# **ON WH-MOVEMENT IN SPANISH ECHO QUESTIONS**<sup>\*</sup>

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ABSTRACT. This paper examines Spanish echo questions, an understudied phenomenon even in extensively described languages such as English. In particular, it focuses on a very particular type of echo questions, such as those made in response to a previous yes/no question (e.g.  $-Did you buy \{ ^{mumble} \}$ ?; -Did I buy WHAT?) and makes a detailed description, on the one hand, of inherent echo features, common across most languages, and, on the other, those language-specific. In particular, I argue that wh-in-situ is not the only possible option in Spanish EQs in order to get a proper, echo interpretation. In addition, I offer some evidence from Spanish data in favour of a particular syntactic structure underlying this sort of questions (Sobin 2010).

Keywords. wh-movement; wh-in-situ; echo questions; discourse

RESUMEN. En este artículo se examinan las preguntas de eco en español, que constituyen un fenómeno poco estudiado incluso en aquellos idiomas que han sido extensivamente descritos (por ejemplo, inglés). Este artículo, además, presta especial atención a un tipo de preguntas de eco muy particular, como aquellas que se producen en respuesta a una interrogativa polar (p.ej,  $-iHas \ comprado \ \{^{xxx}\}\)^2 - iQue \ si \ he \ comprado \ QUÉ\)$ . En el estudio se ofrece una detallada descripción, por un lado, de las características generales de las preguntas de eco, comunes entre diferentes lenguas, y, por otro lado, características propias de las preguntas de eco en español. En concreto, se argumenta que la opción con el pronombre qu- *in situ* no es la única en las preguntas de eco en español, sino que este también puede desplazarse a diferentes posiciones dentro de la oración. Adicionalmente, se demuestra que español ofrece un interesante argumento a favor de una estructura sintáctica particular que caracteriza este tipo de oraciones interrogativas (Sobin 2010).

Palabras clave. movimiento qu-; qu- in situ; preguntas de eco; discurso

### **1. Introduction**

Echo wh-questions (hereafter wh-EQs) are generally used in immediate response to an utterance to request for repetition or to express speaker's surprise or amazement at some aspect of the utterance's content. This type of questions is traditionally considered as a counterpoint to standard assumptions about interrogative syntax. The few existent syntactic and pragmatic studies on EQs have argued that they do not exhibit overt wh-movement (see Noh 1998; Iwata 2003; den Dikken 2003; Fiengo 2007; Sobin 2010; a.o.). In effect, it has been observed for English that EQs seem to be immune to the obligatory wh-movement and the consequent T-to-C verb raising, as illustrated in (1a). EQs can also apparently violate Superiority effects when containing more than one wh-word, as shown in (1b) (hereafter the echo-introduced wh-phrases appear in small caps):

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(1)	a.	Mary had tea with WHO?	(English)
	b	What did WHO drink at Mary's party?	[from Sobin 2010-132]

In the literature on interrogative syntax, the general tendency is to leave wh-EQs aside, since their syntactic behaviour is quite unusual. 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). However, I side with Sobin (2010:131), who states that EOs "are of great interest and relevance to analyses of question formation since they are clearly in the realm of 'automatic' and 'untutored' knowledge, just the sort of linguistic knowledge that generative grammar has had the aim of explaining since its inception".

As stated in Carnie (2006:340), differently from true, canonical interrogatives, "echo questions are not requests for new information; instead they are requests for confirmation of something someone has heard". For this reason, wh-EQs sometimes are referred to as backward citations (Escandell 1999) or reprise questions (Ginsburg & Sag 2000), since these interrogatives repeat or "quote" a sentence originally pronounced by a different speaker.<sup>1</sup> Consider (2), where the questioner in (2b) cannot hear a part of the previous polar question in (2a). So, she formulates a wh-EO, where the echo-introduced wh-word *quién* 'who' substitutes the unheard portion of the utterance (in offering examples, I will signal an utterance with U and an echo response to it with EO):

(2)	a.	U:	¿Ha llegado ya { <sup>mumble</sup> }?	(Spanish)
			has arrived already { <sup>mumble</sup> }	
			'Has { <sup>mumble</sup> } arrived already?	
	b.	EQ:	¿Que si ha llegado ya QUIÉN?	
			that whether has arrived already who	
			'Has who arrived already?'	

Notice that echo wh-words are referential items, in the sense that they always refer back to a referent which has been already mentioned in the immediately previous discourse. As pointed out by Fiengo (2007:76), by using as a question an 'undeformed' utterance (i.e., a question with wh-in-situ), the speaker presents herself "as being unable to complete the utterance in a satisfactory way" and asks the addressee to repeat a missing bit of language. In other words, she asks to assign a value to the echo wh-word.

As already mentioned, wh-EQs can be produced in immediate response to an utterance in order to request for repetition or to express surprise. Following Bartels (1997), I call the former type *unheard EOs* and the latter *amazement EOs*.<sup>2</sup> In this paper

A: Well, the nature is beautiful there. с

Escandell (2002:873) argues that, from a pragmatic point of view, EQs are "specialised as interpretations of attributed representations: they are interrogative interpretations of interpretations of somebody's thoughts, or, put in other words, they are metarepresentations". For a detailed characterization of EQs as a metalinguistic phenomenon see also Noh (1998) and Iwata (2003).

<sup>&</sup>lt;sup>2</sup> I assume that only unheard, or request-for-repetition EQs are interrogative constructions, both from syntactic and semantic points of view. They seek to reduce the speaker's ignorance regarding the missed portion of the stimulus, denoted by a wh-word, under which the proposition contained within the utterance is true. In contrast, the meaning of an amazement wh-EQ is rather similar to an exclamative, (i): (i)

A: We're going to Pakistan on vacation. a.

<sup>(</sup>English)

b. B: You're going WHEREexcl on vacation?!

<sup>[</sup>adopted from Šimík 2009:5]

In (i), the speaker B knows exactly what has been said, however, in her opinion, Pakistan is the least expected place to go on vacation. By asking (ib), the speaker expresses her surprise.

I restrict my attention to unheard, or *request-for-repetition* wh-EQs; in particular, I focus on EQs formed in response to an interrogative utterance, as the example in (2). I put forth some novel evidence supporting the view that EQs are syntactic phenomena, underlined by a particular syntactic structure: namely, one involving two CP-levels (see Escandell 2002; Sobin 2010; Chernova 2015). Such view allows to account for a number of striking properties of EQs without appealing to purely discursive notions.

One of the most commonly known properties of EQs is lack of wh-movement. It has been commonly assumed that even in languages with obligatory wh-fronting in true questions (e.g., English) EQs necessarily resort to wh-in-situ:

(3) a. U: Did Mary have tea with  $\{^{\text{mumble}}\}$ ? (English)

b. EQ: Did Mary have tea with WHO?

c. EQ: \*WHO<sub>i</sub> did Mary have tea with t<sub>i</sub>? [adopted from Sobin 2010:132]

However, recent studies have revealed that languages with obligatory multiple wh-fronting in canonical questions (e.g., Slavic) can exhibit overt movement of the echo wh-word in EQs (see Chernova 2013b, 2015). In this paper, I focus on Spanish examples of EQs, a language with restricted availability for multiple wh-movement under certain licensing contexts (see Uriagereka 2005, Gallego 2017).<sup>3</sup> In particular, I consider wh-EQs produced in response to a previous polar, yes/no question, as below in (4), in order to examine which positions can be occupied by the echo wh-phrase inside the clause:

(4)	a.	U:	¿Ha leído Pedro { <sup>mumble</sup> }?	(Spanish)
			has read Pedro { <sup>mumble</sup> }	
			'Has Pedro read { <sup>mumble</sup> }?'	
	b.	EQ:	¿Que si Pedro ha leído QUÉ?	
			that whether Pedro has read what	
			'Has Pedro read WHAT?'	
	c.	EQ:	¿Que si ha leído Pedro QUÉ?	
			that whether has read Pedro what	
	d.	EQ:	? ¿Que $si$ ha leído $QUÉ_i$ Pedro $t_i$ ?	
			that whether has read what Pedro	
	e.	EQ:	<sup>?(?)</sup> ¿Que $si$ QUÉ <sub>i</sub> ha leído Pedro t <sub>i</sub> ?	
			that whether what has read Pedro	
	f.	EQ:	* ¿Que $QUÉ_i si$ ha leído Pedro t <sub>i</sub> ?	
		-	that what whether has read Pedro	

As the reader may easily observe, Spanish EQs present a number of differences with respect to their English counterparts. Firstly, they exhibit two newly introduced particles, absent from the echoed polar question: que 'that'<sup>4</sup> and *si* 'whether'. Secondly,

<sup>&</sup>lt;sup>3</sup> Notice that EQs in (4) are different from another type of Spanish wh-in-situ questions, as in (i) (see Jiménez 1997; Uribe-Etxebarria 2002; Etxepare & Uribe-Etxebarria 2012; Reglero 2007):

<sup>(</sup>i) Y tu padre compró ¿qué?

<sup>(</sup>Spanish)

and your father bough what 'And your father bought what?' [from Etxeparre & Uribe-Etxebarria 2005:10,18]

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

<sup>&</sup>lt;sup>4</sup> In principle, the particle *que* 'that' is optional in Spanish EQs. However, most of my informants note that some questions sound more natural (and are interpreted more easily as echo) when such *que* is present. This opens an interesting question on what factors affect the degree of optionality of *que*, which

the echo wh-phrase can occupy different positions inside an EQ. Similarly to languages like English, Spanish speakers show a strong preference for the wh-in-situ option, (4b) and (4c), and unanimously judge as ungrammatical the possibility of complete echo wh-fronting into the CP-level, (4f). However, differently from English, Spanish EQs display a range of "intermediate" distributions. On the one hand, subject-verb inversion is not obligatory, as it can be appreciated in (4b). This is not a surprising phenomenon in null-subject languages (hereafter NSLs), as it has been largely discussed in the literature (see Cardinaletti 1997; Belletti 2004; Gallego 2010; a.o.). In this paper, I will address the question on why the echo wh-word can occupy different positions with respect to the post-verbal subject (the latter being, presumably, within the vP level), (4c) vs. (4d). On the other hand, in addition to these two available options, some Spanish speakers also allow (although marginally) structures where the echo wh-word has undergone some sort of *partial* movement (Fanselow 2005)<sup>5</sup> to a preverbal position (presumably, within TP), as shown in (4e). Although both (4e) and (4f) are generally judged as odd (with different degrees of marginality), many of my informants notice an interesting contrast. Namely, the question in (4e), with partial movement of the echo wh-word, sounds better than the one in (4f), with complete wh-movement. To the best of my knowledge, this sort of data has not been previously reported in the literature.

This paper is organized as follows. In section 2, I review a number of particular properties of wh-EQs which make this type of questions so different from standard wh-questions. Then, in section 3, I take EQ as a syntactic phenomenon, with a particular derivation (namely, two CP levels, in line with Sobin 2010) and provide an evidence for such structure from Spanish. In section 4, I discuss an idea that in EQs an echo wh-word can opt for remaining in-situ or for undergoing wh-movement (the latter option being available only in some languages). I argue that echo wh-movement proceeds successive cyclically. In section 5, I analyze Spanish EQs built on a previous yes/no question and consider different positions that an echo wh-word can occupy inside such structures; it is shown that in Spanish, apart from the standard wh-in-situ option, the echo wh-phrase can occupy the edges of vP and TP phases (in line with Gallego 2007, 2010), but not of CP.

## 2. What we know about EQs

## 2.1. Mood clashes and wh-in-situ

As it has been noticed in the literature, one of the most striking properties of EQs is that they necessarily keep unchanged the clause-type of the sentence they "echo" (see Sobin 2010; Noh 1998; Escandell 2002; a.o.). Consider the following English examples, adopted from Sobin (2010:132), where a correspondent EQ repeats a declarative, (5), a polar, yes/no question (shown in (3) and repeated below as (6)), or a wh-question, (7), respectively:

(5) a. U: Mary had tea with  $\{^{\text{mumble}}\}$ .

(English)

- b. EQ: Mary had tea with WHO?
- c. EQ: WHO<sub>i</sub> did Mary have tea with  $t_i$ ?

I leave aside for the present. In the following correspondent examples, I mark the optional status of *que* by placing it in parenthesis.

<sup>&</sup>lt;sup>5</sup> Following Fanselow's (2005:439) terminology, "movement is *partial* whenever the phrase has been displaced but its final landing site is below the relevant position".

(6)	a.	U: <i>What</i> did { <sup>mumble</sup> } drink at Mary's party?	(English)
	b.	EQ: <i>What</i> did WHO drink at Mary's party?	
	c.	EQ: *WHO <sub>i</sub> t <sub>i</sub> drank <i>what</i> at Mary's party	
(7)	a.	U: Did Mary have tea with $\{^{\text{mumble}}\}$ ?	(English)
	b.	EQ: Did Mary have tea with WHO?	

c. EQ: \*WHO<sub>i</sub> did Mary have tea with  $t_i$ ?

Generally, an EQ can repeat any kind of utterance, as shown by the examples below, both from Noh (1998:108), where what receives an echo response is an exclamative, (8), or an imperative, (9):

(8)	a. b.	U: EQ:	What a great pleasure this is! What a great WHAT this is?	(English)
(9)	a. b.	U: EQ:	Go to see the archaeologist. Go to see WHAT/WHO?	(English)

The strategy of "echoing" is broadly always the same: a wh-EQ repeats the stimulus and replaces the unheard portion by a wh-word. Interestingly, the interrogative clause-typing of the EQ itself co-occurs with the clause-typing of the echoed sentence. In Escandell (2002), this echo-property is referred to as *mood clashes*, while in Sobin (2010) it is called *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. For instance, recall that the EQ in (6b) has to preserve the wh-interrogative character of the echoed wh-question, (6a), including the fronted wh-word *what* and the raised auxiliary *did*. In addition, the EQ in (6b) introduces its own syntactic features, namely the wh-word *who*. Interestingly, however, although the resulting structure clearly violates Superiority, the question in (6b) is grammatical contrary to (6c). That is, it seems that EQs require the echo wh-word to remain in-situ. Similarly, the EQ in (7b) has to preserve the yes/no nature of the echoed utterance, (7a); again, overt movement of the wh-word is blocked.<sup>6</sup> I will come back to the wh-in-situ challenge later in this paper.

Turning back to the "maintenance" of the stimulus' syntactic features, consider also the following Spanish example:

(10)	a.	U:	¡Qué rico (que) estaba { <sup>mumble</sup> }!	(Spanish)
			what delicious that was $\{mumble\}$	
			'How delicious was { <sup>mumble</sup> }!'	
	b.	EQ:	¿(Que) qué rico (que) estaba QUÉ?	
			that what delicious that was what	
			'How delicious was WHAT?'	

<sup>&</sup>lt;sup>6</sup> The fact that a declarative utterance in (5a) can be echoed both with wh-in-situ, (5b), and wh-ex-situ, (5c), leads Sobin (2010:132) to conclude that the latter is not a syntactic instance of an EQ, but rather an example 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 in Chernova (2015), here I depart from this view and argue that EQs *can* involve overt movement.

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(11)	a.	U:	¡Ojalá venga	${$ <sup>mumble</sup> $}!$
			PART come.SUBJ.3SG	{mumble }
			'I wish { <sup>mumble</sup> } would	come!'
	b.	EQ:	¿(Que) ojalá venga	QUIÉN?
			that PART come.SUB	3.3SG who
			'Hopefully WHO will c	come?'

Notice that the echo-response in (10b) maintains the wh-exclamative syntax of the utterance in (10a). Namely, it conserves, on the one hand, the fronted constituent formed by the degree word qué 'what' plus the gradable adjective, and, on the other, the optional particle que 'that' following the adjective (see Zanuttini & Portner 2003; Castroviejo 2006; a.o.). In addition, the EQ in (10b) exhibits its own echo-marker: the interrogative wh-word qué 'what', which replaces the unheard portion of the stimulus. The whole sentence is pronounced with a particular, strong upward or upward-down interrogative intonation (Bartels 1999; Escandell 2002; Sobin 2010), different from the prosodic contour of non-echo questions; the echo wh-word receives an additional stress. Likewise, in the wh-EO in (11b), the desiderative particle  $o_{iald}$  and the verb in subjunctive form -both inherited from the echoed (11a)- co-occur with the echo wh-word quién 'who' and the interrogative prosodic contour. Lastly, a quotative marker que 'that' can optionally appear in both (10b) and (11b) (see Escandell 1999; Chernova 2013a) (I will address it later in this paper). In sum, one of the most striking properties of EQs is that the interrogative echo-features co-occur with the CP-features of the repeated original sentence. However, the so-called mood clashes and wh-in-situ are not the only challenging properties of EQs.

# 2.2. Wide scope and lack of island effects

It has been noticed in the literature that the echo wh-word always has the widest possible scope, independently of its position inside the clause (see Karttunen 1977; May 1985; Sobin 2010; a.o.). That is, as shown below for Spanish, independently of whether the echo-introduced wh-phrase appears in the root clause, (5)-(11b), or deeply embedded, (12b), it always receives wide scope and requests an answer:

- (12) a. U: María dice [que Pedro cree [que Juan es amante de {<sup>mumble</sup>}]].(Spanish) María says that Pedro thinks that Juan is lover of {<sup>mumble</sup>}
   'Mary says that Pedro thinks that Juan is a lover of {<sup>mumble</sup>}.'
  - b. EQ: María dice [que Pedro cree [que Juan es amante de QUIÉN]]? *María says that Pedro thinks that Juan is lover of who* 'Mary says that Pedro thinks that Juan is a lover of WHO?'

Likewise, the in-situ echo *wh*-word is allowed to appear both inside strong and weak islands and necessarily gets wide scope. This is illustrated below for Spanish, where the island effects are created by sentential subjects, (13), adjuncts, (14), and complex NPs, (15):<sup>7</sup>

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(Spanish)
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<sup>&</sup>lt;sup>7</sup> In other words, regarding islands, echo wh-words in wh-fronting languages behave similarly to nonecho interrogative pronouns in wh-in-situ languages, (i) (for discussion, see Hagstrom 1998; Kishimoto 2005; Cable 2010; Chernova 2015; a.o.):

<sup>(</sup>i) Mary-wa [DP [CP John-ni *nani*-o ageta] hito-ni] atta-*no*? (Japanese) Mary.NOM John-DAT *what*-ACC gave man-DAT met-Q \*'What did Mary meet the man who gave \_ to John?' [from Hagstrom 2000:3]

(13) a.	U:	Creo que [vender $\{ {}^{\text{mumble}} \}$ ] sería un error.	(Spanish)
		I.think that to.sell { <sup>mumble</sup> } would.be a mistake	
		'I think that to sell { <sup>mumble</sup> } would be a mistake.'	

- b. EQ: ¿(Que) crees que [vender QUÉ] sería un error? *that you.think that to.sell what would.be a mistake* 'You think that to sell WHAT would be a mistake?'
- (14) a. U: He llamado a alguien [antes de que llegara {<sup>mumble</sup>}]. (Spanish)
   *I.have called to somebody before arrived {<sup>mumble</sup>}* 'I have called to somebody before {<sup>mumble</sup>} arrived.'
  - b. EQ: ¿(Que) has llamado a alguien [antes de que llegara QUIÉN]? *that you.have called to somebody before arrived who* 'You have called to somebody before WHO arrived?'
- (15) a. U: He encontrado [al médico que atendió a  $\{^{mumble}\}$ ]. (Spanish) *I.have found the doctor who tended to*  $\{^{mumble}\}$ .
  - b. EQ: ¿(Que) has encontrado [al médico que atendió a QUIÉN]? *that you.have found the doctor who tended to who* 'You have found the doctor who tended to WHO?'

Turning back to the root scope phenomenon, recall a well-known fact that non-echo contexts with multiple quantifiers (e.g., multiple wh-questions) presuppose exhaustification of every such item, giving rise either to pair-list or single-pair readings (see Higginbotham & May 1981; Hagstrom 1998; Krifka 2001; a.o.). That is, an ordinary multiple wh-question contains answers providing information about each of the members of the set denoted by every wh-word. However, neither pair-list nor single-pair interpretations are available in wh-EQs. For instance, consider (16), where even in the presence of a universal quantifier the EQ only allows the individual reading:

(16)	a.	U:	Todo el mundo vio a { <sup>mumble</sup> }. evervbody saw to { <sup>mumble</sup> }	(Spanish)
			'Everybody saw { <sup>mumble</sup> }.'	
	b.	EQ:	¿(Que) todo el mundo vio a QUIÉN?	
			that everybody saw to whom	
			'Everybody saw WHO?'	
	c.	R:	A María.	
			to María	
			María.	
	d.	R:	*Pedro vio a María (Juan vio a Elena).	
			Pedro saw to María (Juan saw to Elena)	
			'Pedro saw María (Juan saw Elena).'	

Likewise, in a wh-EQ reproducing a previous wh-question, as the one in (17b), only the echo-introduced wh-phrase receives scope; the wh-word inherited from the previous utterance requires no response within the echo-turn.<sup>8</sup> In fact, the only appropriate

<sup>&</sup>lt;sup>8</sup> 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; a.o.):

answer to (17b) is (17c) (as far as the agent of the action described by the stimulus in (17a) was Juan indeed):

(17)	a.	U:	¿ <i>Qué</i> compró { <sup>mumble</sup> } en IKEA?	(Spanish)
			what bought { <sup>mumble</sup> } at IKEA	
			¿What did { <sup>mumble</sup> } buy at IKEA?	
	b.	EQ:	¿(Que) qué compró QUIÉN en IKEA?	
			that what bought who at IKEA	
			'¿What did wно buy at IKEA?'	
	c.	R:	Juan.	
	d.	R:	*Juan compró un armario (y Pedro compró un colchón	n).
			Juan bought a wardrobe (and Pedro bought a mattres	S
	e.	R:	*Un armario.	
			a wardrobe	

# 2.3. Partial wh-echoing

As already said, by uttering a wh-EQ the speaker often signals that she has understood everything else in the stimulus, except one single item, which is replaced by the correspondent echo wh-word (e.g., *You saw WHAT?*). However, in occasions the speaker can be very precise and signal what portion of the stimulus is missed exactly:<sup>9</sup>

(18)	a.	U: Creo que reside en $[_{DP}$ la $[_{NP}$ Pata- $\{^{\text{numble}}\}$ ]].	(Spanish)
		<i>I.think that he.lives in the Pata-{<sup>mumble</sup>}</i>	
		'I think (that) he lives in Pata-{ <sup>mumble</sup> }.'	
	b.	EQ: $\mathcal{L}(Que)$ crees que reside en $[DP la [NP Pata-WHAT]]?$	
		that you.think that he.lives in the Pata-what	
		'You believe (that) he lives in Pata-WHAT?'	
	c.	EQ: *(Que) en $[_{DP}$ la $[_{NP}$ Pata-QUÉ $]]_i$ crees que reside t <sub>i</sub> ?	
		that in the Pata-what you.think that he.lives	

By uttering the wh-EQ in (18b), the speaker signals that she has missed the last two syllables of the name of Patagonia. The unheard portion does not constitute a syntactic object or even a morpheme; moreover, *gonia* itself does not correspond to anything that exists in this world. Therefore, the speaker simply asks to repeat the missed bit of language, signalling that everything else has been correctly understood. Another interesting observation comes from (18c): partial wh-echoing does not admit overt movement. So, the only available option is wh-in-situ, despite the fact that the echoed utterance is declarative (compare with (5c)). Needless to say, (18b) is not allowed under non-echo reading. That is, the strategy of partial wh-questioning seems to be strongly restricted to specific pragmatic contexts; namely, to request-for-repetition EQs.

<sup>(</sup>i) a. Who knows where Mary bought what?

b. John does.

c. John knows where she bought milk, Bill knows where she bought bread... <sup>9</sup> I thank an anonymous reviewer for providing this example.

# 3. EQs as a syntactic phenomenon

# 3.1. Do EQs involve an independent syntactic derivation?

In this section I will briefly discuss why EQs should not be treated as a non-syntactic phenomenon, although such way of thinking could seem quite plausible at first sight.<sup>10</sup> Indeed, most of the previously considered data may be interpreted in a way that this type of questions does not require an independent syntactic derivation. One could claim that the original utterance is simply "frozen" in the correspondent EQ and some portion of it is replaced by a wh-phrase.<sup>11</sup> As pointed out by Sobin (2010), such an account would correctly predict wh-in-situ, (5)-(9), or even the apparent lack of Superiority effects in questions with multiple wh-words, (6b). The data concerning islands, (13)-(15), and partial wh-echoing, (18), would be also predicted.

However, it is not clear how such a view would explain the fact that an echo wh-word always receives wide scope, (16) and (17). Moreover, the stimulus and the correspondent EQ may show different person-agreement features and deictic elements. The content of an EQ is sensitive to the participants of the speech act and, more precisely, to the changing discourse roles between the speaker and the addressee (see Dalrymple & Kaplan 2000; Harley & Ritter 2002):

(19)	a.	U:	Me	ir-é	de	tu	casa	{ <sup>mumb</sup>	<sup>le</sup> }.	(Spanish)
			CL.1SG	will.go-1SG	from	your	house	mumble	²}	
			'I will	leave your h	ouse	{ <sup>mumb</sup>	<sup>le</sup> }.'			
	b.	EQ:	¿(Que)	(CUÁNDO) t	e	ir-ás	5	de	mi	casa (CUÁNDO)?
			that	when (	cl.2sc	5 will	.go-2sc	5 from	ı my	house when
			'You w	vill leave my	hous	e wh	en?'			

Observe that the accommodation process affects the valuation of the [person] feature on the verb and the personal pronouns. The accommodation reflects the two dependents of the participants of the speech act, speaker and addressee, corresponding to 1<sup>st</sup> and 2<sup>nd</sup> person respectively. The attested deictic accommodation in EQs is unexpected if we assume that EQs are a particular type of direct quotes (e.g., *Mary said: "I am hungry"*); rather, they seem reminiscent of indirect questions (e.g., *Mary said that <u>she</u> was hungry*). Following Sobin (2010:135), I take the person-agreement facts as evidence that wh-EQs do not simply reproduce the syntactic structure of the stimulus, but rather they "actively involve syntax".

<sup>&</sup>lt;sup>10</sup> For a more detailed discussion of this point (as well as for additional arguments), the reader is referred to Sobin (2010).

<sup>&</sup>lt;sup>11</sup> By this I do not mean that any type of strategy requiring an exact repetition of a lost portion of discourse always involves syntactic derivation. As pointed out by an anonymous reviewer, it seems clear that certain types of "request-for-repetition" questions –those exploiting resemblances in form– resort to partially frozen segments of speech. Partial wh-echoing (see section 2.3) can be seen as such type of discourse strategy. Another example is shown in (i), where the speaker A imitates her interlocutor's pronunciation of the word *tomatoes*:

<sup>(</sup>i) A: I'd like *tom[eiDouz]* for lunch.

<sup>(</sup>English)

B: I'm not very keen on *tom[eiDouz]*. [from Iwata 2003:189] Fiengo (2007) distinguishes between *repeat* and *open* readings of EQs: the former always require a faithful enough representation of the previous utterance, while in the latter "the questioner's interest resides not so much in the unheard bit of language but in the item it denotes" (Fiengo 2007:76). Crucially, according to the author, repeat questions are always wh-in-situ, while open ones allow both wh-in-situ and wh-ex-situ. In this paper I restrict my attention to the latter type of EQs and argue that they actively involve syntax.

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### 3.2. EQs as double-CP structures

Certain echo-properties, such as the co-occurrence of features of two different clause-types and the widest scope for the echo-inserted wh-word, suggest that EQs are structurally different from true wh-questions. It has been proposed that 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 (see Escandell 2002; Sobin 2010). Here I adopt Sobin's (2010) general idea regarding distribution of two CP-levels in EQs:  $CP_{EQ}$  asymmetrically c-commands  $CP_{U}$ :<sup>12</sup>



I agree with Sobin's (2010:131) claim that the key challenging properties of EQs can be captured "in terms of independent necessary scope assignment mechanisms and a complementizer that subordinates the utterance being echoed". The structure in (20) predicts why EQs maintain the key clause-typing features of the echoed utterance. The echo-inserted wh-phrase and the  $C_{EQ}$  share an instance of a particular, echo-feature, which is absent from the embedded  $CP_{U}$ ; so, the widest scope of the echo wh-word (at the expense of its loss for the wh-word repeated from the stimulus) is also expected.<sup>13</sup> This mechanism also predicts another Sobin's generalization: in EQs the echo wh-word must remain in-situ (although, as advanced, I do not share this opinion here).

I assume that the derivation of wh-EQs –i.e., clarification questions about certain portion of the previous utterance– contains the same type of a force-feature (interrogative, declarative, etc.) as in the sentence being echoed. I standardly assume that such features are carried by the complementizer C. This does not mean that the

(i) a. ¿Ven aquí inmediatamente? come.IMPER here right-now
'Come here right now?'
b. ¿Qué deprisa va?

*what.EXCL fast* goes 'It goes so fast?'

[from Escandell 2002:875-876]

(Spanish)

Escandell also suggests that EQs imply two different CP-levels, but their distribution is quite different from the one in (20). Namely, the specifier of  $CP_{EQ}$  is occupied by the  $CP_U$  projection, which, in turn, is completely "frozen". Although her proposal can capture many interesting facts of polar EQs, unfortunately, it cannot address most challenging properties of wh-EQs; even the simple fact of emergence of an echo wh-word is not expected. For a detailed discussion of mismatches of Escandell's (2002) proposal with wh-EQs see Chernova (2015).

<sup>13</sup> Sobin address the widest scope of the echo wh-word through its unselective binding by the highest  $C_{EQ}$  at distance, through valuation of the echo-feature (assuming that the echo wh-word must remain in-situ). Recall, however, that his original proposal has been developed for English data, in order to account for the differences between true questions (with obligatory wh-movement) and EQs (always with wh-in-situ) (see examples in (5)-(7)). See discussion below.

<sup>&</sup>lt;sup>12</sup> Escandell's (2002) approach was designed in order to capture polar amazement EQs in Spanish, as those in (i):

derivation of wh-EQs somehow introduces a "frozen copy" of the utterance's CP (*contra* Sobin 2010). Rather, it means that a C head of the same type as the one of the stimulus is merged in 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 bottom-up derivation. This also enables certain changes at structurally lower levels, such as deictic accommodation and insertion of an echo wh-word, replacing the unheard portion of the utterance. Once the CP<sub>U</sub> is built, an additional functional head is merged into the derivation:  $C_{EQ}$ . It selects its sister CP<sub>U</sub> as a complement and projects a discourse-bound interrogative projection. CP<sub>EQ</sub> assigns scope to the anaphoric, echo-introduced wh-word and assigns the request-for-repetition meaning to the resulting question.<sup>14</sup> As the derivation proceeds, we obtain a double-CP structure in (20).

Regarding EQs with wh-in-situ, here I follow Sobin's (2010) proposal and assume that the echo-interrogative head  $C_{EQ}$  can bound an echo wh-word at a long distance in its argument position. Recall our previous discussion that even deeply embedded wh-items (even those "caught" inside islands, as in (13)-(15)) receive wide scope in EQs. Consider, in addition, the following English examples:

- (21) a. [CP Who C<sub>wh</sub> [says [CP that [Bill knows [CP where [Mary bought what]]]]]]?
  b. Jane does.
  - c. \*Jane says that Bill knows where Mary bought the towels, Zelda says that Bill knows where Mary bought the sheets... [from Sobin 2010:145]
- (22) a. [CP<sub>EQ</sub> C<sub>EQ</sub> [CP<sub>U</sub> [Mary said [CP that [Bill thinks [CP that [John saw WHO]]]]]]]?
  b. Jane.

As noticed in Sobin (2010:145), whereas a non-echo wh-word *what* in (21a) "has difficulty getting root scope", as shown in (21c), the *who* of the EQ in (22a), despite of being deeply embedded, easily gets wide scope.

However, although I adopt Sobin's idea on the general distribution of CPs in EQs and long-distance binding, I depart from his proposal in several standpoints. The most significant one, as already mentioned, is that I do not support the idea that EQs always require wh-in-situ. As I argued in Chernova (2015), wh-movement in EQs is not an exception, but rather a licit option, a standard application of the operation internal Merge. However, the availability of overt echo wh-movement is subject to parametric variation and, roughly, depends on whether a language allows for multiple specifiers of its phase heads<sup>15</sup> and also on the clause-type of the echoed utterance (declarative, interrogative, exclamative, etc.).

## 3.3. Spanish particles and the double-CP structure

As in Chernova (2013a), I suggest that an interesting piece of evidence for the idea that EQs preserve the clause-typing features of the echoed utterance comes from Spanish wh-EQs reproducing a previous polar question:

<sup>&</sup>lt;sup>14</sup> For a detailed mechanism of agreement between C and the echo wh-word, see Chernova (2015). Here, I believe that an extensive discussion of the whole complex syntactic mechanism of derivation of EQs, with all its nuances, fall aside from the scope of this paper and is neither desirable due to space restrictions.

<sup>&</sup>lt;sup>15</sup> As is well known, apart from the standard phase heads C and v (Chomsky 2000, 2001), some languages may activate additional phase domains: e.g., TP in Romance (see Gallego 2010), AspP in Slavic (see 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,  $CP_{EO}$ . Keep this idea in mind, as I will turn back to this issue in section 4.

(Spanish)

(23)	a.	U:	¿Ha leído María { <sup>mumble</sup> }?
			has read María { <sup>mumble</sup> }
			'Has María read { <sup>mumble</sup> }?'
	b.	EQ:	¿(Que) *(si) ha leído María QUÉ?
			that whether has read María what
			'Has María read WHAT?'

Again, recall that the EQ in (23b) exhibits two additional elements (apart from the echo wh-word), which are absent from the yes/no question in (23a): a quotative marker *que* 'that' and *si* 'whether'.

Regarding the particle *si*, it is worth mentioning that its use is quite restricted in Spanish wh-EQs. *Si* obligatorily precedes EQs reproducing a previous yes/no interrogative questions: its lack would result in ungrammaticality of (23b). Crucially, this particle is not allowed in EQs built on a previous declarative or a wh-question. This is illustrated by (24) and (25) respectively:

(24)	a.	U:	María lee { <sup>mumble</sup> }. <i>María reads</i> { <sup>mumble</sup> } 'María reads { <sup>mumble</sup> }.'	(Spanish)
	b.	EQ:	¿(Que) (*si) María lee QUÉ? that whether María reads what 'María reads WHAT?'	
(25)	a.	U:	¿Qué compró { <sup>mumble</sup> }? what bought { <sup>mumble</sup> } 'What did { <sup>mumble</sup> } buy?'	(Spanish)
	b.	EQ:	¿(Que) (*si) qué compró QUIÉN? that whether what bought who 'What did WHO buy?'	

But why the presence of *si* is so restricted? In line with Chernova (2013a), here I suggest that in EQs *si* reflects the CP layer of the echoed yes/no question. As is standardly assumed (since Katz & Postal 1964; Baker 1970), a yes/no question projects an interrogative operator Q within the CP layer (namely, at Spec,CP), in order to get the interrogative interpretation. Q can be phonetically realized or null,  $[\emptyset]$ . Following Baker (1972), I assume that Q is null in English and Spanish root polar questions, but it is phonetically realized in embedded contexts: as *if/whether* in English, *se* in Italian (see Rizzi 2001b) and *si* in Spanish (see also Rigau 1984; Suñer 1991; Hernanz 2012). Therefore, I suggest that for EQs as the one in (23b) (assuming the structure in (20a)) the specifier of the utterance's CP is occupied by a null interrogative Q. This is represented below in (26a). However, when the utterance is echoed, its CP domain becomes 'embedded' within the echo-interrogative clause-typing of the EQs; as a result, *si* shows up:

(26) a. U: 
$$[CP_U \ \emptyset \ C_U \ ...]$$
  
b. EQ:  $[CP_{EQ} \ [CP_U \ si \ C_U \ ...]]$ 

So, the absence of si from the EQs in (24) and (25) is not a surprise under our assumption that si is a phonetically realized interrogative operator Q. Given that this

operator is absent from the CP level of declaratives and wh-questions, it cannot appear in EQs.<sup>16</sup> Thus, we can conclude that the particle *si* present in the EQ in (23b) has interrogative nature; it is the overtly realized interrogative Q-operator.

Consider now the introductory particle *que* 'that'. It can optionally appear in any type of Spanish *wh*-EQs, independently of the clause-type of the echoed utterance, as it can be observed in (24) y (25). Following Escandell (1999), I take *que* as a quotative marker. I also claim that rather than being an item "inherited" from the stimulus, *que* is an echo-introduced element: it signals that the speaker partially reproduces the words pronounced by her interlocutor in the previous speech turn. This intuition is also confirmed by the distribution of these two particles in EQs repeating a polar question: *que* must always precede *si*:

(27)	a.	EQ: ¿Que	si ha leído María QUÉ?	(Spanish)
		that	whether has read María what	
		'Has N	María read WHAT?'	
	b.	EQ: *¿Si	que ha leído María QUÉ?	
		whet	her that has read María what	

Interestingly, as reported in Escandell (1999), the particles *que* and *si* are not restricted only to the cases of repetition of what has been explicitly pronounced in the previous turn of a speech act by a different speaker. That is, these particles are not limited to EQs. The author suggests that, from a pragmatic point of view, such particles act as special markers signaling that the sentence may be attributed to a different speaker. This is illustrated by the examples below, in which *que* and *si* precede the representational thoughts, attributes by the speaker to the addressee:

(28) a. ¿Que han hecho un lago donde había un valle? Pse. (Spanish) that they.have done a lake where was a valley INTERJ
Me es igual. CL. ISG is equal
'They have made a valley where there was a valley? I don't care.'

b. Me pregunto [quién-Ø<sub>i</sub> t<sub>i</sub> viene a la fiesta]. CL.1SG I.ask who-Q comes to the party 'I wonder who is coming to the party.'

<sup>&</sup>lt;sup>16</sup> Certainly, the reader may object this observation by referring to a well-known idea that wh-interrogative syntax is based on movement of a Q[uestion]-particle into CP. According to Q-based theory (Cable 2010), Q is merged with a wh-word in its argument position and then moves into CP, triggering overt wh-movement as a side effect of its own raising. Notice, however, that a Q-particle responsible for wh-movement might be of a different kind from Q present in polar questions. In the latter, Q seems to be directly generated in CP rather than undergoing movement from a structurally lower position. Therefore, there is no surprise that while the polar Q becomes overt in embedded contexts, the wh-Q does not necessarily follow the same pattern (at least in most Indo-European languages; for data on wh-questions in other languages, see Cable 2010). This idea is supported by the following contrast between embedded polar and wh-questions from English and Spanish respectively:

<sup>(</sup>i) a. I wonder [whether<sub>Q</sub> Mary had tea with John].

<sup>(</sup>English)

b. I wonder [*who*- $\emptyset_i$  had tea with John  $t_i$ ].

<sup>(</sup>ii) a. Me pregunto [si<sub>Q</sub> María viene a la fiesta]. (Spanish) CL. ISG I.ask whether María comes to the party 'I wonder whether María is coming to the party.'
b. Me pregunto [quién-Ø<sub>i</sub> t<sub>i</sub> viene a la fiesta].

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b. La verdad es que es un proyecto fascinante. ¿Si podré *the truth is that is a project fascinating. Whether I.will.can* terminarlo a tiempo? Bueno, espero que sí. *finish-CL.3SG on time well I.hope that yes*'The truth is that it is a fascinating project. Will I be able to finish it on time? Well, I hope that I will.' [from Escandell 1999:3966.3968]

By uttering (28), the speaker advances what would be a possible question of the hearer, in her opinion. The speaker simply *attributes* the assertions in (28) to her interlocutor, probably without having heard them in the previous turn of the dialogue.

To summarize this section, I adopt Sobin's (2010) idea that EQs have a particular double-CP structure that explains their apparently strange behavior: co-occurrence of the echo interrogative features with those of the utterance they eco. I provided an argument from Spanish EQs in support of this syntactic structure. However, as advanced, I depart from the standard view that EQs necessarily trigger the in-situ position for the echo-introduced wh-word.

### 4. Wh-in-situ vs. wh-ex-situ in EQs

## 4.1. Wh-movement and the double CP-structure

As in Chernova (2015), I suggest that EQs do allow both wh-in-situ and wh-ex-situ. However, the availability of the latter is constrained by the clause-type of the echoed utterance. Interestingly, there is a crucial observation in Sobin (2010), which I take as a departure point for my argumentation. Consider again (5), repeated below as (29):

(29)	a.	U:	Mary had tea with { <sup>mumble</sup> }.	(English)
	b.	EQ:	Mary had tea with WHO?	

c. EQ: WHO<sub>i</sub> did Mary have tea with  $t_i$ ?

Sobin observes that English EQs with overt wh-movement, as in (29c), are only appropriate when echoing a declarative utterance, as the one in (29a). In effect, as we have seen in previous sections, movement of the echo wh-word is blocked in other syntactic contexts and the only available option for the wh-word is to appear in-situ:

(30)	a.	U: Did Mary have tea with { <sup>mumble</sup> }?	(English)
	b.	EQ: Did Mary have tea with WHO?	
	c.	EQ: *WHO <sub>i</sub> did Mary have tea with t <sub>i</sub> ?	
(31)	a.	U: <i>What</i> did { <sup>mumble</sup> } drink at Mary's party?	(English)
	b.	EQ: <i>What</i> did WHO drink at Mary's party?	· • • /
	C.	EO: *WHO; what did t; drink at Mary's party?	

c. EQ: \* WHO<sub>i</sub> *what* did t<sub>i</sub> drink at Mary's party d. EQ: \* WHO<sub>i</sub> t<sub>i</sub> drank *what* at Mary's party?

Sobin argues that EQs must preserve the syntactic character of the stimulus; such maintenance is achieved by freezing the CP of the echoed utterance. Thus, (30c) is ungrammatical because overt wh-movement is not compatible with yes/no syntax of the stimulus in (30a). Similarly, movement of the echo wh-word in (31c,d) would broke the frozen CP structure of the echoed wh-question in (31a).

However, in Chernova (2013b, 2015) I analyzed this type of questions in languages with multiple wh-fronting like Slavic and showed that it is not true that wh-ex-situ

option is only appropriate for echoing a declarative. Instead, I demonstrated that at least in Slavic languages the echo wh-word can undergo overt movement even when the CP of the echoed utterance has interrogative syntax. This is exemplified below for an echoed wh-question:

(32)	a.	U:	Kogo	udaril {	mumble}?	(Russian)
			who.AC	Chit {	mumble }	
			'Whom	did { <sup>mumb</sup>	<sup>ble</sup> } hit?'	
	b.	EQ:	Kogo	udaril	KTO?	
		-	whot.AC	CC hit v	who.NOM	
			'Whom	did who	hit?'	
	c.	EQ:	Kogo	KTOi	udaril t <sub>i</sub> ?	
		-	who.AC	C who.NO	M hit	
	d.	EQ:	<sup>?</sup> Kto <sub>i</sub>	kogo	udaril t <sub>i</sub> ?	
			who.NO	M who.AC	CC hit	[from Chernova 2013b:171]

As shown in (32), in Russian the echo wh-word can appear in-situ, (32b), or undergo movement to an immediately preverbal position, (32c), or even to the left periphery of the EQ, above the wh-word "inherited" from the utterance, (32d). The data suggest that Sobin's generalization on the mandatory wh-in-situ for EQs does not hold crosslinguistically.

# 4.2. Echo wh-extraction through phase edges

Contrary to the standard views on the obligatoriness of wh-in-situ in EQs, I believe that echo wh-movement proceeds successive cyclically, 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 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).<sup>17</sup>

Given the double-CP structure of EQs we have seen in (20), it is expected that the edge of  $CP_U$  can act as an escape hatch for the extracted echo wh-word on its way into  $CP_{EQ}$ . So, the grammaticality of echo wh-extraction crucially depends on availability of the specifier of  $CP_U$  as a landing site. I claim that this is precisely the reason why the clause-type of the echoed utterance plays a so important role for overt echo wh-movement.

When an EQ is built on the basis of a declarative utterance, the edge of  $CP_U$  is unfilled; so, it can act as an escape hatch for an echo wh-word on its way to Spec,  $CP_{EQ}$ . Recall the grammaticality of the English example in (29c) (repeated below as (33b)),

<sup>&</sup>lt;sup>17</sup> According to Chomsky's (2000, 2001) *Phase Impenetrability Condition* (hereafter, 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 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:

<sup>(</sup>i) [Given structure  $[_{ZP} Z ... [_{HP} \alpha [H YP]]]$ , 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  $[\alpha]$  are accessible to such operations.

with complete wh-extraction and echo-interpretation.<sup>18</sup> In fact, to the best of my knowledge, the observation holds for most languages, including Spanish (see next section):

(33) a. U: Mary had tea with  $\{^{\text{mumble}}\}$ . (English) b. EQ:  $[CP_{EO} WHO_i [CP_U t_i [C_U did] [Mary have tea with t_i]]]?$ 

But what about echo wh-extraction in interrogative contexts? As we have seen in (30c) and (31c,d), such EQs result completely ungrammatical in English, but acceptable (although slightly deviant) in Slavic, as shown in (32d). The reason for such crosslinguistic variation is quite simple under current proposal. Standardly assuming that languages with multiple wh-fronting resort to multiple specifiers of CP, unlike languages of the English type (Rudin, 1988; Richards 2001; a.o.), it is not surprising that echo wh-extraction is licit only in the former type of languages. The contrast is schematically represented below, for the English EQ in (31c) and the Russian one in (32d):

(34) a. 
$$*[CP_{EQ} [CP_{U} what [C did] [WHO drink at Mary's party]]]?(English, (31c))$$
  
b.  $?[CP_{EQ} KTO_i C_{EQ} [CP_{U} t_i [CP_{U} kogo [t_i udaril]]]]?$  (Russian, (32d))

A note is in order regarding the second option for the fronted echo wh-word in Russian, at an immediately preverbal position, (32c).<sup>19</sup> As argued in Chernova (2015) (see also Svenonius 2004; Dyakonova 2009; a.o.), in Slavic Aspect Phrase (AspP) can behave as an additional phase (apart from CP and vP). One of immediate consequences of such phasal nature of AspP is that languages like Russian can make use of an additional escape hatch, namely the specifier of AspP. So, this position can occasionally host the extracted echo wh-word, making possible an EQ like (32c) (represented below in (34c)):

(34) c. 
$$[CP_{EQ} C_{EQ} [CP_{U} Kogo [AspP t_e KTO_i [t_i udaril]]]]?$$
 (Russian, (32c))

As evident, this option is excluded from English, where the only possibility for the echo wh-phrase is to stay in-situ, (31b) (being also legitimate in Slavic, (32b)).

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 Slavic, but absent from English):<sup>20</sup>

<sup>&</sup>lt;sup>18</sup> Observe that under this view there is no need to postulate any exceptional nature of such constructions (*contra* Sobin's 2010 pseudo-EQs). For a more complete crosslinguistic picture of echo wh-extraction out of different syntactic contexts, the interested reader is referred to Chernova (2015).

<sup>&</sup>lt;sup>19</sup> Due to space limitation and given that Russian EQs do not constitute the topic of this paper, I will not present here a detailed solution for the derivation in question, just a general idea. For a complete discussion of theoretical premises of *v*-to-Asp phase extension and other technical matters, the reader is referred to Chernova (2015).

<sup>&</sup>lt;sup>20</sup> For clarity's sake and due to space limitations, here I omit the details and present a very simplified version of what I proposed for wh-movement in EQs in Chernova (2015).



To sum up, assuming the particular syntactic structure of EQs, the intuition is that echo wh-movement proceeds successive cyclically and has to pass through at least one embedded domain,  $CP_U$ . Thus, it is expected that the syntactic character of the echoed utterance (declarative, interrogative, etc.) restrict the availability of the wh-ex-situ option. Moreover, it seems that the typology of a particular language regarding wh-movement in true questions may enable additional escape hatches for extraction of the echo wh-word. With this general idea in mind, let us consider now Spanish data.

# 5. Spanish wh-EQs

As I advanced in the introduction of this paper, Spanish data concerning wh-EQs –and particularly the option of overt wh-movement– are quite intriguing. Consider first the wh-EQ built on a previous declarative utterance, (36):<sup>21</sup>

(36)	a.	U:	María nos dijo { <sup>mumble</sup> }.	(Spanish)
			María CL.1PL said { <sup>mumble</sup> }	
			'María told us { <sup>mumble</sup> }.'	
	b.	EQ:	¿(Que) (María) os dijo (María) QUÉ?	
			that María CL.2PL said María what	
			'María told you WHAT?'	
	c.	EQ:	¿(Que) QUÉ <sub>i</sub> ( <sup>?</sup> María) os dijo (María) t <sub>i</sub> ?	
			that what María CL.2PL said María	

Similarly to what we have seen for English wh-EQs echoing a previous declarative, (29), in the previous examples the echo wh-word can remain in-situ, (36b), or undergo overt movement into the leftmost position of the question, (36d). In addition, it can also appear in an immediately preverbal position, an option being excluded from English.

Consider now Spanish EQs repeating a previous yes/no question:

(37)	a.	U:	¿Ha traído María { <sup>mumble</sup> }?	(Spanish)
			has brought María { <sup>mumble</sup> }	
			'Has María brought { <sup>mumble</sup> }?'	
	b.	EQ:	¿(Que) si (María) ha traído (María) QUÉ?	
			that whether María has brought María what	
			'Has María brought WHAT?'	

<sup>&</sup>lt;sup>21</sup> There is, in principle, another option for questions in (36), where the topicalized subject *Maria* appears before the echo wh-word  $qu\acute{e}$  'what' (presumably, adjoined to CP). However, all consulted speakers express their preference for a post-verbal subject and accept the question as in (i) only marginally, under an appropriate context:

(i) EQ: <sup>?</sup>  $\mathcal{L}(Que)$  María  $QUE_i$  os dijo  $t_i$ ?

that María what CL.2PL.DAT said

Concerning (36c), most consulted speakers report that they accept the subject in the pre-verbal position only marginally. However, if the echo wh-word remains in-situ, as in (36b), the subject can appear both pre-verbally and post-verbally. Reasons of such fluctuations are not clear to me at the moment, so I leave this issue for future research.

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c.	EQ: ' ¿(Que) si	ha traído QU	É <sub>i</sub> María t <sub>i</sub> ?
	that w	hether has brought w	hat María
d.	EQ: <sup>?(?)</sup> ¿(Que) si	QUÉ <sub>i</sub> ha traído	María t <sub>i</sub> ?
	that w	hether what has brou	ght María
e.	EQ: * ¿(Que) Q	ué <sub>i</sub> si ha traíd	o María t <sub>i</sub> ?
	that w	hat whether has brou	ight María

Again, observe that the echo wh-word can appear at different positions. I will consider each option in what follows of this section.

### 5.1. Echo wh-in-situ and subject inversion

Let us first address the in-situ position of the echo wh-word, the preferred one for all my Spanish informants. As it can be appreciated from (37b), questions in Spanish may lack subject inversion. As is well-known, such fluctuations are common across NSLs and have little to do with EQs in particular. It has been widely described in the literature that in unmarked, *bona fide* questions the subject tends to appear post-verbally, whereas a pre-verbal subject tends to receive a topic-like or categorical interpretation (see Cardinaletti 1997; Belletti 2004; Gallego 2007, 2010; a.o.). For instance, notice the contrast between (38a) and (38b):<sup>22</sup>

(38)	a.	$[_{CP}$ Por qué C $[_{TP}$ Celia llamó a su hermana]]?	(Spanish)
		for what Celia called to her sister	
		'Why did Celia call her sister?'	
	b.	[ <sub>CP</sub> Por qué C llamó [ <sub>TP</sub> (Celia) a su hermana	u (Celia)]]?
		for what called Celia to her sister	Celia
		'Why did Celia call her sister?'	[from Gallego 2007:129]

As pointed out in Gallego (2007:129), while the question in (38b) 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 one in (38a) receives a marked interpretation. Namely, it can mean either 'why was it Celia (and not other person) who called her sister?' or else 'why was it (true) that Celia called her sister?'. Observe that the noticed topic-like interpretation of pre-verbal subject also arises in declarative clauses:

(39) a.  $\begin{bmatrix} CP & C & [TP & Maria_i & T & [vP & t_i & v & baila ] \end{bmatrix} \end{bmatrix}$  (Spanish) *Maria dances* 'Maria dances.' (=Maria is a dancer)

<sup>&</sup>lt;sup>22</sup> Notice that in standard questions, as in (37a), a post-verbal subject can occupy either Spec,TP or Spec,vP, depending on whether we assume T-to-C movement of the verb or not. Here, adopting Gallego's (2007, 2010) view, I assume that in standard wh-questions the verb is in C; if the verb remains in T, the subject appears pre-verbally and the whole question receives a marked interpretation. Regarding EQs, given their undeniable marked reading, I argue that the verb never raises as high as  $C_{EQ}$ . The English data, as in (i), suggest that the verb does undergo T-to-C<sub>U</sub> movement:

<sup>(</sup>i) a. U: ¿[CP What C did [TP Mary buy]]?

b. EQ:  $\mathcal{L}[CP_{EQ} C_{EQ} [CP_{U} What C_{U} did [TP WHO buy]]?$ 

As for Spanish EQs, I assume that the verb can appear either in  $C_U$  (giving rise to the [verb>subject] configuration) or in T (resulting in [subject>verb] word order). However, for the ease of exposition, in (40)-(41) I represent the verb remaining in T; consequently, the subject is either in Spec,TP or Spec,vP.

 b. [<sub>CP</sub> C [<sub>TP</sub> T Baila [<sub>vP</sub> María v ]]] dances María
 'María dances.' (=It is María who dances) [from Gallego 2007:222]

So, regarding the position of subjects in NSLs, I assume that in EQs in (37b) the pre-verbal subject occupies Spec,TP, whereas the post-verbal one stays in Spec,*v*P (see Belletti 2004; Gallego 2007, 2010; a.o.).<sup>23</sup> The underlying structure is represented below:

(40) (Que) [CP<sub>EQ</sub> C<sub>EQ</sub> [CP<sub>U</sub> si C<sub>U</sub> [TP (María) [T ha traído] [vP (María) ...QUÉ ]]]]? *that whether María has brought María WHAT* 'Has María brought WHAT?'

I assume that in (40) the in-situ echo wh-word gets scope being bounded at distance by the  $C_{EQ}$  head. Recall our discussion from previous sections that the echointerrogative head  $C_{EQ}$  can bound even deeply embedded echo wh-items and searches for them at a great depth.

## 5.2. Partial echo wh-movement

Now, turning back to the examples in (39), observe that apart from the in-situ option, when the echo wh-word remains in its argument position (within the vP domain), it can also undergo a sort of partial wh-movement (Fanselow 2005) to two structurally higher landing sites. Consider first the EQ in (37c) (repeated below in (41)), which most of my informants judge as slightly deviant in comparison with the in-situ option in (37b) (represented in (40)). In (41), the echo wh-word is sandwiched between the verb (which, I assume, is in T) and the subject (in Spec,vP). So, it seems logical to propose that the echo wh-word has been fronted to the edge of vP:

(41) <sup>?</sup>(Que)  $[CP_{EQ} [CP_{U} si C_{U} [TP T ha traído [vP QUÉ<sub>i</sub> [vP María ... t<sub>i</sub>]]]]?$ *thatwhetherhas brought whatMaría* 

But what about the two remaining EQs in (37)? Most of my informants report that the EQ in (37d) seems rather odd in comparison with the other two in (37b) and (37c). However –and, perhaps, quite unexpectedly at first sight–, many of the consulted speakers notice a peculiar contrast between (37d) and (37e) (repeated below in (42a,b) for reader's convenience):

(42)	a.	EQ: $?(?)$ ; (Que) si QUÉ <sub>i</sub> ha traído María t <sub>i</sub>	?
		that whether what has brought María	
	b.	EQ: * $i$ (Que) $QUE_i$ si ha traído María $t_i$	?
		that what whether has brought María	

As deviant as the two questions are, the one in (42a) sounds slightly better than the one in (42b). This contrast becomes increasingly prominent when the echo wh-phrase

<sup>&</sup>lt;sup>23</sup> I assume that in NLSs, as opposed to English, nominative Case is assigned in Spec,vP. In addition, subjects have to check their [person] feature with T, which cannot be checked via long-distance agreement (see Boeckx 2008). Following Belletti (2004), I assume that in the case of post-verbal subjects, the [person] feature is checked through movement into Spec,TP of a null (referential) *pro*, base generated together with the post-verbal NP-subject ([NP NP [*pro*]]). When the subject appears pre-verbally, it means that the whole NP has undergone A-movement into Spec,TP in order to value its [person] feature.

is strongly stressed.<sup>24</sup> Notice that the echo wh-phrase in (42a) undergoes a kind of partial wh-movement to some position below *si* 'whether' (that is, below  $CP_U$ ); meanwhile, the EQ in (42b), with complete wh-movement to the leftmost position (presumably into the  $CP_{EQ}$  level), results completely ungrammatical for all my informants.

Observe also that in (42a) the subject can appear either post-verbally (that is, in Spec,vP) or pre-verbally (Spec,TP). So, what position can –marginally– occupy the echo wh-word, giving rise to an EQ as (42a)? I suggest that such position is the edge of TP, an additional host available in Spanish (but not in English) as a result of *v*-to-T phase extension (Gallego 2007, 2010).

As already mentioned in previous section, under the standard view (since Chomsky 2000), the complement domains of the phase heads, v and C, become opaque for further operations as a result of being transferred to the external systems. Nevertheless, several studies on phases (particularly, den Dikken 2007; Gallego 2007, 2010; a.o.) have argued that points of Spell-out are subject to parameterization: languages can differ with respect to what portion of the structure becomes a phase domain. The extension of vP'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. The mechanism of phase extension I assume in this paper is synthetically represented below (adopted from den Dikken 2007):

(43) a.  $[ZP \ \alpha \ [Z] \ [HP \ [H] ]]$ phase  $\Phi$ b.  $[ZP \ \alpha \ [Z+H_i] \ [HP \ t_i \ ]]$ phase  $\Phi$   $\leftarrow$  phase  $\Phi$ 

Here I adopt Gallego's (2006:47) view, namely that "one of the most obvious differences between Romance and English holds the key: *v*-to-T movement" (see also Gallego 2007, 2010). The author captures this crucial parametric difference – morphological tense richness of Romance languages– in terms of Phase Sliding: in Spanish (but not in English), TP is a phase.<sup>25</sup> The contrast between these two languages is schematized below, in (44), where  $\alpha$  (within the clear shadowed zone) stands for the edge of a phase; meanwhile  $\beta$  (the dark shadowed zone) represents the phase domain, which gets transferred to the Interfaces and becomes invisible to the higher syntactic nodes:

(44)	a.	[vP	α	[v]	$\begin{bmatrix} VP(=\beta) & \dots \end{bmatrix}$	(English)
	b.	[TP	α	[T]	$\begin{bmatrix} v P(=\beta) \begin{bmatrix} v \end{bmatrix} \begin{bmatrix} V P & \dots \end{bmatrix} \end{bmatrix}$	(Spanish)

<sup>&</sup>lt;sup>24</sup> Some of my informants report that (37d) can only be interpreted as a request-for-repetition wh-EQ, as opposed to the two previous EQs in (37b,c), which could also receive an amazement reading under relevant discourse situation. I leave the intriguing question on why the amazement reading is lost with a partially fronted wh-word for future research.
<sup>25</sup> This idea captures a well-known descriptive difference between the so-called "morphologically rich"

<sup>&</sup>lt;sup>25</sup> This idea captures a well-known descriptive difference between the so-called "morphologically rich" languages (e.g., Romance) and "morphologically poor" ones (e.g., English). 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 ample theoretical discussion).

Gallego (2007, 2010) addresses a number of properties of Spanish (and other Romance languages) that, according to his proposal, derive from the consequence of TP being a phase: *pro*-drop; the fact that subjects can appear both pre- and post-verbally, the formers bearing a topic-like flavor; the lack of obligatory subject-verb inversion in questions (see (38)-(39) and the related discussion), among others. In sum, in Spanish the edge of TP can exhibit certain peripheral phenomena, generally attributed to the "standard" phase heads C and v.<sup>26</sup>

Here I argue that a Spanish EQ as (42a), with an echo wh-phrase sandwiched between the question operator *si* 'whether' and the verb, is another particular consequence of TP being a phase. The edge of TP can act as a host position for the echo wh-word, extracted out of the *v*P domain in order to remain visible to further computation. However, in EQs the edge of TP is embedded inside another phase domain, CP<sub>U</sub>. Recall that Spanish, similarly to English and differently from Slavic languages, does not make use of multiple specifiers of CP. Given that the single Spec,CP<sub>U</sub> is already occupied by *si*, further movement of the echo wh-word into CP<sub>EQ</sub> is blocked. So, the resulting EQ with complete echo wh-movement, as in (42b), is completely ungrammatical. The correspondent "failed" derivations of the EQs in (42a) and (42b) –although with different degree of deviance– are represented below in (45) and (46) respectively:

$$(45) \stackrel{?(?)}{(Que)} [CP_{EQ} [CP_{U} si C_{U} [TP QUÉ_{i} T ha traído [vP ti [vP María ... t_{i}]]]]?$$

$$that whether what has brought María$$

The data seem indicate that while an echo wh-word "lie still" in its argument position, as in (40), it can be easily bounded at long distance by the head  $C_{EQ}$ . As already mentioned, the in-situ option is the most preferred one by all my informants. However, the further an echo wh-item moves from its base position (into Spec,*v*P, (38), Spec,TP, (45), or Spec,CP<sub>EQ</sub>, (46)), more deviant the resulting question is. But still, we have seen that, in contrast with English and similarly to Slavic, Spanish presents at least two additional landing sites for the echo wh-word (namely, Spec,*v*P and Spec,TP), apart from the standard wh-in-situ option.<sup>27</sup> This is schematically represented below:<sup>28</sup>

<sup>&</sup>lt;sup>26</sup> In fact, Gallego's proposal captures the sense of Uriagereka's (1995) FP projection, sandwiched between CP and IP and encoding discourse-oriented effects.

<sup>&</sup>lt;sup>27</sup> For another particularly interesting –and unexpected– resemblance of Spanish and Slavic languages, see Gallego (2017) who reports that European Spanish can resort to the multiple wh-fronting strategy under specific discourse conditions.

<sup>&</sup>lt;sup>28</sup> Due to space limits, here I prefer not to go into a detailed discussion of the motives of an increasing oddness of Spanish EQs with wh-raising (recall the contrast with Russian, (33)). In Chernova (2015), I proposed to solve this puzzle in terms of Q-based theory, in spirit of Cable (2010). Namely, I argued that in such cases an echo wh-word undergoes movement in order to stay visible to an echo Q-particle, merged at distance, at higher functional nodes, but still requiring a syntactic agreement with the echo wh-word it c-commands.



That this observation is on track is suggested by evidence from Spanish EQs based on a previous wh-question, as the one below. Again, the wh-in-situ option, (48b), is judged as completely grammatical. On the other hand, observe that as lower ends up the fronted echo wh-word  $qu\acute{e}$  'what' better the sentence is judged, very similarly to what we have seen in previous examples:

(48)	a.	U:	$Quién$ le ha dado al niño $\{mumble\}$ ? (Spa	anish)
			who CL.3SG has gave to.the kid { <sup>mumble</sup> }	
			'Who has given { <sup>mumble</sup> } to the kid?'	
	b.	EQ:	¿(Que) quién le ha dado al niño QUÉ?	
			that who CL.3SG has gave to.the kid what	
			'Who has given WHAT to the kid?'	
	c.	EQ:	¿(Que) (*QUÉ) quién ( <sup>??</sup> QUÉ) le ha dado ( <sup>?</sup> QUÉ) al niño	t <sub>i</sub> ?
			that what who what CL.3SG has gave what to.the kid	

As it can be appreciated in (48c), partial movement into the edge of vP gives a better result than movement into the edge of TP. Finally, as for the completely ungrammatical option, with the echo wh-word at the leftmost position (at the edge of  $CP_{EQ}$ ), I argue that such movement is blocked due to the utterance's wh-word *quién* 'who'. Given that it already occupies the single Spec,  $CP_U$ , this position becomes unavailable as an intermediate landing site for the extracted echo wh-word *qué*.

# 6. Conclusion

This paper analysed a quite understudied phenomenon (as much vaguely mentioned in footnotes): EQs. It presented a detailed characterization of this type of interrogatives, with a number of "strange" properties, which are crosslinguistically common. Although the few existent studies on the topic are restricted to English, here I considered Spanish EQs and presented some novel data. On the one hand, I argued that Spanish offers an interesting piece of evidence for the double CP-structure of EQs, previously proposed by Sobin (2010) on the basis of English data. Namely, I paid particular attention to the interrogative particle *si* 'whether', present in EQs based on a previous yes/no interrogative utterance and omitted in root contexts. On the other hand, I started from the idea that echo-inserted wh-word *can* undergo overt movement, against the already mentioned study by Sobin (2010) and, in fact, a large amount of literature, where wh-in-situ has been taken as an inherent and indispensable feature of EQs. Our intuition seems to be confirmed by data: Spanish EQs, apart from the standard wh-in-situ option, do allow at least two landing sites for the fronted echo wh-item: a post-verbal one (I argued, at the edge of vP) and, marginally, a pre-verbal one (at the edge of TP). So, this paper also offers an additional –and, in some sense, unexpected– argument for a well-known previous observation that in Spanish, there is an additional position, sandwiched between CP and vP, with phasal status (FP in Uriagereka 1995; TP in Gallego 2007, 2010). As a consequence, this position can host  $\bar{A}$ -moved items, and echo wh-words are just one of those.

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# References

- Baker, C. L. (1968). Indirect Questions in English. PhD Thesis, University of Illinois.
- Baker, C. L. (1970). Notes on the description of English questions: the role of an abstract question morpheme. *Foundation of Language* 6, pp. 197-217.
- Bartels, C. (1997). Towards a compositional interpretation of English statement and question intonation. PhD Thesis, University of Massachusetts.
- Bartels, C. (1999). The Intonation of English Statements and Questions: A Compositional Interpretation. New York & London: Garland Publishing.
- Belletti, A. (2004). Aspects of the Low IP Area, in L. Rizzi (ed.), *The Structure of CP and IP. The Cartography of Syntactic Structures* (vol. 2). Oxford/New York: Oxford University Press, pp. 16-51.
- Boeckx, C. (2008). Aspects of the Syntax of Agreement. London, Routledge.
- Cable, S. (2010). *The Grammar of Q: Q-particles, Wh-movement, and Pied-Piping*. Oxford: Oxford University Press. <u>https://doi.org/10.1093/acprof.oso/9780195392265.001.0001</u>
- Cardinaletti, A. (1997). Subjects and clause structure. In L. Haegeman (ed.), *The New Comparative Syntax*. London: Longman, pp. 33-63.
- Carnie, A. (2006). Syntax. A Generative Introduction. Oxford: Blackwell.
- Castroviejo, E. (2006). *Wh-exclamatives in Catalan*. PhD Thesis, Universitat Autònoma de Barcelona.
- Chernova, E. (2013a). El análisis sintáctico de las preguntas *qu- in situ* de eco en español. *Verba. Anuario Galego de Filoloxía* 40, pp. 65-92.
- Chernova, E. (2013b). On Instances of Echo Wh-Movement in Light of Multiple Spell-Out. *Linguistic Analysis* 38(3/4), pp. 153-182.
- Chernova, E. (2015). The Syntax of Wh-Movement in Multiple (True and Echo) Questions: A Q-Based Approach. PhD Thesis, Universitat de Girona.
- Chomsky, N. & H. Lasnik. (1977). Filters and Control. Linguistic Inquiry 8, pp. 425-504.
- Chomsky, N. (2000). Minimalist Inquiries: The Framework. In R. Martin, D. Michaels
  & J. Uriagereka (eds.), *Step by Step. Essays on Minimalist Syntax in Honour of Howard Lasnik*. Cambridge, Mass.: MIT Press, pp. 89-155.
- Chomsky, N. (2001). Derivation by phase. In M. Kenstowicz (ed.), *Ken Hale: A life in language*. Cambridge (Mass.): MIT Press, pp. 1–52.
- Cooper, R. (1983). *Quantification and Syntactic Theory*. Dordrecht, Reidel. https://doi.org/10.1007/978-94-015-6932-3

Culicover, P. (1976). Syntax. New York: Academic Press.

- Dalrymple, M & R. Kaplan. (2000). Feature indeterminacy and feature resolution. *Language* 76, pp. 759-798. <u>https://doi.org/10.2307/417199</u>
- Escandell, M. V. (1999). Los enunciados interrogativos. Aspectos semánticos y pragmáticos. In I. Bosque & V. Demonte (eds.), *Gramática Descriptiva de la Lengua Española (vol. 3)*. Madrid: Espasa Calpe, pp. 3929-3991.
- Escandell, M. V. (2002). Echo-syntax and metarepresentations. *Lingua* 112, pp. 871-900. https://doi.org/10.1016/S0024-3841(02)00051-7
- Etxepare, R. & M. Uribe-Etxebarria (2012). Las preguntas de qu-in situ en español: Un análisis derivacional. In J. M. Brucart & Á. Gallego (eds.): *El movimiento de constituyentes*. Madrid: Visor, pp. 251-272.
- Fanselow, G. (2005). Partial Wh-Movement. In M. Everaert & H. van Riemsdijk (eds.), *The Blackwell Companion to Syntax (vol. 3).* Malden: Blackwell, pp. 436-492.
- Fiengo, R. (2007). Asking Questions: Using Meaningful Structures to Imply Ignorance.Oxford:OxfordUniversityPress.https://doi.org/10.1093/acprof.oso/9780199208418.001.0001
- Gallego, Á. (2006). Phase effects in Iberian Romance. In N. Sagarra & A. J. Toribio (eds.), *Selected proceedings of the 9th Hispanic Linguistics Symposium*. Somerville (Mass.): Cascadilla Proceedings Project, pp. 43–55.
- Gallego, Á. (2007). *Phase Theory and Parametric Variation*. PhD Thesis, Universitat Autònoma de Barcelona.
- Gallego, Á. (2010). *Phase Theory*. Amsterdam: John Benjamins. https://doi.org/10.1075/la.152
- Gallego, Á. (2017). Multiple Wh-Movement in European Spanish. In E. Castroviejo,
  O. Fernández-Soriano & I. Pérez-Jiménez (eds.), *Boundaries, Phases, and Interfaces. Case studies in honor of Violeta Demonte.* Amsterdam, John Benjamins, pp. 196-222. <u>https://doi.org/10.1075/la.239.10gal</u>
- Hagstrom, P. (1998). Decomposing Questions. PhD Thesis, MIT.
- Harley, H. & E. Ritter. (2002). Person and Number in Pronouns: A Feature-Geometric Analysis. *Language* 78(3), pp. 482-526. <u>https://doi.org/10.1353/lan.2002.0158</u>
- Hernanz, M. Ll. (2012). Sobre la periferia izquierda y el movimiento: el complementante si en español. In J. M. Brucart & Á. Gallego (eds.), *El* movimiento de constituyentes. Madrid: Visor, pp. 151-171.
- Higginbotham, J. & R. May. (1981). Questions, Quantifiers and Crossing. *Linguistic Review* 1, pp. 41-80. <u>https://doi.org/10.1515/tlir.1981.1.1.41</u>
- Iwata, S. (2003). Echo Questions are interrogatives? Another version of a metarepresentational analysis. *Linguistics and Philosophy* 26, pp. 185-254. <u>https://doi.org/10.1023/A:1022851819941</u>
- Jiménez, M. L. (1997). Semantic and pragmatic conditions on word order in Spanish. PhD Thesis, Georgetown University.
- Karttunen, L. (1977). Syntax and semantics of questions. *Linguistics and Philosophy* 1, pp. 3–44. <u>https://doi.org/10.1007/BF00351935</u>
- Katz, J & P. Postal. (1964). *An integrated theory of linguistic descriptions*. Cambridge, (Mass.): MIT Press.
- May, R. (1985). Logical Form: Its Structure and Derivation. Cambridge (Mass.): MIT Press.
- Noh, E. (1998). Echo Questions: Metarepresentations and Pragmatic enrichment. *Linguistics and Philosophy* 21, pp. 603-628. <u>https://doi.org/10.1023/A:1005361528891</u>

- Pesetsky, D. (1987). Wh-in-situ: Movement and Unselective Binding. In E. Reuland & A.G.B. ter Meulen (eds.), *The Linguistic Representation of (In)definiteness*. Cambridge (Mass.): MIT Press, pp. 98-129.
- Reglero, L. (2007). Wh-interrogatives in Spanish. Probus 19(2), pp. 267-297.
- Richards, N. (2001). *Movement in Language: Interactions and Architectures*. Oxford: Oxford University Press.
- Rigau, G. (1984). De com 'si' no ésconjunció i d'altres elements interrogatius. *Estudis Gramaticals: Working Papers in Linguistics*. Bellaterra: Universitat Autònoma de Barcelona, pp. 249-278.
- Rudin, C. (1988). On Multiple Questions and Multiple Wh Fronting. *Natural Language* and Linguistic Theory 6, pp. 445-502. <u>https://doi.org/10.1007/BF00134489</u>
- Šimík, R. (2009). Amazement Echo Questions as Rethoric Echo Questions. Paper presented in the class of A. Kratzer & L. Selkirk 'Meaning and intonation'. University of Amherst. Spring.
- Sobin, N. (2010). Echo Questions in the Minimalist Program. *Linguistic Inquiry* 41(1), pp. 131-148. <u>https://doi.org/10.1162/ling.2010.41.1.131</u>
- Sudo, Y. (2007). A metalinguistic semantics for echo questions. In M. Aloni, P. Dekker & F. Roelofsen (eds.), *Proceedings of the Sixteenth Amsterdam Colloquium*. Amsterdam: ILLC / Department of Philosophy University of Amsterdam, pp. 205-211.
- Suñer, M. (1991). Indirect Questions and the Structure of CP. Some Consequences. In
  H. Campos & F. Martínez-Gil (eds.), *Current Studies in Spanish Linguistics*.
  Washington: Georgetown University Press, pp. 283-312.
- Svenonius, P. (2004). Slavic Prefixes Inside and Outside VP. Nordlyd 32(2), pp. 205-251.
- Uriagereka, J. (1995). An F Position in Western Romance. In K. Kiss (ed.), *Discourse configurational languages*. New York: Oxford University Press, pp. 153-175.
- Uriagereka, J. (2005). A Marcovian Syntax for Adjuncts. Ms., University of Maryland.
- Uribe-Etxebarria, M. (2002). In situ questions and masked movement. *Linguistic Variation Yearbook* 2, pp. 259-303.
- Zanuttini, R & P. Portner. (2003). Exclamative clauses: at the syntax-semantics interface. *Language* 79(1), pp. 39–81. <u>https://doi.org/10.1353/lan.2003.0105</u>