

ON SPANISH COMPARATIVE SUBDELETION CONSTRUCTIONS*

Abstract. In this paper I explore the two strategies (i.e. “Inversion” and “Obligatory Gapping”) allowed in Spanish to form comparative subdeletion constructions (cf. Knowles 1984, Price 1990 and Rivero 1981). I show that the two strategies are related and derive from the same source. That is, the NP containing the quantity term must undergo overt movement to check a strong focus feature in the “Inversion Strategy”. If the feature is not checked, the derivation can still be rescued by deleting the strong feature in PF. Once the strong feature is erased from the derivation, the resulting grammatical sentence constitutes an instance of the “Obligatory Gapping Strategy”.

1. Introduction

In this paper I examine the curious behavior exhibited by Comparative Subdeletion constructions in Spanish. On the surface, one could claim that Spanish does not allow Comparative Subdeletion constructions (Snyder 1995). As I will show, this claim can be easily falsified. The correct generalization emerging from the data is the following: Spanish does not allow Comparative Subdeletion in the same way English does (Knowles 1984, Price 1990 and Rivero 1981). However, Spanish allows Comparative Subdeletion under the two following circumstances: obligatory gapping of the verb (i.e. the “Obligatory Gapping Strategy”) and word order alteration of the elements in the comparative clause (i.e. the “Inversion Strategy”).

I will capture the Spanish data by appealing to the idea that there is a strong focus feature requirement in the “Inversion Strategy”. Based on this, I will claim that the NP

containing the quantity term must undergo overt movement to check a strong focus feature. If the feature is not checked, the derivation can still be rescued by deleting the strong feature in PF. Once the strong feature is erased from the derivation, the emerging sentence is grammatical. My analysis follows Lasnik's (1995) analysis of pseudogapping in which the derivation can be salvaged either by pied-piping or by deletion of the offending strong feature.

I organize the paper as follows. First, I introduce the data and some background assumptions regarding Comparative Subdeletion. Second, I focus on the "Inversion Strategy". The main finding is that the object raises overtly to a focus position with the verb in the head of that very same projection. This result is quite interesting given that the verb doesn't raise that high in declarative sentences. Third, I discuss the "Obligatory Gapping Strategy". As it will become clear below, this strategy involves a deletion process which serves to hide an offending strong focus feature. Fourth, I show that my analysis can be extended to Comparative Deletion structures. Finally, I draw the main conclusions of the paper.

2. Comparative Subdeletion: General assumptions

Bresnan (1972) gave the name 'Comparative Subdeletion' to the type of structure represented in (1):

- (1) Mary read more books than John read magazines.

(1) roughly means “the number of books that Mary read is larger than the number of magazines that John read”. According to Bresnan’s analysis, the underlying representation of (1) contains a variable ranging over degrees or quantities, as shown in (2):

(2) Mary read more books than John read [x-many] magazines.

The ungrammaticality of a sentence such as (3) is usually taken as evidence for the existence of an empty quantifier in the subcomparative clause. Bresnan (1975) argues that the impossibility of having an overt quantifier in (3) supports the idea that there is indeed an empty category in examples such as (2).

(3) *Mary read more books than John read (two/many/ a few) magazines.

Note that the variable in (2) gets deleted under identity with material in the main clause, as in (4). The parallelism between ‘more’ and ‘x-many’ might not be obvious at first sight. The underlying assumption here is that ‘more’ is decomposed into ‘er many’. Note that the only difference between ‘er many’ and ‘x many’ is that the comparative morpheme has been substituted for a variable ranging over quantities in the subcomparative clause.

(4) Mary read more books than John read [~~x-many~~] magazines.

Later work, such as Bresnan (1975) and Chomsky (1977), observed that comparatives share several characteristics with wh-movement (see also Corver 1990, den Besten 1978, Grimshaw 1987, Larson 1988, among others). To be more precise, subcomparatives exhibit island effects. As the data in (5) show, subcomparatives obey the Complex NP Constraint. (6) and (7) contain violations of the Sentential Subject Constraint and the Coordinate Structure Constraint, respectively (all the data come from Bresnan 1975):

- (5) a. It has done no less harm than you say it has done good.
b. *It has done no less harm than you have the opinion that it has done good.
- (6) a. You have as many reasons for leaving him as it's likely that he has for leaving you.
b. *You have as many reasons for leaving him as that he has for leaving you is likely.
- (7) a. *Dean drank more booze than Frank ate a lot of Wheaties and Sammy drank milk.
b. *Wilt is taller than Bill is so strong and wide.

Based on paradigms similar to the ones above, Chomsky concludes that the variable in (4) should be identified with the trace of a null Operator. This null Operator is extracted from the NP and moves to Spec, CP. The resulting derivation is given in (8):¹

(8) Mary read more books than *Op_i* John read [*t_i* many] magazines.

Further support for this analysis comes from some dialects of American English (Bresnan 1972) where an overt wh-word is allowed in the same position the null Operator occupies in (8). Some examples are given below:

- (9) a. Mary read more books than what John read magazines.
b. She is more happy now than what she was sad before.

These very same facts are also observed in Afrikaans (example from den Besten 1978):

- (10) Jan koop meer boeke as wat Piet plate koop
John buys more books than what Pete records buys
'John buys more books than (what) Pete buys records'

Based on the evidence above, it is fair to conclude that subcomparatives behave like wh-constructions. Attractive though this analysis may be, it raises some questions. Note that under this analysis, subcomparatives involve violations of the Left Branch Constraint (LBC), which is disallowed in English (see (11)). Since subcomparative wh-movement is similar to (11), (11) may then be expected to be good under this analysis. Obviously, this is the wrong prediction. Whereas (8) is well-formed, (11) is not:

- (11) *How many did John read magazines?

Different solutions have been proposed to this problem. Just to give an example, Izvorski (1995) argues that the gap in the subcomparative clause is not a *wh*-trace with a null –modifier status. Following proposals by Grimshaw (1987), Izvorski adopts the idea that the null element in the subcomparative clause is a non-overt adverbial phrase like “to a certain extent/great extent”. Note that the movement of this non-overt adverbial phrase does not induce an LBC violation:

- (12) a. In what quantity did Mary eat apples?
b. To what extent was John surprised?

Other authors such as Kennedy and Merchant (2000) and Snyder, Wexler and Das (1995) suggest that LBC effects are exclusively a PF phenomenon. As Snyder et al. (1995: 588) put it, “one might, for example, argue that LBC effects are exclusively a PF phenomenon, tied to cliticization of a (null or overt) determiner onto its specifier; LBC effects would then not be expected in LF movement operations” (we will review Kennedy and Merchant’s proposal in more detail in section 6.1.2). Furthermore, note that languages that do not allow left-branch extraction in all relevant cases are capable of allowing it exceptionally in some contexts. As pointed out to me by an anonymous reviewer, French does not allow left-branch extraction except for one context (‘*combien*’-extraction, see (13) from Snyder 1995).²

- (13) *Combien_i Jean a-t-il lu t_i de revues?*
how-many John has-he read t of magazines
‘How many magazines did John read?’

Regardless of the exact analysis to be adopted, there seem to be ways out of the LBC effect problem (if it exists after all). For the purposes of this paper, I will therefore adopt structure (8) when analyzing comparative subdeletion constructions in Spanish.

3. Subcomparatives of quantity according to Snyder (1995)

In his study of the syntax of quantity and degree across languages, Snyder (1995) examines whether languages allow bare numerals/measure phrases, LBC effects and subcomparatives (of quantity and degree). If we focus on subcomparatives of quantity ((1)), we notice that there is cross-linguistic variation: some languages allow the construction whereas other languages don't. In his survey of twelve languages, Snyder finds that Japanese, Khmer, Hungarian, German and Albanian behave like English in allowing comparative subdeletion constructions. In contrast, French, Russian, Spanish, Italian, Serbo-Croatian and Mandarin disallow the construction. Some representative examples are provided below:

(14) Kira mien siawp'ow jran jieng Aroy mien C. D. (Khmer)

Kira have book many/more than Aroy has C.D's

'Kira has more books than Aroy has C.D's'

(15) Eva lexon më shumë revista se c'lexon Beni libra (Albanian)

Eva reads more magazines than what reads Ben books

'Eva reads more magazines than (what) Ben reads books'

(16) Marie a lu plus *(de) livres que Jean a lu *(de) revues (French)

Mary has read more (of) books than John has read (of) magazines

‘Mary has read more books than John has read magazines’

(17) *Maria ha letto più libri che Gianni ha letto riviste (Italian)

Mary has read more books than John has read magazines

‘Mary has read more books than John has read magazines’

4. Comparative Subdeletion Constructions in Spanish

4.1 The data

As mentioned in the previous section, Spanish belongs to the class of languages which disallow comparative subdeletion constructions. Snyder gives the following ungrammatical example to illustrate this point:

(18) *María leyó más libros que Juan leyó revistas.

Mary read more books than John read magazines

‘Mary read more books than John read magazines’

The interesting thing about Spanish is that (18) becomes fully grammatical once the verb ‘leyó’ (read) is deleted from the subcomparative clause (Price 1990). The grammatical status of (19) provides empirical evidence for this claim:

(19) María leyó más libros que Juan revistas.

Mary read more books than John magazines

‘Mary read more books than John (read) magazines’

I will call the structure in (19), that is, a structure where the verb undergoes gapping, the “Obligatory Gapping Strategy”. Interestingly, Spanish is not the only language where obligatory gapping of the verb is required in order to form a Comparative Subdeletion construction. According to Price (1990), Andrea Calabrese (p.c.) and Eva Bar-Shalom (p.c.), Galician, Portuguese, Italian and Hungarian behave in the same way as Spanish. Some relevant examples are provided below.³

(20) a. *Maria ha letto più libri che Gianni ha letto riviste

Mary has read more books than John has read magazines

‘Mary has read more books than John has read magazines’

b. Maria ha letto più libri che Gianni riviste

Mary has read more books than John magazines

‘Mary has read more books than John (read) magazines’

(Italian (Andrea Calabrese, p.c.))

(21) a. *János több könyvet olvasott mint Maria újságot olvasott

John more book-acc read than Mary newspaper-acc read

‘John read more books than Mary read newspapers’

- b. János több könyvet olvasott mint Maria újságot
Janos more book-acc read than Mary newspaper-acc
'John read more books than Mary newspapers'

(Hungarian (Eva Bar-Shalom, p.c.))

- (22) a. *Ama a seu pai menos que ama a sua mãe
loves to his father less than loves to his mother
'He loves his father less than he loves his mother'

- b. Ama a seu pai menos que a sua mãe
loves to his father less than to his mother
'He loves his father less than his mother'

(Portuguese (Price, 1990))

- (23) a. *Esta nena é menos grande ca é a túa
this girl is less big that is the yours
'This girl is smaller than yours is'

- b. Esta nena é menos grande ca a túa
this girl is less big than the yours
'This girl is smaller than yours'

(Galician (Price, 1990))

A question arises at this point: Could the Spanish sentence in (18) be ungrammatical because the verb 'leyó' (read) is repeated twice in the structure? Maybe there is a strong preference in Spanish to leave out as much material as possible from the comparative

clause. This wouldn't be surprising given that in subject contexts 'pro' must be used instead of an overt pronoun (if possible). In order to test this hypothesis, let us use a different verb in the subcomparative clause in (18). If the sentence turns out to be grammatical, one could argue that there is a ban in Spanish against having redundant material in Comparative Subdeletion. In contrast, if the resulting sentence is still ungrammatical, one should look for a deeper explanation in order to account for the facts. As (24) shows, a different verb does not make a difference. Even though we have two different verbs; namely, 'leyó' and 'compró', the sentence is still ungrammatical:

- (24) *María leyó más libros que Juan compró revistas
Mary read more books than John bought magazines
'Mary read more books than John bought magazines'

Perhaps comparing the number of books read to the number of magazines bought may seem a bit odd pragmatically speaking. Even if we construct a sentence which makes more pragmatic sense, the outcome is the same, as shown below:

- (25) *Mi padre vende más libros que mi madre compra discos
my father sells more books than my mother buys records
'My father sells more books than my mother buys records'

(Price 1990, ex. (86b))

Furthermore, the verb ‘leyó’ can appear in the comparative clause once the word order is modified, as in (26). This fact in itself clearly indicates that the same verb can appear both in the main clause and in the comparative clause. There is a requirement though: the word order in the comparative clause must change from Subject-Verb-Object ((18)) to Object-Verb-Subject ((26)). I will call this alternative way of forming Comparative Subdeletion the “Inversion Strategy”.⁴

- (26) María leyó más libros que revistas leyó Juan
Mary read more books than magazines read John
‘Mary read more books than John read magazines’

As expected, sentences with different verbs ((27)) also become grammatical once the word order is modified:

- (27) Mi padre vende más libros que discos compra mi madre
my father sells more books than records buys my mother
‘My father sells more books than my mother buys records’

(Price 1990, ex. (86a))

In summary, Spanish does not have the English Comparative Subdeletion construction. However, Spanish has two alternative ways to express the same meaning: the “Obligatory Verb Gapping Strategy” and the “Inversion Strategy”.

4.2 Previous analyses

There are no detailed analyses of the two subdeletion strategies discussed above. Knowles (1984) and Rivero (1981) mention the “Inversion Strategy” and they propose a movement analysis for it. To be more precise, both authors argue that the object and a quantifier-like expression move from some position inside the VP to Comp. The relevance of this proposal will become clear in section 6.1.2. As far as I know, the only work dealing with both strategies is Price (1990). According to her, the “Inversion Strategy” involves topicalization of the object in the subcomparative clause. More specifically, she establishes a parallelism between (27) and (28):

- (28) Dicen que enemigos, parece que tiene
(they) say that enemies, (it) seems that (he) has
‘They say that enemies, it seems that he has them’

In both cases, the objects ‘discos’ (records) and ‘enemigos’ (enemies) are undergoing topicalization.

Price argues that a verb can only occur in the subcomparative clause if there is a category in topic position which is not the verb itself. If this criterion is met, the verb falls outside the scope of the comparison proper. For example, in (27) ‘discos’ is topicalized in the subcomparative clause. For Price, this means that ‘discos’ is the element that is being compared. Since the verb is not topicalized in this example, it is not inside the comparison itself. For some reason, the verb can appear in these instances. In other words, Price finds

that the element in topic position can override the prohibition against the presence of a verb in the subcomparative clause.

This approach to the data does not seem to explain the phenomenon under discussion. Why does a topic suddenly allow the presence of a verb in the subcomparative clause? Why isn't a verb allowed if there is no topic in the sentence? Price's account seems to be restating the descriptive generalization discussed above without really providing an explanation for it. Furthermore, the object in the subcomparative clause in (27) does not seem to be undergoing a topicalization process. To begin with, a topic needs to be followed by a pause in Spanish.⁵ Moreover, subject-verb inversion is not required. The data in (29) below support these two points. The behavior of the topicalization process is clearly different from the kind of movement taking place in (27). The object 'discos' (records) in (27) cannot be separated with a pause from the rest of the sentence. As shown in (30) subject-verb inversion is required. The object 'discos' needs to be adjacent to the verb, in contrast to the topicalized object in (29).

(29) Dinero, todo el mundo necesita

money every the world needs

'Money, everyone needs'

(Zubizarreta 1999, (16a))

(30) *Mi padre vende más libros que discos mi madre compra

my father sells more books than records my mother buys

'My father sells more books than my mother buys records'

5. The “Inversion Strategy”

In this section I offer an analysis for (26), repeated as (31). In order to account for the pattern exhibited by this sentence, I will pay attention to the information structure of the sentence, as well as the position each of the elements occupy in the subcomparative clause. The basic idea to be explored is that the object in the subcomparative clause undergoes focus movement with the verb landing in the head of Foc. This is an important finding given that the verb doesn't move so high in declarative clauses.

- (31) María leyó más libros que revistas leyó Juan
Mary read more books than magazines read John
'Mary read more books than John read magazines'

In section 5.1, I provide some background regarding verb movement. This will serve to compare the position where the verb lands in regular declaratives vs. subcomparative structures. Then, I concentrate on the movement of the object and the position of the subject.

5.1 On Verb Movement

Let us start with some basic background regarding verb movement in Spanish declarative clauses. It is well-known that verbs in French raise higher than English main verbs. Pollock (1989) offered the following paradigm to illustrate this difference:

- (32) a. Jean n'aime pas Marie
 John neg loves neg Mary
 'John doesn't love Mary'
- b. *Jean ne pas aime Marie
 John neg neg loves Mary
 'John doesn't love Mary'
- c. *John loves not Mary
- d. John doesn't love Mary

The paradigm above contains data with negation. There is a clear difference between English and French. Whereas the verb needs to precede the negative element 'pas' in French, the opposite is true in English. In this language the verb needs to appear after negation. This contrast has been interpreted as a difference in verb movement between the two languages. Verbs raise in French but they don't in English. Belletti (1990) shows that Italian also exhibits verb movement. The relevant data are given below:

- (33) a. Gianni non parla più
 John neg speaks any more
 'John does not speak any more'
- b. Maria non rideva ancora
 Mary neg laughed yet
 'Mary did not laugh yet'

- c. Lui non diceva mai la verità
 He neg said never the truth
 ‘He never told the truth’

Belletti establishes a parallelism between the French ‘pas’ and the negative polarity adverbs ‘più’, ‘ancora’ and ‘mai’. The French and the Italian data are identical in the sense that the verb needs to precede the negative element. Belletti, following Pollock, assumes that French ‘pas’ and Italian ‘più/ancora/mai’ are located in a position immediately to the right of AgrSP: NegP. Schematically, the syntactic positions of the relevant elements look as follows:

- (34) [_{AgrSP} NP ne/non V [_{NegP} pas/ più-ancora-mai [_{TP} ...

Based on the data in (33) and the schema in (34), Belletti concludes that the verb moves to the highest inflectional projection in Italian, namely, AgrS. This is so because ‘più-ancora-mai’ are located higher than TP and NegP and the verb precedes them in the tree. The only position left for the verb is AgrS.

It is standardly assumed that Spanish verbs also move overtly to the highest inflectional projection within the split IP. Ordóñez (1997), Suñer (1999) and Zubizarreta (1998) have already argued for this claim.

If we now apply Pollock’s and Belletti’s tests, one notices that Spanish behaves exactly like French and Italian. The Spanish counterparts of the Italian data in (33) are given in (35):

- (35) a. Juan no habla ya más/nunca más
 John neg speaks any more
 ‘John does not speak any more’
- b. María no se ha reído todavía
 Mary neg CL has laughed yet
 ‘Mary has not laughed yet’
- c. Él no dijo nunca la verdad
 he neg said never the truth
 ‘He never told the truth’

The paradigm above suggests that overt verb movement is also operative in Spanish. As the examples make clear, the verb needs to precede the negative adverbials ‘ya más/ nunca más’, ‘todavía’ and ‘nunca’ (since there is no reason to the contrary, I assume that the negative adverbials are located in the same position as the Italian ones). If we combine this observation with the schema in (34), we can reach the following conclusions: Spanish verbs move to AgrS.

In summary, in this section I have shown that Spanish behaves like French and Italian in having overt movement of the verb from V to AgrS. In section 5.3, I will offer an additional argument for V-to-AgrS movement based on Floating Quantifiers.⁶ The present argument will suffice for the purposes of the discussion in the next section.

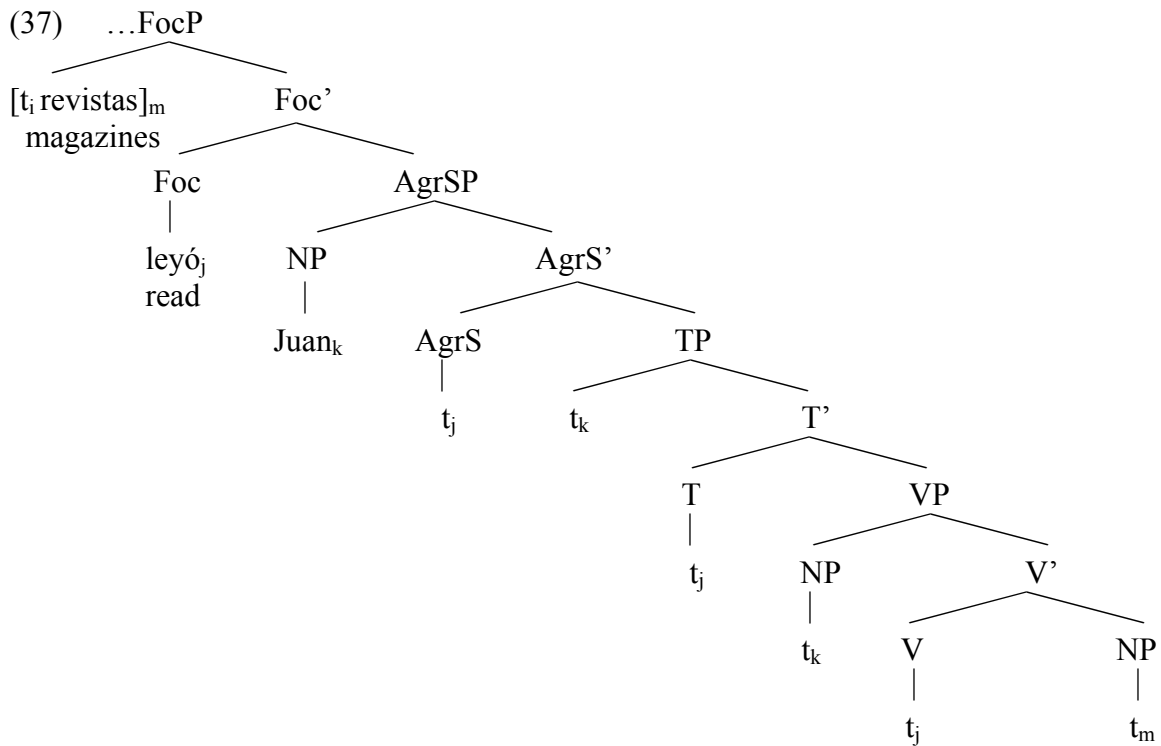
5.2 Focus and landing sites

Recall Price's claim that the object in the subcomparative clause undergoes topicalization. We presented evidence against this claim. The distribution of pauses and the word order of the elements in the subcomparative clause do not correspond to the characteristics exhibited by a topicalization process.

When pronouncing a subcomparative clause such as (31) above, the object 'revistas' (magazines) needs to be heavily stressed in order for the sentence to be grammatical. I am proposing that we are dealing here with focalization (i.e. contrastive focus). That this is an instance of focus movement is supported by word order facts. As noticed by Torrego (1984) (see also Campos and Zampini 1990, Hernanz and Brucart 1987, among many others), focalization structures share one fundamental property with wh-movement: subject-verb inversion is required. In the following example from Torrego, the DO 'un viaje a las Canarias' is undergoing focus movement. As the contrast between a. and b. shows, subject-verb inversion is obligatory in these cases (the DO is contrastively focused in both (36a) and (36b). I indicate contrastive focus in capital letters):

- (36) a. UN VIAJE A LAS CANARIAS hizo Antonio este verano.
a trip to the Canary-islands made Antonio this summer
'Antonio took A TRIP TO THE CANARY ISLANDS this summer'
- b. *UN VIAJE A LAS CANARIAS Antonio hizo este verano.
a trip to the Canary-islands Antonio made this summer
'Antonio took A TRIP TO THE CANARY ISLANDS this summer'

Based on these facts I claim that the object in the subcomparative clause is undergoing focus movement from object position to the specifier of a Focus Phrase.⁷ The derivation I propose for the sentence is given in (37). A justification of the landing sites immediately follows.



As (37) shows, the NP ‘ t_i revistas’ (recall that ‘ t_i ’ is a variable ranging over quantities) moves overtly from the complement position of the verb up to the Spec position of FocP (I am ignoring AgrOP, or vP for Chomsky 1995). I am assuming with Kennedy (2000) and Rivero (1981) that the whole NP ‘ t_i revistas’ moves overtly. The head of FocP, that is, Foc, has a strong focus feature. The NP has a matching feature which needs to be checked off. By overt movement of the NP ‘ t_i revistas’ to Spec FocP the strong feature is checked in a

spec-head relation. Note that the verb raises to Foc while the subject is located in Spec of AgrSP.⁸ In this way, we obtain the desired word order Object-Verb-Subject.

Several questions come to mind. Is it really the case that the verb moves to Foc or could the adjacency between the focused DO and the verb be a result of affix hopping of a null affix onto the verb? Let us illustrate this possibility with some Bulgarian examples. Bošković (2001) notes that a subject cannot intervene between a wh-word and a verb in Bulgarian regular wh-questions (see (38)). Curiously enough, the verb doesn't move to C in these contexts. To be more precise, Izvorski (1993) argues that under the assumption that I-to-C movement takes place in Bulgarian, (39b) should be acceptable, just like its English counterpart "what has Maria forgotten about?". Clearly, the prediction is not borne out. The ungrammaticality of (39b) indicates that the verb does not move to C in Bulgarian wh-questions (see Izvorski (1993) for more relevant arguments).

(38) a. *Kakvo Ana dade na Petko?

what Ana gave to Petko

'What did Ana give to Petko?'

b. Kakvo dade Ana na Petko?

what gave Ana to Petko

'What did Ana give to Petko?'

(39) a. Maria beše zavravila za sreštata

Maria was forgotten about the meeting

'Maria had forgotten about the meeting'

b.*Za kakvo beše Maria zavravila?

for what was Maria forgotten

‘About what had Maria forgotten?’

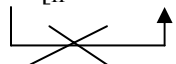
c. cf. Za kakvo beše zavravila Maria?

for what was forgotten Maria


‘About what had Maria forgotten?’

In order to account for this puzzling behavior, Bošković (2001: 245) proposes that “the null interrogative C in Bulgarian is a verbal affix which must merge with a verb under PF adjacency” (I am assuming with Bošković the affix hopping analysis of affixation (Chomsky 1957), in which an affix and its host must be linearly adjacent in PF. See in this respect Bobaljik (1995), Halle and Marantz (1993), Lasnik (1995) and Bošković (2001)). Let us illustrate this analysis below:

(40) [CP Kakvo C [IP Ana dade Ana na Petko]]



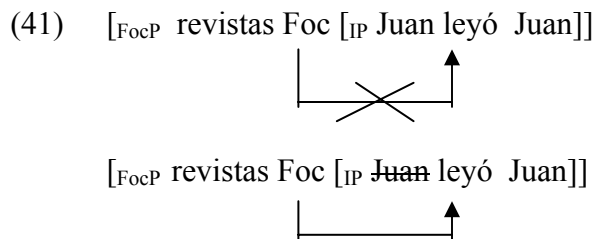
[CP Kakvo C [IP ~~Ana~~ dade Ana na Petko]]



As the schema above makes clear, the subject ‘Ana’ moves from Spec VP to Spec IP with the verb located in I. Note here that I am assuming the Copy Theory of movement (Chomsky 1995, 2000, 2001) in which an element that moves leaves a copy behind.⁹ If the subject (i.e. the highest copy) were to be pronounced in Spec IP, it would induce a PF violation since C, being a verbal affix, wouldn’t be able to attach to its host (the subject

would intervene between the two). The PF violation is salvaged by deletion of the highest copy of ‘Ana’ and the pronunciation of the lower copy of this element (Bobaljik 1995, Bošković 2001, 2002, Franks 1998, Hiramatsu 1997, 2000, Reglero 2004, 2005, Stjepanović 2003 etc.). Alternatively, the subject could remain in Spec VP in (40), which is an option in Bulgarian. Either way, C can merge with the verb under PF adjacency.

Maybe the analysis provided by Bošković for Bulgarian questions could also be extended to subcomparative constructions in Spanish. If this were possible, we would derive the adjacency between the DO and the verb without appealing to verb movement. The derivation for (31) would proceed as follows:



Following Bošković (2001) and Lambova (2001), we could propose that the null ‘Foc(us)’ head is an affix (like C in Bulgarian). This affix is a verbal PF affix which hence must be adjacent to a verbal element. Now, it is clear why the derivation fails if the highest copy of the subject gets pronounced: the affix fails to attach to the verb. If the highest copy of the subject is deleted the problem disappears. At this point no element intervenes between the affix and the verb. Hence, the affix can freely hop onto the verb.

We have discussed two possible ways to obtain the DO-verb adjacency in (31). Under the first possibility, the verb raises to Foc. Under the second possibility, the verb remains in I. The adjacency effect is obtained through affix hopping of a null verbal affix onto the

verb. In order for this to happen, a low copy of the subject needs to be pronounced. Otherwise, a PF violation would take place. Below, I provide evidence that the verb movement analysis is indeed the correct way to account for the data.

Let us continue our discussion by considering high adverbs. Cinque (1999) classifies the following Italian adverbs in this group: ‘francamente’ (frankly), ‘fortunatamente’ (fortunately), ‘probabilmente’ (probably), ‘ora’ (now) etc... Let us focus on one high adverb and discuss its meaning and distribution. Belletti notes that the Italian high adverb ‘probabilmente’ (probably) can appear in three main positions in the sentence. As shown in (42a), the adverb can appear in sentence-initial position. (42b) shows that ‘probabilmente’ can also appear in the position preceding the verb and following the subject. Finally, the adverb can be located in the sentence-final position provided the adverb is separated from the rest of the clause by a pause. In the three cases the adverb has a sentential reading that can be paraphrased as ‘It is probable that...’

- (42) a. Probabilmente Gianni telefonerà alle 5
probably John will-call at 5
‘Probably John will call at 5’
- b. Gianni probabilmente telefonerà alle 5
John probably will-call at 5
‘John probably will call at 5’
- c. Gianni telefonerà alle 5, probabilmente
John will-call at 5 probably
‘John will call at 5, probably’

The same facts obtain in Spanish, as shown below:

- (43) a. Probablemente Juan llamará a las 5
probably John will-call at the 5
'Probably John will call at 5'
- b. Juan probablemente llamará a las 5
John probably will-call at the 5
'John probably will call at 5'
- c. Juan llamará a las 5, probablemente
John will-call at the 5 probably
'John will call at 5, probably'

There is one more possibility for the placement of 'probably' in the sentence. Belletti mentions in her note 29 that 'probabilmente' can also be located between the verb and the object, as in (44):

- (44) In vita sua Gianni leggerà probabilmente molti racconti d'avventura
in life his John will-read probably many novels of-adventures
'In his life, John will read probably many adventure novels'

The crucial difference between (44) and (42) is that 'probabilmente' does not have a sentential reading in the former example. In other words, (44) cannot be paraphrased as 'It is probable that John will read many novels in his life'. The adverb in this particular

example only takes scope over the phrase immediately following it (i.e. the NP ‘*molti racconti d’avventura*’). For completeness, let me offer the Spanish example. ‘*Probablemente*’ does not have a sentential reading in this example either.

- (45) *En su vida Juan leerá probablemente muchas novelas de aventuras*
in his life John will-read probably many novels of adventures
‘In his life, John will read probably many adventure novels’

Before discussing the relevance of the different readings of ‘*probabilmente*’, let us explore what example (45) tells us about the position of the verb in declarative clauses. As I have just discussed, ‘*probabilmente*’ does not have a sentential reading in (45). An immediate question arises: Why is that the case? Recall from our discussion in section 5.1 that the verb is located in AgrS in Spanish. If ‘*probabilmente*’ cannot have a sentential reading when it appears after the verb, it means that the adverb is located even higher than the verb in these cases. I assume that the adverb is AgrSP-adjoined in (43a-b).¹⁰ Note that this accounts for the ungrammaticality of (45) under the sentential reading of the adverb. The adverb is AgrSP-adjoined, the verb is in AgrS but the former follows the latter in the structure. This is not a possible scenario. Note that ‘*probabilmente*’ has a sentential reading in (43a-b). In (43a), the adverb is AgrSP-adjoined, the subject is in Spec AgrSP and the verb is in AgrS. In (43b) the adverb and the verb are in the same positions. The subject is able to appear before the adverb indicating that the subject is higher than AgrSP. I will discuss the position of the subject in greater detail in section 6.1.1. It suffices to say at this point that the subject is in a topic position in (43b) (I will ignore (43c) here since

‘probablemente’ seems to be functioning just as an afterthought, as indicated by the obligatory pause).

After this brief digression, let us go back to our derivation (37). Recall that the proposal is that the object is in Spec FocP and the verb is located in the head of this projection. I suggested that it might not be necessary to assume this high position for the verb (for the alternative affix hopping analysis, I refer the reader to the discussion above). There is evidence, however, that the verb is located higher than in the declarative sentence. To construct the relevant test, I need to find a sentential adverb which cannot appear in a position after the verb in a declarative sentence but which can appear in that very same position in the subcomparative clause in (31). If this state of affairs is found, it would imply that the verb moves higher in the subcomparative clause than in a regular declarative. That is, the verb would be located in AgrS in the declarative sentence but higher than AgrS in the subcomparative clause.

(45) above and the paradigm below show that there is indeed a contrast between declaratives and subcomparatives. Similarly to (45), (46) is a well-formed sentence and crucially ‘probablemente’ does not have a sentential reading. It only has the irrelevant reading where the adverb takes scope over the NP. In contrast, ‘probablemente’ has a sentential reading in the subcomparative clause in (47). Admittedly, the judgment is subtle but the reading is there. This contrast between (45)/(46) and (47) indicates that the verb ‘leyó’ (read) is higher in (47) than in (45)/(46). Since the verb is located in AgrS in (45)/(46), it follows that the verb is higher than AgrS in (47) (recall that the adverb is AgrSP-adjoined). According to our tree in (37) the next head up is Foc.

(46) # María leyó probablemente 2 libros

Mary read probably 2 books

‘Mary read probably 2 books’

(47) María probablemente leyó más libros que revistas leyó probablemente Juan¹¹

Mary probably read more books than magazines read probably John

‘Mary probably read more books than John probably read magazines’

5.3 More on the subject position

So far I have shown that the verb moves to Foc, above SpecAgrSP (see evidence above from sentential adverbs). Throughout I have also assumed that the subject is located in Spec of AgrSP. However, there is some evidence that the subject may be located lower in the structure (it will become clear below why the evidence is not crystal clear). In order to test the position of the subject, I will use data with Floating Quantifiers. I assume Sportiche’s (1988) analysis of these facts. The basic idea is that the presence of a Floating Quantifier signals the presence of an NP-trace next to it. This is also known as the stranding analysis of Floating Quantifiers. To illustrate, consider the example below. As the structure makes clear, the NP ‘the students’ was in the position following ‘all’ at some point in the derivation, forming a constituent with it. Then, it moved to the matrix IP. The NP moved stranding the quantifier behind.

(48) The students seem all t_{NP} to have left.

This test is particularly useful for us because it indicates where the NP was originally located. As Bobaljik (1995) and Bošković (2004) note, Sportiche's analysis is not without problems. The examples below are ungrammatical even though an NP-trace is assumed to exist in both cases.

- (49) a. *The students arrived all t_{NP}
b. *The students were arrested all t_{NP}

In order to solve this problem, Bošković proposes the following generalization (Bošković deduces the generalization from independent mechanisms, i.e. he shows it is a theorem):

- (50) Quantifiers cannot be floated in their θ -positions.

If this generalization is correct, the examples in (49) are ungrammatical because the quantifiers are located in a θ -position. It follows that in all the grammatical examples the quantifier is not floated in a θ -position. This is indeed the case in (51) (see Bošković for the consequences of this analysis).

- (51) The students_i were all t_i arrested t_i

I will apply the floating quantifier test to the subcomparative construction under discussion. First of all, note that Spanish allows floating quantifier structures, as illustrated in (52a). Under Bošković's analysis, the quantifier cannot be floated in Spec VP, a θ -

position. Otherwise, the sentence would be ungrammatical. The structure for this sentence is provided in (52b), with ‘todos’ located in TP, a non- θ -position. Note incidentally that this test provides further evidence that the verb is located in AgrS in Spanish.

- (52) a. Los estudiantes leyeron todos el libro
 the students read all the book
 ‘The students all read the book’
- b. [_{AgrSP} Los estudiantes]_j leyeron_i [_{TP} todos t_j t_i] [_{VP} t_j t_i el libro]

The Floating Quantifier test gives an ungrammatical output in the subcomparative case, as shown in (53). The conclusion I can draw from these data is that ‘todos’ is floated in a θ -position: Spec VP. If this is the case, the subject ‘los estudiantes’ would be located in Spec TP. A second possibility is that the subject remains in Spec VP. This is the case if floating movement did not even take place in the subcomparative example.

- (53) *María leyó más libros que revistas leyeron los estudiantes todos
 Mary read more books than magazines read the students all
 ‘Mary read more books than the students all read magazines’

I have evidence that the subject is located lower than Spec of AgrSP in subcomparative structures. However, there is an interfering factor that needs to be controlled for. I need to test whether a quantifier can be floated in the following English sentence:¹²

(54) Mary read more books than the students all read magazines

If the sentence is ungrammatical, it would imply that quantifier float is ruled out independently in the subcomparative construction. In this scenario, the Spanish data above would not tell us anything about the position of the subject in subcomparatives. Two out of the three informants I checked the data with, found (54) grammatical. My third informant gave a ‘*’ to the sentence. Based on the judgment of my first two informants, the conclusions I reached above seem to be on the right track. However, one needs to be cautious given that my third informant didn’t accept the sentence. Maybe one reason why he didn’t accept it is because there may be too many focused elements in the sentence.¹³

In summary, I have shown that the object ‘revistas’ in (31) moves to Spec FocP. Based on the sentential adverb evidence, I have also shown that the verb moves to Foc, above SpecAgrSP. Curiously enough, there is also evidence that the subject cannot be located in SpecAgrSP, it must be located in a lower position. The evidence comes from floating quantifiers but as noted above, there is a potentially interfering factor that could make the quantifier float discussion irrelevant. At this point my analysis does not really account for the fact that the subject is lower than usual (assuming that the quantifier float evidence is indeed relevant). I will leave this issue for future research (but see footnote 14 for a possible analysis).¹⁴

6. The “Obligatory Gapping Strategy”

In this section, I examine constructions where the verb has undergone obligatory gapping in the subcomparative clause. The relevant example is (19), repeated as (55a):

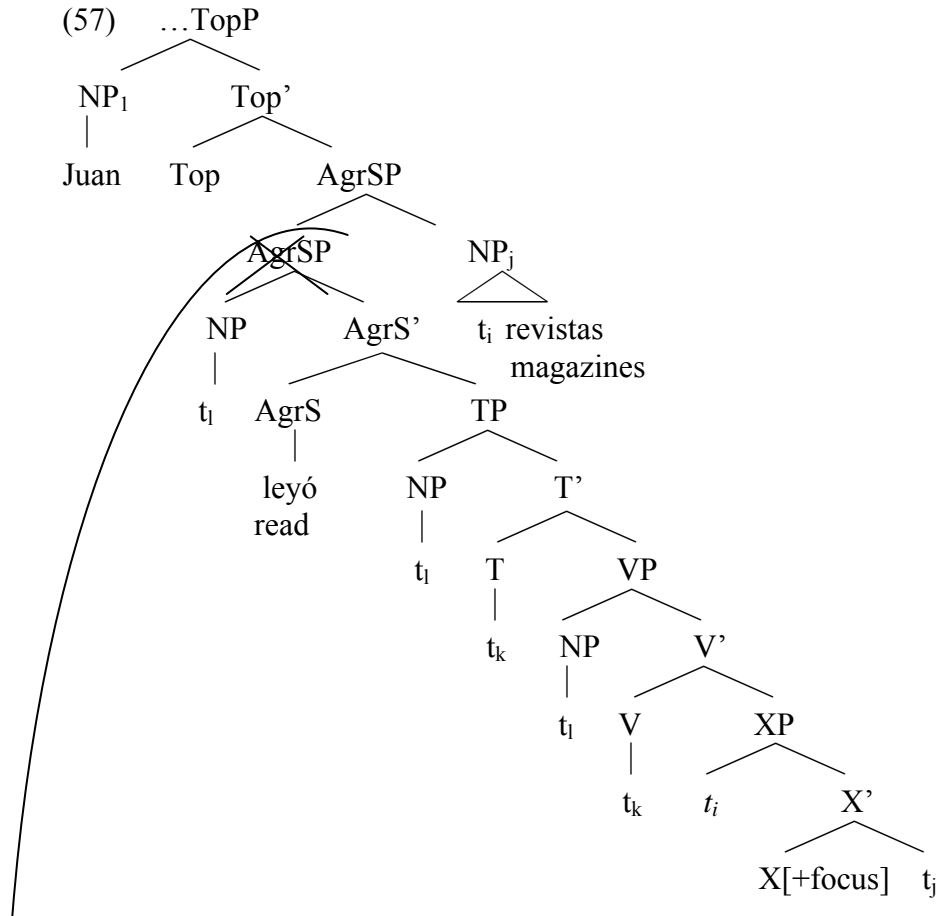
- (55) a. *María leyó más libros que Juan revistas.*
 Mary read more books than John magazines
 ‘Mary read more books than John (read) magazines’
- b. **María leyó más libros que Juan leyó revistas*
 Mary read more books than John read magazines
 ‘Mary read more books than John read magazines’

One important characteristic of this construction is that the verb has to undergo gapping. If it doesn't, the result is ungrammatical, as in (18) (repeated as (55b)). This is clearly different from normal gapping where the verb is optionally elided. (56) below is a representative example. See Williams (1977), Hankamer (1973, 1979), Agbayani and Zoerner (2004), Sag (1976), Johnson (1994), Lobeck (1995, 1997), Larson (1990), Ross (1970), Tri Chan (1999), among others, for relevant discussion of this construction.

- (56) a. John bought apples and Mary bananas
 b. John bought apples and Mary bought bananas

I propose that there is a PF violation in the structure in (55b). The violation is eliminated by deleting the verb in the subcomparative clause, as in (55a). Following insights of Lasnik (1995) and Kennedy and Merchant (2000) regarding a similar phenomenon in English pseudogapping structures, I propose that there is a strong feature that needs to be checked either by movement, as in the “Inversion Strategy”, or by PF deletion of the strong feature in PF. It is this last strategy that is taking place in (55a).

Let me offer the derivation for (55a):



6.1 Motivating the analysis

There are three main aspects of the derivation in (57) that need to be argued for. As the tree makes clear, the subject ‘Juan’ is located pretty high in the structure, namely, Spec TopP. This high placement for the subject is not that surprising. Ordóñez (1997), Ordóñez and Treviño (1999), Ausín and Martí (2001), among others, have already argued for the possibility of this high position for the subject in declarative and interrogative clauses. I will show that the subject is also located in Spec TopP in subcomparative sentences. Second, there is an extra projection in the tree called XP. This projection contains a strong

focus feature. The NP ‘ t_i revistas’ is the complement of X at some point but then it moves so that it escapes the deletion site. I will provide evidence for the existence of XP in the tree. The relevant evidence comes from Kennedy and Merchant (2000) and Rivero (1981). Finally, the movement of the DO needs to be argued for. I will propose that the object undergoes Heavy NP shift (HNPS).

6.1.1 Subjects as Topics: Let us start by discussing the position of the subject ‘Juan’ in the subcomparative clause. The first possibility that comes to mind is that the subject is located in Spec AgrSP. However, there is evidence that the subject is located higher, namely in Spec TopP. Belletti (1990) mentions that negative quantifiers such as ‘nessuno’ (nobody) cannot undergo topicalization. The relevant examples are provided in (58). Spanish behaves like Italian, as in (59):

- (58) a. *Nessuno, l’ho incontrato ieri
 nobody CL have see yesterday
 ‘Nobody I saw him_{CL} yesterday’
- b. *A nessuno, gli daranno il premio
 to nobody CL will-give the prize
 ‘To nobody, they will give him_{CL} the prize’

- (59) a. *A nadie, lo ví ayer
 to nobody CL saw yesterday
 ‘Nobody I saw him_{CL} yesterday’

- b. *A nadie, le darán un premio
to nobody CL will-give the prize
‘To nobody, they will give him_{CL} the prize’

If the subject in the subcomparative clause behaves like a topic, then a negative quantifier will not be able to occur in that position. Unfortunately, the test cannot be run since the resulting output is not pragmatically sound:

- (60) # María read more books than nobody magazines

Belletti offers some additional tests for topichood. According to her, in sentences containing a subject followed by a sentential adverb, the adverb is in a high position and the subject is in a left peripheral position, topicalized or left-dislocated. An Italian example is given in (61a) and the Spanish counterpart in (61b). Recall that I already discussed this possibility for Spanish in section 5.2. If I combine the negative quantifier test with this new test, an interesting result emerges. If the position preceding ‘probablemente’ is a topic position and if negative quantifiers cannot be topicalized, I correctly predict that a sentence such as (62) should be ungrammatical.

- (61) a. Gianni probabilmente telefonerà alle 5
John probably will-call at 5
‘John probably will call at 5’

b. Juan probablemente llamará a las 5

John probably will-call at the 5

‘John probably will call at 5’

(62) ??Nadie probablemente llamará a las 5

nobody probably will-call at the 5

‘Nobody probably will call at 5’

Let us apply this test to our subcomparative example. In (63), the subject ‘Juan’ precedes the sentential adverb, which is consistent with the idea that ‘Juan’ is located in a topic position. Note that ‘probablemente’ has a sentential reading in the subcomparative clause.

(63) María probablemente leyó más libros que Juan probablemente revistas.

Mary probably read more books than John probably magazines

‘Mary probably read more books than John probably (read) magazines’

Let us now focus on another example which further suggests that ‘Juan’ is behaving like a topic in subcomparative constructions. The relevant data is provided below. Under the assumption that ‘probablemente’ cannot occur higher than topics,¹⁵ the ungrammaticality of (64) is explained if ‘Juan’ is indeed a topic. That is, if the subject is in a topic position and the adverb cannot occur higher than that position (i.e. it is AgrSP-adjoined), I expect the word order adverb-subject to be impossible.

- (64) ?? Probablemente María leyó más libros que probablemente Juan revistas
 probably Mary read more books than probably John magazines
 ‘Probably Mary read more books than probably John (read) magazines’

In summary, the evidence presented in this section suggests that the claim that the subject in the subcomparative clause is behaving like a topic. In the next section I provide support for AgrSP-deletion and XP.

6.1.2 AgrSP-deletion and XP: Recall from the discussion on the “Inversion Strategy” that the DO had a strong focus feature which was checked off by overt movement of the DO to a Focus projection. I would like to suggest that the DO ‘revistas’ also has a strong focus feature in the “Obligatory Gapping Strategy”. Following Lasnik (1995), I assume that strong features can be eliminated from the derivation either via movement or via PF deletion of the strong feature. Once PF deletion takes place, the strong feature is literally gone at that level.

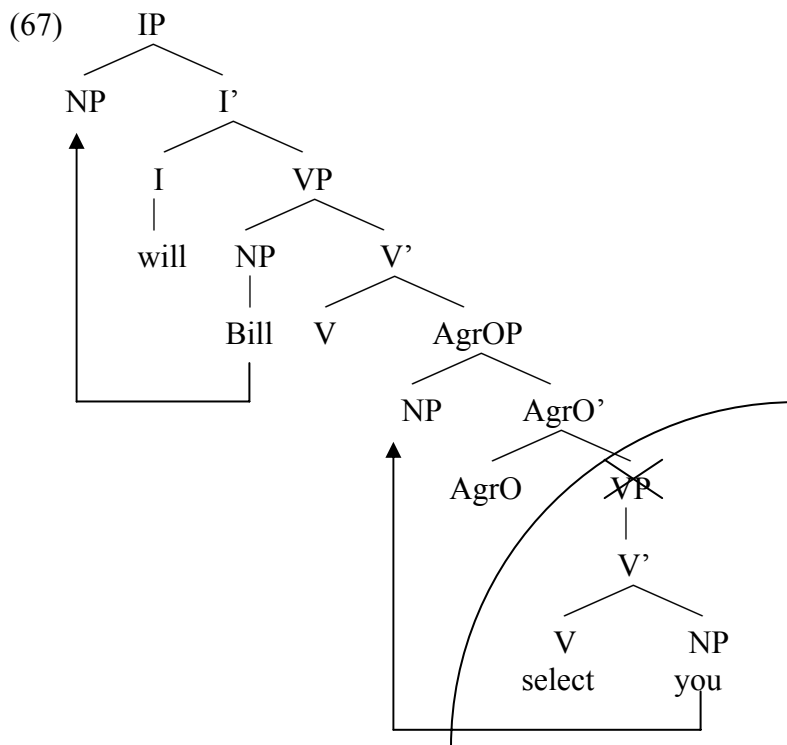
Lasnik applies this system to explain the behavior of pseudogapping examples such as (65):

- (65) John will select me, and Bill will ~~select~~ you.

At first glance, it seems that Pseudogapping structures only involve elision of the main verb (‘select’ in this case). However, (66) shows that other elements can be elided as well:

(66) The DA proved Jones guilty and the assistant DA will ~~prove~~ Smith ~~guilty~~.

In order to account for this apparently discontinuous type of ellipsis, Lasnik (1995) proposes that Pseudogapping is an instance of VP ellipsis with the remnant having moved out of the VP to Spec AgrOP overtly (Lasnik assumes that English may have overt object shift (i.e. movement to Spec AgrOP)). The derivation Lasnik gives for (65) proceeds as follows (Lasnik assumes Koizumi's (1993, 1995) 'split VP hypothesis'. See Agbayani and Zoerner (2004) for an alternative analysis of pseudogapping structures):



As (67) makes clear, the remnant 'you' raises to Spec AgrOP. After this raising takes place, the VP containing the verb 'select' is elided. Note that under the overt object shift analysis, the V undergoes short overt movement in non-elliptical constructions (i.e. the V

raises, via AgrO, to the higher V), moving in front of the shifted object. One of the questions arising in derivation (67) is the following: Why is (68) ungrammatical given that (67) is possible? In other words, why doesn't the verb raise in the Pseudogapping examples?

(68) *Bill will you select

In order to offer an answer to this question, Lasnik makes use of Chomsky's (1993, 1995) theory. In Chomsky (1993), an unchecked feature causes a PF crash. Under this view, the moving element has a strong feature that needs to be checked against a matching feature upstairs. Lasnik (1999) tries to reconcile the pseudogapping facts with Chomsky's (1995) Virus Theory of feature strength (i.e. an unchecked strong feature needs to be immediately checked. This theory is based on Attract. A category containing a strong feature attracts an element with a matching feature downstairs). For this, he takes Chomsky's (1995) theory of pied-piping and Ochi's (1998) interpretation of it. Bearing these ideas in mind, let us see how the ungrammaticality of (68) can be accounted for. First, we need to postulate that higher V has a strong feature that needs to be checked (Lasnik (1995) suggests that the feature driving the raising of V could be a θ -feature). After Formal Features of the lower V are attracted by the higher V, lower V becomes defective. In (68), either the Formal Features of 'select' did not raise or the features were raised but pied-piping did not take place. In both cases the derivation crashes. So, why doesn't the verb raise in Pseudogapping examples? Let's go back to (67). As I have already explained, when the matching features of lower V are attracted, the lower V becomes phonologically defective.

We also know that one of the reasons why (68) is ungrammatical is because pied-piping did not apply. It seems that we have two options: either we do pied-piping and we get ‘Bill will select you’ or we delete the phonologically defective V (‘Bill will ~~select~~ you’). In the Pseudogapping examples we have decided to hide the PF damage by deleting the defective structure. Once deletion applies there is no longer a problem with PF because the damage is literally gone at that level.¹⁶

Let us suppose that the same process is at stake in the subdeletion cases under discussion. The strong focus feature can be checked by overt movement (this would be the “Inversion Strategy”) or by PF deletion. If PF deletion is taking place in the “Obligatory Gapping Strategy”, the projection containing the verb and the strong focus feature would have to be deleted. That we also need to delete the verb is obvious from the ungrammaticality of examples containing an overt verb (see (55b) above).

The ellipsis process cannot be VP ellipsis (see (69) for an English example illustrating this ellipsis process). If this were the case, we would predict sentences containing modal verbs to be grammatical in Spanish (the modal would be in AgrS and the verb in V). This is a wrong prediction, as illustrated in (70). It must be the case that a higher projection is deleted. I will assume based on my discussion below that the deletion site is AgrSP.

(69) John sleeps every afternoon, and Mary should too.

(70) *María puede leer más libros que Juan puede revistas

Mary can read more books that John can magazines

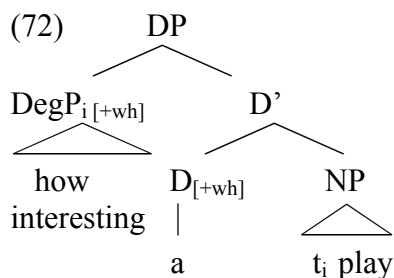
‘Mary can read more books than John can magazines’

One immediate question arising from the structure in (57) is: Why do we need the extra projection XP? It would be easier to propose that there is only an NP bearing a strong focus feature. This alternative would be simpler but it wouldn't give us the output in (55a). This is so because at the point of deletion of the strong focus feature, there would not be a way to eliminate the strong feature without eliminating the NP 'revistas' as well. It seems that we need a way of deleting the focus feature without deleting the DO.

A similar problem was faced by Kennedy and Merchant (2000) in their analysis of attributive comparative deletion. They note that pseudogapping of the verb is obligatory in the construction in (71a):

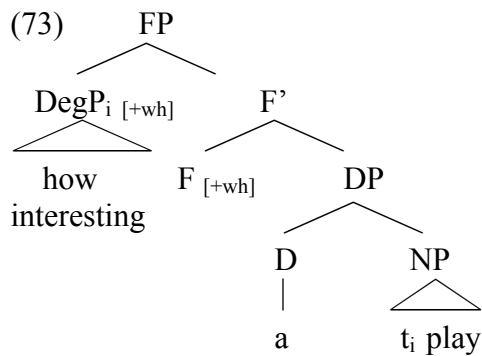
- (71) a. *Pico wrote a more interesting novel than Brio wrote a play
 b. Pico wrote a more interesting novel than Brio did a play

They propose that the underlying structure for the phrase "how interesting a play" looks like (72) below:



The idea is that 'how interesting' originates inside the NP. Then, it moves to spec DP and passes its strong wh-feature to the head of the DP (see Webelhuth (1992), Chung (1994)).

Kennedy and Merchant also assume, following Lasnik, that an offending strong feature can be eliminated from the derivation via PF deletion of the projection containing the verb and the strong feature. Let us go back to (71b) now. If PF deletion were to occur in this case, there would be no way to delete the strong +wh-feature without deleting the survivor ‘a play’. In order to solve this problem, they suggest that the structure for ‘how interesting a play’ is more complex than (72). They propose the structure in (73). Note that there is an extra layer of structure, namely, FP. Given this richer structure, it is now possible to delete the strong feature without deleting ‘a play’. The idea is that the DegP with its +wh-feature raises to Spec FP. The +wh-feature, which is now in Spec FP is transferred to F via spec-head relation. The DP ‘a play’ right-adjoins to VP and VP deletion applies and deletes the FP containing the strong +wh-feature. Crucially the DP is outside the deletion site.



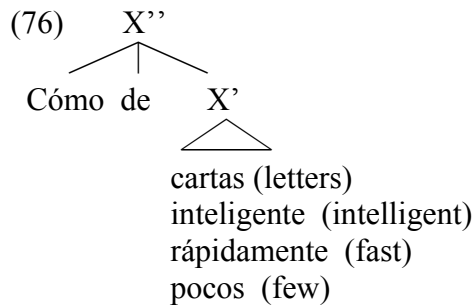
One piece of evidence which supports the rich structure in (73) is given in (74). According to Kennedy and Merchant, ‘of’ in (74) occupies exactly the F position in (73):

(74) [How long of a novel] did Brio write?

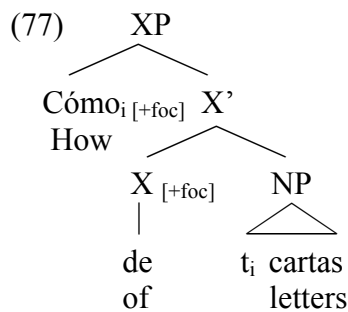
Could it be the case that the structure of the NP ‘revistas’ in (55a) is also more complex than it seems at first sight? If this could be maintained, it would give us a way of deleting the offending strong focus feature without deleting ‘revistas’. I would like to propose that this is indeed what happens in the construction under consideration. According to Rivero (1981), left-branch modifiers belonging to the general class of degree/quantity/measure/quality phrases can be moved in isolation from the constituent they modify by wh-movement (the judgments hold only for some dialects of Spanish):

- (75) a. Cómo dices que llegaron de cartas?
 how say-you that arrived of letters
 ‘How many letters do you say arrived?’
- b. Cómo dices que es de inteligente?
 how say that is of intelligent
 ‘How intelligent do you say he is?’
- c. Cómo dices que corre de rápidamente?
 how say that runs of fast
 ‘How fast do you say he runs?’
- d. Cómo dices que hay de pocos libros?
 how say that are of few books
 ‘How few books do you say there are?’

The ‘cómo’ (how) modifier is the spec of a X’ category (where X ranges over N, A, Adv. and Q). The preposition ‘de’ is inserted by transformation (Rivero (1981)).

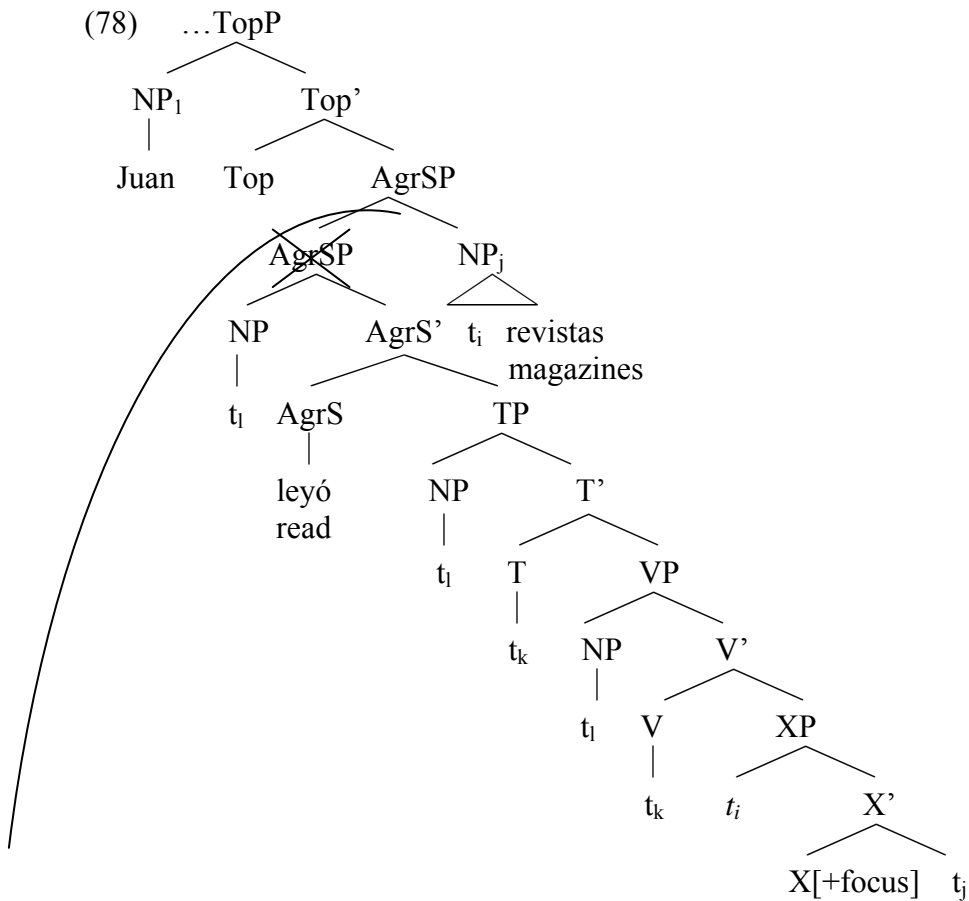


I propose to update (76) as in (77) (note that XP is the equivalent of Kennedy and Merchant's FP). Maintaining the intuition that there is a connection between the two subcomparative strategies, I propose that a strong [+focus] feature is involved in this case, too.



If the structure in (77) is correct it gives us a way to delete the strong focus feature without deleting the NP. I repeat the big structure here for convenience (see (78) below and (57) above).

So far, we know that the subject 'Juan' in (55a) is a topic. We also know that the AgrSP containing the verb and the strong feature get deleted in PF.¹⁷ What I need to discuss is the position and the nature of the movement of the DO 'revistas'. This is the topic of the next section.



6.1.3 Heavy NP Shift of the object: One of the claims made in the derivation in (78) is that the DO ‘revistas’ is AgrSP-adjoined. Is there evidence that the object is that high in this kind of structure? Let us compare (79) with (80). The floating quantifiers are ruled out in the first set of data, not in the second one. As discussed in section 5.3 (ex. (52)), ‘todos’ is located in Spec TP in (80). According to this, (79a) indicates that the object is even higher than the floating quantifier in the grammatical (80). If ‘todos’ is in Spec TP and ‘revistas’ is higher, the ungrammaticality of (79a) is expected. (79b) seems to indicate that the ellipsis site is very high, so that the floating quantifier is caught in it. These two pieces of data together support the idea that the object is very high in the structure and that the ellipsis site is very high as well.

- (79) a. *María leyó más libros que los estudiantes todos revistas
 Mary read more books than the students all magazines
 ‘Mary read more books than the students all read magazines’
- b. *María leyó más libros que los estudiantes revistas todos
 Mary read more books than the students magazines all
 ‘Mary read more books than the students all read magazines’

- (80) Los estudiantes leyeron todos el libro
 the students read all the book
 ‘The students all read the book’

So far we know that the object is located quite high in the structure but what kind of movement is the object undergoing? I will claim that the object is undergoing Heavy NP Shift (HNPS).¹⁸ Lasnik (1995) uses the following tests to determine whether the object is undergoing HNPS in pseudogapping constructions. He compares HNPS and pseudogapping in double object constructions. He tests whether the first and the second object can undergo pseudogapping and/or HNPS. He also tests data with pronouns. Since there is no one-to-one parallelism between pseudogapping and HNPS, Lasnik claims that the pseudogapping remnant is not undergoing HNPS. Let us see whether the remnant ‘revistas’ is undergoing HNPS or not. (81) is the baseline data to show that HNPS is possible in Spanish (see Fernández-Soriano (1993) and Ordóñez (1997)):

- (81) a. ?Trajeron al hombre que estaba siendo interrogado a la habitación
 (they) brought to-the man who was being interrogated to the room
 ‘They brought the man who was being interrogated into the room’
- b. Trajeron t a la habitación al hombre que estaba siendo interrogado
 (they) brought to the room to-the man who was being interrogated
 ‘They brought into the room the man who was being interrogated’

As the examples above make clear, a heavy NP such as ‘al hombre que estaba siendo interrogado’ can either stay in its base-generated position or can undergo movement to the right. In fact, the HNPS-ed version sounds more natural (note that ‘t’ in (81b)) stands for the trace of the displaced heavy NP).

In (82a), I have the first object as a remnant in an “Obligatory Gapping Strategy” (note that this is the base order for the sentence: S V DO IO). (82b) shows that the first object in a ditransitive construction can undergo HNPS.^{19,20} The parallelism is maintained with the second object: it can survive in the subcomparative clause ((83a) and it can undergo HNPS ((83b)). Jayaseelan (1990) notes that only one element can be HNPS-ed in English (he attributes this observation to Stowell (1981)). As shown in (84b), this is not the case in Spanish: more than one element can undergo HNPS in this language. Interestingly, multiple remnants can appear in subdeletion constructions too, as in (84a).

- (82) a. María le dio libros a más alumnos que Juan revistas
 Mary CL gave books to more students than John magazines
 ‘Mary gave books to more students than John (gave) magazines’

b. María le dio t a Pedro los libros de aventuras que más le gustaban.

Mary CL gave t to Peter the books of adventures than more CL liked

‘Mary gave to Peter the adventure novels he liked the best’

(83) a. María le dio libros a más chicos que Juan a chicas

Mary CL gave books to more boys than John to girls

‘Mary gave books to more boys than John (gave) to girls’

b. María le dio libros t ayer al estudiante que había sacado las mejores notas

Mary gave books yesterday to-the student who had obtained the best grades

‘Mary gave some books yesterday to the student who had received the best grades’

(84) a. Juan le compró (a María) más libros (a María) que Pedro revistas a Antonia

John CL bought to Mary more books than Peter magazines to Antonia

‘John bought more books to Mary than Peter magazines to Antonia’

b. Provó t t al jurado su culpa que Juan fuera visto con el arma del

proved to-the jury his guilt that John was seen with the weapon of-the

homicidio

murder

‘It proved his guilt to the jury that John was seen with the murder weapon’

Given the parallelism between the movement of the remnant and HNPS, I will claim that the object is undergoing HNPS in the subcomparative clause.²¹ I will assume the

traditional approach to HNPS whereby the object is right-adjoined to some maximal projection. Given the evidence I have found for the high position of the object, adjunction to AgrSP seems to be a reasonable assumption.

7. An extension: Comparative Deletion

In this section I show that it is possible to extend my analysis to Comparative Deletion constructions.

Comparative Deletion constructions are sentences of the type in (85a) (Bresnan 1973, 1975).²² These constructions differ from Comparative Subdeletion in that something other than a variable is deleted in the comparative clause, as in (85b):

- (85) a. Mary read more magazines than John read
b. Mary read more magazines than Mary read [~~x-many magazines~~]

The Spanish counterpart of (85) is ungrammatical, as shown below:

- (86) *María leyó más revistas que Juan leyó
Mary read more magazines than John read
'Mary read more magazines than John read'

Once again, if the verb is elided, the sentence becomes fully grammatical, as in (87):

- (87) María leyó más revistas que Juan
Mary read more magazines than John
'Mary read more magazines than John'

It could be argued that 'que Juan' is indeed a phrasal construction (i.e. a PP) in (87). If so, then there is no issue as to whether obligatory gapping strategy is available in Comparative Deletion in Spanish. If there is no verb to start with in 'que Juan', one could argue that Spanish lacks the Comparative Deletion construction all together. What I will argue next is that 'que Juan' in (87) is not phrasal but clausal. Therefore, there are reasons to believe that the verb has undergone obligatory gapping in these constructions, too.

In English, it has been argued that the comparative sentence in (88) contains a PP rather than a full clause (Hankamer, 1973).

- (88) John knows more lawyers than me

Supporting evidence for this claim comes from the following set of facts. While it is possible to have a clausal counterpart of (88) after the Nominative 'I' ((89a)), it is impossible to have it after 'me' ((89b)). Given the ungrammaticality of (89b), it is fair to conclude that 'than me' in (88) does not have a clausal source. If so, we would expect to be able to follow the sentence with a verbal form, as in (89a).

- (89) a. John knows more lawyers than I do
b. *John knows more lawyers than me do

The state of affairs in Spanish is quite different. As shown in (90), only the Nominative form of the first person pronoun is allowed after ‘que’:

- (90) a. María leyó más revistas que yo
 Mary read more magazines than I (Nom)
 ‘Mary read more magazines than I’
- b. *María leyó más revistas que me
 Mary read more magazines than me (Acc)
 ‘Mary read more magazines than me’
- c. *María leyó más revistas que mí
 Mary read more magazines than me (Dat)
 ‘Mary read more magazines than me’

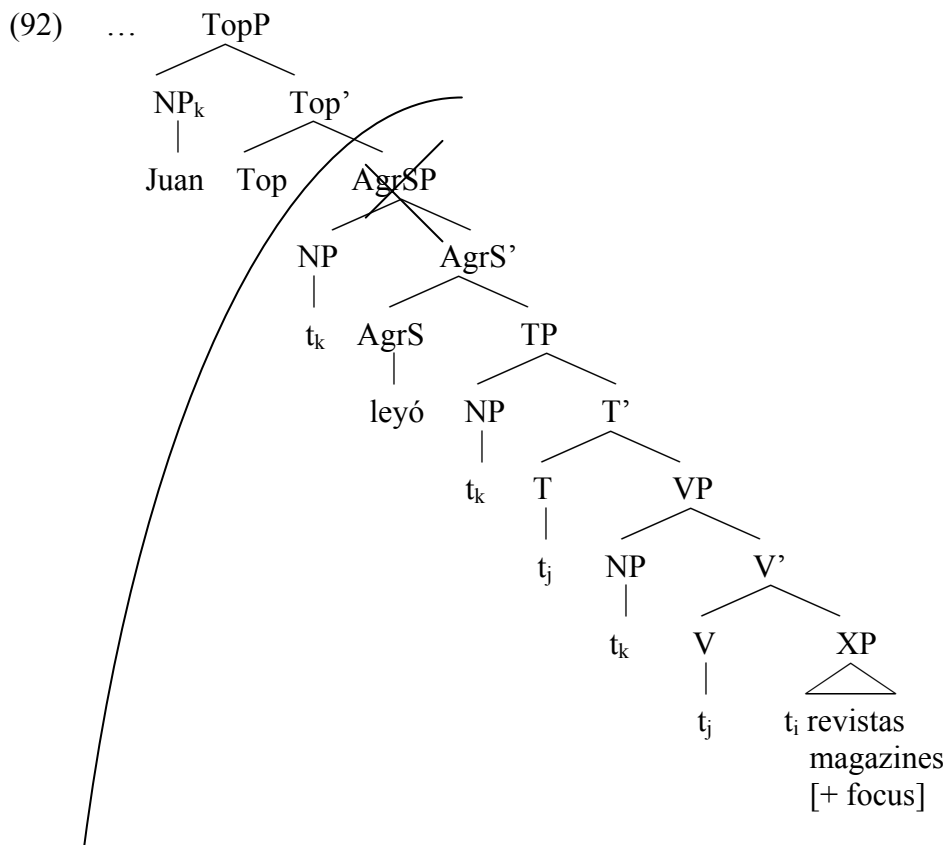
Furthermore, objects following a preposition bear Dative Case in Spanish, as shown below:

- (91) a. a (to) $\left\{ \begin{array}{l} \surd \text{ mí (Dat)} \\ * \text{ yo (I-Nom)} \\ * \text{ me (I-Accus)} \end{array} \right.$ b. de (of) $\left\{ \begin{array}{l} \surd \text{ mí (Dat)} \\ * \text{ yo (I-Nom)} \\ * \text{ me (I-Accus)} \end{array} \right.$

The evidence presented above suggests that ‘que’ is not prepositional in nature. If this were the case, we would expect the pronoun in (91a) to bear Dative Case, contrary to fact. Furthermore, the form the pronoun surfaces in (i.e. Nominative) is the only form which

would allow a clausal counterpart, as in (90a). The interfering factor in Spanish is that a verb can never appear in the comparative clause. Let us now explain why this is the case.

In order to account for the obligatory gapping of the verb in (87), I will propose a very similar derivation to (19). In fact, I argue that Comparative Deletion in Spanish is another manifestation of the “Obligatory Gapping Strategy”. The derivation I propose for (87) is as follows: once again there is a strong feature that needs to be checked. In order to salvage the structure, we need to delete the AgrSP containing the verb and the offending feature. In this case, the object does not undergo HNPS. The relevant derivation is given in (92):



8. Conclusion

In this paper I have explored the role of contrastive focus in Spanish Comparative Subdeletion constructions. As shown above, Spanish has two strategies to form these constructions. Under the “Obligatory Gapping Strategy”, the verb undergoes obligatory gapping. Under the “Inversion Strategy”, the word order of the elements in the comparative clause is modified. I have argued that there is a strong focus feature that needs to be checked in both cases. In the “Inversion Strategy” overt movement takes place and the relevant strong feature is checked off. In the “Obligatory Gapping Strategy”, the AgrSP containing the verb and the offending strong feature are deleted and literally disappear at the PF level. My analysis has not only offered an account of Comparative Subdeletion but has also proved successful in capturing Comparative Deletion structures in Spanish.

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¹ This analysis is a slight oversimplification of Chomsky (1977). According to Chomsky (1977: 123), “no wh-word was moved, but only wh-”. What Chomsky is implying is that the whole wh-word does not move but only the wh-feature does. Chomsky makes this distinction to avoid Left Branch Condition violations. See below for relevant discussion.

² For additional discussion on left-branch extraction, see Bošković (2005).

³ There seems to be dialectal variation when it comes to Portuguese. The Brazilian Portuguese speakers I consulted the data with, accepted (22a) provided it contained an overt subject, as in (i). My European Portuguese informant found both (22a-b) ungrammatical. Curiously enough, all informants accepted (ii), contrary to Price (1990). This casts some doubt on the classification of Portuguese as an “Obligatory Gapping”/Spanish-type language.

(i) Ele ama o seu pai menos que ama a sua mãe
he loves to his father less than loves to his mother
‘He loves his father less than he loves his mother’

(ii) A Maria leu mais livros que o João leu revistas
the Mary read more books than the John read magazines
‘Mary read more books than John read magazines’

⁴ Spanish-type languages do not allow inversion, as in (i) (but see footnote 3 for Portuguese):

(i) a. *Maria ha letto piu libri che riviste ha letto Gianni (Italian)
Mary has read more books than magazines has read John
‘Mary has read more books than John has read magazines’

b. * János több könyvet olvasott mint újságot olvasott Maria (Hungarian)

John more book-acc read than magazines-acc read Mary

‘John read more books than Mary read magazines’

c. *A Maria leu mais livros que revistas leu o João (Portuguese)

the Mary read more books than magazines read the John

‘Mary read more books than John read magazines’

d.??María leu mais libros que revistas leu Xan (Galician)

Mary read more books than magazines read John

‘Mary read more books than John read magazines’

⁵ There may be some variation in this respect. Bošković (2001) notes that in sentences such as (i) (his example (204)), some speakers can have a pause while others cannot.

(i) A ninguna de estas personas, (no) las ví en la fiesta

to none of these people not CL saw in the party

‘I didn’t see any of these people at the party.’

⁶ Another interesting test to determine the high position of the adverb is the placement of sentential adverbs. If the verb precedes really high adverbs, it would indicate that the verb is located in AgrS. Unfortunately, this test cannot be run in Spanish (see section 5.2 below).

⁷ That there is movement of the object (and the variable ranging over quantities) in the subcomparative clause is confirmed by the fact that island effects are observed in the subcomparative clause (thanks to an anonymous reviewer for suggesting movement diagnostics for the construction under examination). To provide one example, the “Inversion Strategy” obeys the Complex NP-constraint, as in (i), indicating that movement took place in the subcomparative clause.

(i) *María tiene más libros que Pedro la idea de que revistas leyó Juan (el otro día)

Mary has more books than Pedro the idea of that magazines read John the other day

‘Mary has more books than Peter has the idea that John read magazines (the other day)’

⁸ Contrary to Chomsky (1995), I adopt the existence of AgrSP in the clausal structure. For Chomsky (1995), there is only a TP above VP, with no AgrSP in a higher position. However, see Belletti (1990), Bošković (2004), McCloskey (1997), Stjepanović (1998), among others, for empirical arguments that we need a richer clausal structure along the lines of Pollock (1989).

⁹ The switch from traces to copies was proposed by Chomsky (1993) to conform to the Inclusiveness Condition. Generally, the highest copy of the chain is pronounced. However, a lower copy may be pronounced in order to avoid a PF violation (for relevant discussion on this proposal, see Franks (1998) and Bošković (2001, 2002)).

¹⁰ Here I'm modifying Watanabe (1993) and Bošković's (1995, 1997) assumption about the placement of high adverbs. They show that in English the adverb can be TP or AgrSP-adjoined. I claim that in Spanish it must be AgrSP-adjoined.

¹¹ Apparently, repeating the adverb 'probably' in the matrix and the subcomparative clause does not lead to ungrammaticality. However, repeating other sentential adverbs in both sentences sounds quite degraded. For example, (i) sounds degraded to my ear.

- (i) ??Juan sinceramente tiene más posibilidades que oportunidades tiene sinceramente Juan
John sincerely has more possibilities than opportunities has sincerely John
'John sincerely has more possibilities than John sincerely has opportunities'

This contrast may be attributed to the fact that even in a coordinated structure, 'probably' sounds much better than 'sincerely':

- (ii) María probablemente leyó muchos libros y Juan probablemente leyó muchas revistas
Mary probably read many books and John probably read many magazines
'Mary probably read many books and John probably read many magazines'

-
- (iii) ??María sinceramente tiene muchas posibilidades y Juan sinceramente tiene muchas oportunidades
Mary sincerely has many possibilities and John sincerely has many opportunities
'Mary sincerely has many possibilities and John sincerely has many opportunities'

For some reason it does not sound good to repeat 'sincerely' in both conjuncts. For the purposes of my discussion, I will use 'probably' since its repetition in both clauses still gives us grammatical outputs.

¹² When I elicited the judgments from my informants, I controlled for issues that might interfere with their judgments, such as parallelism between the two clauses. For example, I used two floating quantifiers in both clauses. (54) is only a representative example of the set of data my informants judged.

¹³ Željko Bošković informs me that 'all' is typically stressed a bit when floated. (54) is well-formed syntactically so maybe the reason why my third informant didn't accept (54) is because there were too many stressed/focused elements in the sentence.

¹⁴ The interesting question is why the subject is lower here. It seems that we have contradictory evidence. On the one hand, the adverb interpretation analysis indicates that the verb is moving to Foc. On the other hand, the floating quantifier test indicates that the subject is low. Still the issue is that there is nothing that would prevent the subject from moving to SpecAgrSP in the construction in question. An anonymous reviewer suggests the following possibility. It has been argued that an element undergoing wh-movement must pass through SpecAgrSP in Spanish (cf. Goodall 1992, Canac-Marquis 1992). For example, Goodall (1992) argues that wh-phrases in Spanish move to Spec AgrSP (Spec IP in his terminology) given that wh-phrases and preverbal subjects compete for the same position, as in (i):

- (i) a. *Qué puesto Josefina tiene en la empresa?
what position Josefina has in the company
'What position does Josefina have in the company?'
- b. Qué puesto tiene Josefina en la empresa?
what position has Josefina in the company
'What position does Josefina have in the company?'

Furthermore, wh-phrases move to SpecCP. Evidence for this comes from successive cyclicity, as in (ii). Goodall argues that Subjacency should force the wh-phrase to stop in at least one of the embedded sentences on its way to the matrix clause (see Torrego (1984) for related discussion). If the landing site for the wh-phrase is SpecAgrSP, at least one of the embedded subjects should appear in a postverbal position. As (ii) shows, this is not the case, suggesting that wh-phrases move to Spec CP in Spanish. If this proposal is correct, it is possible that the element undergoing focus movement must pass through Spec AgrSP, so that the subject cannot move to this position, as it usually does. To be more precise, in the tree structure in (37), the object ‘revistas’ will undergo focus movement and will stop in Spec AgrSP on its way to Spec FocP. The verb will be located in Foc. The subject will try to move to AgrSP but the movement will be blocked given that the position will be already occupied by a trace/copy of the object ‘revistas’. As a consequence, the subject will need to stay in a lower position (Spec TP or Spec VP). If correct, this analysis could explain why the subject is lower than expected in the construction under examination. Predictions and consequences of this analysis will be explored in further research.

(ii) Qué puesto dijo Manolo que Iris cree que Josefina ocupa en la empresa?

which position said Manolo that Iris thinks that Josefina has in the company

‘Which position did Manolo say that Iris thinks that Josefina has in the company?’

¹⁵ This possibility is quite likely given the discussion in section 5.2 where it was argued that ‘probablemente’ is AgrSP-adjoined in the sentential reading.

¹⁶ Lasnik (2002) compares the feature movement approach with Chomsky’s (2000) non-movement operation “Agree”. Based on data from pseudogapping and sluicing, Lasnik concludes that the feature movement approach is superior. More specifically, he argues that the complementarity between obligatory movement and ellipsis observed in pseudogapping and sluicing constructions can be accounted for in a straightforward manner under the feature movement approach. The complementarity will be lost (or unclear) if feature movement was abandoned in favor of “Agree”.

¹⁷ Note that TP could also be the relevant projection. However, if that were the case the verb would be outside the deletion site. See section 6.1.4 for a TP-deletion possibility.

¹⁸ I'm assuming the traditional approach to HNPS where the object ends up in a right-adjoined position in the structure. Nothing would go wrong if the object is left-adjoined instead. I will assume the right adjunction hypothesis here for ease of exposition.

¹⁹ Note that it would make more sense to compare the number of books to the number of magazines in (82a) (see (i) below). The reason I didn't do this is because I wanted to have a neutral word order in both (82a) and (83a):

- (i) *María le dio a Pedro más libros que Juan revistas*
 Mary CL gave to Peter more books than John magazines
 ‘Mary gave Peter more books than John magazines’

²⁰ I take the sentences in (82)-(84) to be the equivalent of English double object constructions. See Demonte (1995), Blears (2003), among others, for the empirical evidence to support this claim.

²¹ It would be very interesting to find cases where HNPS cannot occur. In that scenario we would expect subdeletion constructions to fail too. Unfortunately, I haven't come across this kind of examples. Note however that in the examples discussed above there is always a one-to-one parallelism between HNPS and subdeletion. It is not the case that HNPS fails in some cases whereas subdeletion is perfectly grammatical (or viceversa). This seems quite suggestive regarding what's going on in these constructions.

²² There is a long debate as to whether Comparative Deletion and Comparative Subdeletion derive from the same source. For example, Chomsky (1977), den Besten (1978), Bresnan (1973, 1975), Izvorski (1995) and Kennedy (2000) argue that the two constructions are the same underlyingly, the only difference being the amount of material deleted in each construction. In contrast, Grimshaw (1987), Corver (1990, 1993) and Kennedy (1998, 1999) argue that the two constructions are fundamentally different. Shedding light on this debate is beyond the scope of this paper. For the purposes of my discussion, I will follow the first group of authors and assume that the two constructions derive from the same source.