

Floating Quantifiers as Overt Scope Markers^{*}

George Tsoulas
(University of York)

Tsoulas, George. 2003. **Floating Quantifiers as Overt Scope Markers**. *Korean Journal of English Language and Linguistics* 3-2, 157-180. Why should quantifiers float? This is the question that this paper sets out to answer. In the past, research concentrated on how the theory should account for the non-constituency of a quantificational determiner and the NP it quantifies over. Successful as they might have been, those theories have little, if anything to offer as an answer to the question why quantifiers would float. Here we sketch a theory that puts the scopal properties of FQs (already observed by Dowty and Brodie, 1984) in the center of their properties. We construct a theory in which FQs are simple scope markers and float when differential scope needs to be marked.

Key Words: Floating quantifiers, scope, movement, agree, stranding

1. Introduction

The first version of this paper was presented at the KASELL conference in August 2002 at Sogang University in Seoul. I would like to thank the organisers for inviting me and the audience at the conference for their comments and discussion. I would especially like to thank my discussant Kwang-Sup Kim for comments which led to many improvements. I also presented a version of this paper at a NESS meeting in Durham. Thanks to that audience too for comments. I would also like to thank the following colleagues for patient discussion and penetrating commentary: David Adger, Dora Alexopoulou, Kook-Hee Gill, Steve Harlow, Caroline Heycock, Bernadette Plunkett, and Anthony Warner, who apart from everything else was extremely patient with my data questions even when my examples were either exorbitantly ungrammatical or just plain English. This research was partially supported by the *Arts and Humanities Research Board*, Grant B/B/RG/AN5827/APN12471: *Strategies of Quantification*.

One of the central questions of the early minimalist programme (Chomsky, 1993) was *how perfect is language*. Given a set of so-called *design specifications* the degree of perfection, in other words, how well language, as we know and understand it, fits those specifications, is largely an empirical matter. In subsequent stages of development of the central tenets of minimalist theory, as those can be seen in the subsequent series of Chomsky's works¹) there is a discernible move aiming to establish that indeed language is perfect in the above sense. A methodological repercussion of this move is that if one accepts the assumption that language is indeed a perfect system, the business of providing *explanations* for empirical phenomena amounts to uncovering the relevant part of the design specifications. In other words, each appropriately delimited empirical domain can be seen as a solution (the best one) to some problem. Explanation in this sense consists in finding the problem that the structures in question are a solution to. This is also the reason why apparent optionality is a major aspect of the grammar to be explained away. The present paper addresses from such a perspective the question of *floating quantifiers* (FQ). The problem raised by sentences with FQs is simply that, at first sight at least they seem completely optional. Indeed the fact that the logical form of sentences where quantifiers seem to float and those where they appear in their canonical position is 'so similar'. Sportiche (1988) has led many researchers in the past to adopt the analysis originally proposed by Sportiche (1988) which essentially relies on optional movement operations.² Here we will revisit FQs and we will propose that in fact they

¹See essentially Chomsky (1994; 1995a; 1995b; 2000; 2001a; 2001b). These works give a good idea of the development of what one might call the *orthodox* version of the minimalist programme. For a different view, see Brody (1995).

²We will turn to other analyses shortly.

are overt scope markers, submitting that the defining feature of FQ constructions is the fact that the NPs associated with these quantifiers must take scope at the surface position of the quantifier, a fact first noted in Dowty and Brodie (1984). This paper, I should stress, is largely programmatic. I will develop here a suggestion about the nature of floating quantifiers which does, I believe, offer a coherent way to understand their behaviour and properties in a unified and consistent manner. The paper is structured as follows: in 2 we will give a brief cross-linguistic survey aiming simply at showing the generality of the phenomenon. In 3 we will concentrate on the distribution of FQs in English. Section 4 will be a survey of some of the most influential accounts of the facts.³) We present the core of our proposal in 5. Section 6 is a small foray into the mechanisms of scope taking. In 7 we provide some more details of the proposal and we outline how the core data are accounted for. We conclude in section 8.

2. The Generality of the Phenomenon

Descriptively speaking, a so-called *floating* quantifier is a quantifier which appears to be floating away from the NP/DP it operates upon as in the following example:

- (1) The cooks [all] would [all] have [all] been [all] preparing monkfish.

FQs are by no means a phenomenon peculiar to English. In fact, its earliest mention, due to R. Kayne, was with respect to French (see Kayne, 1969, 1975, 1978). The following examples

³Note that we will not go into great detail on the advantages and shortcomings of each of these accounts. For an excellent survey we refer the reader to Bobaljik (1998).

provide a small sample of FQs in a variety of languages:⁴⁾

(2) FRENCH

Les enfants auraient [tous] du [tous] avoir [tous] fait leur travail.

The children should all have done their homework.

(3) GREEK

Ta pedia [ola] exoun idi [ola] figi.

The children have all already gone.

(4) GERMAN

Im Garten had der Hans sie gestern [alle] gegesen.

Hans ate them all yesterday in the garden.

(5) DANISH

Eleverne fik uden tviv alle en praemie.

The students have undoubtedly all received a prize.

(6) JAPANESE

Yuube kuruma ga doroboo ni 2-dai nusum-are-ta.

Last night cars-nom thief by 2-CL steal-PASS-PAST

Last night two cars were stolen by a thief.

(7) KOREAN

Chayk-ul haksayng-i se-kwen sassta.

book-acc student-nom 3-CL bought

A student bought three books.

Although, as the above examples indicate, the phenomenon itself is rather widespread, it would be misleading to imply that

⁴⁾The Danish example is from Giusti (1990), the Japanese example is from Miyagawa (1988), and the Korean example from Gill (2001).

it is also unified. For example, French is more liberal than English in that it allows FQs from objects as well as from subjects. German, on the other hand is more liberal than either English or Danish, and Greek seems more liberal than most in that it allows existential quantifiers to float alongside the more easily found universals.⁵⁾ A host of questions arise here not only to do with the syntactic constraints on FQs but also in what concerns the particular kind of quantification (if such a characterisation is really appropriate) that is expressed by FQs. We will have little to say here about these matters though. Let's now turn to English.

3. FQs in English

English has a large number of quantificational Ds. However, only three of them may float, namely:

- (8) a. *All*
- b. *Both*
- c. *Each*

On the one hand, what this means is that these three quantifiers have the same distribution in floating positions:

(9) The scientists (all) would (all) have (all) been (all) adjusting their theories (*all).

(10) The scientists (both) would (both) have (both) been (both) adjusting their theories (*both).

(11) The scientists (each) would (each) have (each) been

⁵⁾To an extent, Japanese and Korean are like Greek given that they allow numeral quantifiers to float.

(each) adjusting their theories (*each).

On the other hand, this means that the limited set of quantifiers which can appear separated from their associated NP, mainly in sentence-final position, should not be analysed in the same way:

(12) Regrets, I've had **a few**.

(13) Regrets, I (***a few**) have (***a few**) had.

Only *a few* seems to be able to appear in this position although if heavily accented *some* is not too bad:

(14) Friends in Seoul, I have **SOME** . . . (understood: but not many)

There are good reasons to believe that these cases are simply cases of Q-stranding (distinct from the purported stranding occurring in *Q-float*). The obvious reason, of course is that these quantifiers can only appear in the final position.

However, an interesting question arises here, namely why these quantifiers can be stranded in their base position and they are prohibited from all other positions which are otherwise available to FQs. In a sense this is a more well-behaved stranding process, assuming, as seems natural, that the NP is in Topic or Focus position (crucially an A'-position). As Bobaljik (1998) notes the majority of well-documented stranding processes are associated with A'-movement such as split topicalisation, left-branch violations in French, P-stranding⁶, and *was* . . . *für* in German. One could take this as evidence that *Q-float* is different from true stranding processes which do involve movement, but let's leave this question aside for the

⁶P-stranding is also possible with A-movement.

moment and return to FQs in English. Essentially, English FQs have the following characteristics:

- (15) a. They can only be associated with surface subjects.
- b. They can occur in all positions between T and v.
- c. They cannot appear adjacent to the trace of a *wh*-moved DP.

Property (15-a) is exemplified by examples like:

- (16) *Betty read the books all.
- (17) *Betty gave books to the peasants all.
- (18) *The draft-dodgers have been given passports all.
- (19) *The delegates arrived all.

(16) and (17) show that an FQ cannot be associated with a direct or indirect object. (18) and (19) show that FQs cannot be associated with deep subjects in their base-position in passive and unaccusative constructions. Property (15-b) is illustrated in (9)-(11) above. Finally, property (15-c) is illustrated in the following examples where a quantifier floats off a DP which has been *wh*-moved in cases of relativisation (20), topicalisation (21), and *wh*-questions (22):

- (20) *The judges who were all drunk voted for Betty.
- (21) *Those judges, the president will have all fired before the end of his first year in office.
- (22) *Which judges will the president have all fired before his

first term in office?

Interestingly though, although FQs are clearly unacceptable in *restrictive relatives* as in (20) above, a fact that has remained unexplained⁷ so far is that they are perfectly acceptable in *non-restrictives*:

(23) The judges, who were all drunk, voted for Betty.

In the light of the above data it has been suggested that the generalisation for English FQs and perhaps cross-linguistically is something like the following:

(24) GENERALISATION ON THE DISTRIBUTION OF
FLOATING QUANTIFIERS

Floating quantifiers are possibly adjacent to DP traces only (in other words adjacent to A-traces).

Note here that the generalisation as it stands is compatible both with a movement and a base-generation analysis.

A second point of interest before we leave this section is that although it is fairly clear that in sentences with a sequence of auxiliaries FQs may appear on the left of each auxiliary or the main verb, speakers have distinct preferences for the positioning of each of the FQs. So, for example, all of my informants clearly prefer (25) to (26):

(25) The children will each eat an apple.

(26) The children each will eat an apple.

⁷Though not unnoticed, this contrast is noted, as least, in Bianchi (1999) and Alexopoulou and Heycock (2002).

This pattern, with *each*, is repeated with longer sequences of auxiliaries. We will return to this point.

3.1. The Semantic Characteristics of FQs

To begin with, there seems to be no truth-conditional difference between (27) and (28):

(27) All the lecturers are badly paid.

(28) The lecturers are all badly paid.

Meaning differences occur when FQs appear with modal auxiliaries and/or negation. Consider the following:

(29) Both professors did not give a lecture: $both > \neg \neg > both$

(30) The professors did not both give a lecture: $\neg > both$

(31) All the candidates can not be appointed: $\forall > \neg \neg > \forall$

(32) The candidates can not all be appointed: $\neg > \forall$

Although (29) and (31) are ambiguous with negation scoping either above or below *both* or the universal, (30) and (32) are not. The only possible scope is the surface scope, i.e. only one professor gave a lecture and only some candidates can be appointed (but not none). These are the scope freezing facts that were first mentioned in Dowty and Brodie (1984).

4. Structures for FQs: A Very Brief Overview

4.1. Q-Float

The initial approach to quantifier-float was in terms of a transformation that moved the quantifier to the right or to the left. This is the approach taken by Kayne (1975). An example of this type of approach applied to English can be found in McCawley (1988).

4.2. *Q-Stranding*

The stranding view of FQs originates with Sportiche (1988). This view shares with the rightward movement analysis the intuition that the FQ and its associated DP form a constituent at some level. This explains the two properties which have been considered central to the understanding of these constructions, namely that the quantifier seems to quantify over the associated DP and that, in languages that show overt morphological agreement Q also agrees with the DP.

Though ingenious, the stranding view has a number of problems. First, it cannot explain the ungrammaticality of (16)-(19). Second, the association with A-movement only also remains mysterious. Third, in the case of *each* the source of the sentence with the FQ is in fact ungrammatical:

(33) The girls have each bought an ice-cream.

(34) *Each the girls have bought an ice cream.

Fourth, the scope freezing facts are also unexplained without extra stipulations.⁸⁾

Finally, the stranding approach on its own cannot explain the patterns in the pairs, (35) and (36):

⁸⁾Déprez (1994) suggests that one could assume that FQs cannot be raised by QR, though she goes on to say that this is probably too strong and offers an alternative view; this is the type of stipulation one would have to make.

- (35) a. All linguists are drunk.
b. *Linguists are all drunk.

- (36) a. All linguists are intelligent.
b. Linguists are all intelligent.

The nature of the predicate, stage-level in (35), and individual-level in (36) seems also to have an influence.

4.3. VP Adjunction, Adverbial Quantification

The second main type of approach to FQs is the one that takes them to be adjuncts to V(v)P. There are three sub-approaches that can be distinguished here. First there is the approach that takes FQs to be adverbial and behave similarly to quantificational adverbs such as *always*, and quantify over events or situations. Proponents of this approach are Swart (1991) and von Stechow (1994). The second sub-approach takes FQs to be adverbial in their distribution, but assigns to them a more complex internal structure, with an empty nominal. Alternatively, they are considered adjuncts to VP but with a requirement to C-command a trace of the DP they associate with. This approach has been advocated by Doetjes (1991, 1992, 1997) and Junker (1990, 1995).

Finally the third type of approach within this family is represented by Williams (1982, 1989, 1997), who proposes that FQs are VP adjuncts but they modify the thematic structure of the VP, more precisely, it modifies the distributivity of the external argument.

5. A Different View: FQs as Scope Markers

Much of the difference between the approaches outlined above

can be found in the set of properties of FQs that are considered *essential*. Thus under the stranding view the most salient properties are (37):

- (37) a. The fact that in languages which show overt agreement the Q agrees with the DP.
 b. The Q seems to quantify over the DP.

As for the VP-modifier/adverb view things are a little murkier; there isn't really a clear-cut set of properties. The main motivation seems to come from both theoretical considerations (with antecedents in the Categorical/Montague type approach taken in Dowty and Brodie (1984)) and the semantic effects of FQs. The view I would like to propose in this paper shares insights from both types of approaches. It is my view that the scope-freezing facts constitute the essential property of FQ constructions. To put it in the terms of the introduction, FQs are the solution to the following conflict: A DP needs to take intermediate scope⁹⁾ but A-movement resists reconstruction. In other words, we might say that one of the design specifications that the output of C_{HL} must meet is to be scopally unambiguous and LF is always so. There are of course problems with this suggestion taken in concert with the idea developed here. A critic would be quick to point out that if the idea is on the right track we should be seeing a lot more FQs than we actually do. I don't have an answer to this criticism in its full generality. What it suggests though is that perhaps there may be something more going on in connection with the quantificational force of the elements that do associate with FQs. For this paper I will disregard this. Essentially, the approach that I would like to defend in this paper then is that so-called

⁹⁾By intermediate scope here I mean scope at some position inside the functional field between T and v.

floating quantifiers *neither quantify nor float*. The agreement and apparent quantification over the DP are only derivative. The central property, I suggest, is that the FQ marks the scope of the associated DP:

(38) PROPOSAL 1

So-called FQs are in fact *scope markers* and they are located at different scope positions.

If FQs are scope markers, it is easily understandable why the scope of the DP is fixed in the FQ position.

Several questions arise with respect to this proposal, first, how is the scope marker related to its DP? How are the agreement facts to be accounted for? Does this approach help us at all understand why only a restricted set of quantifiers 'float'? What are the exact *scope positions* occupied by the scope markers? In the remaining sections, I will try to flesh out the proposal in (38) in order to show that this approach does indeed go some way towards providing answers to the above questions.

6. Notes on Scope Assignment Mechanisms

We will not be concerned here with the entire set of mechanisms involved in scope assignment.

Roughly speaking, we can distinguish two main approaches to scope assignment:

- (39) a. The QR-only approach: May (1977), May (1985)
- b. The Chain-link approach: Hornstein (1994)

The central assumption of the QR approach is the uniformity of scope assignment which we can formulate as in (40):

(40) The Uniformity of Quantifier Scope Assignment

Quantifier Raising applies uniformly to all QPs. Neither QR nor any particular QP is landing-site selective; in principle, a QP can be adjoined to any (non-argument) XP.

(Beghelli and Stowell, 1997, p. 72)

On the other hand, the chain-link approach suggests that every link in an A-chain is a potential scope position for the moved DP. In recent work (Szabolcsi, 1997; Szabolcsi and Zwarts, 1997) the above types of approach have come under criticism. Essentially the criticism is levelled against what Szabolcsi (1997) calls the *semantically blind rule of scope assignment* as she points out:

(41) [this rule] . . . roughly speaking "prefixes" an expression α to a domain D and thereby assigns scope to it over D , irrespective of what α means and irrespective of what operator β may occur in D :

1. The semantically blind rule of scope assignment

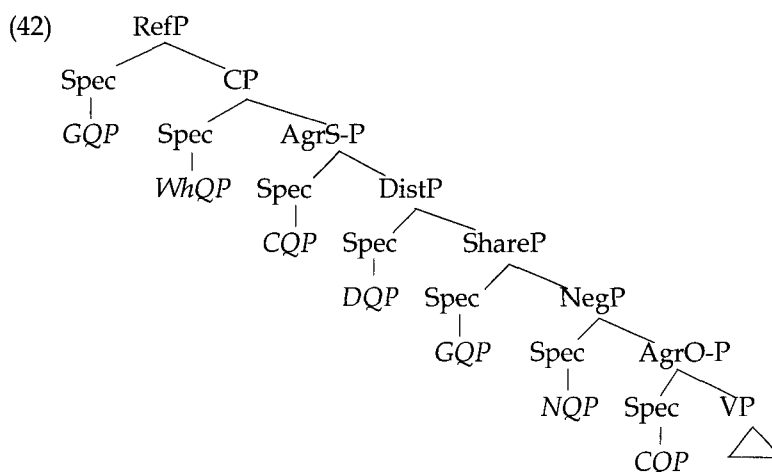
$$\alpha[D \dots \beta \dots] \Rightarrow \alpha \text{ scopes over } \beta$$

(Szabolcsi, 1997, p. 109)

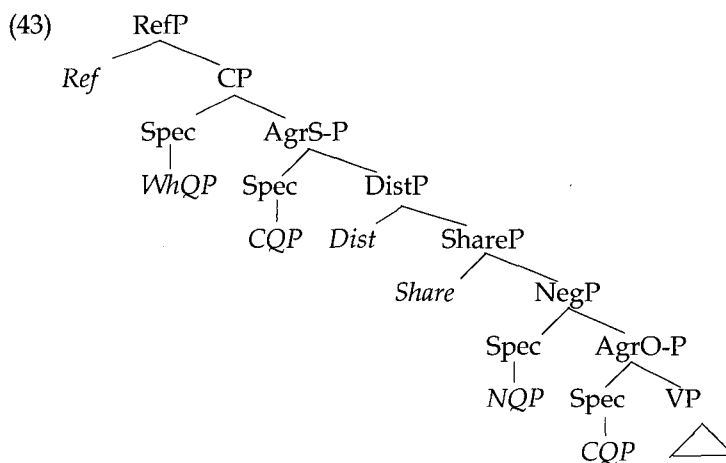
As an alternative to the blind rule it has been proposed that in fact QPs are selective with respect to their landing sites and that scope depends on the nature of the particular landing site. One particular implementation of this idea, due to Beghelli and Stowell (1997) is shown in the next section.

6.1. The Phrase Structure of Scope

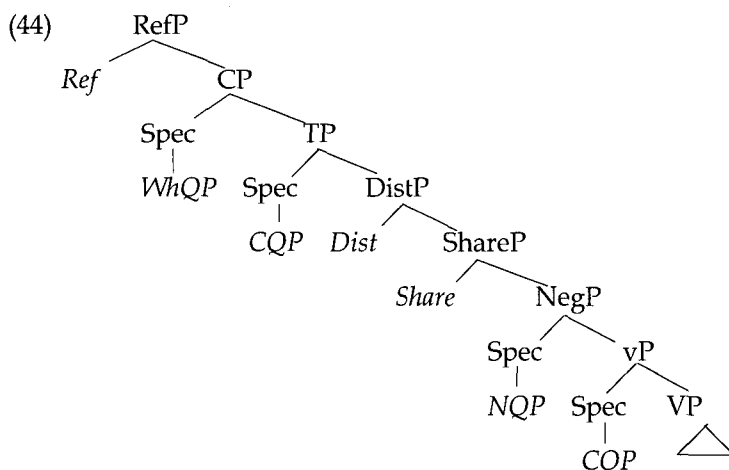
To begin with, consider the following structure from Beghelli and Stowell (1997).



Beghelli and Stowell (1997) argue extensively for the fact that different types of QPs end up in different positions because different types of QPs have different scopal properties, an observation going back at least to Kroch (1974). Unlike Beghelli and Stowell (1997), we will propose here that although there are heads in the clausal spine which instantiate scopal positions different types of QPs only move there when these are endowed also with an EPP feature. Otherwise the feature in question is deleted under agree. Thus, a more appropriate structure would be:



Removing the Agr nodes we will end up with something like the following:



where the [Spec, vP] position is ambiguously referring either to the inner spec of vP for an object (as it is Case-licensing position) or the outer spec vP containing—normally—the trace of the subject.

Now, note that this view differs—in technical implementation more than in spirit—from Beghelli and Stowell (1997) in that scope is not the reflex of *syntactic* agreement processes as instantiations of a [spec-head] relationship, but rather as the manifestation of a long-distance agree relationship. Now, let's return to the cases of so-called floating quantifiers. If the above is correct then the mechanisms are fairly clear.

In the simple case, assume that the DP is located in either [Spec, RefP] or [Spec, TP]. Assume further that this DP is endowed with an uninterpretable feature [$\pm F$].¹⁰ Some kind of featural specification is needed in order to make the DP an active probe. This probe will find a matching goal in one of the scopal heads and depending on where the feature is

¹⁰We return immediately to the nature of this feature.

valued/matched, it is at that position where the DP will take scope—this is marked by an overt spell-out of the relationship in the form of a scope marker—formerly known as a floating quantifier. As for the position of the goal, we can assume that it is lacking in \emptyset -features and becomes thus active. The nature of the position in question will determine the form of the scope marker:

- (45) Dist \rightarrow *Each*
 Share \rightarrow *All*
 Dist \rightarrow *Both*

We assume here that the difference between *both* and *each* is that *both* has a feature [+dual].

7. Further Details and Consequences

In the previous section, I mentioned that DPs would have to be endowed with some kind of uninterpretable feature. I would like to suggest that the feature in question is in fact a *scope* feature. This not only seems natural when considered against the background of the present discussion, it is also a generally plausible suggestion. To the extent that scope is syntactically determined one needs the means to implement this. Moreover, a scope feature would make it easier to assign scope to NPs that are not overtly quantificational in syntactic terms. Next, the question that, of course, arises here is how this proposal really fares, from an empirical point of view. To begin with, the question that arose with respect to the stranding analysis concerning the impossibility of stranding a quantifier in the base position of an underlying subject does not even arise here since the positions available to the scope markers are all higher and thus there is no need for any stipulation to rule out such cases

in English. In other languages, however, there is no such restriction. Consider French for instance:

(46) Les enfants sont tous partis.
The children are all gone.

(47) *Les enfants sont partis tous.
The children are gone all

(48) Les enfants viendront tous.
The children come-fut all.
The children will all come.

(49) Les enfants regardent tous le soleil.
The children look all the sun.
All the children look at the sun.

(50) *Les enfants regardent le soleil tous.
The children look the sun all.
All the children look at the sun.

The above examples reveal an interesting paradigm in fact. As we can see the FQ can appear between the auxiliary and the participle (46), after the finite verb (48), and between the finite verb and its object (49). Crucially they cannot appear in sentence final position when there is an auxiliary (47) or when there is an object (50).¹¹ Now, what this shows is that the restriction on the appearance of FQs adjacent to DP traces (and their inability to appear next to the base position of underlying subjects) has been misconstrued. It is not A-movement that we should be looking at but V-movement instead. As is well

¹¹This is not the entire paradigm but it is sufficient for my current purposes.

established, verbs move to T in French while they don't in English, save for auxiliaries. As is expected under the current analysis, this is sufficient to account for the observed distribution. Due to the position of the scopal heads we expect scope markers (FQs) to appear to the right of elements located in the functional projections orbiting around T and to the left of those orbiting around v. In other words, to the left of modal and other such elements and to the right of AgrO or participial agreement projections. I take this to be the general case. There is obviously something more that needs to be said concerning the English auxiliary system, which bears out the above prediction only partially. Given that I don't know what should be said about this, I can only offer the suggestion that the Aux field in English is organised in a templatic manner. I will not pursue this any further here though.

Second, the impossibility of FQs with A'-movement. We can easily understand why this is. DPs that have been *wh*-moved need not mark their scope independently—they are already in an operator position. Also the fact that a quantifier like *each* cannot float off **each the man/men* need not worry us any more. It can't because it never was there. Fourth, the scope-freezing effects: our account fares better here than any other since we do not have to postulate anything, e.g. about the applicability of QR to FQs. Being just scope markers these elements are not legitimate targets for QR. In general then, the proposal seems promising.

8. Concluding Remarks

In this paper, I have articulated an alternative view of the structure of sentences containing floating quantifiers. According to this theory, FQs are best understood as overt scope markers. In the body of the paper, I concentrated on showing how the

proposal would work without looking particularly at any possible consequences. However, if the proposal outlined above turns out to be on the right track, it would have serious consequences for our understanding of the way DPs are assigned scope. A fuller account would have to offer a more articulated view of scope assignment covering a larger array of constructions and making it clear where the boundary between syntax and semantics lies with respect to scope assignment. My view is that ultimately all DP scope should be syntactically assigned leaving the more intricate cases for the semantics, a natural view. The theory proposed here constitutes also an argument in favour of the selective application of scope assigning rules as advocated in Szabolcsi (1997) and elsewhere, with some modification. One issue that we did not explicitly touch upon is the precise location of the DP associated with the scope marker. The issue is complex since we should establish the precise reading of the DP (which seems to be referential) and whether the appropriate position of such DPs is indeed [Spec, RefP] in Beghelli and Stowell (1997). If this is indeed so, then we need to reconsider the status of that position. It is similar, but not quite identical to the position that topics occupy, but can we consider it an A-position? As an A'-position it would be disqualified for separate scope marking. One avenue to explore in this connection is the one taken by Gill (2000) with respect to topics, i.e. that they are in fact arguments in some sense. It would perhaps be a fruitful exercise to explore the hypothesis that it is not topics in general but rather topic-like elements located in [Spec, RefP] that ought to be considered argumental. In this connection, the view expressed recently by Adger and Ramchand (2003) and Butler (2003) according to which EPP features relate directly to predication may also be helpful and illuminating. There are of course many other aspects of the proposal that require clarification and further work such as how to reconcile

this proposal with the data reported in McCloskey (2000) from an Irish dialect of English where quantifier float and *wh*-movement are not incompatible as in (51):

(51) What_i did he *all*_i get for Christmas?

On the other hand, it would also be very illuminating to investigate the connection made above between verb movement and FQs in the history of English. It is well known that quantifiers could float in Middle English off the base position of a passive subject¹²) as in (52):

(52) They were raised all.

and verb movement was not completely lost by that time. More research is needed here. However, to the extent that this proposal proves tenable, there is at least one thing that we may have achieved here: remove another bit of optionality from the grammar. Floating quantifiers as scope markers are the optimal solution to the problem of assigning low scope to a DP sitting in a high A-position.

References

- Adger, D. and G. Ramchand. 2003. Merge and move: *Wh*-dependencies revisited. Ms. Queen Mary and University of Oxford.
- Alexopoulou, D. and C. Heycock. 2002. On the raising analysis of relative clauses. Ms. University of Edinburgh.
- Beghelli, F. and T. Stowell. 1997. Distributivity and negation: The syntax of *each* and *every*. In A. Szabolcsi, ed., *Ways of Scope Taking*, 71-107. Dordrecht: Kluwer Academic Publishers.
- Bianchi, V. 1999. *Consequences of Antisymmetry: Headed Relative*

¹²I give here a Modern English equivalent. Interestingly, my informants tell me that this example is not that bad really. Why? I don't know. Thanks to Anthony Warner for pointing this out to me.

- Clauses*. Berlin New York: Mouton de Gruyter.
- Bobaljik, J. D. 1998. Floating quantifiers: Handle with care. *Glott* 3, 3-10.
- Brody, M. 1995. *Lexico-Logical Form: A Radically Minimalist Theory*. Cambridge, Massachusetts: The MIT Press.
- Butler, J. 2003. Having an argument: Semantic EPP. Ms. University of York.
- Chomsky, N. 1993. A minimalist program for linguistic theory. In K. Hale and S. Keyser, eds., *The View from Building 20*, 1-52. Cambridge, MA: MIT Press.
- Chomsky, N. 1994. Bare phrase structure. In G. Webelhuth, ed., *Government and Binding Theory and the Minimalist Program*, 381-439, Oxford: Blackwell.
- Chomsky, N. 1995a. Language and nature. *Mind* 104, 1-61.
- Chomsky, N. 1995b. *The Minimalist Program*. Cambridge, MA: MIT Press.
- Chomsky, N. 2000. Minimalist inquiries: The framework. In R. Martin, D. Michaels, and J. Uriagereka, eds., *Step by Step: Essays on Minimalist Syntax in honor of Howard Lasnik*. Cambridge Mass: MIT Press.
- Chomsky, N. 2001a. Beyond explanatory adequacy. Ms. MIT.
- Chomsky, N. 2001b. Derivation by phrase. In M. Kenstowicz, ed., *Ken Hale: A Life in Language*, 1-52. Cambridge MA: MIT Press.
- Déprez, V. 1994. Questions with floating quantifiers. In M. Harvey and L. Santelmann, eds., *Proceedings of SALT 4*, 96-113.
- de Swart, H. 1991. *Adverbs of Quantification: A Generalised Quantifier Approach*. Ph.D. thesis. University of Groningen.
- Doetjes, J. 1991. *L-tous. A Unifying Account of Quantifier Float in French*. Master's thesis. Leiden University.
- Doetjes, J. 1992. Rightward floating quantifiers float to the left. *The Linguistic Review* 9, 313-332.
- Doetjes, J. 1997. *Quantifiers and Selection: On the Distribution of Quantifying Expressions in French, Dutch and English*. HIL Dissertation #32 (Leiden). [Chapter 8: Floating Quantifiers].
- Dowty, D. and B. Brodie. 1984. A semantic analysis of 'floated quantifiers' in a transformationless grammar. In *Proceedings of WCCLF-3*, 75-90. Stanford University: Stanford Linguistics Association.
- Gill, K.-H. 2000. *A Formal Approach to Long-distance Anaphora: The Case of Korean*. Ph.D. thesis. University of Edinburgh.
- Gill, K.-H. 2001. Floating quantifiers in Korean. In S. Kuno. et. al., eds., *Harvard Studies in Korean Linguistics X*. Harvard & Seoul: Hanshin Publishing Company.
- Giusti, G. 1990. Floating quantifiers in Germanic. In J. Mascar'ó and M. Nespó, eds., *Grammar in Progress: Glow Essays for Henk van Riemsdijk*, 137-146. Dordrecht: Foris Publications.

- Hornstein, N. 1994. *LF: The Grammar of Logical Form from GB to Minimalism*. Oxford: Blackwell Publishers.
- Junker, M.-O. 1990. Floating quantifiers and distributivity. *Cahiers Linguistiques d'Ottawa* 18, 13-42.
- Junker, M.-O. 1995. *Syntaxe et Sémantique des Quantifieurs Flottants Tous et Chacun: Distributivité en Sémantique Conceptuelle*. Genève: Librairie Droz.
- Kayne, R. S. 1969. *The Transformational Cycle in French Syntax*. Ph.D. thesis. MIT.
- Kayne, R. S. 1975. *French Syntax: The Transformational Cycle*. Cambridge, MA: MIT Press.
- Kayne, R. S. 1978. Le condizioni sul legamento, il collocamento dei clittici e lo spostamento a sinistra dei quantificatori. *Revista de Grammatica Generativa* 3, 147-171.
- Kroch, A. 1974. *The Semantics of Scope in English*. Ph.D. thesis. MIT.
- May, R. 1977. *The Grammar of Quantification*. Ph.D. thesis. Cambridge, MA: MIT.
- May, R. 1985. *Logical Form: Its Structure and Interpretation*. Cambridge, Mass: MIT Press.
- McCawley, J. D. 1988. *The Syntactic Phenomena of English*. Chicago: University of Chicago Press.
- McCloskey, J. 2000. Quantifier float and *wh*-movement in an Irish English. *Linguistic Inquiry* 31, 57-84.
- Miyagawa, S. 1988. *Structure and Case Marking in Japanese [Syntax and Semantics 22]*. New York: Academic Press.
- Sportiche, D. 1988. A theory of floating quantifiers and its corollaries for constituent structure. *Linguistic Inquiry* 19, 425-449.
- Szabolcsi, A. 1997. Strategies for scope taking. In A. Szabolcsi, ed., *Ways of Scope Taking*, 109-154. Dordrecht: Kluwer Academic Publishers.
- Szabolcsi, A. and F. Zwarts. 1997. Weak islands and an algebraic semantics for scope taking. In A. Szabolcsi, ed., *Ways of Scope Taking*, 217-262. Dordrecht: Kluwer Academic Publishers.
- von Stechow, K. 1994. *Restrictions on Quantifier Domains*. Ph.D. thesis. MIT.
- Williams, E. 1982. The NP cycle. *Linguistic Inquiry* 13, 247-289.
- Williams, E. 1989. The anaphoric nature of θ roles. *Linguistic Inquiry* 20, 425-456.
- Williams, E. 1997. *Thematic Structure in Syntax*. Cambridge, Massachusetts: The MIT Press.

George Tsoulas
 Department of Language and Linguistic Science
 University of York

Heslington, York
YO10 5DD - England - UK
E-mail: gt3@york.ac.uk

Received: May 8, 2003

Accepted: June 10, 2003