

**Linguistic Perspectives
on the Romance Languages**

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Offprint

This is an offprint from:

William J. Ashby, Marianne Mithun,
Giorgio Perissinotto and Eduardo Raposo (eds)
Linguistic Perspectives on the Romance Languages
John Benjamins Publishing Co.
Amsterdam/Philadelphia
1993

(Published as Vol. 103 of the series
CURRENT ISSUES IN LINGUISTIC THEORY)
ISSN 0304-0763
ISBN 90 272 3605 4 (Eur.)/1-55619-557-5 (US)
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Catalan as VOS: Evidence from Information Packaging*

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1. Introduction

The traditional analysis of null-subject Romance languages as being SVO has been challenged in recent years by a number of studies that, on the basis of evidence from government relations or case assignment, propose an underlying VOS order instead (cf. Zagona 1982, Contreras 1986, Adams 1987, Bonet 1990, inter alia). Using evidence of a different sort from the domain of sentential information packaging (cf. Chafe 1976, Prince 1986, Lambrecht 1987) this paper argues that the VOS hypothesis is the correct one, at least for the case of Catalan.

The information-packaging role of verbal complements in Catalan is unambiguously encoded in the surface position of those complements in a one-to-one fashion. There are three possible information-packaging roles and there are three possible surface syntactic slots in which verbal complements may appear: left-detached, in situ, and right-detached. For subjects, however, if the SVO hypothesis is adopted, we obtain four possible syntactic slots: left-detached, preverbal (in situ), postverbal, and right-detached, and a mismatch arises between surface structural encoding and information-packaging role. But if the basic word order is VOS, we regain the isomorphy between informational interpretation and structural position, since, as will be shown, left-detached subjects and preverbal (in situ) subjects appear to be one and the same. Thus *all* arguments—subjects and complements—behave in the same way.

The paper is structured as follows. First, the information-packaging structure of the sentence and its mapping onto surface structure in Catalan is discussed. Second, we focus on the necessary distinction between postverbal subjects and right-detached subjects that parallels the distinction between complements in situ and right-detached complements. Finally, it is argued that all preverbal subjects are in fact left-detached subjects. The result is a consistent one-to-one mapping between information-packaging structure and surface configuration.

2. Background

2.1. Basic word order

As is well known, null-subject Romance languages like Catalan and Italian allow overt subjects to appear in two distinct clause-internal slots, a preverbal one and a postverbal one, as illustrated in (1):¹

- (1) a. *Ha trucat l'amo.*
 3s-perf-call the.boss
 'The boss called.'
 b. *L'amo ha trucat.*

It has traditionally been assumed that the underlying word order in these languages is SVO. This automatically turns the postverbal subject slot into a derived one: (1a) would be derived from (1b) via a subject-postposition rule (cf. e.g. Jaeggli 1982:142, Rizzi 1982:132, Burzio 1986).²

Recent research, however, points out that it is necessary to base-generate VOS order directly for a variety of reasons. For instance, Contreras (1986) suggests that the distribution of bare NP subjects in Spanish is explained by the ECP if this language is a VOS language. Adams' (1987) account of pro-drop requires that *pro* in head-initial, right-governing languages be generated postverbally. Finally, Bonet (1990), on the basis of some government and floating-quantifier facts, argues that preverbal subjects in Catalan are derived from their underlying postverbal position.

It is perhaps significant that these works arrive at the conclusion that the VOS hypothesis is the correct one quite independently. The evidence presented in this paper represents further independent support for the nonderived status of postverbal subjects.

2.2. Informational articulation

Information packaging, as defined by Chafe (1976), Prince (1986), and Vallduví (1990a), is a structuring of the information contained in a sentence according to the speaker's beliefs about the hearer's knowledge and attentional state.³ Global sentence interpretation includes both the logico-semantic interpretation of propositional content and the informational interpretation of the information-packaging structures in which this propositional content is delivered. Information-packaging interpretation must bleed syntactic structure, possibly mediated by an abstract level of representation, much in the same way logico-semantic interpre-

tation does, and therefore it must be represented at S-structure as well, where it interfaces PF and the reality of the utterance. Information packaging consists of a set of instructions to hearers about how to enter information into their knowledge-store. The purpose of information packaging is to gain efficiency and avoid redundancy in the updating of the data base (cf. Vallduví 1990a).

The sentence is informationally divided into a *focus* and a *ground*, which are defined as in (2):

- (2) Focus: What the hearer is instructed to enter into her/his knowledge-store.
 Ground: Elements that indicate where and how to enter the focus.

This partition is equivalent in empirical coverage to the focus-presupposition or focus/open-proposition division (cf. Chomsky 1971, Jackendoff 1972, Prince 1986, Rochemont 1986, Ward 1988, among others), the focus-topic articulation of modern Prague School linguistics (e.g. Sgall et al. 1986), and the OldInfo-NewInfo split of Välimaa-Blum (1988).

A given sentence may be focal in its entirety if no indication of where its content goes in the hearer's knowledge-store is needed (all-focus sentences). The ground, if there is one, is further subdivided into two elements. One, the *link*, which more or less corresponds to the sentence-initial topic or theme in Halliday (1967), Reinhart (1982), and Välimaa-Blum (1988), indicates under which address in the hearer's knowledge-store the focus must be entered. The other, the *tail*, indicates how the focus is entered under a given address. This may be represented as in (3),

- (3) sentence = { focus, ground }
 ground = { link, tail }

and may be illustrated with an example from English. In (4a) there is a link, *the boss*, and the focus, *hates broccoli*. This sentence corresponds to a prototypical topic-comment structure (cf. Gundel 1988). In (4b) there is a complex ground composed of a link as above and a tail, *broccoli*, while the focus is only the verb.⁴ The informational interpretation of these sentences, following the definitions above, is spelled out under them in (4):⁵

- (4) a. The boss [hates BROCCOLI.]
 b. The boss [HATES] broccoli.
 a. Under the address 'the boss' in your knowledge-store add that s/he hates broccoli.
 b. Under the address 'the boss' in your knowledge-store substitute

'hates' for *v* in 's/he *v* broccoli'
(which is already under that address).

A total of four possible information-packaging instructions may be construed with the three terminal information-packaging roles listed in (3). In the next section it is shown how Catalan verbal complements encode these three informational roles in an unambiguous way.

3. Verbal complements

The linear order of verbal complements in Catalan is invariable. The direct object must precede any oblique object or locative argument. The (b) sentences in (5) and (6) are ungrammatical:

- (5) a. *Vaig donar el ganivet a l'esmolet.*
1p-past-give the knife to the.knife-grinder
'I gave the knife to the knife-grinder.'
b. **Vaig donar a l'esmolet el ganivet.*
- (6) a. *Ficarem el ganivet al calaix.*
1p-fut-put the knife in.the drawer
'We'll put the knife in the drawer.'
b. **Ficarem al calaix el ganivet.*

But, even though no permutations in order among the complements are allowed within the clause, there are three structural positions in which they may appear: in situ, left-detached, and right-detached. This is illustrated for the direct object *el ganivet* 'the knife' in (7):

- (7) a. *Ficarem el ganivet al calaix.*
b. *El ganivet₁ el₁ ficarem t₁ al calaix.*
c. *El₁ ficarem t₁ al calaix, el ganivet₁.*

Sentence (7a) shows the complement in situ and (7b) and (7c) show the complement in a left-detached and a right-detached slot, respectively.

Left-detachment is a fronting of a phrase to a sentence-initial slot that triggers the appearance of a coindexed clitic attached to the verb. Here an adjunction-to-IP analysis of left-detachment will be adopted, based on the analysis proposed for topicalization in English by Baltin (1982) and extended to Romance (Italian) left-detachment by Rochemont (1989). The adjunction-to-IP analysis allows us to give a parallel treatment to left- and right-detachment: while left-detachment is a lefthand adjunction to IP, right-detachment is a righthand adjunction to IP. This is illustrated in (8):

- (8) a. Left-detachment: [IP XP₁ [IP ... cl₁ ... t₁ ...]]
b. Right-detachment: [IP [IP ... cl₁ ... t₁ ...] XP₁]

Notice that right-detachment also triggers the appearance of a coindexed clitic in the core clause. Since Catalan clitics appear when the complement slot they are coindexed with is empty at the surface, this behavior is expected. While the cooccurrence of a clitic and an overt argument in situ is illicit, as in (9), the presence of the clitic is mandatory when an internal argument is detached, as shown in (10):⁶

- (9) a. **El₁ ficarem el ganivet₁ al calaix.*
obj
b. **Hi₁ ficarem el ganivet al calaix₁.*
loc
- (10) a. *El ganivet₁ el₁/(∅) ficarem t₁ al calaix.*
b. *El₁/(∅) ficarem t₁ al calaix, el ganivet₁.*

Sentences like (10b), for instance, show that the only way to get an object to appear to the right of the locative is by right-detaching it.⁷

The obligatory clitic is not the only sign that indicates the clause-external status of right-detached phrases. Prosody is equally telling. Intonational prominence in Catalan is necessarily clause-final (cf. Vallduví 1990b), so the prosodic shifts in (11b) and (11c) are out:

- (11) a. *Ficarem el ganivet al calaix.*
b. **Ficarem el ganivet al calaix.*
c. **Ficarem el ganivet al calaix.*

As expected, when complements are right-detached they appear to the right of the default clause-final prominence. This was shown for the object above in (7), and is shown for the locative and for both complements in (12):

- (12) a. *Hi₁/(∅) ficarem el ganivet t₂ al calaix₁.*
b. *L₁'hi₂/(∅) ficarem t₁ t₂ al calaix₂ el ganivet₁.*

In sum, both the presence of a coindexed clitic and the placing of intonational prominence to its left identify a verbal complement as right-detached.

In Vallduví (1990a) it is pointed out that both right- and left-detached phrases encode the informational ground of the sentence, while complements in situ, which remain within the scope of intonational prominence, are interpreted as focal. (It is well known that intonational prominence is, crosslinguistically, a structural encoder of focushood.) For instance, while (13b), with the locative in

situ, is a felicitous response to the question in (13a), the paraphrases in (13c) and (13d), with the locative right- and left-detached, respectively, are not:

- (13) a. *On són, els ganivets?*
 'Where're the knives?'
 b. *Els₁ vaig ficar t₁ al calaix.*
 'I put them in the drawer.'
 c. *#Els₁ hi₂ vaig ficar t₁ t₂ al calaix₂.*
 d. *#Al calaix₂ els₁ hi₁ vaig ficar t₁ t₂*

The directionality of the detachment depends on the informational status of the ground elements in the sentence. If the phrase is to be interpreted as a link, it is detached to the left. If it is not (if it is a tail) it is detached to the right. The difference between the two information-packaging roles within the ground becomes evident in contrastive contexts that force a link interpretation for the phrase in question. This is shown in (14):

- (14) a. *On són, els coberts?*
 'Where's the flatware?'
Les forquilles són a l'armari, però...
 'The forks are in the cupboard, but...'
 b. *...els ganivets₁ els₁ vaig ficar t₁ al calaix.*
 c. *...#els₁ vaig ficar t₁ al calaix, els ganivets₁.*
 '...the knives I put in the drawer.'

It is clear, then, that the three surface structural slots in which verbal complements may appear correspond in a one-to-one fashion to the three information-packaging roles the phrases in a given sentence may perform: if they are (part of) the focus they remain in situ, if they are links they left-adjoin to IP, and if they are tails they right-adjoin to IP. In what follows, it will be shown that subjects, despite initial potential objections, behave in the same way.

4. Postverbal subjects

The distinction between postverbal subjects and right-detached subjects is not always carefully drawn. Under the traditional view, both are found in derived positions, but these positions are different. Postverbal subjects are either VP-internal or adjoined to VP (or in a righthand spec of IP, in some approaches), while right-detached subjects are clause-external. Evidence for the distinction between these two types of postverbal subjects is not available from the clitic facts, since

Catalan is a null-subject language with no subject clitics, but there are nevertheless several empirical points that warrant it.

First, there is the particular prosodic contour that was shown above to be associated with right-detachment structures. True postverbal subjects are found within the scope of intonational prominence, as in (15a), but right-detached subjects, which are clause-external, are placed to the right of prominence, as in (15b). This distribution parallels the distribution of in-situ and right-detached complements, shown in (16), the only difference between the two right-detachments being the expected absence of a clitic in the case of the subject (the trace in (15b) is the posited base position of the subject):

- (15) a. *Ahír va fer el cafè l'Anna.*
 yest. 3s-pst-make the coffee the Anna
 'Yesterday Anna made the coffee.'
 b. *Ahír va fer el cafè t_p l'Anna₁.*
 (16) a. *Ficarem el ganivet al calaix.*
 b. *Hi₁ ficarem el ganivet t_p al calaix₁.*

Second, while true postverbal subjects must appear to the left of VP adjuncts, right detached subjects must appear to their right, as shown in (17). Notice that, if the subject appears to the right of the adjunct, it cannot be prominent, as shown in the contrast between (b) and (c). Again, this is parallel to the behavior of postverbal complements, illustrated in (18), which along with the prosodic and string order effects show the expected clitic pattern:

- (17) a. *Ha trucat l'amo a les vuit.*
 3s-perf-call the.boss at the eight
 'The boss called at eight.'
 b. *Ha trucat t₁ a les vuit, l'amo₁.*
 c. **Ha trucat a les vuit l'amo.*
 (18) a. *He trucat l'amo a les vuit.*
 1s-perf-call the.boss at the eight
 'I called the boss at eight.'
 b. *(*Ø)/L₁'he trucat t₁ a les vuit, l'amo₁.*
 c. **He trucat a les vuit l'amo.*

Finally, there is the placement of clause-peripheral particles like the vocative *xec* 'man' and the tag *oi* 'right?'. These particles may not appear between phrases within the core clause, as indicated in (19), but can nevertheless show up to the left of right-detached elements, as shown in (20). Again, this is expected if right-detached phrases, including subjects, are in fact clause-external.

- (19) a. *Fica (*xec) el ganivet (*xec) al calaix, xec.*
 'Put the knife in the drawer, man.'
 b. *Ahir va fer (*xec) el cafè (*xec) l'Anna, xec.*
 'Yesterday Anna made the coffee, man.'
 c. *Ficarem (*oi) el ganivet (*oi) al calaix, oi?*
 'We'll put the knife in the drawer, right?'
 d. *Ahir va fer (*oi) el cafè (*oi) l'Anna, oi?*
 'Yesterday Anna made the coffee, right?'
- (20) a. *Fica-hi₁ el ganivet t₁, xec, al calaix₁.*
 b. *Ahir va fer el cafè, xec, l'Anna.*
 c. *Hi₁ ficarem el ganivet t₁, oi, al calaix₁?*
 d. *Ahir va fer el cafè, oi, l'Anna?*

Once the necessary distinction between true postverbal subjects and right-detached subjects on structural grounds is taken into account, it becomes clear that the former are (part of) the focus while the latter are tails within the ground, and, therefore, not collapsible on informational grounds either. For example, sentence (21b) is a felicitous reply to (21a), but (21c) is an infelicitous one, since the subject *l'amo* 'the boss' is inappropriately treated as a tail:

- (21) a. *Que hi ha cap missatge, per a mi?*
 'Are there any messages for me?'
 b. *Sí. Ha trucat l'amo.*
 'The boss called.'
 c. *Sí. #Ha trucat t₁, l'amo₁.*

The conclusion is that true postverbal subjects, which are clause-internal and therefore lie within the scope of prominence, receive the same informational interpretation that complements in situ have (this is not surprising, since complements in situ are also clause-internal and lie within the scope of prominence) and that right-detached subjects receive the same interpretation that right-detached complements have.

The informational parallelism between postverbal subjects and complements in situ would have a perfect structural match if it were assumed that postverbal subjects are in-situ arguments. In other words, if postverbal subjects are nonderived, the generalization in (22) holds:⁸

- (22) *All arguments, internal and external, remain in situ iff they are focal, and undergo detachment iff they are part of the ground.*

Obviously, it is impossible to capture this generalization if the SVO hypothesis is maintained, but it follows automatically if VOS basic word order is assumed. This suggests that Catalan is, in fact, a VOS language.

5. Preverbal subjects

There is one subject slot, though, which is still informationally unaccounted for: the clause-internal preverbal slot. If this preverbal slot and the left-adjunction slot can be merged into a single one, the asymmetry between subjects and complements will disappear entirely, since the one-to-one mapping between surface position and informational role can be extended to subjects. That preverbal subjects are clause-external has already been argued for by, among others, Contreras (1986) and Fernández-Soriano (1989) for Spanish, and by Rigau (1988) for overt pronominal subjects in Catalan.

Sentences (23) to (26) constitute evidence, some of it used by these authors and elsewhere, that shows preverbal subjects 'behave' like left-detached phrases. First, subjects from embedded clauses, as is well known, may be left-adjoined to the matrix sentential node, confirming that left-detachment of subjects is an available option:

- (23) *L'amo₁ crec que ha trucat t₁.*
 the.boss 1s-believe that 3s-perf-call
 'The boss I think has called.'

Second, subjects and left-detached complements may appear in any linear order with absolute freedom, as in (24), which is reminiscent of the freedom in linear order between detached complements (25):

- (24) a. *L'Anna₁ el cafè₂ el₂ va fer t₂ t₁ ahir.*
 b. *El cafè₂ l'Anna₁ el₂ va fer t₂ t₁ ahir.*
 'The coffee Anna made yesterday.'
- (25) a. *El ganivet₁ al calaix₂ l₁'hi₂ ficarem t₁ t₂ en acabat.*
 b. *Al calaix₂ el ganivet₁ l₁'hi₂ ficarem t₁ t₂ en acabat.*
 later
 'The knife in the drawer we'll put later.'

And third, the clause-peripheral vocative *xec* may be placed between the subject and the verb, as illustrated in (26):

- (26) a. *L'amo₁, xec, ha trucat t₁ tres cops.*
 three times
 'The boss's called three times, man.'

- b. *L'Anna_i, xec, va fer el cafè t_i ahir.*
 'Anna made the coffee yesterday, man.'

This is unexpected unless there is an IP node to which the particle can attach between the subject and the verb. Therefore, many subjects must be clause-external.

Although these facts do not constitute conclusive evidence—they show that preverbal subjects are sometimes left-detached subjects, but not that they must always be left-detached subjects—, there are, fortunately, two additional observations about the distribution of subjects that leave less room for doubt. First, preverbal subjects in Catalan are always interpreted as links. It has long been noticed that preverbal subjects display the aboutness feeling typical of fronted 'topic' verbal complements, as argued by van Oosten (1987), for instance, and, furthermore, they also possess the existential force characteristic of 'topics' (or links, in our terms) (cf. e.g. Horn 1989). This existential force is crucially absent from postverbal subjects and complements. In other words, while (27a) appears to presuppose the existence of the king of France, (27b) does not:

- (27) a. *El rei de França_i encara no ha trucat t_i.*
 b. *Encara no ha trucat el rei de França.*
 still no 3s-perf-call the king of France
 'The king of France hasn't called yet.'

If link interpretation is to be associated with a particular structural position across the board, and preverbal subjects are always interpreted as links, it follows that they should always be located in the same slot where we find nonsubject links.⁹

The second observation that strongly endorses this analysis is that preverbal subjects, like left-detached complements, must appear to the left of fronted wh-phrases and the yes/no question morpheme, as shown in (28), (28a-b) for a subject and (28c-d) for a complement:

- (28) a. *L'amo_i que ha trucat t_i?*
 the.boss Q 3s-perf-call
 'Has the boss called?'
- b. **Que l'amo ha trucat?*
- c. *L'amo_i que l_i'has trucat t_i pro?*
 obj.2s-perf-call
 'Have you called the boss?'
- d. **Que l'amo_i l_i'has trucat t_i pro?*

The traditional account for this distribution is in terms of a subject-verb inversion triggered by the wh-environment (cf. Picallo 1984 and Bonet & Solà 1986 for

Catalan, and Torrego 1984 for Spanish), but the application of such a rule would yield a linear order verb-subject-complements which is non-existent in Catalan, as illustrated in (29):¹⁰

- (29) a. **Quan va fer l'Anna el cafè?*
 'When did Anna make the coffee?'
- b. **Què posarem nosaltres al calaix?*
 'What will we put in the drawer?'

In fact, in interrogative sentences the subject most preferably appears in a left- or right-detached slot, but if it need appear within the scope of focus it does so at the end of the clause, that is, in its in-situ position:

- (30) a. *L'Anna_i quan va fer el cafè t_i?*
 b. *Quan va fer el cafè t_i l'Anna_i?*
 c. *Quan va fer el cafè l'Anna?*

The fact that subjects are found to the left of wh-words may force us to change the analysis of left-detachment from adjunction to IP to adjunction to CP or it may not, depending on what the landing site of wh-movement is assumed to be in wh-question formation.¹¹ But even if detachments had to be reanalyzed as adjunctions to CP, the result is that we have enough grounds to analyze all preverbal subjects as left-detached subjects. That is, preverbal subjects are always found in a derived position, namely the position in which we find left-detached complements as well. Subjects, then, can be equated to verbal complements in their structural encoding of informational notions. Subjects remain in situ in their postverbal base-generated slot if their informational role is to be (part of) the focus and they are detached if they are part of the ground. If they are to perform the role of link within the ground, the detachment is a leftward one, otherwise it is a rightward one. This is exactly the behavior observed in nonsubject arguments. Therefore all arguments behave in the same way. Adopting the VOS hypothesis, the mapping between information structure and surface configuration is now consistent across the board.

5.1 A problematic case

There remains one type of preverbal subject that cannot be reduced to left-detachment. It is the case of universal quantifier subjects, specifically negative quantificational subjects as in (31):

- (31) *Ningú* (no) *ha trucat.*
 no one no 3s-perf-call
 'No one has called.'

Nothing may occur between the subject *ningú* 'no one' and the verb (neither other detached phrases, nor clause-peripheral particles, nor wh-words), except for the optional negative operator *no*. This is shown in (32), where a left-detached object cannot appear to the right of *ningú*:

- (32) a. *Els dolents₁ ningú (no) els₁ vol t₁.*
 the bad-ones-m. no one no obj 3s-want
 'The bad ones no one wants.'
 b. **Ningú els dolents₁ (no) els₁ vol t₁.*

However, nonsubject left-detached negative universal quantifiers share the same characteristics: they do not allow any intervening material to their right either, as shown by (33), where the linear order of the two left-detached complements is not free, in stark contrast with the behavior of other left-detachments:

- (33) a. *El sou₁ a ningú₂ (no) l₁'hi₂ regalen t₁ t₂ pro.*
 the pay to no one 3p-give-for-free
 'The pay they don't give to anyone for free.'
 b. **A ningú₂ el sou₁ (no) l₁'hi₂ regalen t₁ t₂ pro.*

Therefore, it seems that the exceptionality of the subject in (31) is not due to its status as a subject but to its status as a particular kind of quantifier. The position of these negative quantifiers, both subject and nonsubject, must be determined independently.¹² Whatever the answer, it is safe to conclude that examples like (31) pose no immediate threat to the merger of the preverbal and left-detached subject slots.

6. Conclusion

It must be pointed out that the arguments used for Catalan seem to be applicable also to Italian, which, as shown by Antinucci & Cinque (1977) and Calabrese (1990), presents the same characteristics with respect to word order and detachment (*emarginazione* in Italian).¹³ The extension of these conclusions to Spanish and Romanian is less direct in that more surface slots are allowed for the subject in those languages, requiring additional study.

Recent research on the syntax of null-subject Romance languages has been offering bits and pieces of evidence that favor the hypothesis that these languages are underlyingly VOS. This paper has added some facts to the stock of evidence

that militates against the traditional SVO hypothesis. The SVO hypothesis puts subjects at odds with the regular informational behavior of other arguments in that, in contrast to the striking consistency in the case of complements, it does not allow for a straightforward mapping between surface position of subjects and their information-packaging role. The VOS basic word order, however, allows us to maintain a one-to-one mapping between surface subject slot and informational role, thus providing us with the means to generalize the informational marking of complements to all arguments without further stipulation. This conclusion adds to the already existing evidence and constitutes important support for the VOS hypothesis.

Notes

- * This paper evolved from a short discussion of the facts in Vallduví (1990a:Ch. 5). I am indebted to several people at the University of Pennsylvania and the University of Southern California and several members of the audience during the oral presentation of this paper for insightful comments and suggestions. All errors and shortcomings remain my responsibility.
1. Romanian and Spanish allow subjects to appear in more than two slots, since they may surface in more than one postverbal position, e.g. between the verb and its complements or at the end of the verb-complement string.
 2. See Shlonsky (1989) for an analysis where postverbal subjects are base-generated but where there is also a preverbal subject slot available for postverbal subjects to move to.
 3. The contents of this introductory subsection are adapted from Vallduví (1990b).
 4. Link-focus constructions are also equivalent to predicate focus sentences in Lambrecht (1987) and to categorical judgments in Kuroda (1972) and Sasse (1987). Link-focus-tail constructions are sometimes called 'narrow' or 'constituent' focus sentences or variable-containing constructions (Prince 1986). All-focus sentences correspond to Kuno's (1972) neutral descriptions, Schmerling's (1976) news sentences, Kuroda's and Sasse's thetic judgments, and Lambrecht's sentential focus constructions.
 5. Bold letters signal throughout the paper the lexical item within the focus that contains intonational prominence. The brackets ([]) in (4) enclose the entire focus of the sentence.
 6. There are two well-known exceptions to the ban on clitic doubling: the optional presence of clitics along with indirect objects and the mandatory presence of clitics with complement strong pronominal forms.
 7. Heavy-NP shift is an available option in Catalan for moving 'heavy' phrases to the end of the clause, thus being another source of locative-object string order. This syntactic operation works in Catalan just as it does in English and does not apply to 'nonheavy' NPs.
 8. This generalization abstracts away from logico-semantically motivated movements like wh-question formation. Also, it is worth mentioning that the so-called 'focus-preposing' or 'focus-movement' construction is not a counterexample to this generalization for the case of Catalan, as shown in Vallduví (1990a:Ch. 5).
 9. That preverbal subjects are always in a clause-external link position is further supported by the distribution of subjects in embedded sentences. As is well known, left-detachment of complements, although perfectly licit, is much less frequent in embedded sentences. Significantly, postverbal subjects occur more freely and frequently in embedded sentences as well.

If preverbal subjects are analyzed as left-detached arguments, this ceases to be a coincidence, since the informational factors that make links less needed in embedded contexts should apply to both subjects and nonsubjects to the same extent.

10. Some dialects, e.g. Southwestern Catalan, allow this linear order, behaving like Spanish in this respect.
11. The traditional landing site for wh-words is Spec of CP. However, Campos (1986) and Eguzkitza (1987) argue that in Spanish wh-words land in an IP-internal adjunction slot. Bonet (1990) and Vallduví (1990a) suggest that at least in the case of Catalan this landing site is Spec of IP (available now if all subjects are left-detached).
12. Their position, given that they are quantificational, could be the same position in which we find wh-phrases, if an IP-internal landing site approach for these phrases is adopted. Or, alternatively, they may be located in a different phrasal projection, Sigma Phrase, as argued by Laka (1991).
13. The only difference, perhaps, is that the presence of a clitic coindexed with a right-detached complement is sometimes optional in Italian, contrasting with its obligatoriness in Catalan.

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