

Quantifier Movement in Icelandic

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Derivational analyses of OV order such as that in Zwart 1993 involve movement of VP-internal elements to the left, across the verb. Such movement appears not to be subject to Holmberg's Generalization (Holmberg 1986), which observes that certain kinds of movement are prohibited from crossing the verb. On one view, an OV language like German differs from a VO language like Icelandic in that German is not subject to Holmberg's Generalization, while Icelandic is. Here I show that Quantifier Movement in Icelandic is not subject to Holmberg's Generalization, although similar movements in Norwegian are. Thus the difference between OV and VO languages cannot be reduced to the parametric applicability of Holmberg's Generalization by language.

0. Background*

It has been observed at various times and in various contexts that certain types of movement seem to be inhibited from crossing the verb; for example, according to Steele (1978), OSV is a possible alternative order for most SOV languages (cf. her p. 615), while SVO is substantially less commonly possible, and OVS fairly seldom so. Similarly, most VSO languages allow VOS order (and vice-versa), while only about half of the VSO languages in Steele's sample permit SVO (cf. her p. 616).

Ross (1967) observed that a number of OV languages maintain a rather strict verb-finality; he proposed that languages which are OV in Deep Structure do not have rightward movement rules. Fukui (1993) develops an analysis in which head-final languages allow movements which disturb head-finality, but only at a greater cost (in

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terms of Chomsky's 1991 derivational economy) than orderings which preserve the basic headedness value. His proposal is unlike that of Ross in also maintaining the analogous constraint on head-initial languages, so that they favor reorderings that preserve head-initiality.

The best-known example of a movement which respects the verb as a boundary is *Object Shift* (OS), analyzed in Holmberg 1986 for Mainland Scandinavian (MS) and Icelandic. OS is the leftward movement of a definite noun phrase across adverbial elements (Holmberg 1986 held that OS was restricted to pronouns in MS, but see Nilsen 1997 for arguments that this is not necessarily so).

In (1a), the object is in its most neutral position, following the verb but preceding other elements in the verb phrase (I use a particle to indicate the right edge of the verb phrase as it is generally assumed that particles do not move rightward). The verb has moved to second position, across the sentential adverb. In (1b), the pronominal object appears to the left of the adverb. This is analyzed, following Holmberg 1986, as involving leftward movement of the pronoun to a position outside (or adjoined to) the VP; as sketched in (1c) (t_v is the trace of the verb, t_o the trace of the object).

- (1) a. *Knut leverte sannsynligvis oppgaven inn.* (Nor)
Knut handed probably the.assignment in
'Knut probably handed the assignment in.'
- b. *Knut leverte den sannsynligvis inn.*
Knut handed it probably in
'Knut probably handed it in.'
- c. *Knut leverte den sannsynligvis [_{VP} t_v t_o inn].*
Knut handed it probably in

OS is prohibited from crossing overt non-adverbial material; this fact is known as *Holmberg's Generalization* (HG; cf. Holmberg 1986:165). OS is observed in V2 contexts, where the verb has moved to the left, across an adverb. In embedded clauses in MS, the verb does not move, and OS is impossible.

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- (2) a. ...*hvis Knut sannsynligvis leverte den inn* (Nor)
 if Knut probably handed it in
 b. *...*hvis Knut den sannsynligvis leverte inn*
 if Knut it probably handed in
 c. * ...*hvis Knut den sannsynligvis* [_{VP} *leverte t_o inn*]
 if Knut it probably handed in

OS is also impossible across non-finite verb forms, prepositions, and particles.¹

- (3) a. *Knut har {*den} sannsynligvis levert {den} inn.* (Nor)
 Knut has it probably handed it in
 ‘Knut has probably handed it in.’
 b. *Knut skrev {*den} sannsynligvis på {den}.*
 Knut wrote it probably on it
 ‘Knut probably wrote on it.’
 c. *Lars skickade {*den} sannolikt in {den}.* (Swe)
 Lars handed it probably in it

OS is also prohibited across such sentence elements as the subject or indirect object (though see Josefsson 1992 for examples in which OS crosses the subject, in Swedish).

- (4) a. *I dag leverte {*den} Knut {den} sannsynligvis inn.* (Nor)
 today handed it Knut it probably in
 b. *Knut ga {*den} sannsynligvis Marit {den}.*
 Knut gave it probably Marit it

HG may not have a unified explanation: the different elements may be uncrossable by OS for different reasons. For example, if OS is a type of A movement, as argued in Holmberg 1986 (cf. Webelhuth 1992, Vikner 1994, Holmberg & Platzack 1995, Holmberg 1997 for discussion), then the fact that it cannot cross subjects or indirect objects is expected under Relativized Minimality (RM; Rizzi 1990), but its being unable to cross verbs and prepositions still requires another explanation.

Whatever that explanation is (see Holmberg 1999 for a recent proposal along with discussion of previous ones), OS has seemed to be somewhat of an anomaly in that other movements do not obey HG, nor even the residue of it once RM effects are

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ignored. For example, A' movements such as topicalization and wh-movement may freely cross moved and unmoved verbs, as may A movements such as passive and subject raising.²

Recent proposals regarding the derivation of OV orders from underlying VO orders (e.g. Zwart 1993) compound the problem in a sense, as they postulate object movements to the left that resemble OS except that they do not obey HG. This raises the possibility that languages are parametrized according to whether they obey HG or not; possibly, OV languages are just those that do not. However, since VO languages have HG-oblivious rules events like subject raising and topicalization, even this scenario leaves HG with a very narrow scope of application. Worse yet, according to Diesing 1997, Yiddish, generally considered a VO language, has something which looks very much like OS but which violates HG.

Part of the problem in providing an analysis for HG, then, is in finding other examples than OS to which it applies. Here I would like to point out one such example: *Negative Movement* (NM) in Norwegian. NM has been largely overlooked because unlike OS, it does not cross adverbs. As a result, it is always string-vacuous in languages like Norwegian. However, it can be observed by the fact that it is obligatory: failure to undergo NM results in ungrammaticality. Thus, although the sentence in (5a), with a negative object, is grammatical, this is not so for the sentences in (5b-e), which repeat the contexts from (2) and (3) above in which HG blocks OS.³

- (5) a. *Knut leverte ingenting inn.* (Nor)
Knut handed nothing in
'Knut didn't hand anything in.'
- b. *...*hvis Knut leverte ingenting inn*
if Knut handed nothing in
- c. * *Knut har levert ingenting inn.*
Knut has handed nothing in
- d. * *Knut skrev på ingenting.*
Knut wrote on nothing
- e. * *Lars skickade in ingenting.* (Swe)
Lars handed in nothing

In addition, NM cannot cross a subject or indirect object.

- (6) a. * *I dag leverte ingenting Knut inn.* (Nor)
 today handed nothing Knut in
 b. * *Knut ga ingenting Marit.*
 Knut gave nothing Marit

The contrast between (5a) and (5b) is quite striking. It is explained on the assumption, due to Christensen 1995, that negative objects must leave VP overtly (cf. also Haegeman's 1995 Neg Criterion), given that that movement is subject to HG. Thus (5a-b) are analyzed as in (7).

- (7) a. *Knut leverte ingenting* [_{VP} t_v t_o *inn*].
 Knut handed nothing in
 b. *...*hvis Knut* [_{VP} *leverte ingenting inn*]
 if Knut handed nothing in

(5b) is then bad because the negative object has to move, but cannot cross the verb, which has not left VP.

In Swedish and Danish, sentences like those in (5b-c) can be rescued by non-string-vacuous NM.

- (8) a. ...*om Lars ingenting inlämnade.* (Swe)
 if Lars nothing handed.in
 '...if Lars didn't hand anything in.'
 b. *Lars har ingenting inlämnat.*
 Lars has nothing handed.in
 'Lars hasn't handed anything in.'

Some speakers of Norwegian also accept such sentences, though for most speakers, they are not employed except in idiomatic expressions. Even in Swedish and Danish, non-string-vacuous NM may be restricted in various ways, to different degrees for different speakers. I will not attempt any further analysis here of the Danish and Swedish facts, except to point out the similarity of the French fronting of *rien* in sentences like that in (9a) (from Obenauer 1998).

- (9) a. *Il n' a rien préparé.* (Fre)
 he NEG has nothing prepared
 'He hasn't prepared anything.'

- b. * *Il n' a préparé rien.*
he NEG has prepared nothing

Cf. Cinque 1990, Taraldsen 1991 on a different case of single-word operators with special syntactic properties.

In the remainder of this paper I turn to Icelandic, a language which exhibits a highly productive rule of NM, and a slightly less productive rule of *Quantifier Movement* (QM), neither of which respects HG. Icelandic and Norwegian can thus clearly be contrasted with respect to whether NM is subject to HG or not (Swedish and Danish I will tacitly take to pattern with Norwegian, assuming the pattern in (8) above to be exceptional).

The paper is organized as follows: in §1 I summarize the essential syntactic properties of QM. Following Jónsson 1996 I take QM to be, in general, A' movement, and following Rögnvaldsson 1987 I model it as adjunction to VP. I show that in certain contexts, this leads to QM having properties of A movement, rather than A' movement. In §2 I discuss the semantic effects of the movement and suggest that it represents an overt instance of Quantifier Raising (QR). I take QR to be motivated by rules of semantic interpretation, which build tripartite quantificational structures. QR moves to the left edge of VP, on this view, in order to syntactically demarcate its nuclear scope (as in Diesing 1992). In §3

1. The Syntactic Properties of QM in Icelandic

Icelandic is uncontroversially a VO language, in that complements quite generally follow their heads.

- (10) a. *Strákarnir höfðu hent grjóti í bílana.*
the.boys had thrown rock in the.cars
'The boys had thrown rocks at the cars.'
- b. * *Strákarnir höfðu grjóti hent í bílana.*
the.boys had rock thrown in the.cars

Icelandic has OS; as in MS, OS in Icelandic is subject to HG. In (11a-b), the main verb has moved to the left across the adverb *aldrei* 'never,' and in (11b) OS has applied; in (11c), there is a participle which has not moved across *aldrei*, and OS is prohibited.

- (11) a. *Strákarnir hentu aldrei grjótinu í bílana.*
the.boys threw never the.rock in the.cars
‘The boys never threw the rocks at the cars.’
- b. *Strákarnir hentu grjótinu aldrei í bílana.*
the.boys threw the.rock never in the.cars
‘The boys never threw the rocks at the cars.’
- c. * *Strákarnir höfðu grjótinu aldrei hent í bílana.*
the.boys had the.rock never thrown in the.cars

What I discuss in this paper is another leftward movement process, distinct from OS, which affects negative objects obligatorily, moving them to the left, across an unmoved verb (Rögnvaldsson 1987).

- (12) a. * *Strákarnir höfðu hent engu grjóti í bílana.*
the.boys had thrown no rock in the.cars
- b. *Strákarnir höfðu engu grjóti hent í bílana.*
the.boys had no rock thrown in the.cars
‘The boys had thrown no rocks at the cars.’

Jónsson 1996 calls the movement in (12b) Negative Movement (NM, as above). A similar movement process may affect non-negative quantificational objects, but only optionally, and not necessarily for all speakers; many speakers feel that the order in (13b) is odd or at least stylistically marked, and many similar examples are adjudged ungrammatical. I indicate the variable status of such examples with a question mark here, though it should be noted that many such examples are perfect for many speakers.

- (13) a. *Strákarnir höfðu hent miklu grjóti í bílana.*
the.boys had thrown much rock in the.cars
‘The boys have thrown many rocks at the cars.’
- b. ? *Strákarnir höfðu miklu grjóti hent í bílana.*
the.boys had much rock thrown in the.cars
‘The boys had thrown many rocks at the cars.’

The movement in (13) is what I have referred to above as Quantifier Movement (QM), following Christensen 1995; assume for the moment that NM is a specific

case of QM (I motivate this assumption in §2 below).

The basic empirical facts are carefully documented in Rögnvaldsson 1987, where QM (including NM) is analyzed in terms of adjunction to VP. Jónsson 1996 analyzes NM, proposing that negative expressions move to SpecNegP, under Haegeman & Zanuttini's 1991 Neg Criterion. Here I extend the empirical coverage of the work by Rögnvaldsson and Jónsson, and refine the analysis.

A note on the data: most of the examples of QM with non-negative quantified DPs are marked or degraded for many speakers, and even those speakers who accept QM generally find the corresponding sentences without it more natural. I have not indicated this in the examples in the sections to follow. Even speakers who are hesitant to accept sentences displaying QM detect a clear contrast between the examples that I give here as good and the starred examples.

In addition to speaker variation, the choice of quantifier affects acceptability. Rögnvaldsson 1987:38-42 gives examples with QM with *þrímislegur* 'various' and *dálítið* 'a little' as well as downward entailing quantifiers/adjectives such as *fáir* 'few' and *lítið* 'little' as perfect, and marks examples of QM with *mikið* 'much' and *einhverjar* 'some' as "??." Other speakers are not necessarily as strict. Rögnvaldsson also notes other factors affecting acceptability, including length. For example, he gives the pair in (14a-b) (his p. 40, his judgments, confirmed by other speakers), to which can be added (14c-e).

- (14) a. *Jón hefur þrímislegt þurft að þola.*
 Jón has various had to tolerate
 'Jón has had to put up with various things.'
- b. ? *Jón hefur þrímisa erfiðleika þurft að þola.*
 Jón has various difficulties had to tolerate
 'Jón has had to put up with various difficulties.'
- c. ?? *Jón hefur þrímisa óhjákvæmilega erfiðleika þurft að þola.*
 Jón has various unavoidable difficulties had to tolerate
 'Jón has had to put up with various unavoidable difficulties.'
- d. *? *Jón hefur þrímisa erfiðleika sem voru óhjákvæmilegir þurft að þola.*
 Jón has various difficulties as were unavoidable had to tolerate
- e. ? *Jón hefur þrímisa erfiðleika þurft að þola sem voru*

óhjákvæmilegir.

Jón has various difficulties had to tolerate as were unavoidable
 ‘Jón has had to put up with various difficulties that were unavoidable.’

As indicated, full DPs undergo QM with slight reluctance, deviance sometimes increasing with length, witness the contrasts between (14b-c) and (14c-d). A relative clause can be stranded, as in (14e), which is comparable to (14b), with no relative clause (I gloss the relative particle *sem* as ‘as,’ cf. Svenonius 1998).

Henceforth I will omit the ‘?’ before examples with full DPs, taking them to be basically good, in a certain register. Examples which I do mark with a question mark are noticeably worse, for a majority of informants, than examples like (14a-b).

1.1. QM moves quantificational DPs

As has already been suggested in the examples in the introduction, QM is restricted to quantified elements, specifically quantified DPs. It is impossible with bare indefinites (cf. (10)), including bare plurals, as in (15a), and with definites (cf. (11)), including possessed DPs and names, as in (15b-c).

- (15) a. * *Strákarnir höfðu steinum hent í bílana.*
 the.boys had stones thrown in the.cars
- b. * *Strákurinn hefur bjórflöskunni minni hent í bílinn.*
 the.boy has the.beer.bottle my thrown in the.car
- c. * *Helgi hefur Atómstöðina lesið.*
 Helgi has The Atom Station read

For some speakers, QM is possible with weak quantifiers (cf. (13) above), including numerals, as well as strong quantifiers (four of six polled accepted both (16a) and (16b), and two rejected both; all found (16c) more or less acceptable; for those speakers who rejected (16a), similar examples with *bara* ‘only’ before the numeral were substantially improved). Negative polarity items, such as *neitt* in (16d), also undergo QM.

- (16) a.% *Strákarnir höfðu þremur steinum hent í bílana.*
 the.boys had three stones thrown in the.cars
 ‘The boys had thrown three rocks at the cars.’

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- b.% *Strákarnir höfðu öllum steinunum hent í bílana.*
 the.boys had all the.stones thrown in the.cars
 ‘The boys had thrown all the rocks at the cars.’
- c. *Helgi hefur flestar bækur lesið.*
 Helgi has most books read
 ‘Helgi has read most books.’
- d. *Enginn hefur neitt gert.*
 nobody has anything done
 ‘Nobody has done anything.’

Generally, QM moves DPs of any case (e.g. the object of *henta* ‘throw’ in (10-13) is dative, but the object of *lesa* ‘read’ in (16c) above is accusative). Complements of prepositions can be moved in some cases, as seen in (17b).

- (17) a. *Hann hefur talað við ýmsa.*
 he has spoken with various
 ‘He has spoken with various [people].’
- b. *Hann hefur ýmsa talað við.*
 he has various spoken with
 ‘He has spoken with various [people].’
- c.*? *Hann hefur við ýmsa talað.*
 he has with various spoken

Preposition stranding is generally possible under A' movement in Icelandic. In some cases, preposition stranding under QM is not possible, but PP movement is, at least for some speakers (cf. Jónsson 1996:84).

- (18) a. *Hann hefur ekki hlegið að neinum.*
 he has not laughed at anybody
 ‘He hasn’t laughed at anybody.’
- b.*? *Hann hefur ekki neinum hlegið að.*
 he has not anybody laughed at
- c. *Hann hefur ekki að neinum hlegið.*
 he has not at anybody laughed
 ‘He hasn’t laughed at anybody.’

P stranding and PP movement appear to be in roughly complementary distribution, for different verb-preposition combinations, though in some cases both options are regarded as dubious (and there is some degree of speaker variation; in particular, some speakers seem to always prefer P stranding). I return to the interaction of PPs with QM in §1.5 below.

1.2. *QM is like A' movement*

Jónsson 1996 shows that NM generally has the characteristics of A' movement, rather than A movement, and here I demonstrate the same for QM. Jónsson identifies four factors suggesting an A' movement analysis for NM:

- (19) A' properties of NM (Jónsson 1996:83)
- a. NM is not Case-driven
 - b. NM licenses parasitic gaps
 - c. NM triggers WCO violations
 - d. NM does not create new binding possibilities for anaphors.

For (19a), Jónsson points out that NM moves complements of prepositions, as seen above for QM in (17b), and that NM moves PPs, as seen for QM in (18c). An additional argument that QM is not Case-driven is the fact that it crosses clause boundaries. For example, (20b) shows the object of the embedded verb *geta* 'be able to, solve' moving past the participle in the main clause.

- (20) a. *Á prófinu mun hann sýmast geta margt.*
 on.the.test will he seem solve many
 'On the test he will seem to be able to solve many [problems].'
- b. *Á prófinu mun hann margt sýmast geta.*
 on.the.test will he many seem solve
 'On the test he will seem to be able to solve many [problems].'

Case is available in the embedded clause from the transitive verb *geta*; the main verb in the matrix clause, on the other hand, is the raising verb *sýmast*, 'seem,' which is standardly assumed not to assign Case.

As for (19b), Jónsson provides examples of QM which are intended to demonstrate that it licenses parasitic gaps, similar to those in (21a-b); (21a) shows a

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good example of QM with a parasitic gap; (21b) shows that the parasitic gap is bad without QM; and (21c) shows that QM is not necessary if there is no parasitic gap.

- (21) a. *Þeir hafa mörgum sagt upp án þess að hrósa fyrir vel unnin störf.*
 they have many said up without to praise for well done work
 ‘They have fired many people without praising [them] for a job well done.’
- b. **Þeir hafa sagt upp mörgum án þess að hrósa fyrir vel unnin störf.*
 they have said up many without to praise for well done work
- c. *Þeir hafa sagt upp mörgum án þess að hrósa þeim fyrir vel unnin störf.*
 they have said up many without to praise them for well done work
 ‘They have fired many people without praising them for a job well done.’

Diagnostic (19c) is Weak Cross-Over (WCO). (22a) shows that *skila* ‘return’ takes two (dative) complements, goal before theme (the opposite order is not possible); (22b) shows that QM of the second complement across the first is possible; and (22c) shows that this is not possible if the crossed complement contains a pronoun coindexed with the complement moved by QM. (22d) shows that A' movement has the same property.

- (22) a. *Ég hef skilað Jóni mörgum bókum.*
 I have returned Jon many books
 ‘I have returned many books to Jon.’
- b. *Ég hef mörgum bókum skilað Jóni.*
 I have many books returned Jon
 ‘I have returned many books to Jon.’
- c. **Ég hef mörgum bókum_i skilað eigendum þeirra_i.*
 I have many books returned owners their
 (‘I have returned many books to their owners.’)
- d. **Hvaða bókum_i hefurðu skilað eigendum þeirra_i?*
 which books have.you returned owners their

Finally, Jónsson shows that NM does not create new opportunities for binding,

unlike A movement ((19d)). Example (23a) is modelled on his (112), p. 85, and, in conjunction with (22c), demonstrates that the same holds for QM: whether the pronoun is reflexive or not, it cannot be bound by the QM-moved expression. (23b) shows that A movement is different in this respect, as it does not induce WCO.

- (23) a. * *Ég hef marga bækur_i gefið^ð eigendum sínum_i.*
 I have many books given owners RFX
 ('I have given many books to their owners.')
- b. *Þessar bækur_i voru gefin eigendum sínum_i.*
 these books were given owners RFX
 'These books were given to their owners.'

While it may not strictly be true that A' movement never creates new opportunities for binding, it does not in the usual case, while A movement generally does, so (23) supports the proposal that QM is A' movement. However, in §1.3-5 below I show the picture is slightly more complicated, and in §2 below I will suggest that QM is actually a case of Quantifier Raising (QR), a movement more restricted than A' movement (for example, it cannot cross an indicative clause boundary).

1.3. QM targets the highest VP

QM occurs under a variety of auxiliaries. In Icelandic, auxiliary verbs may take bare infinitives, as in (24a), *to*-infinitives (i.e. infinitives with the preposition/complementizer *á*), as in (24b), or perfect participles, as in (13) or (24c).

- (24) a. *Þorgerður mun lítið borða.*
 Þorgerður will little eat
 'Þorgerður will eat little.'
- b. *Sigríður ætlar þmislegt á gagnrýna.*
 Sigríður will various to criticize
 'Sigríður will criticize various [things].'
- c. *Eyþór getur ekkert gert.*
 Eyþór can nothing done
 'Eyþór can't do anything.'

If there are multiple auxiliaries, QM moves the DP to the left of the highest non-

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finite verb (in a finite clause); given that the finite verb has left the VP it heads, this is consistent with QM targeting the highest VP, as Rögnvaldsson (1987) suggests.

- (25) a. *Hann mun miki hafa vilja lesa.*
 he will much have wanted read
 ‘He has wanted to read much.’
 b. **Hann mun hafa miki vilja lesa.*
 he will have much wanted read
 c. **Hann mun hafa vilja miki lesa.*
 he will have wanted much read

Control verbs generally pattern with auxiliaries in that QM can escape the infinitive clause, as in (26b); testing for QM within the embedded clause is difficult because of the oddness of most instances of auxiliaries embedded under control verbs; but given a suitable context, some marginally acceptable examples can be constructed, as in (26c) (this is discussed further in §2, where the different readings of (26a-b) are also discussed) ((26c) is not terribly good, but whether this is due to semantic or strictly syntactic factors is unclear to me).

- (26) a. *Hann hefur lofað að lesa margar bækur.*
 he has promised to read many books
 ‘He has promised to read many books.’
 b. *Hann hefur margar bækur lofað að lesa.*
 he has many books promised to read
 ‘He has promised to read many books.’
 c. ? *Ég skipaði henni að hafa margar bækur lesið.*
 I ordered her to have many books read
 ‘I ordered her to have read many books [at the time of my return].’

Subjunctive complements more clearly allow both short QM, and for a subset of speakers, also allow long QM. On the readings, see §2.

- (27) a. *Hún hafði viljað að hann gæti keypt margt.*
 she had wanted that he could.SUBJ bought many
 ‘She had wanted him to be able to buy many.’

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- b. *Hún hafði viljað að hann gæti margt keypt.*
she had wanted that he could.SUBJ many bought
'She had wanted him to be able to buy many.' (i.e. that the number could be high)
- c.% *Hún hafði margt viljað að hann gæti keypt.*
she had many wanted that he could.SUBJ bought
'She had wanted him to be able to buy many.' (i.e. many particular items)

Finally, indicative complements clearly do not allow long QM.

- (28) a. *Hún hefur lengi vitað að hann getur keypt margt.*
she has long known that he can bought many
'She has long known that he could buy many.'
- b. *Hún hefur lengi vitað að hann getur margt keypt.*
she has long known that he can many bought
'She has long known that he could buy many.'
- c. * *Hún hefur lengi margt vitað að hann getur keypt.*
she has long many known that he can bought

OS is diagnosed by the fact that it crosses adverbs (cf. (11b) above). QM does not; the pattern in (29) is representative and can be repeated with a variety of adverbs and quantificational DPs (though there is speaker variation on whether *fá* 'few' requires QM or not; the judgments given are for those speakers for whom it is optional).

- (29) a. *Hann getur ennþá lesið fáar bækur.*
he can yet read few books
'He can read few books yet.'
- b. *Hann getur ennþá fáar bækur lesið.*
he can yet few books read
'He can read few books yet.'
- c. * *Hann getur fáar bækur ennþá lesið.*
he can few books yet read

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- d. *Hann las bókina ennþá.*
he read the.book yet
'He still read the book.'

(29d) shows that in an OS context, a definite DP can cross *ennþá*, 'still, yet.' (29c) shows that QM cannot.

Floated quantifiers are sometimes used as a diagnostic for the left edge of VP, on the assumption that they can occupy SpecVP. QM cannot cross a floated quantifier.

- (30) a. *Þau hafa öll ýmislegt séð.*
they have all various seen
'They have all seen various [things].'
b. **Þau hafa ýmislegt öll séð.*
they have various all seen

However, it is unclear how much significance to attach to this, since floated quantifiers probably function as scope markers for quantification, and this may block QM across them. Furthermore, there is no guarantee that the floated quantifier in (30a) is in SpecVP.

1.4. Constraints on QM

QM is at least as constrained as topicalization (in fact, more so); it cannot escape adjuncts. This is shown for topicalization in (31b), for QM in (31c).

- (31) a. *Þeir hafa rífið hús til þess að búa til mörg bílastæði.*
they have demolished houses to it to prepare to many parking.spaces
'They have demolished houses in order to make many parking spaces.'
b. **Mörg bílastæði hafa þeir rífið hús til þess að búa til.*
many parking.spaces have they demolished houses to it to prepare to
c. **Þeir hafa mörg bílastæði rífið hús til þess að búa til.*
they have many parking.spaces demolished houses to it to prepare to

QM can move a subject, for example from the ECM complement of a perception verb, as can topicalization.

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- (32) a. *Ég hef heyrt marga fara út úr herberginu.*
 I have heard many go out of the.room
 ‘I have heard many [people] leave the room.’
 b. *Marga hef ég heyrt fara út úr herberginu.*
 many have I heard go out of the.room
 ‘Many [people], I have heard leave the room.’
 c. *Ég hef marga heyrt fara út úr herberginu.*
 I have many heard go out of the.room
 ‘I have heard many [people] leave the room.’

QM can (marginally) escape an indefinite noun phrase, like topicalization (one speaker of six rejected both of (33b-c); another rejected (33c); three others found (33c) questionable).

- (33) a. *Ég hef skrifað skýrslur um margar bækur.*
 I have written reviews of many books
 ‘I have written reviews of many books.’
 b. *Margar bækur hef ég skrifað skýrslur um.*
 many books have I written reviews of
 ‘Many books, I have written reviews of.’
 c. ? *Ég hef margar bækur skrifað skýrslur um.*
 I have many books written reviews of
 ‘I have written reviews of many books.’

QM out of a definite noun phrase is ungrammatical, as with topicalization.

- (34) a. *Ég hef skrifað skýrsluna um margar bækur.*
 I have written the.reviews of many books
 ‘I have written the reviews of many books.’
 b. * *Margar bækur hef ég skrifað skýrsluna um.*
 many books have I written the.reviews of
 c. * *Ég hef margar bækur skrifað skýrsluna um.*
 I have many books written the.reviews of

Whatever the precise characterization of constraints on syntactic movement, QM shows no signs of escaping them. It is actually more constrained. For example, QM

cannot move the subject of a finite complement, though A' movement can (the embedded clause here is subjunctive, which was shown in (27c) above to allow QM from object position, for some speakers).

- (35) a. *Hún hafði viljað að marga stelpur kæmu í veisluna.*
 she had wanted that many girls came in the party
 'She had wanted many girls to come to the party.'
- b. *Hversu marga stelpur hafði hún viljað að kæmu í veisluna?*
 how many girls had she wanted that came in the party
 'How many girls had she wanted to come to the party?'
- c. * *Hún hafði marga stelpur viljað að kæmu í veisluna.*
 she had many girls wanted that came.SUBJ in the party

Other restrictions on QM appear in the next subsection. In §2, I resume the discussion of the constraints on QM, after discussing its semantic effects.

1.5. QM without auxiliaries

Taking QM to target the left edge of the highest VP, inside the position of adverb attachment, QM will be string-vacuous in case the main verb moves out of VP. (36a) ambiguously allows a specific or existential reading for the object (cf. §2); but so does (36b), in which QM has not taken place. Thus, it is possible that no QM can take place in (36a). Nor does (36c) have any readings that (36a) does not have, so it cannot be used to demonstrate that QM cannot have taken place in (36a) (more on readings in §2; two of six informants rejected all examples of QM with numerals without *bara* 'only,' including (36c), but accepted it if *bara* was inserted before the numeral).

- (36) a. *Við buðum tveimur ræðumönnum.*
 we invited two speakers
 'We invited two speakers.'
- b. *Við getum boðið tveimur ræðumönnum.*
 we can invited two speakers
 'We can invite two speakers.'

- c. *Við getum tveimur ræðumönnum boðið.*
 we can two speakers invited
 ‘We can invite two speakers.’

There is one indication, however, that QM can occur string-vacuously. Recall from the introduction that negative DPs obligatorily shift to the left (cf. (12) above, or (37b-c) below); assuming that NM (negative movement) is an instance of QM, the fact that examples like (37a) are grammatical suggest that QM must have applied there.

- (37) a. *Við buðum engum lögregluþjónum.*
 we invited no police.officers
 ‘We didn’t invite any police officers.’
 b. * *Við getum boðið engum lögregluþjónum.*
 we can invited no police.officers
 c. *Við getum engum lögregluþjónum boðið.*
 we can no police.officers invited
 ‘We can’t invite any police officers.’

This can also be seen in embedded clauses. Control infinitives move to Infl in Icelandic (Thráinsson 1993), as can be seen from adverb placement, as in (38a). Thus, it can be inferred that the negative object in (38b) has undergone NM.

- (38) a. *Þú lofaðir að segja ekki orð.*
 you promised to say not word
 ‘You promised not to say anything.’
 b. *Þú lofaðir að segja ekkert.*
 you promised to say nothing
 ‘You promised to say nothing.’

Compare the *to*-infinitive complement of an auxiliary, in which there is no verb movement.

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- (39) a. * *Þú þurfið að segja ekki orð.*
 you need to say not word
 b. * *Þú þurfið að segja ekkert.*
 you need to say nothing
 c. *Þú þurfið ekkert að segja.*
 you need nothing to say
 ‘You don’t need to say anything.’

Rögnvaldsson 1987 and Jónsson 1996 argue that the negative object in examples like those in (37a) and (38b) has left VP. Given this assumption, it can be concluded that QM is possible in general when there is no verb in VP, even though it may be string-vacuous in such cases.

However, there are certain circumstances in which QM to a headless VP is not possible. First, QM can escape a PP (cf. (17) above), but is substantially degraded in such cases if there is no verb in VP. Thus, the pattern in (40a-b) is representative (Rögnvaldsson 1987:37 gives (40b) without marking it as degraded, but agrees (p.c.) that it is less than perfect; Jónsson 1996:93 marks it ‘?’ and other informants have generally agreed). On the other hand, not moving the DP out of the PP, as in (40c), is substantially worse.

- (40) a. *Ég hef engan talað við.*
 I have noone spoken with
 ‘I have spoken to noone.’
 b. ? *Ég talaði engan við.*
 I spoke nobody with
 ‘I spoke with nobody.’
 c. *? *Ég talaði við engan.*
 I spoke with nobody

The status of such examples varies with the verb (as Rögnvaldsson notes, op. cit. p. 45) and with speaker. Recall from (18) above that *hlega að* ‘laugh at’ was a verb-preposition combination that favored pied-piping over preposition stranding, under QM. The preference is repeated in the simplex verb examples, as seen below.

- (41) a. ? *Ég hlo að engum.*
 I laughed at nobody
 'I didn't laugh at anybody.'
- b.*? *Ég hlo engum að.*
 I laughed nobody at

Thus we can assume that the whole PP fronts, string-vacuously, in (41a), perhaps because such PPs are somehow 'DP-like' (e.g. in that their prepositions are relatively semantically vacuous). The PP in (40), then, is less DP-like in the relevant sense. Why DP extraction is not perfect in (40b) and not allowed in (41b) will become clear(er) momentarily.

Another instance of contrast between simplex and complex verbs is seen with double object constructions, as demonstrated by Rögnvaldsson 1987:46, using the examples in (42).

- (42) a. *Jón hefur ekkert sagt Sveini.*
 Jon has nothing said Svein
 'Jon has told Svein nothing.'
- b. * *Jón sagði ekkert Sveini.*
 Jon said nothing Svein
- c. *Jón sagði Sveini ekkert.*
 Jon said Svein nothing
 'Jon told Svein nothing.'

In (42a), it can be seen that NM allows a DP to cross another DP (the unmarked order of complements for the verb *segja* 'say, tell' is dative-accusative, as in (42c)). However, when the verb is simplex, as in (42b), this is impossible. Instead, the order is obligatorily as in (42c). Jónsson 1996 suggests that the indirect object in (42c) undergoes obligatory OS just in case the direct object is negative (as suggested above, OS must be to a higher position than NM), but does not suggest why this should be the case, since OS is ordinarily optional. In any event, the simplex-complex verb distinction can be observed in examples in which OS cannot be a factor.

- (43) a. *Ég hef sett eitum í mörg glös.*
 I have set poison in many glasses
 'I have placed poison in many glasses.'

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- b. ? *Ég hef mörg glös sett eitur í.*
 I have many glasses set poison in
 ‘I have placed poison in many glasses.’
- c. *Ég setti eitur í mörg glös.*
 I set poison in many glasses
 ‘I placed poison in many glasses.’
- d. * *Ég setti mörg glös eitur í.*
 I set many glasses poison in
- e. * *Ég setti eitur mörg glös í.*
 I set poison many glasses in

Here *eitur* ‘poison’ is a bare mass noun, and cannot undergo OS. Furthermore, even if it were to move to the left, the example in (43e) shows that QM cannot target a position to its right. Though QM is less than perfect in examples of this sort, there is a clear contrast between (43b) and (43d-e). A similar example is given below.

- (44) a. ? *Ég hef ekkert talað við hann um.*
 I have nothing talked with him about
 ‘I haven’t talked with him about anything.’
- b. * *Ég talaði ekkert við hann um.*
 I talked nothing with him about

Here NM is clearly impossible across a PP, unless it is across a verb as well (the pattern is the same for QM generally). OS cannot be a factor, as it does not affect PPs.

In all of the good examples of QM so far, the quantified DP has been immediately followed by a non-finite verb or *að*, or, if examples like (37a) and (38b) involve string-vacuous QM, then the DP can also be sentence-final. Being sentence-final is not a criterion in itself, as the examples in (45) show.

- (45) a. *Við höfum engan bjór í ísskápnum.*
 we have no beer in the.refrigerator
 ‘We have no beer in the refrigerator.’

- b. *Við tókum engar kartöflur upp.*
 we took no potatoes up
 ‘We dug up no potatoes.’
- c. * *Við tókum upp engar kartöflur.*
 we took up no potatoes

Here, the negative DP appears to the left of PP or a particle. If it were true that there is no QM except to the left of an unmoved verb (or *að*; cf. e.g. (24b) above), then the condition on NM, which is obligatory if possible, would become mysterious. Note that the ungrammaticality of (45c) strengthens the case that NM is obligatory, since Icelandic allows the order particle-DP with non-negative objects (cf. Svenonius 1996a).

One last example of the same pattern is seen for QM out of control complements, whether the complement is introduced by a preposition or not: the verb *neyða*, ‘force,’ takes a *to*-infinitive with the preposition *til* ‘to,’ while the verb *skipa*, ‘order,’ takes a simple *to*-infinitive (for some reason, many informants found these particular examples degraded, though similar examples, such as (26b) above, were acceptable; at any rate, the contrasts noted are salient).

- (46) a. ? *Hann mun marga stráka neyða þig til að kyssa.*
 he will many boys force you to to kiss
 ‘He will force you to kiss many boys.’
- b. * *Hann neyddi henni marga stráka til að kyssa.*
 he forced her many boys to to kiss
- c. ? *Hann hefur engum skipað henni að giftast.*
 he has nobody ordered her to marry
 ‘He hasn’t ordered her to marry anybody.’
- d. * *Hann skipaði henni engum að giftast.*
 he ordered her nobody to marry

I propose that this peculiar distribution can be explained if it is assumed that when the verb is simplex, QM and Case checking compete for the same position. This is most straightforward if Case is checked in the position adjoined to the main VP, as in Chomsky 1995, while QM is adjunction to the highest VP, following Rögnvaldsson 1987. When there is no auxiliary, this will be the same landing site (the same result

can also be had assuming Agr_O , if certain additional assumptions are made: Agr_O selects the case-assigning VP, and QM is movement into the specifier of the lowest functional head above the highest VP; but see below on the non-unifiability of QM and OS).

Thus QM will always be possible, subject to constraints on A' movement, if there is an auxiliary or other non-case-assigning verb, because then the adjunction site on the highest VP is not a Case position. Just in case there is no auxiliary, QM will only be possible for DPs which check Case with that particular verb; generally, this will restrict QM to objects of the verb, as seen above; ECM subjects (for example, in small clauses like that in (32) above) will also be able to undergo QM into an auxiliariiless main clause, but again it will be string-vacuous.

This means that QM occurs with simplex verbs but only as a kind of A movement. It is predicted, then, that it should show properties of A movement. In particular, it should not license parasitic gaps. In (47) below, the parasitic gap example is repeated with a simplex verb, with a negative object and a non-negative; neither one can license a parasitic gap.

- (47) a. * *Þeir sögðu engum upp án þess að hrósa fyrir vel unnin störf.*
 they said nobody up without to praise for well done work
- b. * *Þeir sögðu mörgum upp án þess að hrósa fyrir vel unnin störf.*
 they said many up without to praise for well done work
- c. *Þeir sögðu engum upp án þess að hrósa þeim fyrir vel unnin störf.*
 they said nobody up without to praise them for well done work
 'They fired nobody without praising them for a job well done.'

Jónsson 1996:92, arguing explicitly for string-vacuous A' movement in cases like the ones under discussion, gives the example in (48a) (he does not mark it as degraded). However, for other speakers (all five consulted) this example is clearly ungrammatical, just like the parallel one in (48b) with OS.

- (48) a. * *Jón les ekkert án þess að gagnrýna harðlega.*
 Jón reads nothing without to criticize severely
 ('Jón reads nothing without criticizing [it] severely.')

- b. * *Jón las bókina ekki án þess að gagnrýna hana hartlega.*
 Jón read the.book not without to criticize severely
 ('Jón didn't read the book without criticizing [it] severely.')

The analysis proposed here explains the possibility of string-vacuous QM, noted above, and excludes all of the examples of QM to a simplex verb out of more deeply embedded positions. It might serve to explain Rögnvaldsson's example of QM failing to cross an indirect object, as well: that might be captured under an account of Relativized Minimality effects, whereby A movement cannot cross a filled A position.

Still undiscussed are the prepositional examples in (40-41) above and certain examples with adjectival complements noted by Jónsson (1996:92), whence the examples below.

- (49) a. *Jón er engum líkur.*
 Jón is nobody like
 'Jón is like nobody else.'
 b. *María er engum háð.*
 María is nobody dependent
 'Maria is dependent on nobody.'

Here, the DP complements of the adjectives are dependent on them for Case; the copula (presumably) has nothing to do with the matter. Yet overt NM is licit, even though the main verb moves out of VP. I assume that in these cases, the VP is a licit target for NM precisely because the verb is not a potential Case-assigner, having no external theta-role (cf. Burzio 1986). This account might be extended to the prepositional examples: it might be that the verbs which (marginally) allow DP fronting out of a prepositional complement (as in (40b)) are also not Case-assigners. The marginality of such examples might have to do with the fact that they are *potential* Case-assigners.

It may appear at this point that OS feeds QM in the cases at hand, but things are not quite that simple. The problem is that, as noted above, OS crosses all sorts of sentential adverbs, but QM does not cross any. This is seen when the verb is simplex, as below.

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- (50) a. *Hann les bókina {ennþá/víst/sennilega}.*
he reads the.book yet/apparently/probably
'He {still/apparently/probably} reads the book.'
- b. **Hann les fáar bækur {ennþá/víst/sennilega}.*
he reads few books yet/apparently/probably
- c. *Hann les {ennþá/víst/sennilega}fáar bækur.*
he reads yet/apparently/probably few books
'He {still/apparently/probably} reads few books.'

Thus, if the OS and QM movements are construed as movements to specifier positions, the OS position is higher than the QM position. If they are construed as adjunction, OS adjoins above adverbs, while QM adjoins below them. A potential explanation for this fact appears in the next section.

2. Semantic effects of QM

2.1. QM is QR

As in English, surface order of quantificational elements does not unambiguously determine scope in Icelandic. Below, the translations are intended to suggest the different scopal readings.

- (51) a. *Ég sagði öllum eitthvað.*
I said all something
'Everybody is such that I told them something or other.'
'There is something that I told everybody.'
- b. *Hann hefur viljað lesa margar bækur.*
he has wanted read many books
'He has wanted to be well-read, having read many books.'
'There are many books that he has wanted to read.'
- c. *Íslendingur virðist hafa unnið.*
Icelander appears have won
'A particular Icelander appears to have won.'
'It appears that some Icelander or other has won.'

Also as in English, various kinds of movements have a scope fixing effect. This is true of Topicalization and of Object Shift (Diesing 1996).⁴

- (52) a. *Hann las ekki þrjár bækur.*
 he read not three books
 ‘He didn’t read so many as three books.’
 ‘There are three books that he didn’t read.’
- b. *Hann las þrjár bækur ekki.*
 he read three books not
 ‘There are three books that he didn’t read.’
- c. *Margar bækur hefur hann viljað lesa.*
 many books has he wanted read
 ‘There are many books that he has wanted to read.’

Thus it is not surprising that QM should induce scope fixing. This can be seen when one quantified DP is moved across another, as in (53b) (though (53c) is still ambiguous).

- (53) a. *Við höfum sýnt hverju vitni nokkrar myndir.*
 we have shown every witness some pictures
 ‘Every witness is such that we have shown her some pictures.’
 ‘Some pictures are such that we have shown them to every witness.’
- b. *Við höfum nokkrar myndir sýnt hverju vitni.*
 we have some pictures shown every witness
 ‘Some pictures are such that we have shown them to every witness.’
- c. *Við höfum hverju vitni sýnt nokkrar myndir.*
 we have every witness shown some pictures
 ‘Every witness is such that we have shown her some pictures.’
 ‘Some pictures are such that we have shown them to every witness.’

QM also affects the relative scope of the moved DP and non-DP elements in the clause. This can be seen in (54a) (cf. (51b)) and in (54b-c) (repeated from (27b-c) above; the alternative in (27a) there, without QM, is ambiguous).

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- (54) a. *Hann hefur margar bækur viljað lesa.*
he has many books wanted read
'There are many books that he has wanted to read.'
- b. *Hún hafði viljað að hann gæti margt keypt.*
she had wanted that he could many bought
'She had wanted him to be able to buy a large quantity.'
- c.% *Hún hafði margt viljað að hann gæti keypt.*
she had many wanted that he could bought
'There are many that she had wanted him to be able to buy.'

Thus, I suggest that QM is in fact overt QR (Quantifier Raising), a process assumed to apply in all languages, generally covertly. The connection between QM and QR is hinted at in Rognvaldsson 1986:47, but not pursued.

The analysis of QM as QR has some immediate consequences. First, it explains at least some cases of optionality for QM: QR has the function of determining scope; when scope is variable, QR must be optional, or at least have a range of targets. Thus QM should in principle be optional, as it appears to be in fact (though the cases of ambiguity above still require discussion). In addition, the analysis of QM as QR puts the question of whether NM is a subcase of QM into a new light. There is a debate in the literature as to whether negative expressions such as *nobody* and *no dogs* are quantificational or not. If NM is a subcase of QM, then such expressions must be quantificational, in whatever sense is relevant to QR, under the present hypothesis. The same holds of negative polarity items, since they also undergo QM (cf. Ladusaw 1992, Giannakidou 1998 for discussion of the question whether these are properly quantificational). Furthermore, the analysis of QM as QR sheds new light on its clause-boundedness, noted in the previous section. It is well known that QR, unlike typical types of A' movement, tends to be clause-bounded.

The implications of the analysis go further. If QM is overt QR, then it allows us to examine properties of QR which are not subject to scrutiny in languages like English. Various accounts have been suggested for variable scope that potentially do away with QR. If QM is QR, then syntactic QR definitely exists.

Other questions about QR are also potentially answered. It seems, for example, that quantified expressions need not always move, contra suggestions that QR is obligatory in order to establish a variable-binding relation; QR is apparently to the VP, not to the IP level as is sometimes suggested (or, at least, QR *can* move to the

VP level, and Economy or something else prevents it from moving further in this case; cf. Fox 1999:175). QR does not move definites or names, contra some suggestions.

2.2. *Why QM is optional*

The examples in (51) suggest that Icelandic has covert QR, like English. This is unexpected, given that it also has overt QR, in the form of QM. Given a principle like Procrastinate, covert movement is preferred when possible. The Minimalist account for overt movement is to postulate strong features. But if strong features exist in Icelandic to trigger overt movement, when a quantifier has wide scope, then covert QR should never be possible.

One way out of this quandary is to invoke the notion of parallel grammars. This idea has been invoked in other cases of optionality, but should, I feel, always be regarded with skepticism. If a single speaker can control two different grammars which are identical except for a single parameter setting, then optionality should be rampant. This type of explanation is only appealing if the two different grammars in question are significantly different. If two different constructions belong to two different grammars, then speakers should sense a difference in register or style when they compare the constructions.

However, this is precisely the situation with respect to Icelandic QM. As I mentioned above, many speakers do not use QM at all (though all use NM), and most speakers feel that examples of QM are stylistically marked or formal. Thus it seems reasonable to assume that there is a version of Icelandic which does not have QM at all, requiring covert QR, and another version of Icelandic which has only overt QM, not resorting to covert QR. Then no single register of Icelandic has optional QM, though many speakers accept both the formal and the informal versions. This kind of explanation would be falsified, in my view, by a sentence in which there is both QM and covert QR (such a sentence could only be produced by some kind of code-switching, which should be detectable to informants). An example might be (53c) above, repeated here as (55a).

- (55) a. *Við höfum hverju vitni sýnt nokkrar myndir.*
 we have every witness shown some pictures
 ‘Every witness is such that we have shown her some pictures.’
 ‘Some pictures are such that we have shown them to every witness.’

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- b. * *Við höfum hverju vitni nokkrar myndir sýnt.*
 we have every witness some pictures shown
- c. * *Við höfum nokkrar myndir hverju vitni sýnt.*
 we have some pictures every witness shown

(55a) is ambiguous, as indicated. There are two ways to explain the second reading. One, covert QR moves the weakly quantified DP ‘some pictures’ beyond the moved universal quantifier. This contradicts the above explanation based on bidialectalism, unless some factor prevents overt QM of the second quantifier; this might be supported by the badness of examples (55b-c), which suggest that only one DP can be moved at a time; however, good examples can be constructed, as in (56).

- (56) a. *Ég hef þmsum ekkert sagt.*
 I have various nothing said
 ‘I have told various [people] nothing.’
- b. *Ég hef engum neitt sagt.*
 I have nobody anything said
 ‘I have told nobody anything.’

The second type of explanation for the ambiguity of (55a) would be that the apparent wide scope reading for ‘some pictures’ there is actually just a non-quantificational reading, where a specific set of pictures is named by the expression ‘some pictures’ (as in Fodor & Sag 1982; an approach like that of Reinhart 1997 would serve the same purpose here).

Interesting in this light is sentence (53b) above, repeated here as (57).

- (57) *Við höfum nokkrar myndir sýnt hverju vitni.*
 we have some pictures shown every witness
 ‘Some pictures are such that we have shown them to every witness.’

As suggested by the translation, this sentence only has the ‘wide scope’ reading for the existentially quantified object. According to the analysis sketched here, a register with QM has no covert QR. Thus it is impossible for the universally quantified object to move covertly; it must be interpreted in situ. Since universals have no ‘specific’ reading, the result is unambiguous, contrasting with (55a).

2.3. *The landing site of QM*

Understanding QM to be QR clears up some questions about constraints discussed in §1. There, it was noted that QM can cross infinitive and subjunctive clause boundaries, but not indicative ones, and that it always targeted the highest VP in a given sequence of auxiliaries plus main verb.

I assume that QR is motivated by the need to create a tripartition for semantic interpretation of quantificational structures, following Partee 1995. It might be expected, then, that constraints on quantificational tripartition would turn up as constraints on QM. The tighter the correspondence between syntactic structures and semantic interpretations, the more clearly these constraints would show up as syntactic restrictions on QM.

As a first approximation, assume that the nuclear scope of a quantificational tripartition must correspond to some kind of quasi-propositional entity, say a state of affairs (SoA), where a SoA might minimally contain a saturated function-argument complex and a spatio-temporal value of some kind. Assume that the syntax-semantics interface is such that verbs which move to Infl bear spatiotemporal variables, and verbs which do not move, such as those which head complements to auxiliaries, do not (this is akin to saying that auxiliaries select something smaller than IP, if the spatiotemporal variable is associated with Infl). Assume, finally, that reconstruction allows the spatiotemporal variable to be interpreted in the VP, even if the verb moves overtly, and allows the arguments of the main verb to be interpreted in VP as well. Then the minimum target for QM will be the VP projected by the highest verb in an auxiliary-main verb sequence.

This establishes a lower limit on QM (though how the unmoved quantifier in (57) is interpreted remains an issue). As for the higher limit, QM is sensitive to mood, as seen above, which suggests that it has something to do with modal anchoring, in the sense of Farkas 1992. For example, say that an indicative clause is anchored to the context of utterance (in addition to, or instead of, the embedded context). This means that it is evaluated with respect to the context of the utterance (for example, it is presupposed true). But quantification is about reorganizing the model for evaluation; if a SoA appears in the nuclear scope of a quantifier, then it is evaluated with respect to the quantification, not with respect to the utterance context. It seems likely that this is the reason that QR can never cross the boundary of an indicative CP.

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An additional condition noted above was that subjects are more resistant to QM than objects; specifically, subjects of subjunctive clauses do not undergo QM, though they may undergo A' movement. In a model like that of Rizzi 1990, this could suggest that they are not antecedent-governed, perhaps because QR does not leave a full copy of itself behind. On the other hand, subjects are critical to the anchoring process, so there might be a semantic explanation instead.

These remarks have unfortunately been vaguer than I would like. These ideas are explored in somewhat more detail in Svenonius 1994, though not with respect to Icelandic. For example, there I discuss the fact, noted by Williams 1983, that there is an ambiguity in examples like (58a) which is lacking in (58b).

- (58) a. John believes someone to be angry at him.
'John believes that someone or other is angry at him.'
'There is someone such that John believes that person is angry at him.'
- b. John believes someone angry at him.
'There is someone such that John believes that person is angry at him.'

I suggest in Svenonius 1994 that the SC complement to epistemic verbs does not bear a spatiotemporal location variable, though a clausal complement containing a verb always does. This means that the complement in (58a), but not the one in (58b), contains the necessary ingredients for a SoA. On the account being developed here, this would mean that the SC complement cannot serve, by itself, as the nuclear scope for quantification (this is also the idea behind Stowell's 1991 account of such data). A quantified DP will therefore not be interpretable in the SC, inside the scope of the epistemic verb. This narrow scope interpretation is possible, however, with the infinitival complement, because the embedded verb provides a spatiotemporal variable, and a SoA can be built there.

Since Icelandic has overt QR, the predictions of this account can in principle be tested more clearly than with English; however, the judgments turn out to be exceedingly delicate, and not all speakers report the contrast I indicate below. For some speakers, however, the ambiguity exists with infinitival complements, and not with SCs, as with English.

- (59) a. *Ég tel margar neðanmálsgreinar vera ónauðsynlegar.*
I consider many footnotes be unnecessary
'I consider it unnecessary to have many footnotes.'

- ‘Many footnotes are such that I consider them unnecessary.’
- b. *Ég tel margar nefnanmálsgreinar ónauðsynlegar.*
 I consider many footnotes unnecessary
 (%: ‘I consider it unnecessary to have many footnotes.’)
 ‘Many footnotes are such that I consider them unnecessary.’

Next, consider the pattern for QM.

- (60) a. *Ég hef margar nefnanmálsgreinar talið vera ónauðsynlegar.*
 I have many footnotes considered be unnecessary
 ‘Many footnotes are such that I have considered them unnecessary.’
- b.% *Ég hef margar nefnanmálsgreinar talið ónauðsynlegar.*
 I have many footnotes considered unnecessary
 ‘Many footnotes are such that I have considered them unnecessary.’

As expected, QM is possible with the infinitive, and leads to the wide-scope reading. However, for some speakers, QM is seriously degraded with the SC complement. Importantly, exactly the speakers who get the indicated contrast in (59) also consider (60b) ungrammatical. The badness of (60b), for those speakers, might seem surprising. However, there is a potential explanation consistent with everything I have said here, which builds on the account in Svenonius 1996b (cf. also Svenonius 1994, ch. 2, §3, especially pp. 134 ff.).

In that work, I develop an account of the interpretation of the SC complement to an epistemic verb which links it crucially to the interpretation of its subject. Specifically, I draw a connection between those SCs and the categorical judgment of Kuroda 1972 and related work. If that line of thinking is correct, then the subject must be a sort of topic, and will therefore be referential, not quantificational. The apparent wide-scope reading for the subject of the SC, then, is really a specific reading. If QM is QR, as suggested here, then it would not be expected that that subject should undergo QM in (60b). See the works cited for an explanation of why the same is not true for the infinitival complement (in brief, the contribution of the specific subject is the modal anchoring parameter of Farkas 1992, while this can be provided by Infl in an infinitival clause).

For speakers who do not get the contrasts in (59-60), the complement to *telja* ‘consider’ may contain a null verb in the apparent SC examples, which would then enable it to bear a spatiotemporal location variable, just like infinitival complements.

3. On the lack of QM in Norwegian

Norwegian had, at least as recently as one century ago, something which closely resembles QM in Icelandic (these examples are taken from Knut Hamsun's 1892 novel *Mysterier*). NM was frequently employed, as in (61a-d), but examples of non-negative QM are also in evidence, as in (61e).

- (61) a. *Han hadde ingen bestræbelser gjort.* (1892 Nor)
 he had no efforts made
 'He hadn't made any effort.'
- b. *Jeg kan intet oppdage...*
 I can nothing discover
 'I can't find anything...'
- c. *...skjønt han ingen skyld hadde*
 although he no blame had
 '...although he was not to blame'
- d. *...når vi næsten ingen kul får solgt*
 when we nearly no coal get sold
 '...when we can hardly sell any coal'
- e. *...og jeg måtte noget gjøre*
 and I must something do
 '...and I had to do something'

All of these sentences are ungrammatical in modern Norwegian (most speakers regard them as 'poetic' or 'old-fashioned' at best). Recall from the introduction to this paper (§0) that I claimed that Modern Norwegian, like Icelandic, actually has obligatory NM, but unlike in Icelandic, NM in Norwegian observes HG (Holmberg's Generalization). This is illustrated in (62) below, where Icelandic sentences exhibiting NM are compared with Norwegian ones on alternate lines; the first pair is good, and I claim that they both have undergone NM, although it is string-vacuous here.

The Norwegian example (62d) is bad, like its Icelandic counterpart, because the negative DP has not undergone NM; while the example in (62f) is bad because NM violates HG. The only alternative with a complex verb is to avoid a negative DP object, as in (62g).

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- (62) a. *Ráðherrann sendi engan fulltrúa á þingi.* (Ice)
 b. *Statsrådet sendte ingen befullmektiget til forsamlinga.* (Nor)
 the.minister sent no delegate to the.assembly
 ‘The minister sent no delegate to the assembly.’
 c. * *Ráðherrann getur sent engan fulltrúa á þingi.* (Ice)
 d. * *Statsrådet kan sende ingen befullmektiget til forsamlinga.* (Nor)
 the.minister can send/t no delegate to the.assembly
 e. *Ráðherrann getur engan fulltrúa sent á þingi.* (Ice)
 f. * *Statsrådet kan ingen befullmektiget sende til forsamlinga.* (Nor)
 the.minister can no delegate send/t to the.assembly
 ‘The minister cannot send any delegate to the assembly.’
 g. *Statsrådet kan ikke sende noen befullmektiget til forsamlinga.* (Nor)
 the.minister can not send any delegate to the.assembly
 ‘The minister cannot send a delegate to the assembly.’

The claim being made here is that this pattern can be explained if NM is obligatory in Norwegian, but is subject to HG. If there is no NM in Norwegian, then the contrast between (62b) and (62d) is unexplained. If NM is not subject to HG in Norwegian, then the contrast between (62e) and (62f) is left a puzzle.

The parallel between OS and Norwegian NM is also replicated in the case of verb topicalization of the sort discussed in Holmberg 1997, 1999.

- (63) a. * *Jeg har kyssa ingen av dem.* (Nor)
 I have kissed none of them
 b. * *Jeg har ingen av dem kyssa.*
 I have none of them kissed
 c. *Kyssa har jeg ingen av dem.*
 kissed have I none of them
 ‘I haven’t KISSED any of them’

The examples are exactly parallel to Holmberg’s examples showing that although OS cannot cross a participle, it can move to the left if the participle is topicalized.

If it is correct to interpret these results as meaning that NM is subject to HG in Norwegian, then HG is herewith shown to apply to other movements than simply

OS. Since OS in both Icelandic and Norwegian is subject to HG (whether or not OS is held to apply only to pronouns in Norwegian), this also shows that HG cannot be a parameter over languages. Furthermore, even OS is not universally subject to HG, if the Yiddish cases of leftward movement of definite DPs presented by Diesing (1997), such as that in (64) below, are analyzed as OS.

- (64) a. *Max hot geleynt a bukh.* (Yid)
 Max has read a book
 ‘Max has read a book.’
 b. *Max hot dos bukh geleynt.*
 Max has the book read
 ‘Max has read the book.’

Diesing concludes (cf. her pp. 400 ff.) that this movement is not OS, but one of her primary reasons is precisely the failure of that movement to observe HG; another is the lack of RM effects, but as noted above this may be a separate issue from HG.

Thus, what is needed in order to understand HG is a principled distinction between OS in Scandinavian and NM in Norwegian on the one hand, and most other movements, including OS in Yiddish and NM in Icelandic on the other hand. Here I propose (quite tentatively, it must be admitted) that what distinguishes movements which are subject to HG from those which are not is whether the movement is driven by feature-checking or not.

Consider that both OS and NM (and QM more generally) have interpretive effects. OS, as analyzed by Diesing, allows the definite object to escape the nuclear scope of the sentence, that is, it removes definite expressions from the focused part of the clause. QM, as analyzed above, is QR, straightforwardly a function of interpretation. NM is forced, plausibly, because sentential negation is quantificational, following Partee 1995, and requires semantic tripartition of the clause.

It has been proposed that all movement is due to the need to check features. Beghelli & Stowell (1997) develop a proposal whereby QR is feature-driven as well (cf. also Szabolsci 1997). However, consider the possibility that this is not the case, and that some movements are driven by the need to make certain relations, such as scopal relations, unambiguous. Apparently, such movements, like the feature-driven ones, can be covert. Conceivably, semantically driven movement occurs as soon as possible, in contrast to feature-driven movement, which, by Procrastinate, occurs as

late as possible. Then constructions in which non-feature-driven movement occurs covertly are those in which it is prevented from occurring overtly. On this story, HG would be the description for something, still unexplained, which prevents non-feature-driven movement from occurring overtly.

4. Conclusion

In this paper, I have explored one movement in detail, the movement of quantifiers out of VP in Icelandic. I have argued that QM is a type of A' movement, following Jónsson 1996, and that it involves adjunction to VP, following Rögnvaldsson 1986. I have further suggested that QM is overt QR, something which sheds light on various aspects of QR, if correct. I have furthermore suggested that some of the peculiar traits of QM can be explained on a particular conception of the mechanism of Case-assignment, one which leads to VP-adjoined positions being sometimes A movement, sometimes A' movement.

QM is unusual in resulting in OV orders in an otherwise VO language. I have suggested that a similar movement exists in Norwegian, but is hidden by the fact that it obeys HG, a constraint developed on the basis of observations about OS. The fact that QM exists in Norwegian is evident, I claim, from the fact that negative objects (which obligatorily undergo QM in Icelandic) are licit in Norwegian just in those contexts in which QM would obey HG.

This has ramifications for HG. HG has been claimed to hold of the leftward movement of objects in Scandinavian but not in West Germanic, something which tempts one to think of it as a constraint which is parametrized by language (though see Haegeman this volume for a way to preserve HG for West Germanic). However, seeing that Icelandic OS obeys HG but Icelandic QM does not, whereas Norwegian OS and QM both do, shows that the parameter must be more finely tuned. This should lead one to explore the possibility that other movements, such as topicalization or wh-movement, might be subject to HG in some languages.

I have offered a highly speculative distinction between movements which obey HG and those which do not: feature-driven movements will ignore HG; that is, strong features will attract checking elements regardless of intervening material, while other movements, possibly driven by needs of the interface with the interpretational component, are subject to it. This does not tell us what HG is, but it allows for a

reevaluation of it.

Movement which is subject to HG is in a sense like the opposite of what is expected under Procrastinate - OS occurs overtly if possible, otherwise covertly (or not at all?) as in Pesetsky's 1989 Earliness Principle. This would make sense in an Economy framework if covert movement were more costly, rather than less so. Suppose, then, that what distinguishes movements which are subject to Earliness from movements which are subject to Procrastinate is whether what must be checked is strictly formal features or whether contentful features are also forced to move. For interpretive effects such as scope, content must move along with formal features. For feature checking movements, only features need actually move. Procrastinate favors covert movement just when it can move features only. In the case of interpretive movement, Procrastinate does not favor the covert movement, because equally much is moved whether the movement is over or covert. We can then say that Earliness applies when two movements move equally much material, but Procrastinate (reformulated as 'move as little as possible') applies when the different options involve different quantities of material.

Why do Icelandic QM and Yiddish OS violate HG? The answer on this story would have to be that it is because they are feature-driven. That is, Icelandic actually has strong quantificational features, as does presumably Hungarian, and Yiddish (and perhaps Dutch) has strong definiteness features, forcing OS.

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¹ In Norwegian, as in English, noun phrases may precede a verbal particle: *throw it out*; thus a noun phrase may undergo OS in the presence of a particle. In Swedish, however, noun phrases must follow particles, and cannot be moved to the left of them by OS. Thus the example illustrating this is taken from Swedish. Cf. Holmberg 1986 for the OS facts, Taraldsen 1983, this volume, Svenonius 1994, Haider 1997 for the facts about particles.

² Henry 1995 makes the extremely interesting observation that Belfast English has OS (of pronouns) in exactly in those contexts in which there is verb movement (imperatives). The fact that verb movement is restricted to imperative constructions means that evidence for the learner of an OS rule cannot be terribly abundant; OS will only be observed in imperatives with pronominal objects and suitable adverbials. The fact that Belfast English observes HG then suggests that HG is the result of some innate constraints, or at least some which are very easy to learn.

³ Some speakers get main clause phenomena in certain embedded clauses; those speakers will accept (5b), but the same speakers will accept the order V-Adv in conditional clauses with *hvis* 'if'.

⁴ I follow Diesing in assuming that the leftward movement of the object in (52b), across the negation marker, is not a case of QM, given that QM does not cross adverbial elements – cf. (29) above. If in fact (52b) involves QM, then whether OS induces scope fixing is still an open question.