

2001

Floating Quantifiers and Θ -Role Assignment

Željko Bošković
University of Connecticut

Follow this and additional works at: <https://scholarworks.umass.edu/nels>



Part of the [Linguistics Commons](#)

Recommended Citation

Bošković, Željko (2001) "Floating Quantifiers and Θ -Role Assignment," *North East Linguistics Society*. Vol. 31 : Iss. 1 , Article 6.

Available at: <https://scholarworks.umass.edu/nels/vol31/iss1/6>

This Article is brought to you for free and open access by the Graduate Linguistics Students Association (GLSA) at ScholarWorks@UMass Amherst. It has been accepted for inclusion in North East Linguistics Society by an authorized editor of ScholarWorks@UMass Amherst. For more information, please contact scholarworks@library.umass.edu.

Floating Quantifiers and θ -Role Assignment¹

Željko Bošković

University of Connecticut

In this paper, I examine the floating quantifier (FQ) construction, illustrated by (1).

(1) The students seem all to know French.

There are several different approaches to FQs, the most prominent of which are Sportiche's (1988) stranding analysis (see also Giusti 1990, Shlonsky 1991, Sportiche 1996, Merchant 1996, McCloskey 2000), on which the element an FQ modifies is generated as a constituent with the Q, the Q subsequently being stranded under the movement of the element in question (see (2)), and the adverbial analysis (see Williams 1980, Dowty and Brodie 1984, Kayne 1984, Miyagawa 1989, Doetjes 1992, Baltin 1995, Bobaljik 1995, Torrego 1996.)

(2) The students_i seem [all t_i] to know French.

I focus here on the stranding analysis, concentrating on one problem that arises under this analysis, discussed with respect to (4) below.² Before discussing the problem, I repeat here

¹For valuable comments and questions, I thank students in my Spring 2000 syntax seminar at the University of Connecticut and audiences at NELS and the University of Maryland, especially Cédric Boeckx, Bob Frank, Martin Hackl, Norbert Hornstein, Howard Lasnik, Christer Platzack, and Juan Uriagereka.

²I will not be able to address here all the issues that arise under this analysis. However, the issue that I *will* address represents the most serious problem for this analysis, in my opinion. My goal in this paper is to show that the problem can be solved in a principled way. Notice that throughout the paper, I ignore the

an argument for the stranding analysis from McCloskey (2000), who examines Q-float under wh-movement in West Ulster English (WUE). He shows that Qs floated under wh-movement in WUE occur exactly in positions through which wh-movement is expected to pass.³

- (3) What (all) do you think (all) that he'll say (all) that we should buy (all)?

The WUE data McCloskey discusses (see his paper for the full paradigm and a demonstration

irrelevant completive reading of *all*, on which *all* means something like *entirely* (see Bobaljik 1995).

³McCloskey also observes that (ia-b) provide evidence for overt object shift. Given that the infinitival subject in (ia) moves overtly to the higher clause for Case-checking, there is space for the Q to be stranded preceding *to*. This is impossible in (ib), where the infinitival subject is Case-marked within the infinitive.

- (i) a. Who did you expect your mother all to meet at the party?
b. *Who did you arrange for your mother all to meet at the party?

Since the analysis presented below depends on the possibility of overt object shift in English, I mention here a few more arguments for overt object shift (for overt object shift analyses and additional arguments, see also Bošković 1997a, Johnson 1991, Koizumi 1995, Lasnik 1999a, and Runner 1998, among others).

Lasnik (1999a) presents an analysis of pseudogapping that requires overt object shift. More precisely, he argues that (i) involves overt object shift, followed by VP ellipsis.

- (i) John kissed Mary, and Peter did Susan, [_{VP} kiss t_j]

Lasnik also gives an argument for overt object shift concerning (ii). Based on (iia), he argues that covert movement does not affect binding possibilities. (The assumption here is that the indefinite moves to the matrix IP projection covertly.) It follows, then, that the exceptionally Case-marked (ECM) subject in (iib) must be moving to the matrix clause overtly.

- (ii) a. *There seem to each other_i to have been some linguists_j given good job offers.
b. The DA proved two men_i to have been at the scene during each other's_j trials.

Bošković (1997a) provides an argument for overt object shift based on (iii). Without overt object shift and the accompanying V-movement (the overt object shift analysis assumes short V-movement in English, which is not the case with the no overt object shift analysis), the construction can only be analyzed as involving infinitival IP coordination (iiia). But then it is impossible to Case-license the subject of both infinitives. Only one of them can be Case-licensed, and its Case-licensing movement violates the Coordinate Structure Constraint. Under the overt object shift analysis, the construction can be analyzed as involving matrix AgroP coordination (iiib), so that the subject of both infinitives can be Case-licensed without a violation.

- (iii) a. John [_{AgroP} [_{VP} believes [_{IP} Jim to be crazy] and [_{IP} Mary to be smart]]]
b. John_i believes_j [[_{AgroP} Jim_k t_j [_{VP} t_j t_j [_{IP} t_k to be crazy]]] and [_{AgroP} Mary_l t_j [_{VP} t_j t_j [_{IP} t_l to be smart]]]]]

The grammaticality of constructions like (iv), where a matrix clause adverbial follows the embedded clause subject (see Postal 1974 for an early discussion of such constructions), also provides evidence that the embedded clause subject is moving overtly into the matrix clause.

- (iv) I've believed John for a long time now to be a liar. (Kayne 1985)

that the paradigm cannot be accounted for under the adverbial analysis) provide strong evidence for the stranding analysis. (4), however, raises a serious problem for this analysis.

- (4) a. *The students arrived all.
b. *The students were arrested all.
c. *Mary hates the students all.

Given that the SS subject of passive and ergative constructions originates in object position, it should be possible to strand the Q in (4a-b) in this position under subject movement. A similar problem is raised by (4c) given overt object shift, which should be able to strand the Q. The ungrammaticality of (4c) is particularly interesting in light of the fact that an accusative object can float a Q in ECM and double object constructions (see (5a-b)). In fact, Q-float is possible even in simple transitives with pronominal direct objects (see (5c)).

- (5) a. Mary believes the students all to know French.
b. Mary gave the kids all some candy.
c. Mary hates them all.

The ungrammaticality of (4) raises a serious problem for the otherwise very successful stranding analysis of Q-float, which must be resolved before the analysis can be endorsed.⁴

I will approach the problem by recasting it in terms of a broader descriptive generalization, given in (6).

- (6) Quantifiers cannot be floated in θ -positions.

All the problematic cases in (4) come under the generalization in (6), which I show below follows from independent mechanisms. This will give us an independent account of the constructions in (4) that will make them irrelevant to Sportiche's analysis of Q-float, resolving the most serious problem for this analysis. Before demonstrating that (6) can be deduced from independent mechanisms, I will empirically strengthen the generalization in (6) by showing that Q-float is impossible not only in object θ -position, which are the cases we have dealt with so far, but also in subject θ -position, i.e. SpecVP.

Holmberg (1999) claims that a FQ modifying a subject cannot occur between an auxiliary and the participle in Swedish embedded clauses. Given that, as is well-known, auxiliaries in Swedish embedded clauses do not move overtly, constructions like (7) provide evidence that Q-float is not possible in subject θ -position, i.e. SpecVP.

⁴ Sportiche claims that French does allow Q-float in the direct object position of passive and ergative constructions. However, Bowers (1993) and Bobaljik (1995) show that the French data in question were misanalyzed and that French does not differ from English in the relevant respect.

- (7) Jag undrar varför studenterna inte (alla) har (*alla) läst boken.
I wonder why the-students not all have all read the book

More evidence to this effect is provided by the Japanese data in (8).

- (8) a. *Gakusee-ga hanbaagaa-o 3-nin tabeta.
students-nom hamburger-acc 3-cl ate
'Three students ate a hamburger.'
b. Gakusee-ga 3-nin hanbaagaa-o tabeta.
students-nom 3-cl hamburger-acc ate
c. Hanbaagaa-o gakusee-ga 1-tu tabeta.
hamburger-acc students-nom 1-cl ate
'Students ate one hamburger.'

It is well-known that objects in Japanese can move overtly outside of VP via scrambling and/or object shift. Given that the object in (8a) can be located outside of its VP, a question arises why an FQ associated with the subject cannot occur following it. Since it is plausible that the FQ in (8a) is located in SpecVP, I take the ungrammaticality of (8a) to provide further evidence for the validity of (6) (see Koizumi 1995 for an alternative analysis).

Consider now the following French data:

- (9) a. Les enfants mangent ?tous tout/*tout tous.
the children eat all everything
'The children all eat everything.'
b. Les enfants ne mangent ?tous rien/*rien tous.
the children neg eat all nothing
(10) *Les enfants ont vu tous ce film.
the children have seen all this movie

It is well-known that *tout* and *rien* must move overtly outside of VP (see Belletti 1990, Cinque 1999, Kayne 1975, Sportiche 1988), leaving room for a FQ associated with the subject to be located following them, which is not possible (see Sportiche 1988). (9) raise the same question as (8a). I take (9) to provide more evidence that Q-float in subject θ -position, SpecVP, is impossible. Sportiche's (10) confirms the conclusion. Given that French participles can undergo overt movement outside of their VP (see Cinque 1999 and Pollock 1989), the fact that a Q associated with the subject cannot occur following the participle in (10) confirms that Q-float is not possible in a θ -marked SpecVP, in accordance with (6).⁵

⁵Belletti (1990) observes that Italian allows constructions like (10). This is not unexpected given that Italian participles move higher than French participles (see Belletti 1990 and Cinque 1999), which should leave enough room for a FQ following them not to be located in subject θ -position. (There should be at least one XP between Italian and French participles to capture the difference in their height. This suffices for our purposes

Below, I will provide more evidence for the validity of (6). However, I take the data concerning the impossibility of Q-float in both subject and object θ -position presented so far amply to justify positing (6). The next question to ask, then, is whether (6) can be deduced from independent mechanisms of the grammar or it needs to be elevated to the level of a principle of Universal Grammar. I will show that (6) is deducible from independent mechanisms. In other words, it is a theorem. The following assumptions, all made and justified independently of our current concerns, will play the crucial role in the analysis:

1. Sportiche's (1988) and Benmamoun's (1999) claim that FQs are adjoined to the NP (DP under the DP Hypothesis, which I disregard here) they modify (see also fn. 6). Benmamoun is particularly convincing in his arguments to this effect. He treats FQs as kind of appositives.

2. Chomsky's (1986) ban on adjunction to arguments, the idea behind it, attributed to K. Johnson (p. 16), being that adjunction to arguments interferes with θ -role assignment.

We already have all we need to rule out (4). Given assumption 1, *all* is adjoined to *the students* in its θ -position. It then interferes with θ -role assignment, given assumption 2. (4a-c) are thus straightforwardly ruled out for θ -theoretic reasons, which resolves a serious problem for Sportiche's analysis of Q-float. However, the problem is that we now appear to have ruled out Q-float altogether. For example, it appears that even the good instance of Q-float in (1) is now ruled out since θ -role assignment in the most embedded SpecVP to *all the students* seems blocked by assumptions 1-2. To resolve the problem, I adopt the following assumption, the final mechanism needed for a successful deduction of (6).

3. Lebeaux (1988, 1991): Adjuncts can be inserted into the structure acyclically (see also Bošković 1997b, Nissenbaum 1998, Ochi 1999, and Stepanov 2000).

Given assumptions 1 and 3, the good example of Q-float in (11) can be derived as shown in (12). Being an adjunct, *all* can be added acyclically after *the students* moves away from the position in which it is θ -marked. The adjunction of *all* then does not interfere with θ -role assignment to *the students*, as it does in (4).

(11) The students were all arrested.

- (12) a. [_v arrested the students]
 b. the students [_v arrested t]
 c. all the students [_v arrested t]
 d. the students were all t [_v arrested t]

I conclude therefore that the generalization in (6) can be deduced from an interaction of the independently motivated assumptions 1-3. In turn, by accounting for the ungrammaticality of (4), (6) (more precisely, assumptions 1-3) removes the most serious problem for the otherwise very successful stranding analysis of Q-float.

The analysis presented above has a number of important theoretical and empirical consequences, to which I turn now. Consider first the non-Q-float construction in (13).

since the FQ can be located in the Spec of that XP.)

(13) Mary failed all the students.

At first sight, it appears that under the current analysis, the grammaticality of (13) provides further evidence for overt object shift in English. More precisely, it appears that we need the direct object in (13) to undergo overt object shift to be able to derive the construction without *all* interfering with θ -role assignment. If *all* is adjoined to the direct object, it would interfere with θ -role assignment to the direct object unless inserted into the structure after the direct object moves away from its θ -position. Overt object shift removes the direct object from its θ -position overtly, so that the Q can be added without undesirable consequences. Relying on overt object shift in English does not seem to be a problem in light of considerable evidence for it amassed in the literature (see fn. 3). However, I believe that (13) is derivable under current assumptions regardless of when object shift takes place in English. The underlying assumption in the above discussion of (13) was that non-floating and floating constructions have the same structure for the QNP part. I believe that the assumption is invalid. In fact, Benmamoun (1999) very convincingly argues that in Arabic, floating QNPs have a different structure from non-floating QNPs even prior to Q-float.⁶ The position is actually forced on us by economy of derivation. If the two had the same structure, it appears that principles of economy of derivation, in particular, the requirement to carry as little material as possible under movement, responsible for forcing all LF movement to be feature movement (Chomsky 1995; see also Stateva 2000 for much relevant discussion), would always force the floating option. Since in the floating derivation movement carries less material than in the non-floating derivation, Q-float should be obligatory. In other words, the possibility of, e.g., *the students were all arrested* would block *all the students were arrested* since movement to SpecIP carries less material in the former construction than in the latter construction. Q-float is obviously not obligatory. How can we deal with this fact without giving up on economy of derivation? The simplest solution seems to be to give different structures to floating and non-floating constructions. Suppose, furthermore that the structure of non-floating constructions is such that Q-float is simply not possible (see fn. 6). The question of comparison of floating and non-floating constructions then would not arise and the problem noted above would be resolved. The suggestion made here is to account for the lack of Q-float in (13) in the same way as for the pied-piping under wh-movement in (14).

⁶According to Benmamoun, in floating structures, the Q is adjoined to the NP. In non-floating Q NP structures, the Q takes NP as its complement. The NP is not allowed to move outside of the QP, an important point in light of the discussion below. (The situation is slightly more complicated in Arabic than in English in that the language also allows non-floating NP Q sequences where the NP and the Q form a constituent. See also Shlonsky 1991 for relevant discussion.) It is worth noting in this respect that Déprez (1994) observes that in French, floating *chacun* 'each' differs from non-floating *chacun* in that only the former induces weak island effects. This can also be taken as indicating that floating and non-floating Qs differ structurally. In fact, if we apply Benmamoun's analysis to the case in question we may be able to unify the weak island effect of floating *chacun* with the pseudo-opacity effect, where adjuncts like *beaucoup* induce weak island effects. (See Obenauer 1976 and Rizzi 1990. Recall that Benmamoun considers FQs to be adjuncts.)

(14) Whose book did Mary buy?

It appears that the +wh-feature of C would be checked in a more economical way in (14) if we were to check it by moving *whose* instead of *whose book* to SpecCP. (The former movement would carry less material.) However, movement of *whose* alone is simply not an option, English not being a left-branch extraction language. The question of comparison then does not arise: we are using the only available option, which is to move *whose book*.⁷ The suggestion is then that (13) should be accounted for in the same way as (14), the underlying assumption being that the structure of a non-floating QNP sequence is such that Q-float, i.e. moving the NP without the Q, is not possible, just like moving *whose* alone is not possible in (14). Since Q-float is obviously possible in floating constructions, it then follows that floating and non-floating constructions have different structures. Giving floating and non-floating constructions different structures is also desirable in light of the fact that the two very often differ morphologically (see, e.g., Benmamoun 1999 for Arabic and Merchant 1996 for German) and semantically (see, e.g., Bobaljik 1995 and Williams 1982 for English). The structural difference could be a reflex (or the trigger) of the morphological and semantic differences. (See also (29) below and fn. 6 for interesting syntactic differences, which can be captured by giving floating and non-floating constructions different structures.)

To summarize the digression on economy of derivation, we have seen that it is not necessary for the direct object in (13) to undergo movement from its θ -position to account for the grammaticality of the construction. This is desirable. While it is quite possible that the direct object in (13) actually moves out of its θ -position overtly as a result of object shift,

⁷In languages that allow left-branch extraction, left-branch extraction is assumed freely to alternate with pied-piping. In other words, left-branch extraction is supposed to be optional, as illustrated by the Serbo-Croatian examples in (i), which is difficult to account for in the minimalist framework.

- (i) a. Koji knjigu je on kupio?
 which book is he bought
 'Which book did he buy?'
 b. Koji je on knjigu kupio?

There are, however, cases where left-branch extraction is forced, as would be expected given economy of derivation. Thus, left-branch extraction is in some cases forced in the Bulgarian *li*-construction, which corresponds to English clefts (see Bošković in press:237 for more relevant examples).

- (ii) a. Čija li knjiga prodade?
 whose Q book sold
 'Whose book did he/she/you sell?'
 b. *Čija knjiga li prodade?

It is possible that in the cases where left-branch extraction seems optional, we are not dealing with true optionality. One possibility is that the left-branch and the pied-piping movement actually check different features, in which case the question of comparison would not necessarily arise. (In the system developed in Bošković 2000a, wh-fronting could involve scrambling in (ia) and focus movement in (ib).

the overt movement analysis seem implausible for the QNP sequence in (15) (see also the discussion of (29) below). However, given the above discussion, the QNP in (15) does not have to undergo overt movement from its θ -position.

(15) beside all the students

As noted by B. Frank (p. c.), the current analysis gives us a principled account of the scope freezing effect of Q-float. In fact, the effect confirms the obligatoriness of Q-float.

- | | | |
|---------|---|---------|
| (16) a. | The students did not seem all to know French. | not>all |
| b. | The students all seemed not to know French. | all>not |
| c. | The students seemed not to all know French. | not>all |

The scope relations indicated above seem the only possibilities for (16). Of particular interest to us is (16b), where *all* can scope over the negation, but the negation cannot scope over *all*. Suppose now that Q-float is not obligatory. We could then derive (16b) as follows: *All* is adjoined to *the students* below *not*, as in (16c) (see (17) below for discussion of what the position would be). *All the students* then moves into the matrix clause, where Q-float takes place. *The students* moves to the matrix SpecIP, leaving *all* behind. On this derivation, there is a copy of *all* below the negation. We would then expect the negation to be able to scope over *all*, just as it does in (16a,c).⁸ As noted above, the expectation is not borne out. The problem in question does not arise under the current analysis, where Q-float is obligatory if it can take place. The problematic derivation given above is ruled out via economy of derivation: the unnecessary pied-piping of the Q results in a violation of the requirement that movement carry as little material as possible. Recall that if we choose the structure for the QNP that allows Q-float, which we have obviously done in (16b), Q-float must take place as soon as the Q is inserted into the structure - the NP cannot carry the Q with it. Since pied-piping of a Q that is to be floated is not an option, under this analysis the surface position of a FQ indicates the position where the Q has entered the structure. The only way to derive (16b) is then as follows: *The students* is inserted in the embedded clause and moves to the matrix clause, crossing the embedded negation. At the point when it moves in front of *seem* (the relevant position could be the Spec of the VP headed by *seem*, or SpecTP under the Split I Hypothesis), *all* is acyclically inserted into the structure, after which *the students* moves to the matrix SpecIP, obligatorily stranding *all*. Since there is no copy of *all* below the negation, the negation cannot scope over it. I conclude, therefore, that the scope freezing effect provides a confirmation of the obligatoriness of Q-float: Q-float must take place whenever possible, as expected given economy of derivation.

The current analysis also has consequences for the status of \bar{I} , or, more precisely, the Split I Hypothesis. Under the current analysis (17) is derived as shown in (18).

⁸The argument here is based on the controversial claim that there is scope reconstruction with A-movement. See Chomsky (1995), Hornstein (1995), Kitahara (1996), and Lasnik (1999b) for opposing views.

- (17) The students all passed the exam.
 (18) The students_i [all t_i] [_{VP} t_i passed the exam]

Since Q-float is not possible in θ -positions, *all* in (17) cannot be stranded in SpecVP, as standardly assumed. Rather, it has to wait for *the students* to move away from its θ -marked SpecVP to enter the structure, as shown in (18). It follows, then, that we need a more articulated clausal structure than the one proposed in Chomsky (1995), which has only TP above the VP in which the subject is θ -marked. Empirically, this seems required independently of our current concerns. To mention just one case, it is difficult to see how the short V-movement data discussed in Pollock 1989 (see also Belletti 1990, Bošković in press, Cinque 1999) can be accounted for under Chomsky's clausal structure. Like the data discussed here, Pollock's data provide evidence that we need more structure between VP and the projection whose Spec the subject occupies at SS, which is not provided by Chomsky's (1995) system. In other words, a return to some version of the Split I Hypothesis is in order.

There is also empirical evidence that *all* in (17) is not stranded in the θ -marked subject position, i.e. SpecVP. As discussed in Bobaljik (1995), while *all* floated by a subject can either precede or follow high, sentential adverbs, it must precede low, manner adverbs.⁹

- (19) a. These thieves could all completely crack this safe in 5 minutes flat.
 b. *These thieves could completely [_{VP} all crack this safe in 5 minutes flat]
 c. The thieves have certainly all been apprehended.
 d. The thieves have all certainly been apprehended.

Given the standard assumption that even low adverbs like *completely* are located above the θ -position of the subject when preceding the verb, (19a-b) provide strong evidence that *all* cannot be floated in a θ -marked SpecVP, as expected under the current analysis.

More empirical evidence to this effect is provided by (20).

- (20) *The students_i believed John [_{VP} [all t_i] [_{IP} to be smart]]

If *John* in (20) undergoes, or can undergo, overt object shift, as argued by a number of authors (see fn. 3), the θ -position of the subject is lower than *John*.¹⁰ Still, a Q floated by the subject cannot follow the ECM-ed NP. I take the ungrammaticality of (20) to provide further evidence that Q-float in subject θ -position is not possible, as expected under the current analysis, which in turn requires richer clausal structure than that of Chomsky (1995) to account for constructions like (17). As discussed above, the conclusion that we need richer

⁹As discussed in Sportiche (1988), French patterns with English in the relevant respect.

¹⁰This is not the case under Koizumi's (1995) split VP-analysis (see also Lasnik 1999a), which I do not adopt here.

clausal structure than Chomsky (1995) is supported independently of our current concerns.¹¹

Let us now return to the contrast between (4c) and (5) with respect to the ability of an accusative-marked element to float a Q. I will show now that the current analysis can help us choose among several alternative analyses of the constructions in question proposed in the literature, severely restricting available possibilities, a desirable result conceptually.

Consider first the contrast between (5a) and (4c), whose structures under the current analysis and assuming overt object shift are given in (21) and (22) respectively.

(21) Mary believes the students_i [_{IP} [all t_i] to [_{VP} t_i know French]]

(22) *Mary hates the students_i [_{VP} [all t_i]]

The ungrammaticality of (22) is accounted for as discussed above: the reason for the badness of the construction is the fact that the Q is adjoined to the NP in its θ -position. This does not happen in (21). Given the VP Internal Subject Hypothesis, in (21) *all* is inserted into the structure after the NP it modifies moves away from its θ -position, so that the problem discussed above with respect to (22) does not arise with respect to (21).¹²

Consider now the contrast between (5c), repeated here as (23), and (4c).

(23) Mary hates them all.

The contrast between (23) and (4c) can be readily accounted for if object pronouns move higher in overt syntax than object NPs in English. In fact, Lasnik (1999b) shows that object

¹¹The ungrammaticality of (ib,d), which contrast with (ia,c), provides further evidence for the impossibility of Q-float in subject θ -position, since the FQ seems to be located in this position in (ib,d). (The constructions in (i) are taken from Sag 1976.)

- (i) a. They have all been talking.
 b. *They have been all talking.
 c. They are all being patsies.
 d. *They are being all patsies.

However, Sag observes that this type of construction is acceptable when the second auxiliary is *have*.

- (ii) They may have all left.

There are two ways to treat (ii): Either the complement of *have*, call it FP, is bigger than VP (*all* can then be located in SpecFP, which would be a non- θ -position) or the complement of *have* is a VP, but *have* undergoes short movement from its base-generated position (*all* could then be located in the Spec of the VP headed by *have* before the movement). Concerning the latter analysis, see Bošković (1997a), where it is argued that cross-linguistically, in complex verbal constructions all verbal elements undergo short V-movement, covertly or overtly. It is possible that, in contrast to *been* and *being* in (i), *have* in (ii) undergoes the movement overtly.

¹²Notice incidentally that (21) provides evidence for both the VP Internal Subject Hypothesis (without it, *all* would be located in a θ -position) and for overt object shift (overt object shift is needed to strand *all*). Notice also that the last *all* in the WUE (3) can be stranded in the object shift position.

pronouns behave differently from object NPs with respect to several height tests, exhibiting higher behavior than object NPs. This state of affairs fits well with the conclusion concerning the contrast between (23) and (4c) we are led to. A possible analysis is that both object pronouns and object NPs undergo overt object shift, with pronouns undergoing further overt movement from the object shift position, where the Q is located in (23).¹³ As for the nature of this additional movement of pronouns, I suggest that we are dealing here with cliticization. Evidence for this suggestion is provided by the fact that contrastively focused and coordinated object pronouns cannot float a Q.

- (24) a. *Mary hates THEM all.
 b. *Mary hates him and her both.
 (25) a. Mary hates them both.
 b. *Mary hates John and Bill both.

If cliticization is responsible for the additional movement of the pronoun in (23) and (25a), which licenses Q-float, the fact that Q-float is not possible in (24), where the pronoun is not a clitic (clitics cannot be contrastively stressed and coordinated) is expected. Apparently, once the cliticization option is removed through contrastive focus and coordination, object pronouns do not differ in the relevant respect from object NPs. The cliticization analysis thus gives us an account of the paradigm in (4c)/(23)-(25).

Consider now the contrast between (5b), repeated here as (26), and (4c).

- (26) Mary gave the kids all some candy.

The grammaticality of (26) and the contrast between (26) and (4c) can be readily accounted for under the small clause analysis of (26) (see Kayne 1984 and Den Dikken 1995, among many others). Under the small clause analysis, (26) is treated in the same way in the relevant respects as ECM constructions. The construction is derived as follows: *The kids* is generated within the small clause in its θ -position. It moves to SpecIP of the small clause (see Chomsky 1995, Den Dikken and Næss 1993, Hornstein and Lightfoot 1987, and Kitagawa 1986 for arguments that small clauses are IPs), where *all* is added to it. It then undergoes overt object shift, stranding *all*. (There might be a null V in the small clause.)

- (27) Mary gave the kids_i [_{IP} [all t_i] to [_{NP/VP} t_i some candy]]

The current analysis leads us to very specific conclusions concerning the structure of double object constructions (more generally, ditransitives, see the discussion of (28) below) and the status of small clauses, eliminating a number of analyses proposed for double object/ditransitive constructions and small clauses in the literature.

¹³Lasnik presents a different analysis which, however, still crucially relies on a height difference between object pronouns and object NPs. For much relevant discussion, see also Bošković (2000c).

H. Lasnik (p. c.) observes that (28)-(29) receive a principled account under the current analysis.

- (28) You put the books all on the table.
 (29) a. ?Who_i did you put all the pictures of t_i on the table.
 b. *Who_i did you put the pictures of t_i all on the table.
 c. You put the pictures of John all on the table.

Suppose that, as argued in Lasnik (1999b), object shift takes place overtly only optionally in English. In (29a,c) nothing forces it to take place overtly. On the other hand, in the Q-float constructions in (28) and (29b), object shift must take place overtly. This is the only way to derive them without having a FQ in the θ -position of the accusative NP (I assume here a small clause analysis for (28), as discussed with respect to (26)), which would run afoul of the generalization in (6), deducible from independent mechanisms. Notice now that (29a) contrasts with (29b). H. Lasnik (p. c.) observes that while both constructions are somewhat degraded as a result of a specificity effect, (29b) is worse than (29a). The contrast can be readily accounted for under the current analysis given the Ormazabal et al. (1994)/Takahashi (1994) claim that extraction out of heads of non-trivial chains is disallowed. (The authors show that the claim, responsible for the Subject Condition effect among other things, is deducible from independent principles.) Since (29b) but not (29a) has to involve overt object shift, only (29b) has to involve extraction out of the head of a non-trivial chain.¹⁴ The contrast between (29a) and (29b) thus receives a straightforward account. In fact, the contrast under consideration can be interpreted as an additional argument that floating and non-floating QNPs have different structures, a result of which is that only FQs are sensitive to the θ -restriction.

Another consequence of the current analysis of Q-float is that the final landing site of Icelandic “object shift” cannot be the accusative Case-checking position (SpecAgroP/SpecvP) (see also Bošković 1997a, Holmberg 1999, Holmberg and Platzack 1995, and Vikner 1995). Consider (30).

- (30) Ég las bækurnar_i ekki allar t_i.
 I read the books not all
 ‘I didn’t read all the books.’

It appears that if the shifted object in (30) were to be located in SpecAgroP, the floated Q would have to be located in the θ -position of the object, in violation of (6). I conclude therefore that *bækurnar* in (30) is located higher than the accusative Case-checking position. One way of analyzing (30) is as follows: *Bækurnar* undergoes overt object shift, the Q is

¹⁴Assuming that we can extract only out of elements in θ -marked positions would also give us the desired result. Notice that I assume that overt movement to SpecIP of the small clause does not have to take place so that the direct object in (29a,c) can remain in its θ -position.

added to it in that position, after which *bækurnar* moves to a higher position.¹⁵

There is also considerable independent evidence that the final landing site of Icelandic “object shift” is not the accusative Case-checking position, but a position higher in the tree. One piece of evidence for this is provided by the fact that shifted objects are located, in fact must be located (see Vikner 1995), above sentential adverbs, which are cross-linguistically assumed to be very high in the tree.¹⁶

- (31) I gaer las Pétur bókina, eflaust/*eflaust bókina, ekki t.
 yesterday read Peter the book doubtlessly not
 ‘Yesterday, Peter doubtlessly didn’t read the book.’ (Bures 1993)

Holmberg and Platzack (1995) observe that the shifted object in (32) cannot bind an anaphor from its SS position, but can bind a pronoun, which means that the object is not even located in an A-position. (They also note that, in contrast to the shifted object in (32), a passivized subject can bind an anaphor, but not a pronoun, within the adverbial in question (33).)

- (32) Han taldi Ólaf og Marteini, þeim/*sér/*hvorum öðrum, til undrunar [t,
 he considered O. and M. them/REFL/each other to wonder
 vera jafn góða]
 be qually good
 ‘He considered Olafur and Marteinn, to their surprise, to be equally good’
- (33) Ólaf og Marteini voru, *þeim/sér/?hvorum öðrum, til undrunar, taldir [t, vera jafn
 góða]
 ‘Olafur and Marteinn were, to their surprise, considered to be equally good.’

These data conclusively show the final landing site of Icelandic “object shift” is not the accusative Case-checking position. Rather, it’s an A’-position above the accusative Case-checking position. Recall that we were led to the conclusion that the landing site of “object shift” in Icelandic is higher than the accusative Case-checking position by the grammaticality of (30). If *bækurnar* were to be located in SpecArgoP in (30), we would not have space to

¹⁵The Q might even be higher than SpecArgoP. Notice that the current analysis leads us to the conclusion that the negation in Icelandic can be higher than the VP-adjoined position, which is standardly assumed to be its position. In Bošković (2000b, in press) I show that Icelandic negation can indeed be higher in the structure than standardly assumed independently of our current theoretical concerns. It is worth noting here that according to Holmberg (1999), some speakers do not accept (30) with an NP object, but accept it with a pronominal object. This can be accounted for if for these speakers, full NPs in Icelandic move to SpecArgoP, while pronouns undergo further movement from this position, as argued above for English.

¹⁶Thus, Watanabe (1993) and Bošković (1997a) claim that in English, sentential adverbs, which can even occur above auxiliaries, are licensed by T. (More precisely, according to Watanabe and Bošković, who assume the Split I Hypothesis, the sentential adverb is TP-adjoined in (i).)

(i) John probably can play the guitar.

locate the Q anywhere but the θ -position of *bækurnar* within the VP, which is not allowed. The conclusion we have reached based on (30) thus has strong independent support.

Let us now return to WUE. Consider (34), taken from McCloskey (2000).

- (34) a. ?Who did you send to the shops all?
b. ?What did you put in the drawer all?

McCloskey analyzes these constructions as follows. He assumes that the direct object is generated below the prepositional object. In (34), it moves from its base-generated position, floating the Q in that position. Obviously, if what he have said so far is correct, this analysis cannot be maintained. The floated Q cannot be located in the θ -position of the element it modifies in (34), which is what happens under McCloskey's analysis. Can (34) be analyzed in a way that is consistent with (6)? I propose the following as the derivation of (34): As standardly assumed, the direct object is generated preceding the prepositional object. It then undergoes heavy NP shift. (For the moment, let us think of heavy NP shift traditionally in terms of rightward movement.) The quantifier *all* is added to the wh-phrase after it undergoes heavy NP shift. Finally, the wh-phrase moves to SpecCP, stranding the Q in the heavy NP shift position. I would like to suggest that the reason why the constructions in (34) are somewhat degraded is that the element located in the heavy NP shift position, *who all*, is not very heavy.¹⁷ The derivation given above is consistent with (6).

There is also independent evidence that (34) involve heavy NP shift. It is well-known that the first object in double object constructions and the complement of a preposition cannot undergo heavy NP shift. If the correct way of analyzing constructions in which a FQ associated with the first object follows the second object, the pattern instantiated in (34), is to have the first object undergo heavy NP shift, we predict that the pattern in question will not yield a good result in double object constructions and in constructions where both objects are PPs. The prediction is borne out. (I thank Jim McCloskey for help with the data.)

- (35) a. *Who did you talk to about John all?
b. *Who did John give that money all?

Under the current analysis, (35) can only be derived by heavy NP-shifting the wh-phrase before having it undergo wh-movement. The constructions are then straightforwardly ruled out because the first object in a double object construction and the complement of a preposition cannot undergo heavy NP shift.

The analysis presented here has important consequences for proper treatment of heavy NP shift. Given the above discussion, analyses of heavy NP shift that leave the heavy NP shifted element in situ overtly, such as that of Larson (1988) and Kayne (1994), cannot be correct. Under these analyses, the FQ would be inserted in the θ -position of the heavy NP

¹⁷According to McCloskey, some speakers actually reject (34). I discuss this type of construction, as well as the adjunct effect noted by McCloskey, in more detail in work in preparation.

shifted element in (34), which should not be possible. Treating heavy NP shift as a PF movement, which has been occasionally suggested in the literature, would not work either since the Q that enters the structure in the heavy NP shift position obviously needs to enter the structure in the syntax. On the other hand, the traditional rightward syntactic movement analysis of heavy NP shift captures the data under consideration straightforwardly.¹⁸

To conclude, in this paper I have established the descriptive generalization that Qs cannot float in θ -positions and showed that the generalization can be deduced from an interaction of independent mechanisms and assumptions, namely Sportiche/Benmamoun's proposal concerning the structure of FQ-constructions, Chomsky's ban on adjunction to arguments, and Lebeaux's proposal concerning acyclic insertion of adjuncts. To the extent that it is successful, the current analysis provides further support for these assumptions. We have also seen that the analysis puts severe restrictions on a number of mechanisms and constructions, ruling out a number of proposals made concerning the mechanisms and constructions in question, thus severely restricting the possibilities available in the system. I repeat here some of the conclusions that follow from the current analysis, which rule out proposed alternatives concerning the mechanisms and constructions in questions: Floated and non-floated QNPs have different structures; the small clause analysis is the correct analysis of ditransitive constructions; small clauses are headed by a functional element; object pronouns in English move further than object NPs, more precisely, they undergo cliticization; the simple TP-over-vP clausal structure is inadequate; the final landing site of Icelandic "object shift" is not the accusative Case-checking position (SpecAgroP/SpecvP); and heavy NP shift involves syntactic movement of the affected element. All the restrictions noted above follow from (6), which is deducible from independently motivated assumptions. The restrictions therefore come for free. The current analysis also provides additional evidence for overt object shift in English, explains the freezing effect of Q-float on scope, and provides an explanation for the different behavior of floating and non-floating QNPs with respect to extraction possibilities, only the latter allowing extraction out of it.

Appendix

McCloskey (2000) observes the very interesting contrast between (36) and (37) in WUE.

- (36) Who was arrested all in Duke Street?
(37) *They were arrested all last night?

¹⁸Notice, however, that we do not necessarily have here evidence against Kayne's (1994) LCA, i.e. evidence for the possibility of rightward movement. We simply have here evidence that heavy NP shift must involve overt syntactic movement. Whether the movement is to the right or to the left is irrelevant for our current purposes. It is probably possible to analyze heavy NP shift as involving leftward movement of the shifted element followed by leftward movement of the material base-generated within VP that precedes the shifted element at SS. (We would be dealing here with remnant VP fronting, see in this respect Kayne 1998.) Such an analysis would be consistent with both the LCA and the current treatment of Q-float.

Although WUE allows (36) it behaves like Standard English with respect to (37). How can the contrast in question be accounted for? McCloskey leaves open the ungrammaticality of (37). He does, however, provide an account of (36). The account is based on his claim that *who* in (36) moves to SpecCP without moving to SpecIP, the reasoning behind the claim being that if *who* were to move to SpecIP in (36), it would not be possible to account for the contrast between (36) and (37). In other words, the assumption is that whatever rules out movement to SpecIP from the position adjacent to *all* in (37) would also rule it out in (36). The proposal raises a very interesting question with respect to how the requirement that forces overt movement to SpecIP in English is satisfied in (36), given that the construction under McCloskey's analysis does not involve movement to SpecIP. McCloskey provides an answer to the question in his analysis. Let us first see how McCloskey prevents *who* from moving to SpecIP in (36). He suggests that Q-float involves a step in which the NP associated with the Q moves to SpecDP, the Q being located in D. The movement gives us the order NP Q within the DP. When the NP in SpecDP is a wh-phrase, the head D acquires the +wh-feature so that SpecDP counts as an A'-position. The wh-phrase (*who* in (36)) then cannot move to SpecIP from this position, since the movement would be an instance of improper movement. Rather, the wh-phrase moves directly to SpecCP. Since the "subject" in (36) never moves to SpecIP, the hope is that whatever rules out (37) will be irrelevant in (36). How is the requirement that forces overt movement to SpecIP satisfied in (36)? McCloskey suggests that overt movement is preferable to Agree (he actually does not use the term Agree). However, when a requirement cannot be satisfied without a violation through overt movement, satisfying the requirement through Agree, i.e. without actual movement, becomes possible. In the case in question, features of I cannot be satisfied through actual movement since this would result in improper movement. Therefore, features of I can be satisfied without movement through Agree.¹⁹ The analysis raises a number of questions since it appears that we should always be able to get around a violation induced by overt movement by doing Agree. E.g., we might be able to get around the Left Branch Condition and the *that*-trace effect by doing feature checking through Agree, i.e. without movement.

- (38) a. *Whose did you see t books?
 b. *Who do you think that t left?
 (39) a. *You saw whose books?
 b. *You think that who left?

I will therefore suggest an alternative account, which will, however, preserve McCloskey's proposal that *who* in (36) does not move to SpecIP. The account will be couched in terms of recent attempts to eliminate the EPP and to derive its effects from the Inverse Case Filter, i.e. the requirement that traditional Case-assigners "discharge" their Case-feature overtly in a Spec-head relation (see Boeckx 2000, Bošković 2000c, Castillo, Drury, and Grohmann 1999,

¹⁹It is implied here either that the EPP is a featural requirement or that there is no EPP. The analysis is inconsistent with Chomsky's (1999) position that the EPP is a requirement that a specifier be filled overtly.

Floating Quantifiers and θ -Role Assignment

Epstein and Seely 1999, and Martin 1999). Under the analyses presented in these works, overt movement to SpecIP in (40) takes place for Case-licensing, not the EPP.

(40) Mary has [_{VP} t slept]

Furthermore, I suggest that nominative Case in WUE can be either a feature or an affix.²⁰ Given the proposal, (36) can be derived as follows under the current analysis of Q-float: *Who* undergoes string vacuous heavy NP shift from its base-generated position, after which the Q is added in accordance with (6). *Who* then moves to SpecCP stranding the Q. The derivation crashes if we choose the feature option for nominative Case.²¹ However, if we choose the affix option, affixation can take place between *who* and I under PF adjacency. The current analysis readily accounts for the contrast between (36) and (37). In order to derive (37) without violating (6), *they* must undergo string vacuous heavy NP shift prior to movement to SpecIP. Its movement to SpecIP then results in improper movement so that the construction is straightforwardly ruled out. What happens if *they* remains in the heavy NP shift position, as in *were arrested they all*? Nominative Case cannot be “satisfied” in the construction through either feature-checking (recall that we are assuming that nominative Case can be checked only through Spec-head agreement) or affixation (I and *they* are not adjacent.) The paradigm under consideration is thus accounted for. I leave detailed exploration of the proposal that nominative Case (or Case in general) can be an affix for feature research. Let me, however, point out that the current analysis gives us a straightforward account of the contrast in (41), noted by McCloskey.

- (41) a. Who was throwin’ stones all around Butchers’ Gate?
 b. *They were throwing stones all around Butchers’ Gate.

The contrast in (41) can be accounted for in the same way as the contrast between (36) and (37). Like (36) and (37), (41a-b) have to involve heavy NP shift of *who/they*, which leads to a violation in the case of (41b) (improper movement), but not (41a).

References

Baltin, Mark. 1995. Floating quantifiers, PRO, and predication. *Linguistic Inquiry* 26: 199-

²⁰The proposal is in the spirit of Lasnik (1999a), where the same kind of proposal is made for what Chomsky (1995) called the V-feature of I. The current and Lasnik’s proposal can be reconciled by assuming that in Lasnik’s affixation cases, a phonologically null I merges with the verb (the modification would actually be necessary in Lexical Phonology) or by appealing to the Split I Hypothesis to separate nominal and verbal properties of I into two distinct projections.

²¹This is so unless we assume that the nominative Case of I can be checked against a *wh*-phrase in SpecCP after I-to-C movement. However, this option is presumably not available in embedded questions. Otherwise, this feature-checking analysis could be a viable alternative to the analysis given in the text.

248.

- Belletti, Adriana. 1990. *Generalized verb movement*. Turin: Rosenberg and Sellier.
- Benmamoun, Elabbas. 1999. The syntax of quantifiers and quantifier float. *Linguistic Inquiry* 30: 621-642.
- Bobaljik, Jonathan. 1995. *Morphosyntax: The syntax of verbal inflection*. Doctoral dissertation, MIT, Cambridge, Mass.
- Boeckx, Cédric. 2000. EPP eliminated. Ms., University of Connecticut, Storrs.
- Bošković, Željko. 1997a. *The syntax of nonfinite complementation: An economy approach*. Cambridge, Mass.: MIT Press.
- Bošković, Željko. 1997b. Fronting *wh*-phrases in Serbo-Croatian. In *Proceedings of the V Annual Workshop on Formal Approaches to Slavic Linguistics*, ed. Martina Lindseth and Steven Franks, 86-107. Ann Arbor: Michigan Slavic Publications.
- Bošković, Željko. 2000a. On multiple *wh*-fronting. Ms., University of Connecticut, Storrs.
- Bošković, Željko. 2000b. PF merger in Scandinavian: Stylistic fronting and object shift. Ms., University of Connecticut, Storrs.
- Bošković, Željko. 2000c. A-movement and the EPP. Presented at the University of Maryland, College Park.
- Bošković, Željko. in press. *On the nature of the syntax-phonology interface: Cliticization and related phenomena*. Elsevier.
- Bowers, John. 1993. The syntax of predication. *Linguistic Inquiry* 24: 591-656.
- Bures, Anton. 1993. There is an argument for a cycle at LF here. In *Proceedings of the Chicago Linguistic Society* 28, 14-35. University of Chicago, Chicago, Ill.
- Castillo, Juan Carlos, John Edward Drury, and Kleantes K. Grohmann. 1999. The status of Merge over Move preference. Ms., University of Maryland, College Park.
- Chomsky, Noam. 1986. *Barriers*. Cambridge, Mass.: MIT Press.
- Chomsky, Noam. 1995. *The minimalist program*. Cambridge, Mass.: MIT Press.
- Chomsky, Noam. 1999. Derivation by phase. In *MIT Occasional Papers in Linguistics* 18. MITWPL, Department of Linguistics and Philosophy, MIT, Cambridge, Mass.
- Cinque, Guglielmo. 1999. *Adverbs and functional heads: A cross-linguistic perspective*. Oxford: Oxford University Press.
- Déprez, Viviane. 1994. The weak island effect of floating quantifiers. In *University of Massachusetts Occasional Papers in Linguistics* 17, ed. Elena Benedicto and Jeffrey Runner, 63-84. GLSA, University of Massachusetts, Amherst.
- Dikken, Marcel den. 1995. *Particles*. Oxford: Oxford University Press.
- Dikken, Marcel den, and Alma Næss. 1993. Case dependencies: The case of predicative inversion. *The Linguistic Review* 10: 303-336.
- Doetjes, Jenny. 1992. Rightward floating quantifiers float to the left. *The Linguistic Review* 9: 313-332.
- Dowty, David. and Belinda Brodie. 1984. A semantic analysis of "floated" quantifiers in a transformationless grammar. In *Proceedings of the Third West Coast Conference on Formal Linguistics*, 75-90. Stanford, Calif.: CSLI Publications.
- Epstein, Samuel D. and T. Daniel Seely. 1999. SPEC-ifying the GF "subject". Ms.,

Floating Quantifiers and θ -Role Assignment

- University of Michigan and Eastern Michigan State University.
- Giusti, Giuliana. 1990. Floating quantifiers, scrambling, and configurationality. *Linguistic Inquiry* 21: 633-641.
- Holmberg, Anders. 1999. The true nature of Holmberg's generalization. *Studia Linguistica* 53: 1-39.
- Holmberg, Anders, and Christer Platzack. 1995. *The role of inflection in Scandinavian syntax*. Oxford: Oxford University Press.
- Hornstein, Norbert. 1995. *Logical Form: from GB to Minimalism*. Cambridge: Blackwell.
- Hornstein, Norbert, and David Lightfoot. 1987. Predication and PRO. *Language* 63: 23-52.
- Johnson, Kyle. 1991. Object positions. *Natural Language and Linguistic Theory* 9: 577-636.
- Kayne, Richard. 1975. *French syntax: The transformational cycle*. Cambridge, Mass.: MIT Press.
- Kayne, Richard. 1984. *Connectedness and binary branching*. Dordrecht: Foris.
- Kayne, Richard. 1985. Principles of particle constructions. In *Grammatical Representation*, ed. Jacqueline Guéron, Hans-Georg Obenauer, and Jean-Yves Pollock, 101-142. Dordrecht: Foris.
- Kayne, Richard. 1994. *The antisymmetry of syntax*. Cambridge, Mass.: MIT Press.
- Kayne, Richard. 1998. Overt vs. covert movement. *Syntax* 1: 128-191.
- Kitagawa, Yoshihisa. 1986. *Subjects in Japanese and English*. Doctoral dissertation, University of Massachusetts, Amherst.
- Kitahara, Hisatsugu. 1996. Raising quantifiers without quantifier raising. In *Minimal ideas*, ed. Werner Abraham, Samuel D. Epstein, Höskuldur Thráinsson, and C. Jan-Wouter Zwart, 189-198, Philadelphia: John Benjamins.
- Koizumi, Masatoshi. 1995. *Phrase structure in minimalist syntax*. Doctoral dissertation, MIT, Cambridge, Mass.
- Larson, Richard K. 1988. On the double object construction. *Linguistic Inquiry* 19: 335-391.
- Lasnik, Howard. 1999a. *Minimalist analysis*. Oxford: Blackwell.
- Lasnik, Howard. 1999b. Chains of arguments. In *Working minimalism*, ed. Samuel Epstein and Norbert Hornstein, 189-215. Cambridge, Mass: MIT Press.
- Lebeaux, David. 1988. *Language acquisition and the form of the grammar*. Doctoral dissertation, University of Massachusetts, Amherst.
- Lebeaux, David. 1991. Relative clauses, licensing and the nature of the derivation. In *Syntax and Semantics 25: Perspectives on phrase structure*, ed. Susan Rothstein, 209-239. New York: Academic Press.
- Martin, Roger. 1999. Case, the Extended Projection Principle, and minimalism. In *Working minimalism*, ed. Samuel Epstein and Norbert Hornstein, 1-25. Cambridge, Mass.: MIT Press.
- McCloskey, James. 2000. Quantifier float and wh-movement in an Irish English. *Linguistic Inquiry* 31: 57-84.
- Merchant, Jason. 1996. Scrambling and quantifier float in German. In *NELS 26*, 179-193. GLSA, University of Massachusetts, Amherst.
- Miyagawa, Shigeru. 1989. *Structure and Case marking in Japanese*. (*Syntax and Semantics*

- 22.) San Diego, Calif.: Academic Press.
- Nissenbaum, Jon. 1998. Movement and derived predicates: Evidence from parasitic gaps. In *MIT Working Papers in Linguistics* 25, ed. Uli Sauerland and Orin Percus, 247-295. MITWPL, Department of Linguistics and Philosophy, MIT, Cambridge, Mass.
- Obenauer, Hans-Georg. 1976. *Etudes de syntaxe interrogative du français*. Niemeyer.
- Ochi, Masao. 1999. Multiple spell-out and PF adjacency. *Proceedings of NELS 29*, 293-306. GLSA, University of Massachusetts, Amherst.
- Ormazabal, Javier, Juan Uriagereka, and Miriam Uribe-Echevarria. 1994. Word order and wh-movement: Towards a parametric account. Presented at GLOW 17, Vienna.
- Pollock, Jean-Yves. 1989. Verb movement, Universal Grammar, and the structure of IP. *Linguistic Inquiry* 20: 365-424.
- Postal, Paul M. 1974. *On raising: One rule of English grammar and its implications*. Cambridge, Mass.: MIT Press.
- Rizzi, Luigi. 1990. *Relativized minimality*. Cambridge, Mass.: MIT Press.
- Runner, Jeffrey. 1998. *Noun phrase licensing and interpretation*. New York: Garland.
- Sag, Ivan. 1976. *Deletion and logical form*. Doctoral dissertation, MIT, Cambridge, Mass.
- Shlonsky, Ur. 1991. Quantifiers as functional heads: A study of quantifier float in Hebrew. *Lingua* 84: 159-180.
- Sportiche, Dominique. 1988. A theory of floating quantifiers and its corollaries for constituent structure. *Linguistic Inquiry* 19: 425-449.
- Sportiche, Dominique. 1996. Clitic constructions. In *Phrase structure and the lexicon*, ed. Johan Rooryck and Laurie Zaring, 213-276. Dordrecht: Kluwer.
- Stateva, Penka. 2000. What simple clitics tell us about 'complex' nominal expressions? Presented at NELS 31, Georgetown University.
- Stepanov, Arthur. in press. Late adjunction and minimalist phrase structure. *Proceedings of NELS 30*, GLSA, University of Massachusetts, Amherst.
- Takahashi, Daiko. 1994. *Minimality of movement*. Doctoral dissertation, University of Connecticut, Storrs.
- Torrego, Esther. 1996. On quantifier float in control clauses. *Linguistic Inquiry* 27:111-126.
- Vikner, Sten. 1995. *Verb movement and expletive subjects in the Germanic languages*. Oxford: Oxford University Press.
- Watanabe, Akira. 1993. *AGR-based Case theory and its interaction with the A'-system*. Doctoral dissertation, MIT, Cambridge, Mass.
- Williams, Edwin S. 1980. Predication. *Linguistic Inquiry* 11: 203-238.
- Williams, Edwin S. 1982. The NP cycle. *Linguistic Inquiry* 13: 277-295.

Department of Linguistics, U-145
 University of Connecticut
 Storrs, CT 06269

boskovic@sp.uconn.edu