

KOREAN-ENGLISH CODESWITCHING EXPLAINED BY THE DOUBLE SWITCH CONSTRAINT EXPLAINS WH IN-SITU*

Bahareh Samimi (Bahareh.Samimi@unige.ch)

1. INTRODUCTION

Korean-English intrasentential codeswitching¹ data from Lee (1991) analyzed in Finer (2014) suggest that a *wh* word in a codeswitched sentence behaves as it would in its own language regarding the *in situ* vs. movement option.

From this observation, made by Finer, and a few further arguments, I will show that the Korean *wh in-situ* is real *in-situ* and does not undergo movement to the *vP* periphery (i.e. the clause-internal Focus position defined in Belletti 2004). Codeswitched sentences with a Korean *wh* word in an English context provide evidence for this claim.

Building upon the above two arguments, I highlight how the movement of an English *wh*-word in the embedded clause changes the word order of the Korean main clause from head-final to head-initial. I explain this change by Biebrauer et al.'s (2014) Final-Over-Final Constraint (FOFC), re-labeled as the Double-Switch Constraint by Samimi (2018). I argue that the Double-Switch Constraint can undo certain language specific rules in the process of codeswitched language formation, contrary to MacSwan's (1999:234, 138) statement: "Nothing constraints code-switching apart from the requirements of the mixed grammars." From this phenomenon I deduce that the codeswitched language is a single language with its own unique grammar, rather than a mix of two languages.

Finally, building upon the illuminating facts about codeswitched interrogatives, the paper refutes a few of the major analyses of *in-situ* and movement interrogatives while favors others.

By offering a general linguistic explanation for a codeswitching phenomenon, this paper encourages a move from *descriptive* studies of Codeswitching towards *theoretical* studies of Codeswitching.

The sections of this paper are organized as follows. Section 2 introduces the monolingual word order pattern of the two languages that participate in the codeswitching language under discussion as well as the declarative word order pattern of the codeswitching language. Section 3 shows the changes that the language of the *wh*-word brings to the codeswitching sentences. Section 4 presents the Double-Switch Constraint (FOFC), a universal constraint on word order. Section 5 highlights the importance of explaining codeswitching word order constraints theoretically rather than descriptively. Section 6 applies the constraint introduced in section 4 on the word order changes observed in section 3 and attributes one single grammar to the bilingual codeswitching language, rather than a free mix of two grammars. Section 7 makes a generalization based on facts established throughout the paper in regard to the *wh* movement and *in-situ* theories proposed in the literature. Section 8 summarizes and concludes the paper.

* I would like to thank the editors of this issue, and the reviewers for their relevant comments.

¹ Bilingual intrasentential codeswitching is the alternate use of two languages below sentential boundaries among bilingual interlocutors (from MacSwann 2014:2).

2. THE LANGUAGE OF LITTLE v DETERMINES WORD ORDER IN THE vP

Korean is a head-final language. This means that in this language the complement precedes the head. The Korean sentence in (1) below shows that the object precedes the verb and example (2) shows that the embedded clause precedes the selecting verb 'wonder'.

- (1) Mary-ka maykcwu-lul masi-ess-ta.
 Mary-SM beer-OM drink-PST-DECL
 'Mary drank beer.' Finer (2014:17a)
- (2) John-un [Mary-ka muet-ul sat nunci] kungkumhaehata.
 John-SM [Mary-SM what-OM buy Q] wonder-DECL
 'John wonders what Mary bought yesterday.' Finer (2014:31b)

English is a head-initial language and the direct object follows the verb in this language. It is important to know what the position of the object can be in a Korean-English codeswitching language.

Chomsky (1995) introduces little vP as a projection above VP . In line with Gonzalez and Lopez (2011:838) I take the little v head to be spelled out by the light verb in light verb constructions (by a suffix such as *-ier* in German and silent in languages such as English), and following Butt (2010:4), I take the light verb to be the verbalizer.

I agree with Finer on the point that the language of v correlates with the position of the object as well as with the possibility of marking the object. I observe further that functional v from either of the two languages can combine with lexical V from the other language, without influencing the position of the object.² In other words, V (being lexical and not functional) does not influence the position of the object. In the examples given here Korean v is realized as a light verb and the English v is silent, or phonologically null.

The grammatical sentences in (3) and (4) below and the ungrammatical sentence in (5) exemplify the statements made above. The sentence in (3) shows a Korean v (*ha*) with an English V (*put*).³ In this example, the object is case-marked and precedes the verb, as it would in an all Korean sentence

- (3) Meena, *basket-aneta all the toys-lul* pali *put-ha-ko* cipe kaca.
 in OM quickly put-do-and home go.
 'Meena, put all the toys in the basket quickly, and go home.' Finer (2014:25b)

Example (4) shows an English v (null) with a Korean V (*pélyé*). In this example the object is not case-marked and follows the verb, as it would in an all English sentence.

- (4) *Appa* was about to *pélyé* my *ippal*.
 Daddy throw away tooth
 'Dad was about to throw away my tooth.' Finer (2014:28a)

Example (5) shows the incompatibility of an English v with a preverbal object.

² The numerous examples of this kind in the codeswitching literature require a modification of Belazi et al.'s (1994) statement "a word of language X, with grammar G_x , must obey grammar G_x ". The correction should be precise that if the 'word' is lexical, it is free to integrate into whatever grammar.

³ Finer's (2014:52) observation about the incompatibility of a Korean v and an English V is contradicted by example (3) taken from the same paper.

- (5) * I ceonyek(-lul) ate.
 I dinner(-OM) ate
 ‘I ate dinner.’

Finer (2014:27)

These examples show that the language of v (Korean in (3) and English in (4)) determines the position of the verb’s complement as well as the presence or absence of a marker on the object. Examples (3) and (4) show that v from either language can co-occur with V from the other language. The position of the object determined by the language of v in a declarative sentence will be called the in-situ position in the forthcoming discussions on interrogatives. It is now possible to look at the behavior of *wh* words in Korean-English codeswitching and highlight the factor that makes the in-situ versus movement choice in the code-switched language.

3. EMBEDDED WH MOVEMENT INFLUENCES WORD ORDER IN THE MAIN CLAUSE

As shown in the previous section, the language of v determines the position of the object. What is the relation between the language of v and the position of the *wh*-object in a Korean-English codeswitched sentence? English is a head-initial *wh*-movement language and Korean a head-final *wh*-in-situ language (note the position of the *wh*-word in the embedded clause of the Korean example in (2) and its English translation). In preparing the answer to the question of this section, I will briefly define my perspective of head-finality and of *wh*-movement.

It is possible to assume following (Kayne 1994:47) that head-finality of Korean is the result of leftward movement of the object from a postverbal position. The head-final generating movement – an EPP feature assigned to the head of the head-final phrase – is distinct from A-movement to the TP layer, or A’-movement of an English *wh*-word to the C-layer of the clause.

In the case of *wh*-movement, it is possible to follow Pesetsky’s (2000) direction who suggests that an in-situ language like Korean exemplifies feature-movement and a language like English shows overt *wh*-movement. In line with this point of view, the requirements of the high head that attracts *wh*-words – be it the C head, or the Q head in a split-CP analysis (as per Rizzi 2013) – can be taken to be constant, and variation can be laid on the *wh* element. In other words, if the functional Q-feature is separable or merged independently (Mathieu 1999 for the case of Chinese) from the lexical item that is the *wh*-word, this latter stays in-situ. If the Q-feature is not separable, *wh*-movement is forced. This is the conclusion that Finer reaches following Watanabe’s (1992) analysis of *wh*-in-situ in terms of empty operator movement; in his words: “This approach distinguishes the two languages not by the feature content of C (it bears an EPP feature in both cases), but by the nature of the moving items” (Finer 2014:56).

In order to determine the in-situ vs. movement type of codeswitched interrogative sentences, it is essential to define the supposed in-situ position of the *wh* word as well as its expected landing site in case of movement. Given the information provided in the previous section, an object-*wh* word’s in-situ position is before the verb (and following the subject) if v is Korean (c.f. (2)), that is, the position of the non-interrogative argument. It is after the verb if v is English. In other words, the in-situ position of the *wh*-object depends on the language of v . As for the landing site of the *wh* word, at this point it is only possible to say that it is in the C-layer of the clause, a position different from and structurally higher than the in-situ position.

The codeswitching example (6) is an instance of an English sentence, where the only Korean element is the interrogative object. The *wh*-word *muet* ‘what’ follows the English verb in this case.

- (6) a. I wonder he bought *muet* yesterday.
 what
 'I wonder what he bought yesterday.'
 b. * I wonder *muet* he bought yesterday. Finer (2014:34a)

The fact that the *wh*-word appears in the object position of the English embedded clause shows not only that the Korean *wh*-word does not undergo movement to the left-periphery (in the sense of Rizzi 1997) of the embedded clause, but also that it does not undergo movement to the *vP* periphery (in the sense of Belletti 2004), or else it would appear to the left of the verb⁴. The possibility of short movement to the *vP* periphery would have been difficult to verify in an all Korean sentence, for the in-situ position and short *A'* movement landing site would both be to the left of the verb. The absence of short *wh*-movement to the *vP* periphery in example (6) is compatible with Shlonsky's (2012) conclusion that the *vP* periphery is not equipped with a position that hosts *wh*-elements; in his words: "the *vP* periphery includes a *FocP* but not a *WhP*".

In an all Korean sentence, the position of the *wh*-word in main (7a) and embedded (2, 7b) questions is between the subject and the verb, just like its non-interrogative counterpart (see (1)). It is in-situ in this sense. Example (8) is an instance of a Korean sentence, where the only English element is an interrogative word. In this codeswitched sentence the *wh* word is the leftmost element of the embedded clause.

- (7) a. John-i eoce *muet-ul* sat-ni.
 John-SM yesterday what-OM buy-Q
 'What did John buy yesterday?' (Finer 2014:31)
- b. John-un [Mary-ka *muet-ul* sat *nunci*] *kungkumhaehata*.
 John-SM [Mary-SM what-OM buy Q] wonder-DECL
 'John wonders what Mary bought yesterday.'
- (8) Na-nun *mucheok kungkumhae* [*who-lul* [ku-ka oeoce *mannatunci*]]
 I-SM very much wonder -lul he-OM yesterday met *Fin_{INT}*⁵
 'I very much wonder who he met yesterday.' Finer (2014:35)

The examples given so far show that the impact of *v* on the *wh* word is limited to defining its in-situ position. On the actual locus of the *wh* word in the codeswitched sentence, Finer rightly concludes "putting aside the question of the placement of the complement CP in [(8)], we see that Korean *wh* remains in situ while the English *wh*-phrase moves. Also, the [+WH] properties of the subordinate CPs of either language can be accessed by the selecting verbs of either language" (Finer 2014:55).

In effect, what I would like to highlight about example (8) is the consequence of *wh*-movement in the embedded clause on the word order of the main clause. Even though it is the Korean *v* of the main clause that must determine the position of its complement (the embedded clause) to be on the left of the verb similarly to (7b), it appears that in (8) the

⁴ One might argue that the *vP* in 'he bought *muet* yesterday' in (3) is a head final *vP*, and claim that the postverbal appearance of the *wh* object *muet* can be interpreted as a short-*A'* moved *wh* from the left to the right of the Korean *v*. Against this argument, the ungrammaticality of a preverbal object in (5) with an English verb *ate* and a null English *v* shows that the English *vP* of the switched sentence cannot be head final (i.e. it does not allow a preverbal object). For *v* to be considered Korean, one expects there to be a Korean light verb to realize *v*, which is not the case in this example.

⁵ The particle *nunci* is glossed *Fin_{INT}* by the author, as per Samimi (2016).

presence of an English *wh*-object in the codeswitched sentence and its leftward movement prevents the Korean main clause from behaving as it would normally.

Similarly, Example (9) shows that the verb *kungkumhae* ‘wonder’ precedes its English interrogative complement, just like the verb *aleo* ‘know’ in (10), although these verbs normally have their complement (a Korean embedded clause) to their left.

- (9) Na-nun kungkumhae [*what he bought yesterday*].
I-SM wonder
‘I wonder what he bought yesterday.’ Finer (2014:32b)
- (10) Eomma, aleo [*what Daddy bought for me*?]
mommy, know
‘Mommy, do you know what Daddy bought for me?’ Finer (2014:33)

In the following section I will present a universal constraint on word order before explaining in section 6 how this constraint can account for the order of the matrix verb and the embedded clause in sentences such as (8).

The most important observations of this section with regard to the *wh* word are the following. Firstly, the language of the *wh*-word determines the *wh*-movement vs. *wh* in-situ type of the codeswitched sentence (Finer’s finding). Secondly, *wh*-movement in the embedded clause forces head-initial word order in the main clause (the focus of this paper).

4. FOIG OR THE DOUBLE-SWITCH CONSTRAINT

The order of the Korean verb and the embedded clause it selects in (8) is not compatible with the syntax of Korean, even though the discussions of section 2 on the language of *v* would predict that the position of the Korean *v*’s complement be determined according to Korean syntax. This anomaly suggests that there is some higher rule that governs word order in the codeswitching language, one that surpasses the language-specific rules of Korean and English. In this section I will present the Double-Switch Constraint as a universal constraint on word order before showing, in section 6 that the order which seems abnormal to the syntax of the participating languages is normal to this universal rule of Grammar. The Double-Switch Constraint, designed around observations made by Holmberg (2000) on the crosslinguistically impossible word orders, is explained below.

Holmberg’s (2000) descriptive generalization about word order patterns in natural languages highlights the fact that a head-final phrase *c*-commanding a head-initial one is unattested among languages. This generalization is dubbed the Final-Over-Final Constraint (FOFC) by Bieberauer et al. (2008:2014). These authors unite ordering gaps in different domains and offer a syntactic description of the gap, built principally upon Kayne’s (1994) Linear Correspondence Axiom (LCA) and an important generalization they make about the EPP feature, according to which if a head has an EPP feature, then all the heads in its complement domain must have an EPP feature. The presence of the EPP feature on a head forces movement of its complement to its specifier and the result is a head-final phrase.

The word order gap being head-final over head-initial, the label Final-Over-Final Constraint in Bieberauer et al. (2008) is misleading. Here I merely rename the same phenomenon as the “Double-Switch Constraint”, borrowed from Samimi (2018)⁶. In the

⁶ Samimi (2018) proposes a stronger version of the Double-Switch Constraint whereby all languages start as head-final low in the structure. The strong version, although absolutely compatible with the discussions of this paper, is not necessary here.

present paper, the Double-Switch Constraint keeps the same explanation of the FOFC phenomenon, while it simply re-describes it as follows.

The Double Switch Constraint:

Building the structure of the clause upwards on the hierarchy of functional heads, once head-finality switches to head-initiality, it cannot switch back to head-finality.

The aim of the following two sections is to make use of the Double-Switch Constraint to provide an explanative account of head-initiality of the Korean matrix clause in (8) in particular, and in general, the phenomenon of the birth of one new language from the two languages engaged in codeswitching.

5. THE NECESSITY OF PROVIDING A THEORETICAL EXPLANATION FOR CODESWITCHING PHENOMENA

Section 3 emphasized the incompatibility of a codeswitching sentence with the syntax of the two languages that participate in its formation. In the sentence under discussion, a Korean verb ($v+V$) is *followed by* a Korean complement containing an English Wh object. If codeswitching sentences obeyed the rules of the participating languages, this sentence would be ungrammatical, the grammatical versions being (A) Korean v and a preverbal complement, or (B) English v and postverbal complement.

In this situation where the syntax of both participating languages fall short of explaining the behavior of the codeswitched language, I intend to show how the Double-Switch Constraint, a rule of the Universal Grammar (UG), can explain the phenomenon. In this way, I will theoretically define the codeswitching grammar as one grammar governed by UG, rather than a mix of two grammars, as is commonly believed.

Codeswitching linguistics' perception of codeswitching phenomena is well summarized in the following three quotations

There is nothing special about the codeswitched sentences beyond the independently necessary separate grammars, as argued at length by other researchers for different corpora.

(Finer 2014:56)

There is no need to propose any sort of third, separate codeswitching grammar; moreover, an additional grammar of this sort would have to be learned, but there is no evidence to indicate that fluent bilinguals have to learn to codeswitch... The two grammars operate during codeswitching just as they do during monolingual speech, except that each grammar generates only part of the sentence.

(Woolford 1983:522)

If nothing extra beyond the separate grammars needs to be specified, bilingual codeswitching emerges as a natural consequence of the syntactic system interacting with a set of categories whose elements are drawn from the two lexicons. This is the central thesis of much recent work in the field (see especially MacSwan 1999, 2010, Mahootian 1993, van Gelderen and MacSwan 2008, among others).

(Finer 2014:40)

Assuming that nothing special beyond the separate grammars constrains the birth of new codeswitched languages is ignoring the role of universal grammar in language formation. This problem is best described in the following remark stated by MacSwan (2014:4) in introducing a program for studies in codeswitching:

Explicit constraints on CS [Code-Switching] are not theoretically well defined because they reference language switching, and grammars are formally blind to the languages they generate. Furthermore, constraints so formulated may serve to provide good linguistic description (to the extent that they are empirically correct), but they do not serve to explain or enlighten. Constraints on CS, in the theoretical sense, restate the descriptive facts by telling us which grammatical constructions or properties are evident in CS. While *linguistic description* is an important first step, it does not constitute a *linguistic theory*. Hence the more serious problem with CS-specific mechanisms is that they threaten to trivialize the enterprise. Rather than explaining descriptive restrictions observed in CS data, CS-specific mechanisms simply note these restrictions within the grammar itself so that no explanation is needed, and one is left still wondering what general principles of grammar might underlie the observations and descriptions.

MacSwan (2014:4)

In the following section, I show that the Double-Switch Constraint is the general principle of grammar that surpasses the rules of separate grammars. If codeswitching phenomena can be explained with this analytical tool, it can be concluded that each codeswitched language is one natural language and their behavior is not governed by code-switching specific mechanisms, but by universal linguistic mechanisms.

6. DOUBLE-SWITCH CONSTRAINT OVERCOMES LANGUAGE-SPECIFIC RULES IN CODESWITCHING

Since, the Double-Switch Constraint is a rule governing all languages, it is of no surprise that it applies to new-born codeswitched languages such as the Korean-English codeswitching under discussion here.

It is important to note that the Double-Switch Constraint is blind to the languages that are engaged in the structure; all what it sees is head-directionality. From the bottom to the top of the structure, once head-finality switches to head-initiality, it cannot switch back to head-finality. In other words, at this point the Double Switch Constraint does not limit the number of switches between the participating languages and concerns only head-directionality. Sentences such as the following Spanish-English codeswitching where five switches (marked by circles) between the two languages occur are not excluded by this constraint, since there is no head-directionality switch in the structure.

- (11) *Y en Puerto Rico* ° he would say ° *que cortaba cana,* ° even though ° *tenia su negocio,* ° you know.
'And in Puerto Rico he would say that he cut cane, even though he had his own business, you know.'
Sankoff & Poplack (1980)

Let us bring up the problematic and interesting example of a Korean main clause with Head-Complement order, where something beyond the separate grammars controls the word order.

- (12) Na-nun mucheok kungkumhae [*who*-lul [ku-ka oeoce mannat nunci]]
I-SM very much wonder -lul he-OM yesterday met Fin_{INT}
'I very much wonder who he met yesterday.'

I describe the embedded clause as consisting of a head-final Korean *v* (whereof the case-marker *-lul* on the object, c.f. section 2), continuing to a head-final T, and head-final

Fin_{INT} (realized as *nunci*)⁷. In other words, the complements of these heads are to their left (in the approach adopted here: in their respective specifier positions). The complement of the embedded verb (the wh-object) has undergone wh-movement, and no longer appears in its in-situ position which I stated in section 3 to be to the left of the verb and to the right of the subject. I claim here that the landing site of the wh-word *who-lul* is the specifier of the *Qemb(edded)* head (à la Cinque & Rizzi 2016)⁸, which in both English and this code-switched sentence is silent⁹. The consequence of such a movement is that the complement of this head can no longer move to its now-occupied specifier and head-finality stops. Given that the structure has had one switch to head-initiality, from that point on, even if the language switches back to Korean, the Korean matrix verb does not attract its CP complement to its spec and head-initiality continues up; a clear instance of the Double Switch Constraint.

The explanation of the verb-complement order of the main clause is based on a distinction between *Qemb* and *Fin_{INT}*. These heads (*Qemb* and *Fin*) represent the two lowest heads of the left-periphery of the (embedded) clause, in Cinque & Rizzi's (2016:146)¹⁰ hierarchy of criterial positions within the complementizer zone, shown in (13) below.

- (13)
- ```

[Force
 [Top*
 [Int
 [Top*
 [Foc
 [Top*
 [Mod
 [Top*
 [Qemb
 [Fin
 [IP]

```

While *Fin<sub>INT</sub>* and all lower heads attract their complements to their specifiers (i.e. they are head-final), after movement of the wh word to the spec of *Qemb*, there is no longer any place in this spec position for the complement of *Qemb* which is *Fin<sub>INT</sub>P* to move up to. This is how *Qemb* stays head-initial. By the Double Switch Constraint, none of the higher phrases can be head-final. It follows that the Korean verb which selects this embedded clause as its complement stays head-initial, too, wherefore the postverbal occurrence of the embedded interrogative clause.

In this section, it was shown, on the basis of a case of codeswitching word order unexplainable by the rules of the participating grammars, that the Double Switch Constraint as a universal rule of grammar modulates new language formation. The syntax of the codeswitching language was analyzed with the same tool as other monolingual languages, instead of recurring to descriptive codeswitching specific mechanisms which, as MacSwan

<sup>7</sup> *Nunci* is called  $Fin_{INT}$  by analogy to the Persian interrogative word *aya* in Samimi (2016). A thorough study of the position of *nunci* is encouraged to strengthen the arguments presented here.

<sup>8</sup> The landing site of the wh-word is said to be spec Focus in Rizzi (1997) or a Q position in Rizzi (2013).

<sup>9</sup> Ur Shlonsky accentuates the possibility of having the wh word in the specifier of *Foc(us)*, mentioning that “*Qemb* only really comes to light in indirect questions that contain a focus and a wh”. I will keep with the *Qemb* choice to avoid assuming that the embedded interrogative is ambivalent, ‘sometimes’ hosting the wh word in *Qemb* and ‘sometimes’ in Spec of *Foc*. Given that both heads are higher than *Fin<sub>INT</sub>*, the explanation in terms of the switch to head-directionality is compatible with both *Foc* and *Qemb* as the host of the wh word.

<sup>10</sup> Also in Rizzi & Bocci (2015).



(c.f. §5) notes, threaten to trivialize the enterprise. The following section draws more general conclusions about the role of the lexical elements in interrogative sentences.

## 7. GENERAL THEORETICAL REMARKS ON THE IN-SITU VS. MOVEMENT OPTIONS

Data and arguments of section 3 highlighted the observation made by Finer that whatever the language of C, a Korean *wh* stays in-situ and English *wh* moves. Based on this observation, generalized below in terms of LIMD, it is possible to go back to the literature on “*wh* in-situ vs. *wh* movement” and underline the most compatible analysis.

- (14) Lexical In-situ/Movement Distinction (LIMD):  
Whether *wh* movement takes place or not is a lexically determined property of the *wh* word.

In the following sub-sections, analyses of *wh* in-situ vs. *wh* movement are separated on the basis of whether they see the source of this distinction to be in the grammar, or in the lexicon as is compatible with the observations on Korean-English codeswitching.

### 7.1. Incompatible analysis: Chomsky (1995) strong/weak *wh* feature in C

Chomsky (1995) differentiates *wh* in-situ and *wh* movement languages by distinguishing between weak and strong Q features in the interrogative C head of different languages. Accordingly, if a language like Korean is in-situ, it is because the interrogative C in this language bears a weak Q feature. Similarly, if English is a *wh*-movement language, it is because the interrogative C in this language bears a strong Q feature. Since variation is laid on a property of C and not on the *wh*-words, this analysis is refuted by LIMD. The most relevant example that refutes this model is (6a) ‘I wonder he bought *muet* yesterday’. If movement was motivated by the strong Q feature of interrogative C in English, *muet* would have to move. However, (6b) where *muet* moves is ungrammatical.

### 7.2. Incompatible analysis: Cheng (1991) Clausal Typing Hypothesis

Cheng (1991) differentiates *wh* in-situ and *wh* movement languages by the presence of a *wh* particle (overt or covert) in C for marking *wh* questions. Her Clausal Typing Hypothesis (CTH) reads: “Every clause needs to be typed. In the case of typing a *wh*-question, either a *wh* particle in C is used or else fronting of a *wh*-word to the Spec of C is used, thereby typing a clause through C by spec-head agreement.” Cheng predicts that languages which use both movement and *wh* particle for typing the clause should not exist. The pair of sentences (6) and (8) go utterly against CTH. Sentence (8) is a case in point of *wh* movement (*who-lul*) co-occurring with the question particle *nunci*. In Sentence (6) ‘I wonder he bought *muet* yesterday’, the English embedded clause is marked as interrogative without *wh* movement or a question particle.

While it is apparent that question particles are elements in the C layer that are related to marking sentences as interrogative, given LIMD, *wh*-movement serves an independent function. This function can be fulfilled either by *wh*-movement or movement of a Q feature, depending on the movement vs. in situ type of the *wh* word. In other words, all *wh* questions involve interrogative marking by a covert or overt head in the C layer, plus *wh* movement or Q-movement to an independent projection in the C layer.

Along the same lines, Cheng & Rooryck (2000) can be questioned. In order to account for the case of French in-situ which does not involve a *wh*-particle, Cheng & Rooryck postulate an interrogative-licensing intonational morpheme in French in-situ questions, which

would literally be the phonological version of the wh particle of Cheng (1991), i.e. it would be in complementary distribution with the question particle. It follows from the arguments of the preceding paragraph that such an intonational morpheme can be the phonological expression of interrogative marking of C, while both wh movement and wh in situ are compatible with it, depending on the morphological make-up of the wh words. One updated version of Cheng & Rooryck's idea would be that the intonational morpheme types the clause as interrogative both in movement and in situ main questions.

### 7.3. Compatible analysis: Mathieu (1999) operator/variable distinction

Three types of operator variable relations are defined by Mathieu (1999) for three types of languages in terms of interrogative sentence formation. The English type where both the question operator and the variable are base-generated in-situ in the form of a wh word and are inseparable, the Chinese type where the operator is base generated in C and the variable in-situ in the form of the wh word, and finally the French type where both the operator and the variable are base-generated in-situ and are separable. Depending on the separability of the operator which has to appear in C, the wh stays in situ or moves. Mathieu's approach to in-situ vs. movement in terms of the morphological make-up of the wh word is compatible with LIMD.

If the propositions that Mathieu builds upon the lexical in-situ movement distinction are on the right track, the reason why the operator has to appear in C is to determine the scope of the question.<sup>11</sup>

This paper follows Rizzi's (2013) split-C model, where *Force* (see (13) above) is the highest head that is specified as "interrogative", accessible to a higher selector such as the verb *wonder* which requires an indirect question. *Force<sub>INT</sub>* is in turn connected via Search and Agree to the position hosting the interrogative operator (which is addressed in Mathieu 1999), and the head which marks the clause as interrogative.

The task of typing the clause as interrogative in the C-layer is not related to the wh word; as far as elaborated in this paper, it is accomplished by the high head *Force<sub>INT</sub>* and the low head *Fin<sub>INT</sub>*.

## 8. CONCLUDING NOTES

Korean-English codeswitching data were used for theoretical purposes. The language of *v*, independently of the language of V, determines the position of the object. The language of the wh word determines movement takes place or not. Apparent word-order disorders arise in codeswitched questions.

The position of the wh word relevant to *v* lead to the conclusion that Korean wh words do not undergo short wh-movement to the *vP* periphery.

Word order anomalies in an interrogative sentence were accounted for by the Double-Switch Constraint version of FOFC. I claimed that this universal constraint modulates new-born grammars such as codeswitching languages, to the point where the new code-switching language is no longer explainable merely in terms of the participating grammars and lexicons. The theoretical interest of following a similar line of analysis in codeswitching studies was highlighted.

---

<sup>11</sup> The following three reasons that Mathieu (1999:444) gives for operator movement are thus reduced to one: the question operator is either base-generated or moves to a position in the C layer A) "in order to determine the scope of the wh-phrase", B) "to provide a binder (an antecedent) for the wh phrase" and C) "to satisfy the strong feature of C".

The movement vs. in-situ choice of the *wh* word in codeswitched sentences induced me to reach the best analysis of *wh* in-situ and *wh* movement. Mathieu's (1999) analysis, where in-situ/movement differences are reduced to the morphology of the *wh*-phrase, proved most compatible with the findings of this paper, summarized under the label LIMD (lexical In-situ Movement Distinction).

In sum, the discussions of this paper invite to reflect upon how new languages are born, and further upon how languages are acquired. I see three levels to language: the solid level, the solid-fluid level, and the fluid level. As for the solid level, it is legitimate to consider that there is a universal hierarchy of functional positions in the syntax of human language (See Shlonsky (2010) for thorough description of the Cartographic Enterprise). This hierarchy does not vary from infant to infant or from language to language. As for the solid-fluid level, it is legitimate to claim that reading the universal hierarchy by means of a language faces constraints, of which I know the Double-Switch Constraint. It is solid in the sense that it considers all languages to be head-final low in the structure and allows only one switch to head-initiality. It is fluid in the sense that there is variation among languages regarding the height of the switch point. The fluid level is more delicate to discuss. To me, it is the lexicon. If a new language is born, the lexicon has been modified. When a child learns the lexicon, and records what features lie in each lexical item, the language has been acquired. Although I would normally conclude this paper on codeswitching by saying that the lexicon hosts variation, I prefer to be patient, to avoid ever getting cyclic: there are reasons to believe that the same three levels exist in the lexicon.

## REFERENCES

- Belazi, H. M., Rubin, E. J., & Toribio, A. J. (1994) "Code switching and X-bar theory: The functional head constraint", *Linguistic inquiry*, 221-237.
- Belletti, A. (2004) "Aspects of the low IP area" *The structure of CP and IP. The cartography of syntactic structures*, 2, 16-51.
- Biberauer, T. & A. Holmberg, & I. Roberts (2008) "Structure and linearization in disharmonic word orders", in *Proceedings of the 26th west coast conference on formal linguistics*, vol. 96.
- Biberauer, T. & A. Holmberg, & I. Roberts (2014) "A Syntactic Universal and its Consequences", *Linguistic Inquiry*, 45(2), 168-225.
- Caha, P. (2009) *The nanosyntax of case*, PhD thesis, University of Tromsø.
- Cheng, L. L.-S. (1991) *On the Typology of Wh-questions*, PhD Dissertation, MIT.
- Cheng, L. L.-S. & J. Rooryck (2000) "Licensing *wh*-in-situ", *Syntax* 3, 1-19.
- Chomsky, N. (1995) *The minimalist program*, MIT Press, Cambridge.
- Chomsky, N. (2013) "Problems of Projection", *Lingua* 130, 33-49.
- Finer, D. L. (2014) "Movement triggers and reflexivization in Korean-English codeswitching", *Grammatical theory and bilingual codeswitching*, 37-62.
- Holmberg, A. (2000) "Deriving OV order in Finnish" in Peter Svenonius (ed.) *The Derivation of VO and OV*, John Benjamins, Amsterdam, 123-152.
- Kayne, R. S. (1994) *The antisymmetry of syntax*, vol. 25, MIT Press.
- Lee, M.-H. (1991) *A parametric approach to code-mixing*, Doctoral dissertation, SUNY at Stony Brook.
- MacSwan, J. (1999) *A Minimalist Approach to Intrasentential Code Switching: Spanish-Nahuatl Bilingualism in Central Mexico*, Garland, New York.
- MacSwan, J. (2010) "Unconstraining codeswitching theories", in *Proceedings of the 44th Annual Meeting of the Chicago Linguistics Society*, University of Chicago Press, Chicago, 151-168.

- MacSwan, J. (2014) "Programs and proposals in codeswitching research: Unconstraining theories of bilingual language mixing", *Grammatical theory and bilingual codeswitching*, MIT Press, Cambridge, Mass., 1-33.
- Mahootian, S. (1993) *A null theory of code-switching*, Doctoral dissertation, Northwestern University.
- Mathieu, E. (1999) "WH in situ and the intervention effect", *UCL working papers in linguistics*, 11, 441-472.
- Moro, A. (1997) "Dynamic Antisymmetry: Movement as a Symmetry-breaking Phenomenon", *Studia Linguistica*, 51(1), 50-76.
- Pesetsky, D. M. (2000) *Phrasal movement and its kin*, vol. 37, MIT press.
- Rizzi, L. (1997) "The Fine Structure of the Left Periphery", in *Elements of Grammar*, Springer Netherlands, 281-337.
- Rizzi, L. (2013) "Notes on cartography and further explanation", *International Journal of Latin and Romance Linguistics*, 25(1), 197-226.
- Rizzi, L. & G. Bocci (2015) "The left periphery of the clause, primarily illustrated for Italian", in M. Everaert & H. van Riemsdijk (ed.) *The Blackwell Companion to Syntax*, Blackwell, Oxford, UK.
- Rizzi, L., & Cinque, G. (2016) "Functional categories and syntactic theory", *Annual Review of Linguistics* 2, 139-163.
- Samimi, B. (2018) "The Double-Switch Constraint on Word Order", Certificate Thesis, University of Geneva.
- Samimi, B. (2016) "Three Aspects of Persian Syntax: Complex Predicates in the VP, Word Order in the IP, and The Interrogative in the CP", Master's Thesis, University of Geneva.
- Sankoff, D. and S. Poplack (1980) "A Formal Grammar for Code-switching", Working Papers in the Center for Puerto Rican Studies 8, CUNY, New York.
- Shlonsky, U. (2012) "Notes on wh in situ in French", in Brugé et al., *Functional Heads*, Oxford, Oxford University Press, 242-252.
- Starke, M. (2009) "Nanosyntax: a short primer to a new approach to language", *Nordlyd*, 36(1).
- van Gelderen, E. and J. MacSwan (2008) "Interface conditions and code-switching: Pronouns, lexical DPs, and checking theory", *Lingua* 118.6, 765-776.
- Watanabe, A. (1992) "Subjacency and S-structure movement of Wh-in-situ", *Journal of East Asian Linguistics* 1, 255-291.
- Woolford, E. (1983) "Bilingual code-switching and syntactic theory", *Linguistic inquiry*, 14(3), 520-536.