On wh-movement in echo-questions
and crosslinguistic variation

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Abstract

This paper examines echo *wh*-questions, a rather understudied phenomenon even in extensively described languages such as English. In particular, it focuses on a particular type of echo questions, such as those made in response to a previous declarative (e.g., –*Mary said {mumble}.*/ –*Mary said what?*) or a previous *wh*-question (e.g., –*Who said {mumble}?*/ –*Who said what?*). Such structures are examined from a comparative perspective, analyzing data from three different languages regarding Multiple *wh*-Fronting: English *vs.* Russian, with attention to Spanish. On the one hand, this paper considers the key, cross-linguistically common features of echo questions and discusses their underlying derivational structure. On the other hand, contrary to the standard assumptions that echo questions necessarily require *wh*-in-situ, this paper focuses on the availability of different options of overt echo *wh*-movement among the languages under consideration. It is argued that in echo questions, similarly to what happens in canonical interrogatives, *wh-movement* proceeds successive-cyclically and is subject to parametric variation.

O ruchu *wh* w pytaniach echo i różnicach językowych

Abstrakt

Ten artykuł analizuje pytania echo z elementem *wh*, nie do końca zbadanego zjawiska nawet w obszernie opisanych językach, takich jak angielski. W szczególności koncentruje się na konkretnym typie pytań echo, a mianowicie takich, które zadano w odpowiedzi na poprzednie zdanie oznajmujące (np. –Mary said {mumble}./ –Mary said co?) lub na poprzednie pytanie *wh* (np. – Who said {mumble}?/ –Who said what?). Struktury takie są badane z perspektywy porównawczej, w zakresie *Multiple wh-Fronting*. Analizowane są trzy języki: angielski vs. rosyjski, z uwzględnieniem hiszpańskiego. Z jednej strony niniejszy artykuł rozważa kluczowe, wspólne dla wielu języków, cechy pytań echo i omawia ich podstawową strukturę derywacyjną. Z drugiej strony, w przeciwieństwie do standardowych założeń, że pytania echo koniecznie wymagają wh-in-situ, niniejszy artykuł koncentruje się na dostępności różnych opcji ruchu *wh* w strukturze powierzchniowej wśród rozważanych języków. Twierdzi się, że w pytaniach echa, podobnie jak w pytaniach kanonicznych, ruch *wh* przebiega sukcesywnie cyklicznie i podlega zmienności parametrycznej.

1. Introduction

This paper aims to shed some light on the syntactic behavior of echo *wh*-questions (henceforth *wh*-EQs), which are interrogative sentences produced as an immediate response to

a previous utterance requesting information about some portion of the stimulus that has been missed or unheard. This type of question is exemplified below, in (1b) (hereafter, the echo-introduced *wh*-phrases appear in small caps):

(1) a. *Mary had tea with Dracula.*
    b. *Mary had tea with WHO?*   [from Sobin 2010:132]

As stated in Sobin (2010:132), "EQs present considerable challenges to theories of interrogative syntax predicated on the behavior of non-EQ interrogatives", as they behave in a quite unusual way. For instance, EQs appear to counterexemplify some general statements about the formation of true, non-EQ questions such as the obligatoriness of *wh*-movement or the sensitivity to Superiority effects, which are illustrated in (2) for English:

(2) a. What$_i$ *did John say t$_i$?*
    b. Who$_1$ *said* what$_2$?
    c.*What$_2$ *did* who$_1$ *say*?

However, English *wh*-EQs are immune to the obligatory *wh-movement* and the consequent verb raising, as we have seen in (1b) (*cf.* (2a)). Moreover, when an EQ has more than one *wh*-word, Superiority effects can be easily violated without resulting in ungrammaticality (see (3b); *cf.* (2c)):

(3) a. What *did Dracula drink at Mary's party?*
    b. What *did WHO drink at Mary's party?* [from Sobin 2010: 132]

For these and other reasons, EQs tend to be seen as a non-syntactic phenomenon, as they systematically disobey the general rules of question formation. It seems "unprofitable to attempt to integrate them into the analysis of the more usual types of questions" (Culicover 1976:73), because "the grammatical rules of the language should not generate them"

(Cooper 1983:149). However, here I agree with Sobin (2010: 131), who made the first attempt to capture English EQs in terms of generative syntax, arguing that EQs, being "in the realm of 'automatic' and 'untutored' knowledge", are "of great interest and relevance to analyses of question formation".

Different from true, canonical questions, EQs do not request for new information: "instead they are requests for con-firmation of something someone has heard" (Carnie 2006:340) or has not understood. EQs are strongly bound to the previous discourse and, thus, sometimes are referred to as *backward citations* (Escandell 1999) or *reprise questions* (Ginsburg and Sag 2000). To illustrate this point, observe again the pre-vious example, (3). The questioner in (3b) cannot hear a part of the *wh*-question in (3a) pronounced by their interlocutor (sup-pose, they cannot hear *Dracula*). So, the speaker formulates a *wh*-EQ, in which the echo wh-word *who* substitutes the un-heard portion of the utterance in (3a), the rest of the utterance being reproduced without changes, including the *wh*-word *what*.

So, echo *wh*-words are referential items, in the sense that they ask about a referent which has been already mentioned in the immediately previous discourse. By using as a question an *undeformed* utterance (i.e., a question with *wh*-in-situ), the speaker presents themself "as being unable to complete the utterance in a satisfactory way" (Fiengo 2007:76) and asks the addressee to repeat a missing bit of language and to assign a value to the echo *wh*-word.[1]

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[1] Of course, EQs can be produced in immediate response to an utterance not only in order to request for repetition, as in (2b), but also to express speaker's surprise, as in (i) (following Bartels (1997), I call the former type *unheard* EQs and the latter, *amazement* EQs):

(i)   a.   A: *We're going to Pakistan on vacation.*   (English)
       b.   B: *You're going WHERE on vacation?!*
       c.   A: *Well, the nature is beautiful there.*   [from Šimík 2009: 5]

In this paper, I restrict my attention only to unheard EQs, which can be considered interrogative constructions both from syntactic and semantic points of view (i.e., they seek to reduce the speaker's ignorance about some missed portion of the stimulus, denoted by a *wh*-word, under which the

In this paper, I mainly restrict my attention to the *wh*-EQs containing two *wh*-items, like those in (3b), in which one *wh*-word is "inherited" from the utterance and the second one is echo-introduced. Moreover, I put forth some novel evidence supporting a view that EQs are syntactic phenomena, underlined by a particular syntactic structure: namely, one involving two CP-levels (see Sobin 2010; Chernova 2015, 2017). As it will be argued, such a view allows accounting for several striking properties of EQs without appealing to purely discursive notions.

Here I focus on some key properties of EQs across two languages with different *wh*-fronting strategies: English and Russian. Additionally, I bring into discussion Spanish *wh*-EQs, in order to support some points of my argumentation. Consider the examples below. As is well-known, Russian, (4c), differs from English and Spanish, (4a) and (4b) respectively, in that the former exhibits obligatory Multiple *wh*-Fronting (hereafter, MWF) in questions with more than one *wh*-word. In other words, all *wh*-items must undergo movement in Russian (as generally in Slavic; see Rudin 1988; Richards 2001; Bošković 2002; among many others):

(4) a. Who$_1$ *sees* whom$_2$?
    b. Spanish
      ¿Quién$_1$ *ve*   a quién$_2$?
      who.NOM   sees who.ACC
      'Who sees whom?'
    c. Russian
      Kto$_1$ kogo$_2$ *vidit*?
      who.NOM who.ACC sees
      'Who sees whom?'

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proposition contained within the utterance is true). In contrast, the meaning of an amazement EQ is rather similar to an exclamative: in (ib), the speaker B knows exactly what has been said, however, in their opinion, Pakistan is the least expected place to go on vacation.

Recall that the few existent studies on EQs have argued that this type of interrogatives does not exhibit overt *wh*-movement (see Noh 1998; Iwata 2003; den Dikken 2003; Fiengo 2007; Sobin 2010; among others). Consider the English example in (5), where the questioner cannot hear a part of the previous utterance, a *wh*-question, (5a), and asks for clarification. Observe that in the EQ the echo *wh*-word *who* can only appear in-situ (notice that the apparent Superiority violation does not lead to ungrammaticality in this example), (5b) *vs.* (5c).[2] (In offering examples, I will signal an utterance with *U* and an echo response to it with *EQ*; the unheard portion of the discourse is signaled with {mumble}.)

    (5) a. U: What *did {mumble} buy yesterday?*
       b. EQ: *What did WHO buy yesterday?*
       c. EQ: * WHO *bought* what *yesterday?*

However, as discussed in Chernova (2015), Russian EQs do allow overt *wh*-movement in EQs. Compare the following examples from Russian with what we saw for English in (5):

    (6) Russian
       a. U: Kogo   *udaril* *{mumble}?*
                who.ACC hit
                'Whom did {mumble} hit?'
       b. EQ: Kogo   *udaril KTO?*
                who.ACC hit   who.NOM
                'Whom did hit WHO?'
       c. EQ: Kogo   *KTO*   *udaril?*
                who.ACC who.NOM hit

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[2] A reviewer suggests an interesting example of partial *wh*-movement in English EQs, which sounds marginal (although not completely odd) in contexts where there is a need to recover some missed part of the previous stimulus:
    (i)   a.   U: *Where did they buy {mumble} after the meeting?*
           b.   EQ:[??] *Where WHAT did they buy after the meeting?*
I leave a detailed account of such cases of partial wh-movement in English questions as well as its comparison with Russian and/or Spanish for future research.

    d. EQ: ? *KTO*   kogo   *udaril*?
           who.NOM who.ACC hit

As shown in (6), in Russian, in addition to the *wh*-in-situ option, (6b), the echo *wh*-phrase (here, *kto* 'who.NOM') has two other possible landing sites. On the one hand, it can undergo *partial wh*-movement (Fanselow 2005)[3] to some preverbal position, below the *wh*-word "inherited" from the utterance (here, *kogo* 'who.ACC'), (6c). On the other hand, the echo *wh*-word can also appear at the leftmost position, above the utterance's *wh*-word, (6d).[4]

    Finally, apart from English and Russian EQs, I also consider here some data from Spanish, a language with restricted availability for multiple *wh*-movement under certain licensing contexts (see Etxepare and Uribe-Etxebaria 2005; Uriagereka 2005; Gallego 2017). Observe from the examples below that in this language there are at least two available options for the echo-inserted *wh*-word:[5]

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[3] Following Fanselow's (2005:439) terminology, I assume that "movement is *partial* whenever the phrase has been displaced but its final landing site is below the relevant position".

[4] As reported in Chernova (2015), for some Russian speakers the in-situ position of the echo *wh*-word, as in (5b), is dispreferred over any other option with movement. There is also some variation regarding the leftmost position of the echo-introduced *wh*-phrase, (5d): many speakers judge it as marginal although possible, while others consider it perfectly acceptable; finally, few speakers reject it.

[5] Notice that the EQs in (6) are different from another type of Spanish interrogatives, as in (i), which have received attention in the studies of Spanish questions with *wh*-in-situ (see Jiménez 1997; Uribe-Etxebarria 2002; Etxepare and Uribe-Etxebarria 2012; Reglero 2007):

  (i) a.   A: *Mi padre, mi madre y yo fuimos a la tienda a comprar hue-*   (Spanish)
                vos, leche y café. Mi madre compró los huevos.
                'My father, my mother and I went to the store to buy eggs, milk and coffee. My mother bought the eggs.'
      b.   B: *Y tu padre compró ¿qué?*
                'And your father bought what?' [from Etxepare and Uribe-Etxebarria 2005:10]

Equally to EQs, such questions are necessarily linked to the previous discourse, but, unlike EQs, they do not ask about what has been said; rather, they ask about a strong presupposition following from the context.

(7) a. U: Qué   *ha leído* {*mumble*}?
            who.ACC has read
            'What has {mumble} read?'

    b. EQ: *Que* qué   *ha leído* QUIÉN?
            that what.ACC has read who.NOM
            'What has WHO read?'

    c. EQ: ??*Que* qué   QUIÉN   *ha leído?*
            that what.ACC who.NOM has read

    d. EQ: * *Que* QUIÉN   qué   *ha leído?*
            that who.NOM what.ACC has read

Similar to what we have seen for English, Spanish speakers show a strong preference for the *wh*-in-situ option, (7b), and unanimously judge as ungrammatical the possibility of overt echo *wh*-fronting into the leftmost position, (7d). However, differently from English and similarly to Russian, in Spanish, the echo *wh*-item can undergo partial movement into some immediately preverbal position, below the *wh*-word "inherited" from the previous utterance, (7c).[6]

    Let us summarize the data seen so far. On the one hand, all three languages under consideration allow the in-situ option in *wh*-EQs (although, it is dispreferred in Russian). On the other hand, partial *wh*-movement to some immediately preverbal position is allowed both in Spanish and Russian, but it is blocked in English. Finally, overt echo *wh*-movement to the left edge of the interrogative clause is acceptable only in Russian. This is summarized below in Figure 1.

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[6] Although both movement options are usually judged as odd by Spanish speakers (with different degrees of marginality), many of my informants notice an interesting contrast. Namely, questions with partial movement of the echo *wh*-word, (6c), sound certainly better than the one with complete *wh*-movement, (6d). For a detailed discussion of Spanish *wh*-EQs, see Chernova (2017).

	English	Spanish	Russian
Wh$_{EQ}$-in-situ	✓	✓	✓
Partial movement (*wh*$_U$ > *wh*$_{EQ}$)	✗	✓	✓
Overt movement (*wh*$_{EQ}$ > *wh*$_U$)	✗	✗	✓

Figure 1

Echo wh-movement across languages

In this paper, I mainly discuss why languages like Russian and Spanish do allow *wh*-movement in EQs and other languages like English do not. This paper aims to propose a syntactic account that can capture the attested parametric differences regarding movement.[7] As already mentioned, I focus here on EQs with two *wh*-words: one comes from the stimulus, and the other one is echo-introduced. I propose that similar to any type of syntactic movement, echo *wh*-movement proceeds successive-cyclically. However, its legitimacy is restricted by certain well-established parametric differences among *wh*-fronting languages. Namely, I argue that it depends on two main factors: (i) the clause-typing properties of the echoed utterance (declarative, interrogative, etc.) and (ii) the number of escape hatches out of phases (such as CP) available in a particular language.[8] I show that we can get a deeper understanding of even such a striking (and apparently 'non-syntactic') phenomenon such as EQs if we analyze it comparatively (here, between three typologically different *wh*-fronting languages) and under a unifying theory: namely, Cable's (2010) Q-based approach to the interrogative syntax.

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[7] Due to space restrictions, in this paper I will not address in detail the *wh*-in-situ option, available for all three languages. For a detailed discussion of how EQs with *wh*-in-situ can be accounted for in light of Q-based theory, the reader is referred to Chernova (2015).

[8] As is well known, apart from the standard phase heads C and *v* (Chomsky 2000, 2001), in some languages additional phase domains may be activated: e.g., TP in Romance (see Gallego 2010) or AspP in Slavic (see Dyakonova 2009; Chernova 2015). That is, I claim that echo *wh*-movement crucially depends on whether a language has available escape hatches for extraction of the *wh*-word from the lower domains into the highest level, CP$_{EQ}$. I will turn back to this idea in section 4.

The paper is organized as follows. In section 2, I review several key properties of *wh*-EQs, which distinguish them from canonical *wh*-questions, and propose that EQs have a particular syntactic structure. In section 3, I discuss three theoretical assumptions I make to account for the echo-puzzle: namely, Sobin's (2010) proposal on the double-CP structure underlying this type of questions; then Cable's (2010) Q-based approach to the derivation of canonical *wh*-questions; and, finally, the idea that languages can differ concerning what portion of the structure becomes a phase domain (see Gallego 2007, 2010; den Dikken 2007, among others). Afterward, in section 4, I offer an account that allows us to capture the attested variation regarding echo *wh*-movement in a uniform manner. First, I address EQs with full echo *wh*-extraction, to the leftmost position of the clause (available only in Russian, (6)), and then I consider EQs resorting to partial *wh*-movement (allowed in Russian and Spanish, (6)-(7)). Section 5 concludes this paper.

2. Key syntactic properties of wh-EQs

Many of the challenging properties of EQs have been previously reported in the literature (e.g., see Sobin 1978, 1990, 2010; Parker and Pickeral 1985; Dumitrescu 1992; Noh 1998; Ginsburg and Sag 2000; Escandell 1999, 2002; Iwata 2003; Fiengo 2007; Sudo 2007; Vlachos 2012; Chernova 2013, 2015, 2017; among others). Here I consider only a few of them, the most relevant ones for the topic at hand.[9]

As already mentioned in the previous section, perhaps, one of the most well-known and, at the same time, striking features of EQs is that they preserve the clause-typing properties of the sentence they "echo" (see Sobin 2010; Noh 1998; Escandell 2002; among others). As we have already seen for English in (5) (consider also (8) below), when an EQ repeats a previous *wh*-question, it has to maintain the *wh*-interro-

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[9] For a detailed review of the echo-features, the interested reader is referred to Sobin (2010) and Chernova (2015).

gative morphosyntactic features of the echoed utterance (here, the fronted *what* and the raised auxiliary *did*). In addition, the EQ introduces its own syntactic features (here, the echo *wh*-word *who*). Although the resulting structure clearly violates Superiority, the structures in (5b) and (8b) are grammatical contrary to their counterparts in (c).

> (8) a. U: What *did {mumble} drink at Mary's party?*
>   b. EQ: What *did WHO drink at Mary's party?*
>   c. EQ: * *WHO*ᵢ tᵢ *drank* what *at Mary's party*? [from Sobin
>   2010:132]

Similarly, the EQ in (9b), based on a previous polar question, has to preserve the yes/no nature of the echoed utterance, (9a); so, the echo *wh*-word must remain in-situ:

> (9) a. U: *Did Mary have tea with {mumble}?*
>   b. EQ: *Did Mary have tea with WHO?*
>   c. EQ: * *WHO*ᵢ *did Mary have tea with* tᵢ? [from Sobin
>   2010:132]

However, observe that in the case of "echoed" declarative sentences, as in (10), the echo inserted *wh*-word can either appear in-situ, as in (10b), or undergo overt *wh*-movement into the left periphery of the question (with a consequent raising of the auxiliary *did*), as shown in (10c):[10]

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[10] The fact that a declarative sentence in (9a) can be echoed both with *wh*-in-situ, (9b), and *wh*-ex-situ, (9c), leads Sobin (2010:132) to conclude that the latter is not a syntactic EQ, but rather an instance of what he calls *pseudo EQs*, "simply normally formed questions but with EQ intonation (a strong upward intonational contour)". According to Sobin, this type of sequences is only possible in response to a declarative utterance, as, according to him, EQs must preserve the clause-typing features of the sentence they echo. However, hereI analyze cases like (9c) from a different angle: In languages like English, only declarative utterances can give rise to EQs with overt movement; while in languages like Russian, the option of the explicit echo *wh*-movement is not restricted only to declaratives (see also Chernova 2015, 2017). I will come back to this issue later in this paper.

(10) a. U: *Mary had tea with {mumble}?*
      b. EQ: *Mary had tea with WHO?*
      c. EQ: * *WHOi did Mary have tea with* ti? [from Sobin
                    2010:132]

Generally, an EQ can reproduce any kind of utterance: for ex-
ample, an exclamative, (11), or an imperative, (12):

(11) a. U: *What a great pleasure this is*!
      b. EQ: *What a great WHAT this is*?
(12) a. U: *Go to see the archaeologist.*
      b. EQ: *Go to see WHAT/ WHO*?

As the reader may observe, the strategy of "echoing" is broadly
always the same: an EQ repeats the stimulus and replaces the
unheard portion by a *wh*-word.[11] Interestingly, the interroga-
tive clause-typing of the EQ itself co-occurs with the clause-
typing of the echoed sentence. In Escandell (2002), this echo-
property is called *mood clashes*, while in Sobin (2010) it is
named *Comp freezing*. In both cases, the terminology seeks to
capture the fact that the resulting EQ conserves the clause-
typing markers of the echoed utterance.

   Interestingly, an echo-introduced *wh*-word has always the
widest possible scope, independently of its position inside the
clause (see Sobin 2010; Chernova 2015, 2017). That is, as
shown below for English, independently of whether the echo-
introduced *wh*-phrase appears in the root clause, (8)-(12), or
deeply embedded, (13b), it always receives wide scope and
seeks for an answer:

(13) a. U: *Mary says [that Peter believes [that John is a lover of
                    {mumble}]].*

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   [11] Generally, the natural tendency for an echo *wh*-word is to remain in-
situ (at least in English and Spanish), although, as it has been mentioned
before, there is certain parametric variation across languages regarding
movement in EQs. I will discuss this issue later.

      b.   EQ: *Mary says [that Peter believes [that John is a lover of WHO]]?*

Crucially, the root-scope phenomenon is also observed in EQs with two *wh*-items, as in (8b). As is well-known, canonical, non-echo multiple questions presuppose exhaustification of each quantifier, giving rise either to pair-list or single-pair readings (see Higginbotham and May 1981; Hagstrom 1998; Krif-ka 2001). However, neither pair-list nor single-pair interpretations are available in EQs like (7b). For instance, consider (14), where even in the presence of a universal quantifier the EQ only allows the individual reading:

(14) a.   U: *Everybody talked to {ᵐᵘᵐᵇˡᵉ}.*
      b.   EQ: *Everybody talked to WHOM?*
      c.   R: *To Mary.*
      d.   R: * *John talked to Mary (Peter talked to Helen, Bill talked to Nancy…)*

Likewise, in an EQ based on a previous *wh*-question (see example (15) below), only the echo *wh*-word (*who* in (15b)) receives scope, while the *wh*-word inherited from the previous utterance (*what*) requires no response.[12] In fact, the only appropriate answer to (15b) is (15c) (as far as the agent of the action described by the stimulus in (15a) is John indeed):

(15) a.   U: What *is {ᵐᵘᵐᵇˡᵉ} going to bring to the party?*
      b.   EQ: What *is WHO going to bring to the party?*
      c.   R: *John*
      d.   R: * *John is going to bring vodka.*

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[12] 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 (in the sense that it does not require any answer), as in (ib), or wide scope, as in (ic) (see also Chomsky 1977a; Pesetsky 1987; Sobin 2010; 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...*

    e.   R: * *John is going to bring vodka, Mary is going to bring tequila...*

    f.   R: * *Vodka.*

Moreover, observe that an echo *wh*-word can appear both inside strong and weak islands (without consequences for the grammatical status of the correspondent sentence). Again, just as in previous examples, it necessarily receives wide scope. This is illustrated below for English, where the island effects are created by sentential subjects, (16), adjuncts, (17), and embedded *wh*-questions, (18), respectively:[13]

(16) a.   U: *Mary left [after John met {mumble}]*
        b.   EQ: *Mary left [after John met WHO]?*
(17) a.   U: *I think [that to sell {mumble}] would be a mistake.*
        b.   EQ: *You think [that to sell WHAT] would be a mistake?*
(18) a.   U: *I wonder [who could have {mumble}].*
        b.   EQ: *You wonder [who could have WHAT]?*

Finally, observe that there is an interesting piece of evidence suggesting that EQs do "actively involve syntax" (Sobin 2010:135): the echoed utterance and the correspondent EQ may show different person-agreement features and deictic elements. That is, the content of an EQ is sensitive to the changing discourse roles between the speaker and the addressee (see Dalrymple and Kaplan 2000; Harley and Ritter 2002). This is illustrated below for Spanish:

(19) a.   U: *Me iré   a tu   casa {mumble}.*
                  CL.1.SG go.FUT.1SG to your house
                  'I will come to your house {mumble}.'

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[13] In some sense, EQs in *wh*-fronting languages exhibit similar behaviour to standard, non-echo questions in languages resorting to *wh*-in-situ, (i) (for the latter, see Cheng 1991; Hagstrom 1998; Cheng and Rooryk 2000; Watanabe 2001, 2002; Kishimoto 2005; Cable 2010; among many others):

(i)   *Mary-wa* [DP [CP *John-ni nani-o   ageta] hito-ni] atta-no?*
    Mary.NOM   John-DAT what-ACC gave man-DAT met-Q
    *'What did Mary meet the man who gave _ to John?'

    b.   EQ: *¿(Que) (CUÁNDO) te   irás   a mi casa*
               that when   CL.2.SGgo.FUT.2SG to my house
               (CUÁNDO)?
               when
   'You will leave my house WHEN?'

The deictic accommodation (reflected on the verb and the pronouns) corresponds to the two dependents of the participants of the speech act: speaker and addressee (1st and 2nd person, respectively). These changes are unexpected if we assume that EQs are simply a type of direct quote (e.g., *Mary said: "I am hungry"*). Rather, EQs seem reminiscent of indirect questions (e.g., *Mary said that <u>she</u> was hungry*).

3.   Derivation of wh-EQs: assumptions

3.1. EQs as a double-CP structure

In this paper, I argue that, despite the appearance of being a purely pragmatic phenomenon, unaccountable under any syntactic rule, EQs actually do "actively involve syntax" (Sobin 2010:135). Some of the previously discussed echo-properties, such as co-existence of syntactic features of two different clause-types and wide scope for the echo-inserted *wh*-word independently of its position within a clause, suggest that *wh*-EQs are structurally different from true *wh*-questions.[14] Here I assume a particular echo-structure, originally proposed in Sobin (2010): EQs possess their own, interrogative C head (C_{EQ}), in addition to the C head involved in the derivation of the echoed utterance (C_U). As a result, the syntactic structure of EQs involves two different adjacent CP projections: namely, CP_{EQ} asymmetrically c-commands CP_U. This is schematically represented below:

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[14] For a detailed discussion of why EQs should be analyzed as a syntactic phenomenon, see Sobin (2010) and Chernova (2015, 2017).

(20) CP$_{EQ}$

          C$_{EQ}$ CP$_{U}$

                 C$_{U}$ TP

                          …echo-*wh*…
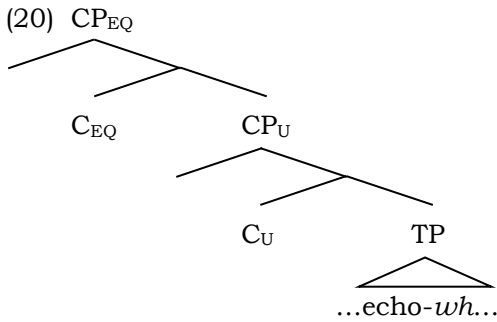
Under the structure in (20), it is expected that the clause-typing features of the echoed utterance would be preserved in the EQ, through projection of the CP$_{U}$ level. However, it does not mean that the derivation of *wh*-EQs somehow implies a "frozen copy" of the utterance's CP (*contra* Sobin 2010). Rather, I suggest that a C head of the same type as the one of the stimulus is merged during the derivation of *wh*-EQs; consequently, the same type of CP (but, importantly, not the same instance of that CP) is built in the course of the standard, bottom-up derivation. Afterward, an additional functional head is merged into the structure: C$_{EQ}$. It selects CP$_{U}$ as a sister and projects a higher, discourse-bound interrogative projection. C$_{EQ}$ assigns scope to the anaphoric, echo-introduced *wh*-word within its c-command domain.[15] The higher projection, CP$_{EQ}$, is also responsible for the request-for-repetition meaning of the resulting question. As the derivation proceeds, we obtain a double-CP structure, as in (20).

Following Chernova (2013, 2017), here I assume that Spanish EQs, especially those reproducing a previous yes/no ques-

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[15] Bear in mind, however, that Sobin's proposal has been developed in order to account for English data, with the attested differences between true *wh*-questions (with obligatory *wh*-movement) and *wh*-EQs (always with *wh*-in-situ) (see (7)-(9)). Thus, the widest scope of the in-situ echo *wh*-word is captured through its unselective binding by the highest C$_{EQ}$ at a distance, through valuation of the echo-feature (for details, see Sobin 2010: 144-146). However, as already advanced, in this paper, I deal with a different set of data, suggesting that an echo *wh*-item *can* move.

tion, offer an interesting piece of evidence for the double-CP structure proposal. Consider the example below:

(21) a. U: *¿Ha llegado* {mumble}*?*
             has arrived {mumble}
             'Has {mumble} arrived?'

  b. EQ: *¿(Que) *(si) ha llegado QUIÉN?*
          that   if has arrived who
          'Has WHO arrived?'

Notice that, in addition to the echo-inserted *wh*-word *quién* 'who', the EQ in (21b) exhibits two items that are absent from the original stimulus, the yes/no question, in (21a): *que* 'that' (a quotative marker) and *si* 'whether' (an interrogative particle). The latter appears only in Spanish EQs based on a previous *yes*/*no* question: while the lack of *si* would be ungrammatical in (21b), its presence is blocked in EQs built on a previous declarative, (22), or a *wh*-question, (23):

(22) a. U: *María compró* {mumble}*.*
            María bought {mumble}
            'María bought {mumble}.'

  b. EQ: *¿(Que) (* si) María compró QUÉ?*
         that   if María bought what
         'María bought WHAT?'

(23) a. U: *¿Qué compró* {mumble}*?*
            what bought {mumble}
            'What did {mumble} buy?'

  b. EQ: *¿(Que) (* si) qué   compró QUIÉN?*
         that   if what bought who
         'What did who buy?'

As I argued in Chernova (2013, 2017), *si* is a phonetically realized instance of the interrogative operator Q, which is merged within the CP level of a yes/no question and is responsible for its interrogative interpretation (see Baker 1970). Q tends to be null in Spanish (and also in English) root polar questions, but it becomes phonetically realized in embedded contexts: as *si* in

Spanish (see Rigau 1984; Suñer 1991; Hernanz 2012); *if/whether* in English (Baker 1970) or *se* in Italian (see Rizzi 2001). Thus, in Spanish EQs, as in (21b) (assuming the structure in (20)), *si* is a phonetically realized Q, merged at the specifier of CP_U; in the root context, the same position is occupied by its phonetically null counterpart.[16] This is schematized below in (24). So, the absence of *si* from the EQs in (22) and (23) is fully expected under such view:

(24) a.   U: [CP_U Ø C_U ...].
      b.   EQ: [CP_{EQ} [CP_U *si* C_U ...]]

Let us now briefly consider the introductory particle *que* 'that', which can optionally appear in Spanish EQs, independently of the clause-type of the echoed utterance.[17] I take *que* as a *quotative* marker (see Escandell 1999). In EQs, it signals that the speaker partially reproduces ("quotes") the words pronounced by her interlocutor in the previous speech turn. The data suggest that this marker is merged within the CP_{EQ} level: observe that *que* must always precede *si*:

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[16] An anonymous reviewer wonders why in English polar EQs *if/whether* (at Spec,QPU under my account) is not present, (i), even though it is in indirect, embedded non-echo polar questions, (ii):
(i)   a.   U: Did Mary have tea with {mumble}? (English)
      b.   EQ: (**If/Whether*) did Mary have tea with WHO?
(ii)   John asked *if/whether* Mary had tea with Dracula.

Perhaps the answer to the aforementioned contrast is that the auxiliar verb undergoes v-to-T-to-C movement in English root questions (contrary to their embedded counterparts; see Pesetsky and Torrego 2001, 2004) and acts as a sort of Doubly-Filled Comp Filter (Chomsky and Lasnik 1977). On the other hand, it has been argued that in Spanish root questions, the verb does not rise so high (see Gallego 2007, 2010 and references therein; see also the footnote 22). I leave this issue for future research.

[17] In principle, the particle *que* 'that' is optional in Spanish EQs. However, most of my informants note that EQs sound more natural (and are interpreted more easily as *echo*) when *que* is present. This opens an interesting question on which factors affect the degree of optionality of *que*. However, I leave this issue aside for the present.

(25) a. EQ: ¿Que si *ha llegado QUIÉN?*
               that if has arrived who
            'Has arrived WHO?'
      b. EQ:*¿Si ha *llegado quién?*
               if has arrived who
            'Has arrived WHO?'

3.2. A Q-particle approach to wh-EQs

As for the trigger of *wh*-movement into the left periphery, here I assume the main insights of Cable's (2010) Q-based theory for true, non-echo *wh*-questions and extend them to *wh*-EQs. According to Cable, movement of a *wh*-word in questions is a secondary effect of Q-movement: in other words, the fronted *wh*-word is not a scope-bearing operator. That is, the syntactic and semantic relations with the interrogative C are established through the help of a Q-particle, which is merged with a *wh*-word (or a larger, *wh*-containing phrase, XP) in its argument position. In languages resorting to *wh*-ex-situ, when Q is merged with a *wh*-phrase, the former takes its sister as a complement and projects its own QP layer, which minimally dominates both items. As a result, the first node endowed with the Q-feature being visible for C is QP. This entails that the attraction of the Q-feature into CP triggers movement of the whole QP (no feature percolation being necessary). This is schematically represented below:

(26) Derivation of standard wh-questions with overt
      wh-movement

(adopted from Cable 2010: 38)
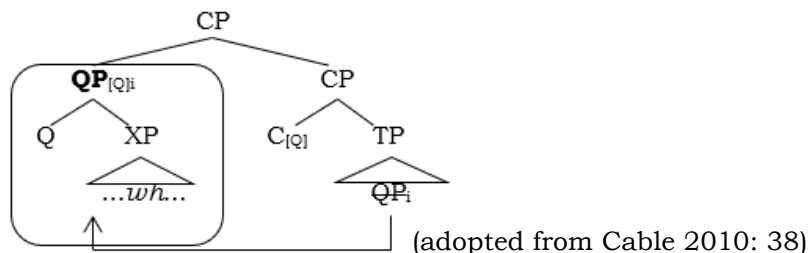
Extending Cable's original theory to *wh*-EQs, I argue that the derivation of this type of interrogatives involves three crucial elements: (i) an anaphoric echo *wh*-phrase, corresponding to the unheard portion of the stimulus, merged at the argument position, (ii) a phonetically null discourse-bound interrogative Q-particle (Q_{EQ}), merged anywhere in the tree where it c-commands the echo *wh*-word, and (iii) a discourse-related interrogative head C_{EQ}.[18] Independently of the merging place of the Q_{EQ}, by the end of the derivation, it must move to the scope position of the question, a syntactic universal. I propose that in *wh*-EQs the scope position for the interrogative operator is in the specifier of CP_{EQ}. Thus, echo *wh*-movement is triggered by a formal imperfection on the Q_{EQ}-particle itself and its need to check its feature [Q_{EQ}] with the head C_{EQ}.

In principle, under Q-theory, a Q-particle can be merged anywhere in the tree where it c-commands the *wh*-word. Following Cable (2010), I propose that in *wh*-fronting languages the size of a *wh*-containing constituent XP is restricted by the locality-sensitive Agree operation between the Q-morpheme and the echo *wh*-word. Regarding EQs, it means that an echo Q-particle must agree with the echo *wh*-word it c-commands within some local domain.

I suggest that all echo-inserted *wh*-words (recall their anaphoric/referential nature, as opposed to *wh*-words of the ordinary question) enter the derivation bearing a valued instance of the [wh]-feature, see (27a). Notice, however, that this [wh]-feature on echo *wh*-elements is different from the standard [wh] on *wh*-words involved in non-echo questions, as only the former are anaphoric items (hence, they bear a [+anaphoric]

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[18] In fact, Cable (2010) suggests that different structures might involve different instances of the same category label Q. So, it is natural to assume that a Q-particle involved in the derivation of a true *wh*-question is different from the one involved in the derivation of a *wh*-EQ. One of the main differences between two Qs is that only Q_{EQ} is anaphoric. Here I signal this property with the index *EQ* on the interrogative Q-particle and the corresponding Q-feature it bears. It also allows us to distinguish between elements involved in the derivation of *wh*-EQs and those found in the derivation of true *wh*-questions.

feature, which I represent here, for simplicity's sake, with an index *EQ*). As for echo Q-particles, assuming Cable (2010), I propose that they must bear a bundle of features, see (27b). In addition to the interrogative feature [Q_{EQ}], I suggest that such Q-morpheme also carries an unvalued instance of [wh_{EQ}], which forces the Q-particle to agree with the anaphoric *wh*-phrase it c-commands:

(27) a. Echo *wh*-word: {[iwh_{EQ}]}
     b. Echo Q-particle: {[Q_{EQ}]; [uwh_{EQ}]}[19]

Such Q/*wh*-agreement is subject to locality conditions. In particular, as discussed in Cable (2010), agreement cannot cross into islands and separate spell-out domains. Under such contexts, the unvalued feature on Q_{EQ} cannot be checked and the derivation fails:

(28)
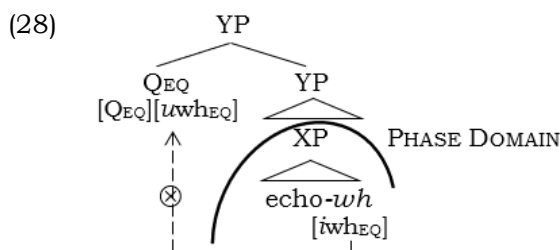
Within Cable's Q-theory, *wh*-ex-situ and *wh*-in-situ structures result from different merging options of Q and its *wh*-containing sister XP. These options are summarized below. On the one hand, the Q-particle can take XP as a complement and project a QP; then the whole complex QP undergoes movement into CP, resulting in *wh*-ex-situ. On the other hand, Q can ad-
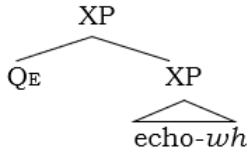
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[19] Under this assumption, EQs with *wh*-in-situ (an option allowed in all three languages under consideration) are derived through the help of a particular instance of Q_{EQ} that does not need to undergo agreement with an echo *wh*-phrase. I do not discuss this option in detail in this paper due to space restrictions. For a detailed account, the interested reader is referred to Chernova (2015).

join to XP; such Q does not project and, as a consequence, it undergoes movement into the scope position of the correspondent question by itself, leaving its sister in-situ. These two options are represented in (29a) and (29b), respectively:

(29) a. Q_{EQ}-projection (wh-ex-situ)

$$\begin{array}{c}
QP_{EQ} \\
\diagup \diagdown \\
Q_{EQ} \quad\quad XP \\
\diagup\diagdown \\
\text{echo-}wh
\end{array}$$
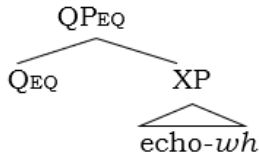
b. Q_{EQ}-adjunction (wh-in-situ)

$$\begin{array}{c}
XP \\
\diagup \diagdown \\
Q_E \quad\quad XP \\
\diagup\diagdown \\
\text{echo-}wh
\end{array}$$

According to Cable, *wh*-fronting languages always resort to Q-projection, while *wh*-in-situ languages like Japanese or Chinese resort to Q-adjunction. However, I propose that even in *wh*-fronting languages, under particular, discourse-bound contexts such as *wh*-EQs, a discourse-bound Q-particle can resort to both merging options. In other words, in *wh*-fronting languages, not all Q_{EQ}-morphemes need to project. Certain instances of Q_{EQ} can resort to adjunction, although they still require agreement with the echo *wh*-word within their c-command domain. If the echo Q-particle merges locally, no effect arises at the outcome: after agreement, the echo *wh*-word remains at its base position and Q_{EQ} undergoes fronting into its scope position on its own. However, if such Q_{EQ} is initially merged at long distance from its *wh*-containing goal XP, it forces the latter to undergo partial *wh*-fronting from its argument position into the edge of a phase, to become visible for the probe Q_{EQ}. This type of Q_{EQ}-adjunction, parameterized for Spanish and Russian (which I will discuss later in this paper), is illustrated below:

(30) Q_EQ-adjunction (after Q/wh-agreement)
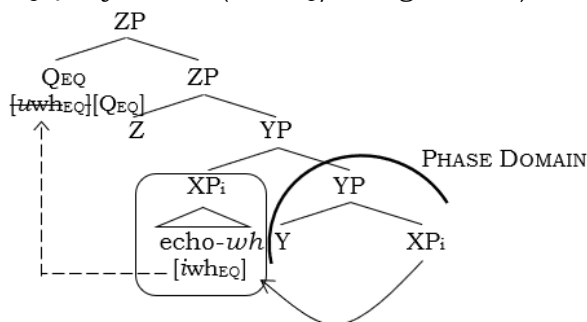

3.3. Parametrized points of spell-out

As it is well-established (since Chomsky 2000, 2001), the complement domains of the phase heads, standardly *v* and C, become opaque for further operations as a result of being transferred to the external systems (the so-called Phase Impenetrability Condition; PIC).[20] In addition, assuming the idea that *v*-movement results in the extension of "checking domains" (see Chomsky 1986, 1995), several studies on phases have argued that points of Spell-out are subject to parameterization (see Svenonius 2000; den Dikken 2007; Gallego 2007, 2010; Pesetsky 2007). In other words, languages can differ as to what portion of the structure becomes a phase domain.

The extension of *v*P's phasehood in a particular language is parasitic on head movement of *v* into a higher functional projection since *v* brings together with it its phasal properties.

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[20] According to Chomsky's (2000, 2001) PIC, once the derivation is done at a given stage, correspondent chunks of structure are spelled-out, thereby becoming inaccessible for the further computation. PIC helps to reduce the computational burden, being a constraint that forces the system to "forget" about transferred portions of the structure. According to Chomsky's (2001:14) version of PIC, the transfer of the complement domain of a phase is delayed until the next phase head is projected; afterwards any further syntactic manipulation of the spelled-out chunk of structure is prohibited:

(i)   Given structure [_ZP Z ... [_HP α [H YP]]], with H and Z the heads of phases], the domain of H [the head of a strong phase] is not accessible to operations at ZP [the next strong phase]; only H and its edge [α] are accessible to such operations.

The mechanism of phase extension that I assume in this paper is synthetically represented below (adopted from den Dikken 2007):

(31) a. [$_{ZP}$ α [Z] [$_{HP}$ [H]]]

                    phase Φ

b. [$_{ZP}$ α [Z+H$_i$] [HP   t$_i$]]

        phase Φ   ←   phase Φ
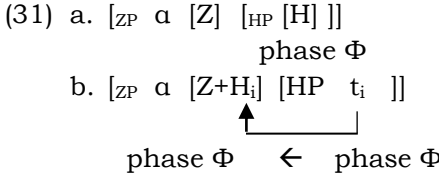
In (31), after movement and adjunction of a phase head H to a higher head Z (creating a complex head), H brings together with it its phasal properties. As a consequence, the phase HP extends its phasal status to ZP. Subsequently, what used to be the edge of HP turns to the domain of the newly extended phase ZP.

Let us first consider Spanish, a language that resorts to the extension of the phase vP into TP (see Gallego 2007, 2010), due to "one of the most obvious differences between Romance and English […]: v-to-T movement" (Gallego 2006:47). The author captures the very well-known descriptive distinction between the so-called "morphologically rich" languages (e.g., Romance) and "morphologically poor" ones (e.g., English) in terms of *Phase Sliding*. Namely, in Spanish (but not in English), TP is a phase.[21] The contrast between these two types of languages is schematized below in (32), where α (within the clear shadowed zone) stands for the edge of a phase; meanwhile, β (the dark shadowed zone) represents the phase domain, which gets transferred to the Interfaces and becomes invisible to the higher syntactic nodes:

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[21] Roughly, Gallego proposes that in Romance NSLs the functional head v undergoes movement to T in order to value the so-called *Tense feature* ([TNS]); later C, which is endowed with a Tense-probe, simultaneously matches T and v (see Gallego 2007, 2010 for a detailed theoretical discussion).

(32) a. English

$[_{vP}\quad \alpha\quad [v]\ \ [VP(=\beta)\ \ ...]]$

b. Spanish

$[_{TP}\quad \alpha\quad [T]\ \ [_{vP}(=\beta)\ [v]\ [VP\ \ ...]]]$
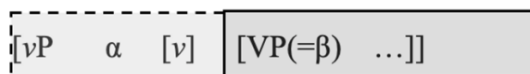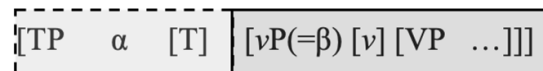
Gallego addresses many properties of Spanish (and other Romance languages) which, according to his proposal, are the result of TP being a phase: e.g., *pro*-drop, the fact that subjects can appear both pre- and post-verbally (the formers bearing a topic-like flavor), and the lack of obligatory subject-verb inversion in questions (see (33)), among others.

(33) Spanish (from Gallego 2007: 129)
    a. [_{CP} *Por qué* C [_{TP} *Celia llamó a su hermana*]]?
        why   Celia called to her sister
    'Why did Celia call her sister?'
    b. [_{CP} *Por qué* C *llamó* [_{TP} *(Celia) a su hermana (Celia)*]]?
   why   called   Celia to her sister   Celia
    'Why did Celia call her sister?'

Observe from (33), that, contrary to English questions (with obligatory subject-verb inversion), in their Spanish counterparts the subject (here, *Celia*) can appear both above and below the verb. As discussed in Gallego (2007:129), while the question in (33b) has a standard, out-of-the-blue meaning ('there is a reason x, such that Celia did not call her sister because of x'), the question in (33a), with a preverbal subject, receives a marked interpretation. Namely, it can mean either 'why was it Celia (and not another person) who called her sister?' or else 'why was it (true) that Celia called her sister?'. According to the author, in (33a) the preverbal subject appears at the edge of TP and, as a consequence, acquires a topic-like flavor. This is a plausible outcome under Chomsky's (2001) claim that discourse-oriented semantics is related to phase

edges. That is, in Spanish the edge of TP can exhibit certain peripheral properties generally attributed to the "standard" phase heads C and v.[22]

As for Russian, another language with rich morphology, it has been argued that it has an additional phasal projection, AspP (see Dyakonova 2009; Chernova 2015). This idea recasts the well-known fact about the richness of aspectual morphology in Slavic, as opposed to languages like Spanish or English. As is well-known, in Slavic languages, aspectual differences are encoded in verbal morphology, particularly, in a large number of aspectual prefixes (see Svenonius 2004). For instance, Russian has a fairly simple system of tense and a quite complex system of aspect, which means that interpretation of the former is mostly determined by the latter (see Borik 2006; Borik and Reinhart 2004). It has been proposed that in Slavic languages, similarly to Romance, the verb undergoes movement, but "it remains relatively low", as it "cannot move as high as T" (Svenonius 2004b:6). Namely, the phase head v moves to Asp (see Svenonius 2004a,b; Ramchand 2004; Bošković 2014). I argue that, as a consequence, the phasal properties of vP extend to AspP, as represented below (compare with (32)):[23]

(34)

COMPLEMENT DOMAIN   EDGE DOMAIN

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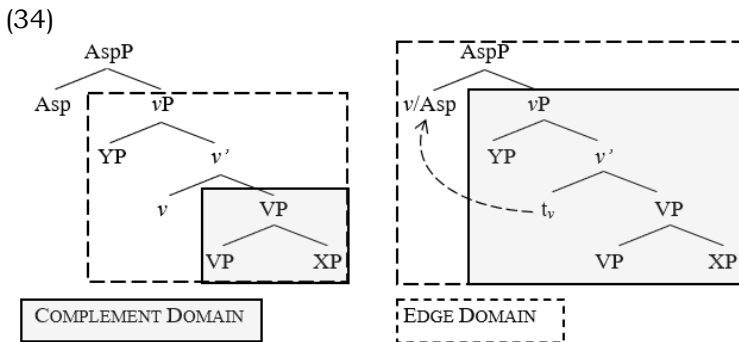
[22] Gallego's proposal captures the sense of Uriagereka's (1995) FP, a projection "sandwiched" between CP and IP and encoding discourse-oriented effects.

[23] For a detailed discussion of arguments suggesting v-to-Asp movement and its application to canonical multiple wh-questions the reader is referred to Chernova (2015).

A natural effect of the phase extension is the consequent extension of the phase complement domain, a point that is going to be crucial for our purposes. Recall from (31) that, under PIC, only the head H and the edge of a phase HP are visible for further operations, while the complement of H becomes opaque by being transferred. However, if the phase HP extends to ZP, what used to be the edge of HP turns into the domain of the newly extended phase ZP. As a result, all syntactic objects with unvalued feature(s) are forced to escape the domain of ZP, otherwise, the derivation would crash.

Applying this logic to Russian (and Spanish), I argue that after movement of v into a higher head, phase extension takes place. That is, the edge of vP turns into the domain of AspP (in Russian) or TP (in Spanish). Subsequently, all potential goals or elements with any formal imperfection must be removed from the edge of vP to the edge of the higher, newly constructed phase, in order to be visible for further syntactic operations. In contrast, in English, the phase vP does not extend and the verb remains low (in v). This scenario is schematically represented below for all three languages:

(35)
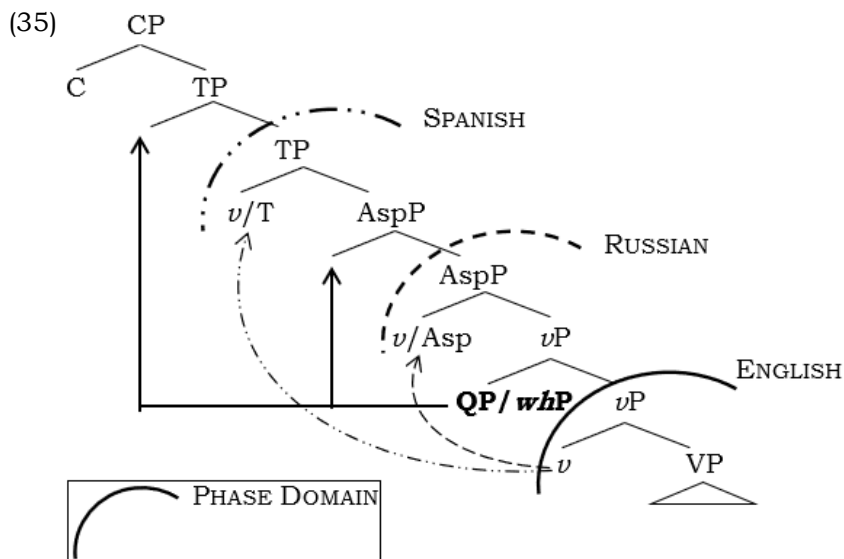
In what follows, I argue that the availability of echo *wh*-movement is parameterized across languages by PIC, as such movement proceeds successive-cyclically out of phase domains through available escape hatches along its path. Partial raising to the preverbal area of echo *wh*-words, an option available in Russian and Spanish EQs, is a consequence of the extension of the vP phasehood and the need of the echo Q-particle to undergo agreement with the echo *wh*-word it c-commands. In EQs, further movement into the highest level, CP_{EQ}, proceeds through the edge of the lower CP_U, which is a phase in all three languages under consideration. As is well-known, the number of available escape hatches out of phases is also parameterized.

4. Accounting for the parametric variation on echo wh-movement

As already mentioned through the paper, I claim that EQs in principle allow for both *wh*-in-situ and *wh*-ex-situ strategies, with an intermediate option: partial *wh*-movement (allowed in Russian and, marginally, in Spanish). However, the availability of overt *wh*-movement into the leftmost position of the question is constrained by the clause-type of the echoed utterance. Importantly, there is a crucial observation in Sobin (2010), which I take as a departure point for my argumentation. Consider again (10), repeated below as (36) with some additional items:

(36) a.   U: *Mary had tea with {mumble}?*
     b.   EQ: *Mary had tea with WHO?*
     c.   EQ: * *WHO$_i$ did Mary have tea with* t$_i$?

Sobin observes that English EQs allow for overt *wh*-movement, as in (36c), only when the echoed utterance is declarative, (36a). In effect, recall from our previous discussion that echo *wh*-movement is blocked in other contexts (when the echoed

sentence is either a polar, (37), or a *wh*-question, (38)). In such cases, the only available option for the *wh*-word is to appear in-situ:

(37) a. U: *Did Mary have tea with {mumble}?*
     b. EQ: *Did Mary have tea with WHO?*
     c. EQ:* *WHOᵢ did Mary have tea with tᵢ?*
(38) a. U: What *did {mumble} drink at Mary's party?*
     b. EQ: What *did WHO drink at Mary's party?*
     c. EQ:* *WHOᵢ* what *did tᵢ drink at Mary's party?*
     d. EQ:* *WHOᵢ tᵢ drank* what *at Mary's party?*

Sobin argues that EQs must preserve the syntactic character of the stimulus (under his proposal, by "freezing" the CP of the echoed utterance). Thus, (37c) is ungrammatical because overt *wh*-movement is not compatible with the *yes/no* syntax of the stimulus in (37a). Similarly, movement of the echo *wh*-word *who* in (38c,d) would break the "frozen" CP layer of the echoed *wh*-question in (38a).

   However, as we have seen already in (6) (repeated below with additional items as (39)), this prediction does not hold for Russian *wh*-EQs, where the echo *wh*-word can undergo overt movement into the leftmost position even when the CP of the echoed utterance has interrogative syntax. This is exemplified below for EQs built on a previous *wh*-question:

(39) Russian
     a. U: Kogo   *udaril {mumble}?*
              who.ACC hit
              'Whom did {mumble} hit?'
     b. EQ: Kogo   *udaril KTO?*
              who.ACC hit   who.NOM
              'Whom did hit WHO?'
     c. EQ: Kogo   *KTO   udaril?*
              who.ACC who.NOM hit
     d. EQ: ?*KTO   kogo   udaril?*
              who.NOM who.ACC hit

As shown in (39), in Russian the echo *wh*-word *kto* 'who.nom' can appear in-situ, (39b) (just as in English), but it can also undergo movement to an immediately preverbal position, (39c), or even to the left periphery of the question, (39d), above the *wh*-word "repeated" from the stimulus.

We have also seen that in Spanish EQs the option of echo *wh*-movement is neither completely blocked, although it is more restricted than in Russian (see (40) below):

(40) a. U: Qué   *ha leído* {mumble}?
                 who.ACC has read
                 'What has {mumble} read?'
      b. EQ: *Que* qué   *ha leído* QUIÉN?
                 that what.ACC has read who.NOM
                 'What has WHO read?'
      c. EQ: ??*Que* qué   QUIÉN   *ha leído?*
                 that what.ACC who.NOM has read
      d. EQ: * *Que* QUIÉN   qué   *ha leído?*
                 that who.NOM   what.ACC has read

Consider also another example, in (41), where the *wh*-EQs echoes a previous polar question and, in addition, exhibits the quotative marker *que* 'that' and the interrogative operator *si* 'whether':

(41) a. U: *¿ Has   traído* {mumble}?
                Have.2SG brought {mumble}
                'Have you brought {mumble}?'
      b. EQ: *¿(Que)* si *he   traído   QUÉ?*
                that if have.1SG brought what
                'Have I brought WHAT?'
      c. EQ:? *¿(Que)* si QUÉ *he   traído* t_i?
                that if what have.1SG brought
      d. EQ:* *¿(Que)* QUÉ si *he   traído* t_i?
                that what if have.1SG brought

In Spanish EQs, in addition to the standard *wh*-in-situ option, (40b) and (41b), the echo *wh*-word can also undergo partial

wh-movement into some preverbal position, the option (c) in
(40) and (41) (similarly to Russian and contrary to English).[24]
However, movement into the leftmost position, above *qué* 'what'
in (40d) and *si* 'whether' in (41d) (presumably into CP_EQ), is
blocked (as opposed to Russian).

Thus, our data suggest that the standard assumption on
the mandatory *wh*-in-situ for EQs does not hold cross-linguis-
tically. In what follows I offer an account for the overt echo *wh*-
movement (available only in Russian) and partial echo *wh*-
movement (available in Russian and Spanish) that captures
the attested parametric variation uniformly.

4.1. Echo *wh*-movement into the leftmost position

Extending Cable's (2010) Q-based theory to EQs (see section
3.2), I argue that in EQs with the echo *wh*-word at the leftmost
position (e.g., *Who_i did Mary have tea with t_i?*, (36c)), what un-
dergoes movement into CP_EQ is not the echo *wh*-word alone,
but rather a complex QP_EQ projection, which includes the echo
Q-morpheme and the *wh*-word.

I claim that echo *wh*-movement proceeds successive-cyc-
lically, through available escape hatches on its way up to CP_EQ.
Following Chomsky's (2001 *et seq.*) Phase theory, I assume
that internal Merge of the fronted *wh*-phrase to the highest CP

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[24] Recall our observation that EQs with partial fronting of the echo
wh-word, below the *wh*-item "inherited" from the echoed stimulus, sound
quite weird for most consulted Spanish speakers (see the footnote 6). Moreo-
ver, an anonymous reviewer brings to my attention an interesting contrast
between the following Spanish examples:

(i)   a.   ?? *¿Que dónde QUIÉN estaba?*
      b.   ?(?) *¿Que dónde QUIÉN estaba durmiendo?*
(ii) *¿Qué dónde estaba (durmiendo) QUIÉN?*

Although both examples in (i) sound rather odd in comparison with (ii), with
wh-in-situ, it seems that the question in (ib), with a "heavier" VP, is slightly
better than the one in (ia). Although a detailed account of Spanish data falls
aside from the scope of this paper, the contrast with their Russian counter-
part is noteworthy. Namely, questions with partial movement of the echo
wh-word have a higher degree of acceptability among Russian speakers than
among Spanish speakers. I leave this interesting issue for future research.

node does not proceed in a unique long leap, but rather occurs through the intermediate landing sites, or *escape hatches* (i.e., every specifier along the movement path). Assuming the double-CP structure of *wh*-EQs (schematically represented below in (42)), it is expected that the complete echo *wh*-extraction has to proceed through the edge of CP_U on its way into CP_{EQ}.

(42) [CP_{EQ} ___ C_{EQ} [CP_U ___ C_U [TP ... [QP_{EQ} *wh*]]]]

Under this view, the grammaticality of EQs with full *wh*-extraction crucially depends on the availability of the specifier of CP_U as an escape hatch out of the phase domain. I argue that this is precisely the reason why the clause-type of the echoed utterance (declarative *vs.* interrogative) plays such an important role for overt echo *wh*-movement.

When an EQ is based on a declarative utterance, the edge of the phase CP_U is left unfilled; so it can act as an escape hatch for an echo *wh*-word on its way to the edge of the higher CP_{EQ}. I claim that this is the reason why the English example in (36c), with overt extraction of the echo *wh*-word (repeated below as (43b)) is grammatical:[25]
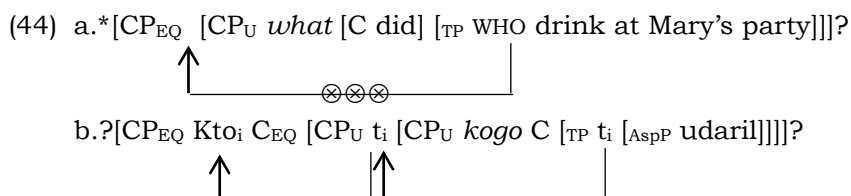
(43) a. U: *Mary had tea with {^{mumble}}.*
       b. EQ: [CP_{EQ} WHO$_i$ [CP_U t$_i$ [C_U *did*] [*Mary have tea with* t$_i$]]]?

However, as we have seen, complete echo *wh*-extraction out of interrogative contexts is much more restricted and it is subject to parametric variation: such EQs result completely ungrammatical in English (see (37c) and (38c,d)) and Spanish (see (41d)), but they are licit (although slightly deviant) in Russian (see (39d)). This puzzling crosslinguistic variation follows straightforwardly from the current proposal. It is commonly assumed in the literature that, unlike languages of the English

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[25] Observe that under this view there is no need to postulate any exceptional nature of such constructions (*contra* Sobin's 2010 pseudo-EQs).

type, Slavic languages, which exhibit obligatory multiple *wh*-fronting in standard, non-echo *wh*-questions, resort to multiple specifiers of CP (see Rudin 1988; Richards 2001; Bošković 2002; among many others).

In EQs based on a previous *wh*-question, the specifier of the CP_U is occupied by the *wh*-word "inherited" from the utterance, as in (38)-(39), or, in the case of Spanish EQs based on a polar question, (41), this position hosts *si* 'whether'. However, in Russian EQs there is an additional escape hatch at CP_U. Thus, it is not surprising that a complete echo *wh*-extraction into CP_{EQ}, through the edge of CP_U, is allowed only in this language. The contrast is schematically represented below, for the English EQ in (38c) and the Russian one in (39d):[26]

(44) a.*[CP_{EQ} [CP_U *what* [C did] [TP WHO drink at Mary's party]]]?

⊗⊗⊗

b.?[CP_{EQ} Kto$_i$ C$_{EQ}$ [CP_U t$_i$ [CP_U *kogo* C [TP t$_i$ [$AspP$ udaril]]]]?

In this respect, Spanish is similar to English in that it resorts to single *wh*-movement in true questions with more than one *wh*-word (see below). Hence, this language does not resort to multiple specifiers of CP:

(45) a. ¿Quién$_1$ *ha visto* a quién$_2$?
          who.NOM has seen who.ACC
          'Who has seen whom?'

---

[26] As for the marginal status of Russian EQs with complete *wh*-movement, (38d), I argue that it can be accounted for in terms of Relativized Minimality (since Rizzi 1990), namely its reformulation in terms of sensitivity to the feature-specification of the involved elements (Starke 2001; see also Rizzi 2013):

(i)   In the configuration [...X ...Z ...Y], a local relation cannot hold between X and Y if Z intervenes and Z fully matches the specification of X in the relevant morphosyntactic features [adopted from Rizzi 2013:179].

Roughly, the echo *wh*-word in (43a) can pass over the non-echo *wh*-item because the former is more richly specified (by being [+anaphoric]) than the latter. For a detailed discussion of this issue, see Chernova (2015).

b.*¿Quién₁   a quién₂ *ha visto*?[27]
      who.NOM who.ACC has seen

Thus, the ungrammaticality of Spanish EQs with echo *wh*-movement into the leftmost position, as in (41d), is also expected under the same logic as in (44).

4.2. Partial echo wh-movement

Let us consider now partial echo *wh*-movement to some preverbal position, attested in Russian and Spanish EQs (see the examples below):

(46) Spanish
    [??]*¿Que* qué   *QUIÉNᵢ*   *ha leído tᵢ*?
        that what.ACC who.NOM *has read*
    'What did WHO read?'

(47) Russian
    Kogo   *KTOᵢ*   *udaril tᵢ*?
    who.ACC   who.NOM hit
    'Whom did WHO hit?'

Recall our discussion that in these languages, in addition to the phase domains projected by C and *v*, there is another intermediate functional projection that can act as a phase and, consequently, can exhibit A-bar properties (and host elements undergoing A-bar movement). In Russian, such phasal properties are assumed by AspP and in Spanish, by TP.
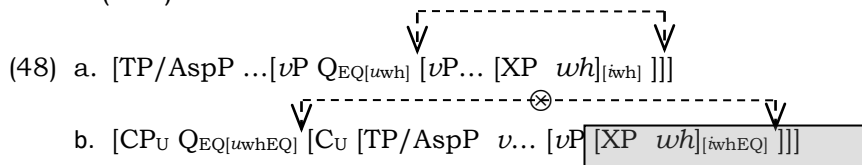
I suggest that in EQs with partial *wh*-extraction, there is an echo Q-particle that is merged *at distance* from the echo *wh*-word and resorts to adjunction. This means that such Q_{EQ}

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[27] It has been argued in the literature that under particular pragmatic contexts Spanish can allow multiple *wh*-fronting (see Etxepare and Uribe-Etxebarria 2005; Uriagereka 2005; Gallego 2017), although, presumably, the lower *wh*-word does not move as high as the first one:

(i)   [?]No sé   *quién₁*   *a quién₂*   ha   enviado una carta.
       NEG know who.NOM to who.ACC has sent   a letter
       'I don't know who sent the latter to whom'   (Uriagereka 2005: 2)

does not need to project its QP_{EQ}, thus it does undergo movement into CP_{EQ} by itself to check its Q_{EQ}-feature. Assuming Cable's (2010) Q-based theory, such Q can adjoin low (e.g., within vP) or high (e.g., at CP_U). I assume that such Q bears an unvalued instance of [wh_{EQ}]; thus, it has to undergo agreement with the echo *wh*-word, bearer of the valued instance of the matching feature. The latter must be visible to the former to be able to agree.
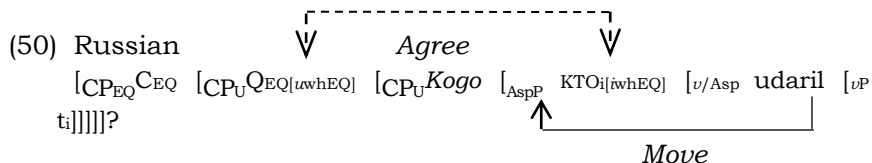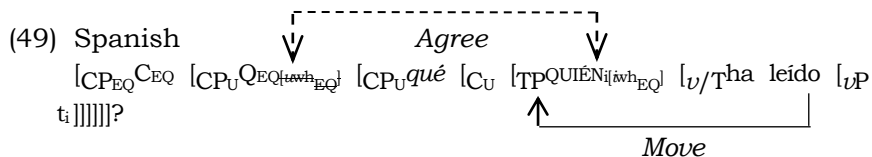
Recall that, in principle, the Q-particle can be merged anywhere in the tree. Suppose that Q_{EQ} is adjoined low (say, at the edge of vP), as represented in (48a). From this position, it can agree with the echo *wh*-word, valuing its instance of [wh_{EQ}], and then it undergoes successive-cyclic movement into its scope position, the edge of CP_{EQ}. By being adjoined, such Q_{EQ} does not pied-pipe the echo *wh*-word, leaving it in-situ. Suppose, however, that the Q_{EQ} is merged high (say, at CP_U), as shown in (48b):

(48) a. $[\text{TP/AspP} \ldots [v\text{P} \ Q_{EQ[uwh]} \ [v\text{P} \ldots \ [\text{XP} \ wh]_{[iwh]} \ ]]]$

   b. $[\text{CP}_U \ Q_{EQ[uwhEQ]} \ [\text{C}_U \ [\text{TP/AspP} \ v \ldots \ [v\text{P} \ [\text{XP} \ wh]_{[iwhEQ]} \ ]]]$

In (48b), the *wh*/Q agreement cannot take place, as the goal (the echo *wh*-word) is within the domain of the extended phase and, hence, it is invisible to the higher probe Q_{EQ}. Given that the formal imperfection on Q_{EQ} cannot be deleted, such derivation fails.

The data in (46)-(47) suggest that in Spanish and Russian EQs with partial *wh*-movement the Q_{EQ} is merged high, as we see that the echo *wh*-word (the goal) raises to a preverbal position. I assume that in these languages, in order to escape the extended phase domain and remain visible to the probe, the echo *wh*-word moves to the edge of TP or AspP, respectively. Notice that the "inherited", non-echo *wh*-word (at Spec,CP_U) cannot intervene between the probe and the goal, as it is specified with a different set of features (i.e., it does not bear [wh_{EQ}]).

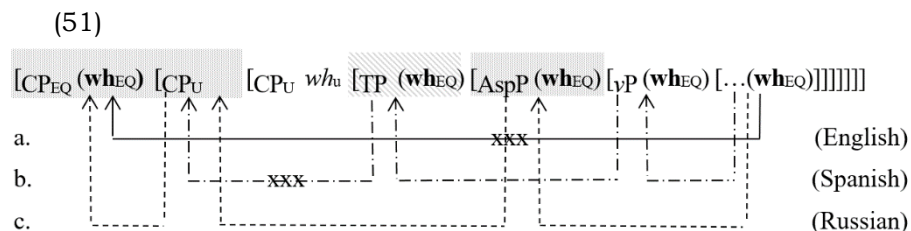This is illustrated below for the Spanish *wh*-EQ in (46), and the Russian one in (47), respectively:[28]

(49) Spanish $\overset{\text{Agree}}{\overbrace{\text{V} \qquad\qquad \text{V}}}$

[$_{CP_{EQ}}$C$_{EQ}$ [$_{CP_U}$Q$_{EQ[\text{iwh}_{EQ}]}$ [$_{CP_U}$*qué* [$_{C_U}$ [$_{TP}$QUIÉN$_{i[\text{iwh}_{EQ}]}$ [$_{v/T}$ha leído [$_{vP}$ t$_i$]]]]]]?

$\underset{\text{Move}}{\underbrace{\qquad\qquad\qquad}}$

(50) Russian $\overset{\text{Agree}}{\overbrace{\text{V} \qquad\qquad \text{V}}}$

[$_{CP_{EQ}}$C$_{EQ}$ [$_{CP_U}$Q$_{EQ[\text{uwhEQ}]}$ [$_{CP_U}$*Kogo* [$_{AspP}$ KTO$_{i[\text{iwhEQ}]}$ [$_{v/Asp}$ udaril [$_{vP}$ t$_i$]]]]]]?

$\underset{\text{Move}}{\underbrace{\qquad\qquad\qquad}}$

Once agreement takes place and the Q$_{EQ}$ deletes its formal imperfection, it undergoes local movement into the edge of CP$_{EQ}$, reaching its scope position.

Evidently, the option of partial *wh*-movement is not available in English, as this language does not resort to the extension of the *v*P phase. Thus, the echo *wh*-phrase remains low, in-situ.

The successive-cyclic nature of echo *wh*-movement is schematically represented below (the shadowed zones represent the additional host positions and escape hatches for the echo *wh*-word that are available in Russian and Spanish, but absent from English):

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[28] A reviewer wonders what happens if the Q-particle is merged at the very end of the derivation, when C$_{EQ}$ is in the structure. In fact, under Cable's (2010) Q-theory, the Q-particle can be merged anywhere in the tree from where it c-commands the *wh*-phrase. As we have seen, if the Q is merged *v*P-internally and projects a QP, it triggers explicit *wh*-movement into the left periphery. However, the Q-particle can also be adjoined directly to C$_U$ or C$_{EQ}$. In such a case, the Q-particle will not project any QP, binding the *wh*-item at distance; consequently, the *wh*-word will remain in-situ. In principle, I assume that such derivation is possible for EQs with *wh*-in-situ (e.g., *Mary had tea with WHO?; Did Mary have tea with WHO?; What did WHO drink at Mary's party?*; etc.; for a detailed discussion, see Chernova 2015). In this paper, however, I focus on EQs with explicit movement, especially those contexts in which a QP has to circumvent barriers to reach the CP$_{EQ}$.

(51)

$$[_{CP_{EQ}} (\mathbf{wh_{EQ}}) \, [_{CP_U} \quad [_{CP_U} \, wh_u \, [_{TP} (\mathbf{wh_{EQ}}) \, [_{AspP} (\mathbf{wh_{EQ}}) \, [_{vP} (\mathbf{wh_{EQ}}) \, [\ldots(\mathbf{wh_{EQ}})]]]]]]]]$$

a. ~~xxx~~ (English)

b. ~~xxx~~ (Spanish)

c. (Russian)

To sum up, assuming the particular syntactic structure of *wh*-EQs, the intuition is that echo *wh*-movement, just as standard *wh*-movement, proceeds successive-cyclically through the available escape hatches, and it is subject to certain parametric variation. The Q_{EQ}-morpheme has to reach its scope position: the edge of the highest phase, CP_{EQ}. Depending on the merging options of Q_{EQ}, the echo-introduced *wh*-word can either be pied-piped into the left periphery of the question or undergo partial movement to the edge of lower phases to be visible for the probe Q_{EQ}.

5. Conclusions

In this paper, I addressed the syntax of *wh*-EQs in three typologically different *wh*-fronting languages (English, Spanish and Russian). I argued that echo *wh*-movement is parallel to standard *wh*-movement in true questions and is subject to similar kinds of restrictions. Crucially, echo *wh*-movement also proceeds successive-cyclically, through the available escape hatches on its path. I offered new empirical data showing that in MWF languages (e.g., Russian) the echo *wh*-item can be fronted into the leftmost position of an EQ independently of the clause-type of the echoed utterance. Meanwhile, in languages resorting to single *wh*-fronting in multiple questions (e.g., English and Spanish) the possibility of echo *wh*-movement to the left edge of the question is restricted by the type of the utterance: whether it is declarative or interrogative. In addition, I argued that in Russian and Spanish an echo *wh*-

word may also undergo partial movement to a lower, preverbal, position; this option being also parametrically restricted.

Following Sobin (2010), I assumed that *wh*-EQs have a particular syntactic structure, with two CP levels. As for the nature of the interrogative movement, I assumed the insights of Cable's (2010) Q-based theory and extended it to the derivation of EQs. That is, there is a particular echo Q-morpheme, which is merged in EQs and which regulates the semantics of the echo *wh*-words; during the derivation, the morpheme has to reach its scope position, the specifier of CP_{EQ}.

On the one hand, I argued that the Q_{EQ}-particle may project a QP_{EQ}, which also dominates its sister, the echo *wh*-word, and pied-pipes it into the left periphery of the question. However, to reach the specifier of CP_{EQ}, such QP_{EQ} has to pass through the lower phase edge, CP_U. Thus, it is expected that the syntactic character of the echoed utterance (declarative *vs.* interrogative) would restrict the availability of the specifier of CP_U as an escape hatch. That is, we expect that such movement is allowed in the case of EQs built on a previous declarative utterance, while it is restricted if the echoed utterance is interrogative. In addition, I argued that the typology of *wh*-movement in true multiple questions (i.e., whether a particular language can make use of multiple specifiers of CP) also determines the final derivational outcome, as it may enable additional escape hatches for extraction of the echo QP.

On the other hand, the Q_{EQ}-morpheme may also resort to adjunction and be merged at distance from the echo *wh*-word. In such case, the latter cannot be pied-piped into the leftmost position of the clause together with the Q_{EQ}; however, the *wh*-item still may undergo raising to an edge of a lower phase to remain visible to its probe. Again, this option is also parametrically restricted. I argued that it relies on the mechanism of extension of the *v*P phase in Spanish and Russian, which has been proposed in the literature on independent grounds.

The two possibilities regarding echo *wh*-movement attested among the languages under consideration naturally follow

from the view offered in this paper. The discussion, hopefully, sheds some more light on the nature of such understudied phenomena as EQs.

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Acknowledgements

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