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Congruence and Uniform Structure Principle: keys for problematic Code-Switching cases

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Abstract: *The present paper tries to test the validity of the notion of congruence and the Uniform Structure Principle against an Algerian Arabic-French code-switching corpus. These two principles represent an important corner stone underlying the latest version of the Matrix Language Frame Model as it has been developed by Myers Scotton in 2002 and 2006. Data from naturally-occurring conversations is analysed within Myers-Scotton's Matrix Language Frame model (1997, 2002, 2006 and 2015) and its supportive model -the 4-M model. Our investigation of bilingual language behaviour of Algerian speakers is conducted from a micro sociolinguistic perspective. The Matrix Language Frame Model's descriptive paradigm succeeded to a large extent in analysing the different insertions in our corpus. To explain and interpret the observed instances of code switching we opted for Matrix Language Frame model's explanatory principles (i.e. congruence and structural uniformity) particularly in the case of challenging code-switching instances. The results of our investigation highlight the fact that both congruence and the Uniform Structure Principle are flexible paradigms that can be adapted and interpreted to account for language-specific patterns and structures. Another important observation is the case of insufficient congruence between Algerian Arabic and French. Our corpus revealed two possibilities in this situation. The structural uniformity of both languages is preserved by using compromising strategies (Embedded Language islands or internal Embedded Language islands) which is in accordance with Myers-Scotton's model. The other possibility that constitutes a challenge to the MLF model is the fact that Matrix Language structural uniformity is imposed across mixed constituents at the expense of Embedded Language structural uniformity.*
Key words: *Code-switching (CS), Congruence, Grammar-based approaches, Matrix Language Frame model (MLF), the 4-M model, the Uniform Structure Principle (USP).*
Résumé : *Le présent article vise à tester la validité de la notion de congruence et du principe de structure uniforme par rapport à un corpus constitué d'alternance codique entre l'arabe Algérien et le français. Un corpus constitué de conversations naturelles est analysé dans le modèle de Myers-Scotton (1997, 2002, 2006*

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et 2015). Notre enquête sur le comportement linguistique bilingue des algériens est menée dans une perspective micro-sociolinguistique. Le paradigme descriptif du Modèle a réussi dans une large mesure à analyser les différentes insertions dans notre corpus. Pour expliquer et interpréter les cas d'alternances codiques observés, nous avons opté pour les principes explicatifs du modèle (la congruence et l'uniformité structurelle). Les résultats de notre recherche mettent en évidence le fait que la congruence et le principe de structure uniforme sont des paradigmes flexibles qui peuvent être adaptés et interprétés pour tenir compte des structures spécifiques à la langue. Une autre observation importante est le cas d'une congruence insuffisante entre l'arabe algérien et le français. Notre corpus a révélé deux possibilités dans cette situation. L'uniformité structurelle des deux langues est préservée en utilisant des stratégies compromettantes (des îlots enchâssés ou des îlots internes) qui sont conformes au modèle de Myers-Scotton. L'autre possibilité qui constitue un défi pour le modèle est le fait que l'uniformité structurelle de la langue Matrice est imposée sur les constituants mixtes au détriment de l'uniformité structurelle de la langue Enchâssée.
Mots clés : *Alternance codique, la congruence, approches basées sur la grammaire, principe de structure uniforme.*

1. Introduction

Language choice and the sociolinguistic, psycholinguistic and grammatical properties of bilingual conversations have been the focus of numerous research papers for the past decades. One of the most hosted debates in the field of contact linguistics is about the nature of code-switching grammatical features. In this respect, several competing models have been proposed trying to account for CS patterns found in different bilingual communities. Today, however, there is little debate about the fact that the insertion model of CS is the most influential approach; this is due partly to Myers Scotton's prominent publications and continuous efforts to develop the MLF model, to cope with new findings and to account for some widely presented criticisms. The aim of the present paper is not only to shed light on the MLF model as a descriptive paradigm using an Algerian Arabic/French CS corpus, but more importantly to discuss its explanatory principles. The basic concepts underlying these principles are congruence and structural uniformity.

2. The Matrix Language Frame Model

Code switching as practiced by AA speakers in Oran, a bilingual and a diglossic community, is a natural way of speaking and a communicative strategy strongly present in the AA linguistic repertoire. It is not always possible to assign clear communicative functions to every individual switch; rather the whole pattern of language alternation seems to function as an unmarked choice. This presents a great opportunity of investigation for contact linguists in general and for code switching researchers in particular.

Our study adopts Myers-Scotton's insertional model as a theoretical frame for the grammatical analysis of CS. The MLF model views CS as the insertion of elements from one language (the EL) into sentences or constituents which are built according to the rules of another language (the ML). This frame is a grammatical structure that is marked by word-order as displayed by (word-order principle) in the MLF model and system morphemes as manifested by (system morpheme principle) in the MLF model.

The system/content morpheme opposition of the MLF model has been further extended under the 4-M model, by dividing the system morphemes into three types according to their relation with lexical heads (i.e. content morphemes). These are early system morphemes and two types of late system morphemes, bridge and outsider

late system morphemes (Myers-Scotton & Jake, 2000, 2001). The 4-M model keeps the feature [+/-thematic role assigner/receiver] that distinguishes between content and system morphemes under the MLF model, and proposes two other features or oppositions: [+/-conceptually activated] and [+/-look outside its immediate maximal projection for information about its form] to account for the new classification of morphemes into four types.

The 4-M model is a model of morpheme classification that is based on the notion that lemmas[1] underlying different morphemes are accessed at different levels during language production, which explain their distribution within a sentence.

For an element to be embedded into a ML frame it should be congruent to the corresponding ML element otherwise insertion is blocked as stated by (the Blocking Hypothesis), or, the EL element should be inserted within a well-formed EL islands as stated in (the EL Hypothesis). So, it is the presence or the lack of such compatibility or congruence that defines code-switching structures. Sufficient congruence, however, as Myers-Scotton (2002) has admitted is not well defined independently from what does occur.

Structural uniformity underlies the Uniform Structure Principle (USP) newly added by Myers-Scotton. This principle further enhances asymmetry by giving priority to Matrix Language (ML) grammatical procedures and restricting the contribution of the Embedded Language (EL).

In the light of what was mentioned, this research paper aims to:

- Clarify some dimensions of the concept of congruence and the newly added principle –the Uniform Structure Principle using Algerian Arabic/ French code-switching corpus,
- Find the relationship between congruence and structural uniformity in a trial to use them as an explanatory paradigm to interpret our findings in general and the challenging code-switching patterns in particular.

To do so, we will expose our findings in a table. These findings concern the type of structures generated from the insertion of French morphemes and constituents into AA matrix structures using the MLF model as a theoretical frame. Then we are going to discuss and interpret the data using Myers-Scotton's principles- congruence and structural uniformity.

3. Methodology

3.1. The informants of the study and data collection

In order to record spontaneous speech from speakers with different age, occupation, sex, relationship and in different contexts, we have chosen five informants[2] to whom we gave the recorder several times for a period of time ranging from one week to two weeks in order to record conversations in which they participate. These respondents are: a man

[1]Lemmas are abstract lexical entries in the mental lexicon that underlie surface level morphemes (Myers-Scotton, 2002:17).

[2] I have also participated in recording some conversations.

aged 42; he is a teacher at university. He with two other partners have a nursery, and a school of computing. The second informant, aged 25, is a female student of medicine in the last year of graduation, and she is on a shift at hospital once every week. The third, aged 31, is a female teacher of Islamic Sciences at the secondary school and she gives lectures at the University of Islamic Sciences. The fourth, aged 18, is a first-year female student in the French department. The fifth informant is a baby-sitter in a kindergarten and she is 37 years old.

We have selected the above informants for different reasons, among them the different relations that they display, the nature of their work which requires them to meet and talk to other people and their varying degrees of proficiency in French. In addition, they constitute micro social networks which we believe are representative of the community under investigation. These informants are ordered according to the amount of conversations that they have recorded. In addition to the above respondents we have also given the recording equipment to others but for short periods of time.

3.2. Data analysis

Spontaneous conversations between informants and their interlocutors were recorded in different settings[3] including university, hospital, kindergarten, home, cafeteria, restaurant, bus, car, teacher's room in a secondary school, secondary school yard and private school of computing. In addition, the conversations are conducted in different social situations, ranging from intimate to formal ones e.g. work meetings between teachers at university, conversations between fellow teachers at university, between fellow students at university, between secondary school teachers, between colleagues during hospital turnovers, conversations between a boss and a secretary in a private school of computing and conversations between women during some occasions.

Our study is based on a corpus of more than fourteen hours of audio-recorded conversations. The approach used in our study is to its majority a qualitative one (interpretation of CS structures was obtained using individual utterances produced by the informants in the data). Our study however was backed up by a quantitative analysis to distinguish between common CS patterns and limited ones. In addition, our findings were compared to other CS data sets particularly those involving Arabic as a Matrix Language.

4. Results and Discussions

4.1. Descriptive paradigm

Myers-Scotton has proposed the complement phrase CP[4] as a relevant unit of analysis, within which she has identified three types of insertion. First, the insertion of single EL content morphemes into ML constituents. This is the type of constituent that is fully identical to the morphosyntax of the ML and to which the system morpheme and

[3] Setting: refers to the physical environment in which the social life of speakers operates (Blom & Gumperz, 1972).

[4] CP (projection of complementizer) refers to specific type of maximal projection or constituent headed by an element in COMP position; although the element is often null. CP is the highest syntactic structure projected by lexical elements that contains other constituents or maximal projections as NPs, VPs, PPs. Both independent and dependent clauses are CPs.

morpheme order principles apply (Myers-Scotton, 2002: 21, 67). Second, the insertion of internal EL islands which are well-formed EL constituents inserted into larger ML maximal projections. Last but not least, the insertion of EL islands which are EL maximal projections or phrase-level constituents inserted into ML CPs.

In this corpus all the three types of constituents are present and frequent when AA is the ML and they are divided into two main structures: *mixed constituents* which are AA maximal projections containing French single morphemes or French internal NPs[5] and *EL islands* which are well formed French maximal projections inserted into AA complement phrases (CPs) as illustrated in the following table:

Mixed Constituents		**French EL Islands**
French single morphemes	**French internal EL Islands**	○ ***French NPs (282)***
○ ***Mixed NPs***	○ ***Mixed NPs***	[DEF + nouns] (110)
French single Ns (35)	French internal NPs (111)	[NUM + Nouns] (51)
French adjectives (42)		[INDEF + nouns] (48)
○ ***Mixed PPs***	○ ***Mixed PPs***	[Nouns +Adjs] (46)
French single Ns (14)	French internal NPs (38)	[POSS + nouns] (11)
○ ***Mixed VPs***		[Nouns + N COMP] (8)
French verb stems (87)		[QUAN + Nouns] (7)
French adverbs (56)		[DEM + Nouns] (1)
		• ***French PPs (85)***
		• ***French AdjPs (4)***

Table 1: French insertions into Algerian Arabic structures

French insertions into AA matrix structures as exposed in table1 reveal the productivity of AA structures with French single morphemes, internal EL islands and EL islands which corroborate at large the practicality of the MLF model's principles in constraining patterns of AA/French CS.

The analysis of inserted French nouns and French internal NPs into mixed constituents reveals that AA morphological processes are not very productive with French nouns. French nouns are not inflected with AA inflections for number (plural suffixes) or gender (feminine suffixes); French feminine and plural nouns are used instead. The AA definite prefix (λ-) is the only ML affix that is occasionally attached to French nouns, and there is a strong tendency for even this article to be replaced by its French counterparts.

[5] All French internal EL islands mentioned in this paper consist of French nouns modified by French definite articles 'le, la, les'. In addition to this type of internal EL islands we have found two French internal EL islands consisting of French possessives plus French nouns, one consisting of a French numeral plus a French noun and one French internal prepositional phrase.

French nouns with their definite articles constitute the majority if not all of the inserted internal EL islands in this corpus. It even outnumbers the insertion of single French nouns in mixed NPs and PPs. Furthermore, the insertion of French nouns with their definite articles as EL islands and Internal EL Islands (259 instances) is almost three times more than the insertion of French nouns (94) into AA phrases. This evidence shows us the extent to which the insertion of French nouns with their articles is preferred and recurrent in this corpus compared to the insertion of French nouns with the AA definite article (λ).

4.2. Explanatory paradigm

To explain and interpret our findings we opted for the notion of congruence and the uniform structure principle that form the explanatory paradigm to explain some challenging code-switching patterns which are used when Algerian Arabic and French are in contact. To do so, we will discuss four main observations paying special attention to the recurrent insertion of French nouns with their definite articles rather than the insertion of single French nouns. A fact that has been widely discussed by many researchers including Myers-Scotton (2002) however there seems to be a clear inconsistency in the way Myers-Scotton defends the frequent insertion of French nouns with their definite articles in Arabic frames.

4.2.1. Congruence

The notion of congruence or equivalence is very important in CS research and has expanded and taken different views beginning by a surface linear equivalence in Poplack's equivalence constraint. Then structural or grammatical equivalence was discussed in Bentahila and Davies' (1983) lexical sub-categorization restriction and in Muysken's syntactic constraints. Finally, under Myers-Scotton's MLF model, the nature of congruence becomes deeper and more complex. It is examined at the three levels of abstract structure of content lexemes (lexical-conceptual, predicate-argument, and morphological realization patterns).

Congruence is represented in the MLF model and 4-M model by the two last hypotheses; the Blocking Hypothesis and the EL Hypothesis. The use of a lexical item is motivated by a match or compatibility between the two languages, in the three abstract structural levels, before the surface realization of the maximal projection of the lexeme. It is the presence or the lack of such compatibility or congruence which in fact defines CS structures, i.e. sufficient congruence results in mixed constituents and insufficient congruence creates EL islands. Myers-Scotton and Jake (1995: 248) have mentioned this relation between congruence and CS choices by stating that: "Variation in congruence (complete, partial, or absent) in the levels of language restricts and therefore structures choices in CS. That is, variation in actual CS realizations reflects variation in congruence at more abstract levels of linguistic structures".

We aim to clarify the concept of congruence using AA/French CS corpus. It also will question the ability of the MLF model in explaining some earlier observed CS patterns and strategies, which are used when AA and French are in contact.

4.2.2. The uniform structural

In addition to the Matrix Language Principle and the Asymmetry Principle, Myers-Scotton (2002) adds another supportive principle -the Uniform Structure Principle

(hereafter USP). Defining this principle Myers-Scotton (2002: 120) states that "A given constituent type in any language has a uniform abstract structure and the requirements of well-formedness for this constituent type must be observed whenever the constituent appears*".*

By adding the USP, Myers-Scotton (2002) gives preference to the ML morpho-syntactic procedures, i.e. the principle maintains the ML structural uniformity of the constituent and of the CP in favour of forming EL islands. Yet, some EL structures are allowed if they obey ML restrictions.

The general principle underlying the Uniform Structure Principle is the one of feature distribution and checking across phrases to maintain phrases' consistency. This principle has been expressed in many syntactic models including Generalized Phrase Structure Grammar, Gazdar, Klein, Pullum, and Sag (1985) and Chomsky's Minimalist Program (1995). The idea of the USP as Myers-Scotton (2002: 121) states is that "Head features (of the Matrix Language) must be observed throughout a maximal projection".

The present AA/French CS data displays some instances that illustrate how AA structures are maintained and preferred in bilingual constituents and complement phrases.

4.2.3. Definite French noun phrases

The provision of French NPs that include French nouns determined by French definite articles in this corpus is striking and need some explanation. This type of noun phrase insertions replaces and exceeds the insertion of single nouns, which is usually the recurrent type of insertion in many CS data sets (Myers-Scotton 1993a [1997], 2002; Treffers-Daller 1994, 1999; Poplack, 1980). French definite nouns are embedded in AA frames either as EL islands or as internal EL islands into AA NPs and PPs.

As internal EL islands, French definite articles[6] (le, la, les, l') accompanying French nouns occur after AA demonstratives, quantifiers, prepositions and they even replace the AA definite article (λ-) in the composite determiner (ωα□δλ-). French internal noun phrases embedded into AA noun phrases and prepositional phrases are also common when French is the ML of bilingual CPs.

Indeed, this phenomenon has been noticed by other scholars working on these two languages i.e. AA/French (Boumans and Caubet, 2000) and those working on MA/French CS data (Nait M'Barek and Sankoff, 1988; Ziamari, 2003; Ouahmiche, 2013). In this regard, Boumans and Caubet (2000: 40) stated: "Preceding embedded French nouns, French definite articles (le, la, l', les) are used as if they were the AA definite article (λ-), even in positions where they would be impossible in monolingual French".

The tendency of French nouns to be inserted with their definite articles when Arabic is the ML has been also the subject of study for many linguists, including Poplack and Sankoff (1988)[7], Boumans (1998), Muysken (2000), and Myers-Scotton (2002).

[6] The AA definite article (λ-) is used only with French singular masculine nouns replacing thus the French masculine singular definite article *le.*

[7] This type of French noun phrase insertions (i.e., internal EL islands) led Poplack and Sankoff (1988) and Nait M'Barek and Sankoff (1988) to assume that there is a process of constituent insertion in MA/French switching.

In some earlier studies, French noun insertions when Arabic is the ML have been contrasted with Dutch noun[8] insertions in Arabic structures. Different hypotheses have been formulated to explain the contrast between AA or MA/French noun insertions on the one hand, and MA/Dutch noun insertions on the other hand, among them, French definite articles (le/la) resembles Arabic (λ-) and Dutch (*de/he)* does not (Heath, 1989)[9]; French articles are obligatory in the noun phrase, however, Dutch *de/he* is not (Boumans, 1998: Muysken, 2000).

In a chapter devoted to problematic code-switching data, Myers-Scotton (2002) speaks about the insertion of French nouns and their determiners when Arabic is the ML. First, she has questioned the validity of the argument that French articles are strongly linked to their nouns and are obligatory in the noun phrase by providing examples from other CS corpora namely Wolof/French and Lingala/French. In Wolof/French and Lingala/French data sets, French nouns never appear with their own determiners. In the former, French nouns are followed by Wolof determiners, and in the latter, French nouns appear as bare forms because Lingala has no determiners at all.

The AA/French CS corpus at hand supports Myers-Scotton's (2002) arguments because French single nouns are embedded without their articles as bare forms in the AA zero article structure that express indefiniteness (table 3 below).

Based on this evidence, Myers-Scotton (2002: 119) argues that "it is not the relation of French with its determiners that can explain why they appear in Arabic/French code-switching. Instead, these examples suggest that the requirements of the Matrix Language are what matter and whether French can satisfy them."

These requirements or specifications, according to Myers-Scotton (2002), are satisfied in the case of French determiners when Arabic is the ML (i.e., French determiners show sufficient congruence with their Arabic counterparts at all three levels of abstract grammatical structures), which explains the appearance of French determiners in AA constituent structures, as she states (ibid: 119) "Embedded Language determiners (French here) can appear if they show sufficient congruence with their Matrix Language counterparts at all three levels of abstract grammatical structure. French determiners seem to pass this test when Arabic is the Matrix Language."

But how is sufficient congruence between AA and French determiners interpreted within Myers-Scotton's (2002) MLF model? The congruence in the context of AA and French determiners, according to Myers-Scotton (2002), lies in the fact that both languages AA and French share the grammatical feature of a determiner complex in modifying a noun as she states:

[8] MA/French and MA/Dutch corpora are contrasted (Nortier, 1990; Boumans, 1998) because in MA/Dutch data sets Dutch nouns are inserted as bare forms without any definite article being it Dutch or AA articles even in position where it is obligatory in AA. on the other hand, French nouns in MA and AA/French CS corpus are almost always accompanied by articles and these are often French definite articles that replaces AA definite article (λ-) and are embedded with French nouns as EL islands.

[9] Cited in Muysken (2000).

> I suggest that the reason[10] is that French has more than a determiner that resembles the Arabic one; more important, it has a determiner complex that closely matches that of Arabic-at least in the North African Arabic varieties. Because of this, even though Arabic is the Matrix language, French determiners can satisfy the requirements of the Arabic complex and appear with French nouns. Myers-Scotton (2002: 122)

Myers-Scotton's arguments seem to be controversial and not convincing. First, although AA and French both have a determiner complex, they in fact differ in the nature of determiners that form each determiner complex. AA accounts in its grammatical system determiner complex consisting of the composite indefinite determiner [ωα□δλ-] and [demonstratives + the definite article (λ-)]. French on the other hand, allows some combinations[11] but disallows others such as: [demonstratives + definite articles (**ce le* 'this the').

Second, if there is sufficient congruence between AA and French determiners at the three abstract levels, as Myers-Scotton suggests, then why are mixed noun phrases containing French nouns determined by the AA definite article (λ-) very rare in this corpus, since mixed constituents are the result of sufficient congruence, as Myers-Scotton (2002: 97) states "The Embedded Language content morpheme can only appear at surface level, fully integrated into the Matrix Language frame, this checking turns up sufficient congruence between the Embedded Language morpheme and its Matrix Language counterpart."

Third and most important is that, there is a contradiction between Myers-Scotton's arguments concerning French determiners and Myers-Scotton's Blocking Hypothesis and EL Island Hypothesis. On the one hand, Myers-Scotton explains the occurrence of French determiners with their nouns within EL islands as a result of sufficient congruence between AA and French determiners. On the other hand, EL islands are considered by Myers-Scotton's MLF model, as compromise strategies in the case of lack of sufficient congruence as stated in the following EL island hypothesis:

> When there is insufficient congruence between the lemma underlying an EL content morpheme and its ML counterpart at one or more of the three levels of lexical structure, the only way to access the EL element is in an EL islands. (Myers-Scotton, 1997:250)

So, there seem to be a clear inconsistency in the way Myers-Scotton defends the frequent insertion of French nouns with their definite articles in Arabic frames.

This phenomenon can still be approached using Myers-Scotton's notion of congruence and the USP. However, instead of concentrating on the feature of Arabic

[10] Here Myers-Scotton (ibid: 122) means the reason behind the frequent appearance of French determiners with their nouns in Arabic constituents.

[11] In French certain partitives or indefinite determiners such as tout 'all' and de 'some' can be accompanied by a definite article as: ***toutle*** *monde* 'all the world' and *je voudrais* ***de la*** *salade* 'I would like some salad') Myers-Scotton (2002: 122).

determiner complex which does not create any problem, since the USP in the case of determiner complex is satisfied when AA is the ML[12]. We will try to interpret the reason behind the lack of congruence between AA articles and their French counterparts in terms of feature distribution between them and the following nouns.

French articles[13] vary according to three grammatical features, definiteness (definite/indefinite), number (singular/plural) and gender (masculine/feminine). Thus, they agree with French nouns in gender and number. AA articles, on the other hand, may be definite or indefinite, however, they do not vary according to number and gender i.e. they do not agree with their nouns in gender and number.

This difference between AA and French articles in terms of gender and number marking creates the insufficient congruence between AA articles and French nouns and explains the occurrence of French nouns with their articles.

This incompatibility or mismatch between AA definite article's features and French noun's features at the conceptual level facilitates the formation of French EL islands or internal EL islands. So, here the lack of sufficient congruence between French nouns and AA articles explain the frequency of French noun phrase insertions into AA matrices (i.e. French nouns succeed to maintain the uniformity of French noun phrase structure by being inserted as well-formed EL islands).

AA uniformity, on the other hand, is also satisfied since these internal French NPs are inserted within AA larger noun phases (AA maximal projections), and are submitted to AA USP (i.e. French noun phrases satisfy the requirements of the AA composite article [ωα□δ + definite article] and AA demonstratives and complete AA determiner complexes by providing definite articles before nouns).

4.2.4. Numerals

Preceding nouns, Numerals are considered by the MLF model and 4-m model as early system morphemes[14]. In mixed constituents, numerals come from the ML and modify EL nouns. Numerals can also come from the EL but within EL islands modifying EL nouns.

In the AA/French CS corpus of the present study there is no instance of a French noun preceded by an AA numeral within a mixed noun phrase, which is allowed by the

[12]AA demonstratives and indefinite article 'ωα□δ-' require definite noun phrases (i.e. definite article + nouns). These requirements are satisfied since the Embedded Language (i.e. French) provides nouns preceded by definite articles as well formed EL islands into the AA structures prepared for definite noun phrases.

[13] French gender is formally marked on the singular article: definite *la*, indefinite *une* for feminine, and *le* and *un* for masculine. French plural is also marked on the articles that usually accompany plural nouns (definite *les* and indefinite *des*). Thus, French articles not only add definiteness but also mark the nouns for number and gender.

[14]early system morphemes are conceptually activated at the lemmas level. Thus, they have the feature [+conceptually activated] along with content morphemesand they provide the information needed to complete the speaker's intention conveyed by the content morpheme. In that they differ from other system morphemes.

MLF model except the following example (in which the French noun is modified by AA numeral '**ωα□αδ' (one)**:

[1]μα-να-βΕατ-λ-≅κ-Σ**ωα□αδ*bras-cassé***.
NEG-1PR-send-for-you-NEG **one *broken arm***.
'I will not send you a lazy person to hire'.

EL islands containing French nouns modified by French numerals on the other hand is a very recurrent type of noun phase insertions (more than 51 tokens).

The fact that there is no instance of mixed constituents containing French nouns preceded by AA numerals on the one hand, and the frequency of embedded French NPs containing French numerals on the other hand, suggests that there is insufficient congruence between AA numerals and their French counterparts since EL islands, according to Myers-Scotton (2002), are the result of a lack of sufficient congruence between the two languages involved in CS. So, how is this lack of sufficient congruence between AA and French interpreted in the case of numerals?

The lack of sufficient congruence between AA numerals and their French counterparts lies in the different features of numerals in both languages. AA numerals from number 2 to 10 subcategorize for plural nouns, yet those that are bigger than 10 call for singular nouns. All French numerals, on the other hand, subcategorize for plural nouns, except number 1 which is used with singular nouns. This explains the appearance of a mixed constituent containing AA numeral in the above example i.e. the numeral 'one' in both languages is used with a singular noun.

To overcome this lack of congruence or mismatch between AA numerals' features and French nouns' features, French nouns are frequently embedded with their numerals as EL islands in this corpus.

Here are some examples found in our corpus that show how the speakers resort to different bridge strategies to avoid using AA numerals as modifiers before French nouns:

[2]σβα□δαρ-να**ωα□δα#*une*** *surveillance*.
Morning did-1PL **one #*one*** *surveillance.*
'We had surveillance in the morning'.
[3]κι□-ΖιΕανδ-≅η**ωα□αδ#*un*** *cadre*□-Ξα:φμ≅νν-αη.
When 3PR-come-3SG to-him one # one executive 3PR-be afraid3SG from-him.
'When a director comes to him he will be afraid of him'.
[4]γα:λ**Ξαμσα#*cinq*** *vigiles radiés*.
Said3SG five # five guards fired.
'It is said that there are five guards fired'.

In the above examples, French nouns are preceded by AA numerals and French numerals. Yet, AA numerals are followed by a pause (#). This is not a case of double morphemes but 'self-repair' i.e. AA numerals are accessed but because speakers want to use French nouns, they correct themselves by using French numerals alongside French nouns. This kind of self-repair strengthens the fact that there is insufficient congruence

between AA numerals and French nouns that prevent forming mixed noun phrases with AA numerals and French nouns.

The following examples show the way speakers avoid using AA numerals as quantifiers before French nouns within the same CPs:

[5]ρα-ηΟμ**Ξαμσα**γα:λ-λ-≅κ*radiés* ***les vigiles***.
Are-3PL **five** said-to-you *fired* ***the guards***.
'They said that there are five guards fired'.

[6]ηΟμα□ασβ-ι:ν***les vigiles*****Ξαμσα**λιρα-ηΟμ□α5-ι:ν-ηΟμμεντ≅μμαβα:5αλ.
They think-3PPart ***the guards*****five** that are-3PL put-3PPart-them from there for nothing.
'They think that the five guards are just there for nothing'.

In example [5], the verb 'γα:λ-λ-≅κ' (is said) and the French adjective*radiés* intervene between the AA numeral and the French noun phrase*les vigiles*. In example [6], the AA numeral 'Ξαμσα' (five) follows the French noun phrase*les vigiles.*

The other way to avoid using AA numerals before French nouns is using the AA construction (numeral + tαE (of) + NP). The following examples illustrate how AA numerals and French nouns are used within the AA structure (numeral + tαE + NP):

[7]Εαν-να**ΞαμσαταΕ*les spécialités*ωραβΕαταΕ*les stages***ϕ≅λ-Εα:μ.
Have-3PL**five of *the specialities*** and **four of *the trainings*** in the year.
'We have five specialities and four trainings in a year'.

[8]μρακβι:ραηι□αωραΖ≅λ-η**αΕαΣρατα**Ε***les chariots***ΞαρΖΥ-ηΟμ.
Woman old she and husband-her **ten of *the carriages*** brought-3PL-them out.
'An old woman and her husband have brought out ten carriages'.

In the above examples, French NPs (*les spécialités* 'the specialities', *les stages* 'the trainings', *les chariots* 'the wagons') are embedded into AA structures headed by the preposition 'tαE' forming AA prepositional phrases that function as complements to AA nouns (Ξαμσα'five', ραβΕα'four', ΕαΣρα'ten').

Thus, the notion of congruence proves again to be efficient in explaining the rarity of occurrence of certain AA system morphemes (AA numerals here) with French nouns in mixed constituents and the frequency of EL islands with their French counterparts.

4.2.5. Possessives

French noun phrases are frequently modified by AA analytic possessive construction [NP + tαE-pronominal suffix] (more than 31 tokens) as in the following example:

**[9]*Les rèves*tαΕ-≅η□≅-τβ≅Ξρ-Ο.
Dreams **of-him** 3PR-evaporate-3PL.
'His dreams will evaporate'.

The AA possessive construction is productive in monolingual utterances with AA nouns as well as in CS utterances with French nouns, and it is found when either AA or

French is the ML of the CP. French EL islands containing French nouns modified by French possessives are limited to eleven instances in this corpus and all of them are nouns that refer to names of relatives (e.g. *ma belle soeur* 'my sister in-law', *son ami* 'her boy friend', *mes cousins* 'my cousins', *mes belles soeurs* 'my sisters in-law', *sa mère* 'her mother', *mon petit cousin* 'my little cousin').

To interpret this, we will compare AA and French possessive structures. The AA semantic relation of possession is expressed using an analytic construction with the preposition 'ταE' (of) which assigns the possessed noun (*les rèves* in example [372]) to a possessor which is a pronoun suffix -≅η (-him**)** that is affixed to the preposition 'ταE' (of) forming the construction ταE-≅η (of-him). French possession, on the other hand, is expressed using possessive determiners before possessed nouns as modifiers that agree with them in gender and number as in the following examples:

[10] ***Ma belle soeur***ρα-ηιΓικιZατμ≅*la syrie*.
My sister-in-law be-3SGF just came from *the Syria*.
'My sister in law has just come from Syria'.

[11] μινν-*activ*-ιν-Eα□□α5λ- ***mes cousines.***
When 1PR-*recharge*-1SG1PR-call for-***my cousins***.
'When I recharge my mobile, I call my cousins.'

According to the MLF model, French possessives are early system morphemes that are activated at the conceptual level by speaker's intentions to add conceptual information to their heads (i.e. possession) and they are indirectly elected by gender and number features of their heads. The preposition ταE (of) in the AA possessive construction however, is a bridge system morpheme[15] (late system morpheme) that is accessed later in the formulator during language production to complete the maximal projection of its head. The requirement is structural not conceptual, to satisfy the well-formedness of the constituent. It means that in AA, the possessed noun and the possessor pronoun suffix are activated at the conceptual level by speaker's intentions; however, they wait until the formulator to be structurally combined by the bridge system morpheme ταE (of).

Thus, the incongruence between the two languages in the case of possessive modification lies in the fundamental difference between the status of system morphemes marking this relation of possession.

Thus in the case of possessive constructions, mixed constituents with internal EL islands are the best solution to the lack of congruence, since AA possessive analytic construction allows the insertion of French nouns with their definite articles which satisfy the USP (i.e. using internal EL islands give preference to ML system morphemes in

[15]Bridge system morphemes unite morphemes into larger constituent. unlike outside system morpheme, both early and bridge system morphemes receive information about their forms from their own maximal projection. However, while early system morphemes are conceptually activated by their heads (content morphemes) to which they add semantic-pragmatic information, bridge system morphemes occur to complete the maximal projection of their heads without any influence from their heads. The requirements of the constituents on bridges are structural not conceptual to satisfy constituent's well-formedness.

maintaining the uniformity across phrases). This strategy of compromise explains the frequency of embedded French definite noun phrases into the AA possessive analytic structures instead of the formation of EL islands with French possessives.

4.2.6. Demonstratives

Demonstratives[16] are early system morphemes, according to the MLF model, when they are determiners preceding nouns. As determiners, AA demonstratives require another determiner before nouns; this is the definite article (λ-). French demonstratives on the other hand are used alone preceding the nouns.

In the AA/French CS corpus of the present study, French definite noun phrases are recurrently inserted as internal EL islands after AA demonstratives. Thus, the insertion of French nouns with their articles as internal EL islands satisfies AA demonstratives' requirements by providing definite articles before nouns and satisfies French nouns' requirements for gender and number markings on articles.

Since there is insufficient congruence between AA demonstratives and their French counterparts, one would expect at least to find some instances of EL islands containing French nouns modified with their demonstrative adjectives. Yet, there is only one instance of inserted French EL Island containing French demonstrative *cet* (this) as follows:

[12] αμαλα***cet après midi***ν≅-τλαθ-O.
Thus, ***this afternoon*** 1PR-meet-1PL.
'Ok, we will meet this afternoon'.

The absence of French EL islands with French demonstratives and French nouns can be explained by the USP. Since the insertion of French nouns with their articles as internal EL islands after AA demonstratives is a compromising strategy that overcomes the problem of congruence and satisfies AA demonstratives' requirements, then, it is preferred over the formation of EL islands because it maintains AA structural uniformity across the noun phrase.

The lack of sufficient congruence and the uniformity of Matrix Language structure do account for the frequent insertion of French internal noun phrases into AA demonstratives' maximal projections, and they partly justify the absence of inserted French EL islands with French demonstratives.

5. Conclusion

The present paper is an investigation of contact phenomena in Algeria. It follows two main directions. The first perspective is descriptive and the second one is interpretive. The descriptive perspective of our investigation introduces Myers-Scotton's morpho-syntactic model in the analysis of code switching. The interpretive perspective of our study uses Myers-Scotton's basic explanatory principles and concepts that underlie the MLF model with its amendments to interpret and explain the attested CS patterns.

[16]In linguistics, demonstratives are deictic words that refer either to the surrounding objects or to abstract concepts that was mentioned earlier. They are also used to refer to the content of previous statement.

The MLF model is based on the premise of asymmetry between the participating languages within bilingual CPs. the Uniform Structure Principle, newly added by Myers-Scotton (2002), further enhances this asymmetry. The System Morpheme Principle of the ML hypothesis states that only outsider late system morphemes which have grammatical relations external to their heads must come from the ML. The Uniform Structure Principle goes beyond the System Morpheme Principle, by considering early system morphemes and bridge system morphemes from the Matrix Language as the unmarked choice because it gives preference to keeping the ML structure uniform across the CP. The USP of the ML is challenged by the lack of congruence between ML structures and EL structures. The lack of sufficient congruence may lead to compromising strategies among them the insertion of EL islands.

In the AA/French CS corpus of the present study, the lack of congruence between the AA definite article and AA numerals and their French counter-parts explains the frequency of French EL islands with French definite articles and French numerals and the rarity of AA mixed constituents with these AA early system morphemes.

The USP also provides the answer to the frequency of AA demonstratives and possessive constructions with French noun phrases. The AA frame is uniformly maintained if the bridge system morpheme and the early system morphemes come from the ML. That is maintaining the frame by allowing the insertion of internal French NPs which overcome the problem of congruence overrides activation of Embedded Language framing procedures in order to form EL islands (i.e. the entire demonstrative or possessive construction in French).

Structural uniformity as a concept is strongly present and challenges the notion of congruence in constraining code-switching instances and limiting the activation of the embedded language grammatical procedures. It also reflects clearly the asymmetry between the two languages at the three abstract levels of language production.

References

[1] Benhattab, A. L. & Ouahmiche, G. (2017). The Feasibility of Content and System Morpheme Hierarchy in the Analysis of Tamazight Bilingual Corpora: The Case of Kabyle and Mzabi Bilingual Speech in Oran. International Journal of Language and Linguistics 5 (1/3), 6-14.

[2] Boukreris, L & Bouchegra, A. (2016). The Language of Advertising: The Case of Code-Switching and Code-Mixing in the Algerian Advertising Scenery. university of Oran, in Revue Traduction et Lnagues, 40-50.

[3] Boumans, L. (1998a). The Syntax of Codeswitching: Analysing Moroccan Arabic/Dutch Conversations. Studies in Multilingualism. Tilburg: Tilburg University Press.

[4] Bouamrane, A. (2013). Constraints on Algerian Arabic-French intrasentential Code-Switching"; university of Oran.

[5] Gardner-Chloros, Penelope (2009). *Code-switching*. Published in the United State of America by Cambridge University Press, New York.

[6] Gerald Stell & Kofi Yapko (2015), *Code-switching Between Structural and Linguistic Perspectives*. Publications of the School of Language & Literature Freiburg Institute for Advanced Studies.Walter de Gruyter Berlin/Munich/Boston

[7] Gullberg, Marianne; Indefrey, Peter and Muysken, Pieter(2009). *Research techniques for the study of code-switching.* in Bullock, B. E. ; Toribio, J. A.*The Cambridge Handbook of Linguistic Code-switching* (p.21-39)

[8] Muysken, Peter (2000). *Bilingual Speech: A Typology of Code-Mixing'*. Cambridge University Press, Cambridge, United Kingdom.

[9] Myers-Scotton, Carol (1993) *Duelling Languages: Grammatical Structure in Code Switching*, Oxford University Press, New York.

[10] Myers-Scotton, C & J-L. Jake (2000). Four types of morphemes: evidence from aphasia, code switching, and second language acquisition; in *Linguistics* 10531100, Walter de Gruyter.

[11] Myers-Scotton. Carol, (2002). *Contact Linguistics: Bilingual Encounters and Grammatical Outcomes*. Oxford University Press, New York.

[12] Myers-Scotton, C. (2005c). Uniform Structure: Looking beyond the surface in explaining code-switching. Rivisita di Linguistica (17), 15-34.

[13] Myers-Scotton. Carol, (2006). *Multiple Voices: An Introduction to Bilingualism*. Oxford Blackwell.

[14] Myers-Scotton, C. (2008). Language Contact: why outsider system morpheme resist transfer. *Journal of Language Contact THEMA (2),* 21-41.

[15] Myers-Scotton, C & Jake, J-L. (1995). Matching lemmas in bilingual language competence and production model: evidence from intra-sentential code-switching. In WEI, Li (2000), Bilingualism Reader, Routledge, London, USA, Canada, 244-279.

[16] Myers-Scotton. C, J-L. Jake & M. Okasha. (1996). Arabic and constraints on code switching. University of South Carolina, Midlands Technical College. In Mushira Eid and Dilworth B. Parkinson Perspectives on Arabic Linguistics IX. John Benjamins Publishing Company, 9-44.

[17] Ouahmiche, G. (2008). The Dynamics of Language Contact in Communities of Practice: Toward a Plurilingual Approach to Language Processing in an Algerian Context. University of Tlemsen. PhD thesis.

[18] Ouahmiche, G. (2011). Matrix-Language Approaches to Classic Code-Switching: The MLF and 4-m Mdels under scrutiny. *Revue Traduction et Langues 10(2)*.

[19] Ouahmiche, G. (2013). Borrowing adaptation routines in Oran Arabic. *Revue Traduction et Langues 12(1),* 13-23.

[20] Ouahmiche, G. (2014). L'effet de la séquentialité dans le parler bilingue Algérien : quelques procédés conversationnels productifs dans les codes mixtes. Revue Traduction et Langues 12 (2), 6-19.

[21] Ouahmiche, G. (2013). Socio-pragmatic Mechanisms in Bilingual Speech: evidence fromAlgerian Arabic/French intra-sentential code-switching. University of Mostaganem-Algeria. MA dissertation.

[22] Ziamari, K. (2003). *Le Code Switching au Maroc : L'arabe Marocain au contact du Français.* Université de Fès. PhD dissertation.