

On the Structural Positions of the Subject in Spanish, their Nature and their Consequences for Quantification

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This paper presents a study of the structural positions that the subject can occupy at S-Structure in Spanish, their nature and the set of implications that the location of the subject in such positions has for a wide range of quantificational phenomena.¹

I first discuss the Obligatory Inversion Rule proposed in Torrego (1984) and the VSO sequences attributed to its application, arguing for a distinction of two different processes and the dissociation of this rule from successive cyclicity. Based on the discussion in section 1, I then study the nature of the two positions available for the subject in Spanish, SPEC/VP and SPEC/IP, arguing for the characterization of SPEC/IP as an A'-position in that language. On the basis of the different nature of these positions, an explanation is given for the asymmetric behaviour displayed by subject quantifiers that depends on whether this element occupies the preverbal or the postverbal position at S-Structure. The analysis will also prove to be valid to account for some contrasts in scope displayed by quantified subjects in English and Spanish, extending moreover to explain some preverbal quantified subject/quantified adjunct asymmetries in Spanish. The location and scope possibilities of Wh-subjects in Spanish will be also captured in a unified way.

Section 3. further shows that the structural position of the subject affects Wh-ex-

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traction as well as the scope of other quantified phrases, conditioning at the same time the semantic import of the sentence, which is understood as presupposed and takes scope over the matrix predicate when the subject sits in SPEC/IP. To finish, I offer an account of the set of scopal asymmetries examined through the paper that relies on the assumption that, unlike clauses with VP internal subjects, the subordinate clauses with preverbal subjects have to undergo movement at LF in order to get their characteristic scope.

1. On the Position of the Subject in Spanish

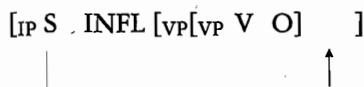
1.1 *The Obligatory Inversion Rule*

It is a well known fact that under certain circumstances various Romance languages, among them Italian and Spanish, allow some word orders in which the subject appears to the right of the sentence (as in the Spanish example in (2)), in opposition to the regular cases with SVO orders in which this element appears sentence initially (1):

- (1) SVO Antonia leyó los libros
 'Antonia read the books'
- (2) VOS Leyó los libros Antonia
 Read the books Antonia

Cases like (2) with a VOS word order have been considered the result of an optional rule of *Free Subject Inversion* (FSI) (or, *Subject Postposing*) that moves the subject NP adjoining it to the right of VP, as represented in (3):^{2, 3}

- (3) Subject Postposing:

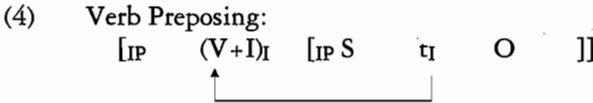


However, as Torrego (1984) observes, all the cases of postverbal subjects in Spanish cannot be analyzed as a unified phenomenon. Thus, in addition to the optional FSI represented in (3), there is a second process, what she calls *Obligatory Inversion Rule* (OIR), (or, *Verb Preposing*), that also creates sequences in which the subject appears after the inflected verb. A major difference between the two processes is that, whereas in the optional rule of Subject Postposing the subject is the element that moves (see (3)), according to Torrego the subject does not move in

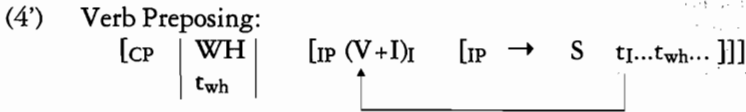
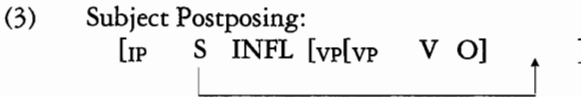
(2) For discussion on this topic, its connection to Wh-extraction and related discussion see, among others, Kayne & Pollock (1978), Rizzi (1982), Belletti & Rizzi (1982), Jaeggli (1980), Burzio (1981) and Jaeggli (1984, 1985).

(3) Subject postposing does not seem to be a uniform phenomenon (or, at least, to involve the same requirements) in all Romance languages, the conditions applying to each case being different. Thus, for instance, while the phenomenon seems to be highly constrained in Italian (where subordinate clauses do not usually allow that order (see Rizzi 1982), or it is limited in French to contexts involving overt operator movement (see Kayne & Pollock 1978 for extended discussion), it seems to be quite free in Spanish (see Torrego 1984).

Verb Preposing, but rather it is the complex head $[V+I]_I$ that does, as (4) represents.⁴



Moreover, while the Free Subject Inversion Rule (Subject Postposing) in (2) is optional, the Obligatory Inversion Rule (Verb Preposing) has to apply obligatorily in certain well-defined contexts. In particular, this rule has to take place necessarily in the case of finite clauses when, as the result of a syntactic movement at S-Structure, a Wh-element or its trace appears in COMP;⁵ consequently, this obligatory rule will apply both in main and embedded sentences.⁶ Thus, from a descriptive point of view, the configuration in which this rule applies as well as the resulting structure of its application should be more correctly represented as in (4'). Observe that a relevant property that derives from the application of Verb Preposing as Torrego characterizes it is that the Wh-element or its trace and the inflected verb will be immediately adjacent to each other (a property that I will refer to as the *adjacency requirement*).



(4) According to Torrego (1984), the landing site for the movement of this complex head would be either an adjoined position to IP or to COMP. For expository purposes, Torrego represents this adjunction operation as adjunction to S although, she observes, nothing in her analysis conflicts with the view that this operation is an adjunction to the complementizer rather than to S. According to her, the S-node created by the adjunction operation of V to S does not count for government or Subadjacency.

Following current approaches to the topic, we could redefine this operation in slightly different terms as movement from INFL to COMP. Fronting of the Wh-phrase to COMP should also be understood in modern terms as movement to SPEC/CP. These characterizations would offer us an explanation of the strict adjacency requirement that can be observed between the tensed verb and the Wh-phrase in the relevant configurations. See related discussion below.

(5) This property also distinguishes Verb Preposing from Verb Second phenomena in Germanic languages or Subject Auxiliary Inversion (SAI) in English. Thus, while the latter restricts its domain of application to main sentences, the Verb Preposing rule under analysis affects not only main clauses but also embedded ones, as exemplified in (i):

- (i) a. * Yo no sé qué María dijo t en la conferencia
I don't know what Mary said in the conference
- b. Yo no sé qué dijo María t en la conferencia
I don't know what said Mary in the conference

(6) To be precise, Torrego argues that not all types of Wh-phrases require inversion. Thus, two major groups need to be distinguished among Wh-elements with respect to this property: a) Wh-elements that trigger obligatory inversion, in concrete the thematic arguments of the verb and the subject of S (that is, internal and external arguments); b) Wh-elements that do not require obligatory inversion as, for instance, *en qué medida* ('to what extent', literally 'in which measure'), *por qué* ('why'), *cuándo* ('when'), *cómo* ('how').

For the time being, I will abstract from this difference using only examples with argumental Wh-elements. I will come back to this issue in section 3, below.

It then follows that while in the Subject Postposing cases the subject appears to the right of the argumental elements in VP (since it is right adjoined to this maximal projection), it appears following the moved $[V+I]_I$ complex head but to the left of the argumental NPs in VP when Verb Preposing applies.⁷ In this paper, I will be only concerned with the structures resulting from what Torrego calls the Obligatory Inversion Rule, disregarding the optional Subject Postposing rule.

Considering the properties of Verb Preposing described above, Torrego argues that it is possible to retrace the movement of an argumental Wh-phrase via this rule. Thus, following her line of reasoning, the derivation of (5b) from (5a) (Torrego's (19a,b) respectively), shows that the Wh-element in the highest COMP has moved COMP-to-COMP in its way up from the most embedded sentence, which provides further support for successive cyclic movement:⁸

- (5) a. Juan pensaba que Pedro le había dicho que la revista
 Juan thought that P. him-D had told that the journal
 había publicado ya el artículo
 had published already the article
 'J. thought that P. had told him that the journal had published the
 article already.'

(7) These major differences are exemplified in (ii) and (iii), where (ii) is the result of the application of the optional rule of Subject Postposing (FSI), and (iii) of the obligatory rule of Verb Preposing (OIR); the failure of the application of the OIR yields the ungrammatical sentence in (iiib). The sentence in (i), on the other hand, displays what is considered the regular surface word order in Spanish: that is, SVO.

- (i) SVO Julia dió los libros a Irene
 'Julia gave the books to Irene'
 (ii) VOS Dió los libros a Irene Julia
 Gave the books to Irene Julia
 (iii) VSO a. A quién dió Julia los libros?
 To whom gave Julia the books
 'Who did Julia give the books to?'
 b. * A quién Julia dió los libros?
 To whom Julia gave the books

As Torrego observes, free subject inversion is always available in Spanish; (iv), (Torrego's (6)), exemplifies a case where both the obligatory Verb Preposing and the optional Subject Postposing have applied:

- (iv) A quién prestó el diccionario Juan?
 To whom lent the dictionary Juan
 'To whom did Juan lend the dictionary?'

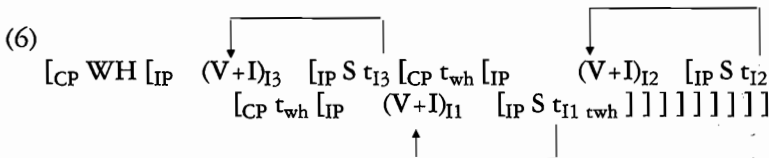
(8) Recall that, as mentioned above, Torrego considers Verb Preposing obligatory in every instance in which a Wh-phrase or its trace is in COMP (but see fn. (6) above); the tensed verb of that clause has to be preposed over the subject in SPEC/IP for the sentence to be grammatical. However, if a Wh-phrase skips a COMP on its way up (a possibility to be allowed in the case of argumental WH-s as far as Subjacency and the ECP are respected), no Verb Preposing will apply in the clause whose COMP has been jumped over, since the structural conditions for the rule to apply (namely, the presence of a Wh-phrase or a Wh-trace in COMP) are not fulfilled.

It should be kept in mind that the possibility just mentioned of skipping a COMP without violating Subjacency reduces to the possibility of skipping the first COMP. Following the analysis presented by Torrego, this is so because (as argued by Rizzi 1982 for Italian), S' but not S counts as a bounding node for Subjacency in Spanish. Thus, in her terms, the behaviour of Spanish in this respect provides further support for Rizzi's (1982) analysis of Subjacency.

The interrogation mark used in Spanish at the beginning of interrogative sentences is systematically skipped throughout the paper to avoid confusion with grammaticality judgements.

- b. Qué pensaba Juan que le había dicho Pedro que
 What thought J. that him-D had t old P. that
 había publicado la revista?
 had published the journal
 'What did John think that Peter had told him that the journal had
 published?'

In (5b) the inflected verb precedes the subject in both the main and the embedded sentences. Following Torrego's analysis, this order is symptomatic of the application of the Obligatory Inversion Rule in both the main and the embedded clauses: the inflected verb has been preposed over the subject, which stays in its SPEC/IP position. The derivation of (5b), then, would be as follows:⁹



Note that this analysis relies on two main assumptions: first, that the inflected verb has been preposed over the subject in the main clause as well as in the embedded clauses; and second, that the subject is located in SPEC/IP.¹⁰

In the remainder of this section, I would like to discuss and propose an alternative explanation for the VSO sequences under analysis. In concrete, I will argue that: a) the VSO order in clauses containing Wh-phrases and Wh-traces in SPEC/CP reflects two different structures, each of them displaying different properties, b) the subject does not sit in SPEC/IP in all the instances of VSO sequences, but rather, in certain cases it remains in its base-generated position in VP, and, finally, that c) Verb Preposing is not necessarily triggered by Wh-movement through SPEC/CP.

1.2. Two Different Structures for the VSO Sequences and Some Further Implications

Even if it seems uncontroversial that the inflected verb moves to COMP in sentences with a Wh-phrase in SPEC/CP, it is not however so obvious that the same process is involved when that position is occupied by a Wh-trace since, as we will see, the latter presents different properties with respect to the adjacency requirement with the verb. To say it differently, the surface VSO order attributed to the uniform application of the obligatory Verb Preposing rule can be equally obtained in the second case if the subject, base-generated within VP, stays in its original position and the inflected verb remains in INFL, after raising of V to INFL.

Let us assume that, in fact, this second strategy is used when a Wh-trace is occupying the specifier position of CP; if this is correct, we will expect several consequences to follow from this assumption.

(9) For expository purposes, the structure abstracts from the trace left by the verb in its movement to INFL.

(10) Note that the second assumption was, at the time when the article was written, the null hypothesis.

If, as Torrego (1984) proposes, the VSO orders in both clauses containing a Wh-trace and a Wh-phrase resulted from the application of the same Verb Preposing rule, the prediction would be that the VSO sequences display the same set of core properties and obey the same set of restrictions; in concrete, the very same adjacency requirement mentioned above would be expected to hold in both cases, as represented in (4') (to avoid unnecessary repetitions, let us call this hypothesis *hypothesis 1*). On the other hand, under a hypothesis like the one presented here that takes the instances of VSO sequences in these two type of structures as reflecting two different phenomena (which just happen to produce the same surface order), some different behaviour can be expected to show up that distinguishes them from one another. (This hypothesis, I will call *hypothesis 2*).

The following paragraphs offer an analysis of the two types of structures under consideration in the light of the adjacency requirement alluded to previously. As will be shown, the two structures display different behaviour in this respect, which suggests that *hypothesis 2* should be favored over *hypothesis 1*.

Observe, first of all, that a proposed WH requires strict adjacency with the inflected verb;¹¹ that is, the verb has to immediately follow the Wh-phrase and no element (including adverbials) is allowed to intervene between the interrogative element and the complex head [V+I]_I.^{12, 13}

- (7) a. QUE le-HA DADO a veces Elena t a Mamen?
 What her(D)-has given sometimes E. t to M.
 'What has Elena given to Mamen sometimes?'
 b. *QUE a veces le-HA DADO Elena t a Mamen?
 c. *QUE Elena le- HA DADO a veces t a Mamen?
- (8) a. QUE DICE a veces Marina que le ha dado Elena
 What says sometimes M. that her(D)-has given E.
 t a Mamen?
 to M.?
 'What does Marina say sometimes that Elena gave to Mamen?'
 b. *QUE a veces DICE Marina que le ha dado Elena t a Mamen?
 c. *QUE Marina DICE a veces que le ha dado Elena t a Mamen?

The same sort of evidence that has been used to prove the adjacency requirement in clauses with a Wh-phrase in SPEC/CP proves that this requirement does not exist

(11) Recall that this is also true when a WH sits in the SPEC/CP of an embedded sentence; see examples in fn. (5) above.

(12) The only exceptions are clitic elements such as *le* in (7a) in the text or *te* in (i) below, where the clitics have moved together with the tensed verb:

- (i) QUE te HA DADO Arantza?
 What you-D has given A.
 'What has Arantza given to you?'

(13) I make use of capital letters for the Wh-phrase and the inflected verb in these examples to make it easier to locate the relevant elements and check the adjacency requirement. No focalization intention should therefore be attributed to the use of different fonts unless explicitly indicated.

for clauses with a posited Wh-trace in that position.¹⁴ Compare some relevant examples, displayed in (9) below; while (9a) with the adverbial *a veces* ('sometimes') located between the WH and the inflected verb is ungrammatical (the adjacency requirement not being obeyed), (9b) with *a veces* appearing in between the Wh-trace and the embedded tensed verb is, on the contrary, grammatical.¹⁵

- (9) a. * A QUIEN *a veces* LE-DICE MariPaz eso t ?
 To whom sometimes him-says M.P. that
 'To whom does MariPaz say that sometimes?'
- b. QUE DICE MariPaz [CP t [C' que *a veces* CREE Juanjo
 [CP. t [C' que *continuamente* HACE Javi t]]]?
 'What does M.P. say that J. sometimes believes that J. does
 continuously?'

The fact that certain adverbial expressions can precede the verb in sentences containing a Wh-trace in SPEC/CP raises some interesting questions as to what positions the inflected verb and the subject occupy in these cases.¹⁶ Observe that in

(14) Recall that, as observed in fn. (4), the adjacency requirement follows from the movement of the tensed verb from INFL to COMP, under a modern reinterpretation of the Verb Preposing rule, and the fact that the Wh-phrase moves to SPEC/CP.

(15) With respect to sentences like (9b), it should be noted that they could be considered a little bit unnatural by some speakers, since they involve too many temporal modifications, but that abstracting from unnaturalness they are absolutely grammatical.

(16) It should be observed here that *a veces* ('sometimes') is not a parenthetical expression in any of these examples; thus, the sentences above do not necessarily involve any stop or change in the intonation pattern preceding or following the adverbial element. Moreover, even as a parenthetical expression, the adverbial element *a veces* ('sometimes') is not allowed to break the adjacency requirement between a fronted Wh-phrase and the inflected verb, as the ungrammatical sentences in (7)-(9) above and degraded example in (i) show:

- (i) ?? * QUE, a veces, HA COMPRADO Cristina?
 What, sometimes, has bought Cristina
 'What has Cristina bought sometimes?'

Furthermore, in the relevant examples *a veces* cannot be in SPEC/CP either, since it follows but it cannot precede the complementizer *que*, as shown by the ungrammaticality of the following example:

- (ii) * A quién ha dicho MariPaz [a veces que ha dado Juanjo dinero t]?
 To whom has said M.P. [sometimes that has given J. money]
 'To whom has MariPaz said that J. has given money sometimes?'

The only available reading for this sentence is when *a veces* is interpreted in the higher clause.

It could be argued that the adverbial element *a veces* is located in a "recursive CP", whose existence has been sometimes proposed to explain sentences like (iii) below, where the interrogative Wh-element follows the complementizer *que* ('that'):

- (iii) Juanjo nos preguntó QUE CUANDO había venido MariPaz
 J. we-D asked that when had arrived MariPaz
 'Juanjo asked us when MariPaz had arrived'

Observe however that this possibility would not be available either, since this adverbial can appear preverbally (as in (iv)) even in those cases in which 'recursive CP'-like structures are not allowed, as in (v):

- (iv) QUE SOSPECHA MariPaz QUE *a veces* HACIA Juanjo por las tardes?
 What suspects M.P. that sometimes did J. in the evenings
 'What does MariPaz suspect that Juanjo used to do in the evenings?'
- (v) * MariPaz sospecha que quién había venido
 M.P. suspects that who had come

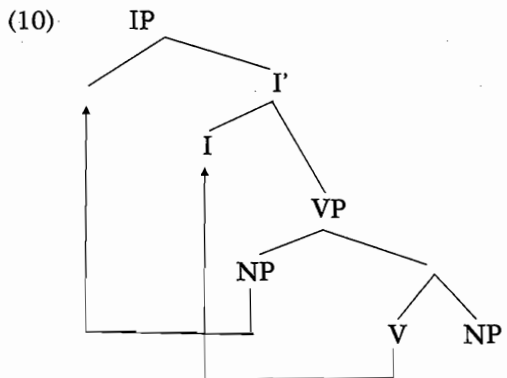
Related to these issues, it is worth mentioning that Bonet (1989) suggests an analysis for Catalan that can be extended to Spanish in which the SPEC/IP could be an available landing site for Wh-phrases. According to her proposal, there is no need to appeal to a 'recursive CP' for sentences like (ii) above, since *que* would be located in Comp and *cuando* ('when') in SPEC/IP. See also Diesing (1988) for a similar proposal suggesting that Wh-phrases move to SPEC/IP in Yiddish in certain configurations. I will come back to this proposal later on; see fn. (54) in section 2.

the relevant cases of subordinate clauses containing a Wh-trace the adverbial element follows the complementizer *que* ('that'). Since the null hypothesis is that the complementizer *que* is in COMP, the adverbial *a veces* ('sometimes') has to be located in a maximal projection lower than CP, that is, somewhere under IP. If this is correct, we are then forced to conclude that in the subordinate clauses with no overt Wh-phrase in SPEC/CP (see (9b) above) the inflected verb is in INFL and no Verb Preposing (or INFL-to-COMP movement, under our reinterpretation of this phenomenon) has taken place.¹⁷

Given that in these cases the subject follows the inflected verb and this is located in INFL, an immediate consequence is that the postverbal subjects in the embedded clauses in (9b) are not located in the SPEC/IP, contrary to the Verb Preposing analysis of the *hypothesis 1* summarized above.¹⁸

If only the SPEC/IP position is available for the subject in Spanish, it is difficult to explain how the facts in (9) above can be accommodated. A solution to this otherwise puzzling situation is possible within the so-called *VP Internal Subject Hypothesis*.¹⁹

Suppose, as advanced above, that the position where the postverbal subject in the sentences at stake appears is its base generated position, i.e. the specifier of VP. The SVO word order that sentences with preverbal subjects display in Spanish would be accounted for by a syntactic movement of the subject from its base-generated position in VP to the SPEC/IP, as represented in (10):²⁰



(17) Under a characterization of Verb Preposing as adjunction to IP, it could be argued that the verb has been preposed even if it appears after *a veces*. But observe that even if this is so, the fact is that, contrary to the cases in (9a) and (i) in fn. (16), the lack of adjacency requirement between the trace in COMP and the verb does not yield an ungrammatical result, and therefore the structure does not seem to qualify as an instance of the Verb Preposing Rule in the relevant sense.

(18) Of course, leaving apart the possibility of dislocation of all the elements following the verb, an issue which is not relevant here since we are not concerned with the optional rule. I will come later on to this possibility to ensure that these sequences are not the result of an optional rule of right dislocation. See fn. (20) below for related discussion.

(19) Cf. Zagona (1982), Kuroda (1986), Kitagawa (1986), Fukui and Speas (1986) and Koopman & Sportiche (1988), among others.

(20) A question that can come to mind is how to ensure that in the relevant examples the subject and the following arguments are not dislocated, which would obviously undermine the hypothesis defended here. Bonet (1989) discusses several ways to distinguish dislocated elements in Catalan that, when carried over to the Spanish cases under analysis, can help us clarify the issue.

This allows us to explain the different properties that the VSO sequences show by characterizing and distinguishing two different processes that create this particular word order. One of them is the Verb Preposing rule as analyzed in Torrego (1984) and summarized above; the other one is the absence of syntactic movement of the subject from its base-generated position and the lack of movement of the inflected verb to COMP. Thus, while the tensed verb has to move to COMP whenever a Wh-phrase is in the SPEC/CP of its clause, this seems not to be the case in sentences where a Wh-trace, instead of the Wh-element itself, is in that position; in those cases the tensed verb need not raise from INFL to COMP, and the reason why the subject is postverbal is because it stays in its base-generated position in VP.^{21, 22}

Further support for *hypothesis II* is obtained when the placement possibilities of negative polarity items and other adverbials that require strict adjacency with the verb are taken into consideration.

Some languages, among them Spanish, present a well-known phenomenon in

To begin with, in contrast with cases involving elements dislocated to the right (as (i)), there is no necessary intonation break or change of the intonation pattern before the postverbal subject in the examples considered above:

- (i) Right Dislocation:
 Qué dices que ha hecho, Asier en la biblioteca?
 What say-you that has done, Asier in the library

Furthermore, whereas sentences containing dislocated elements like (ii) allow continuations in which the dislocated elements can be contrasted, this is not allowed in the regular cases analyzed above of the type in (iii), unless accompanied by the special intonation that characterizes dislocation.

- (ii) Qué dices que a veces lee, Ana en la biblioteca y no Luis en el autobús?
 What say-you that sometimes reads, Ana in the library and not Luis in the bus.
 (iii) ??* Qué dices que a veces lee Ana en la biblioteca, y no Luis en el autobús?

In the same line, dislocated negative polarity items, not allowed whenever dislocated and not c-commanded by Neg, are permitted in the structures at stake:

- (iv) a. * No ha leído los libros, por esta razón, ninguno
 Not has read the books, for this reason, nobody
 b. Qué dices que no ha hecho ninguno por esa razón?
 What say-you that not has done nobody for that reason?
 'What do you say that nobody has done for that reason?'

Finally, and as brought to my attention by Javier Ormazabal (p. c), whereas extraction from inside of dislocated complements is usually degraded, it is perfect when the object follows the postverbal subject in sentences of the relevant type above, which provides further support for the idea that the subject is not dislocated in the cases under study.

- (v) a. ??* De quién dices que leyó Sorkunde el año pasado, novelas t?
 Of whom say-you that read S. the last year, novels
 b. De quién dices que leyó Sorkunde novelas el año pasado?

For an interesting discussion of these and other related topics see Bonet (1989).

(21) For the time being, I leave open for further research how to accommodate this work to the possible existence of intermediate maximal projections between VP and IP, as originally proposed in Pollock (1989) and developed in several recent works.

(22) Note that this makes Spanish closer to English in the sense that Verb Preposing is not triggered by the presence of a Wh-trace, in the same way SAI is not. Recall however that, as observed in fn. (5), Verb Preposing is triggered by the presence of a Wh-phrase not only in matrix clauses but in embedded ones too, this distinguishing Verb Preposing from Verb Second phenomena in Germanic languages or Subject Auxiliary Inversion (SAI) in English. But see Den Besten (1983) for evidence that Verb Second can occur within embedded sentences in certain cases; see also Travis (1984) and Platzack (1986) for discussion.

which a specific set of elements²³ (*nadie* 'nobody', *nunca* 'never', *apenas* 'hardly', *en modo alguno* 'in any way', etc.) pattern as if they had double nature: on the one hand they act as regular polarity items requiring negation to be licensed (as *nadie* 'anybody', *nada* 'anything',...) while, on the other hand, they can be used as universal negative quantifiers (as *nadie* 'nobody', *nada* 'nothing', etc.) with a negative meaning of their own.²⁴

- | | |
|---|--|
| <p>(11) a. <i>María nunca viene</i>
'Mary never comes'</p> <p>b. <i>María no viene nunca</i>
'Maria doesn't come ever'</p> <p>c.* <i>María viene nunca</i>
(Maria comes ever)</p> | <p>(12) a. <i>Nada quiere María</i>
'Nothing loves Mary'</p> <p>b. <i>No quiere nada María</i>
'Mary doesn't want anything'</p> <p>c.* <i>Quiere nada María</i>
(Maria wants anything)</p> |
|---|--|

When they work as universal negative quantifiers, these elements are heavily constrained with respect to the syntactic configurations where they can show up; thus, they have to be placed immediately before the verb and only one such n-word is allowed to appear in that preverbal position.²⁵

Given that both Wh-phrases and preverbal n-words require strict adjacency with the verb, some conflict is expected in this respect in clauses containing both a Wh and a preverbal n-word; since both adjacency requirements cannot be satisfied at the same time and the adjacency requirement of the preverbal n-word interferes with the adjacency requirement between the Wh-phrase and the inflected verb in inter-

(23) For expository purposes, I will follow Laka (1990) in calling these elements *n-words*, the name coming from the fact that in Spanish most of them begin by *n-*.

(24) Cf., among many others, Rizzi (1982), Bosque (1980), Laka (1990), and references therein.

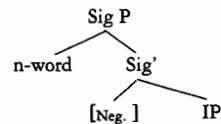
(25) To capture this 'double behaviour' under an analysis that maintains a unique negative-polarity-item nature for these elements and explains at the same time the series of requirements mentioned above, Laka (1990) proposes an account based on the existence of a further maximal projection, the Sigma P (SigP), which she independently motivates. She proposes that this maximal projection (that, following her, appears higher than IP in Spanish and Basque but lower than IP in English) can be headed either by the Negation head, the Affirmation head or the Emphatic Affirmation.

According to Laka, the cases of preverbal n-words acting as universal negative quantifiers can be accounted for by a syntactic movement analysis of both the n-word and the inflected verb to the specifier and head of Sig P respectively, this movement operation explaining the adjacency requirement observed between the n-word and the inflected verb. The motivation for the raising of the inflected verb would follow, under this analysis, from an S-Structure condition, the *Tense C-Command Condition*, which states that 'Tense must c-command at S-Structure all inflectional heads of its clause'; since the Sig P is headed by an inflectional head that is higher than Tense in the structure in Spanish, Tense has to move up to c-command this head.

Following this approach, the restriction that only one n-word can precede the verb is explained under the consideration that only one element can occupy a specifier position. On the other hand, the negative meaning that these n-words seem to have on their own is explained by the agreement relation that the n-word in the specifier position and the inflectional negative head maintain. According to Laka, the structure for sentences like (i) with preverbal n-words would be as in (ii):

- (i) *Nunca viene Pedro a casa*
Never comes Pedro home

(ii)



See Laka (1990) for further details.

rogative clauses, we expect preverbal n-words not to be allowed in those circumstances, a prediction that indeed is borne out:

- (13) * QUE nunca HA HECHO Marivi?
 What never has done M.

Keeping in mind that preverbal n-words are not allowed whenever the Obligatory Inversion Rule has to apply, let us now consider the following cases of long distance extraction, where in addition to a fronted Wh-phrase in the most deeply embedded clause an n-word appears preceding the verb in the intermediate CP:²⁶

- (14) QUE LIBRO_i oyó Ana que NUNCA supo el librero A QUIEN_j había vendido Jon t_i t_j?
 Which book heard A. that never knew the librarian to whom had sold J.
 'Which book did A. hear that the librarian never knew to whom Jon had sold?'

In this example, the Wh-phrase *qué libro* has been extracted from the most embedded clause. Consider now the derivation of this sentence: the most embedded SPEC/CP is occupied by a Wh-phrase, therefore *qué libro* has to skip it. Following the line of reasoning developed above, the n-word appearing before the verb shows that in the case of the intermediate CP the Obligatory Inversion Rule has not applied, even if the subject appears post-verbally. Now, if the OIR is linked to the appearance of a Wh-trace in SPEC/CP, given that this rule has not applied in the intermediate clause, it means that this intermediate SPEC/CP has also been skipped over by the Wh-phrase on its way up. But if so, the Wh-phrase would have passed over two CPs in one single step and the sentence should constitute a Subjacency violation. Since it is not, this suggests that the Wh-phrase has made use of the intermediate SPEC/CP. If this argument is correct, we conclude that the Obligatory Inversion Rule is independent of the appearance of a Wh-trace in SPEC/CP.

The same conclusion is reinforced by an observation in Torrego (1984). It is claimed in that work that a difference between the output of the optional Free Subject Inversion rule (FSI) and the obligatory Verb Preposing rule (=OIR) relates to the possibility of adverb placement. Thus, certain adverbs can occupy sentence

(26) It is worth noting that, even though the speakers I have consulted, including myself, consider sentences like (14) with a Wh-object extracted out of a Wh-island grammatical, some speakers find them degraded (see Torrego 1984 and Jaeggli 1985, for Spanish and Picallo 1984 for Catalan). Thus, in the analysis of this particular type of structures developed in Torrego (1984) sentences like the one in (i) are ruled out as ECP violations:

- (i) * Qué diccionario no sabías a quién había devuelto Celia?
 'What dictionary didn't you know who Celia had returned to?'

According to that analysis, the presence of an argumental Wh-phrase in the lower COMP triggers Verb Preposing obligatorily; since it is assumed there that the trace of the moved verb cannot properly govern the trace of the Wh-object, and given that antecedent government from the embedded COMP is not possible (the COMP being already occupied by the Wh-phrase *a quién* 'to whom', the trace of the object is not governed and the sentence results in an ECP violation.

Looking at the grammaticality judgements it seems that, apparently, two different dialects of Spanish are at work here. It would be extremely interesting to find out the exact ways in which they diverge as well as the consequences of this divergence for the grammar. I leave this question open for further research.

initial position if Free Subject Inversion applies, but this option is not allowed if Obligatory Inversion does ((15)=Torrego's (4)):²⁷

- (15) a. SIEMPRE LEE lo mismo María
 always reads the same M.
 'Mary always reads the same'
- b. * QUE siempre LEE María?
 What always reads M.
- c. QUE LEE María siempre?

If this adverb cannot occupy sentence initial position when obligatory inversion takes place, we can indirectly know when this rule has applied by looking at the placement possibilities of this adverbial element. Consider the following sentence, which involves long distance extraction of an object:²⁸

- (16) A QUIEN piensa Teresa que SIEMPRE dice Josu que SIEMPRE ve Joserra t en
 el monte?
 Whom thinks T. that always says J. that always sees J. in the mounts
 'Who does Teresa think that Josu always says that Joserra always sees
 in the mounts?'

Observe that if, as Torrego suggests, the appearance of *siempre* sentence initially is a symptom of the non-application of the obligatory inversion rule and in turn if a Wh-trace in SPEC/CP triggers Verb Preposing obligatorily, this sentence should involve a Subjacency violation, since following this hypothesis the Wh-phrase has crossed two CPs in its way up. Since the sentence is grammatical, we conclude that Subjacency has not been violated and, therefore, that Verb Preposing has to be

(27) Observe that *siempre* also requires adjacency of the verb when it appears sentence initially, as shown in (i):

- (i) a. Siempre come Kepa manzanas
 Always eats K. apples
- b.* Siempre Kepa come manzanas
 Always K. eats apples

If this requirement is susceptible of being analyzed on the lines of Laka (1990) (see fn. (25)), then the argumentation in the text would reduce to the previous one with preverbal negative polarity items.

(28) As observed with respect to some of the examples above, this sentence can be considered a little bit unnatural due to the repetition of *always*, but to my ears it is grammatical. Further, observe that even a regular affirmative sentence involving no Wh-extraction like (i) is already quite unnatural:

- (i) Teresa piensa que Josu siempre dice que Joserra siempre ve a Arturo en el monte.
 T. thinks that J. always says that J. always sees A. in the mounts.

That the unnaturalness of some examples has to do with the repetition of the adverbial element seems to be supported by the fact that examples like (16) improve in naturalness when the adverbial element alternates:

- (ii) QUE piensa Julio que SIEMPRE dice Inma que NUNCA hace Igor?
 What thinks J. that always says I. that never does I.
 'What does Julio think that Inma always says that Igor never does?'

Thus, the use of *siempre* and *nunca* instead of the repetition of the same token makes the example much more natural, despite the fact that both cases would involve the same structure if the case involving sentence initial *siempre* can be analyzed in terms of the Sig P (see fns. (25) and (27)).

dissociated from the presence of intermediate traces in long distance movement and, ultimately, from successive cyclicity.^{29, 30}

Summarizing, the discussion in this section has shown that, contrary to what was assumed in the classical account, the VSO order in interrogative constructions is not due to a single obligatory process of Verb Preposing. Based on the location of negative polarity items and some adverbial elements, it has been shown that the strict adjacency that necessarily holds between a Wh-phrase in SPEC/CP and the inflected verb in COMP is not obeyed when SPEC/CP is occupied by a Wh-trace. I have proposed that the VSO order in clauses with Wh-traces in SPEC/CP follows from the fact that the subject can remain in its base-generated position in VP and the inflected verb does not raise from INFL to COMP. If these conclusions are correct, long distance Wh-extraction of an argument is then independent of the position of the verb, and Verb Preposing has to be dissociated from successive cyclic movement.

Given that two different positions (SPEC/IP and the base-generated VP internal position) are available for the subject to be located at S-Structure, an immediate question arises as to what consequences follow from its placement in one location or the other. This and related issues are addressed in the following sections, where the relevance of the location of the subject at S-Structure is studied in the light of quantificational scope phenomena and the semantic import of Wh-questions.

2. On the Relevance of the Subject Position and its Consequences for Certain Asymmetrical Quantificational Scope Effects

From the previous discussion we concluded that there are two positions available for the subject at S-Structure in Spanish: SPEC/VP and SPEC/IP. This section studies the nature of these positions and, based on their differences, presents an account of a set of scopal asymmetries that preverbal and postverbal quantified subjects display in that language. The analysis proposed to account for the Spanish

(29) Since in the relevant examples the location of the subject in its base-generated position in VP was based on the placement of the adverbial *a veces* ('sometimes') in IP, the reader might wonder what ensures that this element appears in fact in that position and not in Sig P, as proposed by Laka for the cases of preverbal n-words. It should be kept in mind however that there is a crucial difference between the examples involving *a veces* ('sometimes') and the ones involving n-words and *siempre* ('always'). As described in the text, when n-words and *siempre* appear preverbally they have to be immediately followed by the inflected verb, which under Laka's account is explained in terms of movement of these two elements to Sig P. However, this is not the case with *a veces*; thus, this element does not have to be adjacent to the verb when preverbal, as shown by the following example:

- (i) Cristina a veces come en casa
C. sometimes eats at home
- (ii) A veces Cristina come en casa

Notice that, furthermore, no stop has to follow the adverbial in (i), (ii) or in the examples used above where this element follows the complementizer in embedded clauses. Therefore, we can conclude that the examples with *a veces* involve different structures than those containing n-words or *siempre* and that unlike those elements *a veces* is in IP and the subject is in VP, as proposed above.

(30) At this point, one could wonder whether argument Wh-phrases necessarily move successive-cyclically through intermediate SPEC/CPs, if the conclusion in the text is correct. In fact, these intermediate traces never contribute to the semantic interpretation of the Wh-chain (but see fn. 39); and, if Lasnik, Saito (L & S) (1984) and Chomsky (1986, 1989) are correct, these traces can freely delete (in fact, under the more restrictive theory in Chomsky (1989) *have to delete*) before LF. The ramifications and consequences of this problem, though, are far reaching and go beyond the scope of this paper.

asymmetries will also prove to extend to some differences in scopal behaviour displayed by quantified subjects in English and Spanish.

Before introducing the mentioned asymmetries, let us examine the extraction of Wh-subjects and the different behaviour that Spanish (as well as other Romance languages) and English display in this respect. Consider the following examples, where (17a,b,c) correspond to (18a,b,c), respectively:

- (17) a. Who bought what?
 b. * What did who buy?
 c. Who do you say (*that) bought a computer?
- (18) a. Quién compró qué?
 b. Qué compró quién?
 c. Quién dices que compró un ordenador?

As (18a-b) show, when a subject and an object Wh-phrase are present in an interrogative clause in Spanish, either one of them can be fronted at S-Structure, the result being grammatical. English, on the contrary, exhibits Superiority effects and sentences like (17b) in which the Wh-subject remains in situ and it is the object Wh-phrase that moves, are bad. Furthermore, while English shows *that-trace* effects in sentences where the embedded subject moves at S-Structure (as in (17c)), the parallel Spanish counterparts as (18c) are grammatical.

These differences have been accounted for by assuming that whereas the trace left by the subject can only be governed by antecedent government in English, the subject 'seems to behave' like an object in languages like Italian and Spanish and its trace can be properly governed by other means in configurations in which antecedent government is not possible.^{31, 32} Rizzi and Jaeggli pursue an account of this

(31) See Brandi & Cordin (1989), Rizzi (1982), Belletti & Rizzi (1981), and Jaeggli (1984, 1985), among others, for Romance languages. See also Kenstowicz (1989) for independent evidence that in some Arabic dialects the subject is extracted from postverbal position whenever the complementizer is present.

(32) The ungrammaticality of (17b) has been generally accounted for as an ECP violation (see, among others, Jaeggli 1980, Chomsky 1981, Kayne 1981 and L & S 1984). The trace left by the movement of *who* to COMP cannot be antecedent governed from this position, COMP being already occupied by *what*. Further, since the trace of the subject is not lexically governed, lexical government also fails.

A different account to the problem is pursued in L & S (forthcoming), motivated by the difference of grammaticality of examples like the ones in (i) and (ii):

- (i) a. * Who₂ do you think that t₂ left?
 b. ? Who₁ t₁ thinks that who₂ left?
- (ii) a. * Who₂ do you wonder whether t₂ left?
 b. ? Who₁ t₁ wonders whether who₂ left?

As (ia) shows, whenever the embedded Wh-subject moves to the higher COMP at S-Structure and the complementizer *that* is present, the sentence is ungrammatical. However, as given in (ib), if the very same WH moves in LF the sentence improves dramatically. L & S (1984) accounted for this difference by arguing that the complementizer *that* deletes at LF; then, INFL moves to COMP at LF, and being coindexed with the subject, it can antecedent-govern the trace left by the subject at LF. However, as recognized in L & S (forthcoming), this account is no longer available when pairs like the one in (ii) are considered. In this case the improvement in grammaticality of (iib) cannot be explained by appealing to the same mechanism, since the complementizer *whether* has lexical content and cannot be deleted at LF. Under their new account, INFL would not move to COMP but rather it would adjoin to S. Being a head, and further, being coindexed with the subject, it can antecedent-govern the trace left by *who₂* at LF in (ib) and (iib), which explains their better status.

Considering this, they argue that (17b) cannot any longer be ruled out as an ECP violation, but rather, it should be accounted for as a Superiority Condition violation, an independent condition that should be kept distinct from the ECP.

based on the possibilities that these Romance languages display with respect to subject inversion.³³ Thus, following them, in those languages the subject is extracted not from the preverbal position but rather from the postverbal one, which is usually assumed to be an adjoined position to VP as well as a governed position.

An extremely interesting analysis in this direction is presented in Jaeggli (1985), where it is shown that Superiority Effects (which he assimilates to the ECP) are also present in the grammar of Spanish when the relevant structural conditions are met.³⁴ Consider the following examples, which involve multiple interrogation and instances of Wh-phrases in situ (from Jaeggli 1985):

- (19) a. Quién dijiste que compró qué?
Who you-said that bought what
'Who did you say bought what?'
- b. Qué dijiste que compró quién?
What you-said that bought who
'What did you say that who bought?'
- c. * Qué dijiste que quién compró?
What you-said that who bought
'What did you say that who bought?'
- d. Qué dijiste que Mario compró?
What you-said that Mario bought
'What did you say that Mario bought?'

In (19a) the object Wh-phrase remains in situ at S-Structure and raises to the matrix SPEC/CP occupied by *quién* at LF; since the traces left by the Wh-phrases are properly governed the sentence is grammatical.³⁵ With respect to (19b), where the subject is extracted from the postverbal position at LF, Jaeggli concludes that the necessary licensing requirements are also met, since the sentence is grammatical with *quién* having scope in the matrix clause. Interestingly enough, example (19c) is ungrammatical. Jaeggli observes that this ungrammaticality cannot be attributed to the failure of Verb Preposing, since the example in (19d) where the subject appears preverbally and Verb Preposing has not applied constitutes a grammatical utterance.³⁶ This strongly suggests that (19) is ungrammatical because the trace left at LF by the preverbal subject QUIÉN does not satisfy the ECP.

(33) See references above.

(34) Still, he suggests that not all the Superiority Conditions Violations are analyzable under the ECP; concretely, *Pure Superiority* cases such as (i) still remains a problem for the ECP account:

(i) * What did you tell who(m) that Peter bought?

(35) See Jaeggli (1985) for the concrete proposal of how government and proper government should be defined as well as the government requirements to be obeyed at each syntactic level of representation and at PF.

(36) Jaeggli follows Torrego (1984) in assuming that the lowermost COMP can be skipped by the WH, which being an argumental phrase can move in a single step without violating Subadjacency or the ECP. Recall that, as mentioned in fn. (8) above, the possibility of skipping the first COMP without violating Subadjacency follows from the fact that S' but not S counts as a bounding node in Spanish with respect to this condition.

Jaeggli's observation seems to be related to a further set of phenomena that, as far as I know, has not received a satisfactory account in the literature. Consider the following set of examples, which involve Wh-extraction out of an embedded sentence and postverbal quantified embedded subjects:³⁷

- (20) a. A quién dices que amaba cada senador t ?
 Who say (you) that loved each senator
 'Who do you say that each senator loved?'
 b. Qué dices que ha comprado todo dios t ?
 What say (you) that has bought everybody
 'What do you say that everybody bought?'

As expected, the sentences in (20) are ambiguous in Spanish, allowing two different readings. According to one possible interpretation, the WH has wide scope over the embedded postverbal subject; thus, an appropriate answer for these examples could be: 'It is Jon that each senator loved', and 'It is this computer that everybody bought'. This construal would be roughly represented as in (21):

- (21)
 a. [CP Whom_j [IP you say [CPthat [IP each senator_i [IP loves t_i t_j]]]]]
 b. [CP What_j [IP you say [CPthat [IP everybody_i [IP bought t_i t_j]]]]]

Under the second interpretation, the embedded subject can have wide scope over the Wh-phrase, as represented in (22):^{38, 39}

(37) A word is in order with respect to the quantifiers used in the discussion. It is hard to find a good counterpart in Spanish for quantifiers like *everybody* or *everyone*. One of the closest ones, which I use in some of the examples, is the colloquial *todo dios* (lit. 'every god'); however, there is a tendency for some speakers to interpret it with a group reading. See fn. (40) for some remarks on *cada* ('each').

(38) Observe that in the representations in (22) the Wh-phrase is higher than the quantified NP; still, the latter is allowed to have wide scope over the Wh-phrase. This is so because in May's system adjunction to S' is prohibited; thus, the quantifier has to necessarily adjoin to the matrix S. The possibility of the wide scope reading of the quantified expression over the Wh-phrase obtains from the fact that the two elements govern each other, the quantified NP not being exhaustively dominated by the matrix S as the result of the adjunction operation.

L & S (forthcoming) pursue a different analysis of this particular example. In the new approach, it is claimed that LF configurations unambiguously represent scope relations, as in May (1977). Considering this, the reading where the quantified NP has wide scope over the WH results from the adjunction operation of the first element to the matrix CP, as represented in (i); this possibility, as just mentioned, is disallowed in May (1985).

(i) [CP everyone₂ [CP who₁ [IP do you think [CP[IP t₂ saw t₁ at the rally]]]]]

See May (1985) and L & S (forthcoming) for relevant discussion and argumentation.

(39) Juan Uriagereka (personal communication) observes that there exists a difference between complements in indicative mood and complements in subjunctive mood with respect to the possibilities of quantificational scope. According to him, whereas in sentences like (i) below with a subjunctive complement the quantified NP can be interpreted as having scope over the matrix verb, in sentences like (ii) with an indicative complement the matrix verb has scope over the quantified NP. That is, indicative complements seem to behave as islands in this respect. Interestingly, pair readings are possible in both cases.

(i) Qué quieres que haga todo dios t ?
 what want-you that do- subj. everybody
 (ii) Qué crees que ha hecho todo dios t ?
 what believe-you that has done everybody

- (22) a. [CP Who_i; [IP each senator_i [IP you say [CP that [IP loved t_i t_j]]]]]
 b. [CP What_i; [IP everybody_i [IP you say [CP that [IP bought t_i t_j]]]]]

Under the wide interpretation of the quantified phrase, pair readings can be obtained; in this way, a possible answer to these questions would be: 'Senator Smith loved Gary Cooper, senator Brown loved Ava Gardner,...', or 'Mary bought a computer and Susan bought a book'.

However, when the quantified subject appears preverbally in SPEC/IP (as in (23)), one of the readings disappears, and the only available interpretation is that in which the Wh-phrase has necessarily wide scope over the quantified subject, as previously represented in (21).^{40, 41}

He suggests that a possible explanation for this could be that whereas the quantified expression can move to the matrix IP in the first case, this is not possible in the second. The fact that even in (ii) pair readings are possible could be accounted for if the relevant relation between the Wh-phrase and the quantifier is not established by these two elements directly, but rather holds between the Wh-trace left by the Wh-phrase in the embedded COMP and the quantifier, which would adjoin to the embedded IP without getting out of the embedded indicative complement. (Observe that for this to be correct we have to assume: a) that the Wh-phrase has moved through the embedded SPEC/CP even if movement in a single step would be allowed in this particular case in Spanish (see fn. (8)); and b) that the intermediate trace does not freely delete (at least in this particular case), as might be expected). Even if highly interesting, this hypothesis seems to cope with some difficulties to account for a further set of scopal asymmetries, studied in detail in section 3. below.

Uriagereka (1988) refers to Torrego & Uriagereka (in progress) for an analysis that accounts for the opacity and other relevant properties that indicative complements of epistemic verbs display. Thus, they argue that indicative complements of epistemic verbs differ from subjunctive complements of volitional verbs in that the former are taken to be "(probably adjectival) subordinates" of a posited DP, which would be the true argument of the epistemic verb, whereas the volitional complements would be the true complements of the volitional verb. If this analysis proves to be correct, the difficulty in getting a wide scope interpretation of the quantified phrase that Uriagereka observes might relate to a structural difference.

In the case of other speakers I have consulted, however, even if the relevant reading seems to be easier to obtain with subjunctive complements, it is still possible (with various degrees of difficulties) to get the intended reading with indicative ones in the relevant examples in the text.

I have no clear account for why the difficulties in the readings vary from some speakers to others. The issue of how quantified NPs inside indicative complements take scope might be more complex than what it looks at a first glance, as will be seen in section 3, and it seems that some other factors apart from the difference in mood are playing a role.

Since at this point is not clear to me whether the difficulty in the extraction of quantifiers out of indicative complements is only dependent on the mood of the subordinate clause and, moreover, other speakers still seem to be able to get the relevant reading finding some contrast in the scope of quantified NPs embedded in indicative complements, I will tentatively continue assuming a representation of the embedded indicative complements of the traditional sort, though acknowledging that the issue deserves a more detailed study than the one I can offer here; I leave this open for further research.

(40) Some authors avoid the use of *cada* ('each') because it has been observed that it tends to get wide scope. However, notice that if this is true the lack of distributive readings in (23) and, especially, its contrast with (20) become especially interesting, providing further support for the point I am trying to show. See also section 3. below for some further examples where *each* cannot get wide scope.

(41) The point to be raised also holds for subjects of unaccusative verbs, as for instance:

- (i) a. A dónde dices que fué todo dios?
 Where say-you that went everybody
 'Where do you say that everybody went?'
 b. A dónde dices que todo dios fué?

While *todo dios* in (ia) can take either narrow or wide scope, it can only take narrow scope in (ib).

- (23) a. A quién dices que cada senador amaba?
 b. Qué dices que todo dios ha comprado?

What this suggests is that the quantified NP only can raise to adjoin to the highest IP when it is extracted from the postverbal position, but that this movement is ruled out when the subject is extracted from SPEC/IP at LF; in this case the subject only has scope over the embedded IP.

This situation is reminiscent of the one observed and discussed by Jaeggli with respect to the data in (19). Thus, keeping in mind Jaeggli's account, the first analysis that comes to mind is that in (23) the wide scope of the preverbal subject is impossible because when this element moves at LF to adjoin to the matrix IP, the derivation is ill-formed and results in an ECP violation, as in the case of sentence (c) in (19). However, there exist some cases that cast some doubts on the appropriateness of this account; consider the following example:

- (24) Qué cuenta Charo que sus amigos han visto en cada ciudad?
 What tells Charo that her friends saw in each city
 'What does Charo tell that her friends saw in each city?'

The example in (24) is parallel to those in (23) in the sense that it involves the extraction of the embedded Wh-object, which moves at S-Structure to the main clause, and a quantified phrase (in this case an adjunct QP) in the embedded clause. What is crucial in this example is that, as in the case of movement of the subject from preverbal position, the trace left by the moved quantified adjunct at LF has to be antecedent-governed. It seems logical to expect that since antecedent government does not hold in the case of preverbal quantified subjects when they move to the matrix IP at LF it will not hold for the adjunct case either. However, the sentence in (24) allows a reading in which *en cada ciudad* takes scope in the matrix sentence too; therefore, we are led to the conclusion that there is a correct derivation for that movement and that the traces left by the adjunct are properly governed. Since a subjacency violation in the case of adjuncts yields an ECP violation (antecedent government being necessary), each element of the adjunct chain in the derivation must be subjacent to the next one, all the traces being properly governed. From this we can conclude that the trace left by the adjunct when it adjoins to the embedded IP on its way up is also licensed and, further, that this step is in its turn used to govern the immediately anterior trace.⁴² But, then, a question arises as to what rules out the derivation in which the quantified preverbal subject has matrix scope too.

(42) One might wonder what ensures that it is the whole PP *en cada ciudad* that moves at LF. In other words, what ensures that preposition stranding does not take place at LF and that it is just the NP *cada ciudad* that moves, its trace being then lexically governed by the 'stranded' preposition *en* 'in'. Interestingly, preposition stranding is ungrammatical in Spanish. Observe that this may not be definite to rule out the possibility of preposition stranding at LF if S-Structure and the level of Logical Form can behave differently in this respect. However, if the analysis of comparative constructions in Spanish proposed by Sáez (1990) is correct, there is some independent evidence that this process is not allowed at LF either.

In any case, observe that even if *cada ciudad* could be lexically governed by *en* at LF (which, if section 3. is correct, doesn't seem to be the case), this would not undermine the main line of reasoning pursued in this section, since the crucial case is the difference of scopal properties of quantified preverbal subjects in English and Spanish. See related discussion in section 3.

Observe that the first step in the derivation of the subject includes adjunction to the embedded IP, exactly the same as in the case of the adjunct QP chain. From here on, the chain created by the movement of the preverbal subject is exactly on a par with that created by the movement of the adjunct. But if adjunction to IP serves to govern the previous trace in the adjunct chain, it remains mysterious what prevents government of the initial trace by the same mechanism in the subject one.

May (1985) presents an example which is in all respects structurally identical to those in (23), but that crucially differs from the Spanish cases in that it is ambiguous and allows the reading where *everyone* takes scope in the matrix clause:

- (25) a. Who do you think everyone saw at the rally?
 b. [_S Who₂ [_S everyone₃ [_S you think [_S [_S e₃ saw e₂ at the rally]]]]]]

Given that the Spanish examples in (23) and the English one in (25) are identical and that both will involve the same S-Structure and LF structure (where both quantified subjects are in SPEC/IP and are extracted from that position), it is unclear what prevents the wide scope reading for the subject in Spanish and allows it in English if the relevant fact involved is an ECP violation; that is, given that the quantifier chain in (25b) does not violate the ECP, what makes the quantifier chain violate the ECP in the Spanish examples in (23) if the derivation is exactly identical to the English case?

I have just claimed that the examples in (23) and (24) on the one hand, and (23) and (25) on the other seem to be similar in all relevant respects. However, when we look at the examples in more detail we observe that there is an important difference with respect to the elements compared in each pair under consideration. Thus, differing from adjuncts, we have seen that in Spanish there exists a double possibility for the position of this subject at S-Structure: SPEC/IP or its base-generated position in VP; on the other hand, when we compare the relevant elements involved in the examples in (23) and their English counterparts of the type represented in (25), the same differences arise again since the subject in English can only appear in one position at S-Structure (namely, in SPEC/IP), and lacks the double placement possibility of its Spanish counterpart. Let us explore in more detail what the consequences of this are and how it can be related to the phenomena under analysis.

It is generally assumed that the SPEC/IP position behaves as an A-position, since it can be an A-binder and it is a position that can be the potential recipient of a θ -role.⁴³ However, if the hypothesis of the VP internal base-generation of subjects is correct and the subject is assigned its θ -role in VP, it is difficult to maintain the assumption that the SPEC/IP position is an A-position. A possible way to reconcile the VP internal subject hypothesis and the assumption that SPEC/IP is an A-position could be done along the following lines: suppose that θ -role assignment is linked to Case assignment in the sense that only Case marked NPs will be visible with respect to the theta-role they bear; if so, whereas the object will be visible in its D-Structure position where it is assigned accusative Case, the subject will only be visible once nominative Case has been assigned to it and needs therefore to raise to

(43) Chomsky (1981) defines an A-position as follows: "An A-position is one in which an argument such as a name or a variable may appear in S-Structure; it is a potential θ -position".

SPEC/IP, where it receives Case through SPEC-head agreement with INFL. This would allow us to redefine an A-position so as to include that position in which an NP becomes visible with respect to its θ -role.⁴⁴ But observe that even if we make the definition of A-position dependent on Case, we still do not guarantee that the SPEC/IP is an A-position in all languages, since in those languages that allow other ways to Case mark the subject apart from the mentioned SPEC-head agreement with INFL, the SPEC/IP position could behave as an A'-position. Let us assume that this is correct and explore its consequences in the light of the phenomena under analysis.

There seems to be quite general agreement with respect to the fact that subjects can only be Case marked nominative in SPEC/IP in English; following the line of reasoning sketched above, the SPEC/IP will behave as an A-position in English. On the other hand, when the properties of this position in Spanish are considered, the same does not seem to hold since, as we have seen in section 1, this language presents instances in which the subject does not move to SPEC/IP to get Case and remains in its base-generated position within VP. Since those sentences are grammatical, an immediate conclusion is that the subject NP can receive Case and comply with the Visibility Condition in its base-generated position,⁴⁵ which suggests that SPEC/IP will behave as an A'-position in Spanish. If this move is correct, the prediction is that both languages should display some asymmetries in this respect. In the remainder of this section, I will suggest that, in effect, this is so and that it is precisely the asymmetrical behaviour that arises from the different properties of SPEC/IP in these two languages that accounts for the phenomena exemplified in (20)-(25).⁴⁶

If, as suggested, SPEC/IP behaves as an A'-position in Spanish, movement to this

(44) For related discussion on this issue see, among others, Deprez (1989) and Mahajan (1990).

(45) For some possible ways to Case mark the subject in this configuration see, among others, Koopman & Sportiche (1988) and Raposo & Uriagereka (1990).

(46) Needless to say, some asymmetries should also arise with respect to Binding if the SPEC/IP position differs in the two languages; more concretely, if SPEC/IP is an A'-position in Spanish, we would expect it not to count as an A-binder. It is, however, a difficult task to construct examples with the relevant configuration to check whether this is correct. Note, first of all, that in single clauses with a preverbal subject (that is, where the subject has moved to SPEC/IP) its trace in SPEC/VP can count as the relevant A-binder; the relevant cases, thus, should be examples where the potential bindee is somewhere higher than SPEC/VP, so that it is not c-commanded by the A-trace in that position, but it is c-commanded by SPEC/IP. Juan Uriagereka (p. c.) suggests the following test:

- (i) a. Qué artículo dice María que él_i (no ella) va a publicar porque Juan_i es famoso?
Which article says Mary that he_i (not she) is going to publish because Juan_i is famous
- b. Qué artículo dice María que a él_i (no a ella) van a publicarle porque Juan_i es famoso?
Which article says Mary that to him_i (not to her) are (they) going to publish because Juan is famous
- (ii) a. Qué artículo dices que cada estudiante va a publicar porque él/su propio padre es famoso ?
Which article say-you that each student is going to publish because he/his own father is famous
- b. Qué artículo dices que a cada estudiante le van a publicar porque él/su propio padre es famoso?
Which article say-you that to each student (they) are going to publish because he/his own father is famous

In (ia) the subject *él* has moved to SPEC/IP; in (ib) the embedded indirect object *a cada estudiante* has been dislocated from its base-generated position. None of their traces c-command *Juan*; the subject in the embedded adjunct, but let us assume that this subject is c-commanded by both *él* and *a cada estudiante* from their final position. We can further assume that the position to which the embedded indirect object has moved is an A'-position. Considering this, if there were a contrast between (ia) and (ib) ((ia) being ungrammatical), we could speculate that this is so because the subject in SPEC/IP counts as an A-binder, yielding a Condition C violation.

position will count as relevant for those elements that need to move for scope reasons; that is, SPEC/IP in Spanish will be a position from which scope can be taken, while it will not in English. Suppose that once an element takes scope at S-Structure this scope cannot be changed at LF.⁴⁷ In the case of English, a quantified subject NP will have to move at LF even if it has already moved to SPEC/IP at S-Structure, since it has to take scope. In Spanish, however, movement at LF will be possible only when the subject has not moved to SPEC/IP at S-Structure since otherwise the scope created at S-Structure would be altered at LF.

Keeping this in mind, let us turn back to the conflicting cases under analysis, repeated here for convenience. Consider first the ambiguous examples in (20):

- (20) a. A quién dices que amaba cada senador t?
 Who say (you) that loved each senator
 'Who do you say that each senator loved?'
 b. Qué dices que ha comprado todo dios t?
 What say (you) that has bought everybody
 'What do you say that everybody bought?'

In these sentences the postverbal subject has not moved out from VP to SPEC/IP; therefore when it moves in LF it can move up to the highest IP, this fact accounting for the ambiguity of scope between the Wh-phrase and the quantifier. In any case it moves from an A-position and as far as the derivation is correct, both possibilities are available. Consider now example (24):

- (24) Qué dices que los amigos han visto en cada ciudad?
 What say-you that the friends have seen in each city
 'What do you say that the friends have seen in each city?'

In (iia) on the other hand, if the pronominal *él/so propio* could be interpreted as a variable bound by the quantifier, the 'true' variable would have to be in a position where it c-commands the pronominal; thus, there would be an A-trace in SPEC/IP c-commanding the pronominal at LF; (iib), on the other hand, should display cross-over effects. Though the judgements are quite murky, there does not seem to be any substantial difference with respect to the grammatical status of the clauses in each pair, and speakers find all the examples (at best) degraded. It should be noted, however, that there might be, in addition, some independent factors —related to the tendency to avoid the use of overt pronominals and the asymmetry between subjects and indirect objects in backward pronominalization, among others— that interfere with the possibilities of coreference in the structures under analysis and obscure the relevant tests. It seems therefore difficult to reach any definite conclusion from here, and I will leave this as an open issue.

(47) This issue has received a particular attention in the literature, especially with regard to Wh-movement since, as is well known, the scope of Wh-phrases that undergo syntactic movement is determined at S-Structure and cannot be altered at LF. Different hypotheses have been entertained in the literature trying to explain this descriptive generalization. To cite a couple of them: Aoun, Hornstein and Sportiche (1981) argue that LF Wh-movement can only originate from A-positions. Lasnik & Saito (1984, forthcoming) pursue an account that appeals to the mechanism of COMP indexing. However, as Saito (1989) observes, the COMP indexing explanation cannot cover topicalization cases like (i) (from Saito 1989):

- (i) * Mary thinks that [the man that bought what]_j John knows who_i t_j likes t_i

According to Saito, the ungrammaticality of (i) follows from the fact that the topicalized phrase, having determined its scope at S-Structure, cannot move further at LF. When movement of *what* to the lowest COMP takes place at LF, its trace violates the Proper Binding Condition. See related discussion in the text and in fns. (51) and (53) below.

As in the case of the postverbal subject the quantified adjunct is in its base-generated position; consequently, it will have to move at LF in order to create a variable. Therefore, insofar as the movement of the adjunct quantifier independently obeys all the necessary requirements (and, in particular, the ECP), this element can raise and get scope over the Wh-phrase.⁴⁸

Consider now the Spanish examples in (23), where the wide scope reading of the subject is not allowed, while comparing it with the English example in (25), which is structurally identical and allows the wide scope reading of this element.⁴⁹

(25) Who do you think everyone saw at the rally?
 [_S Who₂ [_S everyone₃ [_S you think [_S [_S e₃ saw e₂ at the rally]]]]]]

(23) A quién dices que cada senador amaba?
 *[[_{CP} Who_j [_{IP} each senator_i [_{IP} you say [_{CP} that [_{IP} t_i loved t_j]]]]]]]

As mentioned previously, there is no way to rule the English derivation in while ruling the Spanish one out, since they are identical; the only way to find a difference between both cases is if, as proposed, the movement of the subject to SPEC/IP in Spanish counts as a valid movement for the quantifier in terms of scope, whereas the English case differs in that respect.⁵⁰ If this is correct, the absence of the wide scope reading in (23) follows from the fact that the subject has already moved in the relevant sense to an A'-position at S-Structure and cannot therefore move again at LF. Thus, the Spanish preverbal subject can only take the scope that corresponds to the movement it realized at S-Structure. In the English case, on the other hand, the

(48) See section 3. for extended discussion on this particular example.

(49) For expository purposes, I will use just one of the Spanish examples, the argumentation applying equally to the other one.

(50) Under a theory like L & S (forthcoming), it could be argued that a difference between the English case and the Spanish one is that, whereas INFL raises at LF in English (see fn. (32)), it does not in Spanish and, thus, the trace left by the preverbal subject at LF is not properly governed. If this were correct, it would undermine the hypothesis defended in the text, which attributes the difference between the languages to the different properties of the SPEC/IP position in each of them. Then, an ECP account would still be possible for the Spanish cases.

However, if the movement of INFL is required for an appropriate interpretation at the semantic level one can imagine that this cannot be language particular, but rather it has to be universal, in the same way we assume that even those languages with no overt Wh-movement have to have it at LF to satisfy the necessary requirements for semantic interpretation. If this is correct, the alternative hypothesis presented in the text would be superior to an ECP account.

Mamoru Saito (p.c.) suggests an interesting way to explain why Spanish might lack INFL raising: it might be precisely because the subject can stay in VP in Spanish that INFL does not raise in LF in this language. We could relate Saito's suggestion to May's (1985) observation that scope domains must range over complete argument structures, and not their proper subparts, which May encodes as (i):

(i) If an operator *O* c-commands a predicate *P*, then it must c-command all the thematic argument positions of *P*.

If so, it might be that the LF movement of INFL in English has to do with the need of this inflectional element of being higher than SPEC/IP, if this is the position where the subject becomes visible with respect to its θ -role in that language. This might leave open an ECP account of the English/Spanish asymmetries at stake.

I will continue assuming the analysis in the text, based on some asymmetries explored in detail in section 3. that seem to favor this approach over one that appeals to the ECP as the result of the difference in INFL raising at LF in these two languages. It is however worth noting that the choice of the analysis in the text does not falsify Saito's suggestion in relation with INFL movement. I leave this open for further research.

movement of *everyone* to SPEC/IP counts as an A-movement, and the quantifier is free to move (in fact, it has to) to an A'-position at LF to take scope.⁵¹

If this approach is correct, it allows a reinterpretation of the data introduced by Jaeggli, with the further advantage that it incorporates both, the restrictions on Wh-subjects and quantified subjects, in a unified way. Let us review Jaeggli's examples in the light of the discussion developed above; recall that the crucial case was (19c) since, following Jaeggli, it demonstrates that similar to English, Spanish shows Superiority effects too, the derivation where the subject Wh-phrase moves at LF being ruled out by the ECP.

- (19) a. Quién dijiste que compró qué?
Who you-said that bought what
'Who did you say bought what?'
- b. Qué dijiste que compró quién?
What you-said that bought who
'What did you say that who bought?'
- c. *Qué dijiste que quién compró?
What you-said that who bought
'What did you say that who bought?'
- d. Qué dijiste que Mario compró?
What you-said that Mario bought
'What did you say that Mario bought?'

Under the analysis developed above the movement of the Wh-subject from its base-generated position to SPEC/IP counts in all respects as movement to an A'-position. However, contrary to those cases involving quantified phrases, there is a further requirement to be met in this case by the Wh-phrase: in concrete, it has to be in a [+Wh] COMP at LF.⁵² Since the Wh-phrase *quién* has already moved in the

(51) Howard Lasnik (personal communication) brings to my attention the following English paradigm discussed in Lasnik & Uriagereka (1988):

- (i) Someone thinks that Mary solved every problem
(ii) Someone thinks that every problem, Mary solved

In (i) the quantifier in the embedded clause can marginally take wide scope in the matrix clause. Interestingly, when the quantifier is topicalized (that is, adjoined to IP) in the embedded sentence (as in (ii)), the matrix scope reading of *every problem* disappears and it can only take scope in the embedded clause. The explanation suggested by L & U (1988) to account for this is the same as the one proposed above to explain the Spanish cases under analysis: once an operator is in a scope-type position at S-Structure it cannot move further at LF.

As observed in the mentioned work, this can also provide an account of the following cases involving negative polarity items if it is assumed that any such element has to undergo Quantifier Raising (QR) at LF and move up to its licensing element.

- (iii) I don't think that Mary solved any problems
(iv) *I don't think that any problems, Mary solved

While in (iii) *any problems* can raise at LF and satisfy its licensing requirements, in (iv) it is in a position in which these requirements cannot be satisfied unless movement takes place. However, since this possibility is disallowed (*any problems* being in a scope-type position at S-Structure), the sentence will be ruled out.

The reader is referred to the discussion immediately below in the text for the extension of the analysis to similar cases involving Wh-phrases in Spanish. For considerations of the English cases and their parallelism to the Spanish ones see fn. (53), which summarizes the discussion of those cases in L & U (1988).

(52) Observe that this is needed to force movement at LF of Wh-phrases in situ at S-Structure.

syntax to an A'-position in (19c), it cannot move further at LF; therefore, the sentence is ruled out not because the trace left at LF by the WH cannot be properly governed, since in fact it will not move, but rather because it violates the [+WH] requirement imposed on Wh-phrases.^{53, 54}

Summarizing, in this section I have presented an analysis of certain constructions involving quantified subjects. It has been shown that some asymmetrical scope facts arise that are conditioned by the different positions the quantified subject can occupy at S-Structure. In concrete, in the case of embedded sentences containing a quantified subject the possibilities for this element to take matrix scope have been

(53) I am thankful to Mamoru Saito for bringing to my attention the relevance of this fact and to Howard Lasnik for pointing out to me the similarity of the Spanish cases considered above and the English cases in Lasnik & Uriagereka (L & U) (1988) presented immediately below. (See also fn. (46) and (50)).

L & U (1988) examine the following examples which are directly related to the discussion presented in the text, and seem to lead to a similar conclusion.

- | | | |
|-----|--------------------------------|---------------------------------|
| (i) | a. Who thinks that I like John | c. Who thinks that I like who |
| | b. Who thinks that John I like | d. * Who thinks that who I like |

The examples in (ib,d) involve embedded topicalization (that is, adjunction to IP) of the objects of the embedded clause, the NP *John* and the Wh-phrase *who*. Interestingly, while (ib) is grammatical, (id), where the topicalized element is the object Wh-phrase, is not. It is suggested there that a possible explanation for this fact (apart from the descriptive generalization that a Wh-phrase cannot be topicalized) is that the topicalized Wh-phrase cannot undergo further movement at LF. This disallows movement of the Wh-phrase to the matrix [+WH] COMP where it should receive its appropriate scope. I interpret this as the impossibility of *Who* in the IP-adjoined position to fulfill the [+WH] requirement, and not as the impossibility of the WH of taking scope from that position, since regular quantifiers can in fact do so when topicalized (as in the case of *Someone thinks that every problem, Mary solved* discussed in fn. (51) above). The parallelism of (19c) and (id) strongly indicates that the conclusion arrived at in L & U (1988) as well as in this work is on the right track. It also provides further support for considering SPEC/IP as an A'-position in Spanish.

It is worth noting, however, that there seem to exist certain apparent exceptions to the hypothesis defended above that any scope determined at S-Structure cannot be altered at LF. Thus, to give just an example, it has been noticed that in Japanese, while being an S-Structure A'-movement, scrambling can be undone at LF. (See Saito (1989) and references therein); some other seemingly problematic cases are also pointed out in L & S (1984). The reader is referred to Saito (1989) for some suggestions and speculations on how to derive the Japanese facts on the basis of the nature of the position to which a scrambled phrase adjoins in Japanese. For discussion and suggestions on how to accommodate some related Polish facts, see Mahajan (1990).

(54) In fn. (16) section 1, I referred to a proposal by Bonet (1989) to the effect that SPEC/IP could be a landing site for Wh-movement in Catalan. Further, as mentioned there, Bonet suggests that this could account for structures like (i):

- (i) Juanjo nos preguntó QUE CUANDO había venido MariPaz
 J. we-D asked that when had arrived MariPaz
 'Juanjo asked us when MariPaz had arrived'

As pointed out to me by Lisa Cheng, this hypothesis might pose a problem for the analysis of Jaeggli's data just presented in the text. However, the possibility of having a Wh-phrase following *que* ('that') in embedded sentences is almost restricted to the verb *preguntar*. In this sense, this type of construction does not constitute the general case, but rather, the exception. Further, as brought to my attention by Javier Ormazabal, not only a Wh-phrase but also *si* ('whether') can follow *que* ('that') in this type of constructions, as (ii) bears witness:

- (ii) Preguntó que si María leyó el libro
 asked that whether Mary read the book
 '(S)he asked whether Mary read the book'

Given that it is improbable that *si* is in SPEC/IP, this casts some doubt on the hypothesis that the Wh-phrases following *que* in the other apparent problematic cases are in SPEC/IP. Since this type of construction is highly constrained and, further, since it is not clear what their structure is or where the interrogative elements following *que* are, I assume that the account appealing to the [+WH] requirement is basically correct. The reader is referred to Uriagereka (1988) for relevant discussion on this type of structure.

seen to be directly dependent on whether it appears in SPEC/VP or in SPEC/IP: only quantified subjects in SPEC/VP can take matrix scope under the appropriate circumstances, this reading being unavailable for those that have moved to SPEC/IP at S-Structure. This has been contrasted with the possibilities of taking matrix scope that quantified adjuncts in Spanish and preverbal subjects in Spanish and English respectively show in the same configurations. I have argued that while SPEC/VP in Spanish and SPEC/IP in English are A-positions, SPEC/IP is an A'-position in Spanish. Considering this and the assumption (independently argued for in the literature) that once an element moves to an A'-position at S-Structure it cannot undergo further movement at LF, I have presented an analysis that accounts for all the cases under consideration. This condition makes the right empirical distinction between quantifiers remaining in their original position at S-Structure (VP-subjects in Spanish, objects and adjuncts) or A-moved elements (e. g., subject raising to SPEC/IP in English) from movement to an A'-position at S-Structure (e. g. Wh-movement to SPEC/CP, topicalization in English and movement to SPEC/IP in Spanish). Thus, while the former are free to move at LF the latter cannot move further at that level, since the relevant movement to an A'-position has already taken place in the syntax. Finally, the approach defended here has proved to account for those cases involving Wh-phrases presented by Jaeggli (1985) as Superiority Condition violations in Spanish, with the advantage of deriving the restrictions operative on Wh-subjects and quantified subjects in SPEC/IP in a unified way.

In the next section, I turn to the different implications of the hypothesis with respect to (long distance) extraction of Wh-elements and the semantic import of Wh-questions. Some further phenomena regarding quantificational scope will be also considered.

3. On the Interaction of Preverbal Subjects and the Scope of Quantifiers

The previous section has shown that the position that a quantified subject occupies at S-Structure has some implications with respect to the scope possibilities of this element. In this section I will show that, in addition to the possible construals for the subject itself, the position that this element has at S-Structure has further implications for some other elements of its own clause as well as for the semantics of the clause in which it is contained.

Section 1. presented an analysis of constructions involving Wh-questions; recall that, as was discussed there, the regular word order in these cases is VSO.⁵⁵ Let us now turn to some interrogative sentences displaying the SVO word order; under our analysis, interrogative sentences where the subject has moved to SPEC/IP. Consider the following contrast:

- (26) (?) Qué dice Juan que María ha dicho que Ana ha comprado t?
 What says Juan that María has said that Ana has bought
 'What does Juan say that Mary said that Ana bought?

(55) It should be remembered that we proposed two different structures to account for the VSO sequences; see section 1. for discussion.

(27)

- a. Por qué dice Juan que ha dicho María que ha comprado Ana el coche t ?
 Why says Juan that has said María that has bought Ana the car
- b.* Por qué dice Juan que María ha dicho que Ana ha comprado el coche t ?
 Why says Juan that María has said that Ana has bought the car

While the long distance extraction of an argumental Wh-phrase out of sentences with preverbal subjects is grammatical, the corresponding case of extraction of an adjunct Wh-phrase is not good.⁵⁶ Interestingly, sentences like (26) with preverbal subjects in the embedded clause present a subtle difference in meaning with respect to their counterparts with the embedded subject in VP, like (28):

(28)

- Qué dice Juan que ha dicho María que ha comprado Ana t ?
 What says Juan that has said María that has bought Ana
 'What does Juan say that Mary said that Ana bought?

Although abstracting from the position of the embedded subjects the two sentences (26) and (28) are syntactically identical, there is a slight difference in their interpretation, having to do with the presuppositional force of the embedded sentences. The consideration of some other relevant examples will shed some light on this subtle semantic difference.

Parallel to the impossibility of downstairs readings in long distance Wh-extraction in examples like (27b), examples of short distance extraction of adjuncts also reveal a contrast with respect to the possible source of the extraction of the Wh-phrase, which is in turn dependent on the location of the embedded subject, as the examples in (29) illustrate:

(29)

- a. Me pregunto COMO ha mandado JUAN a su hijo a ese colegio privado
 (I) wonder how sent Juan his child to that private school
 I wonder how John sent his child to that private school
- b. Me pregunto COMO JUAN ha mandado a su hijo a ese colegio privado
 (I) wonder how (come) Juan sent his child to that private school
 I wonder how (come) John sent his child to that private school

In (29a), where the subject of the subordinate clause remains in its base generated position, the speaker is requesting information on the way in which Juan sent his

(56) It is worth noting that Torrego (1984) presents different grammaticality judgments with respect to Wh-adjunct extraction. According to her, long distance extraction of adjuncts out of clauses with preverbal subjects is grammatical. Her explanation is that a Wh-adjunct moves successive cyclically COMP-to-COMP but that, differently to argumental Wh-phrases, it does not trigger Verb Preposing obligatorily (see fn. (6)). This apparent contradiction with respect to the empirical data might have to do with the intonation pattern in which these sentences are uttered. Thus, it seems that the downstairs reading of (27) is possible with a particular kind of intonation, which is very similar to the typical intonation of echo-questions (a matter which I will not discuss here). With regard to the long distance extraction of Wh-arguments, on the other hand, in that work it is considered more degraded than what I do here. See Torrego (1984) for discussion. See also Uriagereka (1988) for additional cases where the downstairs reading of an adjunct Wh-phrase in the uppermost SPEC/CP at S-Structure in examples involving double embedding depends on the lexical specification of the SPEC/IP of the intermediate clause.

child to that private school. In (29b), with the embedded subject in SPEC/IP, it is presupposed that Juan sent his child to that private school and the question reflects a 'surprised reaction' or, loosely speaking, a rhetorical question from the part of the speaker, roughly as in the English sentence 'I wonder how come John sent his child to that private school'; that is, how come that happened.⁵⁷ Thus, the fact that the subject appears in SPEC/IP has the consequence that this clause is interpreted as presupposed. The contrast in meaning pointed out above between (26) and (28) parallels the difference in presuppositional force that we have just seen distinguishes (29a) from (29b) and, in the same way as in (29b), the preverbal position of the embedded subjects in (26) triggers the presuppositional reading of their clauses.

Kiparsky & Kiparsky (1971) argue that presuppositions are constant under negation; by this we can interpret that presuppositions have wider scope than negation. If this is correct, given the contrast observed in the previous examples, some asymmetries should be expected with respect to the scope between a sentential complement and a matrix negation conditioned by the location of the subject in SPEC/IP or SPEC/VP. In effect, this prediction is borne out; consider the following examples:

(30)

- a. Los periódicos no han publicado que ha comprado la gente máscaras de gas
 The journals not published that bought people gasmasks
 'The journals did not publish that people bought gasmasks'
- b. Los periódicos no han publicado que la gente ha comprado máscaras de gas

The sentences in (30) are again parallel in all respects except for the position of the embedded subject; in both cases the matrix clause is a negative sentence but, while the subject of the sentential complement remains in its base-generated position in (30a), it has raised to SPEC/IP in (30b).⁵⁸ When the meaning of these

(57) There seems to be general agreement on the fact that in (29a) *cómo* can be interpreted either as requesting information on a VP-adjunct or on an IP-adjunct. In the case of (29b), it is also clear that the VP-adjunct reading disappears and that the question has a 'how come' meaning. However, there exists some discrepancy with respect to the possibilities of the IP-adjunct reading. Thus, whereas for most speakers I have consulted this reading is not available, Juan Uriagereka (p.c.) informs me that it is still possible for him.

Interestingly, the IP reading of the Wh-adjunct in short distance extraction of clauses with preverbal subjects, if possible, is probably only available when the interrogative sentence is an embedded clause. See Uribe-Excebarria (in progress) for discussion.

(58) An interesting question arises here as to what ensures that the preverbal subject is in SPEC/IP and not, say, in the SPEC of the Sig P proposed by Laka (1990) (see fn. (25)). (The question is relevant especially when Laka's suggestion that the nature of Sig P could be characterized in terms of the speakers presupposition is taken into account). There seems to be some evidence that that is not the case. Observe that if Laka is correct only one XP can be fronted to the SPEC/Sig P and the inflected verb immediately follows the moved XP, having itself moved to the head position of SigP. However, relevant cases as the one in (i) can be constructed where an adverb appears in between the subject and the verb, which goes against the strict adjacency requirement observed between material in SPEC/SigP and the head of SigP, and suggests that the subject is not located in the specifier of that projection:

- (i) Los periódicos no han publicado que la gente frecuentemente compra máscaras de gas
 The journals not have published that people frequently buys gasmasks
 'The journals haven't published that people frequently buy gasmasks'

As in the other relevant cases with preverbal subjects, the embedded clause in this type of examples is equally presupposed and has scope over negation.

sentences is considered in detail the expected asymmetry arises: whereas (30a) is neutral with respect to the truth value of the complement CP, the reading of (30b) can be paraphrased as 'the fact that people bought gasmasks has been omitted by the journals'. In this case the sentential complement has scope over the matrix negation, as roughly represented in (30'b).

(30'b) [Ex: people bought gasmasks] the journals didn't publish x

That it is the different structural position of the subject that has to do with the presuppositional reading is shown by the contrast between examples like (31a) and (31b).

(31)

- a. No sé POR QUE quería JUAN ir a ese concierto; aunque, en realidad,
(I) don't know why wanted Juan to go to that concert; though, to be honest,
no estoy segura de que quisiese ir
I am not positive he wanted to go
- b. *No sé POR QUE JUAN quería ir a ese concierto; aunque, en realidad,
(I) don't know why Juan wanted to go to that concert; though, to be honest,
no estoy segura de que quisiese ir
I am not positive he wanted to go

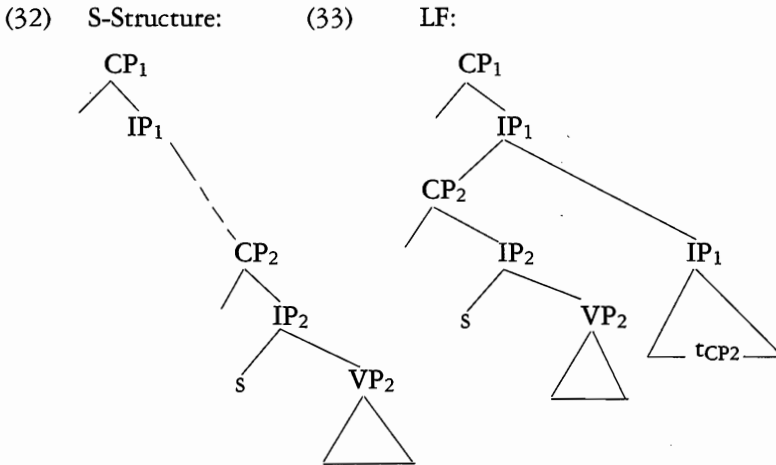
Both sentences are identical except for the location of the subject *Juan*. Crucially, whereas (31a) is grammatical, (31b), with *Juan* preceding the verb, is ungrammatical. The reason for this is that the preverbal placement of the subject in (31b) involves a presupposition (namely, that Juan wanted to go to that concert) that is immediately denied by the following clause, yielding a contradiction.

From what we have seen so far the location of the subject in SPEC/IP triggers a presuppositional reading of the clause in which it is contained, which in that case takes scope over the matrix clause. Furthermore, the position of the subject is also directly related to the possibilities of long distance Wh-extraction; as we have seen, arguments can be extracted out of clauses with preverbal subjects but adjuncts cannot, which seems to point to an analysis in terms of the classical asymmetry of arguments vs. adjuncts with respect to the ECP. In addition, the range of readings of some adjunct Wh-phrases in short distance extraction has also been shown to depend on the surface position of the subject. Since the presupposed embedded clauses with preverbal subjects take scope in the matrix clause, I will take this to be a distinctive property of these constructions and explore its consequences, as well as the way in which this characteristic can account for the cluster of phenomena that we have mentioned here.

3.1. *The Adjunction Hypothesis*

We have just seen that the clauses under consideration take scope in the matrix clause. Let us assume, then, that as in the case of simpler quantificational expressions their scope is obtained in relation to the position they occupy at LF. Since the position the clauses under analysis occupy at S-Structure is different from the one that corresponds to their scope taking position, the embedded clause with preverbal

subject will have to move at LF. In the simplest case, the one with a single level of embedding and a preverbal embedded subject, the S-Structure and LF representations will look like (32) and (33) respectively:⁵⁹



As (33) displays, the hypothesis to be worked out in more detail through this section captures the scope differences of the sentential complements by the movement and adjunction operation of the presupposed sentence to the immediately dominating IP. As the result of this movement, the subordinate clause is in a position in which it can take scope over the matrix predicate, as is typical of the semantics of these constructions.⁶⁰

(59) Higginbotham (1985) observes that nominals like the one in brackets in (i), have the property that their use implies the truth of the sentence corresponding to the nominal:

- (i) Mary persuaded me of [John's lack of talent]

As he observes, the reason for this cannot be in the verb 'persuade', which is non factive both when its object is sentential or an NP:

- (ii) a. Mary persuaded me [that John lacks talent]
- b. Mary persuaded me of something (false)

He suggests that the property of such abstract nominals can be accommodated under an analysis of the type in Higginbotham (1982) for the 'naked infinitive' complements to verbs of perception and causation. In that work, it is argued that 'naked infinitive' complements are indefinite descriptions of individual events. Taking advantage of the event position proposed by Davidson for action verbs, Higginbotham proposes that the apparent clausal structure of 'Mary leave' in (iii) below should be represented as in (iv), where an implicit existential quantifier quantifies over events. The logical form representation proposed for (iii), then, would look like that (v).

- (iii) I saw [Mary leave]
- (iv) (∃x: x is an event & leave (M, x))
- (v) [∃x: x is an event & leave (Mary, x)] John sees x

Following Higginbotham, this would account for the ungrammaticality of sentences like (vi), since at the level of LF this sentence would have the representation in (vii), a typical Proper Binding Condition Violation:

- (vi) *John_i was seen t_i leave
- (vii) [leave t_i]_j John_i was seen t_j

Considering this analysis, the structure proposed for (i) would be:

- (viii) [∃x: lack(John, talent, e)] Mary persuaded me of e

If factivity is related to the existence of an event, the analysis in the text, while different in many respects, is reminiscent to the one proposed by Higginbotham. See Hegarty (1990) for discussion on how to accommodate the event type analysis of Higginbotham to factive phenomena.

(60) Note in passing that the trace left by the movement of the sentential complement will be lexically governed by the trace of the verb.

Having briefly seen the adjunction mechanism and the resulting structure at LF for the simplest case, let us now turn to a more complicated one, involving double embedding. This would be the case of the examples (26) and (27b), repeated here for convenience:⁶¹

- (26) (?) Qué dice Juan que María ha dicho que Ana ha comprado t ?
 What says Juan that María has said that Ana has bought
 'What does Juan say that Mary said that Ana bought?

- (27b) *Por qué dice Juan que María ha dicho que Ana ha comprado el coche t ?
 Why says Juan that María has said that Ana has bought the car

(61) Sentences involving a single level of embedding show a parallel contrast with respect to the downstairs reading of the Wh-adjunct and its relation to the structural location of the embedded subject; consider (i) and (ii):

- (i) Por qué ha dicho Juan que ha venido María?
 Why has said J. that has come M.
 (ii) Por qué ha dicho Juan que María ha venido?
 Why has said J. that M. has come

Thus, whereas example (i) seems to be ambiguous, most speakers show a tendency to find (ii) unambiguous, interpreting *por qué* in the higher clause. Nevertheless, according to some of them, there are some cases in which it is possible to recover from the unique unambiguous reading and interpret the Wh-adjunct in the lower clause. The judgements are, for the most part, quite subtle and several facts seem to obscure the relevant empirical facts. In some of those cases, although the possible answers look as if the adjunct is being read in the embedded sentence, this is not necessarily so; consider the following example:

- (iii) Q: Por qué piensas que María ha venido?
 Why you-think that M. has come
 A: Porque tenía un examen
 Because she had an exam

At a first glance the answer seems to correspond to a downstairs reading of the adjunct Wh-phrase; observe, however, that it is also compatible with a matrix reading, if (iii-A) is considered equivalent to (iv,a) rather than to (iv,b), as seems to be the case:

- (iv) a. I think that because she has an exam
 b. She came because she has an exam

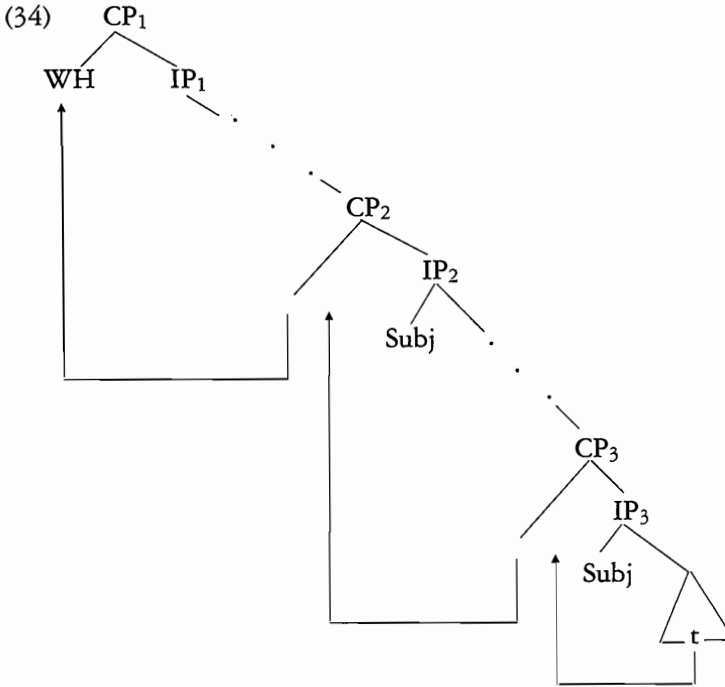
Some further factors might also be playing a role, as for instance, the aspect and tense of the verbs. Thus, the downstairs reading of the adjunct, available in (v,a) and (vi,a) where the embedded subjects are postverbal, is probably harder to be recovered in (vi,b), where the embedded verb is in the future tense, than in (v,b).

- (v) a. Cuándo han anunciado que ha llegado María?
 When did they/was announce(d) that has arrived M.
 b. Cuándo han anunciado que María ha llegado?
 (vi) a. Cuándo han anunciado que llegará María?
 When did they/was announce(d) that will arrive M.
 b. Cuándo han anunciado que María llegará?

Interestingly, the downstairs reading seems to be precluded when two levels of embedding are involved. Thus, most speakers consistently reject that the most deeply embedded clause can be an extraction source of the Wh-adjunct in (27b).

As mentioned above, the judgements are quite subtle and it is sometimes difficult to know whether the downstairs reading is really possible or just apparent with one single level of embedding, though it is very clear that the speakers I have consulted find it much harder when the embedded subject is preverbal. A possible explanation, if the downstairs reading can be somehow recovered, could be that there is somehow a way to override the presuppositional reading of the clause with the preverbal subject, avoiding in this way the raising of this sentence at LF. It would also be worth exploring whether this state of affairs is related to the possibility of quantifier lowering in clauses with one level of embedding (as (vii)), and to the impossibility of double lowering (as (viii)), if in fact the lowering can be analyzed in an alternative way involving raising, a matter that I cannot consider here. (Examples (vii) and (viii) are taken from Aoun 1990).

In this case, the two subordinate clauses have preverbal subjects and, in addition, a Wh-phrase has been extracted from the most deeply embedded one. The corresponding S-Structure representation of these two examples will look roughly like (34).



Consider the case in which the extracted Wh-phrase is an argument, as in (26) above. The Wh-argument will move successive cyclically up to the matrix SPEC/CP. Notice that the Wh-movement between D-Structure and S-Structure represented in (34) is identical to the one of the Wh-argument when the embedded subjects are postverbal, given that at this point the whole structure has not been affected by the LF raising of the embedded (presupposed) sentences. Since the extracted WH is an argument, the trace left in its base-generated position is lexically governed by the verb and assigned [+ γ] at S-Structure.

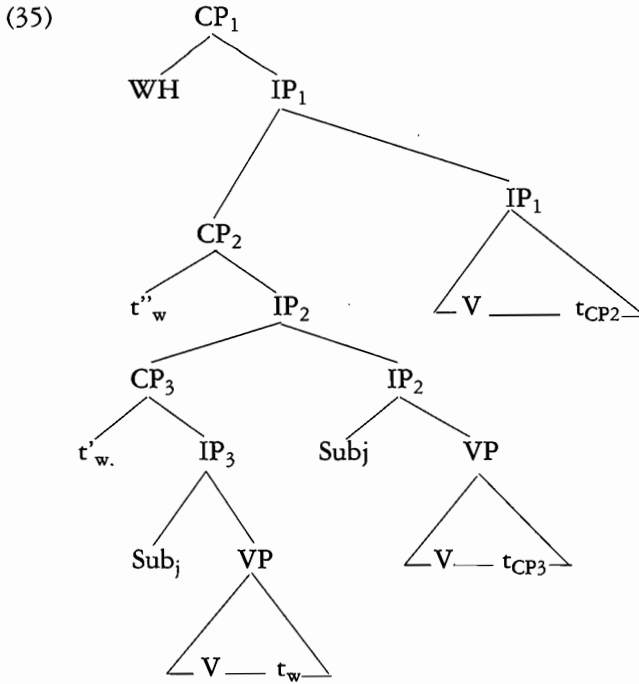
Suppose now that the extracted WH is an adjunct, as in example (27b). The Wh-movement to the highermost SPEC/CP would take place as in the case of the Wh-argument considered just now; that is, as represented in (34). However, there is a crucial difference between the two cases, since now the Wh-phrase is an adjunct and its

(vii) Some politician is likely to address John's constituency

(viii) Some politician seems to be likely to address John's constituency

In what follows, I will therefore assume that the downstairs reading of the Wh-adjunct is not possible when the embedded subject is preverbal, but admitting that some alternative strategies could be available in some cases to override the presuppositional reading of the embedded clause. See fn. (67) for an alternative hypothesis if Wh-movement is approached from a different theoretical position.

traces will not be γ -marked until LF; by then, the presupposed clauses have already raised adjoining to the immediately higher IP; consequently, the relevant configuration when γ -marking of the adjunct-traces takes place is (35) rather than (34):⁶²



Observe, however, that the CP where the traces of the adjunct are embedded is in a typical CED configuration:⁶³ having adjoined to IP, this CP is not L-marked by the verb.⁶⁴ Following arguments that go back to Huang (1982), L & S (1984), and Chomsky (1986), the adjoined CPs thus constitute a barrier for antecedent-government.⁶⁵ In the adjunct chain under consideration, there are two traces in the chain (t''_w and t'_w) that fail to be governed; this is so because these traces in the specifier positions of the adjoined CP₂ and CP₃ respectively are not subjacent to their antecedents (t''_w and the Wh-phrase, respectively) and thus these traces cannot be governed by them. (See fn. (73) for considerations on the initial trace). Since, crucially, γ -marking of the adjunct takes place at LF after all the transformational component, all the traces of the adjunct are needed, and the LF-representation in (35) violates the ECP.^{66, 67}

(62) For ease of exposition, I am abstracting here from the movement of the Verb to INFL.

(63) The discussion here owes much to suggestions by Mamoru Saito.

(64) It is the trace left by the moved CP that is an argument and that is L-marked.

(65) See Fiengo et al. (1988) for related discussion and conclusions.

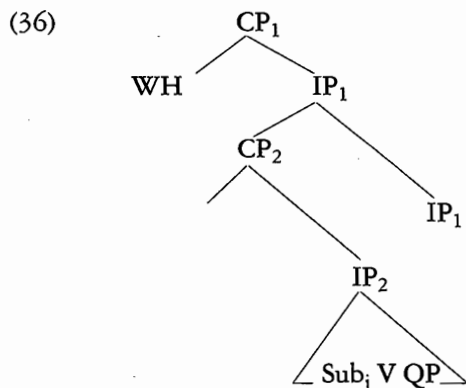
(66) See L & S (1984, forthcoming) for details.

(67) Observe that the adjunction hypothesis might also be worked out if adjunct Wh-movement does not leave traces, as proposed by Uriagereka (1988) and Hegarty (1990). Suppose, along the lines in Uriagereka (1988), that Wh-movement of adjuncts does not leave traces and that we can distinguish scope from modification; suppose further

The LF adjunction analysis allows us to account satisfactorily and in a simple manner for several of the properties observed above; in concrete, the scope facts and the asymmetry that adjuncts and arguments display with respect to Wh-extraction. However, the conclusion reached just now with respect to Wh-extraction of adjuncts might seem to be in contradiction with some of the scope facts analyzed in section 2. Recall that, as we saw there, quantified adjuncts in embedded sentences with preverbal subjects allow matrix scope under certain circumstances; the case discussed in the previous section is repeated here for ease of exposition:

- (24) Qué dices que los amigos han visto en cada ciudad?
 What say-you that the friends have seen in each city
 'What do you say that the friends have seen in each city?'

As mentioned before, *en cada ciudad* can take scope in the matrix clause and pair readings are possible. This case clearly contrasts with the impossibility of extraction of the Wh-adjuncts in (27b), explained immediately above, and could be a possible problem for the argument. Let us reanalyze this apparently troublesome example in detail in the light of the LF-adjunction hypothesis: in this case too, the embedded clause will move at LF, adjoining to IP₁; the resulting structure is represented in (36).

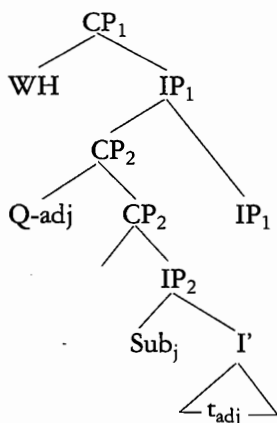


The Wh in the SPEC/CP₁ does not raise a problem, since it is an argument, and its trace has been γ -marked at S-Structure. The quantified adjunct, however, has to

that, as Hegarty proposes, Wh-adjuncts need to be governed by a [+Q] at LF and that they can move downstairs from their S-Structure position and be appropriately interpreted in their final LF position as far as they are still governed by the [+Q] COMP at that level. If so, in the structure in (35), the reading of the Wh-adjunct in the lowermost clause would still be ruled out since the adjunct would have to move to a position where it can modify this clause and it would not get governed by the matrix [+Q] COMP in this final position (CP₂ would always be a barrier). A further question is whether the Wh-adjunct could be interpreted as modifying the intermediate clause CP₂ in (35), which relates to the discussion in fn. (61). If the Wh-adjunct moved at LF and adjoined to IP₁ it would still be governed by the matrix [+Q] COMP; further, it can modify IP₁ (to which CP₂ is adjoined) from that position. This might derive the possibility of the downstairs reading with a single level of embedding discussed in fn. (61) and observed by some speakers, although, then some other explanation is needed to account for why this reading is still impossible in some of those cases with the same structural configuration. See also Epstein (1991) for related discussion.

move at LF from its base-generated position to take scope. The narrow scope interpretation is immediately accounted for if the quantifier moves and adjoins to IP₂. For the wide scope construal, however, the quantifier has to move higher than IP₂. Let us then suppose that the quantifier moves adjoining to CP₂, the resulting LF representation being as in (37):⁶⁸

(37)=(24)'s LF



Observe that the quantifier has not moved out of the adjoined CP₂, which would be a barrier for antecedent government of the trace. Let us now consider the scope of the quantified adjunct (Q-adj) in (37) in more detail. Assuming as a departure point May's (1985) theory of quantification, the scope of the quantifier is determined by the following rule:⁶⁹

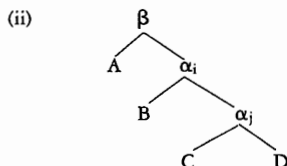
(38) The scope of α is the set of nodes that α c-commands at LF.

(68) It is generally assumed that adjunction to CP is not possible; this assumption is needed in order to account for several island effects that, under most theories, would be wrongly predicted to be avoided by Wh-elements using this adjunction mechanism. Chomsky (1986), following a suggestion by K. Johnson, speculates on the possibility of deriving this restriction from θ -theory, if adjunction to a maximal projection prevents the θ -relation between that maximal projection and its θ -role assigner. In the structure at stake, however, the moved CP is not in a position where it has to receive a θ -role, but rather it is its trace that is assigned the θ -role by the verb. If this line of reasoning is correct, there is nothing to prevent adjunction of the quantifier to the moved CP₂.

(69) The definition of c-command is stated as follows:

(i) α c-commands β = every maximal projection dominating α dominates β , and α does not dominate β .

With respect to *dominance*, May argues that to be dominated by an occurrence of a projection has to be understood as 'being dominated by all the members of that projection'. This means that a phrase that has been Chomsky-adjoined to a given projection is *not* dominated by that projection, but only by part of it. Thus, in a structure like (ii),



the α -projection dominates C and D but not B, which is dominated by β . See May (1985) and Chomsky (1986) for related discussion.

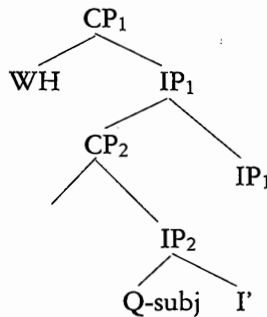
Assuming the definition of *dominance* to be as in May (see fn. (69)), the quantifier phrase will take scope over IP₁, the same as the Wh-phrase. This is so because, according to May's definition, neither CP₂ nor IP₁ dominates the quantified phrase Q-adj; although this element is not excluded by CP₂ nor IP₁, there is at least one segment of each projection that does not dominate it. Given this parallelism of scope between the two quantificational elements, pair readings are possible. This result is, indeed, the correct one and we can properly account for the scope properties of the adjunct QP in (24). What is more important, our hypothesis explains the otherwise striking asymmetry between adjunct wh-phrases and quantifiers in a unified way; the crucial distinction is that while the Wh-phrase has to be extracted out of CP₂ and move up to the Spec of CP₁, the quantifier does not get out of CP₂ and, adjoining to CP₂ and being not exhaustively dominated by this maximal projection, it is in the appropriate structural configuration to take matrix scope.

Moreover, this hypothesis can easily extend to explain also the observed scope asymmetries between adjunct and preverbal subject quantifiers discussed in section 2. with respect to examples (23) and (24). Consider again the sentence in (23a), analyzed previously in section 2:

- (23) a. A quién dices que cada senador amaba t?
Who(m) say-you that each senator loved

As we mentioned above, the quantified NP in SPEC/IP can only get narrow scope (scope in the embedded IP) and pair readings are not possible. We accounted for this fact arguing that SPEC/IP is an A'-position in Spanish and that once an element moves to that position at S-Structure it cannot move further at LF. As I will show now, the explanation appealed to above is compatible with the LF-adjunction hypothesis argued for in this section, and together they derive the correct result for the scopal properties of this example. Consider (39), which displays the LF structure of (23) once adjunction has taken place at LF.

(39)=(23)'s LF



Since the quantified NP has raised to SPEC/IP at S-Structure it has to remain there at LF. If so, a clear difference of the quantified subject in (23) with respect to the quantified adjunct in (37) is that, sitting in the specifier of IP₂, the quantified subject is exhaustively dominated by both IP₂ and CP₂;⁷⁰ therefore, it will have to restrict its scope to IP₂, without the possibility of taking matrix scope. As a

(70) See fn. (69) above.

consequence of this, the WH in the matrix COMP will always have scope over the quantifier in SPEC/IP₂, and no pair reading will be possible, as is indeed the case.

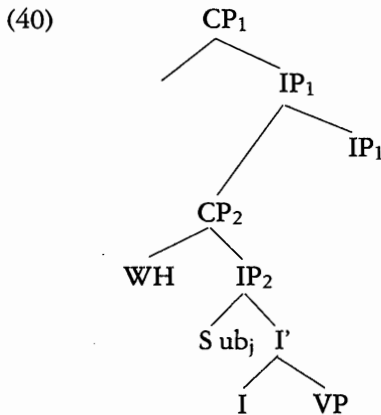
After having shown how the LF-adjunction hypothesis can derive the correct results for all the relevant cases examined in detail in this section, I turn now to a more problematic example which will lead us to reconsider the appropriateness of this hypothesis from a different point of view. Based on this case, I will present and discuss an alternative account, what I will call the *SPEC/IP hypothesis*, which instead of deriving the phenomena under analysis by appealing to an LF-adjunction operation, explains them on the basis of the barrierhood triggered by SPEC/IP. I will then discuss some alternative ways to account for part of the data without appealing to the *SPEC/IP hypothesis* as well as some striking parallelism between Wh-extraction out of factive domains in English and the asymmetries just discussed here that the *SPEC/IP hypothesis* cannot explain. Further consideration of a (partially new) set of interesting scope asymmetries not expected under the *SPEC/IP hypothesis* will also suggest that the originally proposed *Adjunction hypothesis* is, after all, on the right track.

3.2. The SPEC/IP Hypothesis

Let us now turn back to an example introduced at the beginning of this section when we discussed the cases of short distance extraction of Wh-adjuncts in clauses with preverbal subjects.

- (29b) Me pregunto COMO JUAN ha mandado a su hijo a ese colegio privado
 (I) wonder how (come) Juan sent his child to that private school
 'I wonder how (come) Juan sent his child to that private school'

As mentioned above, in this case the interrogative clause takes the *how come* meaning, and the VP and IP adjunct readings are lost.⁷¹ Assuming the hypothesis above, the CP₂ would raise at LF, resulting in a configuration like (40):



(71) But see fn. (57) and (73).

The crucial point of this example is that the WH has not been extracted out to the matrix SPEC/CP but rather, it is inside the adjoined CP₂. Still, some of the possible readings disappear. The possibility of appealing to the lack of antecedent government from an external COMP to explain the lack of the relevant construals is no longer available. Since (29a), the parallel counterpart of this example but with the embedded subject in VP, presents those readings that get lost when the subject is preverbal, it seems that the absence of the relevant readings is once again conditioned by the position occupied by the subject in the subordinate clause. In the spirit of Fukui & Speas (1986), this could be explained under the assumption that whenever the specifier of a functional projection is occupied that maximal projection becomes a barrier.⁷² Since in (29b) the embedded subject sits in SPEC/IP, the VP-adjunct Wh-phrase would have to cross IP (a barrier under this analysis) and it would not be able to antecedent-govern its trace. Since the trace is not lexically governed either, it is not governed at all and that reading is ruled out.⁷³

Note, however, that if the line of argumentation followed in section 1. is correct, there might be an alternative reason to account for the absence of certain readings in (29b). Thus, as we saw there, Verb Preposing seems to be obligatory in Spanish in every instance in which a Wh-phrase occupies SPEC/CP. This seems to be a necessary requirement for the clause to be taken as a regular well-formed Wh-question. In (29b), however, Verb Preposing has not taken place in the embedded interrogative, as can be gathered from the fact that the subject is preceding the verb, and therefore the clause does not qualify as a regular Wh-question. The explanation for the *how come* reading that (29b) presents would follow if it is assumed that in this case *cómo* is directly base-generated in COMP without binding a trace in IP, as has been proposed for the English *how come* by Collins (1990).⁷⁴

Note, however, that even if we can satisfactorily account for the absence of certain readings in cases as (29b) involving short distance extraction by appealing to the need of Verb Preposing, the *Verb Preposing hypothesis* is not available in cases of long distance extraction of adjuncts, such as (27b). Observe that in that case Verb Preposing takes place in the matrix clause, whose specifier is occupied by the Wh-phrase; further, following section 1, Verb Preposing is not necessary in the intermediate and the most deeply embedded clause. Since the downstairs reading of the adjunct disappears when the embedded subjects are preposed, we could still appeal to the *SPEC/IP hypothesis* to account for this type of example. If we appeal to the *SPEC/IP hypothesis*, however, a question arises as to the need for LF-adjunction to explain the relevant facts. Note that the phenomena of Wh-extraction covered by the *Adjunction hypothesis* so far can be accommodated within the *SPEC/IP hypothesis*,

(72) I will not make precise this possible analysis in its whole here.

(73) A possible explanation, suggested to me by Juan Uriagereka (p. c.), for the fact that the adjunct reading is still possible for some speakers would be to assume that the IP adjunct is higher than SPEC/IP in D-Structure. Thus, when extracted, it does not cross over the subject and moves without crossing a barrier.

(74) If Collins's analysis can be extended to Spanish examples like (29b), there might be an account for the absence of Verb Preposing in this case, as brought to my attention by Michael Hegarty (p. c). In effect, since *cómo* would be sitting in COMP the verb cannot move to that position.

The preverbal position of the embedded subject in that example might have to do with the fact that *cómo* ('how (come)') presupposes the truth of its complement, as has been argued for *how come* by Collins. See Collins (1990) for the details.

given that the subject is always preposed in the relevant cases of long distance extraction. Consider the following structure, representative of the long distance extraction cases:

- (41) [CP WH_{adj} V [IP ... [CP t [IP S V [CP t [IP S V t]]]]]]

The movement of the WH from the most deeply embedded clause to the matrix COMP would have to cross over two IPs where the subject is in preverbal position. Since, following the *SPEC/IP hypothesis*, the presence of the subject in SPEC/IP creates a barrier, the derivation in (41) would be prevented by the failure of antecedent government to hold, yielding an ECP violation. In the case of Wh-arguments, since the initial trace is lexically governed the derivation would still be allowed.

This second analysis, thus, could correctly derive the arguments vs. adjunct asymmetry with respect to the Wh-extraction. What is not so clear however is how the scope properties of the clauses with preverbal subjects can be accounted for under this hypothesis. Recall that one of the motivations for the *Adjunction hypothesis* was precisely to provide an explanation to the fact that these clauses take scope in the matrix IP.

Furthermore, although the two theories overlap to some extent and are somehow redundant with regard to Wh-extraction of adjuncts in Spanish, there are some striking similarities between the Spanish Wh-movement of adjuncts analyzed above and some English examples where the S-Structure position of the subject does not seem to be relevant. Thus, in opposition to its Spanish counterpart in (29b), the Wh-phrase in the English sentences in (42) can be interpreted either with the IP-adjunct reading or with the VP-adjunct one. The same is true in long distance extraction cases when the adjunct Wh-phrase can move successive cyclically, as in (42):

- (42) a. I wonder how John sent his child to that private school
 b. Why do they think [that she bought the book t]

As just said, the presence of the subject does not affect the possible readings within the embedded clause of the adjunct Wh-element.⁷⁵ Now, when we consider the extraction facts of Wh-phrases out of sentential complements of factive verbs in English and compare them to the Spanish cases with preverbal subjects discussed above, a surprising parallelism arises:

- (43) a) Extraction of Wh-adjunct
 * Why did they { admit } [that she bought the book t]
 { forget}
 b) Extraction of Wh-object
 What did they { admit } [that she bought t]
 { forget}
 c) Extraction of Wh-subject
 ? Who did they { admit } [t bought the book]
 { forget}

(75) If the characterization of SPEC/IP in English and Spanish is correct, this might indicate that the relevant factor for creating barrierhood is not just whether the specifier of an inflectional category is occupied but rather whether an A'-specifier is, which indirectly points in the same direction as the hypothesis defended here.

As the examples show, the argument vs. adjunct asymmetry observed above in the Spanish examples also holds in English. In this case, however, the ungrammaticality of (43a) cannot be accounted for by appealing to the *SPEC/IP hypothesis*, provided that the downstairs reading of the adjunct in (42b) is available. What is relevant here is that the Spanish cases with preverbal subjects and the English cases in (43) all share an important property: that the clausal complement is equally interpreted as presupposed. If we appeal to the *SPEC/IP hypothesis* to account for the Spanish facts a clear generalization is missed, since this hypothesis has nothing to say about the English case: notice that (42b), identical to the ungrammatical (43a) except for the lexical verb chosen in the main clause, does not lose the downstairs reading of the adjunct. The *Adjunction hypothesis*, on the other hand, can provide an unified account with the need of no further assumption.⁷⁶

3. 3. *The Adjunction Hypothesis Revisited*

In the remainder of this article I will show that it is not clear how some scopal properties of quantified phrases can be accounted for unless an LF movement of the subordinate clauses under analysis takes place. For this, we will have to turn back and reanalyze the interaction holding between the position of the subject and the scopal facts. We have already seen that quantified adjuncts contained in subordinate clauses with preverbal subjects can take matrix scope in those cases where a Wh-argument extracted from the embedded clause is in the matrix COMP. The relevant example, the one under (24), has already been discussed extensively in section 2. and at the beginning of this section. For ease of the exposition, it is repeated here again.

- (24) Qué dices que los amigos han visto en cada ciudad?
 What say-you that the friends have seen in each city
 'What do you say that the friends have seen in each city?'

The important fact to note is that if the subject of the embedded sentence remains in its D-Structure position within VP instead of raising to IP (as in (24)), the matrix scope construal of the adjunct QP disappears and, consequently, pair reading answers are not possible.

- (44) Qué dices que han visto los amigos en cada ciudad?
 What say-you that have seen the friends in each city
 'What do you say that the friends have seen in each city?'

To say it in a different way, only when the embedded subject is preverbal is the matrix scope available for the quantified adjunct. The reason why this should be so is not trivial. Some possible ways out of this problem could be suggested.

Let us consider in the first place a hypothesis where the absence of matrix scope

(76) Needless to say, the topic of factivity is too complex to be considered in its whole here. However, if the approach taken here is correct, it might open a promising way of research of these structures. For a recent and interesting approach to the topic from a different point of view, the reader is referred to Hegarty (1990). See also references in fn. (59).

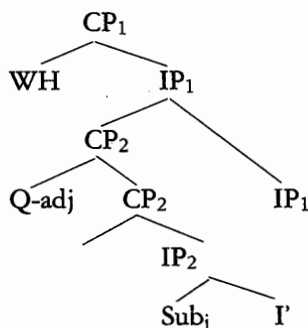
in (44) is due to the assumption that the adjunct QP is clause bound.⁷⁷ This assumption by itself, however, would leave unexplained the possibility of matrix scope in (24), since we should have to admit that 'clause-boundedness' can be violated under certain circumstances. In section 2. fn. (39), a difference was mentioned with regard to the distinct scopal properties of QP that some speakers note in subjunctive and indicative complements. It was suggested there that the difference could be attributed to the islandhood that indicative complements display in this respect. A suggestion was presented in that footnote to account for the possibilities of pair readings that QPs inside indicative complements present despite the islandhood of indicative subordinates. Following that line of reasoning, it might be argued that the quantified adjunct in (24) is clause bound but it can get a wide scope reading because of the relation established between the raised quantified phrase (which would adjoin to the embedded IP at LF) and the trace left by the extracted WH in the embedded SPEC/CP. If this hypothesis were correct, an immediate prediction would be that the same procedure is available for the adjunct QP in (44): under this analysis, the adjunct would raise at LF and adjoin to the embedded IP; the relation between the moved quantified phrase and the trace left by the WH in the embedded SPEC/CP would be the same as that established in the case of (24). Consequently, we would expect for the adjunct QP in (44) the same matrix scope reading available for it in (24). However, as has already been said above, this prediction is not borne out. To finish, if the approach is taken that *en cada ciudad* is not clause bound, we will get into the same kind of difficulties we ran into before to account for the different scopal properties of (24) and (44), since there is no obvious way to find any relevant difference between the derivation that the adjunct QP would have in (24) and the one in (44). On the other hand, if we follow the *SPEC/IP hypothesis*, there is no way to explain the properties at stake either. Observe that it is precisely in those sentences with the preverbal subject that the matrix reading is possible, which means that the adjunct QP can avoid the barrierhood of the embedded IP by adjoining to it in its way up. But if this derivation is correct, it remains mysterious what prevents the same derivation for the QP-phrase in (44).

Summarizing, it seems therefore that none of the alternative accounts explored so far can give a satisfactory explanation of the different behaviour that (24) and (44) display with respect to the scopal facts, whether by considering the quantifier clause bound or not. The *Adjunction hypothesis*, on the other hand, provides an elegant explanation of the phenomena under analysis.

From the scopal properties observed so far it seems that the quantified adjunct is clause bound, since otherwise it might be able to move to take matrix scope independently of the location of the subordinate subject. Let us assume that this is correct, while keeping in mind that it is only when the embedded subject is in SPEC/IP that the quantifier can take wide scope. Recall the structure proposed by the *Adjunction hypothesis* to account for the scopal properties of (24), previously given in (37):

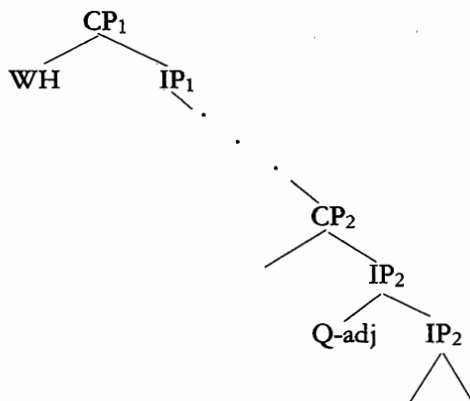
(77) For some discussion on this topic see, among others, May (1977, 1985, 1988), Aoun & Hornstein (1985), Williams (1988), Mahajan (1990) and references therein.

(37) LF Representation of (24):



As was argued for above, the wide scope and pair reading answer possibilities follow from *Q-adj* not being exhaustively dominated either by CP₂ or by IP₁. Consider now the LF representation of (44), the counterpart of (24) but with VP internal subject. Since the subject has not moved to SPEC/IP, no LF movement of the embedded clause will take place.

(45') LF representation of (44):



Observe that in this LF configuration the quantifier is exhaustively dominated by CP₂, which prevents it from taking matrix scope, a desired result. With this hypothesis, the scopal properties of this example and its contrast with (24) follow straightforwardly.⁷⁸

(78) While, for most speakers I have consulted, the scope properties of the embedded adjunct is clearly dependent on the position of the subordinate subject, the grammaticality judgments with regard to the wide scope construal of a quantified object in clauses with postverbal subjects is not a clear matter, and raises a whole set of interesting questions. Consider the following representative pairs:

- (i) a. Qué dices que Pedro ha dado a cada amigo
 What say-you that Peter has given to each friend
 'What do you say that Peter has given to each friend'
- b. Qué dices que ha dado Pedro a cada amigo
 What say-you that has given Peter to each friend
 'What do you say that Peter has given to each friend'

In this section I have argued that the structural position of the subject has implications for a wide range of quantificational phenomena and conditions, at the same time, the semantics of the sentence. It has been shown that Wh-extraction of adjunct phrases and its range of meaning possibilities is dependent on the appearance of the subject in SPEC/IP, while Wh-extraction of arguments is always allowed. It was observed that preverbal subjects trigger a reading in which the sentence to which they belong is understood as presupposed; further, in the case of subordinate sentences with preverbal subjects, the embedded clause typically takes scope over the matrix clause. To account for the phenomena under discussion I proposed that subordinate clauses with subjects in SPEC/IP move at LF to take scope and adjoin to the immediately higher IP.⁷⁹ This hypothesis proved to be correct to account for all the scopal properties of the relevant data. An alternative hypothesis that appealed just to the barrierhood of IPs with specified subjects was then examined, and we compared and discussed both hypotheses; in the light of the scopal properties of clauses with preverbal subjects, the parallelism of the Wh-extraction facts out of factive complement in English the Spanish data under analysis and, to finish, the impossibility of wide scope that subordinate adjunct QPs present in this language in sentences with postverbal subjects, we concluded that the Adjunction Hypothesis seems to be, after all, independently needed.

- (ii) a. A quién dices que Pedro (le) ha dado cada libro
 To whom say-you that P. ((s)he-D) has given each book
 'Who do you say that Peter has given each book to'
- b. A quién dices que (le) ha dado Pedro cada libro
 To whom say-you that ((s)he-D) has given P. each book
 'Who do you say that Peter has given each book to'

For those speakers I have consulted the quantified object in the embedded sentence in (ia) and (iia) (those with the preverbal subject) can take matrix scope. Interestingly, there is some divergence with regard to the possibilities of the wide construal in (ib) and (iib). Thus, while some speakers accept the reading where the quantifier takes matrix scope some others do find some difficulties. Further, any classificatory attempt gets complicated by the fact that, as explained in section 2, postverbal quantified subjects in VP can always take matrix scope in opposition to those that move to SPEC/IP at S-Structure and only have a narrow reading. The relevant pair is repeated here:

- (20) a. A quién dices que amaba cada senador t ?
 Who say (you) that loved each senator
 'Who do you say that each senator loved?'
- (23) a. A quién dices que cada senador amaba t ?

It seems therefore that we have a three way distinction: (i) quantified adjuncts are always dependent on the position of the embedded subject; (ii) quantified subjects in VP can always get wide scope, those in SPEC/IP only get embedded scope; (iii) quantified objects can always take wide scope for some speakers but are dependent on the position of the subject for others. It is not clear how to account for this state of affairs and some additional assumption seems to be necessary in order to explain the whole paradigm above. I leave this open for further research.

(79) Within the *Adjunction hypothesis* there is a second alternative which, though left unexplored for the time being, I would like to briefly point out. Thus, it might be that, instead of the whole subordinate clause with the preverbal subject, it is just the IP immediately dominating the preverbal subject that moves. Under this hypothesis, the Wh-arguments/Wh-adjuncts asymmetry would also come from the different levels at which γ -marking of their traces takes place, as above, and the impossibility of adjunct extraction would follow from a violation of the Proper Binding Condition in the resulting configuration once adjunction at LF takes place. The other asymmetries would derive in the same way as proposed above. Observe that, under this hypothesis, the presupposition would follow as the semantic result of a syntactic pied-piping operation at LF. Some further relevant data have to be considered and different problems be solved before we can evaluate the two alternatives in their whole. This is left open for further investigation.

Summarizing, this paper has studied the structural positions available for the subject at S-Structure in Spanish, their nature and properties, and the relevance that the placement of the subject in those locations has for a wide range of quantificational phenomena.

We have first analyzed the VSO sequences of clauses involving (long distance) Wh-extraction. It has been shown that this word order, which following the classical analysis results from the uniform application of a single rule of Verb Preposing, underlies two different processes and structures, which accounts for the distinct properties displayed with respect to the adjacency requirement by the Wh-phrase/verb and Wh-trace/verb pairs respectively; this led us to disregard Verb Preposing as relevant evidence for successive cyclicity. The study of the different properties of the two positions available for the subject, namely SPEC/VP and SPEC/IP, and the characterization of SPEC/IP as an A'-position allowed us to account for a set of scopal asymmetries displayed by preverbal and postverbal quantified subjects in Spanish. The analysis was extended to cover some further asymmetries between preverbal quantified subjects in English and Spanish with the need of no further assumption. The behaviour of Wh-subjects in Spanish was also accounted for in a unified way.

It has been also shown that, in addition, the location of the subject in SPEC/IP has some further implications affecting Wh-extraction, the possible readings of other quantified phrases in the clause and the semantic import of its own clause, which is understood as presupposed and takes scope in the the matrix clause. We have offered an account of all these properties and asymmetries by proposing that the S-Structures of subordinate clauses with preverbal subjects do not directly match their semantic interpretation, and that a scope induced movement of the embedded clause is necessary in the mapping from S-Structure to LF. Needless to say, much remains to be done and further investigations will, no doubt, lead us to some revisions of the hypothesis; but if the basic tenets of the analysis prove to be correct, it opens an alternative and, I believe, promising way to explore the properties of quantification and to relate them from a purely syntactic perspective to a broader set of phenomena.

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