

A PREVERBAL LANDING SITE FOR QUANTIFICATIONAL OPERATORS

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[Spec, IP] is a position specifically devoted to the overt structural encoding of quantificational operators in Catalan. Preverbal existential and universal quantifiers and *wh*-words in *wh*-questions appear in this slot. The facts are the following: (a) *wh*-words in *wh*-questions (e.g. Eguzkitza (1987), Campos (1986)) and preverbal negative universal quantifiers (Laka (1991)) are left-adjacent to the verbal string and appear below C and left-detachments; (b) [+operator] quantifiers optionally appear in a derived preverbal slot that meets the same profile (Quer (1991)), and (c) adopting the VOS hypothesis (cf. Roselló (1986), Bonet (1990)), [Spec, IP], which is left-adjacent to the verbal string and below C and left-detachments, is now empty and available.

1. Introduction

This paper argues that in Catalan there is a preverbal landing site that is specifically devoted to the structural encoding of quantificational operators, and that this position is the specifier position of IP. This derived slot is where all preverbal universal and existential operators, as well as *wh*-words in *wh*-questions, are found. The existence of this homogeneous overt structural representation for all quantificational operator-variable constructions, both *wh*- and non-*wh*-, had gone unnoticed so far.

The analysis is based on several pieces of evidence. First, the evidence against assuming that in some languages, including Catalan, *wh*-words in *wh*-questions move to a position higher than C or Comp, following the work of Campos (1986) and Eguzkitza (1987), is considered. The facts suggest that *wh*-words move to a position lower than C which is left-adjacent to the verbal string (which includes negation and clitics). Second, it will be noted that negative universal

quantifiers, as observed by Laka (1991), for instance, if they are preverbal, seem to appear in a position below C which is not the same slot regularly associated with left-detachments. Third, there is a class of preverbal elements the existence of which has been recently pointed out by Quer (1991). They appear in a preverbal slot which is not the typical left-detachment slot and, again, is lower than C and adjacent to the verbal sequence. These elements must be not only quantificational, but also, according to Quer, [+operator] in the sense of Hornstein (1984).

Finally, if Catalan is assumed to have VOS basic word order, as suggested by many on the basis of ample and diverse evidence (cf. Rosselló (1986), Adams (1987), Bonet (1990), Contreras (1991), among others), we find that the specifier of IP position, which was traditionally thought of as a 'subject slot', is now empty and available for this new role as a quantifier-related position.

2. Wh-words in Wh-questions

Traditionally, the structural position of wh-words in Catalan has been assumed to be the specifier of CP slot, which is the null hypothesis if English is taken as a point of departure. This analysis, however, is not free of problems. In English, wh-words in wh-questions and in relatives show the same distribution. This is not so in Catalan. In relatives like (1a, b) the wh-element *per qui* 'for whom' must precede the subject *el Pere*, but, in contrast, in wh-questions like (1c, d) the wh-element appears to the right of the subject:¹

- (1) a. L'home per qui₂ el Pere₁ treballa t₁ t₂.
the man for who the P. work-3s
'The man for whom Peter works.'
b. *L'home el Pere₁ per qui₂ treballa t₁ t₂.

¹ In (1) and examples below, for the sake of consistency, the base position of the subject (*t*₁ in (1)) is placed postverbally in agreement with the VOS hypothesis spoused in this paper. However, traditional subject-verb inversion in wh-questions, which will be discussed next, is crucially based on an assumed SVO order.

- (1) c. El Pere₁ per qui₂ treballa t₁ t₂?
 the P. for who work-3s
 'Who does Peter work for?'
 d. *Per qui₂ el Pere₁ treballa t₁ t₂?

The traditional explanation for the contrast between relatives and wh-questions is based on the existence of a rule of subject-verb inversion (cf. Picallo (1984)), triggered by wh-questions but not by relatives, which undoes the expected WhSV order and rules out strings like (2b) in favor of strings like (2a), which is WhVS:

- (2) a. Què vol l'amo?
 what want-3s the boss
 'What does the boss want?'
 b. *Què l'amo vol?

Sentence (1c) is not ruled out because its subject does not appear in a basic 'subject' position but in a derived left-detached position which appears to lie to the left of the specifier of CP.

The subject-verb inversion hypothesis accounts for the inexistence of WhSV order, but it also wrongly predicts examples like those in (3) to be licit:

- (3) a. *Quan va fer l'Anna el cafè?
 when do-PAST-3s the A. the coffee
 'When did Anna make the coffee?'
 b. *Què ficarem nosaltres al calaix?
 what put-FUT-1p we in the drawer
 'What will we put in the drawer?'

In (3a, b) verb and subject are inverted and, therefore, the subject (*l'Anna* and *nosaltres*,

respectively) surfaces between the verb and its internal argument. These sentences should be well formed, but are in fact ungrammatical in the same dialects that show the contrast between *wh*-questions and relatives in (1). The reason behind the impossibility of *WhSV* order in *wh*-questions in these dialects must, therefore, be found elsewhere.²

In fact, in *wh*-questions subjects may appear in three positions. This is shown for the subject *l'Anna* in (4): in (4a) *l'Anna* is a right-detached subject, in (4b) it is a left-detached subject, and in (4c) it is a regular postverbal subject, while (4d) illustrates the illicit placement of the subject between the *wh*-word and the verb.

- (4) a. Quan_2 va fer el cafè t_1 t_2 , $l'Anna_1$?
b. $l'Anna_1$ quan_2 va fer el cafè t_1 t_2 ?
c. Quan_2 va fer el cafè $l'Anna$ t_2 ?
d. * Quan_2 $l'Anna$ va fer el cafè t_2 ?

Right-detached and left-detached subjects are uncontroversially derived subjects and this is shown in their indexing pattern in (4). The clause-internal postverbal subject slot shown in (4c) is one of two clause-internal slots subjects have traditionally been assumed to have. The other one, the preverbal one, yields an ungrammatical string in this *wh*-context (even if inversion applies as in (3)).

Nonsubject arguments may also appear in three positions. This is shown in (5) with the indirect object *al Roc*: in (5a) it is a right-detached nonsubject, in (5b) a left-detached nonsubject, and in (5c) a regular postverbal nonsubject.³

² The subject-verb inversion approach is instantiated, for example, by Rizzi (1991), where subject-verb inversion is viewed as a *V-to-C* movement. Even though Rizzi's paper takes care of a number of potential problems for the *V-to-C* movement analysis for Romance, nothing is said of cases like (3).

³ Here, too, *pro* is placed so as to reflect the assumed nonderived postverbal status of subjects (cf. fn. 1).

- (5) a. Què₁ li₂ donarà_s t₁ t₂ *pro*, al Roc₂?
 what iobj give-FUT-2s to-the R.
 'What'll you give Roc?'
 b. Al Roc₂ què₁ li₂ donarà_s t₁ t₂ *pro*?
 c. Què₁ (li) donarà_s t₁ al Roc?
 d. *Què₁ al Roc (li) donarà_s t₁?

There is considerable parallelism between subjects and nonsubjects in this respect. The indirect object in (5) can appear in the two detachment positions and in its nonderived clause-internal slot. Like subjects, as shown by (5d), nonsubjects may not appear between the *wh*-word and the verb either. Of course, the difference is that, with nonsubjects, this is expected because Catalan, while supposed to have a specific preverbal 'subject' slot, is not supposed to have a specific preverbal 'nonsubject' slot. Thus, the ungrammaticality of (5d) is accounted for in terms of phrase structure.

Given the parallelism between (4) and (5), however, it could be argued that the impossibility of (4d) is due to the same fact that accounts for the impossibility of (5d), namely, that there is no specific preverbal 'subject' slot either. The only subject and nonsubject slots available are postverbal, and any preverbal subjects and nonsubjects are found in derived positions that are blind to the grammatical status of the argument. All arguments, then, may only appear in three structural slots: a nonderived postverbal one, a left-detached one, and a right-detached one. And not only in *wh*-questions, but in all sentence types. This is precisely what most variants of the VOS hypothesis propose and this is exactly what will be assumed here.

Let us suppose, then, that all preverbal subject and nonsubject arguments, with the exception of *wh*-words and the quantificational elements discussed in the next sections, are left-detached and that, given the string order pattern displayed by (4b) and (5b), left-detached phrases are external to CP, where all *wh*-words are supposed to appear. This does indeed account for the cases in (4) and (5), but the contrast between *wh*-questions and relatives seen in (1) is still left

unaccounted for. As expected (if the hypothesis that the subject-nonsubject distinction is of no relevance is correct), the contrast between *wh*-questions and relatives applies not only to subjects, as in (1), but to nonsubjects as well, as in (6). Examples (6a, b) show that the left-detached object *la cervesa* 'the beer' appears to the left of the *wh*-word in *wh*-questions and (6c, d) show that it appears to the right of the *wh*-word in relatives, in total analogy to the subject pattern shown in (1):

- (6) a. *La cervesa*₁ *on*₂ *la*₁ *serveixen* *t*₁ *t*₂?
 the beer where obj serve-3p
 'Where are they serving the beer?'
 b. **On*₂ *la cervesa*₁ *la*₁ *serveixen* *t*₁ *t*₂?
 c. *Sé* *d'un bar* *on*₂ *la cervesa*₁ *la*₁ *serveixen* *t*₁ *amb mànega* *t*₂.
 know-1s of a bar where the beer obj serve-3p with hose
 'I know a bar where beer is served with a hose.'
 d. **Sé* *d'un bar* *la cervesa*₁ *on*₂ *la*₁ *serveixen* *t*₁ *amb mànega* *t*₂.

The issue, then, is not the relative ordering of preverbal subjects and *wh*-words, but the relative ordering of left-detached phrases and *wh*-words. In other words, the problem is that left-detached phrases appear to the right of *wh*-words in relatives, but to the left of *wh*-words in *wh*-questions. There are two possible explanations for the contrast: either left-detached phrases attach to different nodes in each of the constructions or, rather, *wh*-words occupy different structural positions in each of the two constructions. Fortunately, in Catalan and Spanish complementizers and *wh*-words may cooccur in indirect *wh*-questions and, when they do so, the complementizer (*que* in (7)) always appears to the left of the *wh*-word (*on*):

- (7) a. *Pregunten que el ganivet*₁ *on*₂ *el*₁ *ficaràs* *t*₁ *t*₂.
 ask-3p that the knife where obj put-FUT-2s
 'They're asking where you'll put the knife.'
 b. **Pregunten el ganivet*₁ *que on*₂ *el*₁ *ficaràs* *t*₁ *t*₂.

This shows that in *wh*-questions *wh*-words do not occupy the specifier position of CP but rather a slot below C. *Wh*-words, therefore, sit in different slots in relatives and in *wh*-questions. The pair of examples in (7) also shows that left-detached phrases, like *el ganivet* 'the knife', also appear to the right of the complementizer, although in a position above the *wh*-word. If, pace Baltin (1982), Rochemont (1989), and others, left-detachment is analyzed as an attachment to IP, the *wh*-word in *wh*-questions must be seen as appearing in an IP-internal position. Campos (1986) and Eguzkitza (1987), who were among the first to point out the IP-internal status of *wh*-words in *wh*-questions in Romance following a proposal made by Horvath (1986) for Hungarian, conclude that preverbal IP-internal *wh*-words are adjoined to I⁰ or V⁰. The adjunction account, however, is an ad hoc proposal that entails rare downgrading movement operations and wrongly predicts that preverbal *wh*-words can be freely iterated. The proposal this paper leads to duly reflects the IP-internal character of *wh*-words in *wh*-questions without suffering from any of the shortcomings just mentioned.

The sentential configuration in (8) is in accordance with the empirical observations made so far concerning string order in Catalan. *XP*₁ represents a left-detached phrase or phrases. *Wh*-words move to the specifier of CP in relatives, like they do in English, but move to a position within IP (*wh*₂ in (8)) in *wh*-questions. The structure in (8) also reflects the fact that the *wh*-word in *wh*-questions must be left-adjacent to the verbal string, since, as indicated above, nothing may intervene between the former and the latter:

(8) [CP C [IP XP₁ [IP *wh*₂ I ... t₁ ... t₂ ...]]]

Wh-words in *wh*-questions act as quantificational operators. They display the same quantificational behavior traditional existential and universal quantifiers display (cf. Hirschbühler (1985)). *Wh*-words in relatives, in contrast, do not possess any quantificational force. It will be shown below that this semantic difference is crucial in determining the surface encoding of *wh*-words in Catalan.

3. Preverbal Negative Quantifiers

Negative quantifiers in Romance can, of course, appear in their postverbal in-situ position, but they may also appear in a preverbal slot without undergoing any truth-conditional change. This alternation, which has recently been analyzed in several works, including Laka (1991) and Zanuttini (1991), is illustrated in (9), with an unaccusative subject, and in (10), with an indirect object:

(9) a. No va venir ningú.

no come-PAST-3s no-one

'No one came.'

b. Ningú₁ (no) va venir t₁.

(10) a. No regalen res a ningú.

no give-3p nothing to no-one

'They don't give anything to anybody for free.'

b. A ningú₁ (no) li₁ regalen res t₁.

At first blush the preverbal position these negative quantifiers surface in may appear to be the same IP-peripheral left-detachment site for subjects and nonsubjects discussed in the previous section. Compare the lefthand position of *ningú* 'nobody' in (9b) and (10b) with the lefthand position of a typical left-detached phrase like *els dolents* 'the bad ones' in (11):

(11) Els dolents₁ no els₁ volen t₁.

the bad-ones no obj want-3p

'They don't want the bad ones.'

Under further scrutiny, however, it becomes clear that the lefthand position these negative quantifiers appear in does not behave like the standard left-detachment slot. Standard left-detachment allows for more than one left-detached phrase and the linear order among them is free. This is shown by (12), where the left-detached object *el sou* 'the pay' and the left-detached

indirect object *a la gent* 'to people' may be switched around:

- (12) a. El sou₁ a la gent₂ no l₁'hi₂ regalen t₁ t₂.
the pay to the people no obj iobj give-3p
'They don't give the pay to people for free.'
- b. A la gent₂ el sou₁ no l₁'hi₂ regalen t₁ t₂.

However, if one of the two lefthand phrases is a negative quantifier, the linear order among the phrases is not free anymore. The pair in (13) is minimally different from the pair in (12) in that the indirect object is the negative quantifier *ningú* 'no one'. This small difference is sufficient to deem the string order shown in (13b) ungrammatical. The negative quantifier seems to require left-adjacency to the verbal string:

- (13) a. El sou₁ a ningú₂ (no) l₁'hi₂ regalen t₁ t₂.
'They don't give the pay to anyone for free.'
- b. *A ningú₂ el sou₁ (no) l₁'hi₂ regalen t₁ t₂.

Subject negative quantifiers behave alike, as shown by the comparison of examples (14) and (15). In (14) the two left-detached phrases, the subject *l'empresa* 'the company' and the object *els dolents* 'the bad ones', may be switched around freely:

- (14) a. Els dolents₁ l'empresa₂ no els₁ vol t₁ t₂.
the bad-ones the company no obj want-3s
'The company doesn't want the bad ones.'
- b. L'empresa₂ els dolents₁ no els₁ vol t₁ t₂.

In contrast, when the subject is a negative quantifier, as in the sentences in (15), left-adjacency to the verbal string is required again:

- (15) a. Els dolents₁ ningú₂ (no) els₁ vol t₁ t₂.
 'No one wants the bad ones.'
 b. *Ningú₂ els dolents₁ (no) els₁ vol t₁ t₂.

It is clear, then, that these negative quantifiers do not appear in the typical IP-adjunction slot left-detached phrases appear in, but rather in a position within IP which is left-adjacent to the verbal string. The left-adjacency requirement for *ningú* in (15) has nothing to do with its grammatical status as a subject, as shown by the fact that it also applies in (14), where *ningú* is an indirect object. It is rather its status as a quantificational operator that appears to determine its inability to allow other lefthand phrases between itself and the verbal string. Given that the position that these negative quantifiers occupy is below the left-detachment site and that left-detached phrases are lower than C, it obviously follows that negative quantifiers are below C too. This is confirmed by sentences like (16):

- (16) Crec que ningú₁ (no) ho sap t₁.
 believe-1s that no-one no obj know-3s
 'I think no one knows.'

The configuration in (17) reflects all the structural observations made concerning the distribution of preverbal negative quantifiers in this section:

- (17) [CP C [IP XP₁ [IP neg-quant₂ I ... t₁ ... t₂ ...]]]

Preverbal negative quantifiers appear below C and below IP-adjoined left-detachments and are left-adjacent to the verbal string. Laka (1991) argues that these negative quantifiers, along with other emphatic elements, appear in the specifier position of a phrasal projection called ΣP. As will become evident below, this paper agrees that preverbal negative quantifiers are located in a specifier position, but deems the postulation of a specific phrasal projection unnecessary.

4. Other Preverbal Quantifiers

Negative quantifiers are not the only class of classic quantifiers to present the preverbal-postverbal alternation discussed in the previous section. The facts regarding other quantifiers, however, are not as clear-cut as the facts regarding negative quantifiers. For one thing, in the right contexts existential and positive universal quantifiers can be left- and right-detached and thus behave like regular nonquantificational phrases. Witness the existential indirect object *a alguns clients* 'to some clients' shown in (18). It appears in situ in (18a), left-detached in (18b), and right-detached in (18c):

- (18) a. Ja hem fet el descompte a alguns clients.
 alr. do-1p the discount to some clients
 'We've already given some clients the discount.'
- b. A alguns clients₁ ja els₁ hem fet el descompte t₁.
- c. Ja els₁ hem fet el descompte t₁, a alguns clients₁.

That these are real detachments is confirmed by the pair in (19). There are two left-detached phrases, one of them an existential quantifier, and, unlike what happened with the negative quantifiers in (13) and (15), the linear order among the two detached phrases is free:

- (19) a. A alguns clients₂ el descompte₁ ja /l₁zi₂/ hem fet t₁ t₂.
- b. El descompte₁ a alguns clients₂ ja /l₁zi₂/ hem fet t₁ t₂.

This is the expected behavior if the existential indirect object has undergone a regular left-detachment. Apparently, then, unlike the negative universal quantifiers discussed in Section 2, preverbal existential quantifiers need not appear in a 'specific' IP-internal slot and do not require to be left-adjacent to the verbal string.

A closer look at these preverbal positive quantifiers and their distribution, though, shows that, contrary to appearance, a subset of them must indeed appear in a specific IP-internal position.

In this, the paper follows the proposals regarding preverbal quantifiers in Quer (1991). Before that, however, a few things need to be said concerning the structural representation of information packaging in Catalan.

Information packaging is the pragmatic component of language that is responsible for the structuring of the information contained in a sentence according to the speaker's beliefs about the hearer's knowledge and attentional state (cf. Chafe (1976), Prince (1986), Ward (1988)). In Vallduví (1992) it is proposed that sentences are informationally divided into a focus and a ground, while the latter, in turn, is further divided into a link and a tail. This division is adapted from the well-known focus-presupposition and topic-focus informational articulations. The exact interpretation of these notions need not be discussed here, but, very roughly, let us say that focus is the actual information conveyed by the proposition encoded in the sentence, i.e. what a hearer is instructed to add into his/her knowledge-store (viewed as a Heim-style collection of referential file cards (cf. Heim (1983))), while the ground is composed of elements that indicate where and how to enter the information of the focus. Within the ground, the link specifically points to a file card, out of those referred to in the proposition, as the sole point of information entry into the knowledge-store.

In Catalan the structural position of the major constituents at the surface is a function of their informational role (cf. Vallduví (1992)). This contrasts with English, where informational roles are structurally encoded mostly by means of prosody (Steedman (1991)). Thematic and case relations, which in English determine the overt position of phrases, are represented in Catalan surface structure by means of a series of indexed clitics and empty categories instead. The surface structural representation of the different informational primitives is as illustrated in (20):

(20) [IP ground (link) [IP [IP focus] ground (tail)]]

According to (20) any (overt nonclitic) material that appears within the core IP-slot at the surface is interpreted as focus. Ground elements are detached away from the core clause,

appearing as right-detachments if they are tails and as left-detachments if they are links. Therefore, any phrase that appears in a left-detachment slot must receive a link interpretation qua information packaging, as do, for instance, the left-detached quantificational phrases in (18b) and (19). These left-detached quantificational phrases further satisfy a structural requirement characteristic of left-detachment, namely, they bind a clitic within IP.

But, as noted above, there is a class of lefthand quantificational phrases, brought to attention recently by Quer (1991), that do not behave like left-detached phrases in that they do not bind a clitic within IP. This class is illustrated in (21), where the phrases *alguns clients* 'some customers', *tothom* 'everyone', and *poca gana* 'little hunger' appear not in situ but in a lefthand slot:

- (21) a. *Alguns clients*₁ *deurem fer t*₁, *oi, avui?*
 some customers must-FUT-1p do-INF, right, today?
 'We'll probably make some customers today, right?'
- b. (A) *tothom*₁ *aconcentes t*₁ *la mar de bé, tu!*
 to everyone make-happy-2s very well you
 'You're so good at making everyone happy!'
- c. *Poca gana*₁ *passarem t*₁, *amb tot aquest recapte!*
 little hunger go-thru-FUT-1p with all this food
 'We won't starve, with all this food!'

Furthermore, the lefthand quantificational phrases in (21) are not informationally equivalent to the left-detached quantificational phrases in (18b) and (19). The former are interpreted as focal, not as links within the ground like the latter, and, as expected, the sentences they appear in are informationally equivalent to the corresponding examples in (22), where the quantificational phrases appear in situ:

- (22) a. *Deurem fer alguns clients, oi, avui?*

- (22) b. Acontentes tothom la mar de bé, tu!
 c. Passarem poca gana, amb tot aquest recapte!

The structural assumptions implied by (20) suggest that the position the lefthand quantificational elements in (21) appear in is internal to IP, since any material interpreted as focus must appear within the core clause. This is confirmed by the fact that this quantificational phrases must appear to the right of typical left-detachments, which are immediately peripheral to IP. The (left-detached) subject *el govern* 'the government' in (23) and the left-detached complement *del sofà* 'for the sofa' in (24) cannot intervene between the lefthand quantificational phrases *poques coses* 'few things' and *poques peles* 'few pesetas':

- (23) a. El govern₂ poques coses₁ farà t₁ t₂.
 the gov'ment few things do-FUT-3s
 'The government will do few things.'
 b. *Poques coses₁ el govern₂ farà t₁ t₂.
- (24) a. Del sofà₂ poques peles₁ te'n₂ donaran t₁ t₂.
 of-the sofa few money you prt_v give-FUT-3p
 'They'll give you little money for the sofa.'
 b. *Poques peles₁ del sofà₂ te'n₂ donaran t₁ t₂.

Of course, given that this lefthand quantificational slot is lower than IP-adjoined left-detached phrases, it must also be lower than C, as shown in (25):

- (25) Crec que poques coses₁ farà t₁.
 1s-believe that few things do-FUT-3s
 'I believe it'll do few things.'

That this lefthand slot can only be occupied by quantificational elements is shown by the sentences in (26). These sentences are totally parallel to the sentences in (21) above, except that

the lefthand phrases *aquest client* 'this customer', *la mare* 'the mother', and *gana* 'hunger' in (26) are not quantificational. While the sentences in (21) were perfect, those in (26) are ungrammatical:

- (26) a. **Aquest client₁ deurem visitar t₁, oi, avui?*
this customer must-FUT-1p visit-INF, right, today?
'We'll probably visit this client today, right?'
- b. **La mare₁ acontentes t₁ la mar de bé, tu!*
the mother make-happy-2s very well, you
'You're so good at making your mother happy!'
- c. **Gana₁ passarem t₁, amb tan poc recapte!*
hunger go-thru-FUT-1p, with so little food
'We'll starve, with so little food.'

Of course, these sentences are licit if a clitic appears adjoined to the verbal head. In that event, however, they would not be in the same slot occupied by the quantificational phrases in (21), but in a standard IP-adjoined left-detachment slot, and informationally they would receive a link interpretation.

The situation is, thus, that, even though it can be established that some lefthand quantificational elements appear in a specific IP-internal slot (not available to nonquantificational elements), other lefthand quantificational phrases may indeed be cases of standard left-detachment. Examples (27) and (28) illustrate the two options: (27b) is an IP-adjoined left-detached quantificational phrase and (28b) an IP-internal quantificational phrase. The lefthand quantificational element, *alguna cosa* 'something', is the same in both sentences, but, as expected, in (27b) it binds a clitic within IP and in (28b) it does not:

- (27) a. *Aquí hi ha massa feina:*
'There's too much work here:'

- (27) b. *Alguna cosa*_i *l*₁'haurem de fer *t*₁ abans de marxar.
 some thing obj have-to-FUT-1p do-inf before leave-inf
 'We'll have to do something before leaving.'
- (28) a. *Com ho solucionem, això?*
 'How are we going to solve this?'
- b. *Alguna cosa*_i *f*arem *t*₁, no pateixis.
 some thing do-FUT-1p no worry-SBJ-2s
 'We'll do something, don't worry.'

Besides the informational distinction between (27b) and (28b), based on the ground status of *alguna cosa* in (27b) and its focal nature in (28b), there also appears to be a slight semantic distinction between them. Quer (1991) points this distinction out and, using Hornstein's typology of quantifiers (cf. Hornstein (1984)), argues that left-detached quantificational elements are [-operator] and that lefthand non-left-detached ones are [+operator]. Roughly, the difference between the two types of quantifier is that [+operator] quantifiers undergo the syntactic rule of Quantifier Raising and, at some level, form an operator-variable sentential configuration, while, in contrast, [-operator] quantifiers do not undergo Quantifier Raising, do not form an operator-variable sentential structure, receive wide scope, and have a more nominal flavor to them.

In some sense, the quantificational phrase in (27b) is more nominal and less purely quantificational than (28b). In *alguna cosa* in (27b) it is tacitly understood that there is a salient, restricted set of 'things' that have to be done. Some of these 'things' will be done later on when the speaker gets back from wherever *s/he* is going, but some will have to be done before leaving. In (28b), of course, there is also a range over which *alguna cosa* quantifies, but this range is not restricted nor salient in the same way. This distinction is akin to Pesetsky's D-linking notion as applied to capture the semantic distinction between *which person* and *who* (cf. Pesetsky (1987)).

It is this semantic difference between the two *alguna cosa* in (27b) and (28b), whatever its exact nature, that allows it to function as a link in the former case but not in the latter. A link phrase, as noted above, points to the file card that it denotes in the file-structured knowledge-store of the hearer and selects it from among the sentence participants as the sole point of information entry. A link phrase, then, has to be 'nominal' and 'referential' in some sense as a prerequisite, since it must be able to denote a file card. If, as suggested, [-operator] quantifiers have a nominal flavor to them, it is not surprising that they can function as links, just like typical nominal phrases do. In contrast, the other more purely quantificational phrases ([+operator]) have a lower 'referential' force and are not associated with a particular file card. Therefore, they cannot act as links. Significantly, the one class of quantifiers that always lack this 'referential' property, negative quantifiers, cannot possibly act as links, since they never denote a particular file card. It was showed in Section 3 that preverbal negative quantifiers, as expected, cannot be analyzed as left-detached, i.e. cannot be structurally encoded as links, but must be analyzed as occupying a lower IP-internal slot.⁴

In sum, there is a class of [+operator] quantifiers that may appear in a lefthand position which is left-adjacent to the verbal string and is lower than C and IP-adjoined left-detached phrases. This is represented in the configuration in (29):

(29) [CP C [IP XP₁ [IP [+op]-quant₂ I ... t₁ ... t₂ ...]]]

⁴ There is one particular negative quantifier, *cap* 'no, none', that seems to maybe lend itself to a link interpretation, as shown in (i):

- (i) a. ?A *cap* escola₁ la canalla₂ (no hi₁) té les condicions necessàries t₂ t₁.
 in no school the kids no loc have-3s the conditions necessary
 'Children do not have the right facilities in any school.'
 b. La canalla₂ a *cap* escola₁ (no hi₁) té les condicions necessàries t₂ t₁.

It is significant, though, that *cap* is the one negative quantifier that implies the existence of a salient, restricted set of referents. *Cap* 'none' is to *ningú* 'no one' as *quina persona* 'which person' is to *who* 'qui', i.e., *cap* is, in some sense, D-linked. Thus, *cap* is more 'referential' and allows for a link interpretation, albeit somewhat forced.

This position is clearly distinct from the standard left-detachment position and nonquantificational phrases may not appear in it. Some quantificational elements may also appear as left-detached phrases, but in that case they are [-operator] quantifiers that display different semantic and syntactic behavior.

5. Complementary Distribution: [Spec, IP]

The structure in (29) is identical to the structures shown above in (8) and (17). In other words, the distributional properties of the structural slot occupied by the three elements under discussion, *wh*-words in *wh*-questions, preverbal negative quantifiers, and preverbal [+operator] positive quantifiers, are the same. They all appear in a lefthand slot which is IP-internal and left-adjacent to the verbal string.⁵

As discussed above, these elements share the semantic property of being quantificational and have their quantificational meaning structurally represented by means of an overt or covert quantifier-variable structure, i.e., they are syntactic operators. Given their shared semantic features and the identity of their syntactic distributional properties, it is not unreasonable to think that the position these elements occupy is one and the same. In fact, the one fact needed to confirm that *wh*-words in *wh*-questions and preverbal [+operator] quantifiers occupy the same slot is shown in (30) and (31): these elements occur in complementary distribution. It is well known already that no two preverbal *wh*-words may cooccur, and it is also true that *wh*-words and preverbal quantifiers cannot cooccur. In the *wh*-questions in (30) and (31), the negative quantificational complement *a ningú* 'to no one' and the nonnegative quantificational complement *poques coses* 'few things', respectively, cannot appear preverbally, as shown by the (b) and (c) sentences:

⁵ The only observable difference is that preverbal negative quantificational phrases may bind a clitic within IP. This contrasts with *wh*-phrases and the other [+operator] quantificational phrases, which are characterized by the absence of a bound clitic. An account of this contrast will not be attempted here.

- (30) a. *Què₁ no regalen t₁ a ningú?*
 what no give-3s to no-one
 'What don't they give to anyone for free?'
- b. **Què₁ a ningú₂ (no) li₂ regalen t₁ t₂?*
- c. **A ningú₂ què₁ (no) li₂ regalen t₁ t₂?*
- (31) a. *Qui₁ farà poques coses t₁?*
 who do-FUT-3s few things
 'Who'll do few things?'
- b. **Qui₂ poques coses₁ farà t₁ t₂?*
- c. **Poques coses₁ qui₂ farà t₁ t₂?*

It is clear, then, that these preverbal quantificational elements occupy the same position.⁶ But, what is this position? It cannot be an adjunction slot because these preverbal quantificational elements do not iterate freely. The fact that only one of these preverbal elements may appear suggests that the slot it appears in is a specifier position. Here it will be argued that this position is the specifier position of IP. As shown above, this position must be IP-internal and must be left-adjacent to the verbal string. Specifier of IP is a position that satisfies all these requirements and becomes available if the VOS hypothesis is adopted for Catalan.

The VOS hypothesis has been argued for by many scholars for most of the Romance languages on totally independent grounds. See, for instance, Rosselló (1986), Adams (1987), Fernández-Soriano (1989), Bonet (1990), Contreras (1991), Vallduví (1991), Solà (1992), and many

⁶ Quantificational adverbs like *mai* 'never' may cooccur preverbally with other quantificational elements, as shown in (i):

- (i) *Mai ningú₁ (no) havia fet res t₁ de tan greu.*
 never no-one no had-3s done nothing of such gravity
 'No one had ever done anything so grave.'

It is unclear, though, what the structural position of these adverbs is. The issue will not be addressed here any further.

others, for arguments related to the ECP, government, case assignment, the Binding Theory, or informational interpretation. These works also provide alternative accounts for the facts that had been traditionally thought to require the existence of a preverbal subject slot, like nominative case assignment to the subject or the external-argument nature of the subject. It is significant that some of these proposals mention that preverbal quantifier subjects pose the only problem for the assumption that a preverbal 'subject' slot is not needed at all. As discussed above, though, what these preverbal quantifier subjects show is not that a preverbal 'subject' slot is needed, but rather that there is a preverbal slot within IP which serves as an (optional) landing site for [+operator] quantificational elements regardless of their grammatical status as subjects or complements. The specifier of IP position, having been freed of its subject-oriented task, is now available to fulfill this new job. The specifier of IP slot, then, is an A'-position that acts as a landing site for quantificational phrases that appear in an overt operator-variable configuration.

The VOS hypothesis also provides an account of the ungrammaticality of WhSV order in wh-questions, since WhSV order is ruled out by the same fact that rules WhOV out, i.e. because there is no structural slot available between the adjacent wh-word and verbal string. Since the verbal string appears in I and the wh-word appears in the specifier of IP position, nothing can intervene between the two. Assuming that wh-phrases appear in the specifier of IP position, however, raises a further question. The traditional structural trigger of wh-movement is the need for spec-head agreement between a [+wh] C and the wh-phrase. In order to materialize this agreement the wh-phrase must move to the specifier of C to be in a spec-head configuration with the licensing [+wh] complementizer. If, as this paper suggests, wh-phrases move to the specifier of IP position instead, the structural trigger for wh-movement cannot be the same. Rizzi (1991), however, proposes for entirely independent reasons, that, at least in matrix wh-questions, [+wh] be a feature associated with I. If this proposal is on the right track, spec-head agreement between [+wh] and the wh-phrase can be satisfied between I and its specifier, instead of between C and its specifier. There is no need for wh-phrases to move any further.

Throughout the paper, a simple phrase structure, without multiple functional heads, has been

assumed for the sentence. Under such assumptions, the only specifier position below IP and above the verbal string, which in Catalan presumably moves to I⁰, is the specifier of IP slot. However, if a version of the split-inflection hypothesis is adopted, there is more than one projection below C. The facts, though, are still the same. On the one hand, under current assumptions the verbal string must climb up to the topmost functional head below C, call it Z, and the preverbal quantificational phrases at issue must still appear to its left. On the other hand, detachment is not adjunction to IP anymore, but adjunction to the topmost maximal projection below C, call it ZP, and it is ZP that lefthand quantificational phrases must be lower than. So these quantificational phrases, in this state of affairs, must appear between ZP and Z. There is only one nonadjunction slot there: the specifier of ZP.

This ZP could very well be Laka's (1991) ΣP. However, it is a ΣP that is quite different from the original one. Laka's is originally designed to serve as a host for preverbal negative quantifiers and is extended to incorporate focus-preposed focal constituents. Solà (1992:309), who also notices that *wh*-phrases in *wh*-questions appear below C, suggests further that ΣP can also act as a landing site for *wh*-phrases in *wh*-questions. This paper argues that the specifier of IP (or the specifier of ZP, whatever Z is) is a landing site for all quantificational operators, including *wh*-operators. This means preverbal negative quantifiers and *wh*-words but also the other types of [+operator] quantifiers discussed above. It does not include, however, focus-preposed focus constituents of the type of *UN AUTOMÒBIL* shown in (32):

- (32) UN AUTOMÒBIL s'ha comprat ei Jordi.
 a car self.buy-PST-3s the J.
 'A CAR Jordi bought himself.'

Contrary to current assumptions in the syntactic literature, here focus is not taken to be a quantificational element at all and is not put in the same class in which the operators discussed in this paper are found. In fact, the difference between focus-preposed focus constituents and the other operators is not only interpretive, but also syntactic. Vallduvf (1992) shows that

preposed *wh*-phrases and focus-preposed focus constituents are syntactically distinct despite the apparent similarity between the two. In sum, the position where preverbal [+operator] quantificational phrases are found in Catalan could be ΣP . However, the class of elements ΣP was designed to host overlaps only partially with the class of elements this paper argues it hosts.⁷

6. Conclusion

The widely-accepted VOS hypothesis, in spite of all its advantages, had as a puzzling consequence the fact that the specifier of IP slot was left empty and useless. This is changed, at least for the case of Catalan, once its quantifier-encoding task is taken into account.

The specifier of IP slot, or its equivalent in a split-inflection approach, then, is the position where, in Catalan, quantificational operators, including *wh*-words in *wh*-questions, appear. Movement into this position is obligatory in the case of *wh*-questions and optional in the case of other quantificational operator-variable structures. Furthermore, quantificational operators land in this A'-position in an exclusive manner. Taking the specifier of IP as the locus for these operators provides a role for this position, which is left unused if Catalan is VOS, and accounts for all the distributional facts discussed in the previous sections.

Catalan syntax makes it possible to overtly express quantificational operator-variable structures. *Wh*-operator-variable structures are known to be overtly manifested in many languages, including Catalan. Other quantificational operator-variable structures are not overtly manifested as commonly. All these quantificational structures, *wh*- and non-*wh*-, are thought to have a shared abstract representation. In Catalan, however, this shared representation is not abstract but rather explicit, and is schematically drawn in (33):

(33) [IP +op₁ ... t₁ ...]

⁷ The assumption that *wh*-elements and focal elements are interpretatively distinct runs counter to the popular view that *wh*-elements are foci. Taking *wh*-elements as foci is actually interpretatively and empirically unmotivated, as shown in several works (cf. Vallduví (1992) for references).

Surprisingly, though, this Catalan shared overt representation for quantificational operator-variable constructions is not the same representation that other languages putatively display at an abstract level. Abstract Quantifier Raising is traditionally analyzed as an adjunction to a phrasal projection (cf. May (1985)), while Catalan lefthand quantificational operators are clearly in a specifier position. While it is true that in Catalan only one quantificational operator may raise to the lefthand IP-internal slot, it is also true that sentences may have more than one quantifier and that they all have to raise at the appropriate level in order to guarantee the representation of different scope assignments. It is impossible to try to reconcile these facts here: far too many questions arise concerning the empirical facts around possible scope interactions between quantifiers that are overtly encoded as in (33) and those that are not, the configuration of LF in Catalan and the mapping between it and the surface, and the possible existence of representations like (33) in other languages.

Whatever the answers to these ambitious questions, the point of the paper is straightforward and simple: Catalan allows for an overt representation of quantificational operator-variable structures that meets the characteristics shown in (33). Wh-questions follow this structural pattern and so do, albeit optionally, other non-wh- quantificational constructions. All preverbal [+operator] quantifiers are part of an overt operator-variable configuration that uses the specifier of IP slot as the site of the operator. The existence of a homogeneous overt structural representation for all types of quantificational operator-variable constructions, both wh- and non-wh-, had, surprisingly, gone unnoticed so far.

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