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## FLOATING QUANTIFIERS IN OLD ENGLISH: A SYNTACTIC STUDY

The article examines the syntax of Floating Quantifiers (FQs) in Old English. Diachronic data show that contemporary approaches to FQs cannot capture diverse properties displayed by these elements. Therefore the tripartite quantificational classification is proposed: Adjectival Quantifiers (AdjQs), which can float, are specifiers in structural terms. Inflectionally, they resemble adjectives. Pronominal Quantifiers (PQs) are classified as non-floating heads. Similar to pronouns, they can be used substantively. Finally, Adverbial Quantifiers (AdvQs) are dependent on the syntax of adverbs. This division follows the intuition of traditional grammarians (Mitchell 1985, Campbell 1959) who disperse quantifiers among adjectives, pronouns, and adverbs. Consequently, it is shown that, although the syntactic category of quantifiers must be recognized, the FQ is an epiphenomenon, the result of two kinds of movement: some so-called FQs are moved AdjQs, others are stranded PQs.

### 1. Introduction

There have been many attempts to explain the phenomenon of quantifier floating. First breakthrough came with the seminal work by Sportiche (1988), who claimed that Floating Quantifiers (FQs henceforth) are, in fact, stranded elements. Thus, in the sequence [<sub>NP</sub> Q NP],<sup>1</sup> where the Q is always adjoined to the left of NP, it is the NP that moves up into the specifier position of IP to get Case. Adopting the VP-internal Subject Hypothesis, example 1 can be illustrated as follows:

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<sup>1</sup> We use the NP notation following Sportiche. However, in the next section we adopt a more recent convention, that is the DP hypothesis. This inconsistency is not of any consequence here.

(1) *The children will all leave.*

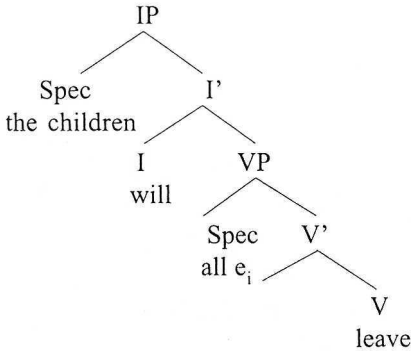


Fig. 1

Alternative theories put forward by various scholars (Baltin 1982, 1995, Bobaljik 1998, Doetjes 1992, inter alia) viewed FQs as adjuncts, members of the adverb category. All these, while differing in some details, exploit the similarity of quantifiers and adverbs.

Finally, scholars working on Arabic data (Shlonsky 1991, Benmamoun 1999) observed that a Q should actually be a head of the QP phrase containing the NP complement since it is the locus of agreement properties:

(2) *Ha-yeladim yasnu kul-am.*  
 the-children slept all-3pl.masc<sup>2</sup>  
 'The children all slept'. (Shlonsky 1991: 167)

All these theories find some support in OE data. In particular, Sportiche's theory deals well with example 3: *begen* is stranded in Spec VP position because the smaller NP, *hie*, is raised into a Case-marking slot. This leaves a trace next to the Q which forms a chain with the moved NP. *Ealles* in example 4 has clearly an adverbial character and we cannot speak of any movement at all. On the other hand, example 5 features a Q with functional properties (Case) and should therefore be a head of the QP projection.

<sup>2</sup> In this article, we use the following abbreviations:

<i>acc</i>	accusative
<i>dat</i>	dative
<i>gen</i>	genitive
<i>fem</i>	feminine
<i>masc</i>	masculine
<i>pl</i>	plural
<i>sing</i>	singular

- (3) *hie wæron begen Hloðwiges suna.*  
 ‘They were both Hloðwig’s sons’.  
 Chronicle Ms A Early (O2) 78<sup>3</sup>
- (4) *Ealles hi rixodon on Brytene feower hundwintra & hund seouanti wintra.*  
 ‘Altogether they ruled in Britain four hundred and seventy years’.  
 Chronicle Ms A Early (O2) 10
- (5) *cymð to demende eallum mancynne on ðam micclan dæge, ælcum be his dædum.*  
 comes to judge all mankind on the judgement day, each-*dat* by his deeds  
 ‘The judge comes to all mankind and to each (person) according to his deeds  
 on the judgement day’.  
 Ælfric’s Letter to Sigeward 56

On the face of such diversity of data, a new analysis is required. We propose that FQs constitute a heterogeneous group which comprises quantifiers displaying different syntactic properties. In order to capture these differences, we introduce the following classification: Adjectival Quantifiers (AdjQs), which bear an inflectional resemblance to adjectives, constitute the first group. Next, we distinguish Pronominal Quantifiers (PQs), which, as pronouns, can be used substantively. Lastly, there are Adverbial Quantifiers (AdvQs) whose behaviour is explained by the syntax of adverbs (cf. Cinque 1997, 1999). This division is in the spirit of traditional grammars (Mitchell 1985, Campbell 1959), which indicate that quantifiers share the properties of adjectives, pronouns, and adverbs. However, as distinct from these grammarians, we grant quantifiers the status of an independent syntactic class.<sup>4</sup> In the following section we deal with these three classes in detail.

## 2. The Analysis

As noted already, the key to proper analysis of FQs is to notice the heterogeneous nature of these elements. In what follows, we offer such a division. It essentially reflects the mode of thinking of traditional grammarians who already observed that quantifiers with their properties are dispersed among adjectives, pronouns, and adverbs. Let us look at the aforementioned three classes in turn.

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<sup>3</sup> The OE data are taken from the Helsinki Corpus of English Texts. A few remaining examples come from Bosworth & Toller Dictionary (*B&T*). In these cases we stick to the original abbreviations used there.

<sup>4</sup> Carlson (1978) argues that quantifiers as a separate syntactic group do not exist in Old English grammar. See Fischer and van der Leek (1981: 311–317) for criticism of this approach.

## 2.1. Adjectival Quantifiers (AdjQs)

One of the most important reasons for classifying quantifiers historically as adjectival elements is inflections. That is, quantifiers follow the inflectional paradigm of adjectives (nonexhaustive):

AdjQs	Adjectives
<i>ealles</i> mines weoredes 'of all my army <i>gen.sg</i> ' Alexander's Letter 10	<i>godes</i> lifes (bysene) '(an example) of good life <i>gen.sg</i> ' The Blickling Homilies 81
<i>ealra</i> þinra gesceafta 'of all your creatures <i>gen.pl</i> ' The Blickling Homilies 75	<i>fela godra</i> monna 'many good men <i>gen.pl</i> ' Chr. 871; Erl. 74, 34 (B&T)
(mid) <i>ealre</i> þinre heortan '(with) all your heart <i>dat.fem.sg</i> ' Ælfric's First and Second Letters to Wulfstan 218	(mid) <i>unrihtre</i> gewilnungu '(with) evil desire <i>dat.fem.sg</i> ' Apollonius of Tyre 2
<i>Eallum</i> þam mannum 'all the people <i>dat.pl</i> ' Ælfric's First and Second Letters to Wulfstan 152	(trymeþ) <i>godcundum</i> gifum '(strengthens with) divine gifts <i>dat.pl</i> ' Cd. 135; Th.170, 8; Gen. 2810 (B&T)
<i>ealne</i> þone here 'all the army <i>acc.masc.sg</i> ' Ælfric's Letter to Sigeward 30	(on) <i>sumne</i> blindne sead '(into) a blind hole <i>acc.masc.sg</i> ' Ælfric's Letter to Sigeward 69

Fig. 2

To push the parallelism with adjectives further, we suggest that AdjQs, just as attributive adjectives in recent proposals (Scott 2002, Haegeman & Guéron 1999), are specifiers of functional projections. This analysis seems plausible for a number of reasons. First, AdjQs are not iterable entering into a spec-head agreement relation with the noun.<sup>5</sup> Many linguists have tried to formalize the lack of recursiveness of some syntactic elements. Giorgi and Longobardi (1991: 133), for instance, propose 'Argument Uniqueness of Spec' principle which militates against multiplying the Spec position. Second, AdjQs can float, which should not be possible if they were, for instance, base-generated adjuncts:

<sup>5</sup> Carlson falsifies this claim with examples in which quantifiers co-occur. However, his earliest examples come from Middle English (Carlson 1978: 308–309). Secondly, even if such examples are found in Old English they cannot be indicative of adjectival status of quantifiers since quantificational co-occurrence is common in Present Day English too, as noted by Fischer and van der Leek (1981: 317): *every few years, some few more books*.



- (6) *ealle* hi forletan *heora æhta* and wif and wunedon on clænnysse, Criste folgende.

'They gave up all their possessions and wives and lived in purity, following Christ'.

Ælfric's First and Second Letters to Wulfstan 78

In the above example, the quantifier seems to have moved up and away from the DP it quantifies over into [Spec, CP] (cf. Kemenade 1997). In other words, *ealle* has been topicalized.

Taken these facts into account, we assume that a Q projects into the AdjQ phrase since it bears Case (examples in Figure 2). However, within the DP, the AdjQ is placed in the specifier slot, as illustrated below:<sup>6</sup>

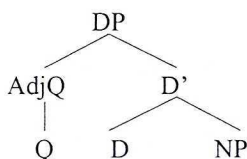


Fig. 3

In this way we capture the agreement as well as movement facts. What requires an explanation is why a topicalized AdjQ is always plain. Giusti (1991) indirectly provides an answer to this question when she observes that there are certain elements such as predicative adjectives and bare NPs that differ from ordinary DPs in that they are not allowed to undergo A-movement, but can undergo topicalization, that is A-bar movement:

- (7) a. *schön* ist sie nicht.  
 b. *Bücher* sind viele gekommen.  
 c. \*weil *Bücher* viele gekommen sind.

Giusti suggests that example 7c is ungrammatical because the NP is in [Spec, IP] (an argument position), which violates the Principle of Full Interpretation (cf. Chomsky 1986a), while *Bücher* in 7b is topicalized. In other words, the bare NP (*Bücher*) is a predicate which is not licensed in an argumental position such as [Spec, IP]. AdjQs can be topicalized, which indicates that they are predicates that must be

<sup>6</sup> There is another possibility in which a Q selects a DP (see the next section). This is the case in Arabic (Shlonsky 1991, Benmamoun 1999). However, Arabic quantifiers have different properties: first, 'agreement is a relation which holds exclusively between a head and a local specifier and not between a head and its complement' (Shlonsky 1991: 165). Thus we have no explanation for agreement between a Q and a noun, which renders similar Arabic sentences ungrammatical. Secondly, a Q assigns Genitive Case to the following NP bearing itself Nominative Case (Semitic Construct State), which is not the case in OE examples.

saturated by DP/QP if they are to appear in argumental position (cf. also Longobardi's 1994 DP/NP distinction).

To recapitulate this section, AdjQs display a close inflectional affinity with adjectives. They occupy the specifier slot in the DP and they can float leftwards. In other words, some of the traditional FQs are actually topicalized AdjQs, which are always plain quantifiers.

## 2.2. Pronominal Quantifiers (PQs)

Pronouns are usually considered as non-projecting heads of the DP (Abney 1987). Similarly, PQs, which can be used substantively, should also be treated in the same way since they bear Case and  $\phi$ -features of their own (example 5 repeated here as 8):

- (8) *cymð to demende eallum mancynne on ðam micclan dæge, ælcum be his dædum.*  
 comes to judge all mankind on the judgement day, each-*dat* by his deeds  
 'The judge comes to all mankind and to each (person) according to his deeds on the judgement day'.  
 Ælfric's Letter to Sigeweard 56

However, this picture is complicated by the following examples:

- (9) *Se apostol sæde [...] þæt hig ealle ætan þone ylcan gastlican mete and hig ealle druncon þone gastlican drenc.*  
 'The apostle said that they all ate the same holy food and they all drank the holy beverage'.  
 Ælfric's First and Second Letters to Wulfstan 184
- (10) *Ealle heora bec ðe se heretoga moyses oþþe witegan be godes dihte gesetton.*  
*Ealle hi sprecað ymbe cristes menniscnysse.*  
 'All their books which the leader Moses or the prophets composed by God's direction; they all speak about Christ's incarnation'.  
 Ælfric's Catholic Homilies (II) 70

The underlined combinations indicate that either a pronoun or a PQ must project. To solve this problem, we can follow two options. We can either admit pronominal projection in 9 or we can argue that pronouns do not project and suggest that only PQs project, as in 10. Then, instances such as 9 are the result of movement around the quantifier. We opt for the latter option. In this way, we extend the wh-movement to pronominal elements and argue that pronouns escape from their DPs via the left edge of QP (cf. Figure 4). In other words, the left edge is an escape hatch (Riemsdijk 1982) for movement, just like the left edge of CP is.<sup>7</sup>

<sup>7</sup> Interestingly, in Present Day English a quantifier must be obligatorily followed by the prepositional complement (*all of them*) because structures such as (12) die out in Early Mod.

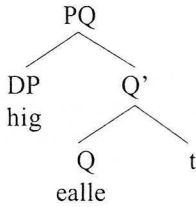


Fig. 4

PQs may also project full NP complements, as sentence 3 above illustrates. In fact, such cases are traditionally labelled as quantifier floating. In our terms, these are PQs whose complements move away in order to satisfy the Case filter. In other cases, movement is not driven by the need to assign Case:

- (11) & on fleame gebrohte þa *Philisteos ealle*, þe fuhton wið Saul.  
and into flight brought the Philistines all who fought with Saul  
'And [he] put to flight all the Philistines who fought with Saul'.  
Ælfric's Letter to Sigeward 36
- (12) and Apollonius *hi bæd ealle* [gretan] and on scip astah.  
'And Apollonius of Tyre ordered to greet them all and went into a ship'.  
Apollonius of Tyre 16

Example 11 lends support to Shlonsky's view that the movement of the DP may be optional proceeding via [Spec, QP] because *þa Philisteos* seems to occupy the specifier slot of the QP (cf. the escape hatch solution above). Example 12 is more problematic for Shlonsky. The movement is not triggered by the need to satisfy the Case filter since it is *gretan* that assigns Case. Nor can we claim that the object lands in [Spec, QP]. The only plausible solution is to assume scrambling of *hi* which separates itself from *ealle*.

Shlonsky further contends that a Q does not need Case (Shlonsky 1991: 177). This idea should be remedied since we have seen that a Q clearly bears Case. Therefore we argue that Qs do receive Case even if they stay in situ through the chain formed between the head DP, which raises to receive Case, and the foot, which is the trace. Then the Case percolates to a head (Chomsky 1981: 49). In effect, the head Q is also Case-marked. Note that this is a quite plausible solution since as Fischer and van der Leek (1981: 316) notice 'in almost all cases floating *eall* does agree in *case* (my emphasis), number and gender with the NP'.

Despite minor difficulties we adopt Shlonsky's proposal. In our terms it means that PQs are heads and Q-float constructions recognized by Sportiche and Shlonsky disguise PQs whose complements have moved away from them.

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English (Mustanoja 1960: 213). Its disappearance may be connected with the rise of the new construction *all of them* (cf. Fischer and van der Leek (1981: 317).

### 2.3. Adverbial Quantifiers (AdvQs)

As for the last group, we have nothing interesting to say beyond stating that they are clearly adverbial in nature and the syntax of adverbs is responsible for their exact position in the tree (see Cinque 1997, 1999 for an interesting proposal). Apart from example 4 above, here are some further sentences with AdvQs:

- (13) forðan þe he sylf ys *eall* god & ælc god cimð of him.  
 ‘Because He himself is all good and all goodness comes from Him’.  
 Ælfric’s Letter to Sigeward 18
- (14) þa wæs micel wundor þæt he wæs *eall* swa gehal swylce he cucu wære mid clænum lichaman.  
 ‘That was a great miracle that he was also whole as if he was alive with a clean body’. Ælfric’s Lives of Saints (IV) 326

### 3. Summary

Diachronically, FQs present themselves as a diverse group whose members cannot be treated in the same way. Therefore, granting them an independent status, we paint the following picture: AdjQs are maximal projections occupying the Spec position while PQs are heads, which may or may not be accompanied by a complement. AdjQs may move leftward from their sister phrase to a Caseless position when they are topicalized. The floating AdjQs are plain Qs because, being a bare phrase, they are not licensed in an argumental position such as [Spec, IP]. Complements of PQs can float away from the head in order to get Case. What remains in situ is the stranded, traditionally, ‘floating’ PQ. Consequently, the FQ is an epiphenomenon, the result of two kinds of movement just referred to: some so-called FQs are moved AdjQs, others are stranded PQs. This is tabulated below:

We hope that the tripartite division proposed here will contribute to better understanding of the nature of FQs in synchronic studies.

Floating Quantifier Type  Properties	Structural position	Movement (floating)		Projection
		Quantifier	Non-quantificational element	
AdjQs	Specifier	Yes	No	No
PQs	Head	No	Yes	Yes/No
AdvQs	Dependent on the syntax of adverbs			

Fig. 5



## References

- Abney, Steven (1987). *The English Noun Phrase in its Sentential Aspect*. Cambridge, MA: MIT dissertation.
- Baltin, Mark (1982). A Landing Site Theory of Movement Rules. *Linguistic Inquiry* 3: 1–37.
- Baltin, Mark (1995). Floating Quantifiers, PRO, and Predication. *Linguistic Inquiry* 26: 199–248.
- Benmamoun, Elabbas (1999). The Syntax of Quantifier and Quantifier Float. *Linguistic Inquiry* 30: 621–642.
- Bobaljik, Jonathan David (1998). Floating Quantifiers: Handle with Care. *Glott International* 3.6: 3–10.
- Bosworth, Joseph, and T. Northcote Toller (1898). *An Anglo-Saxon Dictionary Based on the Manuscript Collections of the Late Joseph Bosworth*. London: Oxford University Press.
- Campbell, Alistair (1959). *Old English Grammar*. Oxford: Clarendon Press.
- Carlson, Anita (1978). A Diachronic Treatment of English Quantifiers. *Lingua* 46: 295–328.
- Chomsky, Noam (1981). *Lectures on Government and Binding*. Dordrecht: Foris.
- Chomsky, Noam (1986a). *Knowledge of Language*. New York: Praeger.
- Chomsky, Noam (1986b). *Barriers*. Cambridge, MA: MIT Press.
- Chomsky, Noam (1995). *The Minimalist Program*. Cambridge, MA: MIT Press.
- Cinque, Guglielmo (1997). *Adverbs and Functional Heads. A Cross Linguistic Perspective*. University of Venice, ms.
- Cinque, Guglielmo (1999). *Adverbs and the Universal Hierarchy of Functional Projections*. Oxford: Oxford University Press.
- Doetjes, Jenny (1992). Rightward Floating Quantifiers Float to the Left. *The Linguistic Review* 9: 313–332.
- Fischer, Olga, and Frederike van der Leek (1981). Optional vs Radical Reanalysis: Mechanisms of Syntactic Change. *Lingua* 55: 301–350.
- Giorgi, Alessandra, and Giuseppe Longobardi (1991). *The Syntax of Noun Phrases*. Cambridge: Cambridge University Press.
- Giusti, Giuliana (1991). The Categorical Status of Quantified Nominals. *Linguistische Berichte* 136: 438–454.
- Haegeman, Liliane, and Jaqueline Guéron (1999). *English Grammar: A Generative Perspective*. Oxford: Blackwell.
- Helsinki Corpus of English Texts: Diachronic and Dialectal*. Helsinki: Department of English, University of Helsinki.
- Kemenade, Ans van (1997). V2 and Embedded Topicalization in Old and Middle English. *Parameters of Morphosyntactic Change*, ed. by Ans van Kemenade and Nigel Vincent, 326–352. Cambridge: Cambridge University Press.
- Longobardi, Giuseppe (1994). Reference and Proper Names: a Theory of N-Movement in Syntax and Logical Form. *Linguistic Inquiry* 25: 609–665.
- Mitchell, Bruce (1985). *Old English Syntax*. Oxford: Clarendon Press.
- Mustanoja, Tauno (1960). *A Middle English Syntax*. Helsinki: Société Néophilologique.
- Pollock, Jean-Yves (1989). Verb Movement, Universal Grammar, and the Structure of IP. *Linguistic Inquiry* 20: 365–424.
- Riemsdijk, Henk van (1982). *A Case Study in Syntactic Markedness: The Binding Nature of Prepositional Phrases*. Dordrecht: Foris.

- Scott, Gary-John (2002). Stacked Adjectival Modification and the Structure of Nominal Phrase. *Functional Structure in DP and IP*, ed. by Guglielmo Cinque, 91–120. Vol. 1, Oxford Studies in Comparative Syntax. Oxford: Oxford University Press.
- 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.