

# Two Russian Hybrids\*

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*Abstract:* This paper reports on a peculiar phenomenon in Russian which involves both a Y/N marker (*li*) with a *wh*-word. Under consideration are the two incarnations of this construction—herein called *Hybrid Wh-coordination* (HWh) and its *reverse* counterpart (rHWh). In the former the Y/N marker precedes the *wh*-word (and the coordinator), while in the latter this order is permuted. This surface difference has deeper underpinnings, since the two constructions do not behave in identical fashion with respect to various diagnostics. Hence they are not amenable to the same treatment. I will argue for a biclausal genesis of HWh questions. The rHWh cases, on the other hand, are ambiguous between biclausal and monoclausal structures, depending on the nature of the *wh*-word. The paper offers novel empirical generalizations, cataloguing previously unreported facts associated with hybrid coordination, as well as some theoretical contributions, bearing on the status of Across-The-Board extractions (ATB), quantifier raising (QR), *li*-placement, and the distribution of topicalized constituents (TC). In particular, the paper presents arguments in favor of QR in Russian. It is argued that the clauseboundedness restriction can be repaired under ellipsis. ATB movement is analyzed as a process of extraction out of each participating conjunct. The placement of *li* is understood as a result of PF reordering, which is distinct from Prosodic Inversion. Finally, D-linked *wh*-phrases are analyzed on a par with TCs.

## 1. Introduction

Russian constructions like (1), dubbed Hybrid *Wh*-coordination (HWh), are the focus of this investigation. In (1) a reduced Y/N interrogative is conjoined with a *wh*-question, giving rise to the interrogative interpre-

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tation in both conjuncts. I will argue that (1) is an instance of CP-coordination with TP-ellipsis in the first conjunct, as demonstrated in (2).

- (1) Skoro li i kto pridet?  
 soon Q and who come<sub>FUT</sub>  
 'Will someone come and will it be soon?'
- (2) Skoro li [~~kto pridet~~] i [kto pridet]?  
 soon Q someone come<sub>FUT</sub> and who come<sub>FUT</sub>

When there is no coordinator, a *wh*-word is obligatorily interpreted as a *wh*-indefinite, as in (3), which is exactly the interpretation that obtains in the ellipsis site in (1) (indicated by the gloss in (2)).

- (3) Skoro li kto pridet?  
 soon Q someone come<sub>FUT</sub>  
 'Will someone come soon?'

The HWh construction in (1) looks remarkably similar to the rHWh question in (4).

- (4) Kto i skoro li pridet?  
 who and soon Q come

The obvious point of divergence pertains to the order of the relevant elements: in (1) the *wh*-word appears before the Q-marker (*li*), whereas (4) evinces a permutation of this order. Apart from this superficial distinction, an aggregate of restrictions is operable in rHWh contexts which are not found in the "regular" hybrids. I argue that rHWh instantiates two varieties, depending on the nature of *wh*-elements. The rHWhs with non-D-linked *wh*-words (*who*-phrases henceforth for ease of reference) are underlyingly biclausal, derived via TP-ellipsis in the first conjunct, as in (5a). The rHWh constructions involving D-linked *wh*-words (*which*-phrases) are monoclausal. The behavior of *which*-phrases in rHWh constructions is assimilated to that of left-dislocated constituents. Such constituents are base-generated adjoined to the highest available position, which I take to be a Boolean Phrase (BP), as in (5b) (hence the *wh*-phrase is adjoined to BP). Since the *which*-phrase is base-generated in the position it appears in, examples like (5b) involve no ellipsis.

- (5) a. Kto<sub>i</sub> [skoro t<sub>i</sub> pridet] i skoro li pro<sub>i</sub> pridet?  
 who soon come<sub>FUT</sub> and soon Q come<sub>FUT</sub>
- b. Kako<sub>j</sub> student [BP i skoro li pridet]?  
 which student and soon Q come<sub>FUT</sub>  
 ‘Which student will come and will he come soon?’

In what ensues I discuss each pattern in turn: HWh cases in section 2 and their reverse counterparts in section 3. I conclude with a summary in section 4.

## 2. Hybrid *wh*-Coordination

This section considers the facts surrounding the construction in (1), which is represented schematically in (6).

- (6) [X *li* & wh...]

HWh-coordination has been reported in the literature for Bosnian/Croatian/Serbian (BCS) in (7) and Polish in (8), but the Russian case is somewhat distinct given the nature of its Y/N marker, *li*.<sup>1</sup> The latter is an enclitic, imposing a one-prosodic-word requirement on its host (see Franks and King 2000). In non-coordinated Y/N questions any word (with the exception of certain quantifiers) can appear before *li*. It has gone unnoticed, however, that in HWh contexts the position preceding *li* is restricted to certain elements: only (i) adjuncts, but not (non-quantified) arguments or verbs and (ii) a limited set of argument QPs that are licit in the pre-*li* slot. In what follows, I discuss (i) and (ii) in turn.

- (7) Da li i gde si ih video?  
*da* Q and where AUX<sub>2SG</sub> them seen  
 ‘Did you see them, and where?’ (Browne 1972)
- (8) Czy i co studiujesz?  
 whether and what study<sub>2SG</sub>  
 ‘Do you study, and what do you study?’ (Tomaszewicz 2011)

<sup>1</sup> The order of conjuncts in the BCS and Polish examples is likewise reversible.

## 2.1. Arguments vs. Adjuncts/Verbs: Basic Facts

The first subset of licit pre-*li* elements is provided in (9). A variety of adverbs of different flavors (manner, time, place, frequency, etc.) as well as some PP adjuncts can appear in the configuration in (10), substituting for X. Some examples are provided in (11).

- (9) a. Adverbs: *davno* 'long ago', *zavtra* 'tomorrow', *vseгда* 'always', *sjuda* 'to here', *daleko* 'afar', *umyšlenno* 'premeditatedly', *skoro* 'soon', *xorošo* 'well', *bystro* 'quickly', *pravil'no* 'correctly', etc.  
 b. Other adjuncts: locational, directional, instrumental PPs

(10) X *li* & *wh*-word ...

- (11) a. *Davno li i kto zakazyval zavtrak?*  
 long.time.ago Q and who ordered breakfast  
 'Did somebody order breakfast a while ago, and who?'  
 b. *Naročno li i kto zdes' razlil moloko?*  
 on.purpose Q and who here spilled milk  
 'Did somebody spill milk here on purpose, and who was it?'  
 c. *ʔV magazin li i začem ušel Ivan?*  
 to store Q and why left Ivan  
 'Did Ivan go to the store, and why did he go there?'

To appreciate the idiosyncrasy of HWHs, consider first some root contexts, in which any element may precede *li*.<sup>2</sup> Example (12a), with a fronted verb, constitutes the most neutral way of asking a Y/N question.<sup>3</sup> The rest of the paradigm in (12) contains fronted non-quantified arguments ( $N > li$ ), which are interpreted as focus-bearing elements.

<sup>2</sup> Certain quantifiers are illicit in pre-*li* positions in non-coordinated questions. See section 2.3 and fn. 14.

<sup>3</sup> An intonation strategy is often preferred over the *li*-strategy in the formation of Y/N-root interrogatives. The *li*-strategy is, however, obligatory in embedded questions. Speakers who find (12) slightly degraded have no objection to such strings in the embedded clauses. My arguments extend to both root interrogatives and embedded contexts.

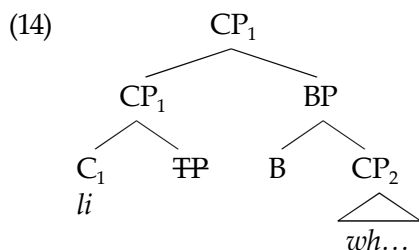
- (12) a. Darit li Ivan Lene cvety?  
gives Q Ivan Lene<sub>DAT</sub> flowers<sub>ACC</sub>  
'Does Ivan give flowers to Lena?'
- b. Ivan li darit Lene cvety?
- c. Cvety li Ivan darit Lene?
- d. Lene li Ivan darit cvety?

However, none of these elements, appearing before *li* in (12), are permitted in *HWh*-questions, as shown in (13). The worst configuration involves a fronted verb in (13a), while the least degraded one (relative to the rest of the set) is the dative indirect object in (13d).

- (13) a. \*Darit li i čto Ivan Lene?  
gave Q and what Ivan Lene<sub>DAT</sub>  
'Did Ivan give something to Lena, and what did he give?'
- b. ?\*Ivan li i komu darit cvety?  
Ivan Q and who<sub>DAT</sub> gave flowers
- c. ?\*Cvety li i kto darit Lene?  
flowers Q and who gave Lene<sub>DAT</sub>
- d. ??Lene li i čto podaril Ivan?  
Lene<sub>DAT</sub> Q and what gave Ivan

## 2.2. Arguments vs. Adjuncts/Verbs: Analysis and Consequences

In the ensuing discussion and throughout the paper I assume Munn's (1993) BP-adjunction structure. Under this approach the head of the BP merges with the lower conjunct, forming an object labelled BP, to which the higher conjunct is adjoined. It is contended that the surface configuration of *HWh* questions is derived via TP-ellipsis in the first conjunct, as shown in (14).



Though there is some debate in the literature on the precise nature of Y/N question formation in Russian (see Bošković 2001, Franks and King 2000, King 1995, and references therein), it is not crucial for the analysis that I am entertaining here. For the sake of explicitness, I assume that *li* is in  $C^0$ , the fronted argument occupies Spec CP, and the verb adjoins to  $C^0$ .

I offer four arguments in support of clausal (CP) coordination. First, it is well known that *wh*-questions and Y/N interrogatives are in complementary distribution, in the sense that they are incompatible in a single clause. Since the elements of both interrogative types are ostensibly present in the HWh construction, it follows that we are dealing with two clausal conjuncts. Second, the conjuncts can be coordinated by a strictly clausal coordinator—*a*—in the presence of high speaker-oriented adverbs, as in (15) (diagnostics due to Tomaszewicz 2011).<sup>4</sup>

- (15) a. Skoro li i/a glavnoe kto sobiralsja zajti?  
 soon Q and importantly who was.going to.stop.by  
 ‘Was somebody going to stop by soon, and, importantly, who?’  
 b. \*Skoro li glavnoe kto sobiralsja zajti?

Third, the coordination of two Y/N markers is possible, and predictably so, if the conjuncts are CPs, given the standard practice of treating *li* as a complementizer.<sup>5</sup>

<sup>4</sup> The following facts demonstrate that *a* ‘and’ is strictly clausal: only clausal constituents, as in (ia) and (ib), but not NPs, as in (ic), can be coordinated by *a*. (Examples are modeled after Tomaszewicz’s (2011) Polish examples.)

- (i) a. Kto i/a glavnoe čto skazal o tebe?  
 who and importantly what said about you  
 ‘Who said something about you and what did they say?’  
 b. Jan igral na gitare i/a Maria igrala na pianino.  
 Jan played on guitar and Maria played on piano  
 ‘John was playing the guitar and Maria was playing the piano.’  
 c. Jan i/\*a Maria

<sup>5</sup> Note that in (16) the first conjunct contains a QP argument. I will return to the distribution of quantified expressions in HWh contexts in section 2.3.

- (16) U každogo li i nadolgo li xvatit vyderžki?  
 at each Q and for.long Q suffice restraint  
 'Will each have enough restraint, and will they have it for long?'

Finally, the paradigm in (17) demonstrates that there is a requirement to answer both conjuncts, suggesting again that HWh questions are underlyingly biclausal. It should be noted that the answer to the Y/N interrogative can only be affirmative for an obvious reason: the second conjunct presupposes an affirmative reply to the first conjunct. Still, the infelicity of (17b) and (17c) indicates that there are two true interrogatives here.

- (17) a. Skoro li i kto pridet?  
 soon Q and who come<sub>FUT</sub>  
 b. #Da.  
 c. #Ivan.  
 d. Da, skoro, Ivan sobiralsja zajti.  
 yes soon Ivan was.planning to.stop.by

With this much settled, I return to the adjunct/argument asymmetry. The core idea accounting for this asymmetry hinges on the preservation of the argument structure in both conjuncts. Thus, the ungrammatical sentences are ruled out due to a missing obligatory element in the second conjunct. The adjuncts can freely precede *li*, since they need not be present in the second conjunct.

The most straightforward case is in (18) (repeated from (13a)) with a simplified derivation in (19). The sentence is ruled out because the verb is missing in the second conjunct.

- (18) \*Daryl li [TP čto Ivan Lene] i čto Ivan Lene?  
 gave Q something Ivan Lena<sub>DAT</sub> and  
 'Did Ivan give something to Lena, and what did he give?'

- (19) \*[V+li [TP t<sub>V</sub>]] & [CP ... ]  
 ^ellipsis ^missing verb

Arguments are excluded in pre-*li* positions for the same reason: the second conjunct is missing an obligatory element, the subject in the

case of (20) (repeated from (13b)). Much like the case in (19), the ungrammaticality of (20) is triggered by the defective argument structure in the second conjunct, as the derivation in (21) demonstrates.

(20) <sup>?</sup>\*Ivan *li* [TP *komu*            *daril cvety*] *i komu daril cvety?*  
 Ivan Q        somebody<sub>DAT</sub> gave flowers and

(21) <sup>?</sup>\*[NP *li* [TP *t<sub>NP</sub>* ]] & [CP ... ]  
           <sup>^</sup>ellipsis        <sup>^</sup>missing subject

Interestingly, Russian offers several strategies that induce amelioration effects in HWh questions involving arguments. One such strategy implicates the introduction of resumptive-like elements—pronouns or epithets—in the second conjunct, as in (22).<sup>6</sup> Observe that in (22), upon the insertion of the co-referential pronoun, the argument structure of the predicates in both conjuncts is rendered intact. The proposed analysis, hence, predicts the improvement below.

- (22) a. <sup>?</sup>Ivan<sub>i</sub> *li i čto on<sub>i</sub> včera nakupil?*  
 Ivan Q and what he yesterday bought  
 ‘Did Ivan buy something yesterday, and what did he buy?’
- b. <sup>?</sup>Ivan<sub>i</sub> *li i čto [ètot durak]<sub>i</sub> opjat’ nakupil?*  
 Ivan Q and what this fool again bought  
 ‘Did Ivan buy something again, and what did this fool buy?’

I assume that the counterpart of the pre-*li* argument in the second conjunct must be coindexed with the pre-*li* argument referring to it, which yields a resumptive-like interpretation. If this is correct, we then expect HWh questions of the configuration [pronoun *li* & name...] to be unacceptable.<sup>7</sup> This prediction is borne out, as shown in (23).

<sup>6</sup> Judgments in (22) vary across speakers from unacceptable to nearly perfect. This variation is presumably due to the availability of this resumptive strategy among my informants.

<sup>7</sup> The ungrammaticality of (23) on the current analysis is not due to a Condition C violation, since the pronoun does not c-command the R-expression. Rather, it is attributed to the ban on backward anaphora in conjunction with the focalized nature of the pre-*li* elements.



- (23) \*On<sub>i</sub> li i čto Ivan<sub>i</sub> včera nakupil?  
 he Q and what Ivan yesterday bought

Contextualization also leads to improvement. As discussed in Gribanova 2013, a contextual antecedent can license object drop in Russian. This is precisely the source of improvement in (24).

- (24) [Context: There are a few items in need of repair.]  
 Džinsy<sub>i</sub> li i kto zaš'et e<sub>i</sub>?  
 jeans Q and who sew<sub>FUT</sub>  
 'Will someone repairs jeans, and who will do it?'

In fact, even the speakers who find pre-*li* arguments in HWh questions only slightly degraded (rather than fully unacceptable as reported above) impose a particular interpretation which correlates with argument drop. The latter is apparent with optionally transitive verbs like *čitat'* 'to read' in (25a), requiring a bound variable reading in the second conjunct, as demonstrated by the paraphrase in (25b). The 'at all' reading, associated with the intransitive incarnation of *čitat'* in (25c), is impossible.

- (25) a. ?Bulgakova<sub>i</sub> li i kto zdes' čital e<sub>i</sub>?  
 Bulgakov Q and who here read  
 b. = 'Was it Bulgakov that someone read, and who read him here?'  
 c. # 'Was it Bulgakov that someone read and who read here (at all)?'

As noted earlier, depending on their grammatical function, pre-*li* arguments in HWh configurations are not uniformly bad. There is a scale of (un)acceptability which sets apart subjects/direct objects and indirect objects. The latter are degraded but not entirely unacceptable. This idiosyncrasy can be likewise linked to argument drop because omitting dative arguments is easier than dropping direct objects or subjects (though the reason for this remains obscure). So, (26a) (repeated from (13d)) is marginally acceptable for the same reason (26b) is.

- (26) a. ?Lene li i što podaril Ivan?  
 Lena<sub>DAT</sub> Q and what gave Ivan  
 b. ?Čto podaril Ivan?  
 what gave Ivan

I turn now to adjuncts. Since they are not required by the argument structure of the predicates, they need not be present in the second conjunct. Sentences like (1) (repeated below in (27)) are derived as shown in (28).

- (27) Skoro li [TP *kto* *pridet*] i kto pridet?  
 soon Q somebody come<sub>FUT</sub> and who come<sub>FUT</sub>
- (28) [Adverb *li* [TP *t<sub>NP</sub>* ]] & [CP ... ]  
 ^ellipsis ^full argument structure

Some predicates, however, require obligatory adverbial support, as in (29a). My analysis predicts that fronting of this adverbial to the pre-*li* position in HWh questions will result in ungrammaticality, since such a configuration ensures that the required element is not present in the second conjunct. The prediction is borne out. Though adverb fronting is perfectly acceptable in non-coordinated contexts like (29b), it is impossible in HWh configurations (29c); cf. (29c) with an optional pre-*li* adverb in (29d).

- (29) a. Kto k nemu \*(xorošo / ploxo) odnositsja?  
 who to him well badly treats  
 'Who treats him well/badly?'  
 b. Xorošo li Maša k nemu odnositsja?  
 well Q Masha to him treats  
 'Does Masha treat him well?'  
 c. \*Xorošo li i kto k nemu odnositsja?  
 well Q and who to him treats  
 'Does somebody treat him well, and who treats him well?'

- (29) d. Xorošo li i s kem včera sygral *Spartak*?  
 well Q and with who yesterday played *Spartak*  
 ‘Did *Spartak* play well yesterday, and with whom did it  
 play?’

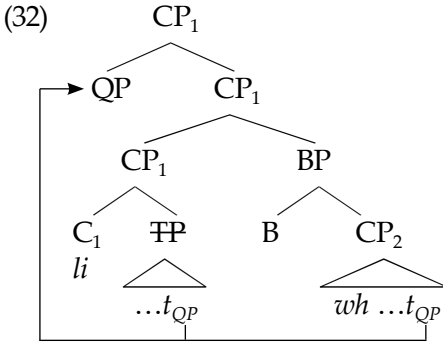
So far we are led to the following conclusions. HWs involve CP coordination with ellipsis in the first conjunct, and as long as fully-fledged argument structure is preserved in both conjuncts, HWh configuration is possible. No rescue strategies are available for verbs, so they are the least acceptable, but some repair strategies—introduction of resumptive-like elements and argument drop—exist for pre-*li* arguments. These strategies can salvage the argument structure in both conjuncts of HWh questions. By far the best examples are constructible with pre-*li* adjuncts, since the latter are not required by the argument structure of the predicates.

### 2.3. Quantifiers

In addition to adjuncts, a limited number of quantified arguments may likewise appear in pre-*li* positions. Those allowed in such positions are listed in (30a); those prohibited are listed in (30b); some acceptable examples are given in (31).

- (30) a. Permitted: *vse* ‘all’, *vsë* ‘everything’, *vsjakij* ‘every’, *mnogo* ‘a lot’ (adverbial), *každyj* ‘each’  
 b. Prohibited: *kto-to* ‘somebody’, *kto-nibud* ‘somebody’, *kto-libo* ‘someone’, *neskol’ko* ‘several’, *nikto* ‘no one’, *mnogie* ‘a lot’ (adjectival), *ljuboj* ‘any’, *malo* ‘little, few’, *nemnogo* ‘not much’
- (31) a. Vsë li i kogda Ivan prodal \_\_\_ Olegu?  
 everything Q and when Ivan sold Oleg<sub>DAT</sub>  
 ‘Did Ivan sell everything to Oleg, and when did he do it?’  
 b. Mnogo li i kto priglasil na novyj god \_\_\_ ljudej?  
 many Q and who invited to new year people  
 ‘Did somebody invite a lot of people to the New Year’s Eve party, and who was it?’

The gist of the analysis to be defended is as shown in (32). An argument can precede *li* only if it is extracted in an ATB fashion from each conjunct to a position high enough to c-command both traces. The operation that triggers this movement is QR.



That Russian has QR is a controversial issue given the traditional view that Russian lacks this covert operation; see, for example Ionin 2002. However, Antonyuk-Yudina (2006, 2009) demonstrates that Russian patterns with English with respect to the availability of inverse scope in doubly quantified SVO sentences. Zanon (2014) likewise argues for QR in Russian, based on the interaction of reflexive possessives with quantifiers. The HWh construction offers additional evidence in support of the availability of QR in Russian.

My proposal concerning the status of QR in HWh questions has two basic ingredients. First, QR is normally taken to be confined to the covert component of the grammar. I assume a single-cycle syntax where “covert” is understood as a copying operation that results in the pronunciation of the tail of the chain in PF (i.e., of the lowest copy).<sup>8</sup> Second, in non-QR cases, normally the higher copy is pronounced. However, certain PF considerations sometimes affect the expected PF copy deletion: instead of the “normal” high copy pronunciation, a lower copy is pronounced. What I propose is a reflex of those two ideas. PF considerations in the cases of HWh coordination require the pronunciation of the head of the chain (to support *li*), instead of the expected low copy of the QP.

<sup>8</sup> See also Bobaljik 1995, Pesetsky 1998, and Groat and O’Neil 1994 for more general approaches, where covert movement is recast in terms of pronunciation of lower copies.



instead of the expected low copy pronunciation (as is normally the case with QR), phonological requirements prompt high copy pronunciation.

- (35) *Vsë* li [TP ...*vsë*-] i kogda Ivan prodal *vsë* Olegu?  
 everything Q and when Ivan sold Oleg<sub>DAT</sub>  
 ^the highest copy of Q is pronounced to support *li*

With this first approximation in place, it is now possible to examine the details of the proposal. As mentioned earlier, the analysis includes two parts—QR and ATB movement. The following sections deal with each one in turn.

## 2.4. Evidence for QR

There are two arguments in support of QR. First, only quantifiers undergo this movement (recall from section 2.1 that non-quantified arguments are not subject to this operation). Second, since “normal” QR is an operation that obeys a clauseboundedness restriction, we expect the movement in HWh questions to obey the same locality constraints, which is precisely what (36) demonstrates.

- (36) \**Vse li i kto skazal, čto Maša prodala \_\_ knigi?*  
 all Q and who said that Masha sold books  
 ‘Did somebody say that Masha sold all the books to Oleg, and who said that?’

While extraction out of *čto*-clauses in Russian is assumed to be independently prohibited, in colloquial Russian long-distance movement of non-quantified NPs, as in (37), is possible, albeit somewhat degraded. At the very least, there is a palpable contrast between (36) and (37), suggesting again that in the case of the former we are dealing with more than just extraction out of a *čto*-clause.

- (37) ??*Ètu knigu Ivan skazal, čto Maša prodala \_\_ Olegu?*  
 this book Ivan said that Masha sold Oleg<sub>DAT</sub>  
 ‘Was it this book that Ivan said that Masha sold to Oleg?’

On the other hand, subjunctive *čtoby*-clauses are more amenable to long distance extractions, as (38) demonstrates.

- (38) Ètu knigu Ivan xotel, čtoby Maša prodala \_\_ Olegu?  
 this book Ivan wanted that<sub>SUBJ</sub> Masha sold Oleg<sub>DAT</sub>  
 ‘Was it this book that Ivan wanted Masha to sell to Oleg?’

Crucially, the clauseboundedness effect in HWh constructions persists even with *čtoby*-embedded clauses, as shown in (39). The quantifier here may not cross a clausal boundary, much like it is prohibited from doing so in *čto*-clauses.

- (39) \*Vse li i kto xotel, čtoby Maša prodala \_\_  
 all Q and who wanted that<sub>SUBJ</sub> Masha sold  
 knigi Olegu?  
 books Oleg<sub>DAT</sub>  
 ‘Did somebody want Masha to sell all the books to Oleg, and who wanted that?’

I conclude that QR is operable in HWh contexts. This approach explains the locality restrictions, i.e., the clauseboundedness effects discussed above, and the impossibility of pre-*li* non-quantified arguments.

## 2.5. Evidence of ATB Movement

This section presents three pieces of evidence in favor of ATB movement in HWh questions. Binding facts, parallelism of HWh questions with the “standard” ATB extraction pattern, and “repair-by-ellipsis” effects all point to an analysis under which the quantifier must be extracted out of each conjunct.

The first argument rests on binding. The extracted quantifier binds a reflexive in the second conjunct, as in (40). Since this is the case, a copy of *každyj učastnik* ‘every participant’ must be present in the second conjunct in order to establish a proper binding configuration. Such an outcome is expected under the current analysis.<sup>9</sup>

- (40) Každyj li učastnik<sub>i</sub> i skol’ko svoix<sub>i</sub> èkzempljarov  
 each Q participant and how.many own samples

<sup>9</sup> Recall also that the fronted quantifier is high enough to c-command the reflexive.

predstavil na vystavke?  
presented on exhibition

'Has each participant presented his samples at the exhibition  
and how many samples did he present?'

The second argument hinges on the exact parallelism between HWh questions and standard ATB-extraction facts. In particular, the two configurations impose the same set of restrictions on left-branch extraction (LBE) out of certain positions. While LBE out of object positions results in acceptable surface strings, LBE out of subject positions is prohibited. Furthermore, certain quantifiers are more amenable to LBE than others.

Consider first the extraction of *mnogo* 'many' out of object positions. In both HWh questions in (41a) and ATB constructions in (42a), LBE of *mnogo* is not only possible but in fact preferred (my informants consistently choose (a) over (b) in (41) and (42)). This preference is manifested for both HWh questions and ATB sentences.<sup>10</sup>

- (41) a. Mnogo li i kto prines \_\_ vina na večerinku?  
much Q and who brought wine to party  
'Did somebody bring lots of wine to the party, and who was it?'
- b. Mnogo li vina i kto prines \_\_ na večerinku?
- (42) a. Mnogo li Ivan prines \_\_, a Sergej vypil \_\_ vina?  
much Q Ivan brought and Sergej drank wine  
'Did Ivan bring lots of wine, and did Sergej drink lots of it?'
- b. Mnogo li vina Ivan prines \_\_, a Sergej vypil \_\_?

By contrast, LBE of *každyj*-type quantifiers is worse than LBE of *mnogo*-type quantifiers from object positions in both HWh questions, as in (43), and standard ATB constructions, as in (44).<sup>11</sup> QPs with *každyj*-

<sup>10</sup> In the (a) examples the sole extractee is Q *mnogo*, but in the (b) examples the entire QP *mnogo vina* is fronted. The placement of *li* in (41b) and (42b) is due to a PF reordering mechanism, which places the complementizer after the first prosodic word. See section 2.7 for details.

<sup>11</sup> Some speakers reject examples (43a) and (44a) altogether.



type quantifiers exhibit a strong preference for pied-piping their complements.

- (43) a. <sup>?</sup>Každogo li i kto poxvalil na vystavke \_\_  
 each Q and who praised on exhibition  
 učastnika?  
 participant  
 'Did somebody praise each participant at the exhibition,  
 and who was it?'  
 b. Každogo li učastnika i kto poxvalil na vystavke?
- (44) a. <sup>?</sup>Každogo li na vystavke Ivan poxvalil \_\_, a Maša  
 each Q on exhibition Ivan praised but Masha  
 osudila \_\_ učastnika?  
 denounced participant  
 'Did Ivan praise and Masha criticize every participant?'  
 b. Každogo li učastnika Ivan poxvalil, a Maša osudila na  
 vystavke?

The generalization concerning the parallelism between ATB and HWh object LBE contexts likewise applies to the restrictions on extraction out of a subject position. Regardless of the quantifier type, LBE out of subject positions is uniformly prohibited in both HWh questions and ATB constructions. Examples (45a) and (46a) show that LBE of *mno-go*-type quantifiers is illicit in HWh and ATB sentences, respectively. The examples in (45b) and (46b) indicate that the entire subject QP must be pied-piped. (This results in the configuration necessitating subsequent PF reordering; see section 2.7.) The same holds of *každyj*-type quantifiers in (47) and (48), the former capturing the behavior of *každyj* in the HWh pattern, the latter in the standard ATB strings.

- (45) a. \*Mnogo li i kakie imenno èkzempljary poxvalili  
 many Q and which exactly samples praised  
 na vystavke \_\_ ljudej?  
 on exhibition people  
 'Did many people praise some samples at the exhibition,  
 and which ones did they praise?'

- (45) b. Mnogo li ljudej i kakie imenno èkzempljary poxvalili na vystavke?
- (46) a. \*Mnogo li na vystavke poxvalili Mišiny èkzempljary,  
 many Q on exhibition praised Misha's samples  
 no osudili Mašiny obrazcy \_\_\_ ljudej?  
 but denounced Masha's giveaways people  
 'Did many people at the exhibition praise Misha's samples,  
 but criticized Masha's giveaways?'  
 b. Mnogo li ljudej na vystavke poxvalili Mišiny èkzempljary,  
 no osudili Mašiny obrazcy?
- (47) a. \*Každyj li i kakie imenno èkzempljary poxvalil  
 each Q and which exactly samples praised  
 na vystavke \_\_\_ učastnik?  
 on exhibition participant  
 'Did each participant praise some samples at the exhibition,  
 and which ones did he praise?'  
 b. Každyj li učastnik i kakie imenno èkzempljary poxvalil na  
 vystavke?
- (48) a. \*Každyj li na vystavke poxvalil Mišiny èkzempljary,  
 each Q on exhibition praised Misha's samples  
 no osudil Mašiny obrazcy \_\_\_ učastnik?  
 but denounced Masha's giveaways participant  
 'Did each participant at the exhibition praise Misha's  
 samples, but criticized Masha's giveaways?'  
 b. Každyj li učastnik na vystavke poxvalil Mišiny èkzempljary,  
 no osudil Mašiny obrazcy?

The consistently uniform behavior of HWh questions and ATB constructions with respect to the possibility of LBE strongly suggests that the same mechanism is involved in their derivations.

The strongest piece of evidence for ATB movement emerges in ellipsis contexts. It has been extensively argued that locality violations improve under ellipsis (Bošković 2011, 2012, Merchant 2001, Ross 1969,

among others). Earlier I demonstrated that quantifiers in HWh questions, being subject to QR, cannot cross a clause boundary. But if clause-boundedness of QR is reducible to locality conditions, we then expect to see amelioration of the clauseboundedness effect under ellipsis. This is borne out as shown in (49) for *čto*-clauses and (50) for *čtoby*-clauses.

- (49) a. Ja uverena, čto naš zlobnyj dekan sčitaet, čto kakoj-to  
I sure that our evil dean thinks that some  
naš student nepremenno provalit èkzameny, no ne  
our student inevitably fail<sub>FUT</sub> exams but not  
uverena vse li [naš zlobnyj dekan sčitaet, čto kakoj-to naš  
sure all Q  
student nepremenno provalit \_\_\_\_ èkzameny].

'I am sure that our evil dean thinks that some student of ours will inevitably fail the exams, but I am not sure if it is all the exams (that the dean thinks the student will fail).'

- b. \*Vse li naš zlobnyj dekan sčitaet, čto kakoj-to naš student nepremenno provalit \_\_\_\_ èkzameny?

- (50) a. Ja uverena, čto naš zlobnyj dekan xočet, čtoby  
I sure that our evil dean wants that<sub>SUBJ</sub>  
kajok-to naš student nepremenno provalil èkzameny, no  
some our student inevitably failed exams but  
ne uverena vse li [naš zlobnyj dekan xočet, čtoby kakoj-to  
not sure all Q  
naš student nepremenno provalil \_\_\_\_ èkzameny].

'I am sure that our evil dean wants some student of ours to fail the exams, but I am not sure if it is all the exams (that the dean wants for the student to fail).'

- b. \*Vse li naš zlobnyj dekan xočet, čtoby kakoj-to naš student nepremenno provalil \_\_\_\_ èkzameny?

Observe that (49b) and (50b) are bad due to the clauseboundedness restriction discussed earlier. Now consider (49a) and (50a), which involve rescue by PF deletion. Under the standard analysis of this effect (Chomsky 1972), \* is assigned to an island if an element crosses it. So, the extraction of *vse* 'all' triggers the assignment of \* to the island. In

order to salvage the derivation some rescue operation needs to apply. Ellipsis is one such operation: it results in the deletion of an island and the \*-bearing element along with it. This is precisely the reason why (49a) and (50a) are grammatical: in these examples the constituent containing a \*-marked element is deleted in PF. Since this rescue procedure fails to apply in (49b) and (50b), the violation remains, leading to the observed ungrammaticality.<sup>12</sup>

Now consider (51) and (52) in light of the above. Had the quantifier been extracted just out of the first conjunct, we would expect to see the improvement we observe in (49a) and (50a). However, the status of (51) and (52) is parallel to the examples in (49b) and (50b). So while the locality violation in the first conjunct *can* be repaired by ellipsis, the clauseboundedness effect apparently persists in the second conjunct, as shown in (53). Hence, it must be the case that in (51) and (52) the quantifier is extracted out of both conjuncts, not just the first conjunct, precisely as predicted by this analysis.

- (51) \*Vse li i kto sčitaet, čto kakoj-to naš student  
 all Q and who thinks that some our student  
 nepremenno provalit \_\_\_ èkzameny?  
 inevitably fail<sub>FUT</sub> exams  
 'Does somebody think that some student of ours will inevitably fail all the exams, and who thinks that?'
- (52) \*Vse li i kto xočet, čtoby kakoj-to naš student  
 all Q and who wants that<sub>SUBJ</sub> some our student  
 nepremenno provalil \_\_\_ èkzameny?  
 inevitably failed exams  
 'Does somebody want a student of ours to fail all the exams, and who wants that?'

<sup>12</sup> Observe that, in principle, *vse* 'all' can undergo LBE, so this cannot be the source of degradedness in (49b) and (50b).

- (i) Vsex li i kogda Ivan priglasil na novyj god \_\_\_ kolleg?  
 all Q and when Ivan invited to new year colleagues  
 'Did Ivan invite all of his colleagues to the New Year's Eve party, and when did he invite them?'

- (53) \*Vse li [CP<sub>1</sub> [CP<sub>2</sub> *t*<sub>VSE</sub> ] ] & [CP<sub>1</sub> [CP<sub>2</sub> *t*<sub>VSE</sub> ] ]  
           ^repair by ellipsis                                    ^locality violation

## 2.6. Consequences for ATB Movement

One potential ramification of my analysis is that ATB movement is not reducible to movement out of just one conjunct. Larson (2013) argues for a variant of this derivation in Macedonian ATB constructions. Under his account the extracted element belongs only in the first conjunct, while the second conjunct contains no gap. At LF a semantic mechanism ensures the correct construal of the moved element. His approach fails to explain the facts in (51) and (52), however. If there is no gap in the second conjunct, then the absence of repair under ellipsis effects remains puzzling.

The above data are accommodated by Munn's (1993) proposal. He derives ATB sentences via *wh*-movement in the first conjunct and operator movement in the second conjunct. The latter operation is subject to locality constraints as expected, but it cannot be easily extended to the LBE examples in (41a) and (42a), in which the first conjunct contains a gap and second conjunct contains a remnant NP, as schematized in (54).

- (54) Quantifier<sub>i</sub> [CP<sub>1</sub> ... \_\_\_\_ ] & [CP<sub>2</sub> ... [QP *t*<sub>i</sub> NP]]

Some multidominance (MD) accounts of ATB face the same problem. Citko (2003) argues that in ATB constructions the extracted element is shared. Successful linearization depends on the absence of overt phonetic material in the gap. She hypothesizes that the possibility of constituent sharing hinges on economy: whenever the constituent can be shared, it must be shared in order to minimize the number of applications of Merge. This happens when the gaps in each conjunct contain traces of identical material. For this reason, her Polish example, reproduced here in (55a), is ruled out. The entire NP *którego studenta* 'which student' is shared, so it must be ex-situ as in (55b) to render the structure linearizable. By contrast, (55c) with distinct remnants in each conjunct is an instantiation of determiner sharing, where the *wh*-word *ile* 'how many' is shared. Once *ile* vacates the shared node, the structure becomes linearizable.

- (55) a. \*Którego on polecił \_\_\_ studenta i firma  
 which he recommended student and company  
 zatrudniła \_\_\_ studenta?  
 employed student  
 ‘Which student did he recommend and the company  
 employ?’
- b. Którego studenta on polecił \_\_\_ i firma zatrudniła \_\_\_?
- c. Ile on kupił książek, a ona przeczytała  
 how.many he bought books and she read  
 \_\_\_ artykułów?  
 articles  
 ‘How many books did he buy, and how many papers did  
 she read?’

Now consider again (41a) and (42a) (the latter repeated below in (56a)). In Citko’s account, the entire QP—*mного вина*—is shared (since the gaps in each conjunct contain non-distinct material). It follows that this entire QP must front to render the configuration eligible for linearization, contrary to the facts.<sup>13</sup> Further, it is impossible to strand a remnant in the first conjunct, as in (56b), or to leave the remnant in each conjunct, as in (56c); cf. (55a).

- (56) a. *Mного* li Ivan prines \_\_, a Sergej vypil \_\_ *vina*?  
 much Q Ivan brought and Sergej drank wine  
 ‘Did Ivan bring lots of wine, and did Sergej drink lots of it?’
- b. ?\**Mного* li Ivan prines \_\_ *vina*, a Sergej vypil \_\_?
- c. ?\**Mного* li Ivan prines \_\_ *vina*, a Sergej vypil \_\_*vina*?

Given the above, Citko’s MD treatment of LBE ATB needs to be amended as follows: (i) either the quantifier *can* be shared in the presence of identical nominal complements (but then what precludes (55a) and (56c)?); or (ii) the mechanism of linearization needs to be revised

<sup>13</sup> Right-Node Raising cannot be implicated here, since the remnant can be followed by an adjunct, e.g., *na večerinku* ‘to the party’, as in (41a) (under the standard analysis of RNR, the right-node raised constituent has to be in sentence-final position). The same is true of (42a)/(56a), in which an adjunct like *včera* ‘yesterday’ can appear at the end of the sentence.

to allow for shared in-situ remnants in order to accommodate (56a) (or any configuration with a stranded remnant).

A more compelling alternative is offered by Niinuma (2010), whose Romanian ATB paradigm in (57) evinces a remarkable similarity to the Russian ATB facts in (56). Romanian, a MWF language like BCS (cf. (34)), imposes a PF ban on contiguous homophonous *wh*-words, prohibiting the configurations in (57a) and forcing the pronunciation of the lower  $\text{Obj}_{wh}$  copy (see Bošković 2002 for relevant evidence against parasitic-gap licensing). Assuming Fox and Pesetsky's (2005) cyclic linearization mechanism, Niinuma proposes that the conjuncts participating in ATB configurations are constructed and spelled out independently of each other. The order in the final representation must preserve the initial Spellout order of individual conjuncts. Example (57b) is thus unproblematic:  $\text{Sub}_{wh}$  precedes, while  $\text{Obj}_{wh}$  follows, both verbs. But in (57c) the surface position of  $\text{Obj}_{wh}$  leads to a contradiction with the underlying position of  $\text{Obj}_{wh}$  in the second conjunct, resulting in ungrammaticality.

- (57) a. \*Ce ce a precedat și a influențat?  
 what what has preceded and has influenced  
 $\text{Sub}_{wh} > \text{Obj}_{wh}$ : \*PF ban: contiguous homophonous *wh*-words
- b. Ce a precedat și a influențat ce?  
 what has preceded and has influenced what  
 $\checkmark \text{Sub}_{wh} > \text{V1} > \text{Obj}_{wh}$  &  $\text{Sub}_{wh} > \text{V2} > \text{Obj}_{wh}$   
 $\checkmark$ linear order preserved in both conjuncts
- c. \*Ce a precedat ce și a influențat?  
 what has preceded what and has influenced  
 $\text{Sub}_{wh} > \text{V1} > \text{Obj}_{wh}$  &  $\text{Sub}_{wh} > \text{V2} > \text{Obj}_{wh}$   
 \*ordering conflict:  $\text{wh}_{OBJ} > \text{influențat} > \text{wh}_{OBJ}$

The Russian facts in (56) beg for a unified analysis with the Romanian ATB pattern. Consider the schematic replica of (56) in (58) below: (56a), corresponding to (58a), is the only configuration in which the underlying linear order of the remnant is preserved in the final representation (*vina* follows the verbs in each conjunct). Predictably, (56b) and its simplified rendition in (58b), along with the pair (56c) and (58c), are ruled out since they result in ordering conflicts, whereby the pronounci-

ation of the remnant in the first conjunct induces a contradiction with the Spellout order in the second conjunct.

- (58) a. ✓*mnogo<sub>i</sub> li Sub1 V1 t<sub>i</sub> & Sub2 V2 t<sub>i</sub> vina*  
 ✓linear order preserved: V1>*vina* and V2>*vina*
- b. \**mnogo<sub>i</sub> li Sub1 V1 t<sub>i</sub> vina & Sub2 V2 t<sub>i</sub>*  
 \*ordering conflict: \**vina*>V2 and V2>*vina*
- c. \**mnogo<sub>i</sub> li Sub1 V1 t<sub>i</sub> vina & Sub2 V2 t<sub>i</sub> vina*  
 \*ordering conflict: \**vina*>V2 and V2>*vina*

## 2.7. Placement of *li*

One question remains: how to handle the behavior of *li* in the fully grammatical sentences in (45–48)?

Russian *li* is subject to the first-word restriction, i.e., it has to follow the first prosodic word within its intonational phrase (Bošković 2001, King and Franks 2000). One possibility here is the Prosodic Inversion (PI) analysis. Under this analysis (as in, e.g., King 1996), *li* is clause-initial. The relevant syntactic movement places the fronted constituent below this question marker. In PF, *li* moves to the right following the first stressed word to satisfy its PF requirement.

I reject this analysis and suggest instead that the entire QP moves in front of *li*. Subsequent PF reordering is responsible for the surface placement of *li*, where *li* is moved to the left to satisfy the PF requirement that *li* follows the first prosodic word.

Recall from section 2.4 that LBE out of subject positions is prohibited, so the entire QP must be pied-piped to the pre-*li* slot. Consider, for example, (59a) and its derivation in (59b) and (59c). In syntax the QP is QRed out of each clause, as in (59b). In PF, the first conjunct TP is elided, while the phonological properties of *li* force the apparent splitting of the QP as in (59b).

- (59) a. *Každyj li učastnik i kakie èkzempljary poxvalil*  
 each Q participant and which samples praised  
*na vystavke?*  
 on exhibition



- (59) b. Syntax: [Každyj učastnik] li [TP1 ... ] & [CP2 wh ...]  
 ↑ QR
- c. PF: [Každyj učastnik] li [TP1... ] & [CP2 wh ...]  
 ↑reordering ^ellipsis

Note that the Prosodic Inversion (PI) analysis, in which *li* moves to the right in PF, is not possible in these sentences. I have argued above that the fronted element must be higher than *li*, resulting in the output in (59b). In this case the PI analysis makes incorrect predictions, placing *li* after *#i kakie#*. Hence the only remaining option is PF reordering, which situates *li* after the first stressed word, a quantifier in the case of (59).

In this section I demonstrated that in HWh contexts a subset of quantifiers can be extracted in ATB fashion and adjoined to the higher CP. The process underlying this derivation is QR, since only quantified arguments are subject to extraction in this configuration; and the operation is clausebounded. Further, I have shown that the clauseboundedness restrictions on QR can be repaired by ellipsis. The pronunciation of the higher copy is triggered by the prosodic requirements of the enclitic *li*.<sup>14</sup>

## 2.8. Intermediate Summary

HWh questions are underlyingly biclausal, with surface strings derived via TP-ellipsis in the first conjunct. HWh questions are distinct from root Y/N questions in that the pre-*li* position is restricted to certain elements. The following table demonstrates the possible configurations:

<sup>14</sup> The quantifiers in (30b) are generally illicit preceding *li*. There are a few possible reasons why these quantifiers cannot participate in the construction under consideration (at least one of the following reasons holds for each element in (30b)). First, they simply do not cooccur with *li* as shown in (i):

- (i) \*Kto-nibud' li kupil moloko?  
 someone Q bought milk  
 'Did somebody buy milk?'

Second, they do not undergo QR (see Yanovich 2005). Third, Fitzgibbons (2011) argues that the highest possible position for *-nibud'* quantifiers is in SpecAgrSP. I will leave this issue to further research.

	<b>Configuration</b>	<b>Status</b>
(1)	Adjunct <i>li</i> & <i>wh</i>	OK
(2)	Non-quantified argument <i>li</i> & <i>wh</i>	?*
(3)	V <i>li</i> & <i>wh</i>	*
(4)	Quantified argument <i>li</i> & <i>wh</i>	OK

The observed asymmetry between pre-*li* adjuncts and arguments/verbs is due to the preservation of argument structure in both conjuncts. HWh questions are licensed only if both conjuncts contain all the obligatory elements. The behavior of quantifiers is a consequence of QR, which proceeds in the ATB fashion out of both conjuncts. Non-quantified arguments and verbs, on the contrary, are ineligible for this derivation. Their appearance in pre-*li* positions results in the missing obligatory element in the second conjunct. Since the adjuncts are not required by the argument structure of the predicate, they need not be present in the second conjunct, so they are licit in pre-*li* positions. For PF reasons (to provide prosodic support for *li*) the highest copy of the quantifier is pronounced.

### 3. Reverse Hybrids

In this section I turn to the distribution of reverse hybrid constructions (rHWh), which are distinguished from HWh configurations, discussed above, by the permuted order of elements. In rHWhs, the reduced conjunct containing a *wh*-word precedes the conjunct containing a Y/N marker. As it turns out, the superficial similarity between the two constructions is not symptomatic of identical derivations. An aggregate of facts sets rHWhs apart from their “regular” counterparts. In fact, even within the rHWh class a distinction is warranted between sentences with D-linked *wh*-phrases (*which*-phrases) and non-D-linked *wh*-phrases (*who*-phrases). The former are argued to be monoclausal with the *wh*-phrase base-generated in a BP-adjoined position; the latter are biclausal with simple *wh*-movement in the first conjunct.

The configuration in (60) is acceptable regardless of the nature or morphological case of the *wh*-phrase in the first conjunct. The crucial requirement pertains to the pre-*li* element in the second coordinate: as long as the adverbial precedes the Q-marker the string is grammatical. Example (61) illustrates this point. All the examples contain a temporal adjunct in the second conjunct’s pre-*li* spot, with varying flavors of

clause-initial *wh*-phrases—non-D-linked in (61a), D-linked in (61b), and an adjunct in (61c).<sup>15</sup>

(60) <sup>OK</sup>*Wh*-phrase<sub>D-linked / non-D-linked / Adjunct</sub> & [*Adjunct li...*]?

- (61) a. Kogo i davno li zdes' agent doprašival?  
 who and long.ago Q here agent interrogated  
 'Who did the agent interrogate here, and did he interrogate him a while ago?'  
 b. Kakogo špiona i davno li agent doprašival?  
 which spy and long.ago Q agent interrogated  
 'Which spy did the agent interrogate, and did he interrogate him a while ago?'  
 c. Gde i davno li agent doprašival špiona?  
 where and long.ago Q agent interrogated spy  
 'Where did the agent interrogate the spy, and did he interrogate him a while ago?'

However, in (62) with a quantified expression before *li*, *who*- and *which*-phrases diverge, in that my informants perceived (62a)/(63a) to be much worse than (62b)/(63b).

(62) a. \**Wh*-phrase D-linked & [QUANTIFIER *li...*]?

b. ?*Wh*-phrase non-D-linked & [QUANTIFIER *li...*]?

(63) a. ?\*Kogo i vse li (očevicy) zdes' videli?  
 who and all Q witnesses here saw

'Did all the eyewitnesses see somebody, and who was it?'

b. ?Kakogo prestupnika i vse li (očevicy) zdes' videli?  
 which criminal and all Q witnesses here saw

'Did all the eyewitnesses see some criminal, and which one?'

<sup>15</sup> Examples (61a) and (61b) contain *wh*-phrases in the accusative. The same pattern holds of other cases as well. The pattern of grammaticality is maintained for all cases in (63).

Some speakers report amelioration effects if a resumptive element is introduced in the second conjunct with *which*-phrases, particularly if the fronted *wh*-phrase is accompanied by a pause, as in (64a). In contrast, no such amelioration strategies are observable for rHWh cases with fronted *who*-phrases in (64b) and (64c).

- (64) a. Kakogo prestupnika# i vse li zdes' ego videli?  
 which criminal and all Q here him saw  
 'Did everybody see a criminal, and which one did everybody see?'  
 b. \*Kogo i vse li zdes' ego videli?  
 who and all Q here him saw  
 c. \*Kogo i davno li zdes' ego videli?  
 who and long.ago Q here him saw

I first discuss rHWh strings with *who*-phrases and then turn to the behavior of rHWh with *which*-phrases.

### 3.1. Reverse Hybrid *Wh*-Coordination with *who*-Phrases

The rHWh construction with *who*-words are biclausal for the following reason. In ungrammatical (65a), *kogo* 'whom' can only be construed as a *wh*-element. Hence, the combination in (65a), intended as an amalgam of a *wh*- and Y/N interrogative in a single proposition, is impossible. Observe that in (65b) the *wh*-word is obligatorily interpreted as an indefinite 'somebody'. So, clause-initially the *wh*-phrase can only be understood as a true *wh*-element. It follows that in cases like (61a) there are in fact two coordinated clauses, a reduced *wh*-question and a Y/N question.

- (65) a. \*Kogo videl li Ivan?  
 who saw Q Ivan  
 b. Videl li kogo Ivan?  
 saw Q somebody Ivan

The analysis that I endorse for this type of rHWhs implicates simple *wh*-movement in the first conjunct, as in (66). The second conjunct

contains an indefinite *pro* (in the sense of Giannakidou and Merchant 1997, 1998), coreferential with its antecedent (the *wh*-word).

- (66) Wh<sub>i</sub> [TP ... t<sub>i</sub>...] & [CP X li... *pro*<sub>i</sub>...]  
 ^ellipsis

Giannakidou and Merchant (1997) distinguish “indefinite *pro*” from the referential (or generic) null *pro* found in *pro*-drop languages. The *pro*<sub>INDEF</sub> gives rise to the quantificational matching effect, which is a process supplying the same quantificational force and descriptive content as the indefinite antecedent. They attribute this property to the antecedent replacement at LF in place of *pro*<sub>INDEF</sub>.

In Russian, *wh*-words are obligatorily interpreted as *wh*-indefinites in certain positions, such as (65b). Zavitnevich (1999) argues that Russian *wh*-words are polarity items, which, unlike English *wh*-words, lack inherent quantificational force. Cheng (1991) defends the same analysis for Polish and Bulgarian, whereby the *wh*-words acquire interrogative force in the course of the derivation. Obligatory *wh*-fronting is a consequence of a licensing requirement which induces movement to SpecCP (or SpecIP in the case of Polish).

It is the combination of these two insights—the theoretical availability of *pro*<sub>INDEF</sub> in a language and the dual nature of Slavic *wh*-elements—that explains the distribution of rHWs as follows. Since Russian *wh*-words lack inherent interrogative force, TP-internally they are always realized as *wh*-indefinites. It follows that the copied element in the second conjunct (i.e., *pro*<sub>INDEF</sub>) is construed as an indefinite (since it is in the TP-internal position), which gives rise to the interpretation matching the English paraphrase in (67).

- (67) Kto [kto pridet] i skoro li kto pridet?  
 who who come<sub>FUT</sub> and soon Q somebody come<sub>FUT</sub>  
 ^=*pro*<sub>INDEF</sub>  
 ‘Who will come and will someone come soon?’

In addition to deriving the correct interpretation, this analysis also explains why the pronominal element is disallowed in Russian rHWs with *who*-words, as in (64b) and (64c) (even for those speakers who tolerate the resumption with *which*-rHWs).

Giannakidou and Merchant (1997) invoke this null element to account for the following paradigm in Modern Greek: the definite clitic is

illicit when the contextual antecedent is indefinite (a weak quantifier) in (68a). This contrasts with (68b), where the antecedent is a strong DP. The omission of the pronominal clitic in the latter case is impossible. The analysis easily extends to (64): the indefinite *pro* precludes the introduction of the resumptive pronoun in Russian in (64b) and (64c), just as it blocks the definite clitic in Greek in (68a).

- (68) a. Q: Efere o Andreas deka/∅ vivlia?  
 'Did Andreas bring 10/∅ books?'  
 A: Ne, (\*ta), efere.  
 yes DEF brought [10/ ∅ books]
- b. Q: Efere o Andreas ola ta/ta vivlia?  
 'Did Andreas bring all the/the books?'  
 A: Ne, \*(ta), efere.  
 yes DEF brought

Thus far, I have argued for a derivation under which the *wh*-phrase from the first conjunct undergoes *wh*-movement, followed by TP-ellipsis. The second conjunct contains an indefinite *pro*. Recall now that rHWh with *who*-phrases are degraded whenever the element preceding *li* is quantified, as in (63a), repeated below in (69). So far, nothing rules out such sentences.

There are two key components, involved in the derivation of sentences like (63a)—focus and ellipsis. The interaction of their properties is what induces the observed ungrammaticality. As mentioned earlier, the material preceding *li* is focalized (for an extensive discussion see Franks and King 2000 and King 1995). On the other hand, Rooth (1992) and Szczegielniak (2004) show that ellipsis is ushered in by destressing. So, the TP in the first conjunct of (63a)/(69) is presupposed and destressed. I propose that because the element preceding *li* is focalized, its counterpart in the first conjunct cannot be destressed or deleted, as demonstrated below in (69b).

- (69) a. ?\*Kogo i vse li (očevidcy) zdes' videli?  
 who and all Q witnesses here saw  
 'Did all the eyewitnesses see somebody, and who?'

- b. Kogo [vse zdes' videli] & vse<sub>i</sub> li [t<sub>i</sub> zdes' pro<sub>INDEF</sub> videli]?  
 ^material presupposed and destressed before deletion      ^focalized: nothing can correspond to it in the first conjunct

The unacceptability of (69) is not limited to pre-*li* quantifiers: the same generalization applies to non-quantified arguments for the same reason: focused *knigi* 'books' in (70) cannot have a counterpart in the elided part.

- (70) \*Kto i knigi li prodal Olegu?  
 who and books Q sold Oleg<sub>DAT</sub>  
 'Did somebody sell books to Oleg, and who was it?'

Adjuncts, on the other hand, are acceptable in pre-*li* positions because they need not be present in the elided part of the first conjunct, being introduced solely in the second conjunct.<sup>16</sup>

These claims are testable. In-situ focus is possible in Russian for some speakers, as demonstrated in (71). If the analysis above is on the right track, we expect to see the deterioration of grammatical examples like (61a) with in-situ focus. This prediction is borne out, as demonstrated in (72), which is distinctly odd if 'beer' is focalized. Since the elided material in the first conjunct is devoid of focus, we get the expected mismatch between the conjuncts, which leads to the observed degraded status.

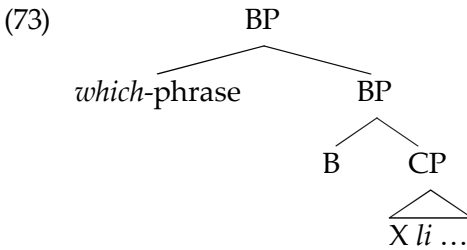
- (71) Ivan prolil [PIVO<sub>FOC</sub>]  
 Ivan spilled BEER  
 'Ivan spilled the BEER.'
- (72) ?\*Kto i naročno li zdes' prolil PIVO?  
 who and on.purpose Q here spilled BEER  
 'Who here spilled BEER? And did somebody spill it on purpose?'

<sup>16</sup> I am agnostic as to whether they are base-generated in pre-*li* positions or appear there via a movement operation. In either account they are absent in the first conjunct, so there is no mismatch in the features of the elided and "surviving" constituents.

So far, the following conclusions emerge from this discussion. The impossibility of anything other than an adjunct in pre-*li* positions with *who*-phrases is due to the focal nature of pre-*li* material: since the element preceding *li* is focalized, its counterpart in the first conjunct cannot be destressed or deleted. The second conjunct contains an indefinite *pro*, which is responsible for supplying the indefinite interpretation characteristic of such examples. In the next section I consider the behavior of rHWh constructions with *which*-phrases.

### 3.2. Reverse Hybrid *Wh*-Coordination with *which*-phrases

In this section I argue that rHWhs with *which*-phrases are monoclausal. The *wh*-elements are treated on a par with left-dislocated (LD) constituents, which are understood as base-generated elements, in a BP-adjoined position, as in (73).



Claims for base-generation of *which*-phrases have been made in the literature for a variety of languages (Iatridou 1995 for Modern Greek, Cinque 1990 for Italian, Dobrovie-Sorin 1990 for Romanian; see also Villa-Garcia 2012 for Spanish, De Cat 2007 for colloquial French, and references therein). Consider, for example, the Modern Greek Clitic Left-Dislocation (CLLD) construction in (74). The extraction of a non-D-linked *wh*-word in (74a) renders the clitic illicit. In contrast, a *which*-phrase allows an optional clitic in (74b). Iatridou (1995) argues for a base-generation analysis of the *wh*-phrase. Under her account the “CLLD’ed constituent is base-generated adjoined to the minimal CP containing the clitic,” which derives a seemingly contradicting set of properties involved in CLLD constructions: compliance with island effects and insensitivity to Weak Crossover (WCO) effects.



- (74) a. Pion (\*ton) idhes?  
 who CL saw  
 ‘Who did you see?’
- b. Pia pedhia (ta) malosēs?  
 which children them scolded  
 ‘Which children did you scold?’ (Iatridou 1995: 25)

In the ensuing discussion I demonstrate that the behavior of Russian rHWh constructions of this type is compatible with the analysis under which the LD’ed *wh*-elements are base-generated. I then show that these *wh*-elements pattern exactly like non-quantified topicalized constituents.

### 3.3. Arguments for Base-Generation of *which*-Phrases

The first argument is based on the LBE facts. In the rHWh construction in (75), the LBE of *kakomu* ‘to which’ is prohibited. This is predicted from my analysis: there is nothing available to LBE because the entire *wh*-phrase is generated very high in the structure. Note that in principle this extraction can proceed unhindered in root contexts, as in (76). Furthermore, as discussed earlier, LBE is acceptable in HWh configurations, as in (77a), and in standard ATB sentences, as in (77b). This is unsurprising on the analysis advanced in this paper. Crucially, what distinguishes (75) from (77) is the number of clauses involved and the underlying position of the potential extractee. The paradigm below follows straightforwardly if the former are monoclausal with a *which*-phrase merged higher than the expected argument position, but the latter two are biclausal, whereby the quantifier is free to undergo LBE and strand the remnant.<sup>17</sup>

- (75) \*Kakomu i davno li dekan postavil dvojkū  
 which and long-ago Q dean gave F

<sup>17</sup> An anonymous reviewer raises an interesting point in conjunction with the analysis in (73), pointing out that it is apparently impossible to generate bare *which* as a TC, and suggests two possible solutions. One is that there is a requirement to generate the full argument (i.e., *which student*) in this position to render probing for case and  $\varphi$ -features, as discussed in section 3.5, possible. Alternatively, on the assumption that *which* is adjectival (see Bošković 2005), the element involved in this construction has to be an NP rather than a bare *which*. I leave this issue to further investigation.

\_\_\_ studentu?  
student<sub>DAT</sub>

'To which student did the dean give an F, and was it a while ago?'

(76) Kakomu dekan postavil dvojku \_\_\_ studentu?  
which dean gave F student<sub>DAT</sub>

'To which student did the dean give an F?'

(77) a. Mnogo li i kto prines \_\_\_ vina na večerinku?  
much Q and who brought wine to party

'Did somebody bring lots of wine to the party, and who was it?'

b. Mnogo li Ivan prines \_\_, a Sergey vypil \_\_\_ vina?  
much Q Ivan brought and Sergey drank wine

'Did Ivan bring lots of wine, and did Sergej drink lots of it?'

The second argument hinges on crossover effects. Russian is sensitive to strong crossover in non-coordinated contexts, as in (78). Example (78a) demonstrates that extraction of the *wh*-phrase out of the matrix is fine in contrast to extraction over the co-referential pronoun out of the embedded clause in (78b). Crucially, (78) shows that the *wh*-phrase must be generated higher than the pronoun in order to yield an acceptable surface representation.

(78) a. Kakoj student<sub>i</sub> skazal, što on<sub>i</sub> opozdal?  
which student said that he was.late

'Which student said that he was late?'

b. \*Kakoj student<sub>i</sub> on<sub>i</sub> skazal, što \_\_\_ opozdal?  
which student he said that was.late

'Which student<sub>i</sub> did he<sub>i</sub> say was late?'

c. ?Kakoj student<sub>i</sub> on<sub>k</sub> skazal, što \_\_\_ opozdal?  
which student he said that was.late

'Which student<sub>i</sub> did he<sub>k</sub> say was late?'

Now consider the rHWh context in (79), where no crossover effect is observed. Example (79) simultaneously indicates three things. One,

there is no full clause in the first conjunct. Had there been, the *wh*-phrase moving across a pronoun would have incurred a crossover violation just as in (78b), but it did not. Two, the absence of a crossover effect in (79) means that the *wh*-phrase cannot have been extracted out of the second conjunct. Finally, the *wh*-phrase must be high enough in the structure to c-command the pronoun in order to bind it. These observations strongly support the analysis in (73) above.

- (79) A kakoj student<sub>i</sub> i davno li on<sub>i</sub> skazal, čto \_\_\_\_  
 and which student and long.ago Q he said that \_\_\_\_  
 opozdal?  
 was.late  
 'Which student said that he was late, and did he say it a while ago?'

Third, the peculiar split between *who*- and *which*-phrases in rHWs with pre-*li* quantifiers reported in (62) and (63) (repeated below in (80)) follows straightforwardly from my proposal. I demonstrated above that anything other than an adjunct is impossible before *li* in contexts like (80a), i.e., with *who*-phrases. This property is due to the focal nature of the fronted element. The issue does not arise for (80b). The latter instantiates a monoclausal structure with a *wh*-phrase merged at the root. There is no ellipsis in the first conjunct, as the first "conjunct" is just a *wh*-phrase, not a reduced clause. Hence, the problems with the focal feature mismatches do not afflict contexts like (80b).

- (80) a. ?\*Kogo i vse li (očevicy) zdes' videli?  
 who and all Q witnesses here saw  
 'Did all the eyewitnesses see somebody, and who?'
- b. ?Kakogo prestupnika i vse li (očevicy) zdes' videli?  
 which criminal and all Q witnesses here saw  
 'Did all the eyewitnesses see some criminal, and which criminal?'

In conjunction with (81), one curiosity arises: when non-quantified arguments occupy the position before *li* in rHWs with *which*-phrases. Surprisingly, such strings are degraded.

- (81) <sup>?</sup>\*Kakogo prestupnika i Ivan li (ego) zdes' videl?  
 which criminal and Ivan Q his here saw  
 'Did Ivan see some criminal, and which criminal?'

Instances like (81) are bad for the following reason. In out-of-the-blue contexts, non-quantified arguments cannot be preceded by *i* 'and', as shown in (82a). This is not the case with pre-*li* quantifiers as in (82b). It follows that (81) is unacceptable for the same reason that (82a) is strange: non-quantified arguments are incompatible with *i* in this context.

- (82) a. <sup>?</sup>\*I Ivana li on videl?  
 and Ivan Q he saw  
 'And was it Ivan that he saw?'  
 b. I vsex li on videl?  
 and everybody Q he saw  
 'And was it everybody that he saw?'

The behavior of *which*-phrases discussed above reflects their base-generation in the highest position on the clausal periphery. The next section discusses a surprising property (given the antecedent exposition) of *which*-phrases in rHWhs with respect to island-sensitivity. I offer a non-movement account of these facts.

### 3.4. *Which*-Phrases as Topicalized Constituents (TCs)

Non-quantified TCs and *which*-phrases in rHWhs are exactly alike in that they evince the same ungrammaticality pattern in island environments. The attempts to front the *which*-phrase out of a relative clause in (83), an adjunct-clause in (84), or a sentential subject in (85) all produce extremely degraded sentences. The same holds for standard TCs in (86), (87), and (88) for the same islands. Note that the introduction of the resumptive element produces no amelioration effects in either context.

- (83) \*Kakuju stat'ju i vse li znajut avtora, kotoryj (ee)  
 which article and all Q know author who it

napisal?

wrote

'Does everybody know the author who wrote some article, and which article does everybody know the author who wrote (it)?'

- (84) \*Kakuju stat'ju i davno li studenty pošli v biblioteku,  
which article and long.ago Q student went to library

potomu što im nado bylo (ee) pročitat'?

because they<sub>DAT</sub> necessary was it read

'Did the students go to the library some time ago because they needed to read a paper, and which paper did the students go to the library because they needed to read?'

- (85) \*Kakogo redaktora i davno li to što ètot avtor,  
which editor and long.ago Q that that this author

nenavidit (ego), pugaet Ivana?

hates him scares Ivan

'Has Ivan been scared that this author hates an editor for some while, and which editor has Ivan been scared that this author hates?'

- (86) \*A ètu stat'ju ty znaeš avtora, kotoryj (ee) napisal?  
and this article you know author who it wrote

'This article, do you know the author who wrote (it)?'

- (87) \*A ètu stat'ju kto pošel v biblioteku, potomu što  
and this article who went to library because

emu nado bylo (ee) pročitat'?

they<sub>DAT</sub> necessary was it read

'This article, who went to the library, because he needed to read?'

- (88) \*A ètogo redaktora to što ètot avtor, nenavidit (ego),  
and this editor that that this author hates him

pugaet Ivana?

scares Ivan

'This editor, does it scare Ivan that this author hates (him)?'

The upshot of the above is twofold. First, given the parallelism between standard TCs and *which*-phrases in rHWh contexts, it is sensible to treat them in similar terms. Additional indirect evidence for the plausibility of this hypothesis is provided by BCS, in which D-linked *wh*-phrases behave exactly like TCs with respect to clitic position. In BCS, the clitics are subject to the Wackernagel effect in that they must appear in second position. Hence, the ungrammaticality of (89a) is due to the violation of this prosodic requirement. However, as discussed in Bošković 2001, TCs do not count in the computation of clitic placement, which is why (89b) is acceptable. The same holds of *which*-phrases, as in (89c), where *koji junačina* ‘which hero’ does not affect the ultimate position of the auxiliary clitic.

- (89) a. \*Ko koga je oborio?  
           who who<sub>ACC</sub> AUX<sub>3SG</sub> overcome  
           ‘Who defeated whom?’
- b. Taj junačina vojsku je oborio.  
           that hero army<sub>ACC</sub> AUX<sub>3SG</sub> overcome  
           ‘That hero defeated an army.’
- c. Koji junačina koga je oborio?  
           which hero who<sub>ACC</sub> AUX<sub>3SG</sub> overcome  
           ‘Which hero defeated whom?’

On the now standard analysis, as in Bošković 2002 or Rudin 1993, TCs in Slavic are adjoined to CP, the highest projection in the clausal domain. My modification in (73), which involves adjunction to BP, complies with the spirit of this proposal. The TC-like *which*-phrases in rHWh constructions are adjuncts to the highest available projection, to wit, BP.

However, the facts in (83–85) entail an additional consequence, rendering the base-generation analysis in section 3.2 suspect. Since *which*-phrases in reverse hybrids are subject to islands, the traditional treatment prescribes movement. The next section deals with this issue.

### 3.5. Movement or Base-Generation?

I argue that *which*-phrases are base generated in the position they appear. If so, two questions need to be addressed: (i) how to derive island

effects without sacrificing the facts concerning crossover? (ii) how to obtain the agreement facts, seeing as both TCs and *which*-phrases in rHWHs match the gap/pronoun in number and case)?

I refer to Bošković's (2007) proposal, adopting his two crucial hypotheses. First, that NPs probe traditional case assigners for case, not the other way around. Second, that the operation Agree is not constrained by the Phase-Impenetrability Condition (PIC). Consider how these tools equip us to answer (ii) above.

Base-generated *which*-phrases probe down the clause in which they are interpreted. Since PIC is irrelevant for Agree, the distance between the *which*-phrase and its case-assigner is likewise immaterial. Hence, (79) (repeated in (90a)) is derived as indicated in (90b). Observe that the derivation in (90b) produces the desired result with respect to the lack of crossover effects. The *wh*-phrase does not move over the pronoun, but rather it is high enough to c-command and bind it.<sup>18</sup>

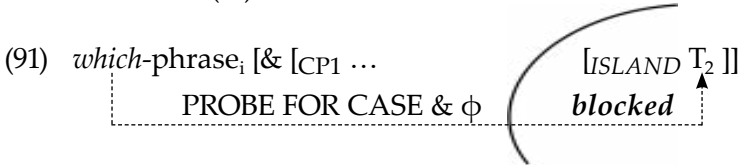
- (90) a. *Kakoj student<sub>i</sub> i davno li on<sub>i</sub> skazal, čto \_\_\_*  
 which student and long.ago Q he said that  
*opozdal?*  
 was.late  
 'Which student said that he was late, and did he say it a while ago?'
- b. *which*-phrase<sub>i</sub> [& [CP<sub>1</sub> ... pronoun<sub>i</sub> ... [CP<sub>2</sub> T<sub>2</sub> ]]
- PROBE FOR CASE & φ

Turning now to the question posed in (i) above of how to explain the sensitivity to islands in (83–88), Boeckx (2003: 100) maintains that "Agree cannot target adjuncts, as adjuncts have inert φ-features." This he frames as a constraint that derives the behavior of strong islands. He offers a slightly different treatment of the Subject condition. Putting aside the details of the proposal, the crucial point for present purposes is that subjects constitute a φ-complete domain, which cannot be targeted by the operation Agree.

Combining the two insights—Bošković's conception of Agree with Boeckx's constraints on the operation itself—we get precisely the par-

<sup>18</sup> See Villa Garcia 2012 for an account of TCs in Spanish couched in the same terms. Note also that theta-roles can be considered bundles of features (Bošković and Takahashi 1998, Hornstein 1999, 2003).

adigm in (83–88). All these ungrammatical instances are ruled out because probe for case and  $\phi$ -features inside the island is blocked, as demonstrated in (91).



Though rHWhs with *which*-phrases evince properties indicative of both movement and base-generation, I have argued for the latter. Base-generation explains the lack of LBE and crossover effects. In this section I have demonstrated that sensitivity to islands can be explained independently on the grounds that Agree is inoperable in the relevant configurations.

#### 4. Conclusion

The paper reported on a previously unexplored construction in Russian, which involves a surprising conjunction of two seemingly incompatible elements, a *wh*-question and a Y/N interrogative, in a single clause. I argued for a particular dichotomy within the hybrids, depending on the order of interrogative elements. HWh questions were shown to be biclausal. rHWhs, on the contrary, were analyzed as either monoclausal or biclausal structures, the choice contingent on the nature of the *wh*-word involved.

Apart from providing new data, the paper also touched on a number of theoretical issues. I articulated the arguments for QR in Russian (based on a particular split between non-quantified arguments and quantifiers in HWh questions). Furthermore, it was shown that the clauseboundedness effect on QR can be repaired by ellipsis. On the basis of the LBE pattern in HWh questions and standard ATB sentences, I argued that ATB is best treated as an operation that moves elements out of each conjunct. The placement of *li* was shown to be due to a PF re-ordering mechanism distinct from the Prosodic Inversion mechanism. To account for the behavior of rHWh questions with non-D-linked *wh*-words, a null element—*pro*<sub>INDEF</sub>—was posited. Finally, I argued for the parallel treatment of D-linked *wh*-phases and Topicalized Constituents.



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