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On Instances of Echo *Wh*-Movement in Light of Multiple Spell-Out*

Ekaterina Chernova

Universitat de Girona

Abstract. Traditionally, echo *wh*-questions are taken as a counterpoint to the standard assumptions about interrogative syntax, since the few existent studies on such constructions have argued that they do not exhibit overt *wh*-movement (Noh 1998; Iwata 2003; Fiengo 2007; Sobin 2010). This paper focuses on a particular type of echo *wh*-question that repeats a previous *wh*-interrogative (e.g., *What did who say?*) and, consequently, exhibits two types of *wh*-constituents: the *wh*-word(s) inherited from the echoed sentence and the echo-introduced *wh*-word. It is shown that Russian echo questions exhibit evidence of at least two patterns of *wh*-movement, apart from the standard *wh*-in-situ option. The echo *wh*-phrase can appear immediately preverbally or at the leftmost position of a clause. These facts are claimed to follow from standard assumptions about the properties of *wh*-movement in multiple *wh*-fronting languages (Richards 2001), Q-movement (Cable 2010), and a particular syntactic structure that underlies echo constructions (Sobin 2010). We also observe that in echo questions which repeat a previous binary *wh*-question the *wh*-phrases copied from the antecedent utterance are inaccessible for the echo-introduced *wh*-item. The paper develops an account of this restriction within Multiple Spell-out theory (Uriagereka 1999). On this view, the computational system takes the echoed utterance's *wh*-words as a complex object and spells it out before merging with the main tree; consequently, its constituents become inaccessible for the further syntactic derivation.

1. Introduction

Echo *wh*-questions (*wh*-EQs) are usually used in immediate response to an utterance to request repetition or to express speaker's surprise or amazement at some aspect of the utterance's content. Generally, *wh*-EQs behave in a quite unusual way. For instance, it has been claimed that it is "unprofitable to attempt to integrate them into the analysis of the more usual types of questions" (Culicover 1976:73) or that "the grammatical rules of the language should not generate them" (Cooper 1983:149). Thus, in *wh*-fronting languages, *wh*-EQs are traditionally

considered as a counterpoint to the standard assumptions about interrogative syntax. For instance, EQs seem immune to the obligatory *wh*-movement and the consequent T-to-C verb raising, as shown in the English example (1a). *Wh*-EQs can also apparently violate Superiority effects when containing more than one *wh*-word, as in (1b) (hereinafter the echo-introduced *wh*-phrases appear in bold and with a subscript *EQ*):

(1) a. Mary had tea with **who**$_{EQ}$? (Sobin 2010: 132)

b. *What* did **who**$_{EQ}$ drink at Mary's party?

This paper is mainly concerned with *request-for-repetition wh*-EQs that contain multiple *wh*-items, as (1b). This type of questions is normally generated in response to a previous *wh*-interrogative, like the one in (2), in which the questioner of (1b) cannot hear the name of the person who supposedly drank something at Mary's party (in following examples, I use *U* to designate the echoed utterance):

(2) U: *What* did (mumble) drink at Mary's party?

Thus, by uttering a *wh*-EQ the speaker asks the hearer to repeat what she has said. As expected, a *wh*-EQ that echoes a non-echo *wh*-question exhibits at least two *wh*-elements: one *wh*-phrase is echo-introduced and emphatically stressed, while the rest of the *wh*-constituents are copied from the immediately previous utterance in the dialogue. This is illustrated by English examples in (3) (hereinafter the utterance's *wh*-words appear in italics and with a subscript *U*):

(3) a. EQ: *What*$_{U}$ did **who**$_{EQ}$ drink at Mary's party?

b. EQ: ***Who**$_{EQ}$ drank *what*$_{U}$ at Mary's party?

Moreover, the contrast between (3a) and (3b) shows that in languages like English the echo *wh*-item, *who*, can only emerge in-situ. The *wh*-phrase that appears at the left edge of the clause, *what*, is inherited from the previous utterance. Thus, the *wh*-EQ in (3a) preserves the *wh*-interrogative character of the echoed utterance in (2).

However, the situation is different in multiple *wh*-fronting (henceforth MWF)

languages like Russian. As is well known, in such languages all *wh*-phrases obligatorily undergo movement in non-echo questions, as shown in (4a). Now consider the following Russian request-for-repetition *wh*-EQs built on a previous binary *wh*-question in (4a):

(4) a. U: *Čto*$_{U}$ *komu*$_{U}$ podaril (*mumble*)?
what.ACC who.DAT gave (mumble)
'What did (*mumble*) give to whom?'

b. EQ: *Čto*$_{U}$ *komu*$_{U}$ podaril **kto**$_{EQ}$?
what.ACC who.DAT gave who.NOM
'What did **who** give to whom?'

c. EQ: *Čto*$_{U}$ *komu*$_{U}$ **kto**$_{EQ}$ podaril?
what.ACC who.DAT who.NOM gave

d. EQ: * *Čto*$_{U}$ **kto**$_{EQ}$ *komu*$_{U}$ podaril?
what.ACC who.NOM who.DAT gave

e. EQ: ?/?? **Kto**$_{EQ}$ *čto*$_{U}$ *komu*$_{U}$ podaril?
who.NOM what.ACC who.DAT gave

The examples in (4) reveal that, unlike English, in Russian EQs with multiple *wh*-constituents, the echo-inserted *wh*-word has several movement-based options with respect to the possible landing sites (at least under the request-for-repetition reading). *Kto* 'who.NOM' can either remain in-situ, as in (4b), move to immediately preverbal position, as in (4c), or (marginally) appear at the leftmost position of the clause, preceding the utterance's non-echo *wh*-elements *čto* 'what.ACC' and *komu* 'who.DAT', as in (4e). Strikingly, however, the echo *wh*-item cannot intervene between the two copied *wh*-phrases, as shown in (4d).[1]

Here and throughout this paper I restrict my attention to *wh*-EQs in which all *wh*-items, including the echo-inserted one, have undergone movement. I will not discuss the *wh*-in-situ possibility here, as it seems to be a common option across many languages in contexts of

quoted speech and might be closely related to *D(iscourse)*-linking (see Pesetsky 1987, 2000).[2] I show that the two possible landing sites of the echo *wh*-constituent ―*wh*-ex-situ and fronting to the immediately preverbal position― follow from particular syntactic properties of Russian, a MWF language of the IP-absorption type (Richards 2001). As the basis for an explanation of apparently puzzling properties of *wh*-EQs, I argue that echo constructions involve two different CP projections (Sobin 2010), in contrast to non-echo interrogatives. However, I crucially depart from Sobin in arguing that *wh*-EQs do exhibit syntactic movement. I postulate that (echo) *wh*-movement proceeds successive cyclically, so that its legitimacy depends on whether there is an available escape hatch in a language or not. As is well-known, additional landing sites for the fronted *wh*-elements are accessible in MWF languages, as opposed to languages like English (e.g. Richards 2001). Therefore, echo movement is predicted to be allowed in Russian, but not in English. However, despite the movement-based options for generation of *wh*-EQs in Russian, the echo-introduced *wh*-phrase cannot be inserted between the *wh*-elements inherited from the echoed utterance. This paper attempts to provide a minimalist explanation of the attested *wh*-impenetrability effect in terms of derivational cyclicity. Particularly, I argue that such restrictions naturally follow from Uriagereka's (1999) Multiple Spell-out (MSO) theory, under which at a given derivational stage a syntactic object becomes inaccessible to further syntactic operations if it has been previously spelled-out.

The paper is organized as follows. In section 2, I consider some basic assumptions regarding the nature of MWF and argue that Russian behaves as an IP-absorption language (Richards 2001). In section 3, I propose a derivational account of *wh*-EQs in Russian in terms of the double-CP structure underlying EQs (Sobin 2010) and the successive cyclic nature of *wh*-movement. In section 4, I argue that the *wh*-impenetrability effect observed in Russian *wh*-EQs, as in (4d), follows from the MSO model (Uriagereka 1999). Finally, brief conclusions are presented in section 5.

2. Prelude on MWF in non-echo questions

In order to situate the discussion of Russian *wh*-EQs with multiple *wh*-items, first I will briefly outline the traditional approach to non-echo *wh*-interrogatives in MWF languages. As is well-known, in Russian as well as in other MWF languages, in multiple questions all *wh*-phrases must be overtly fronted to the left edge of a clause, as the contrast in (5) illustrates:

(5) a. *Kto*$_1$ *kogo*$_2$ udaril?
who.NOM who.ACC hit
'Who hit whom?'

b. **Kto*$_1$ udaril *kogo*$_2$?
who.NOM hit who.ACC

However, since Rudin (1988), it is a well known fact that MWF languages, although superficially very similar, fall into two groups, with different syntactic properties. Here I adopt the two derivational options proposed by Richards (1997, 2001) who distinguishes between CP-absorption and IP-absorption languages, which correspond to (6a) and (6b) respectively:

(6) a. *CP-absorption: Bulgarian, Romanian*
[$_{CP}$ wh$_1$ wh$_2$ [$_{IP}$ … … [t$_1$ t$_2$]]

b. *IP-absorption: Serbo-Croatian, Polish, Czech, Russian*
[$_{CP}$ wh$_1$ [$_{IP}$ t$_1$ wh$_2$ … [t$_1$ t$_2$]]

On this view, only CP-absorption involves Ā-movement to multiple specifiers of the CP-level. In IP-absorption languages, on the other hand, *wh*-fronting is taken to be adjunction to multiple IP-level projections, followed by movement of one *wh*-word to Spec,CP.[3] Various pieces of evidence support this distinction, including data regarding Superiority effects, constituency of the fronted *wh*-phrases and extraction from *wh*-islands. For instance, CP-absorption languages make use of multiple specifiers of CP and, consequently, allow *wh*-movement out of weak islands and multiple *wh*-extractions from embedded declaratives. In contrast, in IP-absorption

languages, the IP-level has multiple specifiers, but CP has only one. Thus, IP-absorption languages are expected to prohibit extraction from *wh*-islands (for discussion, see Richards 1997, 2001).[4]

With respect to Superiority effects, CP-absorption languages typically exhibit rigid ordering of the fronted *wh*-phrases, while IP-absorption languages do not. Traditionally, this distinction is captured in terms of different strategies of *wh*-movement. CP-absorption languages are claimed to resort to *movement* to multiple specifiers. Such movement uniformly obeys Attract Closest (AC) and Shortest Move (SM) principles, and, as a result, the fronted *wh*-elements 'tuck in' (Richards 1997, 2001), as illustrated in (6a). In IP-absorption languages, in contrast, *wh*-phrases are *adjoined* to multiple IP-level projections; these operations can presumably occur in any order. The resulting structures of Superiority-obeying and Superiority-violating questions in IP-absorption languages are sketched in (7) below. As shown, first, both *wh*-items are fronted into the IP-level adjunction sites (in free order), and then one *wh*-word (the closest one to C) is attracted to Spec,CP in order to obey AC (see Richards 1997, 2001 for details):

(7) a. $[_{CP}\ wh_1\ [_{IP}\ t_1\ wh_2 \ldots [t_1\ t_2]\ ]$ (*IP-absorption: Superiority-obeying order*)

b. $[_{CP}\ wh_2\ [_{IP}\ t_2\ wh_1 \ldots [t_1\ t_2]\ ]$ (*IP-absorption: Superiority-violating order*)

Finally, IP-absorption languages generally allow certain intervening material (e.g., clitics, parentheticals, adverbs, etc.) to appear after the first of the fronted *wh*-phrases, while such insertion is not allowed in languages with CP-absorption. This difference suggests that the fronted *wh*-phrases form an indivisible unit in the latter language-type, but not in the former, in which the leftmost *wh*-item forms a separate constituent (see Rudin 1988 for discussion).

The examples in (8)-(9) show that Russian clearly patterns with IP-absorption languages in most regards. In multiple questions, the fronted *wh*-phrases are not subject to Superiority violations, at least in main clauses, as illustrated in (8). Secondly, the *wh*-words

cluster can be interrupted with clitics, as in (9a), or parentheticals, as in (9b):[5]

(8) a. *Kto*$_1$ *kogo*$_2$ udaril?
who.NOM who.ACC hit
'Who hit whom?'

b. *Kogo*$_2$ *kto*$_1$ udaril?
who.ACC who.NOM hit

(9) a. *Kto*$_1$ *by* *kogo*$_2$ udaril?
who.NOM COND who.ACC hit
'Who would have hit whom?'

b. *Kto*$_1$ *po-tvoemu* *kogo*$_2$ udaril?
who.NOM according-to-you who.ACC hit
'Who according to you hit whom?'

Finally, (10) shows that Russian allows multiple *wh*-extraction from an embedded *declarative* clause, while extraction from embedded *questions*, as previously discussed, is generally ungrammatical. Within Richard's IP-absorption hypothesis, (10a) is derived along the lines sketched in (10b):

(10) a. *Kogo*$_i$ *kogda*$_j$ ty xočeš čtoby Ivan priglasil t_i t_j?
to whom when you want that.SUBJ Ivan invited
'Who do you want Ivan to invite when?'

b. [$_{CP}$ wh_i [$_{IP}$ t_i wh_j [$_{CP}$ t_i t_j [$_{IP}$ [t_i t_j]]]]]

According to Richards, multiple specifiers of CP can be licensed if and only if none of these specifiers finally is interpreted as a scope position of a *wh*-phrase. This view correctly predicts grammaticality of (10a), where multiple specifiers of the embedded CP are used merely as intermediate escape hatches for the extracted *wh*-phrases. With this background in mind, we are now in a position to consider the syntax of *wh*-EQs in Russian.

3. The echo syntax

3.1. Double-CP structure of EQs

Although I uphold here the idea that *wh*-EQs and non-echo *wh*-questions are less opposed to each other than they may seem, I assume that the two types of interrogatives involve different syntactic structures.

Request-for-repetition *wh*-EQs are interrogative constructions pronounced in immediate response to an utterance to request for repetition of a missing bit of language. Consider the *wh*-EQ in (11b), which reproduces the antecedent utterance (11a) as a whole (i.e., the original word order is maintained), except for the unheard part, which is replaced by an echo-introduced *wh*-phrase *who*:

(11) a. U: *What*$_{U}$ did (*mumble*) drink at Mary's party?

b. EQ: *What*$_{U}$ did **who**$_{EQ}$ drink at Mary's party?

Semantically, by uttering a non-echo *wh*-question like the one in (11a), the speaker wonders about the properties of the actual world. Meanwhile, a *wh*-EQ as in (11b) seeks to reduce the speaker's ignorance about the properties of the ongoing discourse (see Fiengo 2007; Šimík 2009). In other words, the question in (11b) does not exactly ask the hearer *who* was the person who drank something at Mary's party, but rather asks to repeat the unheard portion of the stimulus.[6]

The most widely-recognized property of *wh*-EQs is that these constructions maintain the sentence-type of the echoed utterance (e.g., declarative, interrogative, exclamative, imperative). In effect, the *wh*-EQ in (11b) preserves the *wh*-interrogative character of the echoed utterance (11a), including the leftmost position of the fronted *what* and the raised auxiliary verb *did*. These phenomena (i.e., *wh*-fronting and T-to-C verb movement) are triggered by the interrogative C head of the antecedent utterance in (11a); hence, these mood markers are expected to be housed at the utterance's CP level. Nonetheless, the CP-features of

the copied utterance always appear in an echo-interrogative environment that, obviously, requires its own features. For instance, EQs generally require a prototypical rising or rise-falling intonation (see Bartels 1999; Escandell 2002). Moreover, in addition to the *wh*-words copied from the stimulus, the *wh*-EQ in (11b) exhibits an extra, echo-introduced *wh*-item, *who*. Thus, in (11b), the echo-features co-occur with the *wh*-interrogative characteristics clearly inherited from the previous utterance.

Under recent derivational analysis of *wh*-EQs, the resemblance between an EQ and an utterance is captured in terms of a particular syntactic structure underlying echo constructions. Contrary to non-echo interrogatives, the syntactic structure of an EQ involves two different adjacent CP projections (see Escandell 2002; Sobin 2010). Here I adopt Sobin's (2010) proposal, under which *wh*-EQs are double CP-structures, as represented in (12):

(12) $[_{CP_{EQ}}\ C_{EQ}\ [_{CP_U}\ C_U\ [_{IP}\ \ldots wh_{EQ}\ldots]\ ]\ ]$

Agree

The echo-structure in (12) involves two different CP projections: the highest CP-level (CP_{EQ}), which asymmetrically c-commands the CP layer of the echoed utterance (CP_U). Notice that this view predicts the maintenance of the utterance's sentence-type in EQs. Another piece of evidence comes from the particular scope properties of the echo *wh*-phrases (see Karttunen 1977; May 1985; Sobin 2010). Unlike in non-echo multiple questions, where a proper response entails giving values for each *wh*-constituent (hence, pair-list or single-pair readings arise), in *wh*-EQs like (4b-e) or (11b) only the echo-introduced *wh*-phrase receives wide scope. That is, the *wh*-word inherited from the echoed utterance requires no response within an EQ.[7] The *wh*-EQ in (11b), although it exhibits two *wh*-elements, has neither pair-list nor single-pair readings. In fact, the only appropriate answer to (11b) is (13a), while (13b) and (13c) are infelicitous:

(13) a. Dracula! (Sobin 2010: 133)

b. #Dracula drank wine!

c. #Wine!

This observation is confirmed by the simple test in (14). The *wh*-EQ (11b), repeated in (14a), can be paraphrased as a single *wh*-question (14b), in which the echoed *wh*-item *what* is replaced by a non-interrogative *wh*-indefinite *something*:

(14) a. *What*$_{U}$ did **who**$_{EQ}$ drink at Mary's party?

b. **Who**$_{EQ}$ drank *something*$_{U}$ at Mary's party?

The response in (14b) is interpreted as a request-for-repetition question, although it is not an *echo* response, as opposed to (14a), as it does not preserve the *wh*-interrogative sentence-type of the antecedent utterance (11a). We might conclude, then, that (14b) is a non-echo *wh*-question pronounced with the echo intonation.[8]

Let us turn back to the structure in (12).[9] Sobin (2010:131) accounts for the particular syntactic (and semantic) behavior of *wh*-EQs in terms of "independent necessary scope assignment mechanisms and a complementizer that subordinates the utterance being echoed". In (12), the superior head C_{EQ} acts as a probe for any echo-inserted *wh*-phrase and binds it at distance via feature-agreement. Thus, according to Sobin, the echo *wh*-phrase must always appear in its base position. However, as discussed in section 1, there is a crucial difference between *wh*-EQs in English and Russian with respect to whether the echo *wh*-phrase can be fronted or not. In English, the possibility of *wh*-fronting is restricted only to EQs which reproduce a declarative utterance, as the paradigm in (15-16) shows:

(15) a. U: Mary had tea with (*mumble*).

b. EQ: Mary had tea with **who**$_{EQ}$? (from Sobin 2010:132)

c. EQ: **Who**$_{EQ}$ did Mary have tea with?

(16) a. U: *What*$_{U}$ did (*mumble*) drink at Mary's party?

b. EQ: *What*$_{U}$ did **who**$_{EQ}$ drink at Mary's party? (from Sobin 2010:132)

c. EQ: ***Who**$_{EQ}$ drank *what*$_{U}$ at Mary's party?

In contrast, as shown in (17), in Russian *wh*-EQs reproducing a previous *wh*-interrogative,

there are at least two more available alternatives for the echo *wh*-phrase, apart from the *wh*-in-situ option in (17b). The echo *wh*-word can move either to the immediately preverbal position, as in (17c), or to the leftmost position, as in (17d). These two options are clearly excluded in English:[10]

(17) a. U: *Kogo*$_{U}$ udaril (*mumble*)?
who.ACC hit mumble
'Who did (*mumble*) hit?'

b. EQ: *Kogo*$_{U}$ udaril **kto**$_{EQ}$?
whot.ACC hit who.NOM
'Who did hit **who**?'

c. EQ: *Kogo*$_{U}$ **kto**$_{EQ}$ udaril?
who.ACC who.NOM hit

d. EQ: $^{?/??}$**Kto**$_{EQ}$ kogo$_{U}$ udaril?
who.NOM who.ACC hit

The immobility of the echo *wh*-phrase in English in almost all contexts forces Sobin to distinguish between two types of *wh*-EQs: on the one hand, *syntactic* echoes, which never exhibit *wh*-movement, like those in (15b) and (16b), and, on the other, *pseudo* echoes like (15c). The latter are claimed to be just normal *wh*-interrogatives pronounced with the echo intonation (i.e., they do not involve the CP_{EQ} projection).[11] In other words, according to Sobin, a *wh*-phrase must be left in-situ in order to get an echo interpretation. Nevertheless, the Russian data seem to contradict Sobin's generalization and suggest that echo *wh*-movement is not an exception, but rather a standard option, though subject to some straightforward restrictions.

3.2. Echo wh-movement in a MWF language

I retain from Sobin's (2010) analysis the idea that *wh*-EQs, contrary to non-echo monoclausal *wh*-interrogatives, resort to double-CP structure. However, I modify his proposal by claiming

that, at least in Russian, an echo *wh*-phrase can undergo overt fronting. I propose that the echo *wh*-fronting, in fact, is fairly similar to the familiar *wh*-extraction from embedded clauses in which the echo *wh*-item moves up successive cyclically. Thus, the echo *wh*-element, on its way from the base position to the specifier of CP_{EQ}, must target dedicated escape hatches. I assume that in EQs of all languages, this movement obligatorily passes through the intermediate CP_U level of the copied utterance. MWF languages, however, can make use of an additional landing site, Spec,IP, which is not available in languages of the English-type. Successive cyclic echo *wh*-movement is schematically represented in (18):

(18) $[_{CP_{EQ}}$ *wh*$_{EQ}$ C_{EQ} $[_{CP}$ <*wh*$_{EQ}$> C $[_{IP}$ (<*wh*$_{EQ}$>) I $[_{vP}$ <*wh*$_{EQ}$>]]]]

echo-fronting in English

echo-fronting in Russian

The legitimacy of movement of the echo *wh*-phrase, I argue, depends on the availability of intermediate escape hatches. In *wh*-EQs which echo a previous *wh*-interrogative utterance, the specifier of CP_U is occupied with the non-echo *wh*-phrase copied from the utterance. Consequently, in this type of EQs we expect the echo *wh*-movement to be prohibited in languages like English, as they make use of a single specifier at both CP and IP layers. In effect, this prediction is borne out. In the *wh*-EQ (16b), which asks about the previously pronounced *wh*-interrogative, Spec,CP_U is already occupied by the utterance's *wh*-word *what*. As a result, the echo *wh*-phrase *who* is only allowed to remain in-situ, as the contrast between (16b) and (16c) reveals. However, when this position is free, echo *wh*-movement should be allowed. Indeed, in (15c), the echo *wh*-phrase can undergo movement to the leftmost position. Given that the EQ reproduces a declarative utterance (15a), its Spec,CP_U is free and available as an intermediate escape hatch.

On the other hand, MWF languages (particularly, of the IP-absorption type) can hold additional intermediate landing sites for the extracted *wh*-phrases, at both CP and IP layers. It

is predicted then that the echo *wh*-item will be able to appear not only in-situ, but in different higher positions. As shown by the data in (17), this prediction is borne out.

Following Chomsky (1995, 2000, 2001), I assume that the interrogative C head of a non-echo *wh*-question involves a set of features, namely {[Q], [wh]}. The feature [Q] gives the interrogative interpretation to a sentence and, roughly, corresponds with an operator, which assigns scope to the element fronted to Spec,CP. The feature [wh], on the other hand, attracts a goal with a matching feature, i.e., a *wh*-phrase.[12] However, in the case of a *wh*-EQ built on a previous *wh*-interrogative, as in (16-17), I propose that the two C heads involved in the double-CP structure are *defective* in some sense. This is illustrated in (19):

(19) $[_{CP_{EQ}}\ C_{EQ\,[Q]}\ [_{CP_{WH}}\ C_{WH\,[wh]}\ \ldots\ ]\ ]$

As shown in (19), the C head of the utterance's CP level (for the ease of exposure, subscripted with *WH*), is endowed with the feature [wh], but it lacks the interrogative [Q] features. This hypothesis accounts for the data in (14) and correctly predicts that in the course of derivation of *wh*-EQs, the utterance's *wh*-item is attracted into CP in order to check the feature [wh]. The fronted *wh*-word, nevertheless, does not receive scope, since Spec,C_{WH} is not associated with an interrogative operator. On the other hand, the superior head C_{EQ} does have the feature [Q] corresponding to the operator. However, C_{EQ} is deficient with respect to the feature [wh]. This intuition predicts that the echo interpretation can be assigned not only to *wh*-constituents, but rather to any interrogatively-marked expression (i.e., any element bearing the matching feature [Q]). This prediction is borne out, as illustrated in (20) (the *echo* constituent receives a strong accent, thus, in the following examples, it is marked with capitals):[13]

(20) a. U: *Kogo*$_U$ udaril president?
who.ACC hit president.NOM
'Who did the president hit?'

b. EQ: *Kogo*$_{U}$ (PRESIDENT$_{EQ}$) udaril (PRESIDENT$_{EQ}$)?
who.ACC president.NOM hit presindent.NOM
'Who did THE PRESIDENT hit?'

Recall that (20b) is an *echo* interrogative, though the unheard portion of the copied utterance is pronounced with a strong interrogative pitch, instead of being replaced by a *wh*-phrase. Additionally, the EQ maintains the interrogative character of the echoed utterance. By uttering (20b), the speaker asks to confirm whether she has correctly heard the relevant words.

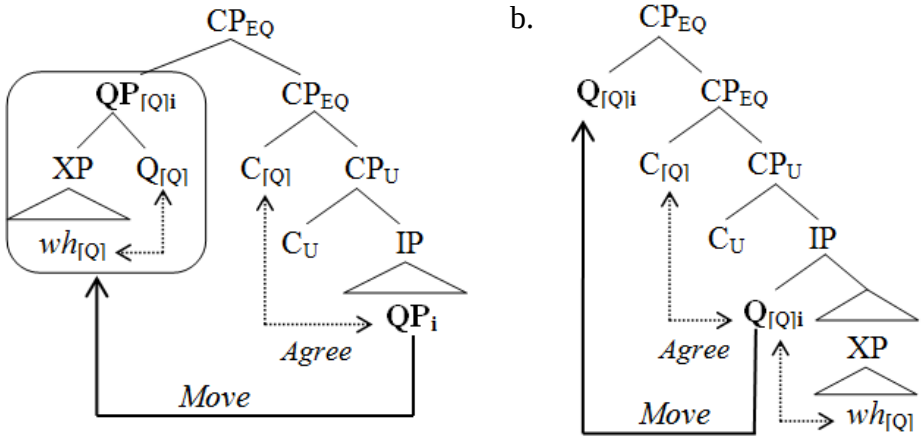
In fact, it has been proposed in the literature that the interrogative C head establishes the syntactic and semantic relations not with a *wh*-word itself. Rather this relation is set up through the help of a particular element merged with the *wh*-word ―the so-called *Q*(*uestion*)-*particle* (see Watanabe 1992; Hagstrom 1998; Cable 2007, 2010). Here I extend Cable's (2007, 2010) proposal for standard *wh*-questions to *wh*-EQs.[14] I argue that the echo interrogative syntax and semantics involve three crucial elements: (i) a *wh*-word generated in its argument position, (ii) a phonetically null Q-particle, which is merged anywhere in the tree where it c-commands the *wh*-phrase and, once attracted by C, moves to the scope position of a question, and (iii) an interrogative C head. All three constituents bear some instance of the interrogative feature [Q].[15]

Following Cable, I assume, that in languages with overt *wh*-fronting, in the course of derivation of a *wh*-EQ, Q is usually merged with the *wh*-item (or some larger structure containing it, XP) in its base position. Then Q projects a QP layer, which immediately dominates both Q and its sister. Consequently, attraction of the features of QP into CP$_{EQ}$ will trigger successive cyclic movement of the entire QP (through the intermediate CP$_{U}$ projection), no feature percolation being necessary. This derivation is schematized below in (21a).

In principle, Q-theory allows the Q-particle to be merged anywhere in the tree where it c-commands the *wh*-phrase. According to Cable, the locality-sensitive Agree operation

between the *wh*-item and Q regulates the possible attachment sites of the latter.[16] I suggest that in IP-absorption languages, in some restricted contexts such as *wh*-EQs, the Q-particle can occasionally be merged in the IP level. As previously discussed, in such languages *wh*-items are adjoined to the IP-level before they move into CP. If the Q-particle has been merged in IP, it can agree with the echo *wh*-phrase when the latter reaches IP. In this particular case, however, a QP cannot be projected for cyclic reasons. Thus Q will move up (successive cyclically) from IP to CP_{EQ} by itself, leaving the *wh*-phrase inside IP. This derivation, which is allowed only in IP-absorption languages, is represented in (21b).

(21) a. b.



3.3. Derivations of wh-EQs in Russian

With all this established, we are now in a position to outline how the echo-introduced *wh*-phrase ends up at two different landing sites during the derivation of the *wh*-EQ built on a previous *wh*-interrogative, (17). First, consider the option in which the echo *wh*-phrase appears at the immediately preverbal position, as in (17c) (repeated below as (22a)). The correspondent derivation is roughly represented in (22b-e):

(22) a. *Kogo*$_{U}$ **kto**$_{EQ}$ udaril?
who.ACC who.NOM hit

b. Step 1: [$_{CPWH}$ C$_{[wh]}$ [$_{IP}$ **Q**$_{[Q]k}$ [$_{vP}$ **kto**$_{[Q]i}$ *kogo*$_{[wh]j}$]]]]

c. Step 2: [$_{CPWH}$ C$_{[wh]}$ [$_{IP}$ **Q**$_{[Q]k}$ **kto**$_{[Q]i}$ *kogo*$_{[wh]j}$ [$_{vP}$ t$_i$ t$_j$]]]]

d. Step 3: $[_{CP_{EQ}}\ C_{[Q]}\ [_{CP_{WH}}\ \textit{kogo}_{[wh]j}\ C_{[wh]}\ [_{IP}\ \mathbf{Q}_{[Q]k}\ \mathbf{kto}_{[Q]i}\ t_j\ [_{vP}\ t_i\ t_j]\ ]\ ]\ ]$

e. Step 4: $[_{CP_{EQ}}\ \mathbf{Q}_{[Q]k}\ C_{[Q]}\ [_{CP_{WH}}\ \textit{kogo}_{[wh]j}\ C_{[wh]}\ [_{IP}\ t_k\ \mathbf{kto}_{[Q]i}\ t_j\ [_{vP}\ t_i\ t_j]\ ]\ ]\ ]$

First, as shown in (22b), both *wh*-phrases, each one associated with a different feature ([Q] and [wh] respectively), are generated in their base position. On the other hand, Q is merged higher, in IP, where it c-commands the echo *wh*-phrase *kto* bearing the matching feature [Q].[17] Then, as (22c) illustrates, both *wh*-items move to IP in a tucking-in manner, so that they keep their original c-command relation (Richards 1997, 2001). That is, *kto*, the highest *wh*-element, occupies the outermost specifier of IP, while *kogo* is fronted to the inner one. Next, once *kto* arrives to the local domain of the Q-particle, the two elements can agree; however, a QP phrase cannot be projected. Afterwards, as in (22d), *kogo* bearing [wh] is attracted by C_{WH} to its specifier position (crucially, C_{WH} cannot target the *wh*-containing phrase *kto*, with the prominent feature [Q]). Then the echo C_{EQ}, associated with [Q], is adjoined to the CP_{WH} of the echoed utterance, (22e). C_{EQ} scans down the tree searching for an element with the matching feature [Q] and finds the Q-particle (again, *kogo* with [wh] cannot intervene). Q moves up to Spec,CP_{EQ} alone, leaving the echo *wh*-phrase *kto* in-situ, in IP. As a result, we obtain (22a), in which the echo-inserted *wh*-phrase receives the widest scope, although it does not move to CP_{EQ} and appears preverbally.

Now let us consider the *wh*-EQs in which the echo *wh*-phrase appears at the leftmost position, above the copied utterance's *wh*-item, as in (17d) (repeated below in (23a)). I suggest that such *wh*-EQs are derived along the lines schematically represented in (23b-e):

(23) a.$^{?/??}$**Kto**$_{EQ}$ *kogo*$_{U}$ udaril?

who.NOM who.ACC hit

b. Step 1: $[_{CP_{WH}}\ C_{[wh]}\ [_{IP}\ [_{vP}\ [_{\mathbf{QP}}\ \mathbf{Q}_{[Q]}\ \mathbf{kto}_{[Q]}]_{[Q]\mathbf{i}}\ \textit{kogo}_{[wh]j}]\ ]\ ]\ ]$

c. Step 2: $[_{CP_{WH}}\ C_{[wh]}\ [_{IP}\ [_{\mathbf{QP}}\ Q\ \mathbf{kto}]_{[Q]\mathbf{i}}\ \textit{kogo}_{[wh]j}\ [_{vP}\ t_i\ t_j\ ]\ ]\ ]\ ]$

d. Step 3: $[_{CP_{EQ}}\ C_{[Q]}\ [_{CP_{WH}}\ \textit{kogo}_{[wh]j}\ C_{[wh]}\ [_{IP}\ [_{\mathbf{QP}}\ Q\ \mathbf{kto}]_{[Q]\mathbf{i}}\ t_j\ [_{vP}\ t_i\ t_j]\ ]\ ]\ ]$

e. Step 4: $[_{CP_{EQ}}\ [_{\mathbf{QP}}\ Q\ \mathbf{kto}]_{[Q]\mathbf{i}}\ C_{[Q]}\ [_{CP_{WH}}\ kogo_{[wh]j}\ \ t_i\ \ C_{[wh]}\ [_{IP}\ t_i\ t_j\ [_{vP}\ t_i\ t_j]\ ]\ ]\ ]$

Whereas in (22) the Q-particle was merged in IP, here the Q-particle is merged with the echo *wh*-phrase *kto* in its argument position. Once these two elements agree, Q projects a QP phrase, which dominates both Q and its sister, as shown in (23b). As a second step, the entire QP (containing *kto*) and the *wh*-word *kogo* tuck in into IP, as in (23c). Then, *kogo* moves to Spec,CP_{WH} in order to check the feature [wh], (23d). Next, the echo C_{EQ} head enters the derivation, being adjoined to the CP_{WH} level. As expected, attraction of the Q's feature into CP_{EQ} triggers movement of the entire QP phrase, pied-piping *kto*, (23e). The echo movement proceeds successive cyclically, through the specifier of the embedded CP_{WH}. Recall from section 2.1 (particularly, see (10)) that in MWF languages of the IP-absorption type, the use of multiple specifiers of CP is allowed only if none of this landing sites is interpreted at LF as a scope position of the extracted *wh*-phrase. In effect, as previously discussed, in a derivation of a *wh*-EQ, the embedded utterance's C_{WH} cannot assign scope, as it has no operator associated with it. In (23), the utterance's *wh*-word *kogo* resembles a *wh*-indefinite more than an interrogative pronoun. Consequently, the extracted QP is allowed to use Spec,CP_{WH} as an intermediate landing site, on its way to the scope position. The resulting derivation is the one with the echo-introduced *kto* ex-situ, above the utterance's *wh*-word *kogo*. We also predict that the former *wh*-element will receive the widest scope.[18]

To summarize, in Russian we observe two consistent patterns of *wh*-movement in EQs with multiple *wh*-constituents. The echo-introduced *wh*-word can appear preverbally or at the leftmost position, above the *wh*-phrase(s) borrowed from the stimuli. These movement-based options, excluded in languages like English, are expected in MWF languages. This is due to the parametric variation: the latter type of languages makes use of an additional escape hatch for the fronted echo *wh*-phrase, contrary to the former. Strikingly, however, the echo *wh*-item cannot intervene between the *wh*-words inherited from the antecedent utterance. I consider this

issue in the following section.

4. *Wh*-atomicity as a result of MSO

The impenetrability of the fronted utterance's *wh*-elements for the echo-inserted *wh*-phrase, as observed in (4d) (repeated below in (24a)), is unpredicted by Richard's theory on MWF languages resorting to IP-fronting. Consider (24):

(24) a. **Čto*$_{U}$ **kto**$_{EQ}$ *komu*$_{U}$ podaril?

what.ACC who.NOM who.DAT gave

b. Step 1: $[_{CP_{EQ}}\ C_{[Q]}\ [_{CP_{WH}}\ C_{[wh]}\ [_{IP}\ \mathbf{Q}_{[Q]}\ \mathbf{kto}_{[Q]i}\ čto_{[wh]j}\ komu_{[wh]k}\ [_{vP}\ t_i\ t_j\ t_k]\ ]\ ]\ ]$

c. Step 2: $[_{CP_{EQ}}\ C_{[Q]}\ [_{CP_{WH}}\ čto_{[wh]j}\ C_{[wh]}\ [_{IP}\ \mathbf{Q}_{[Q]}\ \mathbf{kto}_{[Q]i}\ t_j\ komu_{[wh]k}\ [_{vP}\ t_i\ t_j\ t_k]\ ]\ ]\ ]$

d. Step 3: $[_{CP_{EQ}}\ \mathbf{Q}_{[Q]n}\ C_{[Q]}\ [_{CP_{WH}}\ čto_{[wh]j}\ C_{[wh]}\ [_{IP}\ t_n\ \mathbf{kto}_{[Q]i}\ t_j\ komu_{[wh]k}\ [_{vP}\ t_i\ t_j\ t_k]\ ]\ ]\ ]$

In principle, nothing in the IP-absorption hypothesis rules out (24). Roughly, the derivation sketched in (24b-d) follows the similar patterns as in (22), with the difference that the *wh*-EQ in (24a) echoes a binary *wh*-question with two *wh*-elements, *čto* and *komu*. As expected, in a MWF language with IP-absorption, first all *wh*-constituents, including the echo *wh*-phrase, move into IP in a tucking-in manner. Then C_{WH} attracts the closest available *wh*-item with the matching feature [wh] (i.e., *čto* in (24c)) to its specifier; the rest are left in Spec,IP. Once inside IP, the echo *wh*-phrase *kto* agrees with the Q-morpheme, but the latter cannot project. As a result, the Q-particle, being attracted by C_{EQ}, moves up to Spec,CP_{EQ} alone, leaving *kto* inside IP. This derivation, however, incorrectly predicts the grammaticality of (24a). Obviously, the question is how the impenetrability of the copied *wh*-phrases for the echo *wh*-word, as in (24a), can be ruled out by some independent considerations.

I suggest that the observed restriction follows from Uriagereka's (1999) MSO model (see also Nunes and Uriagereka 2000; Fowlie to appear). Assuming that in the course of derivation multiple applications of Spell-out can take place (see Bresnan 1971), Uriagereka

proposes that if a given syntactic object has been previously spelled-out, it becomes inaccessible to further syntactic computation. After being sent to the interfaces (PF and LF), the object's internal structure is removed from the syntactic component, and only its label and the relevant syntactic features are left behind (the label corresponds to the terminal node). Later, the label is used to determine the exact location of the spelled-out constituent in the main tree. Consider, for example, the syntactic object K = {γ {α, β}}, in which α and β correspond to the constituents and γ to the label. After being spelled-out, K is turned back into the system as a simple copy K = [$_{\gamma}$], where only the label is conserved. In other words, the complex syntactic object, after being transferred, behaves as a single unit, an indivisible atom, whose components are no longer accessible to syntax. Nevertheless, since the label encodes all relevant information required by syntax in order to manipulate an object, K itself can undergo movement, but its components cannot. Consequently, no element can be extracted *out* of the spelled-out constituent, giving rise to the so-called *Condition on Extraction Domains* (CED) effects (see Huang 1982; Nunes and Uriagereka 2000, among others).

A natural consequence of the MSO approach, given the inaccessibility of a spelled-out chunk of structure, is that no movement *into* the transferred object is allowed either. In what follows, I argue that MSO is responsible for the fact that the copied *wh*-phrases resist the infixation of the echo *wh*-word in a *wh*-EQ. Within Uriagereka's MSO model, Spell-out is triggered in order to avoid a linearization failure. Crucially, this is what happens within an EQ: the questioner *echoes* some portion of the immediately previous utterance, pronounced by another speaker. The strategy of 'echoing' implies that the original CP-characteristics of the repeated utterance must be preserved, including the ordering of the constituents. I suggest that this is achieved by the early Spell-out of certain utterance's constituents.

Several pieces of evidence support the claim on the atomicity of the echoed *wh*-phrases of the antecedent utterance. First, as previously discussed, in non-echo *wh*-questions in

Russian, the fronted *wh*-phrases are not sensitive to Superiority effects and can be separated by certain intervening material (see section 2). However, in the case of EQs, the ordering of the copied *wh*-constituents must be the same as in the echoed utterance, otherwise the sentence results infelicitous. Consider (25):

(25) a. U_1: *Kto*$_1$ *kogo*$_2$ udaril lopatoj?
who.NOM who.ACC hit spade.INSTR
'Who hit whom with a spade?'

b. U_2: *Kogo*$_2$ *kto*$_1$ udaril lopatoj?
who.ACC who.NOM hit spade.INSTR

c. EQ: Kogo$_2$ *kto*$_1$ **čem**$_{EQ}$ udaril?
who.ACC who.NOM what.INSTR hit
'Who hit whom with what?'

The *wh*-EQ (25c), with the superiority-violating word order, can be a proper echo response only to the utterance in (25b); the *wh*-question in (25a) requires an EQ that would preserve the superiority-obeying order of the fronted *wh*-words.

Likewise, an EQ can exhibit an adverb between the fronted *wh*-constituents only if the utterance has had exactly the same distribution of the constituents.[19] That is, the *wh*-EQ (26c) is a proper response to (26a), while it would be infelicitous when requesting for repetition of (25a) or (26b):[20]

(26) a. U_1: *Kto*$_1$ *vnezapno* *kogo*$_2$ udaril lopatoj?
who.NOM suddenly who.ACC hit spade.INSTR
'Who suddenly hit whom (with a spade)?'

b. U_2: *Kto*$_1$ *kogo*$_2$ *vnezapno* udaril lopatoj?
who.NOM who.ACC suddenly hit spade.INSTR

c. EQ: *Kto*$_1$ *vnezapno kogo*$_2$ **čem**$_{EQ}$ udaril?
who.NOM suddenly who.ACC what.INSTR hit
'Who suddenly hit whom with what?'

Thus, the data suggest that in context of EQs, certain portions of the echoed utterance (particularly, the copied *wh*-elements) are used as an unanalysed whole, a simple chunk of structure that repeats what has been previously said. I argue that the computational system takes multiple *wh*-words of an echoed *wh*-question as a complex object and spells it out as such, turning back an indivisible atom.

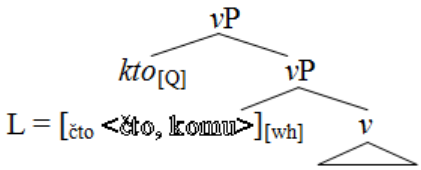
Let us now turn back to the *wh*-EQ in (24), namely, to the point where the *wh*-items have been merged in their argument positions and the structure K, (27a), has been assembled. As previously argued, different *wh*-constituents enter the derivation of a *wh*-EQ bearing different features. The *wh*-words from the echoed utterance, i.e. *čto* 'what.ACC' and *komu* 'who.DAT', bear [wh], while the echo *wh*-phrase *kto* 'who.NOM' is associated with [Q]:

(27) a. K = [$_{vP}$ kto$_{[Q]}$ podaril [čto komu]$_{[wh]}$]

b. L = [$_{čto}$]$_{[wh]}$

The computational system analyzes *čto komu* as a complex (echoed) object, makes a copy of it and spells it out as L, (27b). As a result, the *wh*-constituents are linearized in PF.[21] Next, the spelled-out copy L is merged with K, yielding (28).[22]

(28)



Once the complex object *čto komu* is spelled-out and returned into the structure as a simple item, further derivation proceeds via successive projections of IP, CP_{WH} and CP_{EQ}, which form the double-CP structure of the echo constructions. Thus, under the MSO approach, the *wh*-EQ based on a previous binary *wh*-interrogative, as in (4), follows the same derivational patterns as the *wh*-EQ which repeats a single *wh*-question, as in (17). Again, the two possible landing sites

for the echo-introduced *wh*-phrase are determined by the movement-based options and the way in which the Q-particle is merged into the derivation.

Suppose that Q is merged together with the echo *wh*-phrase *kto* in its argument position. In this case, a QP layer is projected and the entire QP —Q along with its sister, *kto*— undergoes overt movement to the left periphery of the question, as sketched in (29). The result is the echo *wh*-word *kto* preceding the utterance's *wh*-constituents, (29a):

(29) a. $^{?/??}$**Kto**$_{EQ}$ [*čto*$_{U}$ *komu*$_{U}$] podaril?

who.NOM what.ACC who.DAT gave

b. Step1: [$_{CP_{WH}}$ C_{WH} [$_{IP}$ [**$_{QP}$** Q **kto**]$_i$ [$_{\check{c}to}$]$_j$ [$_{vP}$ t_i t_j]]

c. Step2: [$_{CP_{WH}}$ [$_{\check{c}to}$]$_j$ C_{WH} [$_{IP}$ [**$_{QP}$** Q **kto**]$_i$ t_j [$_{vP}$ t_i t_j]]]

d. Step 3: [$_{CP_{EQ}}$ [**$_{QP}$** Q **kto**]$_i$ C_{EQ} [$_{CP_{WH}}$ [$_{\check{c}to}$]$_j$ t_i C_{WH} [$_{IP}$ t_i t_j [$_{vP}$ t_i t_j]]]]

To derive the *wh*-EQ in (29a), first, QP containing the echo *wh*-word *kto* and the simple copy of the spelled-out complex object *čto komu* ([$_{\check{c}to}$]) must tuck in into multiple specifiers of IP. Next, [$_{\check{c}to}$] bearing the feature [wh] is attracted into the CP_{WH} layer, which corresponds to the echoed utterance, as in (29c). Then, C_{EQ} adjoins to CP_{WH} and attracts the entire QP into its specifier, pied-piping *kto*, (29d). The Q-movement proceeds successive cyclically, through the embedded CP_{WH} level. In the resulting derivation, the echo *wh*-phrase occupies the leftmost position in the clause. (Similarly to (23), in (29) the extraction of one *wh*-phrase from the domain of another leads to the RM effects.)

Now suppose that the Q-particle has been merged in the IP layer. In this case, the echo *wh*-phrase *kto* will appear below the utterance's *wh*-phrases, at the immediately preverbal position, as in (30a):

(30) a. [*Čto*$_{U}$ *komu*$_{U}$] **kto$_{EQ}$** podaril?

what.ACC who.DAT who.NOM gave

b. Step 1: [$_{CP_{WH}}$ C_{WH} [$_{IP}$ **Q kto**$_i$ [$_{\check{c}to}$]$_j$ [$_{vP}$ t_i t_j]]]]

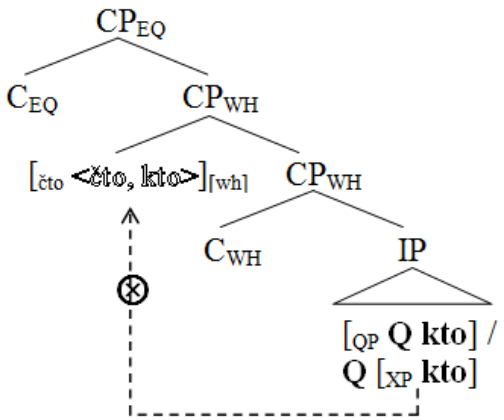
d. Step 2: $[_{CPWH}\ [_{\text{što}}\ \ \ ]_j\ C_{WH}\ [_{IP}\ \mathbf{Q\ kto}_i\ t_j\ [_{vP}\ t_i\ t_j]\ ]\ ]\ ]$

e. Step 3: $[_{CPEQ}\ \mathbf{Q}_k\ C_{EQ}\ [_{CPWH}\ [_{\text{što}}\ \ \ ]_j\ t_k\ C_{WH}\ [_{IP}\ t_k\ \mathbf{kto}_i\ t_j\ [_{vP}\ t_i\ t_j]\ ]\ ]\ ]$

In the case of the *wh*-EQ in (30a), both elements, *kto* and the transferred $[_{\text{što}}\ \ \ ]$, adjoin to the IP level obeying tucking-in. Then, the former agrees with the Q-particle, which has been merged in IP; however, a QP phrase cannot be projected. Next, $[_{\text{što}}\ \ \ ]$ moves up into the specifier of CP_{WH}. And, finally, the head C_{EQ} triggers movement of the Q-particle into its specifier, while the echo *wh*-phrase remains in Spec,IP.

Crucially, the MSO approach accurately accounts for the fact that, despite the two available movement-based options for the formation of *wh*-EQs in Russian, the echo *wh*-phrase cannot intervene between the *wh*-elements copied from the echoed utterance. When deriving an EQ, the computational system interprets the utterance's *wh*-constituents as a complex object. In order to preserve the original ordering and to prevent a possible linearization failure, the copied *wh*-phrases are spelled-out and then turned back into the structure as an indivisible atom, (31):

(31)



In (31), the internal structure of the spelled-out complex object $[_{\text{što}}\ \ \ ]$ becomes invisible for the syntactic computation, so that nothing can be either inserted or extracted from it. Due to the MSO mechanism, it does not matter whether a *wh*-EQ repeats a single, a binary or a ternary *wh*-interrogative utterance. Thus Uriagereka's (1999) MSO model, when applied to EQs, accounts for the apparently mysterious fact of that the echo *wh*-phrase cannot intervene between the *wh*-constituents copied from the immediately prior utterance in the dialogue.

5. Conclusion

In this paper I have provided a syntactic account of *wh*-EQs. Traditionally these questions have been considered as a purely pragmatic phenomenon, which does not obey syntactic rules. I offered several novel observations regarding the behaviour of *wh*-EQs in Russian, particularly those that repeat a previous (single or binary) *wh*-interrogative. The main empirical contribution was to show that *wh*-EQs in Russian, unlike in English, can exhibit overt instances of *wh*-movement. The echo *wh*-word can either move to the immediately preverbal position or to the leftmost position of an interrogative clause. These patterns are claimed to follow from the well-known properties of *wh*-movement in MWF languages of the IP-absorption type, on the one hand (Richards 2001), and from a particular double-CP structure underlying EQs, on the other (Sobin 2010). Contrary to previous proposals, it was argued that EQs do involve overt movement, namely of a Q-particle c-commanding the echo *wh*-word (Cable 2010). The echo Q-movement proceeds successive cyclically, so that its legitimacy depends on the availability of an additional escape hatch for the extracted echo *wh*-item.

It was also observed that, despite the movement-based options available in Russian EQs, there is an otherwise mysterious fact, namely, that the echo *wh*-item cannot intervene between the *wh*-words inherited from the echoed utterance. This fact was argued to follow in a natural way from the MSO theory (Uriagereka 1999). The computational system takes the copied *wh*-phrases as a complex object and spells it out, leaving behind a simple copy, which acts as an indivisible atom. Therefore, its internal structure becomes inaccessible to the rest of derivation. In sum, the proposal developed in the paper allows for a unified view of the interrogative syntax, including non-canonical interrogatives such as *wh*-EQs.

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[1] Notice that not all informants accept (4e), with the echo *wh*-item moved above the copied *wh*-phrases. While many speakers judge it as marginal, others consider it acceptable. But, crucially, the option of leaving the echo *wh*-word between the *wh*-constituents copied from the echoed utterance, as in (4d), is considered ungrammatical by all informants.

[2] I believe that there is another promising way to account for the *wh*-in-situ option, namely the Q-based theory explored in Cable (2007, 2010). Under this view, overt syntactic displacement takes place even in *wh*-in-situ

questions, but what moves is a Q(uestion)-particle which adjoins to a *wh*-item in its argument position (or some larger structure XP containing the *wh*-word). Then, being Q-features attracted into CP, the Q-particle moves alone, leaving the *wh*-item in-situ. This derivation is represented in (i):

(i) $[_{CP}\ \mathbf{Q_1}\ C\ [_{TP} \ldots\ [_{\mathbf{XP}}\ [_{XP} \ldots wh]\ \mathbf{t_1} \ldots]]]$

Although this analysis has been applied to true *wh*-in-situ languages like Japanese (see Watanabe 1992; Hagstrom 1998; Cable 200, 2010; among others), I suggest that *wh*-in-situ EQs, as in (4b), can be analyzed in terms of an adjoined Q-particle. I leave this issue for future research.

[3] Although neither Rudin (1988) nor Richards (1997, 2001) offer any particular explanation of what motivates *wh*-movement into the IP layer, several proposals have been made. For instance, in some works, IP-movement is taken to be focus-fronting to a position below CP (see Bošković 1997, 2000, 2002; Stepanov 1998, and references therein). Other proposals argue for existence of straightforward [wh]-driven movement (for Russian, see Zavitnevich 2005; Bailyn 2011; Scott 2012, and references therein) or Q-movement within Cable's (2007, 2010) Q-based theory (see Dyakonova 2009; Chernova 2013). For space reasons, I will not speculate here on the force driving IP-fronting of *wh*-constituents.

[4] However, see Bošković (2003, 2008) for a different view regarding extraction from *wh*-islands in Bulgarian. According to the author, this phenomenon is not related to the MWF-requirement, since it also exists in several non-MWF languages like Icelandic, Hebrew, Norwegian. In this paper, I abstract from discussion of *wh*-island effects in Russian, because any extraction from a finite clause is generally ungrammatical in this language. In fact, only extraction from subjunctive complements is allowed:

(i) a. * *Kogo*$_i$ ty dumaeš (*čto*) Ivan priglasil t$_i$? (Khomitsevich 2007:134-135)
who.ACC you think that Ivan invited
'Who do you think that Ivan invited?'

b. *Kogo*$_i$ ty xočeš *čtoby* Ivan priglasil t$_i$?
who.ACC you want that.SUBJ Ivan invited
'Who do you want Ivan to invite?'

[5] See, however, Rudin (1996) and Meyer (2004) who report a general preference among speakers for a *wh*-subject to precede a *wh*-object. For more information on Superiority effects in MWF languages the reader is referred to Rudin (1988), Stepanov (1998), Strahov (2001), Bošković (2002), Liakin (2005), Dyakonova (2009), Bailyn

(2011), Scott (2012), among others. I leave this topic aside, since, as it will be shown further, Superiority effects have nothing to say about *wh*-EQs considered in this paper (see also fn. 10).

[6] For this reason, at the pragmatic level, EQs are usually considered *metarepresentations* or *metalinguistic questions*, in a sense that they are "interrogative interpretations of interpretations of somebody's thoughts" (Escandell 2002:872). For discussion of semantic and pragmatic properties of EQs see Noh (1998), Escandell (2002), Iwata (2003), and references therein.

[7] As noted first by Baker (1970), a similar *loss-of-scope* effect arises in embedded *wh*-questions like (ia), where the embedded *wh*-phrase *what* can receive either narrow scope (i.e., it does not require an answer), (ib), or wide scope, (ic) (see also Chomsky 1976; Pesetsky 1987, among others):

(i) a. *Who* knows where Mary bought *what*?

b. John does.

c. John knows where she bought milk, Bill knows where she bought bread…

[8] The similar periphrasis is also available in Russian. In (ib), the copied *wh*-items *čto* 'what.ACC' and *komu* 'who.DAT' from (ia) are replaced by the correspondent *wh*-indefinites *čto-to* 'something.ACC' and *komu-to* 'someone.DAT'. It reveals that only the echo *wh*-item *kto* 'who.NOM' is truly interrogative:

(i) a. EQ: *Čto*$_{U}$ *komu*$_{U}$ **kto**$_{EQ}$ podaril?
what.ACC who.DAT who.NOM gave
'What did who give to whom?'

b. EQ: **Kto**$_{EQ}$ *čto-to*$_{U}$ *komu-to*$_{U}$ podaril?
who.NOM something.ACC someone.DAT gave
'Who gave someone to something?'

[9] For further pieces of evidence for the double-CP structure underlying *wh*-EQs, I refer the reader to Escandell (2002) and Sobin (2010).

[10] Recall that Superiority effects do not play any particular role in *wh*-EQs like (17c,d), in which only one *wh*-phrase is echo-introduced, the rest being copied from the antecedent utterance. (17c), which apparently violates Superiority, is accepted by all informants. In contrast, (17d), with a Superiority-obeying order, is much more difficult to interpret. For discussion of Superiority effects in *multiple* EQs in Russian, where *all wh*-elements receive the echo interpretation, see Radkevich (2008).

[11] For the similar conclusions in English, see also Fiengo (2007), who distinguishes between two types of EQs: repeat questions and true questions with *wh*-in-situ.

[12] For a precise machinery of the feature-checking in *wh*-questions, the reader is referred to Chomsky (2000, 2001), Pesetsky and Torrego (2001), Adger (2003), Bošković (2007), among many others.

[13] In fact, this observation was originally in Sobin (2010), who proposed that C_{EQ} and the echo (*wh*-)constituents bear a feature [i-m] (interrogatively-marked), as opposed to the non-echo C head and non-echo *wh*-words, which are associated with [wh].

[14] Naturally, Q-theory can also be applied to the derivation of the echoed *wh*-utterance, in which case the embedded C_{WH} would bear the feature [Q], as well as the non-echo copied *wh*-item(s). However, for reasons of brevity and readability, I have chosen to simplify the feature specification of the two different interrogative heads (and the correspondent *wh*-elements) present in the echo-structures. No crucial argument in this paper will change if we apply the patterns of Q-theory to both CP projections. In fact, as suggested in Cable (2010), different structures involve different instances of the same category label Q. So, we might assume that the Q-particle involved in a derivation of a true *wh*-question is Q_{WH}, while the one found in EQs is labeled Q_{EQ} and has different properties.

[15] Within Q-theory, examples like (20) are analyzed in terms of a Q-particle merged with NP. Regarding the echo *wh*-phrases (e.g., *kto* 'who.NOM' in (17)), I propose that, apart from [Q], they also bear the feature [wh]. However, the latter is embedded inside the complex structure of the Ā-pronoun (e.g., see Wiltschko 1998). For simplicity's sake, I consider the utterance's copied *wh*-elements being bare *wh-words* with the prominent [wh] feature, while the echo *wh*-items are *wh-containing* phrases, with the prominent feature [Q] (see also Kotek to appear). Thus, C_{WH} can target the former *wh*-constituents, but not the latter.

[16] Cable (2007, 2010) formulates Q-agreement between the Q-particle and the *wh*-phrase in terms of Pesetsky and Torrego's (2007) theory of feature valuation. For further details, the reader is referred to these works.

[17] For the ease of exposition, I start with *čto* 'what.ACC' directly at the *v*P-edge, although it is assumed that it is previously moved there from its argument position, VP.

[18] I suggest that the marginal grammatical status of (23b) arises as a result of the feature-sensitive Relativized Minimality (RM; see Rizzi 1990, 2001; Starke 2001):

(i) a. In the configuration […ₓ … Z … Yᵧ …], a local relation cannot hold between X and Y if Z intervenes and Z is more richly specified than X.

b. $[_{CP}\ [_{QP}\ Q\ \ \mathbf{Kto}]_{EQ}\ \ [_{CP}\ kogo_{U}\ \ [udaril\ \_\_?\ ]\ ]\ ]$

[+Q, +Q, +wh] [+wh]

As represented in (ib), *kto* can be extracted from the domain of *kogo*, because the former, included within a

complex projection QP, is specified more richly than the latter. Moreover, the informants, before they judge the sentences like (23b) as acceptable (though marginal), usually need a moment for reflection. This fact points to the computational complexity of such constructions and, perhaps, is the reasons of the attested speaker variation (see fn. 1). However, since this issue does not affect the *wh*-impenetrability effect of the copied *wh*-items observed in EQs, I leave it aside.

[19] The behavior of non-echo multiple *wh*-questions in Russian suggests that canonical interrogatives do not trigger early Spell-out of the fronted *wh*-words, as opposed to *wh*-EQs. In particular, MSO is a linearization strategy for preserving the original ordering of constituents when repeating the immediately previous utterance in the dialogue.

[20] In fact, 'freezing' properties of EQs have been widely attested in the literature and analyzed from different perspectives (e.g., the *frozen* status of the utterance's CP in Sobin 1990, 2010; the metarepresentational nature of EQs in Noh 1998, Iwata 2003). For instance, it has been observed that certain sentence adverbs are incompatible with canonical interrogatives, (ia), while EQs are far more permissive, (ib). Obviously, the EQ in (ib) echoes a declarative *Surprisingly John has arrived*; so that the adverb is 'frozen' within utterance's CP and does not conflict with the echo interrogative features:

(i) a. * Has *surprisingly* John arrived? (Iwata 2003:228, 231)

b. *Surprisingly* John has arrived?

Crucially, these and other properties of EQs, including the atomicity of certain portion of the echoed utterance, follow in natural way from the double-CP representation in (21).

[21] I speculate that the fact that the echo *wh*-item and the repeated *wh*-elements enter the derivation with different feature-specification helps the computational system to identify the former as a different object.

[22] In (28), I assume that the simple copy of the internal argument, [$_{\text{čto}}$], is merged in the inner specifier of *v*P, in order to keep the initial c-command relation with *kto* 'who.NOM' (see Richards 1997, 2001).