

To Float or Not to Float

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In the literature on the Floating Quantifier (FQ) phenomenon, the debate has mainly centred on the problem of the syntactic distribution and the status of FQs, and the main 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 of movement (Sportiche (1988), among others) or adverbial in character (Bowers (1993), among others). In this talk, I will approach the phenomenon concentrating on its rationale, i.e. 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.

In the first part of the talk I will provide evidence that floating quantification in Spanish is sensitive to information structure, and then I will propose that the FQ phenomenon arises when there is a mismatch in the discourse-related feature specification of the Q(antifier) and its ‘AS(sociate)’. Specifically, adopting a version of feature-based approaches to Topic and Focus (as in Rizzi (1997) and Irurtzun (2007), among others), I will argue that because individual lexical items can be identified with the features Foc(us) and Top(ic), nothing prevents the lexical items which constitute a DP from having different (perhaps contradictory) feature specifications. When this is the case, as in (1), the DP as a whole, not being specified for discourse-related features, will only be syntactically active for checking/agreement relations against IP-related functional heads, but the constituents internal to that DP marked with Top and Foc features will have to move to syntactic positions associated with these discursive categories, triggering the split known as Quantifier Float. This approach is thus in the vein of the analysis proposed in Belletti (2005) for other split phenomena.

- (1) [[todos]_{Foc} [los_{Top} estudiantes_{Top} de_{Top} física_{Top}]_{Top}]_{DP}
 all the students of physics

My proposal crucially relies on the following premises. In principle, for each item three possibilities exist concerning Top/Foc marking: marked as Top(ic), as Foc(us) or not marked. So for the pair formed by a Q and its AS the combination of those features would result in the marking situations of (2). Those in (2a-e), where Q and AS have different feature specifications, are expected to trigger floating quantification, and those in (2f-h), where there is no mismatch, will trigger non-floating quantification. Nevertheless, I will claim that (2d-e) do not arise due to the independently observed fact (Rizzi, 1997) that quantifiers alone cannot be topics. Although I assume a derivational approach to the FQ phenomenon, the model presented here crucially departs from standard derivational analyses in that FQs here are argued to trigger movement and are thus not mere residues of movement of their ASs.

- (2) a. [[Q]_{Foc} [AS]_{Top}]_{DP} b. [[Q]_{Foc} [AS]]_{DP} c. [[Q] [AS]_{Foc}]_{DP} d. [[Q]_{Top} [AS]_{Foc}]_{DP}
 e. [[Q]_{Top} [AS]]_{DP} f. [[Q]_{Top} [AS]_{Top}]_{DP} g. [[Q]_{Foc} [AS]_{Foc}]_{DP} h. [[Q] [AS]]_{DP}

Assuming some version of the Split CP Hypothesis (Rizzi (1997), Belletti (2004)), constituents marked with the features Foc and Top will be assumed to move to the specifier of Foc and Top heads respectively. I argue that [+Foc] Qs, which I assume to be either heads taking AS as their complement or specifiers of DP, will pied-pipe their QP when moving to [Spec,FocP] if no element inside the QP contains discourse-related features different from those of Q. Focal and topic ASs never pied-pipe the QP which dominates them due to the fact

that they are in the complement position of QP. That movement driven by features contained in the head or the specifier of a phrase XP, but not in the complement position of X, induces pied-piping of XP has been independently observed in Horvath (2005, 2006). With this background, let us consider the Spanish examples of possible and impossible floating quantification illustrated in (3-7) where underlining, capitalization and italics indicate topic, focus and neutral –i.e. neither topic nor focus- interpretation respectively.

In (3a), the focal Q ‘TODOS’ first moves to [Spec,FocP] of the high periphery but does not pied-pipe the whole DP because DP contains material, the AS, which is [+Top]. The AS later moves to the [Spec,TopP] of the high periphery. In (3b), the focal Q ‘TODOS’ first moves to [Spec,FocP] of the low periphery in the sense of Belletti (2004) and then the AS ‘los estudiantes de física’ moves to the [Spec,TopP] of the high periphery. In (3c) the topic AS ‘los estudiantes de física’ moves to [Spec,TopP] of the high periphery and the neutral Q remains in situ. In (4a) the focal AS ‘LOS ESTUDIANTES DE FÍSICA’ undergoes movement to [Spec,FocP] of the high periphery without pied-piping the neutral Q, which remains in situ. In (4b) the focal AS ‘LOS ESTUDIANTES DE FÍSICA’ moves to [Spec,FocP] of the low periphery and the neutral Q 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, this floating quantification pattern would be impossible.

In the present context, the floating quantification configuration in (5a) is not obtained simply because the [Foc] Q obligatorily pied-pipes its neutral AS, triggering non-floating quantification [5b]. As for the impossible (5c,d) the same explanation applies; whatever the position occupied by the focal Q in these cases, it should have pied-piped its neutral AS.

The FQ pattern in (6a) where both the Q and its AS are topics is impossible because in this context the whole DP (or QP if Q is a head) is Top and will thus move as a unit, triggering non-floating quantification [6b]. As for the instances in which focal FQs [7a] and ASs [7b] appear in postverbal final position, I will show, after considering different alternatives, that those can be better analyzed as involving movement of the focal element to [Spec,FocP] of the high periphery followed by remnant movement of the IP to [Spec,TopP] of the high periphery, in the line of the analysis proposed in Etxepare and Uribe-Etxebarria (2005) for wh in-situ in Spanish.

- (3) a. [_{TopP} [Los estudiantes de física]_j [_{FocP} [TODOS]_i [_{IP} han conseguido [_{VP} [<sub>t_i t_j] beca]]]]]
 the students of physics all have got grant
 b. [_{TopP} [Los estudiantes de física]_j [_{IP} han conseguido [_{FocP} [TODOS]_i [_{VP} [<sub>t_i t_j] beca]]]]]
 c. [_{TopP} [Los estudiantes de física]_j [_{IP} han conseguido [_{VP} [*todos* t_j] BECA]]]</sub></sub>
- (4) 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]]]
- (5) a. * [_{FocP} [TODOS]_i [_{IP} han conseguido [_{VP} [_{t_i los estudiantes de física}] beca]]]
 b. [_{FocP} [TODOS *los estudiantes de física*]_i [_{IP} han conseguido [_{VP} t_i beca]]]
 c. *Han conseguido *los estudiantes de física* beca TODOS.
 d. *Han conseguido *los estudiantes de física* TODOS beca.
- (6) a. * [Los estudiantes de física]_j [*todos*]_i han conseguido [_{VP} [<sub>t_i t_j] BECA].
 b. [Todos los estudiantes de física]_i han conseguido [_{VP} t_i BECA].</sub>
- (7) a. [_{TopP} [_{IP} [Los estudiantes de física]_i han conseguido [<sub>t_j t_i] beca]_r [_{FocP} [TODOS] t_r]]
 b. [_{TopP} [_{IP} Han conseguido *todos* t_i beca]_r [_{FocP} [LOS ESTUDIANTES DE FÍSICA]_i t_r]]</sub>

Under the present approach, there is no optionality in the system, as floating and non-floating quantifications are the result of movement operations which are in fact obligatory. 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-specifications.