TOPIC, FOCUS AND QUANTIFIER FLOAT

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1. Introduction[1]

In the literature on the Floating Quantifier (FQ) phenomenon [1b], the debate has mainly centred on the problem of the syntactic distribution and the status of FQs, and the question addressed has been why they can appear in some positions but not in others with the ultimate goal of determining whether FQs are residues stranded by movement (Sportiche 1988, among others) or predicative adverbials (Bowers 1993, among others).[2] Here, I approach the phenomenon concentrating on its rationale and thus on the question of why FQs float, which I consider to be the necessary point of departure for the correct characterization of the phenomenon and also for the identification of adequate answers to the above mentioned 'traditional' issues. Although I will concentrate on data from Spanish, the analysis presented here is expected to also be applicable, perhaps with some modifications, to other languages.[3]

What the stranding [1c] and the predicative adverbial [1d] approach have in common is that in both cases FQs are considered to be inert elements, i.e. they do not move. Although I will be assuming a derivational approach as in (1c) here, my proposal will crucially depart from previous derivational analyses in that FQs, like their associates (ASs), will be argued to undergo movement operations which trigger the split known as floating quantification.

(1) a. Todos los estudiantes de física son inteligentes.
all the students of physics are intelligent

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[2] There is a vast literature on floating quantification. Many important works on the phenomenon are not mentioned here simply because it is not the purpose of the present paper to address the issues considered there.

[3] See Sánchez (1993) for a detailed analysis of floating quantification in Spanish.

b. Los estudiantes de física son todos inteligentes.
the students of physics are all intelligent
c. [the students]$_i$ of physics are [all t_i] intelligent
d. the students of physics are [$_{AP}$ all [$_{AP}$ intelligent]]

Within an adverbial analysis of FQs no economy issue arises, as quantifiers are merged in different positions of the clausal architecture, but within a derivational approach economy is expected to come into play, as moving less material should always be cheaper than moving more. So it must be the case that movement of the quantifier in (1) is not optional, which is precisely what I will propose in what follows.

2. Information-structural properties of floating quantificacion in Spanish

2.1. Subject-related FQs

In this section I will describe the basic patterns of clause-mate floating quantification in which the quantified DP is the subject of a sentence, concentrating on the information-structural properties of both the floating quantifier and its 'associate'.

2.1.1. Information-structural properties of the FQ

A. Information focus FQs

As has been observed by Zubizarreta (1998) for subjects in the general case, subject-related FQs can receive an information focus interpretation only if they appear in final position [2B1] —henceforth the focal constituent will be identified by capitalization—. The sentences in (2B2) and (2B3) are grammatical with a focus interpretation of the quantifier but are not possible answers to the question in (2A), an indication that the FQ is those positions cannot be information focus. As for (2B4), it is ungrammatical. Although at first sight we might be tempted to conclude that the impossibility of (2B4) is part of the generally assumed restriction by which FQs cannot precede their ASs proposed in Baltin (1978) and other works, we will later see that this is not the case.

(2) A: ¿Qué estudiantes de física consiguieron beca?
Which students of physics got grant
Which students of physics got a grant?
B1: Los estudiantes de física consiguieron beca TODOS.
B2: #Los estudiantes de física TODOS consiguieron beca.
B3: #Los estudiantes de física consiguieron TODOS beca.
B4: *TODOS consiguieron beca los estudiantes de física.

On the other hand, a FQ in final position is always narrow focus. Evidence in support of this comes from predicate inversion. Notice that whereas predicative copular sentences with canonical word order are compatible with floating quantification [3b], in predicate inversion contexts in which the post-copular subject is typically interpreted as focus [3c], floating quantification is impossible [3d].

(3) a. Todos los estudiantes de física son inteligentes.
all the students of physics are intelligent
b. Los estudiantes de física son inteligentes todos.
c. Inteligentes son todos los estudiantes de física.
d. *Inteligentes son los estudiantes de física todos.

Independently, Zubizarreta (1998, 1999) has shown that subjects in final position always receive a narrow focus interpretation on the basis of the impossibility of assigning focus to other elements in contexts of VOS order [4].[4]

(4) *Me regaló la BOTELLA de vino María. (Zubizarreta 1998, p. 126, ex. 77a)
to-me gave the bottle of wine María

If, as I claim, floating quantifiers in final position are always narrow focus they will not be compatible with a focal object. This prediction is confirmed by the deviance of (5).

(5) *Los estudiantes de física consiguieron BECA todos.
the students of physics got grant all

B. Contrastive focus FQs

FQs in preverbal position [6B1], in post-verbal final position [6B2], or in postverbal non-final position [6B3] can receive a contrastive focus interpretation.[5]

(6) A: Juan dice que sólo dos estudiantes de física consiguieron beca.
Juan says that only two students of physics got grant
B1: No. Los estudiantes de física TODOS consiguieron beca.
no the students of physics all got grant
B2: No. Los estudiantes de física consiguieron beca TODOS.
B3: No. Los estudiantes de física consiguieron TODOS beca.
B4: *No. TODOS consiguieron beca los estudiantes de física.

That the subject in VSO [7a], SVO [7b] and VOS [7c] order can receive a contrastive focus interpretation has been independently noticed by Ordóñez (1997) and Zubizarreta (1998) —(a) is Zubizarreta's and (b,c) are adapted from there—.

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[4] This generalization, although useful for present purposes, is only partially valid. As shown in the interrogative (ii), which is equivalent to (i), the subject in final position does not receive a focus interpretation. Similarly, the restriction does not apply in context in which a focal element is in the preverbal domain, as illustrated in (iv). So the descriptive generalization is that if there is no focal element in preverbal position, a subject in final position following the direct object must be interpreted as focus.

(i) ¿A quién le ha dado María un sofá de cuero?
to whom clit. has given María a sofa of leather
(ii) ¿A quién le ha dado un sofá de cuero María?
(iii) A LUIS le ha dado María un sofá de cuero. (no a Pedro)
(iv) A LUIS le ha dado un sofá de cuero María. (no a Pedro)

[5] The floating quantification pattern of (6B1) should not be confused with the impossible case of preverbal floating quantification like (i) discussed in Sánchez (1999) in which the FQ is not focus. I will later explain the impossibility of (i).

(i) *Mis amigos todos adoran a María.

(7) a. Lavó NINA los platos (no María).
washed Nina the dishes (not María) (Zubizarreta 1998: 108, ex. 21a)
b. NINA lavó los platos (no María).
c. Lavó los platos NINA (no María).

C. Neutral (neither topic nor focus) FQs

As noted by Zubizarreta (1998), postverbal subjects cannot be sentence topics. The examples in (8) are Zubizarreta's (p. 164, footnote 25). Ordóñez (1997) also notes that postverbal subjects cannot be presupposed, as shown by the impossibility of the (8cB1) reply to the question in (8cA) —examples from Ordóñez 1997: 31—.

(8) a. Juan me escribió una carta. La carta llegó ayer.
Juan to-me wrote a letter. The letter arrived yesterday.
b. Juan me escribió una carta. ??Llegó la carta ayer.
c. A: ¿Qué compró Juan ayer?
what bought Juan yesterday
B1: #Ayer compró Juan un libro.
yesterday bought Juan a book
B2: Ayer, Juan compró un libro.

These facts indicate that in cases of postverbal non-final FQs in which some other constituent is narrow focus, the FQ itself is neither topic nor focus [9B1]. Using Ordoñez's (1997) terminology for postverbal subjects, let us call these instances of FQ which are interpreted neither as topic nor as focus *neutral* FQs —henceforth neutral constituents will appear in italics—. On the other hand, preverbal FQs are impossible with a neutral interpretation [9B2].

(9) A: ¿Qué consiguieron todos los estudiantes de física?
What got all the students of physics?
B1: Los estudiantes de física consiguieron *todos* BECA.
B2: *Los estudiantes de física *todos* consiguieron BECA.

*D. *Topic FQs*

We have seen that postverbal FQs cannot be topics. As shown in (10B1), FQs cannot receive a topic interpretation in preverbal position either —henceforth topics will be identified by means of underlining—. If we want to provide an answer to (10A) in which the quantifier and its associate are split, a pseudo-cleft [10c] or a configuration with the Q in neutral position must be provided.

(10) A: Me han dicho que los estudiantes de una asignatura han conseguido
To-me have-they told that the students of a subject have got
beca TODOS.
grant all
B1: *Sí. <u>Todos</u> creo que han conseguido beca LOS ESTUDIANTES DE
Yes all think-I that have got grant the students of
FÍSICA.
physics

B2: Sí. Los que han conseguido beca todos creo que son los estudiantes de física.
B3: Sí. Creo que han conseguido todos beca LOS ESTUDIANTES DE FÍSICA.

This is part of the general restriction observed in Rizzi (1997) by which quantifiers cannot be topics. This is confirmed by the impossibility of left dislocated quantifiers shown in (11).[6]

(11) a. *As for all, all my friends arrived late.
b. *As for all, I met all the students of physics.
c. As for my friends, they all arrived late.
d. As for my friends, I met them all.

The summary of the interpretation of subject-related FQs is given in (12) —IF = Information Focus, CF = Contrastive Focus, *n* = neutral—. In preverbal position FQs always receive a contrastive focus interpretation, in postverbal non-final position they can be neutral and contrastive foci, and in postverbal final position they can be information and contrastive foci.

(12) … AS **FQ$_{(CF)}$** verbal complex **FQ$_{(n/CF)}$** object **FQ$_{(IF/CF)}$**

2.1.2. Information-structural properties of the associate (AS)

A. Information Focus ASs

The AS in final position can be information focus. In that context, the FQ appears in neutral position [13B]. Notice that this example is interesting because it shows that the general assumption that a FQ cannot precede its AS is not correct.[7]

(13) A: ¿Qué estudiantes crees que conseguirán *todos* beca?
which students think-you that will-get all grant
B: Supongo que conseguirán *todos* beca LOS ESTUDIANTES DE FÍSICA.
suppose-I that will-get all grant the students of physics

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[6] Quantifiers alone cannot be topics probably due to the fact that we talk about entities, properties or events, but a quantifier is neither. As a matter of fact, if quantifiers are functional in nature, their behaviour in this respect is probably part of the more general impossibility of having functional elements as topics; the lexical category 'llegar' can be both topic (i) and focus (ii), but the functional category 'haber' can be focus (iv) but not topic (iii).

(i) Llegar, habríamos llegado A LAS CINCO.
arrive, have-would-we arrived at five
(ii) Habría LLEGADO a las cinco.
(iii) *Haber, habría LLEGADO.
(iv) HABRÍA llegado.

[7] This example should not be confused with the ungrammatical (i), noted by Jaeggli (1981), in which the postverbal AS is not focal. As a matter of fact, the impossibility of such examples led Baltin (1978) to the conclusion that the FQs can never precede their ASs, which Jaeggli (1981) explains on the basis of the idea put forward in Belletti (1979) that FQs and their ASs must satisfy antecedent-anaphor conditions. As we have just seen, this is not the case, as neutral FQs can precede their focal ASs.

(i) *Llegaron todos muy tarde los estudiantes.
arrived all very late the students

B. Contrastive focus ASs

The AS in final [14B1], preverbal [14B2] and postverbal non-final position [14B3] can be contrastive focus.

(14) A: Dice Luis que los estudiantes de química conseguirán todos beca.
says Luis that the students of chemistry get-will all grant
B1: Yo creo que conseguirán *todos* beca LOS ESTUDIANTES DE FÍSISCA (no los de química).
I think that get-will all grant the students of physics not those of chemistry
B2: Yo creo que LOS ESTUDIANTES DE FÍSICA conseguirán *todos* beca, (no los de química).
B3: Yo creo que conseguirán LOS ESTUDIANTES DE FÍSICA *todos* beca, (no los de química).

C. Topic ASs

Topic subject ASs —here in the matrix clause— can appear in construction with neutral [15a] or focus [15b] FQs.

(15) a. Los estudiantes de física yo creo que conseguirán *todos* BECA.
los estudiantes de física I think that get-will all grant
b. Los estudiantes de física yo creo que conseguirán beca TODOS.

*D. *Neutral ASs*

The AS cannot appear in neutral postverbal position [16]. Note that I am crucially assuming that preverbal subjects in Spanish are not in a neutral A-position. Many scholars have noticed the special behaviour of preverbal subjects in Spanish; Uribe-Etxebarria (1992) considers it an A'-position, Zubizarreta (1998) considers [Spec,IP] a syncretic category where topics, foci and emphatic elements land, and others, like Ordóñez (1997) and Etxepare and Uribe-Etxebarria (2005), maintain that Spanish preverbal subjects are in fact not in the specifier position of IP-related projections but in some dislocated position.

(16) *Conseguirán *los estudiantes de física* beca TODOS.

In (17) I summarize the distribution and interpretation of AS subjects; in preverbal position they can be contrastive foci and topics, and in postverbal final position they can be contrastive and information foci.

(17) … **AS**$_{\textbf{(CF/Top)}}$ … verbal complex object **AS**$_{\textbf{(IF/CF)}}$

2.1.3. Long distance dependencies

In (15) we have seen two examples in which the AS is in the matrix clause and the FQ in the embedded clause. As shown in (18), the variety of long distance dependencies in floating quantification is much richer. In (18a) both the focal FQ and

its topic AS appear in the matrix clause, and in (18b-e) the topic AS appears in the matrix clause and the focal FQ occupies different positions in the embedded clause. Especially interesting is the case of (18e), where the focal FQ is the only material following the complementizer 'que'.

(18) a. Los estudiantes de física TODOS creo que han conseguido beca.
the students of physics all think-I that have got grant
b. Los estudiantes de física creo que TODOS han conseguido beca.
c. Los estudiantes de física creo que han conseguido TODOS beca.
d. Los estudiantes de física creo que han conseguido beca TODOS.
e. Los estudiantes de física han conseguido beca creo que TODOS.
f. Los estudiantes de física creo que han conseguido *todos* BECA.

So the conclusion from this section is that Spanish floating quantification is sensitive to the topic-focus distinction, the obvious question being where those information-structural properties come from. A logical answer is that in all the examples considered at least one of the members of the quantification —sometimes both— appears in a syntactic position associated to the discourse-related categories topic and focus. In principle, this approach is neutral with respect to the debate about the original position of FQs. If FQs are adverbial elements, we could argue that the FQ in (19a,b) has been directly generated in the position it occupies, whatever it is. If we consider the FQs to always merge in a position in which they are adjacent to their associates, the original position of both the FQ and its AS for both (19a) and (19b) would be [Spec,VP], as shown in (20), which implies that either the Q or the AS —perhaps both— must have moved in the syntax to topic or focus positions. Within this view, the movement operations which are responsible for the split in (19) must be made explicit and, of course, these must conform to the properties of movement observed elsewhere in the grammar. Obviously, the ultimate goal is to account for the properties of floating quantification observed in this section.

(19) a. Los estudiantes de física TODOS consiguieron beca.
b. Consiguieron *todos* beca LOS ESTUDIANTES DE FÍSICA.
(20) … [$_{VP}$ [todos los estudiantes de física] [$_{V'}$ consiguieron beca]]

In what follows, I will assume a derivational analysis of floating quantification; I do not want to call it a stranding/residue analysis because I will propose that FQs are not merely stranded elements. I consider the asymmetry observed between (21) —where floating quantification is possible in the context of an argument— and (22) —where floating quantification associated to an adjunct DP is impossible— as additional evidence in support of a derivational approach to Spanish floating quantification.

(21) a. Todos los días de fiesta me gustan.
all the days of holiday to-me like
I like all public holidays.
b. Los días de fiesta TODOS me gustan.
c. Los días de fiesta me gustan TODOS.

(22) a. Todos los días de fiesta compro flores.
all the days of holiday buy-I flowers
b. *Los días de fiesta TODOS compro flores.
c. *Los días de fiesta compro flores TODOS.

On the other hand, I will show that the combination of a derivational theory of floating quantification with a cartographic approach to clausal architecture allows us to explain the major properties of floating quantification in Spanish.

3. Floating quantification as split

I will assume, as proposed in Irurtzun (2007), that if all the lexical items dominated by a node are positively specified for a given discourse-related feature, the node in question is positively specified for that feature and will then be 'active' in the relevant sense. Specifically, in the case of quantified DPs, if both the Q and its AS are positively specified for the feature [Foc], the DP as a whole will be [Foc] and will thus move to a focus position as a unit, triggering non-floating quantification [23a]. Similarly, because no lexical item of the DP subject in (23b) is positively specified for the features Top or F, the DP itself is negatively specified for those features and thus does not move from its original position in [Spec,VP].

(23) a. [TODOS LOS ESTUDIANTES$_{Foc}$]$_{Foc}$ creo que han llegado t_F tarde.
all the students think-I that have arrived late
b. Si consiguen [*todos los estudiantes de física*] beca …
if get-you all the students of physics grant …

I propose that the FQ phenomenon in Spanish arises when there is a mismatch in the discourse-related feature specification of the Q and its AS. Specifically, I argue that because individual lexical items can be specified for the features Foc(us) and Top(ic), nothing prevents the lexical items which form a DP from having different feature specifications. If this is the case, the DP as a whole will not be specified for discourse-related features and will thus be syntactically active only for checking/agreement relations against IP-related functional heads. But the constituents internal to that DP marked with Top or Foc features will have to undergo movement to positions in which they can be interpreted as topic and focus respectively, triggering the split known as Quantifier Float [24a,b]. This proposal is thus in the vein of the analysis proposed in Belletti (2005) for other split phenomena.

(24) a. [LOS$_{Foc}$ ESTUDIANTES$_{Foc}$]$_{Foc}$ creo que han llegado [*todos*] tarde.
b. [<u>los</u>$_{Top}$ <u>estudiantes</u>$_{Top}$]$_{Top}$ creo que han llegado tarde [TODOS$_{Foc}$]

Within this perspective, the impossibility of (25B) —and Sanchez's (1999) example considered in footnote 5—, where both the Q and its AS are [Top], comes as no surprise; floating quantification is not justified because there is no mismatch in the features of the Q and its AS.[8] Exactly the same happens in the impossible replies

[8] Sánchez's example in footnote 5 and (25B) should not be confused with the grammatical (i) where there is a pause between the DP and the quantifier, which is a case of left dislocation.

(i) Los estudiantes de física, todos van a conseguir BECA.

(B2,B3,B4), where both the Q and its AS are Foc and the split is thus not legitimate.[9]

(25) A: ¿Los estudiantes de física qué van a hacer todos?
B: *Los estudiantes de física todos van a conseguir BECA.
(26) A: Todos los estudiantes de química parecen haber conseguido beca.
B1: No. TODOS LOS ESTUDIANTES DE FÍSICA han conseguido beca.
B2: *No. LOS ESTUDIANTES DE FÍSICA TODOS han conseguido beca.
B3: *No. Han conseguido LOS ESTUDIANTES DE FÍSICA TODOS beca.
B4: *No. Han conseguido beca LOS ESTUDIANTES DE FÍSICA TODOS.

As for floating quantification, in the derivational literature it is generally assumed that Qs are inert elements and thus do not move, so that floating quantification is always the result of movement of the AS to the left leaving the quantifier stranded [27,28]. However, this is clearly not applicable to languages like Spanish. The strongest evidence that FQs move and are thus not inert elements is their presence in focus positions to which movement cannot have been triggered by their topic associates, as shown in the indirect object-related floating quantifications illustrated in (29).

(27) AS_a …… $[_{DP}$ FQ $t_a]$ ……

(28) [The students of physics]$_i$ will (all t_i) get a scholarship.
(29) a. A los estudiantes de física creo que A TODOS les va a dar
to the students of physics think-I that to all clit. go to give
beca el decano.
grant the Dean
'I think that the Dean is going to give a grant to all the students of physics'.
b. A los estudiantes de física creo que les van a dar beca A TODOS.
c. A los estudiantes de física creo que les van a dar A TODOS beca.

Considering that, as we have seen, Qs alone cannot be topics, the situations which are expected to trigger floating quantification are those in (30). In (30a) the Q(uantifier) will move to a position in which it gets a focus interpretation and the AS will move to a topic position. In (30b) the Q will move to a focal position and its AS, being negatively specified for both Top and F, will remain in a neutral position, i.e. it will genuinely be left stranded. In (30c) the AS will move to a focal position with Q stranded in a neutral position. In (30d) the AS will move to a topic position with Q remaining in a neutral position.

(30) a. $[[Q]_{Foc}\ [AS]_{Top}\ ]_{DP}$ b. $[[Q]_{Foc}\ [AS]\ ]_{DP}$
c. $[[Q]\ [AS]_{Foc}\ ]_{DP}$ d. $[[Q]\ [AS]_{Top}\ ]_{DP}$

[9] The incompatibility of predicate inversion and floating quantification observed in (3d) also receives a natural explanation; if both the Q and its subject AS are focus the subject as a unit must invert, triggering non-floating quantification [i].

(i) Inteligentes son TODOS LOS ESTUDIANTES DE FÍSICA.

Restricting ourselves to clause-mate floating quantification, the potential products of the patterns in (30) are illustrated in (31-34). The pattern in (30a) will result in (31a-c), with the topic AS in preverbal position and the focus FQ in final, preverbal, and postverbal non-final position respectively. The two products of (30b) in (32a-b) turn out to be impossible, i.e. the AS cannot be neutral independently of the position occupied by the focal FQ. The examples in (33a-c) are instantiations of (30c), and (34) is the product of the situation in (30d).

(31) a. Los estudiantes de física han conseguido beca TODOS.
b. Los estudiantes de física TODOS han conseguido beca.
c. Los estudiantes de física han conseguido TODOS beca.
(32) a. *TODOS han conseguido *los estudiantes de física* beca.
b. *Han conseguido *los estudiantes de física* beca TODOS.
c. *Han conseguido *los estudiantes de física* TODOS beca.
(33) a. Han conseguido *todos* beca LOS ESTUDIANTES DE FÍSICA.
b. LOS ESTUDIANTES DE FÍSICA han conseguido *todos* beca.
c. Han conseguido LOS ESTUDIANTES DE FÍSICA *todos* beca.
(34) Los estudiantes de física han conseguido *todos* BECA.

Before we concentrate on the analysis of (31-34), let us consider the ungrammaticality of three combinations in which the FQ precedes its AS. Remember that we have shown in (33a) there is no general ban on FQs preceding their ASs, so we must find an independent explanation for the deviance of these examples. The impossibility of (35a) is due to the fact that nothing can be neutral in preverbal position in Spanish, and (35b) is bad because Qs alone cannot be topics.

(35) a. **Todos* han conseguido beca LOS ESTUDIANTES DE FÍSICA.
b. *Todos han conseguido LOS ESTUDIANTES DE FÍSICA beca.

The impossibility of having focus FQs preceding their topic AS [36] is part of the more general restriction observed in Rizzi (1997), independently illustrated in (37b), by which foci cannot precede topics.

(36) *TODOS creo que los estudiantes de física han conseguido beca.
(37) a. Al Decano creo que UN RELOJ le han regalado los estudiantes de física.
To-the Dean think-I that a watch to-him have given the students of physics
b. *UN RELOJ creo que al Decano le han regalado los estudiantes de física.

Now, as I am assuming a derivational theory of floating quantification, I have to be explicit about two issues: the first is the position associated to each information-structural category, and the second is the way in which movement takes place.

3.1. The landing site of FQs and their ASs

Let us consider the first question. I will assume that topic ASs, which always appear in preverbal position, sit in the specifier position of Topic Phrase (TopP) in the

sense of Rizzi (1997). The issue is a lot more complex when we consider the position of focal FQs and ASs. As shown in (31) and (33), these can occur in preverbal, postverbal non-final, and absolute final position. The preverbal left-peripheral focal position can be easily identified with [Spec,FocP] of the left periphery. Focal FQs and ASs in postverbal non-final position are good candidates for the specifier position of a low-peripheral focus position in the sense of Belletti (2004). If this is correct, subjects in postverbal non-final position are not always in situ, against what has traditionally been assumed.

As for the position occupied by focal ASs and FQs in final position two possibilities come to my mind: either they move to some [Spec,FocP] position with subsequent movement of the remnant to a higher left dislocated position —presumably [Spec,TopP]— (see Etxepare and Uribe-etxebarria 2005), or those are in-situ focal elements which end up being in final position as a result of scrambling of the object to the specifier of a functional projection to the left of the base-generation position of the subject as in Ordóñez (1997, 2007), or as a result of p(rosodically-motivated)-movement of the non-focal material as in Zubizarreta (1998). The two alternatives considered have in common that some material which is not focus moves past the focus constituent, but they differ in that the focal element moves in the former but not in the latter.

Let us now turn to the position of neutral FQs in postverbal position. I consider that the neutral position occupied by postverbal subject-related FQs of transitive clauses is the same as the position occupied by post-verbal non-focal subjects: [Spec,vP] (see Uribe-Etxebarria 1992, Ordóñez 1997 and Zubizarreta 1998, among others).

With this background, the movement operations which are expected to result in floating quantification are illustrated in (38). In (38a) both the topic Q and the focus AS, having different discourse-related features, move from within the DP to different specifier positions. In (38b) the AS, being Top or Foc, moves from the DP, and the Q, being neither Top nor Foc, remains in situ.

(38) a. $\underline{AS}_a$ FQ_q …… $[_{DP}\ t_q\ t_a]$ ……

b. AS_a …… $[_{DP}\ \textit{FQ}\ t_a]$ ……

c. *FQ_a …… $[_{DP}\ t_a\ \textit{AS}\ ]$ ……

The third logical option illustrated in (38c), where a focus FQ moves from DP leaving a neutral AS stranded, is in fact not an option, as can be seen in the impossibility of (29a) whose simplified structure is given in (39). Notice that the deviance here is not due to independently motivated information-structural restriction, as the co-occurrence of neutral subjects with focus-fronted constituents is perfectly possible in other contexts [40]. We cannot blame the precedence relation between the

FQ and its AS, as shown by the grammatical (33a). All this is thus an indication the problem in (38c) resides in the nature of the movement operation itself, not the output obtained.

(39) *[TODOS]$_i$ han conseguido [t$_i$ *los estudiantes de física*] beca.
(40) a. ESTA MAÑANA me ha devuelto *tu hermano* el dinero.
this morning to-me has given back your brother the money
b. DOS MANUALES DE SINTAXIS me dio *Luis* ayer.
two handbooks of syntax to-me gave Luis yesterday

So the two questions that we must address now are those of (41).

(41) a. Why can the Q move alone, and thus float, in contexts in which its AS is topic —(38a) illustrated in (42a)— but not in contexts in which its AS is neutral —(38c) illustrated in (39)—?
b. Why is movement of ASs not subject to an equivalent restriction, i.e. why can focus [42b] and topic [42c] ASs move alone in contexts of neutral Qs.
(42) a. [Los estudiantes de física]$_i$ creo que [TODOS]$_j$ han conseguido [t$_j$ t$_i$] beca.
the students of physics think-I that all have got grant
b. [LOS ESTUDIANTES DE FÍSICA]$_i$ han conseguido [*todos* t$_i$] beca.
c. [Los estudiantes de física]$_i$ han conseguido [*todos* t$_i$] BECA.

In order to address these questions it is necessary to consider the nature of pied-piping. As shown in the descriptive generalization (43) taken from Horvath (2006), pied-piping of a phrase XP takes place if the feature triggering movement is on the specifier of or the head of XP, but not if it is on a complement position of X. To illustrate this, let us consider the wh-movement [44] and focus fronting [45] cases taken from Horvath (2005). Pied-piping of the DP takes place in (44a), where the wh-feature is on the head 'which' and on the specifier 'whose', but not in (44b) where the wh-feature is on the complement 'about whose behaviour'. The same contrast is observed in negative inversion in English, where pied piping of the DP in italics takes place when the negative feature is on the specifier —'no young girl' in (45a)— or on a head —'no' in (45c)—, but not when it is contained in a complement position inside the DP —'of no young girl' in (45b)—.

(43) Given a phrase XP, (Horvath 2006: 588)
a. the head X and the specifier YP are pied-pipers for XP;
b. complements of X and modifiers (adjuncts) are not pied-pipers for XP.
(44) a. I wonder {*which stories*/*whose behavior*} Mary disliked. (Horvath's (14))
b. *?I wonder {*stories about whose behavior*} Mary disliked.
(45) a. [*No young girl*]*'s participation in the game* can they permit. (Horvath's (17,18))
b. **The participation* [*of no young girl*] *in the game* can they permit.
c. *No articles by such a reporter* will they agree to publish.

Independently of whether floating quantifiers occupy the specifier position of DP or whether they are heads which take DP as their complement, I propose that [Foc] Qs, when moving to the specifier position of FocP, obligatorily pied-pipe ASs which are not positively specified for different discourse-related features. The consequence of this is that a [Foc] Q will never pied-pipe a topic AS, but it will pied-

pipe a neutral AS.[10,11] The floating quantification configuration in (39) is thus not obtained simply because the [Foc] Q obligatorily pied-pipes its neutral AS, triggering non-floating quantification [46]. As for the impossible (32b,c), repeated below for convenience, the same explanation applies; whatever the position occupied by the quantifier in these cases, it should have pied-piped its neutral AS. In situations in which the AS is topic, the FQ will not induce pied-piping of the DP because it contains information-structure related features different from the one which triggers pied-piping. All this provides an answer for question (41a) above. As for the answer to question (41b), i.e. why the AS can move alone independently of whether the Q is neutral or not, the answer is that the AS, being neither a head nor a specifier, never induces pied-piping of (the maximal projection dominating it and) the Q.

(46) $[_{FocP}$ [TODOS *los estudiantes de física*]$_i$ $[_{IP}$ han conseguido $[_{VP}$ t_i beca]]]
(32) b. *Han conseguido *los estudiantes de física* beca TODOS. (no pied-piping)
c. *Han conseguido *los estudiantes de física* TODOS beca. (no pied-piping)

Now I turn to the analysis of the possible cases of floating quantification observed above, concentrating first on the examples where the FQ and its AS are clause-mates. In (47a), the simplified structure of (31b), 'TODOS' first moves to [Spec,FocP] of the high periphery but does not pied-pipie its AS, which is [+Top] and later moves to the [Spec,TopP] of the high periphery. In (47b), the structure of (31c), 'TODOS' first moves to [Spec,FocP] of the low periphery and then 'los estudiantes de física' moves to the [Spec,TopP] of the high periphery. In (47c), the derivation of (34), 'los estudiantes de física' moves to [Spec,TopP] of the high periphery and the neutral FQ remains in situ.

(47) a. $[_{TopP}$ [Los estudiantes de física]$_j$ $[_{FocP}$ [TODOS]$_i$ $[_{IP}$ han conseguido $[_{vP}$ [t_i t_j]beca]]]]
b. $[_{TopP}$ [Los estudiantes de física]$_j$ $[_{IP}$ han conseguido $[_{FocP}$ [TODOS]$_i$ $[_{vP}$ [t_i t_j] beca]]]]
c. $[_{TopP}$ [Los estudiantes de física]$_j$ $[_{IP}$ han conseguido $[_{vP}$ [*todos* t_j] BECA]]]

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[10] There have been different proposals concerning the syntactic relation between quantifiers and the elements they quantify over. In Sportiche (1998) floating quantifiers are taken to be adjoined to DP. Abney (1987) analyzes them as specifiers of DP, and Shlonsky (1991) argues that they are functional heads which take DP as their complement. The combination of the generalization in (43) and the analysis of FQs as pied-pipers presented here is not compatible with Sportiche's proposal, so FQ would be either heads or specifiers. As noted by Giusti (p.c.), this is related to the issue of the property responsible for the 'floatability' of some quantifiers but not others, which she relates to the 'external' versus 'internal' character of the quantifier. See Cardinaletti and Giusti (2006) for a detailed analysis of the syntax of quantified phrases.

[11] In an earlier version of this paper I assumed that a focus Q always pied-pipes its AS, so that when the AS is topic it later undergoes movement from the pied-piped phrase to a more left peripleral topic position (i). First of all, this is problematic because extraction would be taking place from a moved phrase. But even if we assumed this type of movement to be legitimate —see the English examples in (ii) that many native speakers of English consider gtammatical—, allowing the pattern of movement in (i) for Spanish would wrongly predict the grammaticality of (iii).

(i) … as$_{i\ \ldots}$ [FQ t_i]$_j$ … t_j …
(ii) [Which author]$_j$ did you say that [pictures of t_i]$_j$ you would never buy t_j ?
(iii) *[De Luis]$_i$ yo creo que [A UNA HERMANA t_i]$_j$ conozco t_j.

The derivation of (33b) is as illustrated in (48a), where 'LOS ESTUDIANTES DE FÍSICA' undergoes movement to [Spec,FocP] of the high periphery and the FQ remains in situ. In (48b), the representation of (33c), 'LOS ESTUDIANTES DE FÍSICA' undergoes movement to [Spec,FocP] of the low periphery and the neutral FQ remains in situ. This case is interesting, as it constitutes evidence that focal subjects in postverbal non-final position are not in situ; if that were the case, the floating quantification pattern in (48b) would be impossible.

(48) a. $[_{FocP}$ [LOS ESTUDIANTES DE FÍSICA]$_j$ $[_{IP}$ han conseguido $[_{vP}$ [*todos* t_j] beca]]]
b. $[_{IP}$ Han conseguido $[_{FocP}$ [LOS ESTUDIANTES DE FÍSICA]$_j$ $[_{vP}$ [*todos* t_j] beca]]]

3.2. Focal FQs and ASs in final position

In (49) we have the two instances of floating quantification in which the [Foc] FQ and AS are in final position. The analysis of these is more complex and different alternatives must be considered. In the general case, subjects in final position like (50a) can be approached in four different ways. Torrego (1984) argues that they are the result of adjunction to the right [50b]. Ordóñez (1997) proposes that they are in [Spec,VP] but end up being in final position as a result of scrambling of the object to some functional projection below the landing position of the verb [50c], and for Zubizarreta (1998), too, they are in situ but their final position is the result of p(rosodically motivated)-movement of the material which initially appears after the subject; specifically she proposes that VP adjoins to vP [50d]. An alternative analysis, defended for some cases in Etxepare and Uribe-Etxebarria (2005), would be that in which the subject in final position is in fact in the specifier position of the FocP of the left periphery with subsequent movement of the remnant to the specifier of TopP [50e]. As I assume Kayne's (1994) ban on movement to the right, I will only consider the alternatives in (50c-e).

(49) a. <u>Los estudiantes de física</u> han conseguido beca TODOS.
b. Han conseguido *todos* beca LOS ESTUDIANTES DE FÍSICA.

(50) a. Consiguieron beca todos los estudiantes de física.
b. $[_{IP}$ t_i consiguieron$_v$ $[_{VP}$ $[_{VP}$ t_v beca] [todos los estudiantes de física]$_i$]]]
c. $[_{IP}$ consiguieron$_v$ $[_{XP}$ [beca]$_i$ $[_{VP}$ [todos los estudiantes de física] t_v t_i]]]
d. $[_{IP}$ consiguieron$_v$ $[_{vP}$ $[_{VP}$ t_v beca]$_i$ $[_{vP}$ [todos los estudiantes de física] t_i]]]
e. $[_{TopP}$ $[_{IP}$ consiguieron$_v$ $[_{VP}$ t_v beca]]$_j$ $[_{FocP}$ [todos los estudiantes de física]$_i$ t_j]]

If we assume Ordóñez (1997), the derivation of (49a) would be as in (51a), where the AS has moved to [Spec,TopP] of the matrix clause and the DO 'beca' has scrambled to the left of [Spec,VP] occupied by 'TODOS'. However, deriving (49b) is impossible within his approach: if, as Ordóñez assumes, the subject 'todos LOS ESTUDIANTES DE FÍSICA' stays in situ, scrambling of the object would never result in the surface order in which the DO 'beca' intervenes between the Q and its AS.

Let us consider the consequences of assuming Ordóñez's (2007) proposal that postverbal subjects are in [Spec,VP] in the VOS order, with the object obligatorily moved to the specifier of a functional projection (FP) above FocP of the low periphery [52a], and in the specifier position of SubjP, a projection which contains an EPP-

feature located between the landing site of the verb and the position occupied by the moved object, in the VSO order. If this is the correct analysis, (49b) could be derived assuming that the neutral FQ has moved to [Spec,SubjP] leaving 'los estudiantes de física' stranded in [Spec,VP]. But the problem with this solution is that the Q should pied-pipe its AS even if Q is neutral and AS is [Foc], as this is an instance of A-movement not driven by discourse-related features but by the EPP-feature in the head of SubjP.

(51) a. $[_{TopP}$ [los estudiantes de física]$_j$ $[_{IP}$ han conseguido$_v$ $[_{XP}$ [beca]$_i$ $[_{VP}$ [todos t_j] t_v t_i]]]]
b. Han conseguido$_v$ $[_{SubjP}$ *todos*$_q$ $[_{FP}$ beca$_o$ $[_{VP}$ [t_q los estudiantes de física] t_v t_o]]]

(52) **VOS:** $[_{TP}$ **V**$_v$ $[_{SubjP}$ $[_{FP}$ **O**$_o$ $[_{FocP}$ $[_{VP}$ **S** t_v t_o]]]]] (Ordóñez 2007)
VSO: $[_{TP}$ **V**$_v$ $[_{SubjP}$ **S**$_s$ $[_{FP}$ **O**$_o$ $[_{FocP}$ $[_{VP}$ t_s t_v t_o]]]]]

Assuming Zubizarreta's (1998) analysis, (49a) could be derived via movement of the AS to [Spec,TopP] of the left periphery and p-movement of VP adjoining to vP [53a]. As in Ordóñez's approach, (49b) cannot be derived if the subject '*todos* los estudiantes de física' is assumed to be in situ, as p-movement of vP would never break the adjacency between the Q and its AS. It could only be derived via movement of 'los estudiantes de física' to [Spec,FocP] of the low periphery and p-movement of the vP adjoining to FocP [53b]. But then in order to be coherent we should revise the derivation for (49a) suggested in (53a) along the lines of (53c), where 'los estudiantes de física' is in [Spec,TopP] of the left periphery, 'todos' is in [Spec,FocP] of the VP-periphery and the vP has undergone p-movement adjoining to FocP.

(53) a. $[_{TopP}$ [los estudiantes de física]$_j$ $[_{IP}$ han conseguido$_v$ $[_{vP}$ $[_{VP}$ t_v beca]$_i$ $[_{vP}$ [todos t_j] t_i]]]]
b. $[_{IP}$ han conseguido$_v$ $[_{FocP}$ $[_{vP}$ t_v [*todos* t_j] beca]$_p$ $[_{FocP}$ [los estudiantes de física]$_j$ t_p]]]
c. $[_{TopP}$ [los estudiantes de física]$_j$ $[_{IP}$ han conseguido$_v$ $[_{FocP}$ $[_{vP}$ [t_f t_j] beca]$_p$ $[_{FocP}$ [todos]$_f$ t_p]]]]

A r-(emnant)movement analysis as in Etxepare and Uribe-Etxebarria (2005) could derive (49a) in two possible ways. As shown in (54a), 'todos' might have moved to [Spec,FocP] of the left periphery with subsequent r-movement of the IP 'los estudiantes de física han conseguido beca' to [Spec,TopP] of the left periphery. Alternatively, it might be derived as in (54b), where 'todos' is in [Spec,FocP] of the left-periphery, 'los estudiantes de física' has undergone movement to a topic position in the left periphery followed by r-movement of the IP 'han conseguido todos beca' to another topic position in the left periphery. (49b) could be derived as in (54c), where 'los estudiantes de física' has moved to [Spec,FocP] of the left periphery and the remnant has moved to [Spec,TopP] of the left periphery.

(54) a. $[_{TopP}$ [[los estudiantes de física]$_a$ han conseguido [t_f t_a] beca]$_r$ $[_{FocP}$ [todos]$_f$ t_r]]
b. $[_{TopP}$ [los estudiantes de física]$_a$ $[_{TopP}$ [han conseguido [t_f t_a] beca]$_r$ $[_{FocP}$ [todos]$_f$ t_r]]]

c. [$_{TopP}$ [han conseguido [todos t_a] beca]$_r$ [$_{FocP}$ [LOS ESTUDIANTES DE FÍSICA]$_f$ t_r]]]]

Etxepare and Uribe-Etxebarria (2005) provide the examples in (55) and (56) which independently justify the remnant movement strategies illustrated in (54a) and (54b) respectively. Interestingly, r-movement as illustrated in (54a) and (55a) is also the only way of deriving the instance of floating quantification considered in (18e), repeated in (57) for convenience.

(55) a. Tu hermano ha comprado creo que UN TOYOTA.
your brother has bought I-think that a Toyota
b. [$_{TopP}$ [$_{IP}$ Tu hermano ha comprado t_i]$_j$ Top^o [creo que [$_{FocP}$ [UN TOYOTA]$_i$ F^o t_j]]]

(56) a. Tu padre ha comprado ¿QUÉ?
your father has bought what
b. [$_{TopP}$ tu padre Top^o [$_{TopP}$ [$_{TP}$ ha comprado t_i]$_j$ Top^o [$_{FocP}$ qué$_i$ F^o t_j]]]

(57) a. Los estudiantes de física han conseguido beca creo que TODOS.
the students of physics have got grant I-think that all
b. [$_{TopP}$ [$_{IP}$ [Los estudiantes de física]$_i$ han conseguido [t_f t_i] beca]$_j$ Top^o creo que [$_{FocP}$ [TODOS]$_f$ F^o t_j]]

Thus, the discussion so far has shown that in order to account for the paradigms of floating quantification in which either the FQ or its AS receive a focus interpretation in absolute final position, movement of the focal element to [Spec,FC] of the left- or VP-periphery must be assumed. This is not an unwelcome result, as it is consistent with the mechanisms that we have utilized when explaining the other cases of floating quantification in which one of the members of the quantification was focus. Now, whether the operation responsible for the absolute final position of the focal element —not only in contexts of floating quantification but in the general case— is p-movement of r-movement is an open question.

3.3. Floating quantification and the position of neutral postverbal subjects

So far the analysis of the different floating quantification patterns presented here has crucially relied on the idea that neutral FQs sit in [Spec,VP], a direct consequence of assuming with Ordóñez (1997) and Zubizarreta (1998) that postverbal subjects in the general case are in situ. However, when discussing the cases in (49) we have considered Ordóñez's (2007) proposal that there are two neutral positions for subjects below the surface position of the verb: [Spec,SubjP] and [Spec,VP]. If this is correct, we would perhaps expect there to be more possibilities of floating quantification in the postverbal domain, as in that scenario the AS could in principle move from [Spec,VP] to [Spec,SubjP] leaving the Q stranded [58].

(58) … **V** [$_{SubjP}$ **AS$_i$** Subj [… [$_{VP}$ **FQ** t_i]]]

As a matter of fact, Ordóñez (2007) considers the floating quantification data in the postverbal domain provided in (59), which he considers to be acceptable, as evidence supporting the existence of (movement to) [Spec,SubjP]. Floating quantification in the postverbal domain, he claims, can only be possible if there is a position, [Spec,SubjP], to which the subject can move leaving the Q stranded in its original position. Those sentences are severely deviant to my ears —hence the judgement assigned—, and Ordóñez himself notes that some speakers consider them degraded or ungrammatical. Ordóñez ascribes the deviance of these sentences for some speakers to the fact that in those dialects FQs are not allowed in an in situ position inside the VP. This cannot be the correct explanation, as we have seen above many cases of FQs in postverbal neutral position which are perfectly natural for the speakers who reject (59).

(59) a. *Entonces trataban *mis vecinos* cuidadosamente *ambos* a su hija.
then treated my neighbours carefully both their daughter
b. *Por no hablar *los profesores* pacientemente *todos* a sus respectivos
for not speaking the professors patiently all to their respective
estudiantes.
students

Notice also that Ordóñez's (1997) examples of impossible floating quantification in the postverbal domain of questions like (60), which he takes as supportive of his claim that postverbal subjects in questions are not in [Spec,IP] but in a lower position, should in fact be possible within his (2007) proposal that movement of the subject to [Spec,SubjP] can trigger floating quantification, as (60) would have the representation in (61).

(60) *[$_{CP}$ ¿De dónde vienen estos turistas [$_{VP}$ todos]]]? (Ordóñez, 1997: 140)
from where come those tourists all
Where do all those tourists come from?
(61) *[$_{CP}$ ¿De dónde vienen [$_{IP}$ [$_{SubjP}$ estos turistas$_i$ [$_{VP}$ todos t$_i$]]]]?

The problem now is thus why floating quantification in these cases is impossible, assuming, as I do, that the rest of the evidence that Ordóñez provides is enough to justify the presence of (subjects in) SubjP. But the impossibility of (59) and (60) receives a natural explanation under the theory of floating quantification I am defending here; the split is impossible because in the cases under consideration the Q and its AS do not differ in their discourse-related feature composition —as a matter of fact neither of them is [Top] or [Foc]— and must thus move as a unit, triggering non-floating quantification. The impossibility of floating quantification in these contexts thus does not undermine Ordóñez's argument in support for two A-positions for postverbal subjects, as it is independently explained on the basis of the conditions imposed on the split of the Q and its AS. So, assuming Ordóñez (2007), in the cases of neutral FQs considered above it might well be the case that these are in [Spec,SubjP], and not in [Spec,VP] as I have been assuming.

3.4. Long distance dependencies

In the long-distance dependencies considered above and repeated in (62), the AS is in all cases in [Spec,TopP] of the left periphery of the main clause, and the FQ is in [Spec,FocP] of the left periphery of the main clause in (62a), in [Spec,FocP] of the left periphery of the embedded clause in (62b), in [Spec,FocP] of the VP-periphery of the embedded clause in (62c), in [Spec,FocP] of the left or VP periphery followed by p- or r-movement in (62d), and in [Spec,SubjP] or [Spec,VP] in (62e).

(62) a. Los estudiantes de física TODOS creo **que** han conseguido beca.
the students of physics all think-I that have got grant
b. Los estudiantes de física creo **que** TODOS han conseguido beca.
c. Los estudiantes de física creo **que** han conseguido TODOS beca.
d. Los estudiantes de física creo **que** han conseguido beca TODOS.
e. Los estudiantes de física creo **que** han conseguido *todos* BECA.

There are even more complex and interesting cases of long distance floating quantification in which a FQ and AS generated in the most embedded clause of a three-clause sentence appear in [Spec,FocP] of the first embedded clause and in [Spec,TopP] of the matrix clause respectively [63a,b]. These patterns support the analysis proposed so far.

(63) a. Los estudiantes de física creo que TODOS dice Luisa que han.
the students of physics think-I that all says Luisa that have
conseguido beca
got grant
b. [$_{CP1}$ [$_{TopP}$ los estudiantes de física$_i$ creo que [$_{CP2}$ [$_{FocP}$ TODOS$_j$ dice Luisa [$_{CP3}$ que han conseguido [t_j t_i] beca]]]]]

3.5. Direct and indirect object-related floating quantification

The basic properties of direct and indirect object-related floating quantification are similar to those of subject-related floating quantification. In (64) there are examples of direct object-related floating quantification. Focal direct object-related FQs can surface in four different positions, as they can occur with subjects in final position [64a,b], postverbal medial position [64c] and preverbal position [64d]. In (64a) the subject could be in [Spec,VP] or [Spec,SubjP], in (64b) the subject could only be in [Spec,VP] if, as suggested in Ordóñez (2007), [Spec,SubjP] is higher than [Spec,FocP], and in (64c) it would be in [Spec,SubjP].

(64) a. A los estudiantes de física A TODOS les ha felicitado el decano.
to the students of physics to all clit. has congratulated the dean
'The Dean has congratulated all the students of physics.'
b. A los estudiantes de física les ha felicitado A TODOS el decano.
c. A los estudiantes de física les ha felicitado el decano A TODOS.
d. A los estudiantes de física el decano les ha felicitado A TODOS.
e. A los estudiantes de física les ha felicitado *a todos* EL DECANO.
f. *A los estudiantes de física a todos les ha felicitado EL DECANO.

g. *A TODOS les ha felicitado el decano *a los estudiantes de física*.
h. *A TODOS les ha felicitado *a los estudiantes de física* el decano.
i. A LOS ESTUDIANTES DE FÍSICA les ha felicitado *a todos* el decano.
j. *El decano les ha felicitado A LOS ESTUDIANTES DE FÍSICA *a todos*.
k. Les ha felicitado *a todos* el decano A LOS ESTUDIANTES DE FÍSICA.

As for indirect object-related floating quantification, the relevant patterns are those of (65), which can only be explained on the basis of the approach to floating quantification presented here combined with Ordóñez's (2007) analysis of postverbal subjects.

(65) a. A los estudiantes de física A TODOS les ha dado beca el decano.
to the students of physics to all clit. has given grant the dean
'The Dean has given a grant to all the students of physics.'
b. A los estudiantes de física A TODOS les ha dado el decano beca.
c. A los estudiantes de física les ha dado A TODOS beca el decano.
d. A los estudiantes de física les ha dado A TODOS el decano beca.
e. A los estudiantes de física les ha dado beca A TODOS el decano.
f. A los estudiantes de física les ha dado beca el decano A TODOS.
g. A los estudiantes de física el decano les ha dado beca A TODOS.
h. A los estudiantes de física el decano les ha dado A TODOS beca.
e. A los estudiantes de física les ha dado el decano beca A TODOS.
f. A los estudiantes de física les ha dado el decano A TODOS beca.
e. A los estudiantes de física les ha dado *a todos* beca EL DECANO.
f. A los estudiantes de física les ha dado beca *a todos* EL DECANO.
g. *A los estudiantes de física a todos les ha dado beca EL DECANO.
h. *A TODOS les ha dado beca el decano *a los estudiantes de física*.
i. *A TODOS les ha dado beca *a los estudiantes de física* el decano.
j. *A TODOS les ha dado el decano beca *a los estudiantes de física.*
k. A LOS ESTUDIANTES DE FÍSICA les ha dado beca *a todos* el decano.
l. A LOS ESTUDIANTES DE FÍSICA les ha dado *a todos* beca el decano
m. *A LOS ESTUDIANTES DE FÍSICA les ha dado el decano beca *a todos*.
n. El decano les ha dado A LOS ESTUDIANTES DE FÍSICA *a todos* beca.
o. El decano les ha dado *a todos* beca A LOS ESTUDIANTES DE FÍSICA.

4. Conclusion

Asking ourselves why the floating quantifier phenomenon exists has allowed us to understand the distribution of Spanish FQs and to determine their structural position. I have shown that floating quantification is triggered by movement of the floating quantifier and its associate to different syntactic positions as a result of the mismatch in their information structure-related feature composition. We have also seen that, contrary to what has been assumed in the literature, FQs are not inert elements.

The economy issue does not arise within the present account; floating and non-floating quantification derivations do not compete in terms of economy because they are the result of numerations containing lexical items with different feature-compo-

sition. As expected, then, floating quantification is not optional, i.e. the movement operations which result in floating quantification are obligatory. Additionally, these findings lend support to the theory of focus in which all focal elements are in syntactically-marked focus positions

Important questions remain to be answered. The first is whether the core of this proposal can also explain the properties of floating quantification in other free word order languages and the discontinuous constituent phenomena of so-called 'non-configurational' languages. Also an important issue is what triggers floating quantification in English-type languages in which the phenomenon does not seem to be sensitive to information-structure. But these are topics for other papers.

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