The Scope of Quantifier Phrases in Russian: A QR Analysis*

Svitlana Antonyuk
Stony Brook University
syundina@gmail.com

I. Introduction

The topic of Quantifier Raising (QR), although highly popular and extensively explored for languages like English (May 1977, 1985, Fox 1995, 2000 and many others), has not been studied very closely for Russian. The best known work on QR in Russian is that by Tania Ionin (Ionin 2001a, 2001b); it is proposed there that the availability of QR is constrained in Russian by the availability of discourse driven overt movements like Focus Movement and Topicalization (e.g., any Quantifier Phrase (henceforth QP) is argued to be able to obtain wide scope over another QP when it is focused, as a result of Focus movement, but not otherwise). Thus, Ionin (2001a) argues that "scope between two QPs is frozen in Russian, regardless of whether the word order is SVO or OVS, and of whether the universal or the indefinite is higher at Spell-Out" (p.5). This paper presents new evidence on the interaction of two Quantifier Phrases in Russian suggesting that Russian is much more like English in that Russian sentences with two Quantifier Phrases exhibit scope ambiguities that can be explained by the operation of covert Quantifier Raising to an A-bar position, as originally proposed for English (May 1977, 1985 and others).

First, let us look at the interaction of Quantifier Phrases in English. Sentences like (1) in English are usually interpreted as ambiguous between wide scope for the indefinite QP (e.g., surface scope) and wide scope for the universal QP (e.g., inverse scope).

(1) One boy kissed every girl.
(one > every): there is a boy x such that x kissed every girl in the relevant set of girls.
(every >one): for every girl x, x was kissed by some boy or other

On the original QR analyses, the two scope readings are argued to result from the covert A-bar movement operation of Quantifier Raising that adjoins the moved QP to a position where it c-commands the other QP and thus scopes over it (May 1977, 1985)[1].

Russian has been argued to be different from English in that it does not have QR the way English is generally believed to have; Ionin (2001a, 2001b) maintains that only surface scope is possible in a similar configuration in Russian:

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[1]A more recent view of QR, that of Szabolcsi (2003), Beghelli and Stowell (1997) and others, advocates for a theoretically compatible theory of scope that differs from the classic analyses mentioned above. This view of QR will be discussed later in the paper.

(2) a. Odin mal'čik potseloval každuju devočku (Ionin 2001b)
One boy $_{NOM}$ kissed every girl$_{ACC}$
(one > every, *every > one)
"One boy kissed every girl"

My informants do not agree with such judgments. Inverse scope can be obtained in (2a) as well as (2b) and (2c), where the quantifiers themselves are reversed. To demonstrate this point, however, I will use a different quantifier in object position since indefinite QPs like *one* have been argued to obtain its scope through choice functions, not QR (see Reinhart 1997):

(2) b. [Každyj mal'čik] potseloval [neskol'kih devoček]
Every boy$_{NOM}$ kissed several girls$_{ACC}$
"every boy kissed several girls"
√ (every > several)
√ (several > every)

(2) c. [Neskol'ko mal'čikov] potselovali [každuju devočku]
Several boys$_{NOM}$ kissed every girl$_{ACC}$
"Several boys kissed every girl"
√ (several > every)
√ (every > several)

Sentence (3) is taken by Ionin to show that the Quantifier Phrase "more than ten workers" cannot scope above the intensional verb *refuse*:

(3) Maša otkazalas' uvolit' bol'še desjati rabočix
Maša$_{NOM}$ refused fire$_{INF}$ more ten workers$_{GEN}$
"Maša refused to fire more than ten workers"

The following are judgments reported in Ionin (2001b):

(refuse > more than ten): Maša is willing to fire up to ten workers, but she refused to fire any more than ten;
??/* (more than ten >refuse): there are more than ten workers whom Maša has refused to fire

Here, my informants' judgments differ from Ionin's as follows:
√ (refuse > more than ten),
√ (more than ten > refuse)

On the basis of sentences like (2) and (3) above Ionin (2001b) has argued that "both covert QR and reconstruction are restricted in Russian", with QR being able to move a DP "a fairly short distance (past an adverbial) but not past a higher quantifier or an intentional verb" (p.21). Any ambiguity of sentences involving two quantifiers is argued to be the result of overt discourse-driven movement (Topicalization and Focus Movement).

It is certainly true that some people find it especially difficult to understand what judgments are available in sentences like (3), involving interaction between an intentional verb and a QP. Thus, such sentences could be judged unambiguous at first glance. However,

constructing scenarios that facilitate obtaining each of the two logically possible readings can help clarify that the sentences are, in fact, ambiguous[2].

Apart from the disagreement with speaker judgments on inverse scope reading availability reported in Ionin (2001a,b), there are also numerous sentences with clear preference for or at least availability of inverse scope (examples 4-9) suggesting that the impossibility of QR past vP-level is probably not the right analysis of the Russian facts:

(4) Kto-to ljubit každogo iz nas.
Someone loves everyone from us
"Someone loves everyone of us"

(every > someone): for every one of us, there exists a person who loves each of us
(someone > every): for some person x, x loves every one of us

(5) Každyj raz [pjat' xirurgov] operirovali Bonda. (from Pereltsvaig (2005))
Each time five surgeons operated $_{PL}$ Bond
"Each time five surgeons operated on Bond".
ambiguous: every > 5 or 5 > every

(6) Dva vrača prokonsul'tirovali každogo patsienta.
Two doctors$_{NOM}$ consulter/advised every patient$_{ACC}$
"Two doctors consulted every patient"

(two > every): for two doctors x, x consulted/advised every patient
(every > two): for every patient x, two doctors advised x

To illustrate that both readings of the sentence in (6) are possible, I provide the two scenarios for these readings below.

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[2] It has to be acknowledged that there is good reason for Ionin to try to restrict the application of QR in Russian, since inverse scope readings in this language are quite hard to get. But such is the situation with inverse scope of Quantifier Phrases in other languages, including English, as well. Ruys (2000), for instance, has said the following on the subject:

> …it is very well known that intuitions regarding the wide scope reading in (48) [someone loves everyone] are far from secure. Native speakers… are notoriously reluctant to accept the wide scope reading for *everyone.* Among linguists working in this field, intuitions have also been subject to debate and shifts of opinion. Even those who firmly believe that a wide scope reading is available will usually be more than ready to admit that the reading that reflects the surface order of quantifiers is much more easily available than the inverted order (p.534)

The ease with which the inverse scope reading can be obtained is obviously dependent on many factors, including pragmatics, contextual relevance (as demonstrated above), knowledge of the world and other factors, such as focus (as in fact argued by Ionin). I certainly agree with Ionin's claim that when a structurally lower Quantifier Phrase is focused, it can easily obtain wide scope over the structurally higher quantifier. However, this still leaves unexplained facts regarding the availability of inverse scope readings in neutral-intonation sentences, even if they are hard to get sometimes.

Scenario 1 (two > every):

> At a certain hospital, two doctors are selected every day to make rounds and consult the patients. Thus, for every patient there is to be examined on every given day, the two doctors who make rounds on that day see each patient together, listen to his complaints together and make the decision on how to treat that patient together. Thus, on a given day, every patient who needs to be examined is examined by these two doctors.

Scenario 2 (every > two):

> There is a group of patients at the hospital who are very paranoid about being misdiagnosed if the doctor who examined (every one of) them is not very knowledgeable. Thus, every one of those paranoid patients decides (independently of other patients like himself) not to trust the opinion of the doctor he talked to and see one more doctor, just to make sure this other doctor's opinion coincides with the opinion of the first doctor he saw. Thus, every paranoid patient saw exactly two doctors (the two doctors don't have to be the same for every patient, e.g., the two doctors could vary with the patients)

The inverse scope reading is apparently also possible when the two Quantifier Phrases are post-verbal (as opposed to most of the cases above, with at least one QP being preverbal), suggesting short QR to vP level:

(7) V tečenii uroka učitel' sdelal neskol'ko zamečanij každomu mal'čiku
In duration lesson teacher made several remarks every boy (DAT)
"In the course of the lesson the teacher made several remarks to every boy"

(every > several): for every boy, the teacher made several remarks to him
(several > every): for several remarks, the teacher made them to every boy

(8) Škol'naja gazeta napečatala dve stat'ji každogo načinajuščego žurnalista.
School newspaper printed two articles every aspiring journalist.
"The school newspaper published two articles of every aspiring journalist"

(every > two): for every aspiring journalist, the newspaper published two of his articles
(two> every): for the two articles by every aspiring journalist, the newspaper published them

In all of the sentences above the inverse scope reading is clearly available, if not preferred. This is taken as evidence in favor of a QR analysis of quantifier scope in Russian, contra Ionin (2001 a, b). For the purposes of this article I will develop the analysis of inverse scope in Russian along the lines of May 1985 (but see Szabolcsi 1997, 2003 and Beghelli and Stowell 1997 for a feature-checking analysis of QR).

The paper is organized as follows: in Part II I discuss the assumptions made in this paper; Part III provides an overview of previous work on quantifier scope in Russian (Ionin 2001 a, b); in Parts IV and V I provide evidence for a covert movement analysis of Russian quantifier scope facts and argue that this movement must be QR. Part VI is a discussion of some additional facts about Russian quantifiers that need to be explained on any theory of scope. Part VII concludes the paper.

II. My Assumptions

In arguing for a QR analysis of Russian Quantifier Phrases, I'm making the following assumptions in this paper. Following May 1985, Fox 1995, Fox 2000 and others I assume that inverse scope obtains as a result of a covert A-Bar movement operation. On this view, QR is an adjunction operation that adjoins a Quantifier Phrase to vP or TP from where the moved QP c-commands its scope. The following, traditional definition of c-command is provided in (9) below:

(9) Definition of c-command:
A c-commands B iff

- the first branching node that dominates A also dominates B,
- B is not identical to A,
- Neither A nor B dominates the other.

Essentially following Beghelli and Stowell (1997) and others I assume that all QPs capable of introducing discourse referents introduce a variable that must be bound (to satisfy a ban on Vacuous Quantification). Such a variable is bound by the moved QP from the c-commanding position occupied by the QP after QR. Finally, I also assume that inverse scope can obtain from Reconstruction of the Subject QP to its nearest A position, Spec TP, thus being c-commanded by the object QP that is adjoined to TP-level.

On these assumptions, the suggested LFs for sentence (4), for instance, will be as shown in (10):

(10) a. LF1: $[_{TP}$ Kto-to$_1$ $[_{TP}$ každogo iz nas$]_2$ $[_{TP}$ t_1 $[_{vP}$ t_1 ljubit t_2]] (surface scope)
Someone everyone from us loves

b. LF2: $[_{TP}$ Kto-to$_1$ $[_{TP}$ každogo iz nas$]_2$ $[_{TP}$ kto-to $[_{VP}$ t_1 ljubit t_2]] (inverse scope)

III. Overview of Ionin's Analysis of Russian Facts

On the basis of sentences such as (2) and (3) discussed above Ionin (2001b) concludes that the structurally lower QP cannot obtain scope over the structurally higher QP. She argues that surface scope freezing must be a property of quantifier-quantifier interaction since scope is not frozen everywhere (e.g., a structurally lower quantifier is able to obtain scope over a structurally higher element, as long as that element is not a quantifier itself).

(11) Maša často obedaet s každym mal'čikom (Ionin 2001 b)
Mary often dines with every boy
(every > often)

?? (often > every)

(12) John vsegda otvečajet na vse polučennye imeily
John always answers on all received emails
"John always replies to the emails he receives"

(all > always): for all the emails x, John always replies to x
(always > all): it is always the case that John replies to all emails

Ionin (2001 b) maintains that in the case of adverb/quantifier interaction QR must be implicated. However, she argues that QR is not allowed to adjoin a QP higher than the vP level (with the adverb adjoining to vP as well, hence the ambiguity).

Furthermore, in sentences like (13), involving *de dicto/de re* readings, the lower quantifier phrase easily scopes over an intentional verb, yielding ambiguity. However, in the case of *de dicto/de re* sentences Ionin assumes that the readings are possibly obtained through choice functions, not QR.

(13) Maša hočet vyjti zamuž za stoljara (Ionin 2001b)
Mary wants go in-marriage for carpenter
"Mary wants to marry a carpenter"

de dicto (wants > a): Mary wants the profession of the man she marries to be that of a carpenter
de re (a > wants): Mary wants to marry some specific man, who happens to be a carpenter

Reinhart (1997) argued for a division of labor between QR for universal QPs and choice function operation for existential QPs (with existential QP having both options, choice functions, and QR available to them)[3]. Choice functions analysis was used to explain the ability of existential QPs to scope out of islands, which is illustrated in (14) and (15) with Reinhart's examples:

(14) All students believe anything that many teachers say
(many > all): many teachers are such that all students believe anything these teachers say

Example in (14), for instance, contains an existential QP in the relative clause, which acts as an island for movement for strong (universal) QPs. The existential QP *many teachers*, on the other hand, readily obtains wide scope over the higher QP, yielding the inverse scope reading provided above.

[3] There is a separate issue with this division, however, that might be problematic for the theory, (namely that indefinite QPs are said to be able to both undergo QR and obtain wide scope through choice functions, which seems to be redundant: if obtaining scope through choice functions (provided it is at all possible) is more economical, as follows from Reinhart's discussion, then why should we have QR for indefinite QPs at all?). I will leave this discussion for later.

(15) Every lady read some book
(some > every): for some book x, every lady read x

a. $\exists x$ (book (x) $\wedge \forall y$(lady (y) $\rightarrow$ z read x)))

A choice function, according to Reinhart, is a function that applies to a non-empty set to yield a member of that set. (15a) illustrates how the lower quantifier is able to obtain wide scope by means of choice functions while staying in situ, with the function variable being bound by the existential operator that can be arbitrarily far away.

Since Reinhart introduced choice functions as a way of dealing with the unbounded scope for indefinites, it has been widely assumed by many that existential QPs can obtain wide scope that way. However, in arguing that a language allows wide scope for existential QPs by means of choice functions the way it has been done for Russian, it has to be kept in mind that this way of obtaining scope has been put in doubt as highly problematic and largely inferior to any movement analysis (Geurts 2000). I will not attempt to restore Geurts' arguments here but will instead direct the reader to his original work, which argues, essentially, that just about any movement analysis, QR or not, will fare better than a non-movement analysis like choice functions analysis.

Ionin (2001 b) also shows that a quantifier is able to obtain scope over a wh-phrase (ex.16), and is able to bind a variable contained in the structurally higher wh-phrase, which implies reconstruction of the wh-phrase for binding purposes (ex.17):

(16) Skol'ko fil'mov ty pokazala každoj devočke? (Ionin 2001 b)
How-many$_{ACC}$ movies you showed every girl$_{DAT}$
"How many movies did you show to every girl?"
(how many >every), (every >how many)

(17) Skol'ko svoix knig pročjol každyj malčik?
How-many$_{ACC}$ self's books read every boy
"How many of his books did every boy read?
(every > how many)

Thus, on the analysis proposed by Ionin, Reconstruction for binding in wh-movement (both for Conditions A and C) is allowed, but "scope reconstruction with scrambling" is argued to be banned: "In the case of scrambling there is apparently no reconstruction for scope"[4] (p.15). It has to be noted that since Ionin's analysis allows short QR as vP-level adjunction, Reconstruction of the structurally higher QP always has to be banned in order to maintain the claim that sentences with two Quantifier Phrases exhibit frozen scope only.

In the next section I will show that such analysis of Russian scope facts cannot be maintained since Russian does in fact require Reconstruction of scrambled QPs to their base positions. Other types of evidence will also be provided that suggests that inverse scope in sentences discussed above results from covert QR, which obeys syntactic constraints that apply to overt movements as well.

[4] This claim is interesting in that it runs counter to what has previously been claimed about Scrambling (Saito 1992, etc, Bošković 2004), namely that scrambling obligatorily reconstructs, unlike feature-driven movement that does not.

IV. Evidence for Reconstruction: Binding Principle C

Evidence that Reconstruction of a Scrambled QP for Scope is in fact possible in Russian can be demonstrated by the following sentences:

(18) a. *[Každuju neudačnuju šutku o Maše$_k$] ona$_k$ vosprinimala t očen' boleznenno
Every lame joke about Maša she perceived very painfully
"Every lame joke about herself Maša perceived with much anguish"

(18) b. [Každuju neudačnuju šutku o Maše] on vosprinimal t očen' boleznenno
Every lame joke about Maša he perceived very painfully
"Every lame joke about Maša he perceived with much anguish"

Sentences (18a) and (18b) differ minimally in the pronouns they contain: (18a) contains a pronoun *she* that is co-indexed with *Maša*, while (18b) has a pronoun that refers to somebody else in the context. Since both sentences contain the same Quantifier Phrase and differ only in the pronouns, it must be the case that (18a) is ruled out by a Condition C violation after the QP reconstructs to its base position, which is c-commanded by the co-indexed pronoun (on the generally held assumption that Principle C applies at LF).

The same point is demonstrated by the contrast between the minimally different sentences in (19a) and (19b) that again are constructed in such a way that any contrast between the two sentences can only be attributed to the fact that they differ in the pronouns, allowing us to test the claim about Scope Reconstruction availability by appealing to the Principle C of the Binding Theory:

(19) a. *[O tom, čto nekotoryje znakomye Johna$_k$ emu$_k$ zavidujut] on$_k$ znajet davno t
About fact that some acquaintances J$_{GEN}$ him envy he knows a long time
"That some of his acquaintances envy John he has known for a long time"

(19) b. [O tom, čto nekotoryje znakomye Johna$_k$ emu$_k$ zavidujut] Maša znajet davno t
About fact that some acquaintances J$_{GEN}$ him envy M knows a long time
"That some of his acquaintances envy John Maša has known for a long time"

Example 20 is bad for the same reason: *Maša* is above the co-referenced pronoun at surface structure, yet the sentence is ungrammatical.

(20) *[Bol'šinstvo romanov, napisannyx Mašej$_k$], ona$_k$ izdavala t pod čužim imenem.
Most novels written Maša$_{INSTR}$ she published under foreign name
"Most of the novels she wrote Masha published under somebody else's name"

Thus we see that the claim that Russian does not allow A – Bar Reconstruction cannot be maintained. The fact that scrambled QPs reconstruct to their base position in Russian provides strong evidence against Ionin's claim that Russian sentences involving two Quantifier Phrases never allow inverse scope readings. Since covert A-Bar reconstruction is obligatory in Russian,

the structurally lower QP will always have wide scope over the reconstructed higher QP, which is the inverse to the surface order of the quantifiers. This predicts the possibility of ambiguity observed above.

V. Further Evidence for Movement (QR) Analysis:

A. Possessive DP Islands

In arguing that inverse scope in Russian results from a covert movement operation, QR, it is important to show that movement is indeed involved. This is achieved below by comparing instances of overt movement with sentences that arguably involve covert QR.

Russian overt movement obeys the Possessive DP-island constraint[5] , which is evidenced by the ungrammaticality of the (b) examples in (21) and (22):

(21) a. Kakuju ty videl [__ mašínu]?
Which you saw car
"Which car did you see?"

b. *Kakuju ty videl [Mášinu __ mašínu]?
Which you saw Maša's car
"Which did you see Maša's car?"

The (b) example in (21) is minimally different from the (a) example in that it lacks a possessor, thus the movement of the wh-phrase is possible in (a), but not (b). The Possessor phrase *Mášinu* (*Maša's*) evidently blocks the movement[6].

(22) a. O čjem ty čital [stat'ju __]?
about what you read article
"What did you read an article about?"

b. *O čjem ty čital [Mašinu stat'ju __]?
About what you read Maša's article
"What did you read Maša's article about?"

The ungrammaticality of (22b), which also minimally differs from the grammatical (22a) by the presence of a Possessive Phrase in the former, again suggests that the movement of the wh-phrase is blocked by the Possessive *Maša's*. The same holds for Russian covert movement as well:

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[5] A similar constraint was identified for Polish in Rappaport (2001).

[6] Assuming LF movement of anaphors, the similar contrast between the two sentences in ii. is also expected, thus providing another instance where covert and overt movement are constrained in the same way:

ii. a. $Maša_j$ uvidela stat'ju o $sebe_j$
Maša saw article about self
"Maša saw an article about herself"

b. *$Maša_j$ uvidela Borinu stat'ju o $sebe_j$
Maša saw Borja's article about self
"Maša saw Borja's$_j$ article about self

(23) a. **[**Dva studenta] čitajut [$_{NP}$ stat'ji o každom professore]
Two students read pres.pl articles about every professor
"Two students read articles about every professor"
√ (two > every)
√ (every > two)

(24) b. [Dva studenta] čitajut [$_{DP}$ Mašiny stat'ji o každom professore].
Two students read Maša $_{Poss\ pl}$ articles about every professor
"Two students read Masha's articles about every professor".
√ (two > every), * (every > two)

The data presented in this section suggests that covert movement is indeed implicated in sentences like 22a since this movement obeys the same constraint Possessive DP - island constraint that is operative in overt syntax

B. Coordinate Structure Constraint

More support for the claim that QR is responsible for the ambiguity of Russian sentences with two Quantifier Phrases comes from the Coordinate Structure Constraint (Ross 1967). As was originally shown by Ross (1967), movement obeys the Coordinate Structure Constraint, according to which an element from one conjunct cannot be moved out of the structure. This is demonstrated for English by the ungrammaticality of (25b):

(25) a. Bill cooked supper and washed the dishes.
b. *What$_1$ did Bill cook t_1 and wash the dishes?

One prediction this constraint makes that is important for my purposes here is that the inverse scope reading should not be available in coordinate structures. The prediction is borne out (as indicated by the absence of the inverse scope in (26b), as opposed to (26a)):

(26) a. Kakoj-to student ljubit každogo professora
Some student loves every professor
"Some student loves every professor"
√ (some > every)
√ (every > some)

b. Kakoj-to student ljubit Mašu i každogo professora
Some student loves Maša and every professor
"Some student loves Maša and every professor"
√ (some > every), * (every > some)

The fact that the inverse scope reading is available in (26a), but not in (26b), as predicted by the Coordinate Structure Constraint, suggests again that movement is implicated[7]. Since the surface

[7] As discussed in Fox and Nissenbaum (1999), Ruys (1992) has noticed that if a QP in the second conjunct contains a variable, the QP in the first conjunct is able to QR if and only if it's going to bind this variable. The descriptive generalization provided by Ruys is the following: QR of a QP out of a conjunct A (in a structure A & B) is possible if and only QP binds a variable in B.

position of the quantifiers is the same in the two sentences it must be the case that the movement is covert.

The frozen scope analysis proposed by Ionin (2001a, 2001b) cannot account for this difference (on such an analysis the only way a structurally lower quantifier can obtain wide scope over a structurally higher quantifier is by being focused.)

C. Inverse Linking Construction (ILC)

Inverse Linking involves an embedded Quantifier Phrase that binds a variable it does not c-command at S-structure and is interpreted as having wide scope (May 1977, May and Bale, 2006). The point is demonstrated in ex. (27):

(27) Someone from every city$_i$ despises it$_i$ (from May and Bale, 2006)

Here the QP *every city* binds the pronoun *it*, but under the prevailing assumption that binding requires c-command, this cannot be achieved at Surface Structure, since the QP every *city* is embedded within the subject QP and as such cannot c-command the pronoun it binds.

May (1977) uses sentences like (23) to argue for QR and the existence of the syntactic level of LF. On his analysis, the embedded QP moves out of the embedding structure and adjoins to S where it can bind the pronoun. Thus, adjoining above the embedding subject QP, *every city* obtains wide scope over *someone.* This explains the "quirk" associated with the inverse linking: the embedded QP preferentially has the inverse scope reading on which it scopes over the embedding structure (hence the name of the construction).

On this analysis, the existence of the Inverse Linking Construction in a language is argument for QR[8]. As is shown below, Inversely Linked sentences are grammatical in Russian (examples in 28-30):

(28) [[Neskol'ko fanatov [každogo$_j$ iz členov rok gruppy]] sožalejut o jego$_j$ uhode.
Several fans$_{NOM}$ every$_j$ from members rock band$_{GEN}$ sorry about his$_j$ leave
"Several fans of every member$_j$ of the rock band are sorry about his$_j$ leaving the band"
√ (every > several)

This generalization appears to hold for Russian, as well:

iii. [Kakoj-to student]$_k$ ljubit [každogo professora]$_j$ i xočet videt' ego$_j$ členom svojej$_k$ komissii.
Some student loves every professor and wants see him member$_{INST}$ self's committee
"Some student loves every professor$_j$ and wants to see him$_j$ as self's committee member"

√ (some > every): for some student x, x loves every professor and wants to see every professor on x's committee
√ (every > some): for every professor x, there is a student y such that y wants to be on x's committee

Without attempting to provide an explanation for this generalization here I would like to note that the sentence in iii. further illustrates the parallelism between English and Russian in terms of quantifier scope.

[8] The Inversely Linked Construction is a case that provides direct empirical evidence for TP-adjunction in Russian: since the QP that binds the pronoun after QR is itself embedded in the subject QP at surface structure, the only Functional Projection it can adjoin to after QR is TP.

LF: $[_{TP}$[každogo$_j$ iz členov rok gruppy]$_y$ $[_{TP}$ [Neskol'ko fanatov y]$_x$ $[_{TP}$ x sožalejut o jego$_j$ uhode]]]
Every from members rock band several fans sorry about his leave

(29) [Mnogo poklonnikov [každogo$_j$ fil'ma Čulpan Xamatovoj]] sčitajut jego$_j$
many fans$_{NOM}$ every movie$_{GEN}$ Čulpan Xamatova$_{GEN}$ consider it

samym genial'nym projavlenijem jejo talanta
most genius manifestation her talant
"Many fans of every movie by Čulpan Xamatova consider it to be the most genius manifestation of her talent"
√ (every > many)

(30) [Dva izvestnyx predstavitelja [každogo napravlenija lingvistiki]$_j$]
two famous representatives every framework linguistics$_{GEN}$
objabili jego$_j$ samym perspektivnym
declared it most promising
"Two famous representatives of [every framework in linguistics]$_i$ declared it$_i$ the most promising"
√ (every > two)

Thus, the grammaticality of the Inverse Linking Construction in Russian gives us another reason to posit the QR analysis of Quantifier scope in Russian.

VI. QR Revisited

Assuming that the availability of QR past VP level has been established, it has to be mentioned that a theory of QR in the spirit of May's original work faces the same problems in Russian as it does in English due to evidence that not all QPs behave alike. There is, however, another theory of scope, originally developed in Beghelli and Stowell (1997) and Szabolcsi (1997) that postulates the existence of various structural positions for various types of QPs to deal with such problems. This view of Russian facts is advocated in an unpublished manuscript by Rapoport (2001).

Szabolcsi (1997), for instance, argues for the existence of a variety of functional projections whose Specifier positions are targeted by different kind of QPs. Concentrating on Hungarian, some of the positions she argues for are HRefP, HDistP and HPredOp, with DPs that occur in HRefP, contributing "an individual to the interpretation of the sentence", a DP in HDistP contributing "a set to the interpretation of the sentence, i.e., a witness set", and a DP in PredOp not contributing "an entity to the interpretation of the sentence" and not serving "as a logical subject of predication" (p.122). Necessarily simplifying greatly, I will discuss just a few select pieces from a variety of evidence she offers to support her argument.

Unlike what is predicted by a standard view of QR which applies to all Quantifier Phrases, Szabolcsi shows that various object QPs have different abilities in terms of taking wide scope over the subject QP (ex.31), or over negation (ex.32):

(31) a. Three referees read every abstract.
√ (every N > three N)

√ (three N > every N)

b. Three referees read few abstracts.
√ (three N > few N)
* (few N > three N)

(32) a. John didn't read many abstracts.
√ (many N > not)
√ (not > many N)

b. John didn't read few abstracts.
√ (not > few N)
* (few N > not)

Such differences are argued to pertain to syntax/semantics interface, with the (b) examples being starred since they are not able to "carry the intended [inverse scope] meaning".

The situation appears to be the same in Russian as well:

(33) a. Tri retsenzenta čitali každyj abstrakt.
Three referees read every abtract
√ (every N > three N)
√ (three N > every N)

b. Tri retsenzenta čitali malo abstraktov.
Three referees read few abtracts
* (few N > three N)
√ (three N > few N)

(34) a. John ne čital mnogo abstraktov
John not read many abstracts
√ (many N > not)
√ (not > many N)

b. John ne čital malo abstraktov
John not read few abstracts
* (few N > not)
√ (not > few N)

Thus Russian facts in (33) and (34) seem to behave similarly to English facts reported in Szabolcsi (1997) cited above, which needs to be accounted for if one argues for existence of QR in the spirit of May 1985 (which is expected to affect all Quantifier Phrases). I would like to point out that although I have assumed May's view of QR in explaining Russian data, it is mostly compatible with Szabolsci's analysis since it also assumes QR as an A-bar analysis and is different only in the framework in which QR is handled[9]. Nevertheless, I will attempt to sketch a

[9] Note that the fact that the analysis of Russian scope facts has this problem in the face of the empirical data only stresses the overall similarity between English and Russian that I have argued for in this paper.

tentative solution that could handle the facts in (39) without resorting to the postulation of additional functional projections advocated for in Szabolcsi's framework.

The anaphora facts from Hungarian is one piece of evidence that is used by Szabolcsi to show that "DPs in HRefP/Focus denote plural individuals that can be subjects of collective or distributive predication" and that DPs in HDistP cannot denote plural referents. The claim is that a DP that is located in HRefP, as opposed to HDistP, denotes a plural referent in Hungarian, and thus should antecede a collective subject pronoun, whereas a DP that is in HDistP cannot introduce a plural referent to the discourse and as such should not be able to co-occur with a collective subject pronoun. Szabolcsi argues that this is exactly the case in Hungarian:

(35) John és Bill
John and Bill

Két ügyvéd
two lawyer

titkárnöt vett fel/vett fel titkárnöt
secretary$_{ACC}$ hired {3sg}

sok ügyvéd
many lawyer

hatnál több ügyvéd
more than six lawyer

(36) John és Bill
John and Bill

olyan titkárnöt vett fel, akivel elöbb elbeszélget-ett(3sg)/-tek(3pl)
hired a secretary that he had interview/they had interviewed

Két ügyvéd
two lawyers

If {3 sg}, interview distributive;
If {3 pl}, interview can(must?) be collective

(37) Minden
Every lawyer

olyan titkárnöt vett fel, akivel elöbb elbeszélget-ett(3 sg)/*-tek(3 pl)
hired a secretary that he/*they had interviewed

sok ügyvéd
many lawyers

If {3 sg}, interview distributive;
If {3 pl}, example *

(38) Hatnál kevesebb
Less than 6 lawyers

vett fel olyan titkárnöt, akivel elöbb elbeszélget-ett(sg)/*-tek(pl)
hired a secretary that he/*they had interviewed

sok ügyvéd
many lawyers

If {3 sg}, interview distributive;
If {3 pl}, example * (from Szabolcsi 1997)

What I believe the facts in (35) through (38) are intended to show is that depending on which Functional Projection (e.g., DistP or RefP) a QP raises into in overt syntax, it has different interpretations – distributive vs collective, which in Hungarian is manifested overtly by the form of the pronoun (3rd sg vs 3rd pl). The same test carried out in Russian, however, does not yield quite the same results:

(39) Neskol'ko
several

mnogo
many
advokatov naniali sekretaria, kotorogo oni/*on prointervjuirovali
lawyers hired a secretary which they/*he interviewed (3 pl)

dva
two

bol'še šesti
more than six

Note that none of the QPs in subject position can co-occur with a 3rd person sg pronoun, *on*, (or, for that matter, with a singular morphology on the verb) as is the case in Hungarian. Russian is also different from Hungarian in that all QPs can obviously occur in the same subject NP position (Spec,TP), yet they can have different interpretations. Thus, it is not necessary for a QP to move overtly to different positions in order to have different interpretations, as is argued to be the case in Hungarian. For instance, when the subject QP is *neskol'ko advokatov/dva advokata* (*several lawyers/two lawyers*), the sentence can mean either that the lawyers hired somebody collectively, conducting the interview as a group, or distributively, namely that each member of the set, denoted by this QP, conducted the interview separately from other members of the set (thus resulting in different secretaries being hired). However, when the subject QP is *mnogo/bol'še šesti advokatov* (*many/more than six lawyers*), the QP can only be interpreted distributively, namely that each lawyer hired a secretary (secretaries varying with lawyers).

This result, of course, can be interpreted in (at least) two different ways depending on the theory one adopts. The sentence in (39) can be viewed as supporting Szabolcsi's theory, since it can be said that the difference of the meanings of QPs (which are probably in Spec, TP in overt syntax) results from covert movements of the QPs into the Specifier of the relevant functional

projections, HRefP, HDistP and HPredOp. On this view the fact that the subject pronoun does not change depending on the interpretation of the subject QP it's anteceded by only means that this test cannot be taken as an instance of overt manifestation of the interpretation/position of the QP.

On the view defended in this paper, namely that QR is adjunction to vP or TP-level at LF, the sentence in (39) is harder to account for. Yet, one way seems promising: without attempting to work out all the details of the proposed analysis here, it is possible to imagine that the QPs that are unable to take wide scope constitute a group of so-called "weak quantifiers" while those QPs that can take wide scope over the higher QP are "strong quantifiers". On the analysis sketched here the distinction between vP vs TP adjunction will become crucial, with "strong quantifiers" like *every* being able to go all the way up to TP and modified numerals like *more than six* not being able to go higher than vP. Then, it is possible that with Reconstruction we could get the right result.

The crucial point I would like to make is that whatever the right analysis of the Hungarian and Russian anaphora facts, Szabolcsi's analysis also relies on the assumption that wide scope of quantifier phrases results from QR as an A-Bar movement operation (that can be either covert, as in English, or overt, as in Hungarian), which is exactly the argument made in this paper for Russian. Thus, the present analysis differs from Szabolcsi's analysis only in the framework adopted, but is the same in relying on QR as a (covert) A-bar movement operation.

VII. Conclusions

In this paper I have argued that Ionin's (2001a, b) frozen scope analysis of quantifier phrases cannot account for a range of Russian data discussed in this paper and have proposed a QR analysis of Russian scope facts in the spirit of May (1985). The claim that the interaction of two Quantifier Phrases in Russian yields ambiguity which can be accounted for by QR is supported by a variety of evidence. It has been shown that covert movement is implicated in the cases of QP/QP interaction, and this movement obeys the same constraints that overt movement does. Such is the evidence from Possessive DP Islands and Coordinate Structure Constraint. It has also been demonstrated that these constraints, when applied to instances of covert movement, yield correct predictions as to when the inverse scope reading should not be available.

The section on the possibility of Inversely Linked Construction presents the original argument by May (1977) which showed that the existence of such a construction in a language implicates QR as the only means of deriving the interpretation of such sentences.

I have also shown that not only is covert quantifier movement above the vP level possible, but that Reconstruction of Scrambled Quantifier Phrases for scope is necessary in order to account for the data discussed above. This analysis has attempted to show that whatever view of QR one adopts (namely, that of May or that of Beghelli and Stowell and Szabolsci), it appears to be the only possible way to explain the Russian scope facts.

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