *almost*, both *nessunos* in the negative sentences can (32a), (32b).

However, the validity of this test becomes less clear when we consider Polarity Items licensed by negation. Thus, if we take cases with uncontroversial Polarity Items in other languages, the results of this test are not the ones expected. Consider for example English and Basque. Similarly to the Italian example in (32c), it is true that Polarity items licensed in interrogative environments yield ungrammatical results, as shown in (33):

- (33) a. *Ikusi duzu *ea inor*? b. *Have you seen almost anybody?
 seen have-you almost anybody

When the licenser is negation, however, the results of modifying the NPI with *almost* improve considerably, and the sentences are at most marginal. In fact, for most speakers, in these negative environments the Polarity Items can be modified by *almost* without inducing ungrammaticality, as (34) illustrates:

- (34) a. Ez dut *ea inor* ikusi b. I haven't seen almost anybody
 neg-have-I almost anybody seen

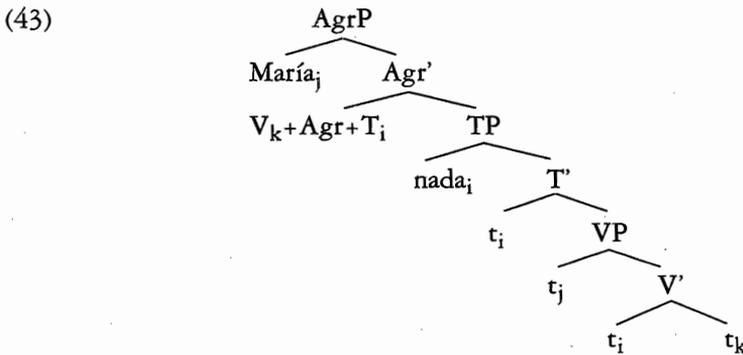
Given these results, the fact that (32b) is well formed does not prove that it is a universal quantifier. What it shows is that, when licensed by negation, the behavior of Polarity Items is different that when the licenser is some other element.

Further evidence in support of the claim that n-word items are Negative Polarity Items is found when we examine their behavior after the preposition *sin* 'without'. In

SPEC-Head relation (Fukui & Speas 1986), if the preposed n-word were sitting in [SPEC,IP] we would expect either that it would agree with Infl, or that the subject would not.

Even under the view of Infl put forward by Pollock (1989), where this category splits into two different projections Tense Phrase and Agreement Phrase, the agreement facts are not automatically rendered irrelevant. Let us consider the possibilities:

Let us consider first a Phrase Structure like the one proposed by Chomsky (1989), where AgrP dominates TP, the possibility that the preposed element be sitting in the highest SPEC in the Inflectional system is automatically ruled out, given the lack of agreement between the preposed constituent and Infl. The n-word could not be sitting in [SPEC,TP] either, since this position would not be preverbal after head movement raises Tense to Agr, as shown in (43):



Let us consider a Phrase Structure like the one proposed in Pollock (1989), where TP is generated above AgrP, and let us assume that subject agreement is realized by movement of the argument to [SPEC, AGRP], as proposed by Mahajan (1989) for Hindi. Under this hypothesis, [SPEC,TP] is still available for movement. If we assume that in declarative sentences the subject moves there in order to satisfy the Extended Projection Principle (Mahajan 1989), then we leave the possibility open for a constituent other than the subject to move to [SPEC,TP] in order to satisfy that Principle, similarly to the way in which the Ergative subject moves to [SPEC, TP] in Hindi, whereas the argument showing agreement sits in [SPEC, AgrP] (Mahajan 1990).

Adverb placement suggests however that this hypothesis is not the correct one. If subjects and preposed n-words were sitting in the same Specifier, we would expect that elements that intervene between the subject and the inflected verb should be able to intervene between the preposed n-word and the inflected verb. This prediction is not borne out. For instance, adverb placement distinguishes the preposed n-word from a standard subject. Thus, adverbs that occur comfortably between the subject and the inflected verb are not possible between the preposed n-word and the inflected verb, as shown in (44):

- (44) a. *María* *frecuentemente* *canta* *en la ducha*
 Mary often sings in the shower
 b. **nadie* *frecuentemente* *canta* *en la ducha*
 nobody often sings in the shower
 c. *Nadie* *canta* *frecuentemente* *en la ducha*
 nobody sings often in the shower

(44a) shows the adverb *frecuentemente* intervening between the subject *María* and the inflected verb. In (44b), we see that this is not possible when we have a preverbal n-word. There is no semantic incompatibility between n-word and the adverb, as shown in (44c), were both appear and the sentence is grammatical. However, the adverb must occur after the preverbal n-word and the inflected verb. Assuming the adverb is in the same position both in (44a) and (44b), it must be the case that n-word is placed in a position higher than Spec of IP, and that the inflected verb has moved upwards too. Therefore, we can conclude that the fronted n-word is not sitting in the Spec of IP/TP.

The next possibility to consider is that n-words occur in [SPEC, CP]. This cannot be the case either, because fronted n-word words can always occur after overt complementizers, as in (45)¹⁶:

- (45) a. *creo* [_{CP} *que* [*nadie* *ha* *venido*]] b. *la* *mujer* [_{CP} *que* [*nunca* *canta*]]
 think-I that nobody has come 'the woman that never sings'
 'I think that nobody came'

The evidence presented so far indicates that the position at stake is higher than [Spec, IP], but lower than [Spec, CP]. I will argue that n-words move to the Spec of Σ P, and that this Σ P is generated above IP in Spanish. Thus, when they occur preverbally, it is to the Specifier of the Σ Phrase that n-words move to when preposed, as illustrated in (46):

- (46) [Σ P *nadie* [Σ' *canta* *frecuentemente* *en la ducha*]]

The P is headed by a phonologically empty negative morpheme, which licenses the polarity item via a Spec-head agreement relation:

- (47)
- $$\begin{array}{c}
 \Sigma P \\
 \swarrow \quad \searrow \\
 \text{nadie} \quad \Sigma' \\
 \quad \quad \swarrow \quad \searrow \\
 \quad \quad [\text{neg}] \quad \text{IP}
 \end{array}$$

⁽¹⁶⁾ We could assume that CP is a recursive projection, following an idea put forward by Chomsky (Class lectures 1989). However, this would leave unexplained why it is that the complementizer cannot follow the preposed word, that is, why is it the recursive CPs are 'ordered'. Moreover, we would have to account for the fact that whereas embedded CPs like *que* do not trigger I-to-C movement, embedded CPs like the one supporting *nadie* always do, as shown in (i):

- (i) a. *Creo que Juan canta siempre*
 'I think that Juan always sings'
 b. **Creo que nunca Juan canta*
 ('I think never that Juan sings')

2.6.3. Sources: Bosque's (1980) proposal.

The idea that preverbal n-words involve some non-overt negative morpheme is not a new one. To my knowledge, it was first proposed by Bosque (1980), in his extensive and insightful work about negation in Spanish. The analysis presented here is in fact similar to Bosque's in various respects.

Bosque (1980) also assumes that n-word words are always Polarity items that need an affective licenser. In the preverbal instances, argues Bosque, sentence negation *no* 'not' incorporates onto the n-word word (in the spirit of Klima 1964), thus yielding the negative meaning.

Bosque also assumes the old version of the VP internal hypothesis (McCawley 1970, Hudson 1973), and claims that the underlying word order in Spanish is VSO. From this underlying order, a transformational operation places one constituent in front of the verb.

Thus, preverbal subjects, questions and preverbal n-word elements are all handled in identical fashion¹⁷. In the case of preverbal n-word words, the input for the rule is a sentence like:

(48) *no tiene nadie hambre*
 'nobody is hungry'

To this sentence, a transformational rule applies, which Chomsky-adjoins the n-word words to the initial position:

(49) *Nadie preposing* (Bosque 1980)
 X-NEG [_S V-Y-POLARITY-W] -Z
 1 2 3 4 5 6 7
 1 5+2 3 4 Ø 6 7

This transformational rule is followed by *Neg-deletion*, which erases the negative marker *no*¹⁸.

The claim made here is that the relation of agreement that holds between the empty head [_{Neg}] and the polarity items sitting in the Specifier position licenses the n-word word¹⁹.

2.6.4 Negative Fronting and Emphatic Fronting.

In the discussion of the properties of the category Σ in the particular case of English and Basque, it was established that there is a tight connection between negation and emphatic affirmation. I have argued that n-word preposing in Romance involves

⁽¹⁷⁾ Pesetsky (1989) has independently put forward a nearly identical proposal, which reduces Wh-movement and preverbal subjects to movement to the Specifier of IP.

⁽¹⁸⁾ Rizzi (1982) also assumes a similar account for n-words in Italian, by means of incorporation of negation onto the preverbal n-word.

⁽¹⁹⁾ If a relation of agreement enables a licenser to license a polarity item, as claimed here, then the condition on Polarity Item licensing starts looking more like government than strict c-command. Notice that allowing the licensing conditions to include SPEC-Head relations does not predict 'anybody didn't leave' to be grammatical, because the Polarity Item is sitting in the SPEC of Infl or Tense, not in the SPEC of NEG-P.

the projection ΣP . Specifically, I have argued that certain Romance languages generate a ΣP above IP, much in the way Basque does. This ΣP is headed by an empty negative morpheme that licenses the NPI sitting in its Specifier by means of a SPEC-Head relation. In turn, the negative head and its projection can only be licensed in the presence of an over n-word element in its Specifier.

I will now provide evidence that this ΣP projection can also be headed by an empty affirmative morpheme, which similarly to the negative one also requires an overt element in the Specifier of its projection in order to be licensed.

Contreras (1976), in his extensive study of word order in Spanish, notes Spanish tends to place the rhematic constituent of the sentence in postverbal position:

- (50) Pedro viene MAÑANA
'Peter arrives TOMORROW'

Contreras calls this the *typical rhematic order*. However, he also points out that in addition to this strategy, 'there is an emphatic order, which is the reverse of the normal order'. In this later case, the rhematic constituent is placed immediately before the inflected verb, as in (51):

- (51) MAÑANA viene Pedro
'Peter arrives TOMORROW'

I will follow Contreras in assuming that the emphatic order in (51) is the consequence of a transformation²⁰; more specifically, I will claim that the preverbal emphatic constituent in (51) has undergone move from its D-structure position to the specifier of ΣP .

The idea that this type of emphatic construction involves movement to a presentential position has already been put forward by Torrego (1984). The following example is taken from her (the postulated S-structure representation is not):

- (52) [_P Un viaje a las Canarias [_{Σ} hizo [_{IP}Antonio este verano]]
'A trip to the Canary Islands Anthony made last summer'

Notice that this fronting differs from another type of fronting available in Romance, which is usually referred to as 'left dislocation'. Contrary to left dislocation cases, this fronting to P does not allow clitic doubling:

- (53) a. *este vestido* compraría yo si tuviera dinero
this dress buy would I if I had money
'I would buy + this dress+ if I had money'

⁽²⁰⁾ Contreras (1976) calls this transformation *THEME POSTPOSING*, and defines it as an optional rule. The operation postpones all thematic constituents, leaving the rhematic one at the beginning of the string. There is a condition added to the rule: *THEME POSTPOSING* is applicable only if the sentence is an assertion. Given that this rule postpones all thematic constituents, there is no way to ensure that the inflected verb immediately follow the rhematic element. In order to achieve this result, Contreras must add one more rule that places the predicate immediately after the rhematic constituent. However, since it is also ungrammatical to have any thematic element preceding the predicate, and given that the rule of theme postponing is optional, a further condition is required which makes it obligatory to postpone all thematic arguments. As Contreras himself notes, though this condition would prohibit left dislocated thematic constituents, which are allowed to precede the theme.

- b. **este vestido* lo compraría yo si tuviera dinero
(‘I would buy this dress If I had money’)
c. *este vestido*, yo lo compraría si tuviera dinero

This preverbal focus position is also discussed by Bonet (1989). Bonet notes only one constituent is allowed in this position. The following are some of her examples:

- (54) a. LES SABATES ha ficat a l’armari en Pere
‘Pere has put THE SHOES in the closet’
b. A L’ARMARI ha ficat les sabates en Pere
‘Pere has put the shoes IN THE CLOSET’

This preverbal focus position, like in Spanish, induces a verb-second effect:

- (55) a. **Un viaje a las canarias* Pedro hizo este verano
b. **Les sabates* en Pere ha ficat a l’armari

And also in Catalan, this emphatic fronting is distinct from left dislocation: Whereas left dislocation leaves a clitic behind (when the clitic is available), this fronting does not allow cliticization:

- (56) a. **LES SABATES* les ha ficat a l’armari en Pere
b. **A L’ARMARI* hi ha ficat les sabates en Pere

2.7. Saying ‘yes’ and ‘no’.

Given that the semantic values of the elements in the category Σ have so far found involve affirmation and denial, it seems natural to look into the relation of the syntactic projection ΣP on the one hand, and affirmative or negative replies to yes/no questions on the other. I will argue that ΣP is involved in affirmative and negative replies to yes/no questions. The evidence I present in support of these claims is drawn from the three languages that are the main object of study in this work: Basque, English and Spanish.

To my knowledge, the syntax of yes/no answers has not been studied as a consistent topic within the generative syntax literature. It is often claimed in fact that there is little or nothing to be found out from such an inquiry, and that only semantics or pragmatics can find anything of interest to say about them²¹.

In this section I would like to challenge this view, and show that there *is* something to say about answers from the syntactic point of view: there are grammatical and ungrammatical answers, and there is also parametric variation as to what a grammatical answer is.

First, I will examine the situation in Basque. It will be shown that relating affirmative replies to the ΣP phrase provides not only an elegant account of the most ob-

⁽²¹⁾ The issue of whether there is anything that syntax can contribute to in the study of answers doesn’t even arise in most discussions I am familiar with (with the exception of Pope 1972). For instance: ‘With what I have said I do not want to suggest that the semantics of questions and answers is less important than the inquiry into their pragmatic aspects. In fact, pragmatic presupposes semantics. A proper semantic account of questions and answers is a prerequisite for a proper pragmatic account.’ (Kiefer 1983: 6) Note that it must also be the case that pragmatic presupposes syntax, and that a proper syntactic account of questions and answers is also a prerequisite for a proper pragmatic account.

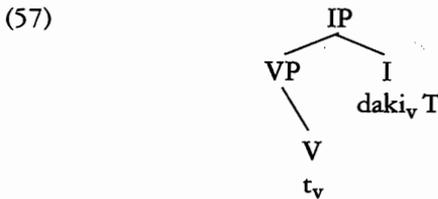
vious facts regarding *yes/no* answers, but it is also the key to a puzzling problem that has so far resisted explanation, regarding sentences whose first overt element is an inflected verb.

Second, I will consider some aspects of the structure of *yes/no* answers in English, and discuss the meaning of *yes* and *no*, their syntactic nature, and the differences between *yes/no* on the one hand and [*Aff*]/*not* on the other. I will also present differences between English, Spanish and Basque regarding *yes/no* answers, and provide an account.

Finally, I will consider the case of Spanish. I will discuss the syntax of *sí* and *no* in relation to Σ P, and I will argue that other elements like *sí que* and *ya* also belong in this category.

2.7.1. Answering in Basque.

Under the assumption that direct answers to *yes/no* question always involve movement of Inflection to the head Σ , the behavior of inflected verbs in these environments is accounted for straightforwardly in Basque. Recall once again that inflected verbs are those where there has been movement of V to Infl, as in (57):



When the reply to a *yes/no* question involves an inflected verb, it *must* have the particle *ba* (*yes*) attached if the answer is affirmative, or the particle *ez* (*no*) if the answer is negative, as the examples in (58) illustrate:

- (58) a. (Bai,) *ba* dakit
 Yes yes-it-know-I
 '(Yes), I do know it'
- b. (Ez,) *ez* dakit
 No not-it-know-I
 '(No,) I don't know it'

(58a) illustrates an affirmative answer: The uncontracted word *bai* 'yes' is optionally present, and separated by a pause from the inflected verb²². The verb has the particle *ba* attached to it. (58b) illustrates a negative answer: parallel to the affirmative case, there is a negative word *ez* 'no', optionally present, and after a pause, the inflected verb with the negative particle attached.

An answer without *ba* or *ez* attached to the inflected verb yields sharp ungrammaticality. Thus, compare (58) to (59):

⁽²²⁾ As mentioned in footnote 8 in this chapter, the particle *ba* is a contraction of the word *bai* 'yes'. It is possible to have a non-contracted form in slow and very emphatic speech, as in,

- (i) *baidakit!*
 yes-it-know-I
 'Yes I know it!'

Conversely, eastern dialects use the contracted form *ba* also for the word 'yes' in isolation, and never use the form *bai*: (ii) *Ba, badakit*

- (59) a. *Bai, dakit b. *Ez, dakit c. *dakit

Note that all the relevant information is present in the answers in (59): the presence of the words *bai* 'yes' and *ez* 'no' already tells us that the answer is affirmative or negative, and the inflected verb informs us of what it is that is affirmative or negative. However, (59a) and (59b) are sharply ungrammatical, and so is the attempt of giving and affirmative answer like (59c) were only the verb is present.

These data find a simple explanation under the Σ P hypothesis. Let us assume that in answering yes or no, the Σ P phrase is projected, headed by whichever value the answer has: affirmative (*ba*) or negative (*ez*)²³. Given the Tense C-Command Condition, Tense must be c-commanding the head of Σ at S-structure, and thus, in the case of Basque, it must raise to that projection (Recall that Σ P is generated above TP in this language). The S-structure representations of (58a) and (58b) are illustrated in (60):

- (60) a. Bai [Σ P badakit [$_{IP}$ δ]] b. Ez [Σ P ez dakit [$_{IP}$ δ]]

Where δ indicates that IP is deleted (following the notation in Wasow 1972). This deletion, however, is not obligatory, and the rest of the sentence can also be part of the answer. What is crucial is that representations like (61), where the inflected verb stays in situ, and Σ P is not generated, are not an option:

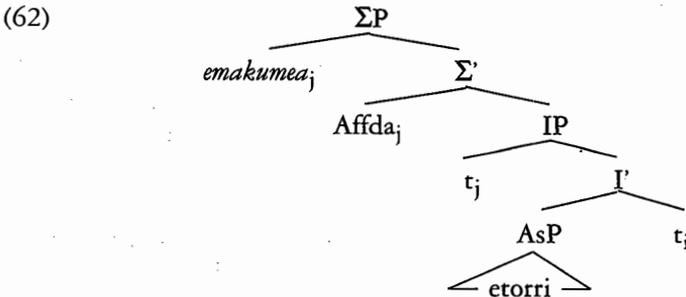
- (61) a. * $[_{IP}$ dakit [$_{VP}$ δ]] b. *Bai, [$_{IP}$ pro dakit [$_{V}$ δ]] c. *Ez, [$_{IP}$ pro dakit [$_{V}$ δ]]

Even if no IP deletion takes place, an affirmative or negative answer that does not involve movement to Σ P yields ungrammaticality. Thus, if one were to ask 'Do you know English?', only a sentence with the particle *ba* or *ez* in attached to the inflected verb would constitute a grammatical answer.

Recall that there are three different elements that can head Σ P in Basque, as argued in section 2.4.1.: One element is negation *ez*, another one is *ba*, and the third one is the empty emphatic [$_{Aff}$]. We have just shown that both *ba* and *ez* occur in affirmative and negative questions respectively, but nothing has been said so far about the third value of Σ : [$_{Aff}$]. Let us consider this case.

There is a basic property of [$_{Aff}$] that distinguishes it from the other two values of Σ *ba* and *ez*. Whereas *ba* and *ez* do not require that the specifiers of their projections be filled by some element, [$_{Aff}$] does require that its specifier be filled by some constituent at S-structure. This follows from the fact that the only phonological content of [$_{Aff}$] is stress, since the heavy stress is placed in the element in the specifier of Σ P. Hence, as we saw at the beginning of this chapter cases where Σ P is headed by [$_{Aff}$] always have some element in the specifier of that projection:

(²³) For a discussion of the status of the initial and optional *bai* and *ez*, see discussion below.



Thus, [Aff] cannot be heading the ΣP when it is the inflection that is affirmed, given that its emphatic value is transmitted to its specifier via agreement. Note that this property of empty [Aff] is not particular to Basque; this head present the same properties in Spanish as well (cf. section 2.5., and later in this section).

2.7.1.1. A result regarding verb initial sentences.

This analysis of yes/no answers in terms of ΣP leads us directly to a phenomenon of Basque grammar that looks quite puzzling at first sight.

Consider the following sentences, all of which are unexpectedly ungrammatical:

- (63) a. * pro_i dator emakumea;
 arrives woman-the
 ('That woman arrives')
- b. *[emakumea;_i [IP pro_i dator]
 woman-the arrives
 ('The woman, she arrives')
- c. * pro dator
 arrives
 ('She arrives')

Basque is a pro-drop language that displays quite a free word order. However, the sentence in (63a), which shows a postverbal subject, is ungrammatical despite the fact that *pro* is licensed in subject position. (63b) is ungrammatical too, although left dislocations of subjects are normally allowed in Basque; and finally, (63c), where the subject has been dropped, is also ungrammatical.

That the ungrammaticality of the sentences above is not due to some restriction on pro-drop of subjects or some restriction on the verb *etorri* 'arrive' used in the example is shown by the following sentences in (64). They are all identical to (63) except for the fact that there is an adverb preceding the inflected verb:

- (64) a. berandu dator emakumea b. emakumea, berandu dator
 late arrives woman-the woman-the late arrives
 'The woman arrives late' 'That woman, she arrives late'
- c. berandu dator
 late arrives
 's/he arrives late'

What the examples in (64) show, when contrasted with (63), is that what makes the sentences in (63) ungrammatical is not the placement of the subject. Rather, it

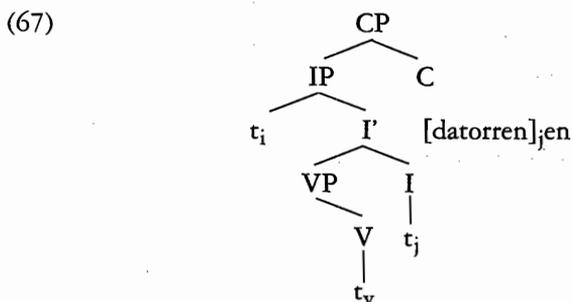
seems that what is wrong about the paradigm in (63) is the fact that the first phonologically overt element within IP is the inflected verb. In fact, it is the case that Basque rules out matrix sentences whose first overt element is an inflected verb or auxiliary. A phonologically based approach to this phenomenon cannot provide a satisfactory answer, however, and this can be argued on the bases of two distinct pieces of evidence. The first one concerns the behavior of embedded clauses. As an example, I will consider relative clauses²⁴. Relative clauses in Basque precede the noun, as shown in (65):

- (65) [t_i berandu datorren] emakumea; Irune da
 late arrives-that woman-the Irune is
 'the woman that arrives late is Irune'

In this environment, a bare inflected verb with no *ba* or *ez* particle attached to it results in a grammatical sentence, as (66) illustrates:

- (66) [t_i datorren] emakumea Irune da
 arrives-that woman-the Irune is
 'The woman that arrives is Irune'

The inflected verb in (66) is in sentence initial position, both with respect to the embedded and the matrix clause. The empty category preceding it is now a trace instead of *pro*, and inflected verb has moved to C (cf. Chapter 1), as illustrated in (67):



The fact that the prohibition against inflected-verb-initial sentences discriminates between different empty categories makes it very unlikely for it to be a restriction applying in the Phonetic Form component. On the contrary, I will argue that this is a syntactic restriction involving S-structure and Logical Form.

It is well known that word order variations in pro-drop languages are not semantically inert different orders yield variations with respect to old and new information, what is known and what is new, the theme and the rheme of the sentence. Let

⁽²⁴⁾ The data I will present hold of relative clauses, indirect interrogatives, conditionals, and embedded clauses where presumably some operator-movement has taken place. They do not hold of embedded clauses that take the complementizer *-(e)la* 'that'. This latter type of clause also behaves like matrix clauses do with regard to other syntactic phenomena, like negation. In Laka (1989) I present a somewhat preliminary discussion on the nature of this complementizer, which deserves further consideration.

me thus assume that, for any given sentence, there must always be a constituent that is interpreted as the rheme. The only exception would be a totally neutral sentence, where no pro-drop is involved and the arguments appear in their D-structure order. It seems uncontroversial to claim that *pro* cannot be rhematized.

Now, if some constituent must be the rheme of the sentence, and if *pro* cannot be the rheme ever, it follows that in a sentence like (63a), repeated again here,

- (63) a. * $[_{IP} [_{IP} \text{pro}_i \text{ dator}] \text{ emakume hori}_i]$
 arrives woman that
 ('That woman arrives')

either the inflected verb or the postverbal subject must be the rheme of the sentence. In southern Romance, postverbal subjects are focalized (Contreras 1976, Calabrese 1985, Bonet 1989), as illustrated in (68) for Spanish and Catalan:

- (68) a. viene *Maria* b. ve *la Maria* 'Mary arrives'

However, this focalization strategy is not available in Basque. Even when heavily stressed, postverbal elements in declarative clauses cannot be interpreted as rhemes²⁵:

- (69) *dator *Mari*
 ('Mary arrives')

The fact that this sentence is ungrammatical in Basque but grammatical in Southern Romance languages further supports the idea that constituents in these languages are not rhematized by attaching some kind of intonation to them, but rather, by placing them in some specific syntactic configuration, an idea that underlies much work done on focus in natural languages (cf. Ortiz de Urbina 1989 and references therein).

All rhematic constituent in Basque must be preverbal (Altube 1929, Ortiz de Urbina 1989), and there is no possibility of rhematizing a postverbal constituent, despite intonation or stress. Given this state of affairs, the only candidate for rheme in (63a) is the inflected verb itself. However, for the inflected verb to be the rheme of the sentence, it must be the case that it has moved to Σ , since it is in this category that the emphatic elements are generated, as discussed in previous sections. Furthermore, in a sentence like (63a) Σ could not be headed by $[_{Aff}]$, because this value of Σ requires an overt element in its specifier at S-structure, as discussed in the previous section. Thus, the only value of Σ that can rhematize inflection are *ba* (or *ez*), which are not present in (63a). Therefore, no element of (63a) can be a rheme, and the sentence is ill-formed.

In contrast with the paradigm in (63), the sentences in (70), where the inflected verb has moved to Σ , are grammatical:

- (70) a. badator emakume hori b. emakume hori, badator c. badator
 yes-arrives woman that woman that yes-arrives yes-arrives
 ('That woman arrives') 'That woman, she arrives' 'She arrives'

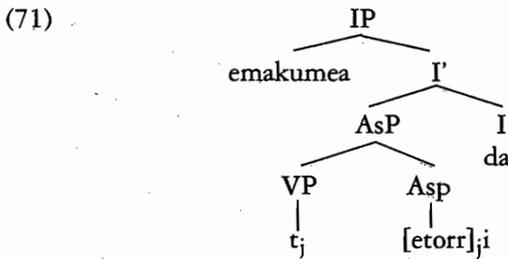
⁽²⁵⁾ I am using the words *rheme* and *focus* interchangeably.

Thus, the prohibition against sentences whose first overt element is a bare inflected element is accounted for, under the assumption that Σ is the position where the emphatic elements are generated.

2.7.1.2. On Non-Synthetic Verbs: A Promissory Note,

Note that nothing has been said here about the behavior of non-synthetic or periphrastic verbs. These verbs present what appears to be a very different behavior. I will present the basic data and what I believe are the issues to be addressed regarding this type of verb-inflection complexes, but by no means will this be a solution, since a complete answer must necessarily go into core issues of the Grammar of Basque whose discussion requires a deeper exploration than what I can offer here.

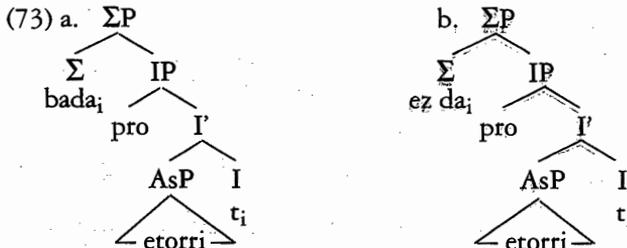
Recall that periphrastic verbs are those that present two separate elements: the lexical verb, inflected only for aspect, and the auxiliary verb, which carries all the inflectional morphology: agreement markers, tense, and modality. The structure of a periphrastic verb does not involve raising of V to Infl. Rather, there is raising of V to the head of AspP. This structure is illustrated in (71);



When replying to yes/no answers, the pattern found in periphrastic verbs partially correlates with the one already discussed in the previous section regarding synthetic verbs. Hence, the options we are by now familiar with are shown in (72):

- (72) a. (Bai,) bada etorri b. (Ez,) ez da etorri
 (Yes) yes-has arrived (No,) not-has arrived
 'Yes, s/he has arrived' 'No, s/he hasn't arrived'

The S-structure representations of (72a) and (72b) hence also involve Σ P's headed by *ba* and *ez*, as is illustrated in (73):



However, there is one more option available in the case of an affirmative answer, which is not possible for synthetic verbs. This third option is presented in (74):

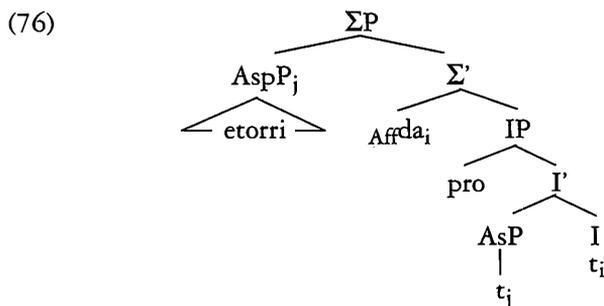
(74) Bai, etorri da 'Yes, arrived has'

In correlation to this fact, it is also possible to have periphrastic verb sentence initially, an option that results in ungrammaticality in the case of synthetic verbs (recall section 4.5.1.1.). The complete paradigm, with synthetic and inflected forms, is given below:

(75) a. *dator b. *da etorri c. etorri da

(75a), as discussed in 4.5.1.1., is ungrammatical. For the same reason, (75b) also yields ungrammaticality. Recall that what rules out (75a) and (75b) is the fact that inflection cannot be the rheme of the sentence unless it is moved to a Σ P headed by *ba* (or *ez*). In contrast with these cases, (75c) is a grammatical sentence. Crucially, the verb is rhematized, that is, it has an emphatic reading. Under our assumptions, this fact means that the verbal complex has moved to Σ P.

I want to claim that in sentences like (75c) the Σ P is involved, as expected. The crucial difference between synthetic and periphrastic verbs is that the later have the option of moving to a Σ P headed by the morpheme $[\text{Aff}]$. What I will argue is that the S-structure representation of (75c) is (76):



In this S-structure representation, Σ P is headed by $[\text{Aff}]$; hence, some overt maximal projection must occupy the specifier of sigma. This maximal projection is the Aspect Phrase, which receives the stress from $[\text{Aff}]$, thus being emphasized. In this respect, then, the difference between synthetic and periphrastic verbs is not a deep one, but a rather shallow one, involving the value $[\text{Aff}]$ of Σ .

2.7.2. Answering in English.

In English also, we find evidence for the claim that yes/no replies involve the category Σ . Affirmative and Negative replies in English are illustrated in (77)²⁶:

(77) a. (Yes) we did b. (No) we didn't

²⁶ In the case of affirmative replies, there exists also the option of using the declarative form of the sentence, as in (i): (i) a. Yes I read it

However, this type of answer differs from the type in (11). Thus, for instance, there are two main restrictions that apply to this kind of answer. First, deletion is not allowed for any constituent:

Where ΣP is headed by $[_{Aff}]$ in the first case and by *Neg* in the second one. Under the hypothesis that ΣP is involved in the representation of the sentences in (77), the ungrammaticality of the following answers is straightforwardly accounted for:

- (78) a. *we did yes
- b. *we did no

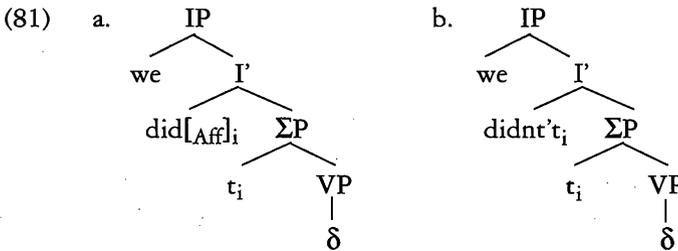
Consider (77a) again. It could be argued that this sentence involves VP deletion, given that the content of the VP is recoverable from the content of the question. Thus, the S-structure representation of (77a) would be as in (79), where no ΣP is involved:

- (79) (yes) $[_{IP}$ we t_i $[_{VP}$ did (;)]

(I assume that Tense/Infl has lowered to V, hence the trace in Infl) If the presence of dummy *do* in these cases were due to a 'VP-copy' process, we should expect the possibility of a parallel process in the case of a negative reply: the sentence initial *no* encodes the negativity of the sentence, and VP deletes leaving a dummy *do* as a copy. However, this strategy is not available. Hence, a negative answer like (80) is ungrammatical:

- (80) *No $[_{IP}$ we t_i $[_{VP}$ did]

The results so far are parallel to those we found in Basque (cf. examples in (59)). And, thus, we can conclude that the affirmative answers in (77) have a very definite S-structure representation; namely, the ones in (81a) and (81b):



2.7.3. On the Meaning of *yes* and *no*.

Let us consider the elements *yes* and *no*. I will argue that they are not generated in ΣP , like $[_{Aff}]$, *not*, and *so* are. First, *yes* and *no* are not the ones at play in emphatic affirmation or negation of sentences, as seen in previous sections.

(ii) Q. Did you find that book on the desk?

- a. Yes, I found it there
- b. *Yes, I found it
- c. *Yes, I found

Deletion is ruled out even in cases where the verb allows null object anaphora:

(iii) Q. Did you eat cake?

- a. *Yes I ate

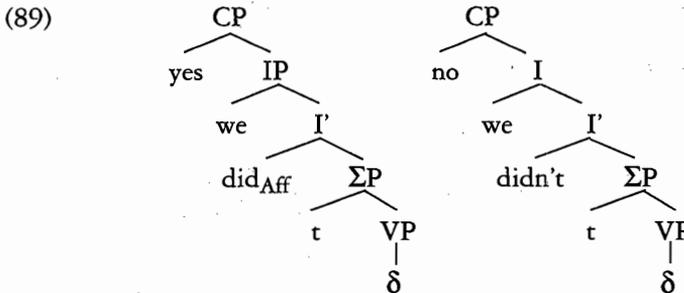
Second, the presence of *yes* is mandatory, unlike in (11a):

(iii) Q. Did you read that book?

- * (Yes) I read it

Although I have no account for these two properties, they support the idea that non-emphatic declarative sentences are not direct answers like the ones in (11).

I did or *I didn't* respectively, *yes* and *no* in (84), (85) and (88c d) are not part of the same sentence as the rest of the answer. More specifically, in cases like (88a, b) the position of *yes* and *no* is the head of CP, right above IP, as in (89):



There is independent evidence in support of this claim. For instance, the elements *yes* and *no* cannot occur in questions, with or without *do-support*, and regardless whether they are echo questions or not:

- (90) a. *Did yes you sing that song? c. *Did no you sing that song?
 b. *Yes you sang that song? d. *No you sang that song?

Secondly, they occur in complementary distribution with other complementizers³⁰:

- (91) a. *She said that yes we could sing b. *She said that no we couldn't sing

Interestingly enough, other languages diverge on this complementary distribution of *yes* and *no* type words and complementizers. Thus for instance, Spanish patterns differently in this respect, in that it allows cooccurrence of the affirmative *sí* or the negative *no*, used in answers, and on overt complementizer, as shown in (92):

- (92) a. pro ha dicho [que *sí* podemos cantar]
 b. pro ha dicho [que *no* podemos cantar]

Moreover, compare the sentences in (93):

- (93) a. She has said yes e. Ella ha dicho *sí*
 b. She has said no f. Ella ha dicho *no*
 c. *She has said that yes g. Ella ha dicho que *sí*
 d. *She has said that no h. Ella ha dicho que *no*

I will later argue that this difference follows from the fact that Spanish *sí* and *no* are not generated in C, but in Σ . Note that in Spanish *sí* and *no* are used in emphatic affirmation and sentence negation, the values of ΣP .

⁽³⁰⁾ The examples in (91) must be distinguished from cases where *yes* and *no* are used parenthetically, as in (i): (i) he said that, yes, he had seen her cry.

In these cases there seems to be a real CP recursion:

(ii) dijo que sí, que la había visto llorar (iii) esan zuen baietz, negar egiten ikusi zuela

It is interesting to note that in certain contexts, which seem to fall under the generalization of propositional attitude predicates, we find elements of Σ as complements of the verb. Consider for example (94):

- | | |
|-----------------------|----------------------|
| (94) a. I hope so/not | g. *I hope yes/no |
| b. I guess so/not | h. *I guess yes/no |
| c. I imagine so/not | i. *I imagine yes/no |
| d. I suppose so/not | j. *I suppose yes/no |
| e. I thing so/not | k. *I thing yes/no |
| f. I believe so/not | l. *I believe yes/no |

But even in these cases, *so* and *not* cannot coocur with an overt complementizer:

- | | |
|-----------------------------|---------------------------|
| (95) a. *I hope that so/not | b. *I suppose that so/not |
|-----------------------------|---------------------------|

Going back to English *yes* and *no*, I have argued above that their semantic content is to affirm or deny the positive declarative version of the question. This means that these words do not qualify or modify the event of the IP they dominate, but, rather, they are connected to the question. Therefore, these heads are not subject to the Tense C-Command Condition, and thus Tense need not raise to C-command them at S-Structure.

That *yes* and *no* are related to the question asked, more than to the replies that may follow, is further confirmed by the fact that these elements are only licensed as a reply to a question. Thus, they cannot be generated in an empty CP in order to emphasize the sentence, or to negate it, as illustrated by the examples in (96), where (a) and (d) contrast with the ungrammatical (b), (c), (e) and (f):

- | |
|---|
| (96) a. Unlike penguins, seagulls do fly |
| b. *Unlike penguins, seagulls yes fly |
| c. *Unlike penguins, yes seagulls (do) fly |
| d. Unlike seagulls, penguins do not fly |
| e. *Unlike seagulls, penguins no (do) fly |
| f. *Unlike seagulls, no penguins (do) fly ³¹ |

In this respect, *yes* and *no* are very much like complementizers of embedded sentences. Complementizers like *that*, *whether*, etc... are not subject to the TCC either, because they do not modify the event of the clause they head, but rather, they establish a connection between the main clause and the embedded one. They are also selected by the matrix verb, in a way similar to which the elements *yes* and *no* have to be licensed by a question.

I haven't yet explained what the structure of answers like (84), (85) and (88c, d) is, although I have already say that the *yes* and *no* present in them does not belong in the same sentence as the rest of the answer. Let me make that statement more precise. I have established that *yes* and *no* are heading a CP, and that they affirm or deny the positive declarative version of the question they are answers to. Note further, that the IP these elements dominate can be optionally deleted:

(³¹) Ignore the reading where *no* is part of the subject DP, as in:
 (i) a. Unlike [most seagulls], [no penguins] like warms

(97) Q: Did you buy me a present? a. [CP Yes [IP δ]] b. [CP No [IP δ]]

I would like to claim that in the examples in (84), (85) and (88c, d), there are indeed two sentences juxtaposed. One of them is headed by *yes* or *no*, and has the S-structure representation in (97), and the other one is the sentence that follows. In this sense, the answers we are now considering would be parallel to other instances of juxtapositions, like:

(98) a. I like Irune, she is terrific
b. I am going to the movies, tomorrow I have to work hard

In these cases, the only connection between the two sentences is that the second one is some kind of amplification of the first one. This is exactly the relation between the *yes* or *no* sentence and the one that follows after the pause in the examples we are considering. This becomes more apparent when we do not delete the entire IP as in (97), but only the VP, leaving the Phrase Marker down to ΣP overt. Consider the following:

(99) Q: Do you play piano? a. No, I sing b. No I don't, I sing

(99a) and (99b) are identical in meaning, because the only difference is whether the first sentence has IP deleted or VP deleted. However, if we attempt to do the same with an answer that involves only one sentence, the result is ill formed:

(100) Q: Do you play piano? a. Yes we do b. *Yes we do we do

The contrast between (99b) and (100b) is thus due to the fact that *no* in (99) is heading a CP which is not part of the sentence 'I sing'. In (100) however, there is only one sentence. The corresponding structures are given in (101):

(101) a. [CP no [IP δ]] // [IP we sing]
b. [CP no [IP we don't [ΣP t [VP δ]]]] // [IP we sing]
c. [CP yes [IP I do_{Aff} [ΣP t [VP δ]]]]

Where (101a) corresponds to (99a), (101b) to (99b) and (101c) to (100a), and the notation // represents separate sentences, juxtaposed. Note in passim that it is never obligatory to delete any constituent. Thus, the VP could also be overt in (101), which would result in the following sentences:

(102) a. No we don't play the piano b. Yes we do play the piano

2.7.5. Answering in Spanish.

Let us now consider how affirmative and negative answers to yes/no questions behave in Spanish. As we would expect given the data from Basque and English, in Spanish also there are interesting restrictions as to what can constitute an answer. The first paradigm to consider is the one in (103):

(103) Q: Leíste el libro que te traje?
'Did you read the book I brought you?'
a. (sí), sí lo leí b. *lo leí c. Sí

The answers in (103) illustrate two uses of *sí*: in one case, *sí* is separated from the rest of the answer by a pause; it can be followed by the second type of *sí* (103a), which is in turn followed by the inflected verb. The second type of *sí* occurs attached to the verb, forming a single intonation constituent (103a). As (103b) illustrates, the bare inflected verb results in ungrammaticality. Finally, there is the possibility of replying with a bare *sí*. We will later discuss what type of *sí* this is.

In contrast, the paradigm of possible negative questions diverges from the one in (103). Consider the examples in (104):

- (104) Q: *leíste el libro que te traje?*
 'Did you read the book that I gave you?'
 a. (no), no lo leí b. *no, lo leí c. no

Similarly to English, a negative answer like (104b) is ungrammatical³² (and so is an answer with the bare inflected verb). Parallel to the *sí* series, there are two uses of *no* as well: the first one is illustrated in (104a), and it is followed by a pause. The second one is attached to the verb and belongs in the same intonation unit as the inflected verb.

It is also possible to reply with a single *no*, whose nature will be discussed below.

Let us consider some differences between the two types of *sí*. Observe first that whereas one of them does not require adjacency with the inflected verb (much like English *yes*), the other one does (much like Basque *ba*).

Since it is intonation what distinguishes the two kinds of *sí*'s I will represent the first type always followed by a comma, and the second one without a comma, indicating that it must be said with no pause at all. The contrast between both types of *sí* with respect to adjacency to the inflected verb is illustrated in (105):

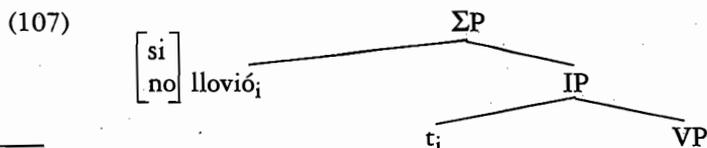
- (105) Q: *Llovió ayer?* 'Did it rain yesterday?'
 a. *Sí, ayer sí llovió* b. *Sí, ayer llovió* c. **Sí ayer llovió* d. *Sí llovió ayer*

The same is true for the series of *no*'s, as shown in (106) (I follow the same convention of distinguishing them with commas):

- (106) a. *No, ayer no llovió* b. **No ayer llovió* c. *No llovió ayer*

Let us assume that the *sí* and *no* that are attached to the inflected verb are generated in ΣP , above IP, like *ba* and *ez* in Basque, and like the [Neg] and [Aff] of section 2.4.

The S-structure representations of the sentences involving these elements are shown in (107):



(32) Ignore readings like the following:

- (i) Q: *Te aburríó el libro que te traje?*
 'Did the book that I brought you bore you?'

- a. *No, lo leí de cabo a rabo*
 'No, I read it beginning to end'

For a discussion of these type of answers, see the preceding section.

Zagona (1988) presents evidence that *no* and Infl in Spanish are amalgamated in a single X^0 by S-structure. In this respect, Spanish *no* is unlike French *pas* but like French *ne*.

Zannuttini (1989) argues that *no* in Southern Romance is generated above IP. In earlier work, Bosque (1980) proposed that negation in Spanish was generated in a position dominating S. I will follow the idea that *no* is higher than IP, and implement it by claiming that it is one of the options in Σ , together with *sí* Σ , [N_{Neg}] and [A_{ff}].

The fact that *sí* and *no* are generated in the head of Σ in Spanish contrast with the nature of *yes* and *no* in English, which are generated in Comp, as argued in the previous section. This explains the following contrasts between the two languages:

- (108) a. *pro* creo [CP que [Σ_P *sí/no*]] b. *I thing [CP that [CP *yes/no*]]

This contrast is accounted for under the assumption that *yes* and *no* belong in the COMP category in English, whereas in Spanish, *sí* and *no* belong in a different category, which is Σ . Note that the contrast illustrated in (108) could hardly be accounted for under the assumption that *yes*, *sí*, English *no* and Spanish *no* are some kind of adjuncts or adverbs.

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