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

Bahareh Samimi (Bahareh.Samimi@unige.ch)

1. INTRODUCTION

Korean-English intrasentential codeswitching[1] 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 in the sense of 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 Bieberauer et al. (2014)'s Final-Over-Final Constraint (FOFC), re-labeled as the Final-Over-Initial Gap and redefined 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 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.

---

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

2. THE LANGUAGE OF *V* DETERMINES WORD ORDER IN THE *V*P

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.
      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 morphologically 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 codeswicthing literature require a modification of Belazi, Rubin, & Toribio's (1994) *The Word-Grammar Integrity Corollary* "A word of language X, with grammar G_x, must obey grammar G_x." The correction should 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.'

<div align="right">Finer (2014 : (27))</div>

These examples confirm that the language of v 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. It is now possible to look at the behavior of wh words in Korean-English codeswitching and highlight the factor the makes the in-situ versus movement choice in the code-switched language.

3. THE LANGUAGE OF THE WH WORD DETERMINES THE IN-SITU VS. MOVEMENT OPTION

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 motivation for this movement – an EPP feature assigned to the head of the head-final phrase – is distinct from the motivation that forces the movement of an English wh-word to the C-layer of the clause. If in the former, movement is linked to v, in the latter one must seek an independent motif.

In the case of wh-movement, it is possible to follow Pesetsky (2000) in assuming 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 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 (1992)'s 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)). 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.

<div align="right">Finer (2014: (34a))</div>

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 verb[4]. 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 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 (2012)'s 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 is between the subject and the verb, i.e. in-situ. Example (7) 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)   Na-nun mucheok kungkumhae [*who*-lul   [ku-ka oeoce mannat nunci]]
           I-SM very much wonder   -lul   he-OM yesterday met Fin$_{INT}$ [5]
           'I very much wonder who he met yesterday.'

<div align="right">Finer (2014: (35))</div>

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 [(7)], 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 (7) 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 (2), it appears that in (7) the 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 (8) shows that the verb *kungkumhae* 'wonder' precedes its English interrogative complement, just like the verb *aleo* 'know' in (9), although these verbs normally have their complement (a Korean embedded clause) to their left.

(8)   Na-nun kungkumhae [*what he bought yesterday*].
           I-SM wonder
           'I wonder what he bought yesterday.'

<div align="right">Finer (2014 : (32b))</div>

(9)   Eomma, aleo [*what Daddy bought for me*]?
           mommy, know

---

[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 expect 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).

'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 (7).

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 (7) is not compatible with the grammar 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 grammar. 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 grammar 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 that a structure in which a head-final phrase c-commands a head-initial one is unattested among languages. Bieberauer, Holmberg and Roberts (2008) dub this generalization the Final-Over-Final Constraint (FOFC). Samimi (2018) corrects the name of the gap, calls it the Final-Over-*Initial Gap* (FOIG) for two reasons. Firstly, it is discussion of an ordering *gap* in *descriptive* terms, which by itself is the consequence of a linguistic *constraint* that needs to be defined in *explanative* terms. Secondly, the unattested order is that of Final-Over-*Initial* patterns, wherefore the need to modify the name Final-Over-*Final* Constraint. At this level, FOIG is a sheer correction of the mistake in the label of FOFC.

Samimi further explores the linguistic constraint which prevents Final-Over-Initial patterns from emerging. She conjectures that all languages start out as head-final low in the structure of the clause, and depending on the point where head-finality switches to head-initiality, they are perceived as head-final, head-initial or disharmonic Initial-Over-Final languages.

The Final-Over-Initial Gap, in her view, is the consequence of a linguistic constraint which she dubs the Double-Switch Constraint, meaning 'head-directionality cannot switch more than once.' She derives the Double-Switch Constraint form antisymmetry of language, following Moro's (1997:51) assertion that "movement is driven by the search for antisymmetry", the requirements of labeling (Chomsky 2013), and Kayne's Linear Correspondence Axiom (LCA), by which head-finality is interpreted as complement-to-spec movement.

The Double-Switch Constraint hypothesizes that the lowest head of the clause always attracts its complement to its specifier, a process visible in languages like Korean where the verb (V) obviously precedes the light verb (v), and more subtly visible in languages like English where the lexical part of the verb (V) precedes a functional verbalizer (v) such as *–ize* in verbs such as *civilize* and *colonialize*. More explicitly, v is taken to be the lowest head of the verbal category. It selects a lexical head as its complement. The two heads appear in a symmetric relation. The need for antisymmetry forces the lexical element (V) to move to the specifier of v and asymmetrically c-command it from the specifier position. This is how

Samimi explains the universal head-finality of the lowest phrase in the clause, based on which she forlmulates the Double-Switch Constraint allowing the structure to become head-initial at some point, and preventing it from switching back to head-finality afterwards.

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 (7) in particular, and the general 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 grammars of the languages that participate in its formation. In the sentence under discussion, a Korean verb is *followed by* a Korean complement containing an English Wh object. In order for Korean grammar to be able to account for word order in the mentioned codeswitching example, the complement (an embedded interrogative) would have to precede the verb. On the other hand, in order for English grammar to be able to account for this verb-complement order, v of the matrix clause would have to be English. In this situation where both participating grammars 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."

In the following section, I show that FOIG defined in terms of 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, as Samimi shows, 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 the 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 are not excluded by this constraint.

(10)   *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.'

<div align="right">Sankoff and Poplack (1980)</div>

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.

(11)   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*). In other words, the complements of these heads are to their left. 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 and Rizzi 2016)[6], which in both English and this code-switched sentence is silent. 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 Final-Over-Initial Gap, explained by 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

---

[6] The landing site of the wh-word is said to be spec Focus in Rizzi (1997) or a Q position in Rizzi (2013).

heads of the left-periphery of the clause, in Cinque and Rizzi (2016:146)[7] hierarchy of criterial positions within the complementizer zone, shown in (12) below.

(12)   [Force
                [Top*
                    [Int
                        [Top*
                            [Foc
                                [Top*
                                    [Mod
                                        [Top*
                                            [**Qemb**
                                                [**Fin**
                                                    [IP]

While Fin_{INT} 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 $Fin_{INT}P$ 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 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.

(13)   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 compatibly 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

---

[7] Also in Rizzi and Bocci (2015)

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.

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 (CHT) 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. Sentence (9) is a case in point of a wh movement (*who-lul)* co-occurring with the question particle *nunci*, a counter-example to CHT. Moreover, if we say that in English the wh-movement does what a question particle does in other languages (typing the sentence as interrogative), we are contradicted by (6) 'I wonder he bought *muet* yesterday', where the wh is in situ, and the English embedded clause is marked as interrogative without wh movement.

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.

Along the same lines, Cheng and Rooryk (2000) can be questioned. In order to account for the case of French in-situ which does not involve a wh-particle, Cheng and Rooryk 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). It follows from the arguments of the preceding paragraph that such intonational morpheme can be the phonological expression of interrogative marking of C or of Q-feature movement, both of which occur in a French in-situ question.

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

Mathieu (1999) argues that the difference among wh in-situ and wh movement languages can be reduced to a difference in the morphological components of the wh word. The components he considers are a variable, and a question operator that must appear in C in order to: (A) determine the scope of the wh-phrase and (B) satisfy the (always-)strong feature of C^8. In cases of wh-movement, the morphologically null question operator and the variable are not separable. This is a case where the null question operator is generated with the wh-phrase in-situ. Forced to move to C, the wh operator drags the wh phrase (the variable) along with it to C. In pure in-situ languages such as Chinese, the wh phrase consists of a referential variable. The morphologically null question operator, base-generated in C, binds the variable directly. The wh phrase in in-situ languages with restrictions, such as French (and German short wh-movement), consists of a non-referential variable and a morphologically null question operator which moves to C and antecedent governs the wh phrase that stays in-situ (the variable). In sum, three types of operator variable relations are defined by Mathieu. The English type where both the operator and the variable are base-generated in-situ and are unseparable, the Chinese type where the operator is base generated in C and the variable in-situ, and the French type where both the operator and the variable are base-generated in-situ

---

[8]Mathieu postulates a third reason for the question operator to appear in C, in the case of French wh in-situ. It is (C) to provide an antecedent for the wh-phrase.

and are separable. Mathieu's approach to in-situ vs. movement in terms of the morphological make-up of the wh word is compatible with LIMD.

I maintain a lexical distinction between in-situ and movement wh words even in a language such as French where in-situ and movement have both been considered as available options. In sentences (14a) and (14b) the Q-operator is separable from the underlined wh-word. In (15a) and (15b) the question operator is not separable from the wh word in bold.

(14)   a.   Tu as fait <u>quoi</u> ?
              You have done what
              'What did you do ?'
       b.   Tu as vu <u>qui</u> ?
              you have seen who
              'Who did you see ?'

(15)   a.   **Qu**'as tu fait?
              What have you done
              'What did you do ?'
       b.   **Qui** as-tu vu?
              Who have you seen
              'Who did you see ?'

Wh words *quoi* 'what' and *qui* 'who' in (14) do not contain a question operator. Wh words *que* 'what' and *qui* 'who' in (15) are the counterparts of the wh-words in (14) with an inseparable question operator, wherefore their (lexically determined) obligation to move.

There is one thing that needs to be clarified in Mathieu's analysis, a point that is not central to his study. Mathieu mentions "satisfying the strong feature of C" as one of the motivations for wh-operator movement. Since these terms have been used in a theory (Chomsky 1995) which does not distinguish between "interrogative marking of the sentence" and "wh-movement", a brief clarification is required in the more accurate discussion of wh interrogatives adopted here.

This paper follows Rizzi's (2013) split-C model, where Force (see (12) above) is the highest head that is specified as "interrogative", accessible to a higher selector such as the verb *wonder* requiring an indirect question. The $Force_{INT}$ is in turn connected via Search to the position hosting the interrogative operator (which is addressed in Mathieu (1999)), and the head which marks the clause as interrogative.

It is possible at this point to reduce the two motivations that Mathieu proposes for wh-movement to the following single motivation related solely to the operator position: "the question operator is either base-generated or moves to a position in the C layer in order to determine the scope of the wh-phrase." The other reason given by Mathieu for wh-movement which was "to satisfy the strong feature of C" can be omitted. Satisfying the strong feature of C, the equivalent of typing the clause as interrogative, is a task accomplished independently of the wh-word. In the codeswitching embedded interrogative in (9), the wh word *who*-lul moves to the position hosting interrogative operators in the left-periphery to determine the scope of the question, and the question-particle *nunci* is the realization of Fin_{INT}. For selection of an embedded interrogative to be feasible, Force comes to agree with the question operator and with Fin in the +interrogative specification.

Mathieu's analysis of the wh-movement vs. in-situ difference as a lexical difference lying in the nature of the wh-word and not the nature of C is compatible with the Korean-English codeswitching data presented in this paper. However, in this section, the motivation for wh- or Q-movement was reduced to "determining scope" and not typing the clause as interrogative. The task of typing the clause as interrogative is accomplished differently in the C-layer; as far as elaborated in this paper, by the high head $Force_{INT}$ and the low head Fin_{INT}.

8. CONCLUDING NOTES

Korean-English codeswitching data were used for theoretical purposes. The language of v, independently of the language of V, decides for the position of the object. The language of the wh word decides whether 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.

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. As Rizzi (2014) cites Borer (1984:29), "the inventory of inflectional rules and of grammatical formatives in any given language is idiosyncratic and learned on the basis of input data. If all interlanguage variation is attributable to that system, the burden of learning is placed exactly on that component of grammar for which there is strong evidence of learning: the vocabulary and its idiosyncratic properties."

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 linearly 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 variety 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, as a convention of 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. Looking at the lexicon through the lens of nanosyntax (Starke (2009), Caha (2009)) along with the reflections of Cinque and Rizzi (2010), Kayne (2005, 2007) and Collins (2007), it is possible to assume that in the formation of the lexicon (for example a wh word consisting of a functional Q feature and a lexical part) the same solid syntactic hierarchy is engaged and the same solid-fluid Double-Switch Constraint applies, with participation of a deeper lexicon which is arbitrarily as fluid.

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, p. 104.

Borer, H. (1984). *Parametric syntax: Case studies in Semitic and Romance languages* (Vol. 13), Walter de Gruyter GmbH & Co KG.

Caha, P. (2009) *The nanosyntax of case*, PhD thesis, University of Tromso.

Cinque, G., L. Rizzi (2010) "The Cartography of Syntactic Structures", in B. Heine, H Narrog (eds.) *The Oxford Handbook of Linguistic Analysis*, New York, Oxford University Press, 51- 65.

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.

Collins, C. (2007) "Home sweet home", NYU WPL (1) 1-34.

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* (No. 25), MIT Press.

Kayne, R. S. (2005) *Movement and Silence,* Oxford University Press, New York.

Kayne, R.S. (2007) "Several, few and many", Lingua 117(5), 832-58.

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. (2014) "On the elements of syntactic variation", in M. Carme Picallo (ed.) *Linguistic Variation in the Minimalist Framework*, Oxford Scholarship Online.

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. (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.

Samimi, B. (2018) "The Double-Switch Constraint on Word Order, Certificate 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, L., Cardinaletti, A., Giusti, G., Munaro, N. & Poletto, C. *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.