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MAGISTER THESIS
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Grammatical Aspects of Algerian Arabic/French Intra-sentential Code-switching

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DEDICATION

I dedicate this modest research to my

Parents for teaching me strength to overcome obstacles

To my sisters and brothers for

their love and support

To my husband for

his emotional support

To my parents and sisters in law for providing a familial atmosphere

And to my daughters for sharing their time with this thesis.

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List of abbreviations:

1/2/3PL: first, second or third person plural.

1/2/3PR: first, second or third person present.

1/2/3SG: first, second or third person singular.

AA: Algerian Arabic.

Adj: adjective.

Adv: adverb.

ART: article.

Aux: auxiliary

CA: Classical Arabic.

COMP: complimentizer.

COP: copula

CP: complement phrase or projection of complementizer.

CS: Codeswitching.

DEF: definite article.

DEM : demonstrative.

Det: determiner.

Dual : a dual suffix.

EL: embedded language.

F: French.

FAgr : feminine agreement.

FUT : future.

GB: government and binding.

INDF: indefinite article.

INFL: inflection

IP: inflectional phrase.

MA: Maroccan Arabic.

ML: matrix language.

MLF: matrix language frame model.

MSA: monolingual structure approach.

O: object.

PLAgr : plural agreement.

PLF: plural feminine.

Post: postposition

PPart: past participle

PR: present

PRD: predicate adjective

Pre: preposition

PRF: present feminine

Pro: progressive

Q: quantifier.

S: subject.

SA: Standard Arabic.

SGF: singular feminine.

Spec: specifier.

suff: suffix.

V: verb.

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A B S T R A C T

The purpose of the present study is to investigate the morpho-syntactic mechanisms underlying Algerian Arabic/French intra-sentential code switching as displayed by Algerian speakers in Oran. Our research work also questions the Matrix Language Frame model's practicality in describing and interpreting an Algerian Arabic-French bilingual corpus.

Data from naturally-occurring conversations is analyzed within Myers-Scotton's (1993, 1997, 2002) Matrix Language Frame model and its supportive models -the 4-M model and the Abstract Level model. Our investigation of bilingual language behaviour of Algerian speakers is conducted from a micro sociolinguistic perspective. This perspective is couched within the general field of contact linguistics. The approach used in the analysis of our data is to its majority a qualitative one. Our study is backed up by a quantitative analysis of recurrent code switching patterns. Our findings are also compared to other CS corpora especially those involving Arabic as a Matrix Language.

The chosen theoretical framework seems to be efficient to a large extent in the analysis of Algerian Arabic French code switching patterns. In addition this insertional paradigm has shown flexibility and rigor in explaining and interpreting the attested code switching mechanisms. The Matrix Language Frame model could also account for the specificity of this corpus i.e. the tendency and frequency of the insertion of French noun phrases [French definite articles + French nouns] in Algerian Arabic matrices. This type of French noun phrases seem to be the most frequent and widespread code switching pattern within mixed constituents by being embedded as internal Embedded Language islands and within mixed complement phrases by being inserted as Embedded Language islands.

The results also highlight the tendency that in the AA/French CS corpus both languages assume the role of the Matrix Language, yet there seems to be an apparent asymmetry between Algerian Arabic and French as dominant languages in the present data. Algerian Arabic seems to impose itself as a Matrix Language qualitatively and quantitatively. We consequently put forward the hypothesis that the apparent asymmetry between AA and French may be related to our informants' relative unequal competence in these languages.

The analysis of AA/French CS corpus within the MLF model signals and highlights two pronounced weaknesses of the model. These are the insertion of AA single system morphemes in otherwise French complement phrases and the frequent occurrence of discourse markers from both languages involved in CS with finite clauses from the other language. The first weakness could be dealt with within Boumans (1998) insertional approach. However the second weakness seems to constitute a real challenged to the MLF model as an insertional design and to the complement phrase as unit of morpho-syntactic analysis proposed by this model. A future research work will give us more evidence on the practicality and challenges of the Insertional perspective to language contact in general and to the MLF Paradigm in particular.

R E S U M E

La présente étude vise à décrire le code switching intra-phrastique entre l'arabe algérien et le français pratiqué par des locuteurs Algériens à Oran. Notre travail de recherche aussi vise à interroger le modèle *du Matrix Language Frame* pour mesurer son degré d'applicabilité au corpus bilingue, sa rigueur en ce qui concerne l'explication et l'interprétation, et sa validité relative aux deux langues impliquées.

Un corpus de conversations bilingues spontanées est analysé dans le cadre de l'approche insertionnelle, plus précisément du *Matrix Language Frame* de C. Myers-Scotton. Le travail que nous proposons s'oriente également vers les deux modèles introduits par C. Myers-Scotton et J. Jake, à savoir le modèle des '*4-M'* (quatre morphèmes) et le modèle du niveau abstrait ' *the Abstract level model*'. Dans ce travail de recherche, nous avons adopté une perspective micro-sociolinguistique, à travers laquelle nous avons tenté d'expliquer quelques aspects de la bilingualité des locuteurs bilingues Algériens. L'approche utilisée dans l'analyse de nos données est de sa majorité qualitative. Notre étude est soutenue par une analyse quantitative des tendances récurrentes de codeswitching. Nos résultats sont également comparés à d'autres corpus en particulier celles impliquant l'arabe comme langue matrice.

Le cadre théorique choisi a permis de dégager les régularités et les « *contraintes* » régissant le code switching arabe algérien/français. En outre le *Matrix Language Frame*, et les deux modèles proposés montrent une flexibilité et une rigueur dans l'explication et l'interprétation des structures qu'offre le contact linguistique entre l'arabe algérien et le français. Le modèle pourrait également rendre compte de la spécificité de ce corpus à savoir la tendance et la fréquence de l'insertion de syntagmes nominaux français [articles définis français + noms français] dans le cadre morphosyntaxique de l'arabe algérien. Ce type de syntagmes nominaux semble être le structure le plus fréquent et nombreux dans les constituants mixtes en étant intégré comme des ilots internes, et dans les syntagmes complémentaires en étant inséré sous forme d'ilots en langue enchâssée.

Les résultats mettent également en évidence la tendance que dans le corpus bilingue arabe algérien/français les deux langues jouent le rôle de langue matrice, mais il semble y avoir une asymétrie dans les deux rôles de langues matrices. L'arabe algérien, en tant que langue matrice, s'impose par ses structures tant quantitativement que qualitativement, contrairement au français. En conséquence, nous émettons l'hypothèse que l'apparente asymétrie entre l'arabe algérien et le français est due à la compétence de l'étudiant dans les deux langues.

L'analyse de corpus l'arabe algérien/français dans le cadre de modèle du *Matrix Language Frame* met en évidence deux failles marquées du modèle. Il s'agit de l'insertion des morphèmes de système de l'arabe algérien dans des syntagmes complémentaires français. La deuxième faille concerne l'insertion des marqueurs discursifs. Les marqueurs discursifs sont une classe de mots hétérogène. Par ailleurs, ils confrontent le *Matrix Language Frame,* en tant que modèle insertionnel, à des problèmes de description et d'analyse.

ملخص البحث

إن الإحتكاك بين اللغات ظاهرة طبيعية ينجم عنها تداخل في قواعد نظامي اللغتين محل الإحتكاك. يحدث هذا التداخل في البنية العميقة للغتين ويؤثر على كل المستويات إبتداءا من أبسط بنية صوتية إلى مستوى النحو و الصرف.

الهدف من هذه الدراسة هو البحث عن الآليات النحو–الصرفية الكامنة قي المزيج اللغوي (code switching) بين الدارجة العربية الجزائرية و الفرنسية داخل الجملة كما يمارسه المتكلمون بالدارجة العربية الجزائرية القاطنين بوهران. كما تهدف أيضا إلى دراسة نموذج ميور سكوتن " Matrix the Language Frame model" لقياس مدى فاعليته و مرونته في شرح وتفسير معطيات مزدوجي اللغة.

تندرج هذه الدراسة ضمن الدراسات الوصفية الكيفية في تحليل مجموع البيانات المتوفرة لدينا معتمدة في ذلك على المنهج التحليلي الذي يرصد الدخيل والمعرب في النظام الخاص باللغة العامية وكذا شرح الأنماط اللغوية الفعالة في عملية المزج اللغوي. كما تستأنس الدراسة بالمنهج الكمي لمقاربة أنماط المزيج اللغوي المتكررة حيث سعت الباحثة إلى مقارنة النتائج المتوصل إليها مع نتائج الدراسات الأخرى المتوفرة لدينا خاصة التي تهتم باللغة العربية كمصدر نحو–صرفي للجملة.

سمح لنا التراث النظري الموظف في الدراسة بتحليل أنماط المزج بين الدارجة العربية الجزائرية و الفرنسية. بالإضافة إلى أنه أظهر مرونة ودقة في شرح وتفسير أنماط المزج اللغوي. كما استطاع هذا النموذج ايضا ان يستوعب خصوصية معطيات هذه الدراسة و المتمثلة في كثرة ادخال الجمل الاسمية الفرنسية عوض الأسماء الفرنسية. هذا النمط من المزج اللغوي هو الأكثر انتشارا و شيوعا.

النتائج أظهرت عدم تناسق واضح بين الدارجة العربية الجزائرية والفرنسية كلغتين مهيمنتين في البيانات الحالية. يبدو أن الدارجة العربية الجزائرية تفرض نفسها كلغة مصفوفة نوعيا وكميا. وبناءا عليه تم قياس الفرضية القائلة بأن التباين الظاهر بين الدارجة العربية الجزائرية والفرنسية قد يكون ذا صلة بالكفاءة اللغوية لدى المخبرين.

General introduction

General introduction:

The study of code-switching –the practice of using two or more languages within the same conversation- has flourished during the last decades receiving numerous books, articles and dissertations that deal with sociolinguistic, psycholinguistic and grammatical properties of bilingual conversations and language choice. The abundant studies and literature on CS from so many perspectives make it impossible to incorporate all code-switching linguistic aspects (i.e., sociolinguistic, psycholinguistic and grammatical) within a single study and it is even impossible to give a complete review of all the literature. Thus the present study will focus on the morphological and syntactic aspects of code-switching.

The interest in the morpho-syntatic side of code-switching began in the 1980s. The general tendency during that period was the belief that code-switching is not constrained. Today there is little debate about the fact that the grammatical features of code-switching are rule-governed. However, the nature of these rules and the ways in which they should be described and analyzed remain a subject of passionate debate. Several competing models are proposed trying to account for code-switching patterns found in different bilingual communities. This has provided a rich body of literature concerning grammatical description of CS from a number of language pairs and in a variety of language contact situations.

In the case of morpho-syntactic analysis of code-switching within a sentence, three main approaches have investigated the grammatical aspects of code-switching. These theoretical models have been classified by many researchers in the field into three main trends namely the linear or surface-based approaches as expounded by Poplack and her associates (1981, 1988, 1995, 2000), the monolingual grammar-based models as have been advocated by Woolford (1983) Muysken et al (1986, 1990, 1995, 2000), Belazi et al (1994), Mahootian et al (1993, 1995, 1996) and MacSwan (1999, 2000, 2004). Finally the insertion-based models as introduced by earlier scholars such as Sridhar & Sridhar 1980, Joshi 1982, 1985, Klavans 1985, Pandit 1986, and Nishimura 1986, and more recently Backus (1996), Boumans (1998) and Myers Scotton (1993, 1997, 2002).

The linear approach to code switching as it has been expounded by Poplack and her associates (1981, 1988, 1995, 1998, and 2000) is mainly based on earlier observed CS possible sites between Spanish and English. This approach uses word order in order to explain CS patterns by allowing switching between words or constituents that share the same surface order in both languages and prohibiting switching when the word order is not shared by these languages. Poplack and her associates (ibid) advocate that code switching involves symmetry between the linguistic systems participating in code switching i.e. the languages involved in code switching have to respect the syntactic requirements of each other.

The grammar-based approaches to code switching as they have been advocated by Muysken et al (1986), Belazi et al (1994) MacSwan (1999, 2000, 2005), and Mahootian (1993, 1996) stipulate that bilingual patterns of language production are generated by the

same mental processes as monolingual ones. These patterns, consequently, obey the same generative rules as their monolingual counterparts. Proponents of these approaches tried to apply Chomsky's monolingual syntactic models such as X-bar theory (1970s) government and binding theory (1980s), and the minimalist program (1990s) in order to formulate CS constraints.

Myers-Scotton's insertional model has become the most influential approach compared to the linear and monolingual grammar based approaches in general and the other insertional approaches in particular. This has been recognized by many researchers working within the same field (Eliason, 1995; Backus, 1996; Boumans, 1998; Gardner Chloros, 2009; Muysken, 2000). Myers-Scotton (1993, 1997, 2002) and Myers-Scotton and Jake's (1995, 1997, 2000, 2001) prominent publications since the early 1990s have not only investigated various CS data sets but they have also questioned psycholinguistics and neuro-linguistic findings about the nature of language production and processing phenomena. Their objective behind such a perspective has been to develop the MLF model, to cope with new findings, and to account for some widely presented criticisms.

The MLF model views CS as the insertion of elements from one language (the Embedded Language) into sentences or constituents which are built according to the rules of another language (the Matrix Language). The insertional approach's main concerns are how the syntactic frame, or matrix, can be identified and what types of elements can be inserted and under what condition insertion is possible. Answering those questions relies on three basic concepts that underlie MLF model's principles and hypothesis and constitute the explicative power of Myers-Scotton's model. In fact these notions are in one way or another, the reason behind the failure of some previous approaches[1] in accounting for many CS patterns. These are asymmetry between the two languages involved in CS, different status of content and system morphemes and congruence.

The aim of the present study is to describe and analyze the grammatical aspects of CS as practiced by Algerian Arabic speakers in Oran. For this objective, the present work will adopt the Matrix Language Frame Model as a theoretical frame for the morphological and the syntactic description of Algerian Arabic/French CS corpus. The Matrix Language and Embedded Language as recently redefined in Myers-Scotton's (2002) MLF model are identified only on the basis of morphological and syntactic criteria. Thus the relationship between grammatical characteristics of code-switching and sociolinguistic features of the language contact situation is not the concern of the present study.

Code switching as practiced by AA speakers in Oran is a communicative strategy strongly present in the AA linguistic reality. Many studies have investigated the grammatical constraints on AA/French CS. Yet a linguistic analysis of AA/French CS within the insertional approaches especially within Myers-Scotton MLF model is a topic that has been

[1] How these notions or one of them were/was behind the failure of linear and government approaches will be discussed in the first chapter when introducing these models.

barely discussed in depth. This is may be due to the fact that the model in question has not ceased to be revised and adjusted since its first release in the work of Myers-Scotton (1993) *Duelling Languages: Grammatical structure in Codeswitching*, resulting in several subsequent publications and additional supporting models and principles. One of the objectives of this study is to try and check the practicality of Myers-Scotton's model with all its corrections and amendments against an AA/French CS corpus.

The other reason for choosing this topic in this sociolinguistic context is the strong presence of code-switching in the language of Algerian speakers in Oran. This presents a great opportunity of investigation for Contact linguists in general and for Code switching researchers in particular.

We have chosen the MLF model as a theoretical frame for our study because of different theoretical and practical considerations. The model differs from other approaches as being theoretically-based rather than just empirically-based. It offers some general hypotheses (the ML Hypothesis, the Blocking Hypothesis, and EL Island Hypothesis) and principles (the Uniform Structure principle, the Asymmetry principle). The MLF theoretical framework is further supported by two new models the 4-M model and the Abstract-Level model. In addition Myers-Scotton is the first to propose a syntactic unit for the morpho-syntactic analysis of CS which is the complement phrase (CP).

This study does not attempt only to apply the MLF model with its supportive models and principles but also to discuss its relevance and validity in the adopted approach. The study at hand will provide and discuss some criticisms put forward by researchers working within CS syntax. It also seeks to describe, interpret and most importantly compare our findings with others from diverse sociolinguistic situations. In this respect we will visit alternative insertional approaches such as the one advocated by Boumans' (1998) insertional approach 'the Monolingual Structure Approache' that has contributed to our understanding of some CS manifestations.

In order to reach these objectives, the present study will depend on data based on more than fourteen hours of audio-recorded conversations in different sociolinguistic situations. The corpus then will be classified in order to be described and analyzed. After describing the different structures, we will try to interpret and explain them within MLF model's theoretical frame. The latter will situate AA/French CS compared to other language pairs especially in the case of some CS instances that seem to constitute a challenge to the MLF model.

Our work is subsumed under a micro sociolinguistic perspective to contact phenomena. The approach that we will use in the analysis of our data is to its majority a qualitative one. The interpretation of bilingual CS structures will be obtained using individual utterances that have been produced by informants in the data. The qualitative perspective in the analysis of code switching and related phenomena has shown its efficiency in the interpretation of bilingual phenomena. However inducing generalizations from individual language utterances in this field of research is quite difficult.

In order to refer to some general and common CS patterns in the AA/French CS corpus of the present study and to distinguish them from uncommon and limited CS instances, the present research will use statistical quantitative procedures when possible. In addition our findings will be compared to other data sets to see if they corroborate the findings of other CS studies in general and those involving Arabic languages as matrices in particular (Moroccan Arabic/ Dutch CS, Boumans, 1998; Algerian Arabic/French CS, Boumans and Caubet, 2002; Moroccan Arabic/French CS, Ziamari, 2003; AA /Berber CS, Benhattab, 2011; Arabic/English CS, Myers-Scotton, Jake and Okasha, 1996).

The data gathering follows the general procedures applied in studies carried in bilingual environments. Members of the community under investigation were recorded in natural situations of daily life. The recording equipment was carried by one of the informants or by the investigator without the knowledge of the speakers. Though this procedure of data gathering has been questioned for ethical reasons, we thought that this seems to be the only way to obtain spontaneous natural speech. Such types of recordings are considered by the bulk of researchers investigating bilingual phenomena as a reliable procedure in data collection. Another elicitation technique has been interviews. We have retained some recorded conversations from interviews done by fourth year students in the Department of Information and Communication Sciences for the preparation of graduation theses.

In order to provide a detailed description of the AA/French CS as spoken in Oran within the framework of Myers-Scotton's insertional model we will examine the roles of AA and French as Matrix Languages and Embedded Languages. The impact of one language on the other will be also investigated questioning congruence and asymmetry between them.

To do so we will try to answer the following questions:

- What is the result of the contact between AA and French at the morpho-syntactic level?
- What type of structures does the insertion of French morphemes and constituents into AA matrix structures, and the insertion of AA elements into French matrix frames generate?
- To what extent does the MLF model succeed to account for CS structures produced by speakers in the AA/French CS data of the present study?
- How can the presence or the absence of sufficient congruence between so different languages as AA and French interpret linguistic phenomena generated by both of them?
- Does asymmetry between AA and French as interpreted at the morpho-syntactic level reflects asymmetry in bilinguals'competence?

To answer the above questions, this thesis is organized as follows:

The study is divided into three chapters. The first chapter deals with the methodological and theoretical considerations of the study. These include a brief description of the overall sociolinguistic situation in Oran that forms the context of the present study and in which the recordings take place. Then follow the presentation of the corpus, the conditions of its obtaining, and the methods used for the collection of data justifying the choice of informants.

This will be followed by defining code-switching and comparing it to another phenomenon resulting from the same linguistic contact, namely borrowing. In order to do so we will use some prominent criteria that are proposed in the literature and try to apply them to our AA/French CS corpus.

After that we will discuss the debate concerning the different proposed models and constraints that try to describe the structures of CS. These models are classified into three main approaches: the linear or the surface-based approaches, monolingual grammar-based approaches and the insertion-based approaches. We will try to show their contributions and limitations using the AA/French CS corpus of the present study. In the course of this chapter we will point out the considerations leading to our preference for the insertion approach in analyzing the syntactic and morphological aspects of CS.

The MLF model on which is based the morpho-syntactic analysis of the AA/French CS corpus will be the object of the second chapter. This model will be discussed in details along with its supporting models i.e., the 4-M model and the abstract level model. This chapter is also devoted to the description of French insertions into AA matrix structures generated from the contact between AA and French in Oran. This chapter contains three main sections.

First section introduces the definition of the Matrix Language and the unit of grammatical analysis as proposed by Myers-Scotton (2002). These two components are the basis for the morpho-syntactic analysis of CS. Then MLF model's hypotheses and principles will be explored. This will be followed by exposing the way MLF model has divided the various types of intra-sentential CS.

In order to analyze intra-sentential CS constituents when AA is the Matrix Language, we will divide these CS structures into two main structures that will be dealt with in two separate sections. First section will describe mixed constituents i.e. the insertion of French single morphemes (nouns, adjectives, adverbs, and verb stems) and internal EL islands (French definite article + French nouns) into AA noun phrases, prepositional phrases and verb phrases. The second section is devoted to the description of EL islands i.e. the insertion of entire maximal projection (nouns phrases, adjectives phrases, and prepositional phrases) into AA complement phrases (CPs).

Third chapter is divided into four sections. First section exposes the different structures generated from AA/French intra-sentential CS when French sets the grammatical frame into which AA morphemes and constituents are inserted. This section will also try to

explain some recurrent CS instances that are problematic to the MLF model, when French is the Matrix Language. After describing both directions of CS i.e. when both languages are Matrix Languages and Embedded Languages, this section ends up with an overview table to summarize the findings of CS in both directions. The latter direction of CS i.e. when French provides the morpho-syntactic frame for AA insertions, revealed an apparent asymmetry between the two languages in their roles as Matrix Languages. This allows us to include bilinguals' competence as a fundamental parameter in interpreting some CS phenomena within the MLF model.

Second section will test the Uniform Structure Principle that has been newly added by Myers-Scotton (2002) in her later publication. This principle further enhance asymmetry by giving priority to Matrix Language grammatical procedures in keeping the ML structure uniform across the sentence and restricting the contribution of the Embedded Language. Section three will use the notion of congruence in trying to interpret frequency of some structures and the rarity of others testing, thus, its rigor in explanation. The final section will investigates the status of some discourse markers in CS at the supra-clausal level. This type of switching has been marginalized in Myers-Scotton's (2002) work despite the fact that they belong to Myers-Scotton's complement phrase's (CP) syntactic analysis.

CHAPTER

CHAPTER ONE

Methodological and theoritical considerations of the study

1.1. Introduction:

The Algerian sociolinguistic panorama is marked by linguistic phenomena that arise from the contact of different languages such as AA and French. The co-existence of these two languages generates certain linguistic phenomena. The linguistic forms that are generated in the same situation pose difficulties in analysis as to the distinction and delimitation between them. When it comes to describing and explaining code-switching, it becomes imperative to define it and distinguish it from borrowing. Indeed, this is a methodological necessity that governs any linguistic study of either phenomenon. In this perspective, one of the objectives of this chapter is to situate the present work in respect to terminological quarrel and in respect to the debate concerning the distinction between CS and borrowing. This study is primarily directed to CS from a structural perspective. Thus it is useful to discuss some prominent structural approaches in CS research. This discussion of linguistic models will raise the issue of the theoretical framework that will contextualize the present study.

The first chapter begins with a brief presentation of the sociolinguistic situation in Algeria, which is the context of the present study; and the different linguistic phenomena generated by this situation. The second section introduces two essential components in any study i.e. the corpus and the informants which will permit to situate the present work in its context. This will be followed by exposing the issue of defining CS and the different ideas that fueled the debate concerning the distinction between CS and borrowing. After that, section four addresses three types of structural approaches to CS namely linear or surface-based approaches, grammar-based approaches and insertion approaches.

Myers-Scotton's MLF model on which the present study is based will be dealt with in details in the second chapter. At this stage, two major trends -the surface- and the grammar-based approaches- in structural study of CS, will be discussed and attested to AA/French CS data in order to justify our preference for Myers-Scotton's insertional model. The insertional approaches will be briefly introduced to point out that Myers-Scotton's model is not the only insertional model but it is the most elaborated and fruitful one. In fact there are some insertional approaches that preceded Myers-Scotton's MLF model. These studies have advocated the different roles of the languages involved in CS and the different status of content and function words; Joshi's (1985) approach that is considered as a background of the MLF model, is one of these approaches.

1.2. The sociolinguistic situation in Algeria:

The sociolinguistic situation in Algeria is diverse and complex because of the existence of a melting pot of languages: Standard Arabic (hereafter SA) which is according to Algerian Constitutions (1963,1976, 1989, 1996, 2002) the official and first national language; Dialectal Arabic or Algerian Arabic including its regional varieties (hereafter AA) which is

the native language of the majority; the middle languages[2] which are intermediate forms between CA and AA (Modern Standard Arabic MSA, Educated Spoken Arabic ESA, and Literary Arabic); Berber (with its different varieties) which is also the native language of a considerable minority and was recently recognized as a national language (Algerian constitution 2002), and French. As a result of the co-existence of these languages, a wide range of sociolinguistic phenomena are observed in Algeria swinging between a bilingual situation and a diglossic one.

The fact that most countries in the world today are multilingual but the policies are in most cases monolingual is a reality that is reflected in the Algerian context. Officially, Algeria is an Arabic Muslim state whose sole official and the first national language is CA. Arabic is supposedly used by all members of the speech community. However socio-linguistically speaking, Algeria is a multilingual country where two or more varieties coexist resulting in complex sociolinguistic phenomena. These are diglossia, bilingualism, code switching and borrowing.

Diglossia was first introduced as a term by the French linguist William Marçais (1930) as 'La Diglossie Arabe'[3]. Then it has been introduced by Ferguson (1959) as a linguistic theory based on his study of four languages, Arabic, Greek, Haitain Creole and Swiss German. He defines diglossia as:

> "*A relatively stable language situation in which, in addition to the primary dialects of the language (which may include a standard or regional standards), there is a very divergent, highly codified (often grammatically more complex) superposed variety, the vehicle of a large and respected body of written literature, either of an earlier period or in another speech community, which is learned largely by formal education and is used for most written and formal spoken purposes but is not used by any sector of the community for ordinary conversation.*" (Ferguson, 1959b: 336)

According to Ferguson (1959), Diglossia is the side-by-side existence of two structurally and historically related language varieties, a High variety (hereafter H) and a low variety (hereafter L), throughout a community. The most important differences between the

[2] This issue has attracted many scholars from different perspectives (Blanc1960, Kaye 1972, Al Hassan 1977, Meisles 1980, Bouamrane1986, and Benali Mohamed 1993). They see these middle varieties as being part of a continuum rather than clear cut distinguished varieties.

[3] " La diglossie arabe se présente à nous sur deux aspects sensiblement différents: 1) une langue littéraire, dit arabe écrit ou régulier ou littéral, ou classique, qui a été partout et toujours écrite dans le passé dans laquelle seul aujourd' hui sont rédigés les ouvrages littéraires ou scientifiques, les articles de presse, lez actes judiciaires, les lettres privées, bref, tout ce qui est écrit, mais pas exactement telle qu'elle se présente à nous n'a peut –être jamais été parlée nulle part. 2) Les idiomes parlés, des patois … dont aucun n'a jamais été écrit mais qui, partout, et peut- être depuis longtemps, (sont) la seule langue de la conversation dans les milieux populaires et cultivées"

two varieties according to Ferguson are the linguistic features of H and L (lexicon[4], grammar[5], phonology[6]) their respective uses (i.e. they are functionally differentiated)[7] and their sociolinguistic differences in terms of prestige[8], literary heritage[9], the way they were acquired[10] and standardization[11]. Within the Algerian speech community, the diglossic features are present to some extent covering only part of Algerian linguistic situation. CA and AA are genetically related however they differ from each other in terms of grammar, vocabulary and pronunciation as well as in terms of prestige, acquisition, literary heritage, function and standardization. CA is the 'H' variety, it is the language of the Koran and Muslim identity and it is used for formal and public settings. The 'L' variety (AA) is reserved for use in informal and intimate contexts.

Fishman (1972) developed the notion of diglossia to cover not only genetically related varieties but also genetically unrelated ones as far as they are functionally distinguished. Applying the term to monolingual as well as bilingual societies Fishman (1972b:92) states:

> *"Diglossia exists not only in multilingual societies which recognize several languages and not only in societies that utilize vernacular and classical varieties, but also in societies which employ several dialects, registers, or functionally differentiated varieties of whatever kind"*(Fishman, 1972:92)

The extended definition of diglossia can cover another part of the situation in Algeria. The existence of French as another H variety which is genetically unrelated to CA and AA, and Berber as another L variety that is genetically different from AA and CA; display the following diglossic relations within the Algerian context: French/AA, French/Berber, CA/Berber.

Algeria is also a bilingual community. Bilingualism has been defined in different ways by different linguists. Following Bouamrane's definition (1986: 15) which is a combination of many linguists' definitions, bilingualism is defined as:

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[4] Lexicon: the presence of paired lexical items, in the sense that H and L possess different terms for the same object.

[5] Grammar-morphological forms of L are simpler than those of H. also cases and verb inflections are reduced.

[6] Phonology: L has evolved away from H and has borrowed some sounds as a result of contact with other varieties.

[7] Function-H is reserved for formal and public speech. L is an informal variety which is limited to daily conversations.

[8] Prestige-Attitudes towards L are less positive compared with H which enjoys a superior status.

[9] Literary Heritage-unlike L, 'there is a sizable body of written literature in H which is held in high esteem by the speech community…..' (Ferguson, 1959: 238).

[10] Acquisition- learning H is through institutions, however, L is normally acquired as a first language.

[11] Standardization: H is standardized, codified and preserver in dictionaries and grammar books therefore it is more stable. L is not codified nor has grammar books this is why it is exposed more to change and variation.

" the use by an individual, a group or a nation (Bell,1975: 165) of two or more languages (Mackey, 1968: 555) in all uses to which they put either (Halliday, 1968: 141"). Bouamrane (1986:15)

Bilingualism entails the alternate use of two or more languages in situations where these languages are in free or contrastive distribution i.e. used for the same purpose. At the societal level, Arabic/French bilingualism is manifested in various public institutions such as administrations, banks, universities, television, etc. At the individual level, Algerian speakers may use two or more languages available to them switching between them with varying degrees.

The existence of many language varieties and the nature of contact between them reflect to some extent the complexity of the sociolinguistic situation in Algeria especially when it comes to diglossia. First, this is due to the great gap that exists between SA and AA on one hand and SA and Berber on the other hand, this lead most of the time to mutual unintelligibility between the speaker of SA and another of AA and Berber. Second the existence of the intermediate varieties (modern standard Arabic MSA and middle Arabic or educated spoken Arabic ESA) form a continuum with SA and AA which make the diglossic situation problematic. The other striking feature of the diglossic situation in Algeria is the existence of two 'H' forms, as mentioned by Bouamrane (1986: 23); CA and French. In addition, French has gained a high social status among Algerian speakers who use it in many formal and informal situations. The existence of two high varieties and many low varieties (AA with its regional varieties and Berber with its different varieties) lead to the following types of relationships as mentioned by Bouamrane (1986:23)

- CA/AA: intralingual diglossia (intralingual means the two varieties are genetically related)
- CA/French: interlingual diglossia. (interlingual means the two varieties CA and F are genetically unrelated)
- French/AA: interlingual diglossia.
- CA/Berber: interlingual diglossia.
- French/Berber: interlingual diglossia.

In the above diglossic situations, varieties are in complementary distribution.

- CA/French: bilingualism.
- AA/French: bilingualism.
- Berber/French: bilingualism.
- AA/Berber: bilingualism.

In the above bilingualism situations, varieties are in free or contrastive distribution (i.e. used for the same purposes).

The sociolinguistic profile of Algeria reveals the existence of many language varieties notably SA, AA, F and Berber as well as the diversity and complexity of the nature of contact between these languages which is mainly characterized by the existence of two major phenomena: Diglossia and Bilingualism. In some situations only one variety is appropriate either the H variety e.g. parliament speeches, the news, etc where the SA is used; or the L variety in informal situations e.g. conversations with family and friends. However the distinction or the functional specialization is not clear cut and the result is not always a diglossic situation. The existence of French, which is used in both formal and informal settings, sometimes as an H along with SA and sometimes as an L along with AA and Berber; entails the existence of bilingualism at the societal as well as the individual level. In these situations, both forms are appropriate and under these circumstances, speakers switch between the varieties available to them in variable way with varying degrees.

After 50 years since the independence and despite the Arabization policies, French is always omnipresent and continues to play an important role in spoken as well as written domains and it is regarded by most Algerians as the language of science, modernism, technology and openness on the outside world. In fact many Algerian speakers understand French and use it in their daily interactions. Algeria is characterized by the presence of Arabic/French bilingualism. This leads to the widespread switching between these two language varieties particularly in the cities because of the high contact between AA and French. Oran, a big city in north western Algeria, is a good example of the practice of AA/F code-switching. However not all the Algerians are bilinguals[12], In fact there are individual differences in terms of linguistic competence. Speakers range from monolingual Algerian Arabic or Berber speakers to those who can use other varieties of Arabic mainly MSA as well as French in their everyday life for specific purposes leading to bilingualism with varying degrees.

I tried to make a brief overview of the sociolinguistic situation in Algeria to provide some background knowledge that is necessary to better understand AA/French code switching in Algeria and particularly in Oran. Our study is mainly interested in the AA/French CS so Algerian Arabic will be used as a cover term representing the varieties used by Algerian Arabic speakers in Oran. Let's now introduce the population and the corpus on which the present study is based

1.3. Methodological considerations of the study:

1.3.1. The informants of the study and data collection:

Our main concern here is the method of data collection employed in recording the corpus that forms the basis of this study. In order to record spontaneous speech from speakers

[12] Bilinguals in this thesis refers to persons who speak two or more languages.

with different age, occupation, sex, relationship and in different contexts, we have chosen five informants[13] to which 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 aged 42 years; he is a teacher at the university. He with two other partners has a nursery and a school of computing.
- The second informant aged 25 years, is a feminine student of medicine at last year of graduation, and she makes guards at the hospital once every week.
- The third aged 31 years, is a feminine teacher of Islamic science at the secondary school and she gives lectures at the University of Islamic Science.
- The fourth aged 18 years, is a first year feminine student in the French department.
- The fifth informant is a baby-sitter in a nursery. 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[14] to others but for short periods of time.

We have also used conversations retained from interviews done by fourth year students in the Department of Information and Communication Sciences for the preparation of graduation theses. These interviews are entitled as follow: Violence against women, kidney transplantation, unemployment, and sewage treatment techniques. The interviewees in those interviews are either ordinary people or specialists in different domains (as a doctor, a psychologist, a sociologist, a technician).

Natural conversations between informants and their interlocutors were recorded in different settings[15] including a university, a hospital, a nursery, a home, a cafeteria, a restaurant, a bus, a car, teacher's room in the secondary school, secondary school yard and the 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 in the university, conversations between fellow teachers at the university, between fellow students at the university, between secondary school teachers, between colleagues during hospital turnovers, conversations between a boss and a secretary in the private school of computing and conversations between women during some occasions.

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

[14] The recording equipment looks like a mobile so the informants do not have to hide it.

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

1.3.2. The conditions of obtaining the corpus:

The data gathered for this study is based on more than fourteen hours of audio-recorded conversations. The speakers were not aware that their speech was being recorded.

The fourteen hours of audio-recorded conversations are not all what we have recorded. Many recordings have been deleted either because the speakers talk exclusively in AA, or because the quality of the sound was not good. Some conversations were conducted in noisy environments where other speakers talk as in a university class, or in a secondary school yard. Other conversations were carried on in places where there was music or traffic noise as in a cafeteria, in a street, or in a bus.

Thus we have only retained recorded conversations that include clear passages of CS. Yet even some of those conversations included unclear passages where the speech was too low or too fast to understand it. There are also passages where turn takings were not respected and speakers spoke at the same time producing interrupted utterances.

Recording spontaneous conversation has not been an easy and a straightforward task especially in the beginning. It was time consuming and sometimes disappointing. We have already cited some conditions that constitute a challenge in obtaining good recordings (i.e., the quality of the sound, overlap of the speech, interruption, noisy environment...etc), the other challenge concerns the informants who recorded the conversations. Two problems arise in this respect.

Firstly, it is difficult to ask people to record their everyday conversations even if they know you, trust you and know that it is for a research purpose and their names will not be revealed. Yet people generally like privacy[16]. This is what makes the informants reluctant and selective in recording the conversations. This has been reflected in their recordings which were very few and disappointing. They for instance record parts of conversations and choose the one in which they don't participate. Sometimes you gave them the recording equipment for weeks and then they gave it back to you with small amount of recordings simply saying that they forgot to use it.

The second problem is that some informants[17] were selective in choosing the interlocutors. They tend to record conversation with interlocutors who use French more than AA or whose speech contains whole utterances in French thinking that this is what is meant by alternation between AA and French.

Because this was the first time that we were dealing with such technique of gathering a corpus, we did not expect such obstacles. Yet these kinds of problems opened our eyes to the

[16] This way of gathering spontaneous speech though it is used by many researchers and it is proved to be effective it is ethically questionable and controversial.

[17] The informants neglect the insertion of single French words as instances of CS which is may be due to the wide spread practice of this type of CS (i.e. insertional).

fact that we need to discuss these things with the informants in order to avoid them, and to explain to them what we need from these recordings instead of just giving them the equipment and telling them to record conversations. Moreover, the informants needed time in order to adapt themselves to the recording equipment and to the idea of recording their conversations. The other thing is that we have asked them to record whole conversations whatever time they take and to record even the conversations that are mostly spoken in AA, because they may contain interesting instances of CS and because it cannot be expected when people will use French words or expressions.

Analysing the data was another challenge because we were dealing with AA which is not a codified dialect and has no written norms or grammatical books. So in some cases we had to decide subjectively on how to transcribe some particles; for instance the particle 'ɛand'[18] sometimes is transcribed as a verb (to have) and sometimes as a preposition (to, at, for).

1.3.3. Transcription of the data in the study:

The corpus of the study was then transcribed. During the transcription we tried to obtain information about the interlocutors, their ages, their occupations, their relation with the informants, the setting of the conversation. This was done with the help of the informants to whom we resorted whenever we felt the need to.

The data at hand is a number of recorded conversations ranging from five minutes to half an hour. In order to analyse the corpus morpho-syntactically, each conversation was transcribed separately and arranged into turn taking utterances. We then segmented each utterance into sentences, clauses and phrases. Not all utterances were easy to analyse simply because we are dealing with spoken discourse which does not always contain fully fledged elements.

The presentation of the data will follow the general tendency in code switching research. First the languages involved in CS will be separated. In the context of AA/French CS, Algerian Arabic will be transcribed using SIL[19] Manuscript phonetic alphabet[20]; French

[18] The construction ['ɛand' + pronominal suffix] e.g. ɛand-ɪ, ɛand-na, ɛand-ək, ɛand-kɔm, ɛand-əh, ɛand-ha, ɛand-hɔm display features of both verbs and prepositions as in the following examples :

ɛand-ək *la carte bleue ?*
Have-you *the card blue* ? (do you have the blue card ?)

n-fʊt **ɛand-ək** sbaːħ.
1PR-COME **to-you** morning. (I will pass in the morning)

[19] SIL International (formerly the Summer Institute of Linguistics) is an organization that has produced several font sets over the years that allow for the transcription of linguistic data using the International Phonetic Alphabet.

will be presented in *italics*. In order to illustrate each type of inserted elements or constituents (e.g. the insertion of nouns, adjectives, adverbs, noun phrases, or prepositional phrases) during analysis, the study will present it in **bold** characters. The examples of this corpus are numbered. Illustrations from other CS data are not numbered and they are kept in their original form.

1.3.4. The approach advocated in the study:

This work has a micro-sociolinguistic perspective which relies basically on qualitative methods. We resort to grammatical qualitative description of the data rather than a quantitative analysis for different reasons or considerations. Many researchers in code switching research and especially those working on the morpho-syntactic aspects of CS structure within the sentence rely on spontaneous conversations of recorded data gathered from micro sociolinguistic environments. These methods of research give them more freedom in analyzing and interpreting sociolinguistic phenomena and it has been efficient in deriving some general constraints.

In addition the field of contact linguistics in general and code switching research in particular has tremendously advanced in the last decades due to the findings of these qualitative studies that have provided a large body of CS literature from typologically divers languages (Myers-Scotton, 1993, Muysken, 1987, Boumans, 1998, Backus, 1996, Romaine, 1989, Gardner-Chloros, 2009). The qualitative examination of different data sets, show that even some CS strategies (i.e. double morphology, bare forms, bilingual compound verbs and flagged CS) are indeed universal strategies that are shared by many bilingual speakers. In fact many authors have drawn on a variety of recent studies and data sets that have a qualitative perspective in approaching CS from a theoritical perspective including Myers-Scotton (2002) who has revised and extended her model, and Boumans (1998) who has propose his Monolingual Structure Approach. Muysken (2000) has also relied on these qualitative findings to propose his bilingual speech taxonomy[21].

[20] The SIL IPA Fonts are scalable outline fonts for both Macintosh and Windows systems. They contain every base character, diacritic, and suprasegmental mark currently prescribed by the International Phonetic Association. They are intended to provide as complete a solution as is possible in one font for the display and publication of phonetic text using the current IPA.

[21] Muysken (2000) prefers the term code mixing (hereafter CM) instead of CS and proposes a kind of a taxonomy or a synthesis that ''depart from the enormous variation in code-mixing patterns encountered, variation due to language typologicall factors in addition to sociolinguistic and psycholinguistic factors'. Muysken's eclictic approach distinguishes between three processes of intra-sentential CM (alternation, insertion and congruent lexicalization) that correspond to the earlier proposed CM models in the literature arguing that no single set of grammatical rules can currently account for all instances of code-mixing.

On the other hand some scholars have referred to the difficulty of quantitative analysis. Boumans (1998: 154) states that: "quantitative information becomes useful only if it exists for all categories that are in complimentary distribution".

Boumans (ibid: 154) further explains that "in addition to counting CS instances, a word count for sufficiently large samples of the monolingual would be required". For instance in order to count English lexical insertions that incorrectly lack Nigerian Arabic (NA) definite article[22] (bare forms), Owens (2005) compare the English inserted bare nouns into NA matrices with those English inserted nouns that are marked for the definite article and with those that are correctly unmaked[23]. Then these English insertions in CS corpus are globally contrasted with the monolingual corpus.

Furthermore researchers such as (Poplack, 1981, 1990, Polack and Meechan, 1998, Owens, 2005) who advocate for a quantitative approach, use statistical analysis program such as the CLAN software and the Combo statistical software in the interpretation of bilingual data. These statistical softwares are however not available to us.

Our prime objective is to analyze AA/French CS instances and test them with the current approaches in general and the MLF insertional model in particular. This model proves to be operative in the case of typologically different languages and in situations where bilingual proficiency is asymmetric[24]. We will also see if our findings corroborate the findings of other CS studies in general and those involving Arabic languages in particular (Moroccan Arabic/ Dutch CS, Boumans, 1998; Algerian Arabic/French CS, Boumans and Caubet, 2000; Moroccan Arabic/French CS, Ziamari, 2003, AA /Berber CS Benhattab, 2011; Arabic/English CS; Myers-Scotton, Jake and Okasha, 1996). Qualitative methods may furthermore help us to find out if there is any specificity to this corpus and to better interpret our data. We believe that our goal justifies such a choice; however the study will distinguish between recurrent and non-recurrent patterns of CS in a statistical way. The non recurrent patterns of CS (fewer than ten instances) will be cited, those instances that exceed ten tokens will be mentioned in their

[22] English inserted nouns that Incorrectly lack the NA definite article means that the English nouns that are inserted in NA matrices lack the definite article in contexts where it is expected (Owens, 2005: 6).

[23] Correctly unmarked nouns means that they are indefinite nouns i.e. in Arabic an indefinite noun is unmarked while the definite noun is marked by the definite article prefix (el). (Owens, 2005: 5)

[24] According to Muysken (2000: 9): "Insertion *is frequent in colonial settings and recent migrant communities, where there is a considerable asymmetry in the speaker's proficiency in the two languages*". The informants in our recordings do not have the same proficiency in AA and French. AA is the mother tongue for the respondents and it is the grammatical source for most utterances in our corpus. French on the other hand is present in daily conversations, yet it is not as controlled as AA. This difference between AA and French competence is not an obstacle to the linguistic analysis of AA/French CS since Myers-Scotton's insertional model does not require bilinguals to have equal proficiency in both languages and it is based on the asymmetrical participation of the two languages in CS (Myers-Scotton, 2002: 25).

absolute numbers. In the case of frequent CS types (more than 20) we will give an approximate number[25].

1.4. Code-switching: problematic definition and terminological dispute:

The term as well as the definition of CS has grown over time and has taken different shapes and dimensions from being aberrant, deviant and random behaviour that is not worth investigating (Bloomfield, 1927: 395; Espinosa, 1917: 408) to approaching CS from a monolingual perspective which sees CS as a type of bilingual skilled performance (Haugen, 1950: 211[26]; Weinreich, 1953: 45[27]). Criticizing this approach Gardner-Chloros (1995: 68) states with a critical eye that:

> *"A lot of effort has been expended within the field of code-switching on setting up a new orthodoxy to replace the old orthodoxy of monolingual norms. This consists in defining code-switching as a special form of skilled bilingual behaviour, to be distinguished from the aberrant manifestations of bilingualism which involve one language influencing another". Gardner Chloros (1995: 68)*

However a growing number of studies from different social contexts involving different language typologies with varying degree of bilingualism have proved that even proficient bilingual speakers employ code-switching at different levels (discourse, sentence, word, and morpheme) and for different purposes. Indeed as Gardner-Chloros (ibid) argues:

> *"Code-switching should instead be considered as a much broader, blanket term for a range of interlingual phenomena within which strict alternation between two discrete systems is the exception rather than the rule" Gardner Chloros (1995:68)*

Thus approaching CS phenomenon does not only imply choosing an appropriate term but also finding an appropriate definition to the phenomenon. The problem of attributing accurate definitions lies in the multi-disciplinary nature of research that CS receives. CS is studied from different perspectives and disciplines e.g. linguistics, sociolinguistics, language acquisition, psycholinguistics and conversational analysis. In addition the side by side

[25] The approximate number is given in the case of recurrent insertions because we have not stopped recording conversations whenever there is an opportunity in order to bring supportive findings to the observed phenomena. Thus the recurrent patterns of CS occur almost regularly (e.g. NP insertions) during recording.

[26] "The speakers may switch rapidly from one language to the other but at any given moment they are speaking only one, even if they resort to the other for assistance" Haugen, 1950: 211.

[27] "The ideal bilingual switches from one language to the other according to Appropriate changes in the speech situation (interlocutors, topics, etc.), but not in an unchanged speech situation, and certainly not within a single sentence". (Weinreich, 1953: 73)

existence of CS with other inter-lingual phenomena (borrowing, interference, pidginazation[28]) in a bilingual community makes CS a 'fuzzy-edged' construct[29] that cannot be easily distinguished from other bilingual manifestations. Gardner-Chloros (1995: 71[30]) has pinpointed to the difficulty of defining CS as a 'unitary phenomenon' saying that:

> *"even within what are generally accepted as code-switches, we are dealing with a number of overlapping phenomena". Gardner Chloros (1995: 71)*

What further complicates the issue of finding an appropriate framework is the issue of terminology in CS research. This problem was outlined by Milroy and Muysken (1995: 12) who claim that:

> *"The field of CS research is replete with a confusing range of terms descriptive of various aspects of the phenomenon sometimes the referential scope of a set of these terms overlaps and sometimes particular terms are used in different ways by different writers". Milroy and Muysken (1995: 12)*

The terminological confusion is the result of variations in using the term CS. These variations are sometimes perceived as different outcomes (nonce-borrowing, code-switching, language choice) and are sometimes subsumed under the blanket of CS (as CS types e.g. alternation vs. insertion[31], intra-sentential vs. inter-sentential CS) but they are given different nominations (code-mixing[32], code-alternation[33], transfer[34]). These concepts are either used

[28] Although CS and pidginization have never been systematically compared, Gardner Chloros (1995: 73) argues that despite the fact that CS is not necessarily accompanied by pidginization, yet evidence shows that CS does occur in pidgin/creole-speaking areas. She also adds that there are linguistic phenomena which might be conceptualized both as CS and pidginization as in the case of new verb-formation.

[29] An expression used by Gardner Chloros (2009:12)

[30] In Milroy and Muysken (1995: 71).

[31] Muysken (2000:3) distinguishes between insertion and alternation as two processes of intra-sentential code-mixing found within the clause (**insertion** of lexical items or entire constituents from one language into a shared structure of the other language. **Alternation** occurs between structures of the two languages). The third process of intra-sentential code-mixing is **congruent lexicalization** which is the insertion of materials into shared structure.

[32] Some researchers (Sridhar & Sridhar, 1980; Kachru, 1983; Singh, 1985) prefer to use code-mixing for intra-sentential switches while reserving the term code-switching for inter-sentential switches only. On the other hand, Muysken (2000:4) uses the term code-mixing as a neutral term to describe intra-sentential CS and considers the term CS appropriate only for alternational type of code-mixing which often takes place within the clause as well.

[33] 'code-alternation' has been adopted by conversational analysts such as Auer (1995:119), Gafaranga (2000:310), and Wei (2000:1) as a hyponym to replace CS.

[34] 'Transfer' is used by Auer (1995:132) to mean insertion of a word or another structure from language B into a language A frame (i.e. insertional type of CS) and code-switching is used for the alternational type of CS.

alongside CS in complementary way or in contrastive way (i.e. to distinguish the former from the latter).

For instance some authors including Gumperz (1972) consider CS as the result of a change in situation for others it is Language Choice[35]. Still others exclude switching of single words considering them as nonce borrowing (Poplack, 1981). Some scholars define CS as a skilled behaviour distinguishing it from the aberrant forms of bilingualism (i.e. intra-word switching and morphological integration) which is the norm and the common kind of CS in some societies (CS an unmarked choice, Myers-Scotton, 1993).

Unfortunately as Gardner Chloros (2009: 11) states "*both halves of the term CS are misleading*". The term 'code' is reserved by some researchers (Poplack, 1980; Myers-Scotton, 1993) to describe switching between languages. Other extend the meaning of 'code' to encompass switching between dialects or varieties of the same language (Gumperz ,1982; Gardner-Chloros ,1991) and even style-shifting in monolingual speech (Romaine, 1995: 122). An extreme definition to the term 'code' is suggested by conversational analysts (Auer, 1998; Alvarez-Caccamo, 1998) who propose to draw a line between what counts as distinct codes by linguists (linguistic varieties) and what counts as distinct codes by bilingual speakers themselves (communicative codes).

Many authors have dealt with the issue of terminology in the literature however they could not come across uniformly standardized terminology to be used (Milroy and Muysken, 1995: 12). Nevertheless to avoid potential confusion, each researcher has tried to locate his position within the field and to define the meaning of terms that he uses. Following the same tradition, we will try to take position in respect to the terminology and the definition that the chosen term will imply.

Throughout the study, the term 'code switching' (hereafter: CS) will be used because it is the most widely used and understood term. Moreover, we believe that using different terms to describe different sides of the same phenomenon will create unnecessary bewilderment. Thus CS will be considered as blanket term that include different outcomes ranging from single morpheme insertion to alternating between languages according to change in situation. Beside the terms[36] intra-sentential CS and inter-sentential CS will be used to refer to CS types. Since this study has a grammatical perspective, the term code switching is held to account for the presence of both AA and French in an utterance and its impact on different linguistic levels (clause, phrase, word and morpheme).

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[35] Trying to distinguish between CS and language choice, Ad Backus & Nadia Eversteijn state that *"the main problem for demarcating language choice and codeswitching seems to be that, on the assumption that language choice always involves a rational decision by a speaker, on the basis of conscious motivations, codeswitching sometimes IS language choice (i.e. a conscious decision), while at other times speakers seem to have produced it more or less without thinking"*.

[36] Intra-sentential and inter-sentential CS will be defined in the second chapter when we will analyze the corpus.

We tried to give some hints about terminological issues that have been discussed in CS research; however what seems important to the present study and to any CS research[37] is the issue of distinguishing CS from borrowing as Gardner Chloros (2009: 73) states:

> *"The researcher transcribing and analyzing code-switched data therefore inevitably has to face the problem of drawing the line between the two categories". (i.e., code switching and borrowing) Gardner- Chloros (1995: 73)*

To do so we will deal with this problem in some details the next section.

1.4.1. Distinguishing code-switching from borrowing:

The field of contact linguistics and specially the study of code switching have flourished in the last decades structurally and socio-linguistically. In spite of that, distinguishing CS from borrowing is still an obstacle in any CS research. This issue has been endlessly discussed in CS literature without achieving any real commonality. The more criteria are proposed to distinguish the two phenomena the more this distinction becomes problematic and controversial. Most criteria proposed in the literature deal with the issue of distinguishing single-word switches from borrowed ones because longer stretches of switching are considered by the community of researchers as CS. Nevertheless the problem of whether a code-switched item is an established borrowing remains a controversial issue both in terms of structural and sociolinguistic analysis of CS (Myers-Scotton: 1993b).

The complexity of the task made some researchers abandon the idea of distinguishing the two processes at least at the grammatical level (Gardner-Chloros & Edwards 2004: 1437). Yet it is important to refer to some common criteria that are proposed in the literature with reference to AA/French CS corpus of the present study in order to decide how to use both concepts when analyzing CS data. These criteria[38] include, first, the status of foreign lexemes depending on their occurrence in the speech of monolingual speakers, second, morphological integration of foreign lexemes, third, their frequency. Finally, we will try to address the different views about the relation between phonological and morphological integration and time depth in relation to AA/French CS corpus of the present study.

1.4.1.1. Monolingual vs. bilingual speakers and the status of foreign words:

Many writers (Appel and Muysken, 1987, Pfaff, 1979) agree on the fact that borrowing (hereafter B) is a collective behaviour of the whole speech community. Borrowed

[37] 'The researcher transcribing and analyzing code-switched data therefore inevitably has to face the problem of drawing the line between the two categories '. (i.e., code switching and borrowing) Gardner- Chloros (1995: 73)

[38] Our taxonomy is adapted from on Boumans' (1998:60) classification of the different criteria that distinguish CS from borrowing.

forms are viewed by most linguists as part of the language in which they occur and they do not require a bilingual situation, however, CS forms are considered to be part of the other language. CS is a strategy of communication used by individual speakers and presupposes a certain degree of bilingual competence. Using Ferdinand de Saussure's distinction, Appel & Muysken (1987: 121) consider borrowing as the integration of two languages at the level of langue, and CS as the integration of two languages at the level of parole. Myers-Scotton (1993: 170) also mentions this distinction that has been made by many writers between "*CS as a bilingual's behaviour and B and other phenomena*[39] *which are within a monolingual's ability*" although she recognizes that "*even here the line may not be so distinct*" (ibid: 170).

This distinction seems to be apparent when we refer to the status of foreign words in a monolingual speech community or for monolingual speakers, however; the distinction is not a clear-cut one when we deal with these phenomena in a bilingual community. In fact the distinction becomes blurred in the case of bilingual speakers because not all foreign lexemes uttered by these speakers are perceived to be CS forms as Boumans (1998: 52) puts it:

> *"We can exclude the possibility that foreign lexemes uttered by monolinguals are CS forms, however there is no implication that all forms uttered by bilinguals or even the forms produced exclusively by bilinguals, are automatically CS forms. We cannot exclude the possibility that the distribution of a B form is restricted to a community of speakers who all happen to be bilingual". Boumans (1998: 52)*

Gardner-Chloros (1995) also reports the difficulty of drawing a line between the two categories stating that:

> *"Although everyone would probably agree that loans used by completely monolingual speakers in highly focussed communities should be regarded as being psychologically separate from code-switching, this provides little help when what you are dealing with is bilingual or plurilingual speakers in bilingual or plurilingual contexts" Gardner-Chloros (1995: 74).*

Relating this criteria to Oran speech community, the problem arises not only in the case of bilingual speakers, who use B forms as well as CS forms with different strategies (adoption, adaptation), but also in the case of some monolinguals who pick up some CS forms and expressions from the bilingual speakers surrounding them. This in turn takes us back to the controversial definition of bilingualism (Myers-Scotton, 1993b: 193).

One of the sentences found in the corpus uttered by an old illiterate feminine speaker who mostly knows and uses AA and she never went to school. She was talking about her son when he was a baby and had bronchitis. She didn't even use the French word for the disease

[39] By other phenomena Myers-Scotton refer to Joshi's (1985 : 190) distinction between 'intra-sentential CS' and 'other interferences, such as borrowing, learned use of foreign words, and filling lexical gaps all of which can be exhibited by monolingual speakers'. She also refers to Poplack's (1988) notion of nonce borrowing (Myers-Scotton, 1993b:170).

‘bronchite’ which is used as a borrowed word instead she uses the old AA one ‘kan mrɪd bəʒnabah’ (he was ill in his sides), yet she said the following sentence:

[01] dar-ət-l-ah waħd d-dwa taɛ ɛrab ja j-mʊt ja ja-ħja, ja ***perdu*** ja ***gagné***[40].

Made-3SGF-for-him INDEF-medicine of Arab either 3PR-died-3SG or 3PR-live-3SG, either lost or won.

‘She treats him with herbal medicine, so that he either would die or survive, either there is a hope or there is no hope to recover’.

So speaker’s monolingual or bilingual status may not be in many cases a useful way to distinguish between CS and borrowing as Myers-Scotton (1993b: 193) claims:

> *“The quandary which arises in defining the speaker as bilingual or monolingual suggests that one should discount the speaker’s status as a way to label the forms he/she uses as either CS or B forms”. Myers-Scotton (1993b: 193)*

1.4.1.2. Morphological integration:

There are two opposing approaches as to consider single-item insertions as loan words or instances of CS. Some researchers such as Poplack and her associates (1980, 1986, 1988, 2006) argue that lone other-language items insertion are borrowings and are different from longer stretches of switches, which are defined as CS forms. Therefore borrowings should be excluded from the analysis of CS utterances. Some researchers, on the other hand including Myers-Scotton (1993a), Gardner Chloros (2009) and Boumans (1998) claim that the distinction between borrowing and CS is not critical in the morpho-syntactic analysis of bilingual speech.

Despite the fact that Poplack’s (1980, 1981) definition of CS does not consider single-lexemes to be CS forms, she proposes three criteria (syntactic, morphological and phonological integration) to determine the status of other language lexical items in the recipient language. In cases where a lexical item shows only syntactic integration, or only phonological integration, or no integration at all, it is considered to be an instance of CS. However, in cases where the lexical item show all the three types of integration it is identified as borrowing. The criteria of phonological integration was later omitted due to its controversial nature according to Poplack (1988), and the concept of ‘nonce borrowing’[41] has

[40] She means by saying ‘he either die or live’, that if he will feel better after this medicine he will recover and live, however if his health stay unchanged, he will probably not recover and may died.

[41] Nonce borrowings are single lexical items or bound morphemes, which satisfy the criteria of morphosyntactic integration; but they may be or may not be phonologically integrated. They differ from established loan words

been introduced as an intermediary category again to exclude single lexical items from CS analysis.

Myers-Scotton (1993), on the other hand, does not see CS and borrowing as two distinct processes, rejecting morpho-syntactic integration as a basis to distinguish between them. She further suggests that Poplack and her associates (1988) in fact recognize the resemblance between single-lexeme CS and B forms by creating this intermediate category which they call 'nonce borrowings'.

According to Myers-Scotton, borrowed forms and singly occurring CS forms undergo ML morpho-syntactic procedures in the same way during language production, and are part of a single continuum (Myers-Scotton, 1993: 163). However, "*the lexical entries of CS and B forms must be different, since B forms become part of the mental lexicon of the ML, while CS forms do not*" (ibid,163).

Myers-Scotton summarizes her objections concerning the criterion of morphological integration as follow:

> "*The problem with morphological/syntactic integration as a criterion for B forms versus CS forms is that several different patterns of integration occur, not just one. This survey has pointed out four patterns: (a) not all B forms show complete morphological integration; (b) most CS forms in ML+EL constituents regularly show near-complete morphological integration; (c) when there is incomplete morphological integration, it may characterize both B and CS forms in contrast to indigenous forms; and (d) both forms show syntactic integration*." (Myers-Scotton, 1993a: 191)

In addition to the above objections to the morphological integration, Boumans (1998: 53) cites two other factors that complicate the use of morphological integration in distinguishing CS from borrowing as follow:

> *"Firstly, not all morphological processes in a language are equally productive and secondly, productive morphology is more characteristic of some languages than of others". (Boumans, 1998: 53)*

By comparing Moroccan Arabic and Turkish as immigrant languages in the Netherlands, Boumans[42] (1998) found that in the case of Moroccan Arabic, no morphological process is applied to embedded Dutch words or constituents. Turkish, however, which is an agglutinative language with a wide range of nominal affixes marking plural, case, possessive and derivation is perfectly productive with embedded Dutch nouns. Boumans noticed that the

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in the frequency of use and degree of acceptance, and they are part of the speech of bilingual speakers not monolinguals.

[42] Boumans (1998) points out to the fact that both Moroccan and Turkish immigrations started in the 1960s and have similar bilingual social circumstances, which exclude the duration and intensity of language contact from explaining the different patterns of integration.

grammatical categories that are marked by affixation in Turkish are marked by means of an analytic construction (possessive) or by word order and prepositions (case) in Moroccan Arabic. So, according to Boumans, morphological differences between the two languages is what make the morphological integration of EL words in Turkish much easier than in MA, rather than the status of EL words as CS forms or B forms (this explain his second statement in the above quotation). He further explains that the morphological integration of Dutch nouns in Turkish does not mean that Turkish borrows only Dutch nouns; rather the morphological integration of Dutch nouns is due to the Turkish morphological process which is more productive with respect to nouns i.e. a wide range of affixes marking plural, case, possessive and derivation are attached to nouns (this explain his first statement in the above quotation).

In the case of AA/French CS, we also have noticed that morphological integration almost exclusively characterizes French verbs (i.e., French verbs are inflected with AA inflections marking tense, subject agreement and object suffixes); however, French nouns don't show any morphological integration (i.e. French nouns are not modified by AA affixes marking number and gender) moreover they tend to be inserted with their articles as NPs (this will be showed in the second chapter). Hence this does not mean that AA borrows only French verbs. The following examples from our AA/French CS corpus contain inserted French verb and nouns into AA structure:

[2] l-mra *généralement* t-***paniqu***-i belχɔf.

DEF-woman *generally* 3PRF-*panic*-3SGF quickly.
'Women generally panic quickly'.

[3] ***Les blouses*** li ka:n-ɔ j-ʒib-u-hɔm dgul-i ***des robes***.

The blouses that were-3PL 3PR-bring-3PL-them say-2SGF *INDEF dresses*.
'They used to bring blouses that look like dresses'.

In example [2], the French verb stem '*paniqu'* is combined with AA prefix (t-) that marks present tense and subject feminine agreement and with AA suffix (-i) which denote gender (feminine) and number (singular) agreement with the subject of the sentence. Yet the French nouns *blouses* and *robes* in Example [3] are embedded into AA frame with their plural suffix (s) and with their articles (les, des).

In the same vein, Pfaff (1979: 298) observes different degrees of morphological integration for different syntactic categories, stating that:

> *'The relationship between morphological adaptation and lexical incorporation is gradient, and depends on the functional load of morphological marking for different syntactic categories' (1979: 298)*

Pfaff (1979: 298) also has pointed to "*The predominance of morphological adaptation in verbs*" that has been noticed in other language-contact situations. A tendency that is explained by Haugen (1973: 536) as:

"The centrality of the verb in the sentence supplements the fact that tense is an obligatory category in (at least) the Indo-European languages". Haugen (1973: 536)[43]

So according to Pfaff (1979: 300), verbs are frequently morphologically adapted because of the requirement to mark tense, aspect, mood and subject-agreement. This is true in the case of AA/French CS data at hand. The majority of French code-switched verbs are inflected with AA inflections for tense, aspect and agreement and are combined with AA object clitic pronouns. Thus the morphological adaptation is not a useful way to distinguish between CS forms and borrowed forms. Otherwise all the French verbs will be treated as borrowed verbs, which is not the case because they are not used by all speakers and their equivalent verbs in AA are used.

Single adapted verbs will be treated in this study as CS forms excluding the old ones that have no counterparts in AA and that are known by monolingual as well as bilingual speakers as 'ʃiʝʝi' *essayer* (to try), 'bantər' *peindre* (to paint), 'ʃarbi' *servir* (to serve), etc. These verbs are not only used with AA inflection but even their stems are changed either phonologically adapted or reduced.

The fact that most established B forms show phonological and morphological integration does not mean that there are not non-integrated B forms and fully integrated CS forms. This makes the criteria of morphological integration, as a basis to distinguish between single-lexeme CS forms and B forms problematic.

1.4.1.3. Frequency:

Frequency is used by Poplack, Sankoff, and Miller (1988) as a criterion along with degree of acceptance, to distinguish between what they call 'nonce borrowing' which just satisfies the morpho-syntactic integration and 'established borrowing'. Thus according to Poplack and her associates lexical borrowing is seen as a continuum ranging from established loanwords to nonce borrowing. But neither CS is considered to be part of such a continuum nor are nonce borrowings seen as instances of CS[44].

Frequency, on the other hand, according to Myers-Scotton (1993) is the most reliable criterion to distinguish between CS and borrowing since both "*are part of the same developmental continuum, not unrelated phenomena*" (1993: 163). According to Myers-Scotton the fact that B forms have become part of the ML[45] mental lexicon[46] of those ML

[43] It is Cited in Pfaff (1979: 298).

[44] See Erman Boztepe 'Issues in CS: Competing Theories and Models'

[45] According Myers-Scotton, ML (matrix language) is identified as the language governing the syntax of the sentence in utterances showing CS. The same ML is also the recipient language in the case of borrowing. The EL is the source of CS forms and B forms (1993: 163).

speakers who use them, means that B forms are accessed as ML morphemes in CS and are not governed by the restrictions which the MLF model imposes on CS forms. This difference in status of B forms and CS forms will affect their frequency of appearance. She adds that "*CS forms may become B forms through an increase in their frequency and their adoption by monolinguals*" (1993: 182).

Frequency is also used to distinguish between what Myers-Scotton calls cultural borrowings and core borrowings. According to her lexical borrowing is not used only to fill lexical gaps in the recipient language instead B forms are divided into cultural borrowings and core borrowings.

Cultural borrowings are "*words for objects and concepts new to the culture*" (1993: 206). They appear in the ML *abruptly* because they are needed to fill lexical gaps in the recipient language. Cultural borrowing may appear in the monolingual speech of either bilinguals or monolinguals. Examples of cultural borrowing in our data include objects of technology: *portable* (mobile), *réseau* (network), *internet* (internet), *micro* (computer), and names of diseases: *cancer* or *tumeur* (tumour), *bronchite* (bronchitis), *oreillons* (mumps), names of utensils mixeur (mixer), séchoir (drier), spatule (spatula), ascenseur (elevator) administrative concepts: *accusé de reception* (aknowledgement of receipt), *la cart bleu*…etc.

Core borrowings are "*words that more or less duplicate already existing words in the L1*" (Myers-Scotton, 2002:41). According to Myers-Scotton core loans meet no real lexical needs and may be entirely redundant, they often enter the recipient language gradually through code-switching, and they are used largely by speakers with fluency in both languages (1993: 169). Examples of core borrowing include names of clothes *pantalon* 'trousers' (instead of sarwal), *cart d'identit* 'identity cart' (nakwa), French numbers, *pince* pliers (instead of kɔlaːb), 'betterave' beet (instead of barba), escalier (instead of drɔʒ) stairs, enveloppe (instead of brajja)…etc. The status of a word as a core borrowing or a code switched item is relative because while some words are considered as borrowed forms for some speakers they are still CS forms for others.

Myers-Scotton explains how she uses frequency to distinguish between CS and the two types of borrowing as follow:

> *"The status of an EL-origin form as a B form or a CS form can be established by measuring the frequency with which it occurs representing the concept or object it encodes in relation to the frequency of the indigenous form for the same concept of object. Cultural B forms are predicted to show high (if not categorical) relative frequency, since there is no indigenous form in competition with them. Core B forms will show high (relative) frequency in relation to those EL forms which are CS forms". (Myers-Scotton, 1993: 207)*

[46]Levelt (1989: 6) defines the mental lexicon as the store of information about the words in one's language cited in Myers-Scotton (1993: 163).

So Myers-Scotton (ibid: 207) uses 'relative frequency' as a more precise criterion to distinguish between CS, core borrowing and cultural borrowing. Relative frequency according to her is the frequency of a word's occurrence in relation to its indigenous counterpart. In the case of cultural borrowing where there is no indigenous counterpart, Myers-Scotton states that:

> *"The only way that one can produce a relative frequency statistic for cultural B forms is to compare them to possible indigenous calques or paraphrases." (1993b:176)*[47].

Nevertheless, even 'relative frequency' as Myers-Scotton herself recognizes "*will not always prove a workable criterion*" (1993b: 204), she further admits that deciding '*how much*' relative frequency is '*enough*' is an arbitrary decision. Boumans (1998: 57) further comments on the inadequacy of the frequency of occurrence as a criterion by saying that:

> *"The problem with word frequency in smaller data corpora is that it is highly dependent on coincidental circumstances of the recorded discourse such as the topics under discussion, the speech style and the interlocutors present. Moreover the repetition of lexical items as a means of creating textual cohesion increases the frequency of an item once it has been used irrespective of its being a CS or a B form". (Boumans, 1998: 57)*

This is true, in our recorded data; the expression *prime de rendement* (productivity bonus) is used more than five times in three different conversations. This may be because there was a notion about increasing salaries by giving this productivity bonus every three months.

There also are idiosyncratic differences i.e. not all speakers use the same EL words and expressions with the same frequency. So depending on the criterion of frequency some words may be considered as B forms for some speakers and at the same time as CS forms for other, which Myers-Scotton (1993b : 195) has acknowledged when she studied the English numbers in Shona. the English numbers in Myers-Scotton's corpus are highly frequent in respect to their Shona counterparts, but still represent CS forms for certain individuals. This is true in the case of core borrowings, which are used by some speakers more frequently than their AA counterparts, yet they are still used occasionally by others. We also noticed that some speakers tend to use some French words frequently e.g. *logiquement* (logically), *normalement* (normally), *donc* (thus), *parce que* (because), even some expressions are often repeated e.g. *pour le moment* (for the moment).

As Boumans (1998: 75) has mentioned, even the same speaker will vary over time with respect to the use of new EL lexical items and with respect to the frequency with which s/he uses particular lexical items.

[47] Mentioned as a note 9 on p. 176

1.4.1.4. Time depth and phonological and morphological integration:

Phonologically and morphologically integrated EL lexical items are considered by many researchers as B forms. Some researchers further assume that the integration is the result of time depth (Thomason & Kaufman, 1988; Van Coetsem, 1988, Bernsten, 1990, Heath, 1989; Norties & Schatz, 1988, among others)[48] . However the assumption that phonological and morphological integration of loanwords is the outcome of time depth seems to be controversial. Some earlier researchers have pointed to the impact of other variables on the process of integration including Haugen (1950)[49] who states that time-depth is not as important a factor in determining integration as the borrower's bilingual ability or the sociolinguistic situation.

Boumans (1998) also observes that integration over time is more likely when the influence of the donor language diminishes or even stops. Coming up to Oranian context, this remind us of the Spanish borrowed words that are integrated in the AA variety of Oran and that are still used by most speakers as part of their every day speech. Some speakers even don't know that they are borrowed from Spanish e.g. liχija (bleach), garfɔ (fork), sabbaɬ (a shoe), sbiɬaːr (a hospital), etc.

Boumans (1998) goes further to support the opposite trend which consider that time depth in some cases, lead to minimal phonological and morphological integration of loanwords, stating that:

> *"This is only true when the impact of the culturally dominant donor language and culture increases over time and the bilingual population gains more access to that language" (Boumans, 1998: 56).*

Boumans points to the fact that the highest degree of phonological and morphological integration is often found with the oldest foreign lexemes. The reason, he argues, is that the oldest foreign lexemes in a bilingual community result from the earliest stages of bilingualism or language contact when the speaker of the native language has little knowledge of the donor language. However when exposure to the culturally superimposed donor language increases and becomes more intense over time, the bilingual community makes more use of the donor language, knows that language better, and therefore more recent foreign lexemes tend to be less integrated than the older ones. Consider the following examples from AA that illustrate the difference between old borrowed lexemes and new ones in terms of phonological and morphological integration:

Old lexemes	VS.	New lexemes
kɔfɪrɬa (adapted from *couverture*: blanket)	VS.	*couvre-lit* (bedspread).

[48] Cited in Myers-Scotton (1993b: 177-79) and Boumans (1998: 55).

[49] cited in Myers-Scotton, 1993b : 178

məʃwara (adapted from *mouchoir*: handkerchief) VS. *papier-mouchoir* (tissue).

vista (adapted from *veste*: jacket) VS. *manteau* (coat).

Boumans (1998) further adds that in some cases the increasing knowledge of the superimposed language, even leads to replacement of older integrated loanwords with the same words of the source language, a process known as *Denativazation* (Haugen, 1953: 393-4)[50]. Mougeon and Beniak (1991)[51] use the term '*disintegration'* to describe the same phenomenon taking place in some areas in Canada regarding English loans in Canadian French. Myers-Scotton (1993b, 177) reveals that when the EL is the language of more socio-economic prestige and if it is also prominent in education this will increase the non-integration of loanwords, suggesting that the same psycho-sociolinguistic[52] factors favoring the borrowing of core lexemes from an EL also favor the non-integration of any type of B form from that language.

This situation can be observed among linguistic minorities either indigenous or immigrants, as is the case with former colonial languages in Asia and Africa and presently with English as the language of science and education world-wide.

In the context of AA/French CS in Oran, this correlation between morphological and phonological integration and intensity of contact between AA and French seems to be true to some extent. Many older B forms are more phonologically and morphologically integrated as in the following table:

AA borrowed words from French	**The original French words**	**English translation**
ɬabla	Table	Table
kɔfɪrɬa	Couverture	Blanket
karɬɑːb	Cartable	school bag
sakɔdɔ	sac à dos	Rucksack
bɔʃɬa	Poste	post office
kɔzɪna	Cuisine	Kitchen
farʃɪta	Fourchette	Fork
məʃwara	Mouchoir	Handkerchief
sarbɪta	Serviette	Towel
ʒɪpa	Jupe	Skirt
ʒɔrnan	Journal	Newspaper
barwɪɬa	Brouette	Wheelbarrow

[50] Cited in Boumans (1998:56)

[51] Cited in Myers-Scotton (1993b: 180).

[52] Among the psycho-sociolinguistic factors that Myers-Scotton mentions 'the desire to identify with EL culture, or at least with aspects of it' in certain types of contact situation (1993b, 172).

trɪsɪntɪ	Electricité	Electricity
fərmlɪʄa	Infermière	Nurse
barasʄʊn	opération / intervention	surgical operation
bərmasʄʊn	Permission	military leave
mdaglas	Dégueulasse	disgusting

These words are still known and used, but there are a tendency among the educated speakers and especially women in some situations to use the exact words from the donor language and even to use them with their articles (most French nouns in this corpus occur with their articles as inserted French NPs rather than as inserted French nouns). Instead of the above integrated words we will probably hear more the following words:

la table (the table), la couverture (the blanket), le cartable (the school bag), le sac à dos (the rucksack), la poste (the post office), la cuisine (the kitchen), la fourchette (the fork), le mouchoir (the handkerchief), la serviette (the towel), la jupe (the skirt), le journal (the newspape), l'opération or l'intervention (the surgical operation), la permission (the military leave), dégueulasse (disgusting).

And even newly used words seem to be less integrated e.g. micro, jet d'eau (fountain), climatiseur (air conditioner), machine à laver (washing machine), portable (mobile), and internet (internet)…etc.

Those are some widely discussed criteria that are proposed in the literature to separate borrowed instances from code switched ones. Yet no one of these criteria has really proved to be useful in setting apart CS from borrowing. Indeed there are more similarities than differences between CS and borrowing especially at the structural level. This reality makes many researchers including (Myers-Scotton, 1993; Boumans, 1998; Backus, 1996, Gardner-Chloros and Edwards, 2004) argue that there is very little reason to draw a clear cut line between single word switches and borrowed words at least in trying to formulate grammatical constraints on CS.

However that does not mean that we will treat all the inserted French items as CS. There are of course borrowed lexemes but identifying them does not depend on clear-cut criteria rather it depends on the researchers' perception of how the dichotomy will help them to describe and analyze their data according to the sociolinguistic context of their studies[53], to the morpho-syntactic typologies[54] of the languages involved in CS and according to the

[53] Sociolinguistic context include the status of the languages involved in CS, the degree of bilingualism of the speakers and the type of contact between the two languages during time.

[54] Language typologies have been already mentioned when we talked about morphological integration as a criterion to distinguish between CS and borrowing. some languages (agglutinative) are morphologically productive which facilitate the morphological integration of code switched items unlike the analytic languages for instance. In addition within the same language, some word categories are more morphologically productive than other classes.

perspective from which the researchers will approach the phenomenon. Boumans (1998) reaches such a resting harbour claiming that:

> *"The difference between B and CS is not a fact of nature; it is about how scholars decide to classify a set of data. Indeed, in view of the lack of consensus that generally governs the domain of linguistic terminology; the task of defining the terms one uses becomes imperative. A criterion that is relevant to one research context may not be relevant to another". Boumans (1998: 58)*

In the same vein Gardner-Chloros (2009: 10) states that:

> *"CS is not an entity which exists out there in the objective world, but a construct which linguists have developed to help them describe their data. It is therefore pointless to argue about what CS is, because […] the word CS can mean whatever we want it to mean" Gardner-Chloros (2009: 10)*

Thus we will treat single words as CS forms, however we will exclude from CS analysis of our AA/French data, the old adapted lexemes that have no equivalent in AA, and that are used by most speakers like the examples given above[55]. These words are morphologically and phonologically reduced or altered to the extent that in many cases it is difficult to make the connection between them and their French origins. In addition the proposed criteria converge in the case of these lexemes and set them clearly as B forms. We will also exclude the words that are associated with new objects and concepts that fill lexical gap and which are widely used by speakers even if they know that they are French lexemes. After defining some concepts related to CS study, let us introduce some prominent structural constraints that are proposed in the literature to account for the different CS structures.

1.5. Structural approaches to Code-Switching:

Structural study of CS has been prolific in the last decades resulting in a number of models that try to find grammatical regularities across CS sentences. Studies that try to describe the linguistic structure of code-switched utterances are interested in intra-sentential CS in which the grammars of the languages involved in CS are in contact.

In this study these models are grouped into three dominants classes: the surface-based or the linear approaches, the grammatical-based approaches and the insertion-based approaches. We will try to give some hints about the premises behind each approach.

[55] We have acquired and used these words without knowing that they are of French origins. Until we grew up that we start to know either from the others or by trying to find their origin in CA or French, that they are borrowed from French. Indeed there are still some borrowed words in our daily speech that we haven't yet make the connection between them and their corresponding French original forms. To give just an example that happen to me; the AA word 'tpɔ' in 'trɪkɔ tpɔ' (undershirt), I did not know that it is adapted from the French (tricot de peau) because I use it without thinking about it meaning. in fact many other persons whom I have asked about this did not know it. Indeed there are many borrowed lexemes that speakers do not thing about their origins because they are naturally acquired as part of their language.

1.5.1. Surface-based approaches or linear approaches:

1.5.1.1. Particular grammatical constraints:

The earlier proposals suggesting constraints on CS in terms of surface structure began as early as 1970s when "*some linguists have despaired of finding any structural constraints on CS*" (Discuillo, Muysken and Singh, 1986: 2). Labov (1971: 475)[56], for instance described Spanish/English CS as the "*irregular mixture of two distinct systems*". Lance (1975)[57] also suggested that "*there are perhaps no syntactic restrictions on where switching can occur*". However, many earlier researchers including : Gumperz and Hernandez-Chavez (1975), Gumperz (1976), Timm (1975), Wentz and MacClure (1976), Kachru (1980), Singh (1981), and Pfaff (1979) show that the two languages in CS are mixed in accordance with certain constraints and that CS tend to occur in certain sites rather than in other.

Earlier constraints on CS are described in CS literature as specific or particular grammatical[58] constraints, i.e. limited to specific structure or constituent, often inhibiting CS between certain lexical categories. These constraints[59] include: the coordinating conjunction constraint[60] (Gumperz, 1976); the complementizer constraint[61] (Kachru, 1980; Singh, 1981); the clitic constraint (Pffaf, 1979, Timm, 1975); the adjective order constraint (Pfaff, 1976, Timm, 1975) among others. Some examples of these constraints will be given below.

Working on Spanish/English CS data, Timm (1979: 477-9) proposes the following constraints preventing switching between a verb and the following elements:

1) Its subject or object pronoun. The following examples according to her are ungrammatical:

* yo *went*/ I *went*
* She sees *lo* / she sees *it*.

2) Its infinitive complement: * They want *a venir* /they want *to come*.

3) Its auxiliary: * *ha* seen/ he *has* seen.

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[56] Cited in Romaine (1989 : 125)

[57] Cited in Bentahila and Davies (1983: 304).

[58] Discuillo, Muysken and Singh, (1986) and Appel & Muysken (1987) describe the earlier constraints as specific or particular, in contrast to the general or universal constraints (linear approach, government approach and insertional approach to CS).

[59] These types of constraints are cited in Discuillo et al (1986).

[60] According to Gumperz (1976) the coordinating conjunction appears in the same language as the following dependent clause.

[61] The complementizer constraint according to Kachru (1980) and Singh (1981); means that the complementizer of a complement clause must be in the same language as the matrix verb, and not necessarily as the complement clause itself.

4) Its negation: * I do not *quiero*/ I do not *want.*

* I *no* want/ I do *not* want.

5) The fifth constraints inhibit CS between nouns and adjectives in certain noun phrases containing an adjective, considering that the combinations Det + N + Adj and Det + Adj + N cannot be mixed e.g. *His favorito lugar/ *his favorito spot/ *su favorito spot.

Studying Spanish/English CS, Pfaff (1979) also states the following restriction concerning noun/adjective CS:

> *"Adjective/noun mixes must match the surface word order of both the language of the adjective and the language of the head noun." (Pfaff, 1979: 306).*

According to Pfaff (1979) adjective switching is limited to adjectives which precede noun in Spanish[62] as well as in English, illustrated by the following example:

El siguiente play. (Pfaff 1979: 306)
'The following play'.

However no switching occurs between a noun and a following modifying adjective as in the following example:

* *I went to the house* chiquita (small). (Pfaff, 1979: 307)
'I went to the small house'.

Pfaff (1979) also proposes the clitic constraint that concerns only object pronoun stated as follow:

> *"Clitic pronoun objects are realized in the same language as the verb to which they are cliticized and in the position required by the syntactic rules of that language". (Pfaff, 1979: 303)*

Most of earlier studies were based on Spanish/English data, suggesting a list of lexical categories that could not be switched, and describing certain favorable switch sites. However "*an important finding of this early descriptive literature*", as MacSwan (2004: 285) emphasizes, "*was the observation that code switching behavior like other linguistic behavior, was rule-governed and not haphazard*". This important finding set the stage for more general and universal constraints that become the "classical studies" on CS (Appel & Muysken, 1987: 121).

Most researchers in the 1980s onward tried to explain the earlier observed language-specific constraints, by formulating more general constraints on CS, to which they claim universal validity. The first attempt to provide such a general approach to CS constraints

[62] In Spanish, adjectives usually follow the nouns they modify, but there are some adjectives that precede their nouns and in this case switching is possible between Spanish noun and English adjective. Because In English, adjectives precede the nouns they modify.

appears in the work of Sankoff & Poplack (1981) and Poplack (1980, 1981). Their approach is known as the equivalence-based approach.

1.5.1.2. The equivalence-based approach; (Poplack 1980, 1981 and Poplack and associates, 1981, 1988, 1990, 1994):

Based on a large Spanish/English bilingual corpus of Puerto Rican community in the United States, Poplack and her associates (Poplack, 1980, 1981; Sankoff & Poplack, 1981) propose two syntactic constraints on CS, the Equivalence Constraint and the Free Morpheme Constraints.

1.5.1.2.1. The Equivalence Constraint:

Depending on the equivalent surface order of constituents in both languages participating in CS, Poplack (1980) proposes the equivalence constraint stating that:

> *"Code switches will tend to occur at points in discourse where juxtaposition of L1 and L2 elements does not violate a syntactic rule of either language, i.e. at points around which the surface structures of the two languages map onto each other. According to this simple constraint, a switch is inhibited from occurring within a constituent generated by a rule from one language which is not shared by the other." Poplack (1980:586)*

So the equivalence constraint states that code-switching between two sentences' elements belonging to two different languages will take place at sites where the elements are ordered in the same way (i.e., when the two languages share the same surface structure), otherwise the switch is blocked. This means that switches in the case of Spanish/English CS may occur between determiners and nouns (*El* man/ *The* man/ *El homber*) because both languages share the same word order, but not between nouns and adjectives in the NP (*a car *nuevo/* a *new* car) because of the non equivalent surface structure for adjective placement in both languages, i.e. in English adjectives precede the noun whereas they follow the noun in Spanish[63].

Other possible switches in Spanish/English CS are between V and object NP, between auxiliary and verb, between preposition and NP, before or after coordinate and subordinate conjunctions. However it is prohibited between negation and verb, because negation precedes the main verb in Spanish, but follows an auxiliary or a model in English. And between object pronoun and verb, because object pronoun precedes the verb in Spanish, and follows it in English.

[63] The above two examples are taken from Gingras (1974) and explained by (Poplack, 1980: 587) under the equivalence constraint.

The three prohibited sites (adjective/noun, negation/verb, and object-pronoun/verb) that were mentioned by Timm (1975) as a list of restrictions on CS between certain categories are cited by Poplack under one general constraint the equivalence constraint.

The equivalence constraint has attracted attention from the beginning and quickly received many counter-examples especially from typologically different language pairs including:

Adaŋme/English CS (Nartey, 1982)[64], Moroccan Arabic/French CS (Bentahila and Davies, 1983) both of them provide counter-examples to the equivalence constraint. These counter-examples involve CS between languages that differ in basic word-order (S-V-O) as well as in noun/adjective placement in the noun phrase.

Adaŋme word order is (SOV); English word order is (SVO). According to the equivalence constraint, switching would be possible after the subject, but not between the verb and object. Yet Nartey (1982) provides the following example involving such switching:

a ŋe mi *help*-e
3pl cop me help-PR PROG
'They are helping me' (Adaŋme/English CS, Nartey 1982:185)

Bentahila and Davies (1983) also find instances of CS between subject and verb. French word order is (SVO) while Moroccan Arabic word order accepts both SVO and VSO order, yet the switching occur between S and V when the two sentences do not share the same word order as in the following example:

ža *le conrôle* 'Came *the checking-time*'
(Moroccan Arabic/French CS, Bentahila and Davies, 1983: 319)

Again, this is a counter-example to the equivalence constraint which would predict CS to occur before the object for the above word order (VSO/SVO), rather than between subject and verb.

Nartey (1982) and Bentahila and Davies (1983) also give counter-examples involving noun/adjective placement as many others including Berk-Seligson (1986), Myers-Scotton. We will not cite all of them; let's discuss Myers-Scotton's counter-example.

Myers-Scotton (1993b: 28) gives the following example from her Swahili/English corpus. This example involves switching between a Swahili noun and an English adjective although Swahili calls for a head-first[65] NP and English requires a head-last NP.

Unaweza kumpata amevaa nguo nyingin bright…..

[64] Cited in Myers-Scotton (1993b: 28).

[65] Head first NP means the noun precede it modifiers in noun phrase (Det, Adj, Adv, Q, ART), while head last NP means that noun follow it modifiers.

Clothes other bright

'You can find her wearing other bright clothes…'

Here are some counter-examples to the equivalence constraint from Algerian Arabic/French CS data of the present study; these examples involve CS between subject/verb and noun/adjective when the word order is not shared by AA and French.

The AA verb may precede or follows the subject, while the French verb must follow the subject. The following example illustrates CS between AA verb 'ʒaw' (came) and subject NP 'les candidats' (the candidates):

[04] *Je pense* **ʒaw** ɛand-ək sba:ħ ***les candidats***.

I think Came to-2SG morning *the candidates*.

'I suppose that the candidates have come to you in the morning'.

Adjectives in AA must follow the nouns they modify, which is also true for most French adjectives, however there are some French adjectives that must precede their nouns. The following example involves switching between a French noun 'role' (role) and AA adjective 'waħdaχɔr' (other). This adjective follow the noun in AA, however in French this adjective 'autre' (other) must precede the noun it modifies:

[05] hɔma ɛand-hɔm ***un role*** waħdaχɔr.

They have-3PL *a-role* other.

'They have another role'.

There are numerous counter-examples like the above, where the word order is not shared between the two languages, yet code switching is accomplished. However the most important weakness of the equivalence constraint as has been noted by many researchers in the literature including Bentahila and Davies (1983), Discuillo et al (1986), Romaine (1989) and Muysken (1995); is the fact that it depends on syntagmatic relations between categories neglecting the categorical equivalence. This implies that the two languages involved in code switching have the same categories. Muysken points to some mismatch in categorical equivalence across languages that include: clitic versus non-clitic pronouns, types of determiners and demonstratives, and types of auxiliaries stating that:

"Word order equivalence is a sub-case of categorical equivalence […]. In fact there is no exact match between categories in different languages". Muysken (1995: 193)

Romaine (1995) also makes a similar observation arguing that:

"The equivalence constraint assumes that the two languages in contact share the same categories and does not make predictions about category mismatches". Romaine (1995: 128)

This categorical mismatch was also noticed in Berk-Seligson's (1986) CS data. Berk-Seligson (1986: 328) provides examples of what she calls 'CS errors' or 'ungrammatical

combinations', which were frequent in her Hebew/Spanish data. These involve the omission of the definite and indefinite article before a noun or NP when switching to Hebrew from Spanish base as in the following example in which Spanish indefinite article 'un' (a) is omitted before a Hebrew noun:

lzitis *taut.*
You made (a) *mistake*.
(Spanish/ Hebrew CS; Berk-Seligson, 1986: 328).

According to Berk-Seligson, the indefinite article is omitted before a noun because it does not exist in Hebrew as a grammatical category. Another common error was the omission of prepositions and prepositional phrases because prepositions in Spanish are free morphemes while in Hebrew most of them are bound morphemes (ibid 331). According to Romaine (1995: 127) omission or repetition of constituents are frequently involved when "*switches occur at sites where there is no structural equivalence between the languages"*.

Bentahila and Davies (1983) on the other hand refer to subcategorization clashes suggesting that "*switching is constrained by the requirement that there should be no violation of the subcategorisation rules of either language*" (1983: 321), and that "*All items must be used in such a way as to satisfy the (language-particular) subcategorisation restrictions imposed on them*" (ibid: 329). They gave many examples in respect to different subcategorisations between Moroccan Arabic and French elements including (demonstratives/definite articles, definite articles/adjectives[66], verb/verb complement[67], complementizer/subordinate clause[68]). The following examples illustrate subcategorization restriction concerning demonstratives from Moroccan Arabic/French data. Demonstratives in

[66] Unlike French adjective which does not require a definite article ; in Arabic, adjective within the definite NP must like the noun it modifies, be itself accompanied by a definite article e.g. /l kalb l kbir/ 'the dog the big' (Bentahila and Davies, 1983 : 320).

[67] Example concerning V/Vcomplement subcategorization : The Arabic verb *(bqa)* 'to remain' subcategorizes for a finite verb complement marked for tense, person and numbers, while the French verb (*devoir)* 'must' subcategorizes for an infinitive verb complement. This is why the following examples are not accepted (Bentahila and Davies, 1983 : 321):

*Je dois nSeli. /I must I pray. (I must pray)
*Tajabqa *confronter ces idées*. /he keeps *opposing these ideas*.

[68] Examples concerning complementizer/subordinate clause subcategorization: The French complementizer 'pour' (in order to) introduce an infinitive clause; the Arabic complementizer (baS) 'in order to' introduce a finite clause. Thus the following examples are ungrammatical because they don't respect the subcategorization restrictions of both languages (Bentahila and Davies, 1983: 323).

**je vais courir pour* ndɛa:f ʃwija
'*I am going to run in order to* I lose some weight.

*nəqra ʃwija baʃ *réussir à l'examen*
'We work a bit in order to *succeed in the examination'*

French immediately precede the noun they modify, however Moroccan Arabic demonstratives (had, hadi, hadu) subcategorize for a finite article as follow:

Cette xʊbza. (*This* loaf).
Hadʊk *les gens*. (These the *people).*
(Moroccan Arabic/French CS, Bentahila and Davies 1983: 321)

According to Bentahila and Davies, these examples are accepted because they satisfy the French and Maroccan Arabic demonstrative subcategorization. However the following examples are not accepted because they neither satisfy French nor Maroccan Arabic demonstrative subcategorisation:

**Cette* l xʊbza. (*This* the loaf)
*Had *pain.* (This *loaf*).
(Maroccan Arabic/French CS, Bentahila and Davies 1983: 321)

Romaine (1989: 124) also provides counter-example to the equivalence constraint from her Panjabi/English CS. Although Panjabi has a left-branching[69] structure and postposition[70] and English has a right-branching structure and prepositions, switches can occur within the prepositional phrase as follow:

Parents te *depend* hona é
Parents post *depend* be Aux
'It depends on the parents'. (Panjabi/English CS, Romain 1995: 124)

Our corpus also includes many violations to the equivalence constraints, when the two languages have different subcategorization restrictions as in the following examples:

[06] kan-ɔ ɟa-hadr-ɔ ɛla *les classes* l-*propre-s.*
Were-3PL 3PR-talk-3PL about *the classes* DEF-*clean-PLAgr.*
'They were talking about clean classes'.

In the NP 'les classes l'propres' (the classes the clean-PLAgr), the French adjective 'propres' (clean) is preceded by an Arabic definite article 'l-' (the) to satisfy the subcatigorization restriction of the AA noun phrase (in Arabic, adjective within the definite NP must like the noun it modifies, be itself accompanied by a definite article). The NP 'les classes l-propres' is a complement to the AA preposition 'ɛla' (about).

[69] Left-branching structure: languages that have OV order i.e. NPobject precedes its verb, while right-branching structure is the VO order i.e. NPobject follow its verb.

[70] Postpositions, prepositions and circumpositions (collectively called adpositions) are a grammatically distinct class of words that combine with other constituents (called their *complements*) to express their grammatical and semantic relation to other units within a clause. *Prepositions* are usually placed before their complements, *postpositions* come after the complement and *circumpositions* consist of two parts that appear on both sides of the complement. Some linguists use the word "preposition" instead of "adposition" for all three cases.

The other difference in sub-categorization restriction between AA and French, include determiners in NPs. In French, the NPs consist of only one determiner, while AA NPs may contain two determiners i.e. the AA determiners (demonstrative pronouns and the indefinite article 'waħd') subcategorize for another determiner (i.e. for a definite article). Yet switching between AA determiners and French NPs is very frequent in our data as in the case of Moroccan Arabic/French CS data (Bentahila and Davies 1983)[71]. The following examples illustrate CS between AA determiners and French NPs:

[07] hadʊ ***les*** *bâtiments soci-aux* li ra-hɔm ǰa-bn-ɔ fi-hɔm.

These *the buildings social-PLAge* that are-3PL 3PR-build-3PL in-them.
'These are the social buildings that they are building'.

[08] ɛand-i waħd ***la*** *pommade trés efficace.*

Have-1SG INDF *the cream very effective.*
'I have a very effective cream'.

The NPs in the above examples consist of an AA determiner (hadʊ 'these', waħd 'one') and a French definite article (les, la); both of them modify the French nouns (bâtiments, pommade). These conform to the AA surface structure rules but violate those of French. There are even examples of NPs that contain three articles; an AA indefinite article 'waħd' (one), an AA definite article 'l-' (the) and a French indefinite article 'une' (a) that modify a French noun as in the following examples :

[09] hadik n-qad-ʊ waħd l-***une*** *heure de travail* wella, n-*rédig*-ʊ-ha.

That 1PR-can-1PL INDF-DEF-*an hour of work* or so, 1PR-write-1PL-it.
'That, we can write it during an hour'.

[10] ra-na fi waħd l-***une*** *semaine* melli bdi-na.

Are-1PL in INDF-DEF-*a week* since started-1PL.
'A week has passed since we have started'.

Poplack (1980) adds another constraint which prohibits switching between a bound and free morpheme called the free morpheme constraint.

1.5.1.2.2. The Free Morpheme Constraint:

Poplack (1980) formulated the second constraint as follow:

> "*Codes may be switched after any constituent in discourse provided that constituent is not a bound morpheme"*. (Poplack, 1980: 585).

[71] However unlike Bentahila & Davies (1993) we haven't found any instance of CS between a French determiner and an AA noun.

The free morpheme constraint prohibits a switch between a lexical item from one language and a bound morpheme from another language. To illustrate this, Poplack (1980: 586) gives the following example where the Spanish bound morpheme *iendo* (-ing) is affixed to the English free morpheme 'eat'.

*eat-iendo
'Eating' (Spanish/English CS, Poplack 1980: 586)

This according to her is prohibited except for free morphemes that have been integrated in the host language as she puts it:

> *"switches take place only at full word boundaries; two morphemes, one of which is bound to the other, must originate in the same language unless the free morpheme has been linguistically integrated into the language of the bound one, i.e., has been borrowed".* (Poplack et al, 1990: 73)

According to Myers-Scotton (1993b, 31-2) the free morpheme constraint was somehow accepted in the 1980s unlike the equivalence constraint, which received many counter-examples. This is due to the fact that many researchers at that time regard the switching of single-words or free morphemes as borrowings. Very few counter-examples to the free morpheme constraint were cited in the literature as in the case of Bentahila and Davies (1983: 315) and Berk-Seligson (1986: 333):

tatabqa **tat-*gratter*.**
You keep durative-*scratch*
'You keep scratching'. (Marrocan Arabic/French CS, Bentahila and Davies 1983: 315)
(Switching between a French infinitive verb 'gratter' (scratch) and a MA durative prefix 'tat')

Pàra ke no ***talfené*-en** a la *mištarà*.
So that they wouldn't *phone* the police.
(Hebrew/Spanish CS, Berk Seligson, 1986: 333)
(Switching between a Hebrew verb stem 'talfén' (to phone) and a Spanish verb ending 'en')

Many Counter-examples to the free morpheme constraint in the literature, come from language pairs including agglutinative languages such as, Swahili/English CS (Myers-Scotton, 1993b); Maori/English CS (Eliasson, 1989[72]); Turkish/Dutch CS (Backus 1996); Japanese/English (Nishimura, 1997); Marroccan Arabic/Dutch (Boumans, 1998); Algerian Arabic/French (Bouamrane, 1986:134); Berber/French (Benali, 2007: 145; Benhattab, 2011: 167-71) and Algerian Arabic/Berber (Benhattab, 2011:167-71). Here is an example from Swahili/English CS:

[72] cited in Myers-scotton (1993b: 31).

Hapa *flame* hiyo inaenda, juu-haiwezi ku- -ku- -*burn.*
INFIN- 2S- OBJ
'The flame is going upwards, it can't *burn* you'.
(Swahili/English CS, Myers-Scotton, 1993:30)

There are many counter-examples to the free morpheme constraint in our data. Most counter-examples involve French verb stems inflected with AA inflections as follows:

[11] n- ***rédig*** **-ʊ -la-h** *le projet* taɛ-ah.
1PR- write -1PL –for-him *the draft* of-his.
'We will write his draft'.

[12] n- ***récupér*** **-i -h.**
1PR –get back-1SG -it
'I will get it back'.

Levelt (1989) tries to interpret these counter-examples to the free morpheme constraint and suggests that different types of languages may have different types of lexical entry in a mental lexicon. He hypothesizes that unlike the speakers of non-agglutinative languages such as English who may have a lexicon consisting of full words; the mental lexicon of speakers of agglutinative languages consists of stems and affixes that are stored separately. According to Levelt (1989), speakers of agglutinative languages such as Turkish tend to form new words by combining a stem with different affixes. The same thing happens in CS i.e., a stem is taken from one language and combined with affixes from another language.

Indeed, intra-word switches are also found in the case of non-agglutinative languages. Working on Spanish /English CS data from the Hispanic community in Northeast Georgia, Daniel James Smith (2002 : 40) found the following examples in which Spanish suffixes (-ar,-ear) are attached to English verb stems : watch-*ar* (to watch), quit-ear (to quit) and check-*ear* (to check). He emphasizes that:

> *"The pattern of creating a verb from an English stem with a Spanish verb ending is a productive one, at least incipiently, in the Hispanic community of this study*" (2002: 40).

Gardner-Chloros (2009) provides similar patterns of switching whereby the following example contains a Cypriot-English verb stem combined with a French infinitive suffix:

Tu peux me *pick-up*-er?
You can me pick-up- INF suffix
You can pick me up. (French/English CS, Gardner Chloros, 2009: 97)

The extensive criticisms and the bulk of counter-examples received from different language pairs, reveal the inadequacy of the constraints which prove to be far from being universal. In this vein Boumans (1998) states that:

> *"These rules appeared to be only characteristic of the Spanish/English data they used, rather than universally applicable. Actually both constraints are reminiscent of earlier work on Spanish/English code switching" Boumans (1998: 14).*

Gardner Chloros (1995) makes a similar remark stating that:

> *"These appeared simple enough to be universally applicable and have been widely discussed" (1995: 95).*

1.5.1.2.3. Polack's strategies to overcome criticism:

Poplack et al (Poplack and Sankoff, 1988; Poplack and associates[73], 1990) acknowledges that equivalence-based switching as in the case of Spanish/English CS of Puerto Ricans in New York City may be an extreme case. In many subsequent publications, the equivalence constraint has been presented as one of the four strategies of CS used by bilinguals to avoid producing ungrammatical utterances. In addition to 'smooth switching at equivalence sites' which obeys the equivalence constraint; there are 'constituent insertion', 'flagged switching' and 'nonce borrowing'. All of them are used to explain the counter-examples to the equivalence constraint and the free morpheme constraint.

To overcome criticisms concerning the equivalence constraint and the free morpheme constraint, Poplack et al (1990) classify single-word switches that either violate the word order of one of the languages participating in CS (i.e. are syntactically integrated) or that show morphological integration in the host language, as a new category called 'nonce borrowings', as in the following statement:

> *"An inflection from one language on a word from the other could automatically be classified as a nonce loan rather than as a violation of the free morpheme constraint, whereas one of the bilingual pair of words on each side of a prohibited, non equivalent boundary could also be considered a nonce loan rather than as participating in a violation of the equivalence constraint " Poplack et al (1990: 74).*

A Nonce borrowing according to Poplack (1990) is the syntactic, morphological but not necessarily phonological integration of an element from one language into the other. Nonce borrowings resemble established borrowings in terms of linguistic integration, in that they differ from code-switchings which remain unintegrated. Yet nonce borrowings differ

[73] Poplack and associates or Poplack et al (1990) is used to refer to Sankoff, Poplack and Vanniarajan's article 'the case of the nonce loan in Tamil' (1990).

from established borrowings "only *quantitatively*....in frequency of use, degree of acceptance, level of phonological integration...etc" (Poplack et al, 1990: 282).

Instead of strengthening the position of Poplack's syntactic constraints, nonce borrowing created much confusion to the distinction between CS and borrowing (Myers-Scotton, 1993b: 182). According to Myers-Scotton many researchers reject the category "nonce borrowing" as a resting place that "permits Poplack and her associates (1988) to set aside the single lexeme items which figure prominently in counter-examples to the two constraints they have proposed" (Myers-Scotton 1993 : 182).

Smooth code switching: is described by Poplack (1993, 276) as a 'real' or 'true' code switching at equivalent sites and as "the only mechanism which does not involve insertion of material from one language into the sentence of another" (Poplack, 1993: 282). The following example from our corpus displays switching at equivalent sites where the word order is shared by AA and French:

[13] *Ecoute,* miːn ʝ-kʊn ɛand-ək *un petit problème* mɛa *les journalistes*, ɛaʝaɬ-l-i.

Listen, when 3PR-be at-2SG *a small problem* with *the journalists*, call-to-me.
'Listen, when you have a small problem with the journalists call me'.

Flagged code switching: is characterized by an interruption in speech, marked by a pause, hesitation, repetition, tag, interjection, discourse marker, complementizer, etc to signal a change in the language being used or to introduce a code-switched material. Flagged switching differs from code switching at equivalent sites, constituent insertion and nonce borrowing which are all ways of alternating two languages smoothly within the sentence (Poplack, 1993: 281). The following example from AA/French CS data illustrate flagged switching:

[14] baʃ l-waħadʝ-*dépos*-i-h, **kimaʝ-gʊl-ɔ**, *une fois pour toutes*.

So that the-one 3PR-*file*-3SG-it, as 3PR-say-3PL, *once and for all.*
So that someone will file it, as they say, once and for all.

In this example the phrase 'kimaʝ-gʊl-ɔ' (as they say) is a flag used to introduce the French expression 'une fois pour toutes' (once and for all).

Poplack (1993: 283)[74] makes a distinction between what she calls a functional (or discourse) flagging reported among French/English bilinguals in Ottawa-Hull, that corresponds to switch-signaling function; and materials flagging in Finish/English CS which is associated with production difficulties. Finish speakers in Poplack's (1993) sample did not belong to a community in which borrowing and CS are a discourse mode (Poplack, 1993:

[74] This is cited by Poplack (1993) as a footnote on page (283)

283) this is why their switches are flagged. In fact what she calls materials flagging are inserted bare English nouns in Finish that are not case marked (show no integration and cannot be classified as nonce borrowings) so according to Poplack they "are most logically treated as flagged, non-smooth single-word switches" (ibid: 281).

Constituent insertion: is the insertion of an entire constituent such as a noun phrase, or a prepositional phrase from one language into the other. The internal structure of the constituent is determined by the grammar of the language it comes from; its location in the sentence is determined by the grammar of the recipient language. According to Poplack (1993), intra-sentential switching may occur at equivalence sites (where permissible switch points are constrained by the same word order between switched constituents), or, more *rarely*, consist of constituent insertion (where word-order constraints across switch boundaries need not be respected for switched constituent).

The motivation behind recognizing *constituent insertion* has been Nait M'barek and Sankoff's (1988) study of Moroccan Arabic/French CS. They found that the most frequent type of intra-sentential CS in MA/French CS corpus is the insertion of French NPs that include determiners and nouns which can be classified neither as nonce borrowing nor as switching at equivalence sites. The following examples from our AA/French CS data illustrate this type of insertions:

[15] rɔħ-na l **waħd l-*magasin*** ʒdid qbal ma-jħall-ɔ **hadu *les magasins*** taɛ électroménager et tous.

Went-1PL to **INDEF DEF-*shop*** new before NEG-open-3PL **those *DEF shops*** of appliances

'We went to a new shop before the opening of those shops of appliances'.

According to Poplack's constraints, the French word *magasin* 'shop' is considered as a nonce borrowing because it is a single morpheme that is syntactically integrated into AA grammatical frame (i.e. the French morpheme *magasin* appears after the AA composite indefinite determiner 'waħd-l' which does not have an equivalent structure in French)[75].

The noun phrase *les magasins* 'the shops' is not a nonce borrowing because it is a constituent not a free morpheme neither it is switching at equivalence sites because word-order is not shared between switched constituents i.e. AA demonstratives call for definite noun phases i.e., (nouns determined by definite articles) however French demonstratives are followed by single nouns. This type of noun phrase insertions violate French determiner's sub-categorizations and were cited by Bentahila and davies (1983) as counter-examples to the Equivalence Constraint.

[75] The composite indefinite determiner (waħd- l) consists of the AA indefinite article 'waħd' which subcategorizes for the definite article (l-). This construction does not exist in French i.e. French indefinite articles occur immediately before French nouns and do not subcategorize for a definite article,

Indeed those types of switching (i.e. NP insertionS) are found to be very recurrent in MA/French CS data studied by Nait M'barek and Sankoff's (1988) compared to switching between Arabic articles and French nouns which have equivalent order in both languages. So Poplack (1993) decides to call this switching type as 'constituent insertion' and presents it as a CS strategy. The frequency of French noun phrase insertions is also observed in our AA/French CS corpus as will be seen in the next chapter.

Despite the fact that Poplack acknowledges the processes of word insertion (nonce borrowing) and constituent insertion, she does not consider them as 'real' or 'true' code-switching but only strategies or "*bilingual mechanisms*" to solve the problem "*of word-order discrepancies between the two languages*" (Poplack et al, 1990: 98).

Commentating on Poplack et al's (1990) strategies Boumans (1998) states:

> *"This constellation leaves little space for falsification of the Equivalence Constraint [….]. whenever both languages happen to permit the attested word order, such switch sites can be said to conform to the equivalence constraint ; in case of divergent word order the 'same' phenomenon will be called constituent insertion or nonce borrowing" (1998 : 16)*

1.5.1.2.4. Criticism to Poplack's linear approach:

In addition to the counter-examples received from the literature and despite the modification that the constraints have undergone, there are many 'contradictions', 'terminological inconsistencies' and 'confusions' of the linear approach that "*leads to a rather roundabout description of CS within sentences*" as Boumans (1998: 17) has noted. Pointing to the same problem, Gardner-Chloros (2009: 97) states that: "*the circularity of this argument dealt the modal what many considered to be a fatal blow*". Romaine (1995: 286) goes further to suggest that:

> "*Poplack's defense of the structural integrity of linguistic systems is motivated less by the evidence than by the desire to justify the validity of a particular theoretical model of code-switching". Romaine (1995: 286)*

Discuillo et al (1986) also criticize the equivalence constraint as 'over-predicting' in the case of languages that share the same word order (French/Italian CS in Montreal and Spanish/English CS) because:

> *"it leaves unexplained for the Spanish-English case why certain allowable switch points show hardly any or no cases of switching" Discuillo et al (1986 : 4).*

However the Equivalence Constraint 'under-predict' in the case of languages that differ in word order (e.g. Hindi/English CS) because:

> *"Given that Hindi is in many respects typical of an SOV language, Hindi-English code-mixing is predicted to be virtually non-existent" Discuillo et al (1986: 4).*

The inadequacy of the linear approach became more apparent with the introduction of *nonce borrowings* and *constituent insertions* as strategies to overcome criticism. This Leads Boumans (1998, 18) to certify that Poplack's CS approach: *"is in reality, often an insertional approach in disguise"* and that *"the elements of insertion, and consequently, that of matrix language, was implicitly present from the beginning".*

The inadequacy of Poplack's constraint is due to the fact that she denies the notion of matrix language and the asymmetrical role of the two languages participating in CS, which in fact can account for most counter-examples provided in the literatures and those from the AA/French CS data under study.

Poplack's linear approach is credited with turning attention to linguistic aspect of CS, when most studies on CS concentrate on its social and functional factors. However it was strongly criticized in CS literature and "*its interest has become largely historical*" (Boumans, 2001: 438).

The linear approach along with the earlier CS constraints are described by Myers-Scotton (2002: 13) to be descriptive i.e. are not motivated by any particular theoretical approach. MacSwan (2000) also makes a similar observation stating that:

> *"A shortcoming in Poplack's constraints is that there is no attempt to EXPLAIN*[76] *the facts. In addition, because the constraints are taken to be principles of the grammar, this approach suggests that code switching is governed by a sort of 'third grammar'." (2000: 56).*

The limitations of the surface constraints and the notion of third grammar led many scholars to look for more principle-based constraints within existing monolingual grammar theories.

1.5.2. Grammar-based approaches to code switching:

After Poplack's approach that depend on a linear word-order and suggest code switching specific-rules[77] (i.e. third grammar or CS grammar) to account for CS constraints, many CS models were proposed including : Government and Binding (GB) framework (Woolford, 1983; Disciullo, Muysken, and Singh, 1986), the Functional Head Constraint (Belazi, Rubin, and Toribio, 1994), Null Theory of Code Switching (Mahootian (1993), Mahootian and Santorini (1995, 1996) and the Minimalist approach (MacSwan, 1997). These approaches are couched within existing syntactic models (Chomsky's generative grammar) that are formulated to explain monolingual phrase structures in terms of structural dependency

[76] The emphasis in the above quotation is MacSwan's.

[77] Poplack (1980) states that: "code-switching is itself a discrete mode of speaking, possibly emanating from a single *code-switching grammar* composed of the overlapping sectors of the grammars of L1 and L2" (1980:615).

between words. Trying to apply Chomsky's (1970s, 1980s, 1990s)[78] models with its amendments to CS research, these researchers have offered different grammatical interpretations and constraints of CS. We will try to present some them.

1.5.2.1. Woolford (1983) phrase structure congruence model:

Woolford (1983: 520) is the first scholar who tried to interpret CS process in terms of Chomsky's (1981) Government-Binding framework, under which she developed a generative model of Spanish/English CS that supports Chomsky's X-bar theory[79] and lexical projection[80] of portions of constituent structure under VP.

According to Woolford's (1983: 522) model "*the two grammars operate during code-switching just as they do during monolingual speech except that each grammar generate only part of the sentence*" i.e. terminal nodes of phrase structures are only filled from the lexicon of the grammar that generate them e.g. in Spanish/English CS, the phrase structure (N + Adj) is generated only by Spanish rule, so the terminal nodes (N, Adj) can only be filled from the Spanish lexicon and switching is prohibited or unaccepted as illustrated by the following example:

*El hombre old esta' enojado. (Gingras: 1974 cited in Woolfod, 1983: 527)
The man old is mad.
'The old man is mad.'

In the case where the terminal nodes are generated by a phrase structure common to both languages they can be filled from both lexicons e.g. the phrase structure rule that expands a noun phrase into a determiner followed by a noun phase and the rule expanding a NP into an adjective followed by a noun; are common in Spanish and English so the terminal nodes may be filled from either lexicon and switching is allowed as in the following examples:

[78] Chomsky's Generative grammar has been under development since the late 1950s, and has undergone many changes in the types of rules and representations that are used to predict grammaticality (i.e., a generative grammar of a language attempts to give a set of rules that will correctly predict which combinations of words will form grammatical sentences). Early versions of Chomsky's theory were called transformational grammar, and this term is still used as a collective term that includes his subsequent theories. Some of Chomsky's prominent theories include: X-bar theory (1970s), government and binding theory (1980s), and the minimalist program (1990s).

[79] X-bar theory is based on the principle that most phrases (Noun, verb, adjective, prepositional phrases etc…) are governed by a lexical head. These heads are represented by an X (standing for a head noun, head verb, head adjective, head preposition...etc) which govern other elements represented by an Xs in a hierarchical manner until we reach the smallest elements called Terminal nodes (i.e. single lexical morphemes). These terminal nodes have got the most bars. These hierarchical relations represent maximal projections. A verb has, for example as its maximal projection a noun Phrase or an Adverb phrase or a prepositional phrase.

[80]'Lexical projection' is the additional information that is projected onto constituent structure trees from the lexicon (Woolford 1983: 530).

The hombre viejo is mad. (Switching between English determine 'the' and Spanish NP)
The man old is mad.
'The old man is mad.' (Gingras, 1974; cited in Woolford, 1983: 527)

The white casa. (Switching between English adjective and Spanish noun)
'The white house.'(Rivas, 1981; cited in Woolford, 1983: 527)

Woolford (1983: 528-30) also inhibits switching between a verb and an object clitic claiming that, in CS sentence, part of the verb phrase structure may be generated by the common phrase structure rule such as adverb nodes (yesterday in the following example), therefore they can be filled from either Spanish or English lexicon; the rest of the verb phrase structure is projected from a verb in one of the lexicons with a subcategorization frame unique to that language, as the case of a Spanish verb 'compré' (brought) and an associated clitic 'lo' (it), which are considered as a lexically projected construction that must be filled entirely from Spanish lexicon as follow:

Yo lo compré yesterday.
'I bought it yesterday.' (Spanish/English CS, Woolford 1983: 530)

Like Poplack's (1980) equivalent constraint, Woolford constraint was too strong in the case of languages that differ in word order because it relies on the order of constituents common to phrase structure rules of both languages. Some researchers even consider Woolford (1983) model as "*a re-formulation of the Equivalence Constraint in Government and Binding terminology*" (Boumans, 1998: 20). Myers-Scotton (1993b: 40) makes a similar observation stating that:

> *"Woolford's proposal is couched in terms of GB, but, in fact her claim is essentially the same as that of the equivalence constraint." Myers-Scotton (1993b: 40)*

However the importance of Woolford's model is its recognition that CS is part of bilingual grammar system that can be assumed under current linguistic theory and does not require a third grammar or CS specific rules[81]. MacSwan (2004) emphasizes this importance, claiming that:

> *"This model allowed Woolford to derive Poplack's equivalence constraint in a theoretically rich framework which made no mention of rules or constraints specific to code switching" (2004: 287).*

The AA/French CS corpus of the present study provides the following counter-example that includes switching between the French verb stem *ray* 'scratch' and the AA clitic pronoun (hɔm) 'them':

[81] Woolford (1983: 522) states that "there is no need to propose any sort of third separate code-switching grammar; moreover, an additional grammar of this sort would have to be learnt, but there is no evidence to indicate that fluent bilinguals have to learn to code-switch (beyond learning situational appropriateness, ect.)".

[16] *les CDs* ga:ɛ ***ray***-a-hɔm mi:n gdab-hɔm b-s-scotch.

DEF compact disks all *scratch*-3SG-them when catch-them with-DEF-adhesive tape.
'He has scratched all the disks when he sticked them to the documents'.

On the other hand, although switching is allowed between articles and nouns (i.e., because they share the same word-order in AA and French), switching between AA articles and French nouns is very rare and switching between French nouns and AA articles does not exist in our AA/French CS corpus[82]. So Woolford's as well as Poplack's model over-predict in the case of articles in the case of AA/French CS.

1.5.2.2. The syntactic government constraint on code switching (Discuillo, Muysken and Singh, 1986):

Using Chomsky's Government and Binding theory, Discuillo et al (1986a) formulate a constraint on code mixing in terms of government[83] stating that:

> *"Whenever constituent X governs Y, both constituent must be drawn from the same lexicon, or must have the same language index q[84]: (if X governs Y: Xq...Yq...)" (1986a: 4)*

According to them whenever there is a government or dependency relation between two elements i.e. one element governs the other switching is inhibited between them. The definition of government in this sense is extremely broad restricting switch sites only to ungoverned elements such as: tags, interjections, exclamations and some adverbs. This definition also excludes common switches that were attested in earlier literature[85] such as those between: subj/V, Det/N, verb/NP object, preposition/NP, V/modifying Adv, Aux/V and complementizer/complement clause.

To overcome the under-prediction of the government constraint, Dicuillo et al (1986b) modify the definition of government[86] limiting it to the relation between a lexical head (N, V,

[82] Both observations will be explained using the MLF model when analyzing the AA/French CS corpus.

[83] Government refers to the relation between a lexical category or a head of a construction (N, V, P, Adj) and its complement (complement is a phrase that a lexical category takes); this relation is referred to as dependency. For example preposition is the head of PP and governs its complement, a noun or NP; similarly V is the head of VP, ECT. Under the X-bar theory, the particular head projects its features within the phrase.

[84] Language index 'q': it simply marks the words that are drawn from a particular lexicon (Discuillo et al,1986:4).

[85] Earlier literature means Spanish/English CS data provided by earlier researchers (Timm, 1975; Pffaf, 1979; Poplack, 1980).

[86] The modified definition of government that Discuillo et al adopt is the following :
'X governs Y if the first node dominating X also dominates Y, where X is a major category N , V, A, P and no maximal boundary intervenes between X and Y' (1986b : 6).

P, Adj) and it complement or maximal projection, excluding functional heads such as determiners, complementizers and auxiliaries.

They also introduce the notion of *Language index carrier*. The language index is assigned to the highest or the first lexical element in a maximal projection which means that not all the maximal projection must be in the same language as the governor lexical head but at least the highest element in a maximal projection. This element is called *Language index carrier* (i.e. Lq carrier) or neutralizing element. An example of Lq carrier is a Det in NP; in the PP phrase *to the school*, the highest element in the NP *the school* is the determiner (*the)*, so only Det (*the*) must have the same language index as the preposition (*to)*. Here switching is possible between Det and N but not between a preposition and Det. However when there is no other elements with the lexical head of the governed category, the lexical head becomes the Lq carrier and must have the same language index as the governor e.g. in the PP phase *to school* the preposition govern a single head noun *school* so both P and N must have the same language index and switching is impossible between them.

Discuillo et al (1986b) identify other Lq carriers for different constituents: including Det (ART, demonstratives, possessives, and quantifiers) in NP, complementizer in clausal complement, quantifiers in Adj phrase (*very* expensive dress) or preceding adverbs (*very* quickly).

Discuillo et al (1986b: 12) predict switching to be possible in the following list illustrated by some examples from Discuillo et al's French/Italian and Hindi/ English CS data. (Possible switching will be indicated through the use of subscripts *q* and *p* that present different language index and the switched elements are in italics):

1. **NP**$_q$ **VP**$_p$
   La plupart des canadiens *scrivono* 'c'.
   (Most Canadians *write* 'c'.) (French/Italian CS, Discuillo et al 1986:15)

2. **AUX**$_q$ **VP**$_p$ (models and auxiliaries do not govern verbs)
   Oui, alors j'ai dit que si potev *aller* comme ça.
   (Yes, so I said that we could *go* like that.)

3. **V**$_q$ **DET**$_q$ **N**$_p$
   Ha ricevuto il *diplome*. [Det 'il' (the) is the Lq carrier]
   ((She) received the *diploma*.) (French/Italian CS, Discuillo et al 1986:13)

4. **P**$_q$ **DET**$_q$ **N**$_p$
   Kuch *force* se. [Quantifier 'Kuch' (some) is the Lq carrier]
   Some with
   With some *force*. (Hindi/English CS, Discuillo et al 1986 : 18).

5. **NP**$_q$ **Copula**$_q$ **PRE-Adj**$_p$ (copula does not govern predicate adjective)
   Perché è *mauvais*.
   (Because it is *bad.*) (French/Italian CS, Discuillo et al 1986:15)

6. $\mathbf{V}_q$ $\mathbf{Q}_q$ $\mathbf{ADV}_p$
Milan zara *reluctantly* gayi. [Quantifier 'zara' (a little) is the Lq carrier]
a little went
Milan went somewhat *reluctantly*. (Hindi/English CS, Discuillo et al 1986 : 19).

7. $\mathbf{V}_q$ $\mathbf{COMP}_q$ $\mathbf{S}_p$
Basta che *marche*. [Complementizer 'che' (that) is the Lq carrier]
((It) suffices that (it) *works*.) (French/Italian CS, Discuillo et al 1986:14)

8. $\mathbf{S}_q$ $\mathbf{CONJ}_P$ $\mathbf{S}_p$

1.5.2.2.1. Criticisms and counter-examples to the government model:

Even after restricting the list of governors to lexical heads and limiting the government domain to the relation between the lexical head and the Lq carrier; the definition of government remained still inadequate as Muysken (2000) himself admits*:*

> *"as it turns out, even this restricted version runs into grave difficulties, due to the abundant recent* ***counter-evidence****" (2000: 24).*

These government restrictions were criticized in the literature by many scholars including Romaine (1989: 125), Nortier (1990: 132), Pandit (1990: 52), Myers Scotton (1993: 43: 131). Nortier (1990) even found that switching between subjects and verbs is less frequent than between verbs and direct objects.

The AA/French CS data at hand provides some counter-examples to the government constraints illustrated by the following examples:

[17] ǰ-dabr-ɔ risa:n-hɔm bassaħ ***il ne faut pas qu'ils attirent les jeunes***. CONJ/S_2

'They are free but *they must not attract the young people'*.

In this example CS occurs between a coordinating conjunction 'bassaħ' (but) and the second clause which is inhibited under the government constraint as in the above list.

According to Discuillo et al (1986b) complimentizer must be in the same language as the verb of the main clause, yet switching is possible between the French verb in the main clause and the AA complementizer as follow:

[18] *Il* ***faut choisir*** *le thême* li rana baɣ-jin n-dir-ʊ-h. V/COMP

'We have to select the theme that we want to do'.

The following counter-examples from our AA/French CS corpus include switching between the following patterns violating the notion of Lq carrier:

1) Switching between a verb and its direct object NP (the article *la* is the Lq carrier and should be in AA as the preceding verb):

[19] ɬin-i ***la même chose*** kima hɔwa. V/DO

Give-me *the same thing* as him.

2) Switching between a preposition and its NP complement (here also the article *la* is the Lq carrier and should be in AA as the preceding preposition):

[20] ka:-n mɛa-na **fe *la société*. .** P/NP

Was-3SG with-us in *the society.*

'He was with us in the society'.

3) Switching between a verb and its modifying adverb (since there is no quantifier before the adverb, the adverb becomes the Lq carrier and should be in AA as the preceding verb):

[21] ma na-ɛraf-hɔm-ʃ ***bien***. V/ADV

NEG 1PR-know-them-NEG *well.*

'I don't know them *well'.*

Muysken (2000: 25) recognizes the inadequacy of the government constraint pointing to the importance of including functional categories as governors. He also points to the fact "*that categorical equivalence undoes the effect of the government restrictions*" (ibid: 25) i.e. an element that is lexically or functionally governed can be switched when it is equivalent to a corresponding element in the other language. Based on this evidence Muysken has further reformulated the government constraint taking into account the notion of equivalence and incorporating functional elements as governors as follow:

> **[Xp Yq], where X governs Y, p and q are language indices, and when there is no equivalence between the categories Y in the languages p and q involved. (Muysken, 2000:25)*

The role of functional elements on their structural environment is considered by Belazi, Rubin and Torbio (1994) in formulating their constraint.

1.5.2.3. The Functional Head Constraint: Belazi, Rubin and Torbio (1994):

Belazi, Rubin and Torbio (1994) agree with Discuillo, Muysken and Singh (1986) on the fact that the relevant constraints on CS should be formulated in hierarchical terms exploiting distinctions and relations already present in grammar. However unlike Disuillo et

al (1986), Belazi et al (1994) exploit the relation between the functional heads and their syntactic environment in formulating CS constraints. These constraints would not permit CS between functional heads and their complements and permit it between lexical heads and their complements.

Based on Abney's (1987) proposal[87] and Chomsky's (1993) assumption[88], Belazi et al (1994) propose the Functional Head Constraint (hereafter FHC), assuming that language is one of the features[89] being checked by a functional head, i.e. a functional head requires that language feature of its complement match its own language feature (1994: 228). The FHC is formulated as follow:

> "*The language feature of the complement f-selected by a functional head, like all other relevant features, must match the corresponding feature of that functional head". Belazi et al (1994: 228)*

Thus the FHC prohibits switching between a functional head and its complement. Using Tunisian Arabic/French and Spanish/ English CS data, Belazi et al (1994: 228-229) restrict CS between the following functional heads and their complements:

- Between complementizer and relative or complement clause (C°/IP)
- Between a model auxiliary and verb complement (I°/VP)
- Between a determiner and noun phrase (Det°/NP)
- Between a Quantifier (also number) and noun phrase (Q°/NP)
- Between a negative particle and its verb (Neg°/VP)

Belazi et al (1994) also claim that Poplack's free morpheme constraint can be subsumed under the FHC given that inflectional morphemes are treated as functional heads. They give the following example in which switching between the Tunisian Arabic free morpheme 'da:r' (house) and the French plural inflectional morpheme (s) is not allowed:

* ʃuft da:r-*s.*
Saw-1SG house-PL.
'I saw the houses.' (Belazi et al, 1994: 231)

[87] Abney (1987) proposes that there exists a special relation between a functional head and its complements, which he calls f-selection (Belazi et al 1994: 228).

[88] Chomsky (1993) assumes that f-selection is one member of a set of feature-checking processes i.e. functional heads select the features of their complements (Belazi et al 1994: 228).

[89] Belazi et al (1994) exploit the general process of 'feature checking' in CS analysis by adding language feature which is according to them operative in all speech but it becomes apparent only in CS. According to Belazi et al, a language feature such as [+Spanish] or [+English] is checked along with other features such as case or agreement.

In addition to the FHC, Belazi et al (1994) propose another constraint to account for CS between a noun and modifying adjective called 'The-Grammar Integrity Corollary' as follow:

'The Word-Grammar Integrity Corollary
A word of language X, with grammar Gx, must obey grammar Gx'. (1994: 232)

This constraint predicts that switching is possible if nouns and adjectives obey the grammar of the languages from which they are drawn. They give the following examples to illustrate this restriction:

J'ai une voiture *mizyaena.*
I have a car *nice.*
'I have a beautiful car.' (Tunisian Arabic/French CS, Belazi et al 1994: 232)

According to Belazi et al (1994) this example is possible because the adjective 'mizyaena' (nice) obeys the Tunisian Arabic grammar which allows adjectives only in post-nominal position and the French noun[90] 'voiture' (car) is also satisfied since it can look to the right for adjective modification. The following example however, is not possible because although the Tunisian Arabic noun 'kharba' (car) is satisfied by looking to the right for adjective modification the French adjective 'belle' (nice) does not obey French grammar which states that this adjective must occur before the noun it modifies.

*ɛand-i kharba *belle.*
am-I car *nice.*
'I have a beautiful car'. (Tunisian Arabic/French CS, Belazi et al 1994: 232)

1.5.2.3.1. Criticisms and counter-examples to the Functional Head Constraints:

The FHC has failed empirical testing and many examples that have already been cited in CS literature present counter-evidence to the FHC. These examples include frequent switching between:

1) complementizers and complement clauses (Bentahila and Davies, 1983: 310-311, 323-324; woolford, 1983: 532; Discuill et al, 1986: 14, 17; Benhattab, 2011: 201).
2) determiners and NPs (Bentahila and Davies, 1983: 316, 321; Discuillo et al ,1986: 13; Pfaff 1979: 306; and Woolford 1983: 527, 533).
3) Quantifiers and NPs (Bentahila and Davies, 1983: 316-317; Discuillo et al, 1986: 14, 17; Benhattab, 2011: 203).

90 French allows postnominal adjectives (adjectives occur after the noun the modify) and some prenominal adjectives (adjectives that occur before the noun they modify), however, Tunisian Arabic allows only posnominal adjectives.

4) Auxiliaries and verb complements (Pfaff, 1979: 299; Bentahila and Davies, 1983: 315; Discuillo et al, 1986: 15; Benhattab, 2011: 207-208).

On the other hand, violations of the equivalence constraint are violation to the Word-Grammar Integrity Corollary as Mahootian and Santorini (1995: 20) noted, since "*it reduces in effect to the Equivalence Constraint*" because it "*requires both the adjective and the noun to obey the grammars of their respective languages*" (ibid, 20).

The following examples present some violations to the FHC model from the literature:

Je peux le dire had *le truc* hada baʃ *je commence à apprendre.* (C°/IP CS)
'*I can say it* this *thing* here in order that *I start to learn*'
(Moroccan Arabic CS; Bentahila and Davies, 1983: 323)

Portava due *micros*. Q/NP
((She) brought two *mikes*.) (French/Italian CS, Discuillo et al 1986:13)

Estaba *training* para pelear. (AUX/VP)
'(He) was *training* to fight'. (Spanish/English CS, Pfaff (1979: 299))

There are counter-examples to Belazi et al's constraints from the AA/French CS data of the study at hand. These include switching between a complementizer and its complement as follow:

[22] ɣadwa ħʃiʝa nə-thatf-ɔ baʃ *on se mit d'accord sur le rendez-vous*. C°/IP°
Tomorrow afternoon 1PR-call-1PL in order that *we decide about the meeting*.
Tomorrow afternoon I will call you to decide about the meeting.

This corpus also provides an instance of CS between a French auxiliary and an AA verb as follow:

[23] *Il* ***fallait*** *pas* t-ɛawad-la-h l-hadra.
It was not necessary 3PRF-repeat-to-him DEF-speech.
She did not have to tell him what was said.

Counter-examples to the FHC in this data also involve Switching between an AA determiner (demonstrative) and a French NP, and between an AA quantifier and a French NP as illustrated by the following examples from our AA/French CS corpus:

[24] ma-ka-ʃ bazzaf *les groupes*.
NEG-be-NEG many *the groupes*.
'There are not many groups'.

[25] ana fɔt **hadik** *la periode*.

I passed that *the period*.

'I have passed that period'.

However we haven't found any instance of switching between a numeral and a noun and between a negative particle and its verb in our corpus.

Belazi et al's (1994) model has been criticized on the conceptual ground by many scholars including those working within the same generative grammar tradition (Mahootian, 1996 ; Muysken, 2000 ; MacSwan 2000, 20: 290). According to MacSwan (2000: 41) and Mahootian and Santorini (1996: 470) the 'language feature', that the FHC requires to be shared between the functional head and its complement, is not independently motivated for other linguistic phenomena, which makes it a mere descriptive fact of CS. Another challenge to this model is the Word-Grammar Integrity Corollary constraint, which is an additional code switching-specific constraint because it is not subsumed under the Functional Head Constraint. According to Muysken (2000) the failure of the FHC is also due to the fact:

> "*that categorical equivalence undoes the effect of the government (here f-selection, selection by functional categories) restrictions*" (2000: 26).

1.5.2.4. Null Theory of Code Switching: Mahootian (1993), Mahootian and Santorini (1995, 1996):

The previous grammatical-based approaches to CS seem to adapt the general principles of monolingual grammar to the analysis of CS by adding specific characteristics (as language index and language feature) to the relation between the head and its complement prohibiting switching between them. Mahootian and Santorini (1996: 470) assert that CS analysis "relies on general principle of phrase structure rather than on constraints that are specific to code-switching analysis", stating that:

> *"Heads determine the syntactic properties of their complements in code switching and monolingual context alike" (ibid, 470).*

Instead of prohibiting switching between a head and its complement, Mahootian & Santorini[91] (1996) allow CS between a head and any other constituent in its maximal projection be it a single word, a phrase or a clause as far as it obeys the syntactic properties of its head i.e. heads impose their syntactic requirement by determining the phrase structure position (parsing to the left or to the right), syntactic category and feature content of their complements (head sub-categorization as case marking, finiteness, tense). Mahootian and

[91] Mahootian (1993) uses a tree-adjoining grammar (TAG) formalism which is an implementation of general work in the government and binding (GB) tradition (Chomsky, 1957, 1993). TAG formalisms encode branching direction by positing the existence of ``auxiliary trees'', partial structures which represent a complement on the left or right of its head, as appropriate to the language under consideration.

Santorini (1996) subsume both functional and lexical heads under their theory since "*lexical heads behave no differently in code-switching contexts than functional heads*" (ibid, 471).

. They cite the following example taken from Nartey (1982) that involve switching between Det (functional head) and its complement (NP):

E wo *green dress* ko.
he/she PAST tone wear ART
'(S)he wore a green dress.' (Adagme-English; Nartey 1982:187)

According to Mahootian and Santorini (1996), since Adàgme determiner is post-nominal, the English complement *green dress* is required to precede it (determiner is the head of the phrase and thus determine the position of the NP).

The following example, on the other hand, illustrates CS between a verb (lexical head) and its object (NP):

You'll buy *xune- ye jaedid.*
Hous- Poss new
'You'll buy a new house.' (English-Farsi; Mahootian 1993c: 152)

Here the verb 'buy' from a VO[92] language (English) precedes a complement from an OV language (Farsi). Being a lexical head, the V determines the position of the complement (here NP object).

Mahootian and Santorini (1996: 472) point to the controversy among researchers when it comes to the analysis of CS between nouns and adjectives in terms of head-complement relation. Bentahila and Davies (1983) for instance consider that noun-adjective construction is headed by adjectives, whereas others such as Discuillo, Muysken and Singh (1986) and Pandit (1990) consider such constructions to be headed by nouns. Mahootian et al (1996: 473-4) provide examples that violate head-complement relation when nouns are heads and when adjectives are heads, concluding that CS between N and Adj is better analyzed in terms of adjunction structures[93] rather than head-complement relation. Under adjunction relation neither nouns nor adjectives determine word order, so their placement can be determined by either language involved in CS.

[92] A VO language is a language in which objects follow their head verbs (English) while An OV language is a language in which the object precedes its head verb (Japenese, Hindi, Farsi, Tamil)

[93] Mahootian et al (1996: 473) restrict the analysis of CS between N and Adj in terms of adjunction structure to ordinary adjectives which are phrasal adjuncts, however in the case of adjectives that exhibits the syntactic behavior of heads, they are analysed in terms of head-complement relation (MacSwan, 2000: 40).

The models provided by Mahootian (1993) and Mahootian and Santorini, 1995, 1996 (and Pandit, 1990 and Halmari, 1993)[94] are subsumed under the same government theories as those provided by (Discuillo et al, 1986 and Belazi et al, 1994). The difference between them is that the latter prohibit CS between a head and its maximal projection while the former allow it under the condition that the switched constituents obey the syntactic requirements of the head as the monolingual constituents do. In that the models provided by (Mahootian and Santorini, 1996; Pandit, 1990; Halmari, 1993) can account for many CS data because their models allow insertion of words and constituents. However the weakness of these models as Boumans (1998: 24) indicates is that:

> *"in the case of inserted governing verbs, government models frequently make the wrong predictions" Boumans (1998: 24)*

Because Santorini and Mahootian (1995: 5) do not consider:

> *"inflectional features like [tense] as separate heads in phrase structure but assume that they are instantiated as syntactic features on lexical heads". Santorini and Mahootian (1995: 5)*

So their model does not account for switching that involve verbs from one language inflected with bound morphemes from another language which is a common switching type in many CS data including AA/French CS data of the present study.

The inadequacy of the government models lies in the different interpretations and the frequent redefinition of the notion of 'government'. There are much controversy among the researchers in respect to what counts as government relation, what are the governing categories and how they applies to CS (Gardner Chloros, 2009: 98). Besides the government relation, as MacSwan (2000: 40) argues, has been abandoned in recent syntactic theory i.e. head-complement configurations are no more checking domains in minimalist program[95] (Chomsky, 1995) which makes "*the government approaches become a code-switching-specific-mechanism*" (MacSwan, 2000: 40).

An alternative to the government approaches is MacSwan's minimalist approach to CS which also tries to account for CS within more universal theories of monolingual grammar rather than CS-specific constraint.

[94] *Similarly Halmari (1993 : 1061) states that 'an English lexical item can be inserted in the terminal node, provided that when a government relation is involved, Finnish morphosyntactic rules are not violated' (cited in Boumans, 1998 : 22).*

[95] current approaches assume that only head-head and head- specifier configurations are checking domains (Sportiche, 1995; *Chomsky*, 1995) in MacSwan (2000 : 41)

1.5.2.5. MacSwan's (1999, 2000) Minimalist Approach to code switching:

MacSwan's approach to CS shares the same principles and insights found in Mahootian et al's (1996) model stating that:

> "*nothing constrains code switching apart from the requirements of the mixed grammars*" (2000: 43).

However he explains CS in terms of Unified grammar principles of Chomsky's (1995) minimalist program[96].

The premise behind MacSwan's (2000) minimalist approach to CS is that the sociopolitical identities of languages are ignored and play no role in linguistic theory as MacSwan argue "*the notion of 'a language' should play no role in the formal system employed to account for the data under analysis*" (2005: 5). However MacSwan (2005: 6) suggest that bilinguals have separate lexicon for each language, and that each lexicon is mentally compartmentalized with a specific set of phonological and morphological rules.

Under the minimalist approach, the computational system is the same for all languages so monolingual and bilingual syntactic derivation are generated in the same way. Yet syntactic variation is associated with lexicon, so "*code switching may be seen as the simple consequence of mixing two lexicons in the course of a derivation*" (MacSwan, 2000: 45). This means that in CS, items may be drawn from the lexicon of either language; these items introduce their features when phrase structure is derived to be checked[97] in the same way as monolingual features are checked. When features mismatch, the derivation crashes and when the features match, the bilingual utterance is produced. So the acceptability of a linguistic utterance depends on whether its features match, no matter whether it is a monolingual or a code switched utterance. The following example cited in MacSwan (2005: 282) from Spanish/English CS (Moro, 2001) illustrates the process of feature checking:

> *The *casa.* 'The *house*'.
> *Los* teachers. '*The* teacher'.

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[96] Minimalist program (Chomsky, 1995) is a model of grammatical conpetence based on the underlying principle that differences between languages are ascribed to the lexicon in the lexical conceptual level rather than being based on purely syntactic parameters. The applications of minimalism to code switching are not intended to explain surface aspects i.e. performance, processing or production aspects of code switching. These applications are rather directed towards the mechanisms that operate at the conceptual level to permit bilingual speakers use grammatical or well formed utterances (Mac Swan, 2005: 4).

In this model there are two central components: a computational system for human language that is presumed to be the same in all languages, and a lexicon, which accounts for the idiosyncratic differences observed across languges and from which the phrase structure is derived (MacSwan 2000: 43).

[97] According to MacSwan (2000, 2005) the lexical requirements or features are checked before the production of CS utterances to block the ill-formed ones.

According to MacSwan (2005: 282), the example 'the *casa*' is ungrammatical because the set of features of the Spanish N is not included within the set of features of English DET (i.e. when Spanish noun's features [person, number and gender] will check English DET's features, will find only person and number therefore the derivation will crash). However the example 'los teachers' is grammatical, because the set of features of the English noun (person, number) is included within the set of features of the Spanish DET (person, number, gender).

Unlike the syntactic component of grammar which allow the union of two lexicons from different languages under the condition that their features match during derivation, the phonological component[98] prevent switching from one system to another except at the boundaries of syntactic heads (X°)[99] because under the minimalist approach, X°s (words) are imputs to phonological form PF (Chomsky 1995).

Depending on the phonological component, MacSwan (2000, 2005 and 2007) subsumes Poplack's free morpheme constraint under the PF DisjunctionTheorem[100] stating that "*we assume that all X°s must be phonologically parsed and that phonological systems may be switched at word boundaries but not within words (heads)*" (2007: 768). According to MacSwan the combination of stem from one language with an affix from another language is well-formed if the stem is incorporated into the phonology and morphology of the other language by rules of word formation internal to the lexicon and not by syntactic operations i.e. the stem becomes part of the lexicon (borrowed) as in the following example in which English stem is borrowed into Spanish:

Juan està *parqu*eando su coche.
'Juan is *park*ing his car (Spanish/English CS; MacSwan, 2005: 7).

1.5.2.5.1. Criticisms to MacSwan's (2000, 2005) minimalist approach:

As Poplack (1980), MacSwan (2005) also treat intra-word switches as borrowings emphasizing on the phonological adaptation. In that the minimalist approach makes wrong prediction, because switching between words and affixes is attested in the literature and Poplack's (1980) free morpheme constraint was badly criticized by many researchers.

[98] The Phonological Component is responsible for mapping the numeration to phonological form (PF), phonological rules built structure by referring to specific morphological material with its phonetic content (MacSwan, 2000: 45).

[99] X° signifies a word level category, be it nominal or verbal. It may consist of one morpheme e.g. boy, play, or more than one morpheme e.g. entertain-ment, play-ed.

[100] The PF Disjunction Theorem overlaps with the Free Morpheme Constraint in terms of empirical prediction, but there are some differences. The PF Disjunction Theorem predicts switching of phonological systems between a stem and an affix to be ill-formed. (Macswan, 2005: 7).

MacSwan's (2000, 2005) minimalist approach assumes that monolinguals and bilinguals store their lexical items in the same way i.e. lexical items are stored with their morphological and phonological features. This contrasts with many competing studies[101] which assert that lexical entries and their morphological and phonological features are stored separately in the mental lexicon of monolinguals and bilinguals. The debate between the two assumptions is still valid in Neuro-science Research. However there is much evidence in bilingual research that supports the latter view.

The other criticism to MacSwan's approach as Jake, Myers-Scotton and Gross (2005) point out, is its reliance on grammaticality judgments rendered by competent or simultaneous bilinguals, who judge the utterances as well-formed or ill-formed ones which is according to them a prescriptive view of grammar.

Using MacSwan's feature checking process, switching between the AA definite article (l-) and French nouns is not possible or ill-formed because the French nouns' features (person, number and gender) are not included within AA definite article's[102] features. Switching between French definite articles and AA nouns on the other hand, is allowed by the minimalist approach, because the set of features of AA nouns (person, number, gender) is included within the set of features of French articles (person, number, gender). This is not true in the case of our AA/French CS corpus. Switching between the AA definite article (l-) and French nouns though limited, it does occur as in the following example that contains switching between the AA determiner (l-) and the French noun *rapport*:

[26] d-dir-ɔ l-***rapport*** *de garde*.

Make-3PL DEF-*report of surveillance*.
'Make the guard report'.

The other counter-evidence from our corpus is that there is no instance of switching between French articles and AA nouns which is allowed by the minimalist approach. So feature checking process as introduced by the minimalist approach is not workable in the case of switching between AA definite article (l-) and French nouns.

The minimalist approach cannot also account for CS instances that include French verbs combined with AA affixes. This type of switching is considered by MacSwan either borrowings or ill-formed elements. Indeed speakers in our recording in particular and in Oran in general, exhibit different degrees of competence in French and even the most competent

[101] These studies include Garrett, 1975, 1988, 1990, Azuma, 1991, levelet, 1989, Stemberger, 1985, and Myers-scotton, 1993.

[102] AA has only one definite article (l-) that is used with plural and singular nouns as well as with masculine and feminine nouns. However French definite articles agree with their nouns in gender (masculine 'le' and feminine 'la') and in number (singular 'le', 'la' and plural 'les')

bilinguals use adapted verbs. The following example from our recordings is uttered by a competent bilingual who acquired French from infancy and uses it fluently:

[27] ana ma **nə -*present*-i-k** mawalɔ.

Me NEG 1PR-*introduce*-1SG-you nothing.
'I will not introduce you'.

Thus CS types (intra-word, intra-sentential, inter-sentential) are not determined only by competence, but also by other factors such as the situation (formal or informal), languages' typologies, the interlocutor…etc.

According to MacSwan (2000, 2005) minimalist approach, when there is a mismatch between features of the switched lexicons, either the derivation crashes or the produced utterance is ill-formed. However many CS data show that bilinguals resort to different ways and strategies to overcome the grammatical difficulties and to accomplish switching such as: bare forms and facilitating strategies (Backus, 1996: 87; Boumans, 1998: 45; Owens, 2005: 27 ; Clyne, 2003: 75), omission or repetition of elements and the creation of new bilingual verbs using do- construction (Romaine, 1995 :131-133)[103]. In the same vein, Gardner Chloros and Edwards (2000: 1436) argue that: "*code switchers take advantage of various 'let-outs' to avoid the straightjacket of grammatical rules*" such as the insertion of a flag before the switched element.

So far the grammar-based approaches have sought to explain bilingual data within independent syntactic principles of existing monolingual grammar theories, excluding any CS-specific constraints. Yet monolingual approaches seem to be too strong to account for bilingual CS manifestations. In this respect Boeschten (1998: 21)[104] states:

> *"CS as verbal behaviour has language-like properties, i.e., it is really not assumed to consist just of the combination of two completely independent systems". Boeschten (1998: 21)*

The third trend in seeking CS grammatical constraints, are known as insertional approaches and are based on the notion of asymmetry between the two languages participating in CS. Some earlier researchers have already pointed to different roles that the participating languages contribute to CS. In what follow, Joshi's insights which paved the way to Myers-Scotton's (1993, 1997, 2002) MLF model, will be briefly exposed.

[103] Romaine (1995: 131) finds many new compound verbs that are created by combining Panjabi operators *'kərna'* (to do) and '*hona*' (to be/become) with English verbs such as 'ple kərna' (to play), 'guilt feel hona' (to feel guilty).

[104]The quotation is cited in Gardner Chloros and Edwards (2004: 1436).

1.5.3. Insertion-based approaches to code-switching:

The insertion approaches are credited with recognizing the different roles that the two languages play in CS and the different status of content and function words. Many researchers in the literature (including: Wentz 1977, Sridhar & Sridhar 1980, Joshi 1982, 1985, Klavans 1985, Pandit 1986, and Nishimura 1986, among others) have presented models that mentioned the distinction between the two languages giving them different terms and different definitions. However Myers-Scotton's (1993b, 1997, 2002) Matrix Language Frame model (hereafter MLF), is the most pronounced and elaborated one. The major premise behind insertional approaches to CS is that one language sets the grammatical structure of the sentence into which elements from the other language could be inserted. Indeed Myers-Scotton's (1993b) MLF model is motivated by Joshi's model (1985). Joshi (1985) is credited with introducing the terms Matrix Language and Embedded Language and he is the first researcher who relies on psycholinguistic research on speech error and aphasia to distinguish between what he calls closed class items and open class items.

1.5.3.1. Joshi's closed class item constraint (1985):

Joshi[105] (1985) may not be the first to talk about the different roles of languages in CS, but he is the first to introduce the terms 'Matrix Language' (henceforth ML) and 'Embedded Language' (henceforth EL). Joshi studied Marathi/English CS data and proposes the asymmetric role of both languages involved in CS, suggesting that CS can occur in one direction from the matrix language to the embedded language. Joshi (1985) defines the ML on the basis of speakers' judgment stating that:

> "*Despite extensive intrasentential switching, speakers and Hearers generally agree on which language the mixed sentence is coming from. We can call this language the Matrix Language and other language the Embedded Language*" (Joshi, 1985:191)

Joshi (1985) depends on Garrett's (1975) speech error study to distinguish between the status of closed class items (e.g. determiners, quantifiers, prepositions...etc) and open class items (verbs, nouns, adjectives and adverbs) in bilingual data, proposing his Closed-Class Item Constraint as follow :

> *"Closed class items (e.g. determiners, quantifiers, prepositions, Aux, Tense, helping verbs, etc.) cannot be switched". (Joshi, 1985: 194)*

The following example provided by Joshi, illustrate the Closed Class Item Constraint:

*Some chairs-war. (Marathi/English CS, Joshi, 1985)

Some chairs-on. "On some chairs"

[105] Joshi's (1985:191) work is influenced by Sridhar and Sridhar (1980) work. Sridhar and Sridhar (1980) advocate an insertinal approach to CS using the term host language (the equivalent of Joshi's'matrix language'), and guest language (which is the equivalent of Joshi's'embedded language').

1.5.3.1.1. Criticisms and counter-examples to Joshi's constraint:

Joshi's criterion that distinguishes between matrix and embedded language does not seem to be precise enough. It has proved to be unreliable in making the distinction between closed class items and open class items as Mahootian (2006) states:

> *"since matrix and embedded languages are not systematically discernible from each other, the closed-class item constraint loses its viability". (2006: 520)*

The other confusion arises in respect to the Closed Class Item Constraint, which is interpreted differently by different authors. According to Belazi et al (1994) for instance the Closed Class Item Constraint disallow switching between closed class items and open class items and they give the following counter-example in which CS is possible between a preposition and a noun phrase:

J'ai joue avec *il-ku:ra*.
I have played with *DEF-ball.*
'I played with the ball.' (Tunisian/French CS, Belazi et al 1994: 227)

However, according to Mahootian (1996:476), the Closed Class Item Constraint means that the closed class items must be in the matrix language. She also considered that Belazi et al's counter-example stated above does not violate Joshi's constraint since the preposition is in the matrix language.

Boumans (1998: 35) on the other hand argues that the Closed Class Item Constraint means that closed class items cannot be inserted on their own but they can occur in the company of an embedded open class item i.e. Joshi allows the insertion of single nouns and noun phrases consisting of a determiner and a noun but disallow the insertion of single determiners.

In addition to the criticisms stated above, CS literature already provides some violations to Joshi's constraint. These include switching of single complementizers, single conjunctions and single prepositions (Mahootian, 1993; Bentahila and Davies, 1983; Bouamrane, 1986:121-2; Benhattab, 2011:236 as in the following examples:

Elle te pique min fuq *le drap.* (Switching of a single preposition)
'*it bites* through *the sheet'* (MA/Fr CS; Bentahila and Davies, 1983 :315)

ndɔg *mais* manakɔlʃ (switching of a single conjunction)
I will taste *but* I will not eat. (AA/French CS, Bouamrane, 1986:121)

Anyway, I figured *ke* if I worked hard enough, I'd finish in the summer.
That (switching of a single complementizer)
(English/Farsi; Mahootian 1996:476)

Our AA/French CS corpus also includes counter-examples involving switching of single prepopsitions, single conjunctions and single complementizers as follow:

[28] ma-na-ɛraf-hɔm-ʃ *bien* tsamma ɣi ***à travers*** hada Ziad. (Switching of a preposition)

NEG-1PR-know-them-NEG *well* means just *through (*this) Ziad.

'I don't know them well just through Ziad'.

[29] *Vous travaillez l'après midi, à partir de quatorze heures* ħatta l-c*inq heures*. (Switching of a Preposition)

'You work the afternoon, from twelve o'clock *until* five o'clock'.

[30]*C'est un traitement efficace* **w** *il a des bonnes résultats*. (Switching of a conjunction)

This is a treatment effective *and* it has some good results.

This is an effective treatment and has good results'.

[31] ɣa:ljji:n ʃwija ***mais*** mla:ħ. (Switching of a conjunction)

Expensive little ***but*** good.

'They are a little bit expensive but good'.

[32] *Je sais* belli *c'est difficile*. (Switching of a complementizer)

I know *that* it is difficult.

The concept of asymmetry along with the terms matrix language and embedded language as well as the distinction between closed class items and open class items have been taken over by Myers-Scotton and further developed and redefined in the MLF model.

1.6. Conclusion:

Poplack's equivalence constraint and free morpheme constraint as well as the government approaches, failed to account for many CS data sets among them the AA/French CS data of the present study. In addition these models were extensively criticized by many scholars in CS literature including their authors. Poplack for instance who remained faithful to her constraints in her subsequent publications, could not deny the prominence of insertion type of CS. So she has introduced 'nonce borrowing', and 'constituent insertion' as two code-switching mechanisms to save the validity of her constraints. Yet her strategies imply the notion of a matrix structure which she has rejected.

Muysken (2000) on the other hand, has criticized the government approaches including his and his associates Governement and Binding theory (Discuillo, Muysken, and Singh's, 1986), concluding that these approaches could be saved if they take into account two

important notions in formulating grammatical constraints. These are the categorical equivalence or congruence which undoes the effect of the government restriction (Muysken, 2000: 25); this means that Muysken acknowledges the process of insertion provided that there is categorical equivalence between grammatical categories of both languages. The second point is the crucial role of the functional elements in determining the overall structure. The notion of categorical equivalence was also implicitly adopted by Mahootian and Santorini (1996) who allow insertion of words and constituents as far as they don't violate the grammar of the head of maximal projection within which they take place. In that they are closer to Myers-Scotton's model; both claim the unequal role of the languages participating in CS i.e., matrix language or governing language (Muysken, 2000). However unlike Myers-Scotton's model, the notion of matrix or governing language is not explicitly pronounced or defined, in addition, inflections are not included as governing elements that determine the structure of verb phrases.

Three major observations are drawn from reviewing the above approaches. These are considered by many researchers working within the sub-field of structural studies of CS as being essential elements that should be taken into account in seeking syntactic constraints on CS. These important points, which are either directly stated in the work of (Muysken, 2000, Boumans, 1998, and Myers-Scotton, 2002) or indirectly inferred as in Poplack's publications and Mahootian and Santorini's (1996) constraints; are first, the unequal role of the two languages involved in CS (this was acknowledged through acknowledging the process of insertion); second, the importance of functional words in structuring CS sentences and thus differentiating them from content words; and finally the importance of categorical equivalence or congruence between categories of both languages participating in CS. Indeed these considerations constitute two major hypotheses in Myers-Scotton's MLF model -The Matrix Language Hypothesis (with its morpheme order and system morpheme principles) and the Blocking Hypothesis. These hypotheses along with Myers-Scotton's MLF model on which the present study is based will be discussed in the next chapter.

The contact situation between AA and French in the sociolinguistic context of the present study is characterized by the presence of different phenomena. That which is the object of this study is CS between AA and French. In order to study and analyze the grammatical aspect of CS as practiced by Algerian speakers in Oran, this chapter has provided some background knowledge about the sociolinguistic situation of Algeria. Then we have introduced a micro sociolinguistic presentation of the informants, the methodology of the work as well as the corpus. After defining CS, we tried to find out how to set apart code switched forms from borrowed ones. To do so, we have presented some major criteria dealing with this issue trying to attest them to our context however it turns out that they cannot help us to draw clear-cut boundaries between both phenomena. This chapter has also outlined some important models proposed to account for syntactic constraints on intra-sentential CS in order to justify our preference for Myers-Scotton's MLF model which will be the subject of the next chapter.

CHAPTER

CHAPTER TWO

Analyzing French insertions into Algerian Arabic grammatical frame

within the framework of the MLF model of Code-Switching

2.1 Introduction:

After showing preference for the insertional approaches to CS and namely the MLF model; this chapter has as its objective to present the major premises of the MLF model and to test them against the corpus of the present study. This chapter also tries to describe the different intra-sentential CS structures generated from the contact between AA and French in Oran when AA is the Matrix Language. We shall start by introducing the definition of the Matrix Language and the unit of grammatical analysis in some details with their amendments. These two components constitute the keys to the syntactic analysis of intra-sentential CS within the MLF approach. Defining the ML is based on two basic oppositions the ML vs. EL opposition and content vs. system opposition. The importance of the asymmetry between the two sides of the oppositions has been outlined in the previous chapter when we have discussed the other grammatical approaches and their deficiencies. In this chapter, the unequal role of each language and each category of morphemes including the new oppositions of the 4-M model will be interpreted and tested using the AA/French CS corpus of this study.

Intra-sentential CS generates various types of constituents. The MLF model has divided these constituents into three categories: mixed constituents, internal EL islands, and EL islands. In this corpus all the three types of constituents are present and frequent when AA is the Matrix Language. These constituents are dealt with in two separate sections; in section (2.3.1) mixed constituents are studied along with internal EL islands and in section (2.3.2.) EL islands are analyzed under the heading of Blocking Hypothesis and EL Island Hypothesis which are based on the notion of congruence[106]. In addition to the asymmetry principle, Myers-Scotton adds the concept of congruence between the two languages involved in CS to account for EL islands within her MLF model.

The present chapter is also a trial to describe syntactic and morpho-syntactic patterns of AA/French CS within the framework of the MLF model to CS. the syntactic and morphological description of the AA/French CS corpus will be divided into mixed constituents and EL islands. Mixed constituents will be analyzed according to the following types of constituents:

- Mixed noun phrases: include the insertion of French nouns along with French internal NPs and the insertion of French adjectives into AA noun phrases.
- Mixed prepositional phrases: include the insertion of French nouns and internal NPs into AA prepositional phrases.
- Mixed verb phrases: include the insertions of French verb stems and French adverbs into AA verb phrases.

[106] Congruence refers to a match between the ML and the EL at the lemma level with respect to linguistically relevant features.

French EL Island insertions seem to be recurrent in this corpus; some of them even seem to compete with mixed constituents. Embedded French EL islands into AA structures are organized as follow:

- Embedded French noun phrases (including all types of French modifiers: articles, possessives, quantifiers, attributive adjectives, noun complements).
- Embedded French adjective phrases.
- Embedded French prepositional phrases.

2.2. Myers-Scotton's (1993b, 1997, 2002) Matrix Language Frame Model:

After interpreting the earlier studies on linguistic constraints of CS, either for lacking theoretical motivations or for depending on the existing syntactic model of monolingual grammar, Myers-Scotton (1993b) comes with her own model namely 'The Matrix Language Frame Model' (hereafter MLF). The MLF model tries to explain CS from the standpoint of language production process[107]. According to Myers-Scotton (2002: 14) what makes the MLF model different from the other models, is its reliance not just on empirical finding (i.e. CS data) but also on psycholinguistic and neuro-linguistic findings about the nature of language production and processing phenomena. The major psycholinguistic theories that influence Myers-Scotton's MLF model are the different activation of base and guest language (Grosjean, 1989), the different retrieval process of closed class items and open class items in Garett's speech error study (1975), and aphasia study and lemmas in the mental lexicon linking conceptual information and grammatical function in Levelt's (1989) language production model[108].

Following Joshi (1985), Myers-Scotton's (1993) MLF model is based on the concept of asymmetry between the Matrix Language and Embedded Language. She also developed the distinction between closed class items and open class items replacing them by different categories called system morphemes and content morphemes.

Myers-Scotton (1993b, 1997, and 2002) and Myers-Scotton and Jake (1995, 1996, 1997, 2000, and 2001) have revised and extended the MLF model several times and it is considered by many researchers (Eliason, 1995; Backus, 1996; Boumans, 1998; Gardner Chloros, 2009; Muysken, 2000) to be one of the most influential models to account for intra-sentential CS.

[107] The MLF model makes use of the existing psycholinguistic model of language production (Levelt, 1989) to explain code switching by trying to show 'how surface realizations (i.e. production) are linked to how language is structured (i.e. competence)' (Myers-Scotton, 2002:15).

[108] All the psycholinguistic theories that motivate the MLF model are mentioned with some details in Myers-Scotton (1993: 46-74).

Before introducing the model and its principles we will see how the concept of the matrix language which is central to the MLF model, has been redefined. The other important issue to any grammatical analysis and especially to the MLF model is the unit of analysis, which also has been modified to better identify the matrix language.

2.2.1. The unit of analysis in setting the structural constraints of CS:

Most grammatical analyses of CS in the literature have been directed towards finding CS constraints within sentence, considering the sentence as the syntactic unit of analysis (Bentahila and Davies, 1983: 304; Poplack, 1980; Discuillo et all, 1986; Myers-Scotton, 1993). Depending on the sentence as a unit of analysis, most researches refer to the distinction between intra-sentential, inter-sentential and extra-sentential CS in the structural analysis of CS, paying more attention to intra-sentential CS because within the sentence the grammar of both languages interact. The three types of CS are illustrated by examples from AA/French CS data of the present study as follow:

- Intra-sentential CS : switching within the same sentence, from single morpheme level to higher levels (phrase, clause) as in the following example :

[33] *Scientifiquement,* j-gulɔ, *le cerveau* j-ʃad *la dernière information*.

Scientifically, 3PR-say-3PL, *the brain* 3PR-keep-3SG *the last information.*
'Scientifically, they say, the brain keeps the last piece of information'.

- Inter-sentential CS : switching from one language to the other between sentences as illustrated by the following example:

[34] blad-na[109] ʃa:bba, fi-ha kɔlʃiɔ. *On a tous dans notre pays.*

Country-our beautiful, in-it everything. *We have all in our country*.
'Our country is beautiful. We have everything in our country'.

- Extra-sentential CS is the insertion of a tag such as a phrase marker, a sentence filler, or an exclamation from one language into an utterance that is entirely in another language. Also called tag switching or emblematic switching as follow:

[35] *Par exemple ce qu'on appelle la disponibilité*,jaɛni, *pour l'encadrement, pour les étudiants*.

'For example what we call availability, it means*, for managerial staff, for students'.*

[109] In AA, possession is either expressed by clitic pronouns which are attached to nouns as suffixes (-ɪ 'my', -ək 'your', -h 'his', -ha 'her', -na 'our', -kɔm 'your plural' -hɔm 'their'); or by the construction [taɛ+ clitic pronouns] that follows the possessed nouns (l-blad taɛna 'country our') (this construction is very productive with French nouns and will be studied when analyzing mixed NPs).

Here 'jaɛni' is a tag from AA inserted in otherwise French sentence.

It seems that even within a sentence the grammars may not be in contact, as Myers-Scotton (2002: 55) argues in her subsequent publications; because a sentence has different structures (i.e. simple, compound, or complex sentences). So while a bilingual simple sentence consists of a single CP[110], a compound or a complex bilingual sentence may contain two or more CPs each from a different language like in the following examples from our AA/French CS data:

[36] *Si vous pouvez déplacer à la pharmacie* w ʃufti Raħim, gɔlilah ʃa wassa:k Sa:ləħ.

If you can go to the pharmacy and you see Raħim, tell him what Sa:ləħ have promised you.

[37] *Quand tu marches* ma-tħasɪ:-ʃ kima *quand tu es véhiculée*.

'When you walk you don't feel as *when you are driving a car.*

In example [36] we have three monolingual CPs. The first conditional clause *Si vous pouvez déplacer à la pharmacie* (If you can go to the pharmacy) is in French, the second compound clause 'w ʃufti Raħim' (and you see Raħim) is in AA, the third main clause 'gɔlilah ʃa wassa:k Sa:ləħ' (tell him what Sa:ləħ have promised you) is in AA.

Example [37] also contains three monolingual CPs; two French CPs '*Quand tu marches'* (When you walk), '*quand tu es véhiculée'* (when you are driving a car) and one Algerian Arabic CP 'matħasɪ:ʃ kima' (you don't feel as).

The following example from Myers-Scotton's (1993b: 72) Swahili/English data clearly illustrates how Myers-Scotton herself was mistaken by taking a sentence as a unit of analysis:

Mpango huu ni *the customer fills forms and surrenders* kiasi fulani ch-a pesa
Plan this is amount some CL 7-of money
Say like 200 shillings every month for two years.

'This plan is (that) the customer fills forms and surrenders some amount of money, say like 200 shillings, every month, and for two years'. (Swahili/English CS, Myers-Scotton, 1993: 72)

[110] **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 level in a tree of syntactic structures (i.e. the highest unit projected by lexical elements) that contains other constituents or maximal projection as NPs, VPs, PPs. Both independent and dependent clauses are CPs. A CP is "the syntactic structure expressing the predicate-argument structure of a clause, plus any additional structures needed to encode discourse-relevant structure and the logical form of that clause" (Myers-Scotton, 2002:54).

According to Myers-Scotton (1993: 72) the Matrix Language of this sentence is Swahili, in which the following El islands are inserted *the customer fills forms and surrenders, say like 200 shillings, every month*, and *for two years*. This example leads Muysken (2002: 65) to criticize Myers-Scotton stating that "*it is hard to see what purpose is gained and what criteria can be used to assume that Swahili is the matrix language throughout*".

After introducing the CP as a unit of analysis and defining the ML in terms of system morphemes and morpheme-order principles, Myers-Scotton (2002: 54) admits that she was confused in considering some full CPs[111] as EL islands[112]. Myers-Scotton (2002: 54) revises the above example in her book 'Contact Linguistics: Bilingual Encounter and Grammatical Outcomes', making clear that '*the customer fills forms and surrenders* kiasi fulani ch-a pesa *say like 200 shillings every month for two years'* is a full CP with English as a matrix language and Swahili direct object ('kiasi fulani ch-a pesa' an amount of money) as an embedded island.

Realizing the limits and confusion of taking a sentence as the reference point of structural analysis, Myers-Scotton (1997, 2002) introduces the bilingual CP (projection of complementizer) as a proper unit of analysis within which the grammars of the two languages are in contact. According to Myers-Scotton (2002: 55) taking a CP as a unit of analysis will avoid the confusing problems of CS within a sentence and will account for constituent with null elements that have been called extra-sentential CS (e.g. what ? or never !) by considering them as monolingual CPs that include a number of null elements.

Following Myers-Scotton (1995: 246), the term *intra-sentential CS* is used to mean intra-CP switching. Thus *intra-sentential* CS is any CP that includes either:

1) a mixed constituent, i.e. maximal projections that contains morphemes from both languages

Or

2) Monolingual constituents, i.e. maximal projections each from one language either from the ML or the EL.

Inter-sentential CS means switching between monolingual CPs. So examples [30], [31] are considered by the MLF model as inter-sentential CS.

[111] Both CPs and EL islands are constituents, but islands are contained within CPs.

[112] Embedded language Islands are embedded language constituents that show structural dependency relationships (they must consist of two or more morphemes (Myers-Scotton, 2002:54).

2.2.2. The definition of the Matrix Language:

While the insertional models and especially the MLF model is supported by many CS data, the most controversial issue that the model tries to deal with, is the identification of the matrix language. Many criteria have been proposed to identify the matrix language. Myers-Scotton (1993b, 1997, and 2002) has modified her definition of the Matrix language several times due to the criticism and the ambiguity that her criteria have arisen.

After pointing to the circularity of the structural definition of the matrix language such as that proposed by (Klavans, 1983; Traffer Daller, 1991a) which is based on the language of the verb stem, Myers-Scotton (1993: 66) first decided to define the ML independently of the structural role it plays. She thus proposed the relative frequency of ML morphemes and EL morphemes in a discourse sample stating that:

> *"The ML is the language of more morphemes in interaction types including intrasentential CS". (1993b, 68)*

Myers-Scotton (1993) recognizes that how large a discourse sample should be "*is an unresolved issue*" (ibid, 68), yet she suggests that a discourse sample means more than one sentence. She also suggests excluding cultural borrowing from the count as EL forms.

The statistical criterion was criticized by many researchers. Muysken (2000: 66) for instance points to the fact that "*morpheme frequency is dependent on the typology of the languages involved*" i.e. the agglutinative languages[113] show more morphemes than isolating languages[114].

Bentahila and Davies (1995 :136) also questioned the validity of the quantitative criterion wondering if an interaction containing two sentences dominated by one language followed by other six sentences dominated by another language, should be analyzed as having a single matrix language depending on counting morpheme frequencies, or should one recognize a change of matrix language within the interaction.

Myers-Scotton (1997: 246) herself admits that her earlier definition of ML (1993: 66-9) is '*misguided*' and '*misleading'* because it attempts to identify the ML empirically. Trying to define the ML as a theoretical construct, Myers-Scotton (1997: 243) first chooses the CP (the projection of the complementizer) as a unit of analysis instead of a sentence. Myers-Scotton (1997) defines the ML in terms of its structural role within a CP showing CS as follow:

[113] An agglutinative language is a language in which words are made up of a linear sequence of distinct morphemes and each component of meaning is represented by its own morpheme e.g. **Unfortunately** is a single word consisting of three morphemes (un, fortunate, ly).

[114] An isolating language is a language in which almost every word consists of a single morpheme e.g. **man** is a single word consisting of a single morpheme (man).

"The ML controls grammatical configurations within all constituents of a mixed CP. […] this control is formalized in the Morpheme Order and the System Morpheme Principles" (1997, 245)

According to Myers-Scotton (1997: 247) only one language which is the ML sets the grammatical frame i.e. supplies system morphemes [function words and inflections] and imposes morpheme order of all mixed constituents within a CP showing CS.

With the introduction of composite CS[115], Myers-Scotton (2002: 66) extends the definition of the ML stating that:

"The Matrix Language is not to be equated with an existing language; rather one should view the Matrix Language as an abstract frame for the morphosyntax of the bilingual CP" (2002: 66)

The source of the ML frame may be one language as in classical CS or more than one language as in composite CS.

Myers-Scotton (2002:66) also claims that the matrix language can change from CP to the next for some speakers, but it does not change within the same CP.

As a response to many researchers (Appel & Muysken, 1987; Muysken, 2002; Gardner Chloros, 2009) who have wondered whether the ML as structurally defined concept can be identified as the 'dominant language' in psycholinguistic terms and as the 'unmarked choice' in sociolinguistic terms, Myers-Scotton (2002: 62) clearly affirms that "*the Matrix Language differs from both of these designations because it is a grammatically based construct*" that applies only to a mixed CP. Yet she does not deny the fact that the ML may coincide with a dominant language or unmarked choice in discourse (Myers-Scotton, 1997: 246).

2.2.3. The MLF model:

The MLF model which is devised to account for classic CS is based on two oppositions that express asymmetrical roles in CS structure: the matrix language/embedded language opposition and the content morpheme/system morpheme opposition. These oppositions apply only to a mixed CP as Myers-Scotton puts it forward:

"The ML vs. EL distinction is only relevant for intrasentential CS because it is only here that two languages are involved in the same CP."(Myers-Scotton, Jake and Okasha, 1996: 11)

[115] Myers-Scotton distinguishes two types of intra-sentential code-switching: classic and composite CS. In classic CS, only one of the participating languages provides the morpho-syntactic structure of bilingual CP as opposed to composite CS in which two languages are the source of the structural frame.

2.2.3.1. The Matrix Language-Embedded Language hierarchy:

The first asymmetry in producing a bilingual CP concerns the participating languages. Only one language called the Matrix Language sets the grammatical frame within a mixed CP by providing system morphemes (function words and inflections) and dictating word order. The other language called the Embedded Language only supplies content morphemes or well-formed phrases in the mixed CP along with the matrix language. The premises of the matrix language (the unequal participation of two languages and the identification of ML in terms of it structural role) are stated as two principles under the ML hypothesis:

- The Matrix Language hypothesis

  The ML sets the morphosyntactic frame for ML+EL constituents. (Myers-Scotton, 1993b:82)

From this follow two principles:

1) Morpheme-Order Principle: in Matrix Language + Embedded Language constituents consisting of singly occurring Embedded Language lexemes and any number of Matrix Language morphemes, surface morpheme order (reflecting surface syntactic relations) will come from the Matrix Language.

2) The System Morpheme Principle: in Matrix Language + Embedded Language constituents, all system morphemes which have grammatical relations external to their head constituents (i.e. which participates in the sentence's thematic role grid) will come from the Matrix Language. (Myers-Scotton, 1993b: 83)

The following example illustrates these two principles that concern mixed (ML+EL) constituents:

[38] nə-ɬlaɛ n-*régl*-ɪ l-*problème* taɛ *l'attestation* hadik.

1PR-go 1PR-*regulate*-1SG DEF-*problem* of *the certificate* that.
'I will go to regulate the problem of that certificate'.

The ML in the above sentence is AA. AA provides most system morphemes; the verb inflections of the French verb stem *'régl'* (regulate), the definite article of the French noun *'problème'* (problem), the demonstrative pronoun of the French NP *'l'attestation'* (the certificate). The AA word order is also respected. AA imposes its word order in the case of the NP 'l'attestation hadik' i.e. the AA demonstrative pronoun[116] follow the French noun and subcategorizes for a definite article.

[116] In AA demonstrative pronouns either precede or follow the nouns they modify, whereas they must precede the nouns in French.

2.2.3.2. The structural constituents in intra-sentential CS:

In a mixed CP[117], the distinction between ML/EL in the MLF model results in three types of constituents: a mixed constituent (ML+EL constituent), an ML island and an EL island. The most relevant constituent within a CP showing intra-sentential CS is the maximal projection[118] according to Myers-Scotton (1995: 246).

- ***Mixed constituent***: include one or more singly occurring embedded language content morphemes that are morpho-syntactically integrated into the ML. These are the type of constituent that is fully and entirely identical to the morphosyntax of only one language and to which the system morpheme and morpheme order principles apply (Myers-Scotton, 2002: 21, 67). The following example from AA/French CS data of this study includes mixed constituents :

[39] ħna n-*corrig*-ɔ ət-*test* w nə-*plac*-ʊ-h fə l-*groupe*.

We 3PR-*correct*-3PL DEF-*test* and 3PR-*place*-3PL-him in DEF-*group*.
'We will correct the test and then we will put him in the appropriate groupe'.

In this sentence, there are two mixed CPs, with AA as a Matrix Language and French as an Embedded Language.

- The first bilingual CP 'ħna n-*corrig*-ɔ ət-*test*' contains an AA subject pronoun 'ħna' (we) and a mixed constituent or mixed VP 'n-corrig-ɔ t-test' (we will correct the test). This mixed VP contains two content morphemes, a French verb stem (corrig) which is inflected with AA verb inflections: tense prefix (n-) and subject agreement (-ɔ), and a French noun (test) which takes an AA definite article (l-) which is assimilated to (t-).
- The second mixed CP 'nə-plac-ʊ-h fə l-groupe' contains two mixed constituents. The first is a mixed VP 'nə-plac-ʊ-h' (we will place him) that contains a French verb stem (plac) to which are attached, tense prefix (nə-), subject agreement suffix (-ʊ), and object clitic pronoun (h). The second mixed constituent is a mixed PP 'fə l-groupe' that contains an AA preposition 'fə', AA definite article (l-) and a French noun 'groupe'.

- ***ML islands***: are made only of ML morphemes under the control of ML grammar. These ML islands are mostly expected because they are part of the language that sets the structural frame of the CP. (Myers-Scotton, 2002 :58).

[117] A mixed CP or bilingual CP is a CP that shows intra-sentential CS.

[118] A maximal projection includes the expantion of its head constituent to the phrase level resulting in NP (noun phrase), VP (verb phrase), PP (prepositional phrase), or AdjP (adjectival phrase).

The ML of the following example from the AA/French CS corpus is AA. This example includes an AA island which is the AA prepositional phrase 'fə l-ʒazaɟɟəʀ' (in Algeria):

[40] zaɛma kaɟen *un marché* fə l-ʒazaɟɟəʀ.

Epistemic[119] are a market in DEF-Algeria.

'Do you thing are there *a market* in Algeria'.

- **EL islands**: are made only of EL morphemes that show internal structural dependency and are well-formed according to EL grammar, yet they occur in the ML frame of a bilingual CP so they are under the control of ML grammar.

Myers-Scotton (2002: 149) distinguishes between two types of EL islands, embedded language islands and internal embedded language islands.

EL islands: are well-formed phrase-level constituents or maximal projections (e.g. NP, PP, VP) that are projected in the embedded language grammar however their placement within the CP is dictated by ML constituents-order. The following example from our AA/French CS data includes EL Island:

[41] ʒaw-ni *les interventions*.

Came-1SG *the interventions.*

'I received interventions'.

The ML of this CP is AA because it contains AA inflections and subject agreement which are outside late system morphemes and has AA word-order (V+S). The French NP '*les interventions'* is an embedded language island that occurs as a subject after the AA verb. The French NP is well formed in French (i.e. it consists of French noun which is a content morpheme and its relevant early system morphemes: a French definite article and a plural suffix) but its placement within the mixed CP respects AA word-order (V+S) not French word-order (S+V).

Internal EL islands i.e. 'EL islands *within* ML+EL constituents' (Myers-Scotton, 1993b: 151). The internal EL islands are also well-formed constituents projected in EL grammar but they are inserted in larger ML maximal projections that govern them. Internal EL Island is an 'intermediate' constituent and part of a maximal projection in the ML (Myers-Scotton, Jake and Okasha, 15: 1996). Internal EL islands include embedded language NPs (Det+N or Det+N+Adj) that are inserted in larger Matrix Language NPs or PPs as in the following examples:

[119] Epistemic modality is the use of modal auxiliaries to express the speaker's judgement or opinion about a statement. E.g. It might be true. Here, the speaker is expressing his attitude about whether what he is talking about is true or not, accepting that there is a possibility, but not being certain. 'zaɛma' in the example [34] is a modal used epistemically.

[42] wɔll-ɔ ɟa-lq-ɔ *des livres*[120] tawaɛ-hɔm fə *les cartables* taɛ *les jeunes*.

Become-3PL 3PR-find-3PL *some books* of-their in *the school bags* of *the youngsters*.

'They have found their books in youngsters' school bags'.

In this bilingual CP with AA as the Matrix Language, there are three mixed constituents [ML+EL constituents] or maximal projections:

- The first is the AA noun phrase '[des livres] tawaɛ-hɔm' (some books of-their) which consists of a French NP [des livres] (some books) modified by the AA possessive construction 'tawaɛ-hɔm'.
- The second mixed constituent is the AA prepositional phrase 'fə [les cartables]', into which the French NP [les cartables] is inserted.
- The third mixed constituent is the AA prepositional phrase 'taɛ [les jeunes]' into which the French NP [les jeunes] is inserted.

So the French NPs are internal EL islands that are embedded into a larger AA noun phrase projected by the possessive construction tawaɛ-hɔm or into AA prepositional phrases projected by the prepositions 'fə' and 'taɛ'.

The following example is from Myers-Scotton's (1993b, 151) Swahili/English CS. It contains an English NP (N+Adj) which is inserted into a Swahili maximal projection projected by a determiner 'ka-':

Ka-*small thing* aka.
A *small thing* it is. 'It is a *small thing'*.
Swahili/English CD, Myers-Scotton, 1993b:151)

Myers-Scotton (1993) has been criticized by Boumans (1998: 36-37) for neglecting to consider plural nouns in her classification of the different structures. According to Boumans (1998) plural nouns which are larger than a single content morpheme and smaller than a constituent is better to be treated as EL islands as in the following example:

Duk *artikel-en* ila bχɪtɪ t-tarʒam-hɔm.
Those *articles* if you want to translate them.
(MaroccanArabic/Dutch CS; Boumans, 1998:37).

Myers-Scotton (2002:149) agrees to treat the EL nouns with their plural affixes as internal embedded language islands.

[120] 'Livres' (books) here refer to Bible.

2.2.3.3. Content Morpheme/ System Morpheme opposition:

The second major opposition in the production of bilingual CPs is the content/system morpheme opposition. Myers-Scotton (1993, 1997) distinguishes two types of morphemes, content and system morphemes. These morphemes according to her display different functions in monolingual and bilingual speech. Content morphemes are elements that convey semantic and pragmatic aspects of utterances by assigning or receiving thematic role. System morphemes indicate relation between the content morphemes in building grammatical frame and they do not assign or receive thematic role. The importance of the ML/EL hierarchy and the definition of the Matrix Language are based on the way content and system morphemes are distributed within a bilingual CP. This distribution is not equal as Myers-Scotton (2002:15) puts it forward:

> *"All the participating languages may contribute content morphemes to bilingual CPs, but not all can contribute critical system morphemes. This is the domain of the Matrix Language". Myers-Scotton (2002:15)*

Thus the MLF model makes it clear that while content morphemes may come from both languages in a bilingual CP, system morphemes only come from the Matrix Language. However not all system morphemes come from the ML; although EL system morphemes cannot be inserted alone into the ML frame, they can appear within EL islands.

In the System Morpheme Principle stated above, Myers-Scotton (1993) does not provide any precise definition of system morphemes that must come from the ML except that they "*have grammatical relations external to their head constituents*" (ibid: 83). Some researchers (Muysken 2000, Boumans 1998) argue that this principle is not clear enough.

Because of the prominence of system morphemes in defining the ML and in setting the hierarchies of the MLF model, Myers-Scotton & Jake (2000, 2001) and Myers-Scotton (2002: 87-8) further elaborate the classification of content and system morphemes by adding the 4-M model. The 4-M model specifies the type of system morphemes that must come from the ML in a mixed CP as *'outsider late system morphemes'*. The other types of system morphemes ('early' system morphemes and 'bridge' system morphemes) which usually come from the Matrix Language in mixed constituents may also come from the embedded language but within embedded language islands.

2.2.4. The 4-M 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)[121]. These are early system

[121] Myers-Scotton and Jake (2000:1060).

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 as in the following figure:

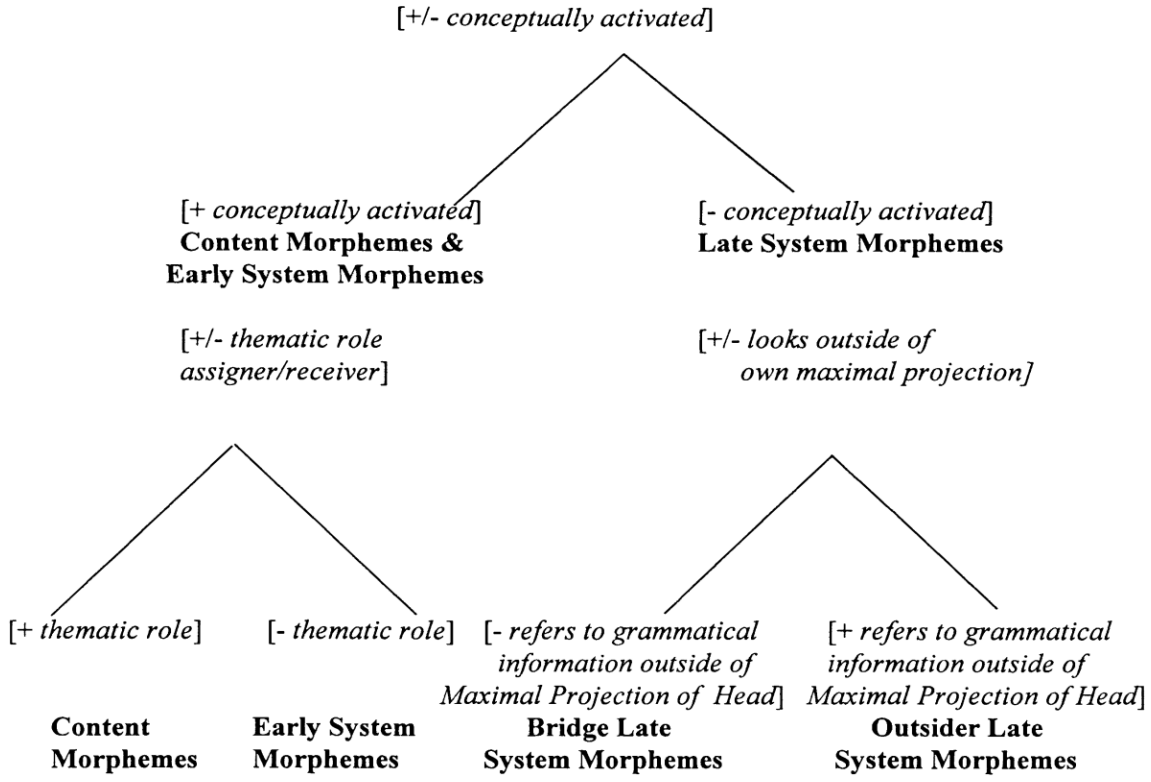

Figure 1. *Feature-based classification of morphemes in the 4-M model (adapted from Myers-Scotton and Jake 2000b).*

The 4-M model is a model of morpheme classification that is based on the notion that lemmas underlying different morphemes are accessed at different levels during language production which explain their distribution within a sentence. Before introducing the four types of morphemes a brief overview of some relevant aspects of language production and a brief presentation of the abstract level model should be outlined in order to understand some basic concepts and mechanisms to explain and to better understand the 4-M model.

2.2.4.1. Model of language production and the Abstract Level model:

Language production goes through three levels: the conceptual level, the functional level and the positional (or surface) level.

Language production procedures start with the conceptual level. Speakers make a number of decisions largely unconscious (i.e. language or stylistic choices that depend on many factors including sociopolitical and psycholinguistic considerations e.g. the situation, setting, proficiency, etc). At this level speaker's pre-linguistic intentions which are the result of speaker's decisions are realized in the form of semantic-pragmatic bundles that are language specific.

These language specific semantic-pragmatic bundles are mapped onto entries (lemmas[122]) in the mental lexicon at the functional level[123] as lexical-conceptual structures.

At the lexical-conceptual structure which is the first level of lemmas and which is activated by language specific semantic-pragmatic bundles; the semantic content underlying content morphemes is activated. The other two levels of lemmas (i.e. predicate-argument structure and morphological realization patterns) contain information about how relations among content morphemes are structurally encoded. The predicate-argument structure includes information about how thematic structure map onto phrase-structure unites (grammatical relations between verbs and some prepositions and their arguments). The morphological realization patterns contain information about the way grammatical relations are realized on the surface (e.g. word order and agreement morphology).

When lemmas underlying content morphemes are directly elected at the lexical-conceptual structure level, they point to lemmas underlying early system morphemes that become activated at the same lemma level because they add conceptual information to content morphemes. when the two remaining abstract levels (i.e. predicate-argument structure and morphological realization patterns) of lemmas become activated, these lemmas send directions to the formulator at the functional level that turns on the actual morpho-syntactic procedures that result in surface-level utterances i.e. at this level (the formulator), lemmas underlying late system morphemes are activated to combine small units into larger hierarchical-structure constituents that are realized at the positional (surface) level.

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[122] Lemmas are abstract lexical entries in the mental lexicon that underlie surface level morphemes (Myers-Scotton, 2002:17). They contain three levels of abstract lexical structure 1) lexical-conceptual structure 2) predicate-argument structure and 3) morphological realization patterns. These three levels contain abstract pragmatic and semantic information as well as syntactic and morphological information necessary for the surface realization of a lexical entry. Thus Lemmas are sets of directions that mediate between the intentions at the conceptual level and the production of grammatical structure including surface structure (Myers-Scotton & Jake, 2000:1055).

[123] The functional level consists of the mental lexicon and the formulator. The mental lexicon contains lemmas (lemmas contain three levels of abstract lexical structure) which are activated by language-specific semantic-pragmatic bundles which are activated in the conceptualizer. (Myers-Scotton, Jake and Okasha, 1996: 22).

2.2.4.2. Content morphemes:

As in the MLF model, content morphemes are defined by the feature [+ thematic role assigner/receiver] that distinguishes them from system morphemes which have [- thematic role assigner/receiver]. Nouns, adjectives, most verbs and some prepositions are content morphemes; they constitute predicate-argument structures[124] by assigning or receiving thematic roles (hereafter θ-role). All Nouns receive thematic roles while most verbs (except copula and 'do' verb) and some prepositions assign thematic roles. Predicates and arguments are content morphemes since the former assign θ-role and the latter receive θ-role as in the following example:

[43] ana n-dirə-l-hɔm *l'entretien*.

I 1PR-make-for-them *the interview*.

I will make with them the interview.

The subject pronoun ana (I) is a content morpheme since it receives the θ-role of agent. The noun '*entretien*' (interview) which constitutes the argument of the predicte 'dir' (make) is also a content morpheme that receives the θ-role of patient. The verb 'dir' (make) is a content morpheme that assigns the θ-role of patient to the noun 'entretien'. The AA preposition 'l-' (for) is a content morpheme that assigns the θ-role of beneficiary or goal to 'hɔm' (them).

Content morphemes also have the feature [+conceptually activated] i.e. Lemmas underlying content morphemes are directly elected[125] as maximal projections' heads (e.g. nouns are activated as heads of NPs, verbs as heads of VPs, and prepositions as heads of PPs). Within mixed CPs, content morphemes may come from either languages participating in CS.

2.2.4.3. System morphemes:

System morphemes have no semantic role i.e. they have the feature [-thematic role assigner/receiver]. System morphemes include inflections and some function words e.g. determiners, tense and agreement inflections, copula, expletive pronouns *it* and *there*….ect.

The feature [+/-quantification] has been also used by Myers-Scotton (1993, 1997) along with [+/-thematic role assigner/receiver] to distinguish between content and system

[124] Predicate-argument structures display the way thematic (semantic) roles or structures are mapped onto grammatical relations e.g. mapping of agent to subject, beneficiary to indirect object …etc.

[125] 'Directly elected' means that speaker's pre-linguistic intentions activate semantic-pragmatic feature bundles at the conceptual level, which point to lemmas in the mental lexicon that underlie those surface content morphemes carrying semantic-pragmatic content of a message (Myers-Scotton & Jake, 2000 :1058).

morphemes. System morphemes have the feature [+quantification][126], this includes quantifiers (all, some, any), determiners, possessive adjectives, degree adverbs as well as tense and aspect. On the other hand content morphemes are characterized by the feature [-quantification]. The [+/-quantification] feature is still considered relevant under Myers-Scotton's (2002:70) 4-M model but additional because according to her, the feature [+/-thematic role assigner/receiver] is sufficient alone.

The basic opposition between content morphemes and system morphemes which is based on the feature [+/-thematic role assigner/receiver] is emphasized by the 4-M model and further modified by adding two new oppositions that classify the system morphemes into three types.

2.2.4.3.1. Early System morphemes:

They are called early system morphemes because they are conceptually activated at the lemmas level. Thus they have the feature [+conceptually activated][127] along with content morphemes i.e. they are activated as soon as the lemmas underlying content morphemes are activated to provide the information needed to complete the speaker's intention conveyed by the content morpheme. In that they differ from other system morphemes.

Early system morphemes however do not assign or receive thematic roles and they are indirectly elected[128] by their head content morphemes because "*they appear in the same surface-level maximal projection as their heads, and they depend on their heads for information about their form*" (Myers-Scotton, 2002: 75).

Early system morphemes include determiner (articles, possessive adjectives, plural affixes and gender affixes[129], and the satellite preposition (verb particles) in phrasal verbs (e.g. 'de' in 'souvenir de'[130] remember).

[126]A morpheme showing [+quantification] is a morpheme that restricts possible referents of a lexical category e.g. articles restrict the possible reference of nouns (a boy vs. boys); tense and aspects restrict possible reference of verbs; degree adverbs, such as very, too, restrict the reference for events and adjectives (Myers-Scotton & Jake, 1995:246).

[127] [+/-conceptually activated] refers to the hypothesis that morphemes are accessed differently during production process. That is, lemmas supporting morphemes activated at the conceptual level by language specific semantic-pragmatic bundles are called conceptually activated; those that are activated at the level of the formulator are not.

[128]Indirectly elected means that lemmas underlying early system morphemes are not activated by speaker's intentions (semantic-pragmatic feature bundles) rather they are activated when lemmas underlying content morphemes point to them to complete their semantic-pragmatic features.

[129] Plural and gender affixes are attached to nouns and to adjectives and determiners (articles, possessive pronouns, demonstrative pronouns) in some languages and agree with nouns that they modify.

French articles and possessives for instance are early system morphemes. They are conceptually activated by speaker's intentions to add conceptual information to their heads (i.e. definiteness, possession) and they are indirectly elected by gender and number features of their heads.

Early system morphemes either come from the Matrix Language in mixed islands or from the Embedded Language within EL islands.

2.2.4.3.2. Late system morphemes:

Unlike early system morphemes, late system morphemes are accessed later in the formulator during language production. They are activated when the formulator receives directions from lemmas underlying content morphemes and early system morphemes to build larger syntactic units. Myers-Scotton and Jake (2000: 1063) define late system morphemes as opposed to early system morphemes as follow:

> *"The information contained in late system morphemes is grammatical as opposed to conceptual. The two types of late system morphemes are not elected to complete a semantic and pragmatic feature bundle with their heads; rather, they are structurally assigned to indicate relations between elements when a larger constituent is constructed". (2000:1063)*

Late system morphemes are further divided into two types, bridges and outsider late system morphemes. They are differentiated from each other by the second new feature [+/- outside information][131].

2.2.4.3.2.1. Bridge system morphemes:

Bridge system morphemes unite morphemes into larger constituent, in doing so they depend on information inside the maximal projection within which they occur, i.e. they have the feature [-outside information]. Both early and bridge system morphemes receive information about their forms from their own maximal projection (NP, PP, VP). 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

[130] This example is given by Myers-Scotton and Jake (2000: 1085) 'de' is an early system morpheme in '*souvenir **de**'* (remember) and a bridge system morpheme in '*par l'hopital **de** Montluçon'* (through the Montluçon hospital)

[131] [+/-outside information] is an abbreviation of [+/-look outside its immediate maximal projection for information about its form] used by Myers-Scotton (2002:77].

constituent's well-formedness. Example of bridges include '*of'* and '*s'* that express possessive relations, and their AA counterpart 'taɛ' and French 'de'.

Bridge system morphemes may come from the Matrix Language in mixed constituents as well as from the Embedded Language within EL islands as illustrates the following example from the corpus of the present study:

[44] ra-h fi waħd t-*trois mois* melli dar-ɔ *la procédure* taɛ *retraitement de dossier*.

Is-3SG in INDF DEF-*three months* since did-3PL *the procedure* of *reprocessing of file.*

'Three months have passed since they have done the reprocessing issue'.

In the above example, there are two mixed CPs; the first CP is [ra-h fi waħd t-*trois mois*] and the second CP is [melli dar-ɔ *la procedure* taɛ *retraitement de dossier*].

The second CP, which is a mixed CP with AA as the ML, contains both AA bridge system morpheme 'taɛ' and French bridge system morpheme 'de'.

- The AA bridge system morpheme 'taɛ' forms a mixed prepositional phrase [taɛ *retraitement de dossier]* that modifies the French embedded noun phrase '*la procedure'* in the mixed noun phrase [*la procedure* taɛ *retraitement de dossier*].
- The French bridge system morpheme 'de' forms a French prepositional phrase [*de dossier*] that is embedded in the mixed prepositional phrase [taɛ *retraitement de dossier]* as a complement to the French noun '*retraitement'*

Dummy pronouns *it* and *there* are also bridge system morphemes as well as the French dummy pronoun '*il'* as in '*il pleut'* (it is raining) (Myers-Scotton, 2002: 80).

2.2.4.3.2.2. Outsider late system morphemes:

Outsider late system morphemes like bridges are structurally assigned to construct larger constituents, unlike bridges they look outside their immediate maximal projection for information about their forms. This means that outsiders are activated when information to combine constituents into the higher projection such as CPs and IPs, becomes available.

Myers-Scotton & Jake (2000) argues that:

> *"This information is only available when the formulator sends directions to the positional/surface level for how maximal projections are unified in a larger construction" Myers-Scotton & Jake (2000: 1064).*

Outsider system morphemes include subject-verb agreement, e.g. the English third person singular 's' which is attached to the verb in VP, however it refers to the subject in NP.

French clitic pronouns (me, te, le, les…etc) and AA clitic pronouns (h, ha, hɔm) are late system morphemes. They require information outside their maximal projection to be activated. This information comes from the subject or object of the verb as in the following example from our AA/French CS data:

[45] n-ʃʊf-ɔ mbaɛd *des trucs* n-*télécharg*-ʊ-hɔm məl l'internet *si on peut les télécharger*.

1PR-see-1PL later *some things* 1PR-*download*-1PL-them from *the internet if one can them download.*

'We will see later some things to download from the internet if it is possible to download them'.

In the above example we have three CPs: [n-ʃʊf-ɔ mbaɛd *des trucs*], [n-*télécharg*-ʊ-hɔm], [*si on peut les télécharger*]. In the second mixed CP, the AA clitic pronoun 'hɔm' which is attached to the French verb stem '*télécharg*' is a late system morpheme because it depends on information (number, gender) outside its own maximal projection to be activated. This information comes from the object of the first CP (i.e., the AA clitic pronoun 'hɔm' in the second CP refers to the direct object '*des trucs*' in the first CP). The French clitic pronoun 'les' in the third CP is also a late system morpheme because it looks outside its own maximal projection for information about its form (i.e., it refers to the direct object '*des trucs'* in the first CP).

2.3. French insertions in AA structures:

Although Myers-Scotton & Jake (2000) and Myers-Scotton (2002) clearly state that 'outsider late system morphemes' are the type of system morphemes that must come from the ML, they still insist on the fact that most system morphemes in mixed constituents come from the ML as they put it forward:

> *"While other types of system morpheme may come from the embedded language (EL), in fact, almost all — not just those required by the system-morpheme principle — come from the matrix language. That is, the embedded language's main contribution to mixed constituents is limited to singly occurring "congruent" content morphemes. Embedded-language islands are also possible". (Myers-Scotton & Jake, 2000:1070-71)*

In this corpus, there are different types of constituent: mixed constituents, internal EL islands and El islands. In order to provide a morpho-syntactic analysis of the different CS structures produced by the speakers of the present corpus, we will classify these constituents into mixed constituents and EL islands. In section (2.3.1.), the morpho-syntactic analysis of mixed constituents when AA is the Matrix Language will be developed. Section (2.3.2.) will be devoted to the morpho-syntactic analysis of French EL islands in AA frames.

2.3.1. Mixed constituents (ML+EL constituents):

Mixed constituents are AA maximal projections (projected by AA heads) that contain either:

- Single French content morphemes (nouns, adjectives, verb stems and adverbs) that are inserted into AA phrases, or
- Internal French EL islands[132] (French definite article + French nouns) that are inserted into larger AA constituents.

In order to analyse the different types of mixed constituents in this corpus we will classify them into mixed noun phrases, mixed prepositional phrases, and mixed verb phrases. Before analyzing mixed constituents, we shall discuss instances of internal EL islands, which are as important in the analysis of this corpus as the other structures i.e. insertion of single morphemes into mixed constituents and EL islands into bilingual CPs.

2.3.1.1. Internal EL islands:

In this corpus, internal EL islands seem to be very recurrent when the Matrix Language is Algerian Arabic. Internal EL islands are well-formed EL constituents that form part of ML maximal projections. They differ from EL islands which are maximal projections themselves. Despite the frequency of internal EL islands they do not seem to be diverse; most of them consist of French NPs containing French nouns defined by French definite articles and are inserted either into larger AA noun phrases or AA prepositional phrases. This type of internal EL islands (i.e. French definite article + Noun) outnumbers the insertion of single French nouns in our corpus.

Other types of internal EL islands observed in the present corpus include French NPs containing French nouns with different types of modifiers: an indefinite articles (example 48), a French possessives (example 49), a French numeral (example 50), and a French adjective (example 47). In addition to internal embedded noun phrases, this corpus includes only one instance of French internal embedded prepositional phrase (example 46). This type of internal EL islands is very rare. The following examples illustrate some internal EL islands:

[46] ra-na n-ʂaqʂ-ɔ [$_{\text{mixed PP}}$ ɛla [$_{\textbf{internal PP}}$***aprés la repris***]].

Are-3PL 3PR-ask-3PL [**about [*after the recovery*]].**
'We ask about how she is doing after recovery'.

[47] hɔma j-dir-ɔ [$_{\text{mixed NP}}$haduk [$_{\text{internal NP}}$***les maisons préfabriquées***]].

They 3PR-do-3PL [those [***the houses prefabricated***]].

[132]Internal EL islands are intermediate constituents of the EL that form part of maximal projections of the ML. they differ from EL islands which are maximal projections themselves.

‘They buy prefabricated houses’.

[48] [$_{\text{mixed NP}}$waħd l-[$_{\text{internal NP}}$ ***une heure***]] n-ɛajjaɬ-l-ək.

[INDEF-DEF-[***an hour***]] 1PR-call-for-you.

‘I will call you in an hour’.

[49] ja-bɣ-ɔ jə-gɔɛd-ɔ [$_{\text{mixed PP}}$ɛand [$_{\text{internal NP}}$ ***mes parents***]].

3PR-like-3PL 3PR-stay-3PL [in [***my parents***]].

‘They like to stay in my parents’ house’.

[50] tsama ra-h fi [$_{\text{mixed NP}}$waħd d-[$_{\text{internal NP}}$ ***dix questions***]].

So is-3SG in [INDEF-DEF-[***ten questions***].

‘He has asked about ten questions’.

Setting aside other types of internal EL islands whose number does not exceed twenty tokens, the present work will focus on internal EL islands that consist of [French definite articles + French nouns]. The insertion of this type of EL islands will be approached alongside the insertion of French single nouns in mixed constituents. This is due to the frequency of insertion of this type of French NPs [French definite articles + French nouns] in AA larger NPs and PPs compared to the insertion of single French nouns in the same AA structures. Thus AA prepositional phrases and noun phrases containing internal French EL islands (i.e. French definite articles + French nouns) are classified as mixed constituents. In this way they don’t differ much from other mixed constituents that contain French singly embedded content morphemes.

2.3.1.2. Mixed noun phrases: Code switching within noun phrases:

The presence of two languages within a noun phrase is recurrent in our corpus. A mixed nominal constituent or a mixed noun phrase contains a French noun or a French internal NP [a French definite article + a French noun] inserted into an AA grammatical frame. As a Matrix language, AA provides different types of system morphemes and dictates its word order across the noun phrases. The system morphemes provided by AA in mixed nominal constituents are determiners (definite/indefinite articles, demonstratives, possessive constructions, pronouns, quantifiers, and numerals); French on the other hand, provides content morphemes which are nouns or internal NPs (definite articles + nouns) in mixed noun phrases. This study will examine the role of AA as a Matrix Language in mixed nominal constituents.

2.3.1.2.1. Code switching within noun phrases; The insertion of French nouns or internal NPs into AA frame:

2.3.1.2.1.1. Definite articles:

AA definite article (l-) or (əl) is a determiner that is used with all nouns (singular, plural, masculine and feminine). In AA/French CS, the AA article (l-) often replaces the French definite masculine singular article (le). This means that the AA definite article (l-) is mostly used with French masculine singular nouns.

This article assimilates to the initial consonant of the noun if this consonant is a coronal or as it is called in Arabic a solar consonant. A French noun can be inserted into morpho-syntactic structure governed by the article (l-) as in the following examples:

[51] hɔwa l-***patron***.

He **the *boss.***
'He is the boss'.

[52] badl-ɔ l-***programme***.

Change-3PL **DEF *programme***.
'They have changed the program'.

[53] ħatta ǰə-kməl l-***groupe***.

Until 3SG-finish **DFE-group**.
'Until the group will be full'.

[54] ana l-***responsable*** hna.

I **DEF-*responsible*** here.
'I am the responsible here'.

[55] rak-ɔm fə s-***secrétriat***.

Are-2PL in **DEF-*secretariat*.**
'You are in the secretariat'.

[56] ǰ-dirʊ-la-h t-***test***.

3PR-make-3PL-for-him **DEF-*test*.**
'They give him a test'.

[57] s-***service*** ga:ɛ ɛaǰan.

DEF-*service* squarely tired.
'The service is squarely tired'

All the above mixed noun phrases have Algerian Arabic as the Matrix Language i.e., they are formed of French nouns determined by the AA definite article (l-). Being the Matrix Language, AA imposes not only its morpho-syntactic rules by providing the system morpheme (the definite article (l-) but also its phonological rules (i.e., before the following consonants t, d, s, z, ʃ, d͡ʒ, r, n) which are called in Arabic the solar consonants, the definite article (l-) becomes assimilated.

The insertion of French nouns into AA noun phrases projected by the AA definite article (l-) is not frequent in this corpus (about 11 examples) and it is mostly limited to the insertion of French masculine singular nouns.

2.3.1.2.1.2. Indefinite articles:

The indefinite nouns in AA are marked by means of 'zero' article, or 'kaʃ', or the composite determiner 'waħd l-'. These articles are system morphemes that form with French nouns, mixed constituents.

2.3.1.2.1.2.1. A Zero article (∅):

Some French nouns are embedded as bare forms without an overt article respecting AA grammar. In AA, some indefinite nouns are generally unmarked. The following examples contain French nouns inserted with a zero article:

[58] ħna nqr-ɔ ***ø initiation*** wəlla ***ø secrétariat***.

We 1PR-teach-1PL ***ø initiation*** or ***ø secreteriat***.

'We teach initiation or secretariat'.

[59] j-dir-ɔ ***ø autorisation***.

3PR-do-3PL ***ø authorization***.

'They should ask for permission'

[60] mʃi ɣi rwa:-ħ w dir ***ø réunion***.

Not just come-2SG and do ***ø meeting***.

'You cannot just come and do meeting'.

[61] dir-i mɛa-h ***ø interview***.

Do-2SGF with-him ***ø interview***.

'Do with him an interview'.

[62] ʃa ʒa:bət-ət ***ø garçon*** wəlla ***ø fille***?

What brought-3SGF ***ø boy*** or ***ø girl***?

'Has she given birth to a boy or to a girl?'

[63] ɛand-ək ***ø engagement*** mɛa-ja.

Have-2SG ***ø commitment*** with-me.

'You have a commitment with me'.

[64] ana n-kʊ-n ***ø intermédiaire***.

I 1PR-be-1SG ***ø intermediate***.

'I am an intermediate'.

The French nouns in the above examples are inserted in the structure [zero article + noun] which respects the AA rules in such sentences. This pattern seems to be recurrent in our corpus (about 35 tokens).

2.3.1.2.1.2.2. The indefinite article (waħd l-):

The composite determiner (waħd l-)[133] consists of the indefinite article (waħd) that sub-categorizes for the definite article (l-) to precede nouns. The insertion of French nouns into NPs governed by the indefinite article (waħd l-) is very limited in this corpus as the following examples illustrate:

[65] fɔ-t ɛla **waħd l-*magasin*** ɛʒabn-i saba:ɬ aɟɟa ʃri-t-əh.

Passed-1SG about **INDEF DEF-store** liked-1SG shoes so bought-1SG-it.

'I passed a store and I saw nice shoes so I bought it'.

[66] rɔħ-t had l-χaɬra, ça fait **waħd d-** ***deux*** wəlla *trois semaines*.

Went-1SG this the-time, that is **INDF DEF-*two*** or *three weeks*.

'It is about two or three weeks since I went there'.

[67] kɔnt nə-*prépar*-ifi **waħd d-*dossier*.**

Was-1SG 1PR-*prepare*-1SG in **INDF DEF-*file***.

'I was preparing a file'.

Examples [09] and [10] from chapter one, that have been used as counter-examples to Poplack's equivalence constraint, are repeated hereafter trying to interpret them within MLF

[133] The prefix (l-) as the definite article or as a part of the composite indefinite article (waħd l-) assimilates to the initial consonant of the noun or adjectives if it is a coronal or solar consonant (t, d, s, z, ʃ, d͡ʒ, ɾ, n) resulting in a geminate consonant.

model's framework. These examples contain French nouns modified by three articles; an AA indefinite article 'waħd' (one), an AA definite article 'l-' (the) and a French indefinite article 'une' (a) as follow:

[68] hadik n-qad-ʊ **waħd l-*une*** *heure de travail* wella, n-*rédig*-ʊ-ha.

That 1PR-can-1PL **INDF-DEF-*one hour*** *of work* or so, 1PR-write-1PL-it.
'That, we can write it during an hour'.

[69] ra-na fi **waħd l-*une semaine*** melli bdi-na.

Are-1PL in **INDF-DEF-*one week*** since started-1PL.
'A week has passed since we have started'.

[70] bala:k **waħd l-*une heure*** n-ɛajja-ɬ-lə-k.

May be **INDEF DEF-one hour** 1PR-call-1SG-for-you.
'I may call you during an hour'.

Although the above examples violate French grammar; they conform to AA grammar. AA provides the composite indefinite article (waħd l-) into which French nouns are inserted with their numerals (i.e. the French particles un, une are used as indefinite articles (a, an) and as numeral cardinal adjectives (one) according to linguistic context). Thus in the above examples the French indefinite article 'une' is perceived as an ordinal number and in this case the above structures conform to AA grammar[134].

The insertion of French nouns into AA structure framed by the indefinite article (waħd l-) are very limited compared to the insertion of French nouns with their French definite articles as internal EL islands in the same AA structure i.e. accompanying French nouns, French definite articles replace the AA definite article (l-) in the composite indefinite article (waħd l-) forming the construction (waħd+ le/la/l'/les + noun) as illustrated by the following example:

[71] kajen **waħd *l'article*** taɛ *recherche* ɛla l-mɔdawəna:t.

There is **INDF *the article*** of *research* about the blogs.
'There is an article of research about the blogs'.

[72] ɛandi **waħd *la pommade*** *très efficace*.

Have-1SG **INDF *the cream*** *very effective*.
'I have very effective cream'.

[134] In AA, the definite article (waħd l-) my precede a noun modified by a numeral e.g.:
ʃri:t waħd l-χamsʂ ktɔb. I bought INDEF-five books. 'I bought five books'.
ktabt waħd r-rabɛ sɬur. I wrote INDEF- four lines. 'I wrote five lines'.

[73] ɛand-ək **waħd** ***les positions*** *extra*.

Have-2SG **INDF** ***the positions*** *extra*.
'You have extra-ordinary positions'.

[74] **waħd** ***la couleur*** ʒab-ha-l-ha t-ɛajjəf.

INDF ***the color*** brought-3SG-to-her disgusting.
'He has brought her a ʒəlaba that has an ugly colour'.

So the insertion of internal French NPs into AA larger NPs governed by the indefinite article 'waħd' is more frequent in this corpus than the insertion of single French nouns into the AA NPs governed by the indefinite article (waħd l-). This is again because of the tendency of French nouns to be embedded with their articles.

We have found two examples in this corpus in which the embedded French nouns lack the definite article after (waħd) as follow:

[75] **waħd** ***ø un quart d'heure*** hakka gɔɛd-i fə *la vapeur*.

INDEF ***ø a quarter of an hour*** like this stay-2SGF in *the steam*.
'Keep you face over the bowl in order to steam it for about a quarter of an hour'.

[76] χɔs-ha *à chaque fois* t-χalləs **waħd** ***ø une somme***.

Shoud-3SGF *each time* 3PRF-pay **INDEF** ***ø an amount***.
'She should regularly pay an amount of money'.

In the above examples; the definite article (l-) as well as the French definite articles are omitted after (waħd) thus violating AA grammar in such contexts.

2.3.1.2.1.3. Demonstratives:

Like French, the AA demonstratives are marked for gender[135] and number (hada, hadi'this', hadu 'these'; hadak (dak), hadik (dik) 'that', haduk (duk) 'those'). However unlike French demonstratives, the AA demonstratives need a definite article before the noun they introduce. In AA/French CS, when AA is the Matrix Language, the AA demonstratives may introduce mixed noun phrases (demonstratives + l- +EL nouns) as in the following example:

[135] In the case of demonstratives, French gender resembles AA gender, both have a masculine/feminine distinction in the singular but not in ther plural.

[77] ma-rak-ʃ m-daχχə-l mɛa-k χadama fə had l-***context***?

NEG-be-NEG PROG-hire-3SG with-you workers in **this DEF-*context***?
'Have you hired workers in this context'?

[78] *Normalement deux fois par semaine* n-dir-ɔ had n-***nettoyage***.

Normally two times per week 1PR-make-1PL **this DEF-*cleaning***.
'Face cleaning should be done twice a week'.

AA demonstratives may also introduce French EL noun phrases. In fact the insertion of French noun phrases that are called internal EL islands is more frequent (about 29 tokens) in this corpus than the insertion of EL nouns (only 3 instances). The following examples illustrate the insertion of French NP²s within a morpho-syntactic frame set by AA demonstratives:

[79] ga:l-l-i bala:k had ***la semaine***.

Said3SG-to-me may **this *the week***.
'He said may be this week'.

[80] kɔn ʒa-w ja-ħtarm-ɔ hadu ***les minoritaires***, ma-j-dir-u-ʃ kima hakka.

If come-3PL 3PR-respect-3PL **these *the minorities***, NEG-3PR-do-3PL-NEG like that.
'If they respect these minorities, they will not do like that'.

[81] gɔtə-l-ha kɔn dərt-i haduk ***les manches***.

Told-to-her if made-3SGF **those *the sleeves***.
'I told her to wear the sleeves'.

[82] hadi ***la faute*** dajmən j-diru-ha.

This *the fault* always 3PR-do-3PL-3F.
'They always do the same mistake'.

[83] hadak ***le stress*** jʒi.

That *the stress* comes.
'the stress is something normal before examination'.

The French nouns not only respect AA sub-categorization restriction by taking a definite article along with a demonstrative pronoun but also respect the AA word order as in the following examples where demonstrative pronouns follow the nouns they modify:

[84] mɔhim ***l'espace*** hadak, zaɛma l-fikra hadik *toujours* qajma.

Important ***the space* that**, that is the idea that *always* exists.
'The important thing is to keep that space or that idea always'.

[85] na-łlaɛ n-*régl*-i l-*problème* taɛ ***l'attestation*** hadik.

1PR-go 1PR-*regulate*-1PL DEF-*problem* of ***the certificate*** **that**.
'I will go to settle the problem of that certificate'.

[86] ***La ruelle*** hadi mli:ħa.

The road **this** good.
'This road is good'.

French nouns as well as French NPs respect AA morpho-syntactic frame and word order imposed by AA demonstratives within which they are embedded. French nouns are more likely to be inserted with their articles as internal EL islands within larger AA noun phrases projected by AA demonstratives than on their own.

2.3.1.2.1.4. Possessives:

Possession is a kind of noun modification in the sense that possessor determines and identifies the possessed nouns. Possession in AA is expressed in two ways; one is synthetic i.e., the possessors are pronominal suffixes that are attached to the possessed nouns. the following example from our corpus illustrate the AA synthetic construction that express possessive relation:

[87] blad-**na** ʃa:ba.

Country-**our** beautiful.
'Our coutry is beautiful'.

In the above example the possessor is the pronominal suffix 'na' that is attached to the possessed noun 'blad' (country). This synthetic construction seems not to be productive with inserted French nouns and it is neither attested in this corpus nor in other CS studies involving Moroccan Arabic as a Matrix Language (MA/Dutch, Boumans, 1998: 206; Moroccan Arabic /French CS, Ziamari, 2002: 132)

The analytic form of the possession however, is frequently used in AA/French CS and it takes the following form [NP + taɛ-pronominal suffix] i.e. the particle 'taɛ' (of) links the possessed object to the possessor which is a pronominal suffix. The particle 'taɛ' (of) is a preposition however unlike the other AA prepositions, it agrees with the possessed nouns in number[136]. The pronominal suffixes (i, ək, əh, ha, kɔm, hɔm) are attached to the AA

[136] Unlike the other AA prepositions, the preposition 'taɛ' agree with the preceding possessed nouns in number i.e. the preposition 'taɛ' is used after singular nouns, yet after plural nouns, it becomes 'tawaɛ' or 'tawɛ'. E.g. ktab **taɛ**-i (book of-1SG) my book / ktɔb **tawɛ**-i (books of-1SG) my books
ktab **taɛ**-na (books of-3SG) our book / ktɔb **tawaɛ**-na (books of-1PL) our books.

particle (taɛ/tawaɛ or tawɛ) modifying the preceding possessed nouns. Inserted French NPs are frequently modified by the AA analytic possessive forms as in the following examples:

[88] kɔn-na ɣi bəl-passeport n-rɔħ-ɔ n-fawt-ɔ ***les vacances*** **tawaɛ-na.**

Were-1PL just with DEF-*passport* 1PR-go-3PL 3PR-pass-3PL *the holidays* of-us.
'We used to travel only with the passport to pass our holidays'.

[89] waʒd-i ***les statistiques*** **tawɛ-ək.**

Prepare-2SGF **the statistics of-you**.
'Prepare your statistics'.

[90] rɔħ-t n-ʒib ***les invités*** **tawɛ-əh.**

Went-1SG 1PR-bring ***the guests*** **of-him**.
'I went to bring his guests'.

[91] aɛɬi-ni ***les papiers*** **tawɛ-ək.**

Give-1SG ***the papers*** **of-your**.
'Give me your papers'.

[92] ʃuft-i mɛa-ha ***la méthode*** **taɛ-ha?**

Saw-1SGF with-her ***the method*** **of-her**?
'did you see her method'

[93] ana n-kamməl ***les deux cours*** **tawɛ-i ɛla** l-waħda.

I 1PR-finish ***the two lectures*** **of-me** at one o'clock.
'I will finish my two lectures at one o'clock'.

[94] ɛand-hɔm ***les organisateurs*** **tawaɛ-hɔm.**

Have-they ***the organizers*** **of-them**.
'They have their organizers'.

The French NPs in the above examples are modified by AA postpositional complements expressing possessive relation (preposition + pronominal suffix).

Embedded nouns or noun phrases can be modified by pronominal possessors (i.e. the particle taɛ links the possessed nouns to the possessor pronominal suffixes) as in the above examples; or by lexical possessors (i.e. the particle taɛ links the possessed nouns to the possessor nouns) using the construction [NP + taɛ+ NP] as in the following example:

[95] dar-t ***l'opération*** **taɛ** l-galb.

Made-1SG ***the operation*** **of DEF-heart**.
'I underwent a heart surgical operation'.

The possessed noun and the possessor noun may both come from the EL (French); yet they are linked using the AA preposition'taɛ' which is a bridge system morpheme forming the construction [NP + taɛ+ NP] that expresses possession as in the following examples:

[96] ǰ-wal-i ɛan-na ***le guide*** taɛ ***le niveau un, deux, trois****…etc***.**

3PRM-become-3SG have-3PL ***the guide*** **of** ***the level one, two, three****…etc*.
'We will have a guide for each level'.

[97] t-wal-i ɛand-i ***un listing*** taɛ ***les meilleur-s écoles***.

3PRF-become-3SG have-1SG ***a listing*** **of** ***the best-PLAgr schools***.
'I will have a listing of the best schools'.

[98] tlaqi-t-ha ***le dernier jour*** taɛ ***les vacances***.

Met-1SG-3SGF ***the last day*** **of** ***vacation*****.**
'I met her the last day of vacation'.

[99] kan-ət ta-qra hna ***la veille*** taɛ ***l'examen***.

Be-3SGF 3SGF-study here ***the eve*** **of** ***the examination***.
'She was studying here the eve of examination'.

[100] ɣad-i n-dir ***la tournée*** taɛ ***les gosses***.

Will-1SG 1PR-make ***the tour*** **of** ***the kids***.
'I will go to pick up the kindergarten kids'.

The above examples illustrate how French noun phrases are frequently inserted in AA frames. These French EL NPs seem to obey ML (i.e. AA) requirements.

2.3.1.2.1.5. Quantification:

2.3.1.2.1.5.1. Numerals:

According to the MLF model, switching of a single numeral from the EL is not possible because numerals[137] are system morphemes so they either come from the ML in mixed constituents or occur as EL islands with the nouns they modify.

Although switching between AA numerals and French nouns is allowed by the MLF model when AA is the ML; there is no instance of such switching in this corpus except example [101] cited bellow. This example involves switching between an AA numeral

[137] Numerals in NPs, behave differently; they are determiners when they precede a noun (e.g. two books), when they do not come before a noun they are a subclass of nouns e.g. *two of us* (in this example 'two' is a noun and 'of us' is the complement of 'two').

(waħad ‘one’) and a French noun (bras-cassé ‘broken arm’) that forms the following mixed noun phrase:

[101] ma-na-bɛat-l-ək-ʃ **waħad *bras-cassé*.**

NEG-1PR-send-for-you-NEG **one *broken arm***.
‘I will not send you a lazy person to hire’.

The particle ‘waħad’ in the above example may be perceived as an indefinite article and as a numeral adjective.

AA numerals in this corpus are not used as modifiers preceding French nouns. AA numerals in our corpus appear with French nouns only within the AA construction: (numeral + taɛ + NP)[138]. In this construction AA numerals are used as nouns and French nouns are inserted into AA prepositional phrases projected by the preposition ‘taɛ’. These prepositional phrases are used as complements modifying AA numerals. This construction is used only with numbers from 2 to 10 in AA and it is limited in this corpus to the following examples:

[102] ɛan-na **χamsa taɛ *les spécialités*** w **rabɛa taɛ *les stages*** fə l-ɛa:m.

Have-3PL **five of *the specialities*** and **four of *the trainings*** in the year.
‘We have five specialities and four trainings in a year’.

[103] mra kbi:ra hiʄa w raʒəl-ha **ɛaʃra taɛ *les chariots*** χarʒu-hɔm.

Woman old she and husband-her **ten of *the wagons*** brought-3PL-them out.
‘An old woman with her husband have brought out ten wagons’.

[104] J’ai choisi **χamsa taɛ *les noms*.**

I have chosen **five of *the names***.
‘I have chosen five names’.

[105] *L’officier de permanence* **ɛaʄʄaɬ l-setta wella sabɛa taɛ *les militaires*.**

The duty officer called DEF-six or **seven of *the soldiers***.
‘The duty officer called six or seven soldiers’.

[138]AA numerals are used as determiners preceding the nouns they modify e.g. ‘χams ktɔb’ (five books); they are also used as nouns and take prepositional phrase as a complement e.g ‘χamsa taɛ l’ktɔb’ (five of the books) ; the latter construction (numeral + taɛ + DEF-noun) is used only with numbers from 2 to 10. CS between AA numeral when it is a determiner and French noun is not possible (*’χamsa noms’ five names); however French nouns can be inserted into the prepositional phrases that modify AA numerals when they behave as nouns (e.g. ‘χamsa taɛ les noms’ five of the names)

In the above examples French NPs (les spécialités, les stages, les chariots, les noms, les militaires) are embedded into AA structure headed by the preposition 'taɛ' forming AA prepositional phrases that function as complements to AA nouns (χamsa, rabɛa, ɛaʃra, and sabɛa).

We have found a counter-example to the MLF model involving switching between a French numeral 'quinze' (fifteen) and an AA noun 'χada:m' (worker) as in the following example:

[106] mi:n d-gul ***quinze*** χada:m maɛnat-ha ***quinze*** χada:m j-kunɔ *permanents, déclarés*, etc.

When 2PR-say ***fifteen*** **worker** means-it ***fifteen*** **worker** 3PR-be-3PL *permanent, registered*…etc.

'When you say fifteen workers it means fifteen workers that are permanent, registered…etc'.

According to the MLF model, numerals are early system morphemes. So they either come from the ML in mixed constituents or from EL within EL islands. Yet in the above example, the numeral comes from the EL (French) in mixed constituent and modifies the Matrix Language (AA) noun. Moreover the AA noun is in singular which violates French grammatical subcategorizations (i.e. French number more than 1 subcategorizes for a plural noun) and satisfies the subcategorization of AA numerals (i.e. AA number more than 10 subcategorizes for a singular noun).

Ordinal numbers are also system morphemes so they come from the ML in mixed constituents. The following examples include switching between AA ordinal numbers and French nouns:

[107] n-dir-u-ha ***la semaine*** l-lɔwla taɛ *février*.

3PR-do-3PL-it *the week* DEF-first of *february*.

'We will do it the first week of february.

[108] ka:n *chargé* ***l'examen*** l-lɔwal.

Was *full the examination* first.

'The first examination was heavy'.

[109] ***s-Section*** z-zawʒa ħału-l-hɔm *quatre questions ouvertes*.

Section second gave-3PL-to-them *four questions open*.

'The second section was given four open questions.

In the above examples, the French NPs are modified by AA ordinal numbers **'l-lɔwla'** (first) and **'z-zawʒa'** (second). In these mixed noun phrases, AA dictates its word

order (i.e. AA ordinal numbers follow the noun they modify unlike the French ordinal numbers which precede the noun).

2.3.1.2.1.5.2. The quantifier (kaʃ):

The indefinite adjective (**kaʃ)** come from AA in mixed noun phrases and modify French inserted nouns as in the following examples:

[110] mən-baɛd ʃuːf **kaʃ *modification*** təbɣ-i n-zidu-ha.

ln-after see-1SG **any *modification*** 1PR-want-1SG 1PR-add-1PL-3F.
'Latter see if there is any modification that you want us to add'.

[111] balak t-ban-əl-na **kaʃ *idée*** waħdɔχra ʃaːba.

May 3PR-appear-to-us **any *idea*** other nice.
'May be we will find another good idea'.

[112] Sure dar-u-l-ha **kaʃ** *mutation.*

Sure made-3PL-to-her **any *mutation***.
'They surely made her a mutation'.

The above examples, which are the only available ones in this corpus, illustrate the insertion of French nouns in AA noun phrases through the quantifier '**kaʃ**'.

2.3.1.2.1.5.3. The quantifiers (gaːɛ) and (bəzzaːf):

Modifiers or quantifiers are system morphemes according to MLF model so they either come from the ML or occur as EL Island. The AA quantifier '**gaːɛ**' (all) is a system morpheme that may quantify a definite French noun phrase. The following examples are found in our corpus:

[113] *Les fissures* məl-fug lə-t-taħt fi **gaːɛ l-*batiment***.

The cracks from the top to the bottom in **all DEF-*building***.
'There are cracks in all the building from the bottom to the top'.

[114] **gaːɛ *le trésor*** *du monde* rah ɛan-na[139].

All *the treasure* *of the world* is in-us.
'We have all the world's treasure'.

[139] The construction ɛand plus pronominal suffix (to have) displays features of verbs:
e.g. **ɛan-na** ɾabɛa taɛ les stages fə l-ɛaːm.
have-1PL four of the training courses in DEF-year. 'we have four training courses in a year'
The construction ɛand plus pronominal suffix (to have) displays also features of prepositions (as in the above example).

[115] ga:ɛ ***les photocopies*** rahɔm ɛand-i.

All *the photocopies* are in-me.
'I have all the photocopies'.

[116]tək naɛł-i:-k ga:ɛ ***les slogans***.

FUT 1PR-give-1SG-you **all *the slogans***.
'I will give you all the slogans'.

[117] n-dirə-l-ha ga:ɛ ***la liste***.

1PR-make-for-her **all *the list***.
'I will make for her the entire list'.

[118] *Deux flacons* taɛ *500 mg* j-kaml-u-l-ha ga:ɛ ***la cure***.

Two bottles of 500 mg 3PR-finish-3PL-for-her ***all the cure***.
'Two bottles of 500 mg will finish her cure'.

The above sentences contain French definite nouns embedded as internal EL islands into a structure provided by the AA quantifier **(ga:ɛ)** forming mixed NPs. This structure is recurrent in our corpus (about 18 tokens).

The AA quantifier 'bəzzaːf' (many) is also a system morpheme, that comes from AA in mixed NPs. The following two examples include French NPs inserted as internal EL islands into larger AA NPs projected by the AA quantifier 'bəzzaːf':

[119] darwak, *pour le moment* ma-kka-ʃ **bəzzaːf** ***les groupes***.

Now, for the moment NEG-be-NEG **many *the groups***.
'For the moment there are not many groups'.

[120] ʃətt-i-hɔm! **bəzzaːf** ***les bébés***!

Saw-2SGF-them! **Many *the babies***!
Did you see them! There are many babies!

The insertion of French noun phrases after the quantifier 'bəzzaːf' (many) is limited to the above two instances.

2.3.1.2.1.6. AA Attributive adjectives modifying inserted French nouns:

French embedded nouns and NPs can be modified by AA attributive adjectives[140] in mixed noun phrases. This corpus provides eighty (18) instances of such switching from which the following examples are taken:

[121] badl-ɔ l-***programme*** ʒ-ʒdid**.**

Changed-3PL **DEF-*programme* DEF-new**.
'They have changed a new programme'.

[122] ***Les journaux*** s-sɣ-a:r ʝ-ħawsˁ-ɔ ɣi ʝ-ɛamr-ɔ.

The newspapers **DEF-small-PLAgr** 3PR-want-3PL only 3PR-fill-3PL.
'The small newspapers want only to fill their pages.

[123] dar-ʊ ***affaire*** mliħ-a**.**

did-3PL ***business*** **good-FAgr**.
'They have done a good business'.

[124] hadi ***politique*** kbir-a**.**

This ***politics*** **big-FAgr**.
'This is a big politics'.

[125] ʃətt-i! warri-t-ək ***option*** waħdɔχr-a**.**

Saw-2SGF! showed-1SG-you **option other-FAgr**.
Did you see! I have shown you another option.

[126] *Le site* ra-h maza:l ***une maquette*** χaw-ʝa**.**

The site is still ***a model*** **empty-FAgr**.
'The site is still an empty model'.

[127] kɔn-t n-di:r ***des gardes*** kɔħl-i:n**.**

Was-1SG 1PR-do **DEF guards black-PLAgre**.
'I used to do exhausting guards'.

The AA attributive adjectives (ʒdid 'new', sɣa:r 'small', mliħa 'good', kbi:ra 'big', waħdaχɔr 'other', χaw-ʝa 'empty', kɔħl-i:n 'black') that modify French nouns and French NPs in the above examples satisfy AA word order i.e. they follow the nouns they modify even if some of their equivalent French adjectives would normally precede the above embedded French nouns [*autre* 'other', *petites* 'small', *grande* 'big', *bonne* 'good', *nouveau*

[140] Attributive adjectives are part of the NP headed by the noun they modify. In some languages (e.g. English attributive adjectives precede their nouns (e.g. a good person) ; in others (e.g. AA) they follow their nouns ('ɪnsan mlɪ:ħ' good person) and in yet others (e.g. French), they may precede or follow the noun they modify.

'new']. Moreover the AA adjectives agree with the French nouns in gender, number and even in definiteness (in examples [21, 22], the AA adjectives are definite (preceded by the AA definite article l-) as the French nouns they modify, in examples [23- 27], the AA adjectives are indefinite by means of zero marking as the French nouns they modify.

2.3.1.2.2. Code switching within noun phrases; the insertion of French Adjectives into AA frames.

Adjectives are content morpheme they either assign thematic role[141] or receive thematic role when they are part of a larger NP. So adjectives may come from the embedded language and be inserted into the ML frames of mixed constituents. Adjectives are classified into attributive adjectives that modify ML nouns and predicative adjectives[142] that are inserted in copula constructions. The insertion of attributive adjectives is limited compared to predicative adjectives (31 inserted predicative adjectives as compared to 11 inserted attributive adjectives).

2.3.1.2.2.1. The insertion of French Attributive adjectives:

This corpus contains about eleven cases of embedded French attributive adjectives that modify AA nouns. The following examples illustrate switching of single adjectives:

[128] ja-ɛɬ-ʊ-hɔm ħaʒa ***symboliqu-e***.

3PR-give-3PL-them **thing** ***symbolic-FAgr***.

'Give them something symbolic'.

[129] d-dir waħd l-ħwa:jəʒ ***incroyable-s***.

Do-3SG INDF **DEF-things** ***incredible-PLAgr***.

'She does incredible things'.

[130] ɛand-ha χazra ***bizarre***.

Have-3SGF **glance** ***strange***.

'She has a strange glance'.

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[141] Some adjectives can assign thematic role as in the following example given by Myers-Scotton & Jake (2000: 1058) :

Stella is interested in horticulture.

Here **interested in** assigns the role of theme (stimulus) to horticulture and the role of experiencer to Stella.

[142] Predicative adjectives are linked through a copula or other linking mechanism to the noun or pronoun they modify e.g. that made me happy. In AA predicative adjectives may also be linked to the noun with zero copula e.g;

hada hɔwa l-ħħal.	daɾk-ɔm ʃa:ba
This he the-solution. 'This is the solution'	house-3PL nice. 'Your house is nice'

[131] χɔs-na ɛɔnwa:n ***précis***.

Need-1PL **title *precise***.
'We need a precise title'

[132] dir-i:-h au moins ɛam-i:n ***successif-s*.**

Make-2SG-it at least **year-Dual suff *successive-PLAgre***.
'Make it at least for two successive years'.

[133] *Au moins* kɔn *la dame* labs-ət ħaʒa ***traditionnel-le***.

At least if *the lady* wore-3SGF **thing *traditional-FAgr*.**
'At least if the lady has worn something traditional'.

The ML in the above examples is AA into which French attributive adjectives are inserted. Both AA and French in the above examples share the same word order i.e., adjectives follow the nouns they modify. However there are other cases where French inserted adjectives respect the characteristics of the ML i.e., AA; this is the case where the French adjectives take a definite article as in the following examples:

[134] ɛłini l-kwa:ɣał l-***origin-aux*** tawɛ-ək.

Give-me the papers **DEF-*original-PLAgr*** of-your.
'Give me your original papers'.

[135] ʒib-i-li t-tricot l-***mauve*.**

Bring-2SGF-for me DEF-sweater **DEF-*purple***.
'Bring me the purple sweater'.

[136] kan-ɔ ja-hadr-ɔ ɛla *les classes* l-***propres***.

Were-3PL 3PR-speak-3PL about the classes **DEF-*proper***.
'They were speaking about the clean classes'.

[137] ʒa-j fə l-*boulevard* l-***principal*.**

Come-3SG in DEF-*boulevard* **DEF-*principal***.
'It is located in the principal boulevard'.

Unlike French, AA attributive adjectives modifying a definite noun are themselves preceded by a definite article as the nouns they modify. Being the Matrix Language in the above examples, AA imposes its characteristics on the inserted French adjectives which also are accompanied by a definite article (e.g. l-*originaux,* l-*mauve,* l-*propre,* and l-*principal*).

Switching between French attributive adjectives which normally precede modified nouns in French and AA nouns is not attested in the present corpus. The following example from our corpus illustrates the restriction on the insertion of this type of French attributive adjectives in AA phrases:

[138] ki j-ʒ-i ***un autre*** **#** **mɔdir waħdaχɔr** w hada j-waχχar...

When 3PR-come-3SG ***another*** **# director other** and this 3PR-go...

'When another director comes and this goes…'

In the above example the speaker has used a French article and a French adjective *un autre* 'another' but he did not finished the French phrase. The French adjective is followed by a pause which means that the speaker seems to forget the French word *directeur* 'director', so he switched again to the AA word **mɔdir** 'director' and finished the noun phrase in AA by using the AA adjective waħdaχɔr 'other'. This self-repair may be explained by the fact that the above French adjective's placement (Adj + N) is not in accordance with AA word-order (N + Adj) so it cannot be used with AA nouns within mixed constituents when AA is the ML. The restriction on the insertion of this type of attributive adjectives was also noted in other CS corpora including Moroccan Arabic/French CS, Ziamari 2003; Moroccan Arabic/Dutch CS, Boumans 1998; Swahili/English CS Myers-Scotton 2002).

2.3.1.2.2.2. The insertion of French predicative adjectives:

The insertion of predicative adjectives in AA frames is more frequent in this corpus than the insertion of attributive adjectives (about 31 inserted predicative adjectives into AA frame). This fact is also noticed in other data (Maroccan Arabic /Dutch; Boumans, 1998: 207; Maroccan Arabic/French CS; Ziamari, 143). French predicative adjectives may be introduced by the copula to be ['kan' (was) or 'rah' (is)] as in the following examples:

[139] ba:ʃ ɬ-ɬalaba **j-kun-ɔ** ***interessé-s*** w ja-ħadr-ɔ.

So that the-students 3PR-be-3PL ***interested-PLAgr*** and 3PR-attend-3PL.
'To make the students interested to attend the lecture'.

[140] hak-ka **j-kun-ɔ** *toujours* ***rafraichi-s***.

Like-this 3PR-be-3PL *always* ***refreshed-PLAgr***.
'Like this they will be always refreshed'.

[141] hada bruħah gal-lə-k **ra-h** ***provisoire***.

This itself said-to-you is-3SG ***temporary***.
'They said that it is temporary'.

[142] hadi azma ɛa:lami-ja rah-a ***universal.***

This crisis universal-FAgr is-3SGF ***universal.***
'This is a universal crisis'.

Predicative adjectives may also be inserted without a copula (ø) which is a frequent structure in AA as in the following examples:

[143] *L'examen* taɛha ***ø evaluatif.***

The examination her ***ø evaluative***.

'Her examination is evaluative'.

[144] hɔwa mʃi ø ***competent.***

He not ø ***competent.***

'He is not competent'.

[145] hadik l-warqa ø ***valable*** *que temma*.

That the paper ø ***valid*** *only there.*

That paper is valid only there'.

[146] *Les couleurs* taɛhɔm ø ***vivant-e-s.***

The colours their ø **living-GAgr-PLAgr**.

'Their colours are living'.

[147] hadʊk *les frites* ***ø surgelé-s.***

Those *the French fries* ø ***frozen*-PLAgr**.

'Those French fries are frozen'.

[148] temma kɔlʃi ***ø surveillé-s***.

There everything ø ***supervised-PLAgr***.

'Everything is supervised there'.

Predicative adjectives may be preceded by other verbs as illustrated by the following examples:

[149] hɔwa j-ba:n ***antipathique*** basʂaħ mli:ħ.

He 3PR-look ***antipathetic*** but good.

'He looks antipathetic but he is a good person'.

[150] ki t-*communiqu*-i *le site* t-rɔdd-əh ***utile***.

When 3PR-*communicate*-3SG *the site* 3PR-make-it ***useful***.

'When you will communicate the site you will make it useful'.

[151] kima Rabia wla:d-ha tani d-ʒib-hɔm ***chauve.***

Like Rabia children-her also 3PR-bring-them ***bald.***

'Rabia's children are also born bald'.

[152] *Surtout* ki gal-ɔ ***barbu.***

Especially when said-3PL ***bearded***.

'Especially when they said that he is bearded'.

So the insertion of French adjectives in AA frames is frequent and it is governed by AA rules i.e. AA governs the insertion of French adjectives whether they are attributive or predicative.

2.3.1.3. Mixed prepositional phrases; Code switching within prepositional phrases:

Code switching within prepositional phrases is frequent in this corpus. Mixed prepositional phrases may include AA prepositions that introduce either mixed noun phrases (i.e. French nouns introduced by the AA definite article l-) or internal EL islands (i.e. French noun phrases). Prepositions that govern such constituents in the present corpus are 'fə' (in), 'mɐn' (of), 'ɛla' (about), 'l' (for), 'mɛa' (with). The following examples illustrate the insertion of mixed NPs into AA prepositional phrases:

[153] ma-rak-ʃ da:χχəl **fə d-*département*** ?

NEG-be-NEG enter-3SG **in DEF-*departement***?
'Do you work in the departement?'

[154] ka:ʃ ma zad-ʊ-kɔm ʃwiɟa **fə s-*salaire*** ?

Thing any added-3PL-2PL little **in the *salary***?
'Do you have an increase in your salary?'

[155] dχal-t bi-ha **fə l-*fond***.

Entered-1SG with-her **in DEF-*bottom*.**
'I took her to the bottom'

[156] *Information pratique* ta-ħtaʒ-ha **fə l-*coté opérationnel***.

Information practical 3PR-need-it **in DEF- *side operational***.
'You need the practical information in the operational side'.

The insertion of mixed noun phrases into AA prepositional phrases displayed by the above examples, is not as frequent as the insertion of French NPs into AA prepositional phrases (there are 19 mixed PPs that include mixed NPs as compared to 38 mixed PPs that contain French NPs). The following examples contain French NPs embedded into structures headed by AA prepositions forming mixed prepositional phrases:

[157] ɟa-χdəm **fə *le secteur étatique***.

3PR-work **in *the sector state***.
'He works in the state sector'.

[158] ra-k ɛaɟa:n **məl-*l'organization***?

Are-2SG tired **from-*the organization***?
'Are you tired from the organization?'

[159] ʒib-ha l-***l'école***.

Bring-it **to-*the school***.
'Bring it to school'.

[160] ħki-l-na ɛla ***l'experience*** taɛak**.**

Tell-2SG-to-us **about the *experience* of-your**.
'Tell us about your experience.

[161] n-saqs-i ɛla ***les détails*** taɛha**.**

1PL-ask-1SG **about *the details* of-her**.
'I ask about her details'.

[162] ja-rgɔd waħad, zuʒ b-***le role***.

3PR-sleep one, two **with-*the role***.
'The guards should not sleep together all the night but they should take roles in sleeping during the night'

[163] kan-ɔ m-waʒd-in *les couloires* b- haduk ***les draps***.

Were-3PL PROG-prepare-3PL *the corridors* **with those *the sheets***.
'They have prepared passages with sheets'.

[164] hawwad mɛa ***les gens*** taɛ ***la mort.***

Went **with *the people* of *the dead man***.
'He went with the dead man's people'.

The above example, include mixed prepositional phrases that occur either as complements to AA verbs examples [153- 161] or as complements to French embedded NPs [163, 164] which are themselves embedded as direct objects to AA verbs.

2.3.1.4. Mixed verb phrases; Code switching within verbal constituents:

2.3.1.4.1. The insertion of French verb stems into an AA frames:

Verb stems are content morphemes according to MLF model, so French verb stems may be inserted in AA frames constituting mixed verb phrases. Mixed verb phrases are formed by the insertion of French verb stems that take the inflections of the Matrix Language (i.e. Algerian Arabic). The insertion of French verb stems in AA frames is very frequent in this corpus. The following examples contain French verb stems conjugated in AA[143] perfect or past tense and imperfect or present tense by taking appropriate AA prefixes and suffixes[144]:

[143] There are two main tenses in Arabic language. 1. Perfect Tense: It is also called the past tense because the action is completed before the present; and 2. Imperfect Tense or the Present Tense. In Arabic the infinitive

[165] n-zaʝr-ɔ ɛla rwaħna darwak baːʃ l-ɛaːm l-ʒaːʝ **n-*soulag*-ɔ**.

1PR-press-1PL on ourselves now so that the-next the-year 1PR-***relieve***-1PL.
'We will work harder this year in order to relieve next year'.

[166] χall-i-ni **n-*désign*-i** *l'élève.*

Let-3SG-me 1PR-***point out***-1SG *the pupil.*
'Let me point out the pupil'

[167] membaɛd *la datte* **n-*confirm*-i-ha l-ək.**

Later *the date* 1PR-***confirm***-1SG-3SGF to-you.
'Later I will confirm the date for you'.

[168] ħaʒa sam-ʊ-ha l- waqt gaːɛ **mə-t-*exist*-iː-ʃ** ɛand-ha.

Something call-3PL-3SGF the time at all NEG-3PR-***exist***-3SG-NEG to-her.
'Something called time does not exist at all for her'.

[169] t-χalla-s *le moin possible* w **t-*bénéfie*-i** *des avantages.*

3PR-pay-3SG the least possible and 3PR-***benefit***-3SG *some advantages.*
'You will pay as least as possible and you will benefit from some advantages'.

[170] nti ***accept*-iti-ha** ma-tədχɔl-ʃ waħadha.

You ***accep***-2SGF-3SGF NEG-enter-NEG alone.
'Surely you have accepted her because she could not access your address without your permission'.

[171] ki ***désist*-ɔ** bazzaf daχl-ət.

when ***withdraw***-3PL many enter-3SGF.
'She has found a job because many had withdrawn'.

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form of a verb is represented by the past form of that verb conjugated in the singular third person masculine 'he'. In English, we say, "to eat" to represent the "verb form". In Arabic, it is represented with kla "he ate".

[144] We add suffixes and prefixes to the root form to generate other tenses and forms. In order to produce the perfect tense forms and the present tense forms of the verbs, we first take the root form of the verb which is the past form of the singular third person masculine 'he' in AA. In French we obtain the stem by omitting the infinitives ('er', 'ir' and 're') from the verbs. Then we add the following affixes:

	Perfect or past tense		**imperfect or present tense**	
I (ana):	ktab-t	form-i-t	na-ktab	n-form-i
You masc (nta):	ktab-t	form-i-t	tə-ktab	t-form-i
You fem (nti):	ktab-ti	form-i-ti	tə-kətb-i	t-form-i
He (hɔwa):	ktab	form-a	ʝə-ktab	ʝ-form-i
She (hiʝa):	kətb-ət	form-ət	tə-ktab	t-form-i
We (ħna):	ktab-na	form-i-na	na-katb-ɔ	n-form-ɔ
They (hɔma):	kətb-ɔ	form-ɔ	ʝa-katb-ɔ	ʝ-form-ɔ

[172] hadi ***accouch***-a:t ǰak?

This ***give***-3SGF birth hasn't she?
'Has she given birth to her child?'

French verb stems can also take the form of AA past participle by being attached to the prefix m- and suffixes (ǰa, i, ǰin) as follow:

[173] *Déjà* kɔn-t **m-*évit*-ǰa** had l-*répétition.*

Already was-1SG PPart-***avoid***-1SGF this DEF-*repetition.*
'I has already avoided this repetition'.

[174] kɔn-t **mə-*programm*-ǰa-tha.**

Was-1SG PPart-***schedule***-1SGF-her.
'I have scheduled her'.

[175] ħna ra-na **m-*lanc*-ǰi:n** groupe taɛ sana χa:msa.

We are-1PL PPart-***launch***-3PL group of year five.
We are launching the group of the fifth grade.

[176] ra-hɔm **m-*pouss*-ǰin-nəh.**

are-3PL PPart-***urge***-3PL-3SG.
'They are urging him'.

The above examples include the insertion of French verb stems of the first group[145] which are the most frequently inserted category. There are more than eighty (80) inserted French verb stems of the first group that are inflected with AA inflections in this corpus. However the insertions of French verb stems that belong to second and third group don't exceed eight verbs in this corpus as follow:

[177] ħna mi:n **n-*fin*-ɔ** *dans cinq saisons* ǰə-bqa ɛan-na *un listing.*

We when 3PR-***finish***-3PL *in five seasons,* 3PRS-*stay for-us a listing.*
'When we finish in five seasons, we will have a listing'.

[178] n-kammal-hɔm w **n-*amort*-i** drahəm-hɔm.

1PR-finish-them and 1PR- ***amortise***-1SG money-their.
'I will finish them and pay off their'.

[179] ma qad-i:t-ʃ **n-*réag*-i.**

NEG-could-1SG-NEG 1PR-**react**-1SG.
'I could not react'.

[145] French regular verbs fall into three groups: group1 ends in 'er', group2 ends in 'ir' and group3 where the infinitive ends in 're'. about 80% of French verbs are in the first group and are mostly regular.

[180] ɣadwa nʃallah, baːʃ **n-*défin*-ɔ** *les axes* taɛ l-mɔltaqa d-dɔwali.

Tomorrow, to 1PR-***define***-1PL *the axis* of the colloquium the international.
'Tomorrow we will meet to define the axis of international colloquium'.

[181] ***Prom*-ət-la-h** baːʃ ta-ɛɬiː-h waħda.

Promised-3SGF-to-him to 3PRF-give-3SG-him one.
'She has promised to give him one'.

[182] hadak lli ***dispar*-a**.

That who ***disappeared***-3SG.
'The one who has disappeared'.

[183] *Normalement* ma-kɔnt-iː-ʃ **t-*répond*-i** ɛli-ha.

Normally NEG-be-2SGF-NEG 2PR-**answer**-2SG about-her.
'Normally you shouldn't answer her'.

The above French verb stems of the second group (*finir* to finish, '*amortir'* to pay off, *'réagir'* to react, '*définir*' to define) and of the third group ('*promettre*' to promise, '*disparaît̂re'* to disappear, '*répondre*' to answer) are inserted in the same way as the verbs of the first group i.e. they keep their stems and take AA inflections. However there are very few inserted French verbs of the second and third groups compared to the insertion of verbs of the first group.

The big difference between the insertion of French verbal stems of the first group and those of the second and third group may be attributed to the fact that French verbs of the first group outnumber French verbs of the second and third group i.e. the French verbs of the first group comprise three thousand verbs of the four thousand that the French language has, so the verbs of the first group are the most numerous.

The insertion of French verbal stems in AA frame is very productive. It involves not only the syntactic frame of the Matrix Language but also the morphological frame. In deed, the frequent adaptation of French verb stems to AA morpho-syntax is what makes the morphological criterion to distinguish between borrowing and CS problematic in the case of AA/French CS.

2.3.1.4.2. The insertion of French adverbs into AA frames:

Adverbs can modify a verb, an adjective, another adverb or a whole sentence[146]. There are several types of adverbs (including adverbs of time, place, manner, frequency, degree adverbs, sequencing adverbs, etc). Adverbs' placement within the sentence varies from one language to the other and even within the same language. The different types and placements of the adverbs classify them as a heterogeneous grammatical category.

Adverbs' heterogeneity is reflected in their CS behaviour; some of them are frequently and easily switched yet others are not. According to the MLF model, the possibility of a single adverb from one language to appear into a sentence from another language depend on its status as being a content or a system morpheme. Some adverbs are system morphemes. These include degree or quantity adverbs that form a closed class of morphemes and modify either an adjective or another adverb (e.g. very). There are no instances of inserted French adverbs that modify AA adjectives or adverbs. This evidence is also supported by others CS studies (MA/Dutch CS, Boumans 1998; Ziamari, 2003). Being system morphemes, these adverbs either come from AA in mixed constituents and modify French adjectives or occur within French EL islands. The following examples include some AA degree adverbs modifying French adjectives:

[184] basːaħ hɔwa ʃuft-əh kiʃɔɣl ***hésité*** **ʃwiɟa.**

But he saw-3SG- somehow *hesitated* little.
'But I saw him hesitated a little bit'.

[185] ki ra-ha ɛama:n ***calme*** **ʃwiɟa**?

How-3SGF ɛama:n *calm* a little?
Has Amman become calm?

[186] ɛand-ah **ʃwiɟa** *le choix* ***difficile*** Hafid.

Have-3SGM a little *the choice difficult* Hafid.
'Hafid has a little difficult choice'.

[187] ʒa:-ni ***le nombre*** kbir bazzaf.

Seemed-1SG *the number* big very.
'I think that the number is very big'.

In the above examples, the AA degree adverb (ʃwiɟa 'a little') modifies French adjectives and follows AA word order (i.e. it follows the adjectives it modifies as opposed to French degree adverbs, which precede their nouns). The fourth example, however, contains the AA

[146] Adverbs that modify a whole sentence or sentence adverbs are either model adverbs that express speaker's orientation toward what is being spoken of (fortunately, really) or sequencing adverbs that mark sequences in the discourse (e.g. first(ly), finally, suddenly). Schachter (1985 :20) cited in Boumans (1998 :111)

adverb 'bazzaf' (very) which modify the AA adjective 'kbir' forming an AA adjective phrase that modify the French NP 'le nombre'. Apart from the above examples, AA adverbs modifying French adjectives or adverbs are very rare in this corpus.

On the other hand, other adverbs are frequently inserted on their own. These adverbs are content morphemes and they include (adverbs of time, adverbs of manner, adverbs of frequency, and model adverbs). With the exception of PPs and NPs that function as adverbs, there are about fifty six (56) adverbs inserted into AA frame. The following examples comprise adverbs of time:

[188] la… la… ***dernièrement*** ma-ɛj-aw fija tə-dχɔl mɛana.

No…no…***recently*** they tried hard to convince me to work with them.

[189] ***Déjà*** ɣi l-fɬur w mazal n-sa:l-ək.

Already just the lunch and still 1PR-owe-you.
'I already owe you a lunch'.

[190] ***Maintenant*** ɛɬi-ni drahəm n-nas.

Now give-me money the people.
'Now give me people's money'.

There are also four tokens in this corpus that include the adverb of frequency 'toujours' (always) and two include the adverb 'jamais' (never) as follow :

[191] ***Toujours*** talq-i-h bə-l-crayon ja-tmaʃʃ-a.

Always 2PR-find-2FSG-him with-the-pencil 3PR-walk-3SG.
'You will always find him holding a pencil'.

[192] nsi:t ma-gɔt-l-ah-ʃ ***jamais*** la-utils-i:t American dictionnary.

Forgot-1SG NEG-said-to-him-NEG ***never*** NEG-used-1SG American dictionnary.
'I have forgotten to tell him that I have never used an American dictionnary'.

Manner adverbs however are the type of adverbs that are mostly inserted in this corpus (more than thirty (30) tokens). This is also noted in other CS data including MA/Dutch CS (Boumans, 1998: 282) and MA/French CS (Ziamari, 2003: 158). The following examples include manner adverbs:

[193] gatl-i j-mad-ʊ-l-ha ***facilement***.

Told-me 3PR-give-3PL-to-her ***easily*.**
'She told me that they will give her easily'.

[194] liq ***vraiment*** t-*concentr*-i.

Should ***really*** 3PR-*concentrate*-3SG.

'You have to concentrate'.

[195] tani łłalg-ɔ ***amicalement.***

Also got divorced-3PL ***friendly***.
'They also got divorced in friendly way'.

[196] ɛłi-t-ha-l-ək ***personnellement.***

Gave-1SG-3SGF-to-you (2SG) ***personally***.
'I gave it to you personally'.

[197] gaːɛ raħ-ɔ l-hittah ***directement.***

All went-3PL there ***directly***.
'They all went there directly'.

[198] basːaħ ana rad-iːt ɛl-ih ***intelligemment***.

But I answer-3SG about-him ***intelligently***.
'But I answered him in an intelligent way'.

[199] ma-na-ɛqal-ʃ belli qriː-na bazzaːf taɛ *les cours* ***ensemble***.

NEG-1SG-remember-NEG that studied-1PL many of *the lectures* ***together.***
'I don't remember that we have studied many lectures together'.

Other Adverbs that are embedded on their own in an AA frame are modal adverbs[147] (about 17 tokens) that modify entire sentences as in the following examples:

[200] baʃ t-kʊ-n ***sure*** belli laħgə-t.

To 3PR-be-3SG ***sure*** that arrived-3SGF.
'So that you are sure that it arrived'.

[201] ɟ-kʊn temma ***logiquement.***

3PR-be there ***logically***.
'Logically he is there'.

[202] kaɟen *un marché* ***biensure*** kaɟen.

There is *a market* ***of course*** there is.

[203] hiɟa ***certe*** min ɟ-kʊn-ɔ mɛa-k ɣaɟa.

It ***admittedly*** when 3PR-be-3PL with-you good.
'Of course it is good when they are with you'.

[147] Model adverbs are sentence adverbs that express the speaker's subjective evaluation of what he says and his attitudes toward the interlocutor (e.g. really, actually).

[204] ***Heureusement*** nɔ-χχɔɾʒ-ɔ *à midi*.

Fortunately 3PR-go out-3PL at twelve o'clock.
'Fortunately we finish at twelve o'clock'

[205] ki dʒ-i ɛand-i ***automatiquement*** n-ɛajja-ɬ lə s-sajjed.

When come-3SG to-me ***automatically*** 1PR-call-1SG for the-man.
'When you come I will automatically call the gay'.

So far we have tried to analyze the different types of adverbs that are inserted in this corpus. In addition to the difficulty of classifying the adverbs, their word order is more variable. Yet they are frequently inserted in AA structures.

2.3.1.5. Mixed constituents recapitulation:

Mixed noun phrases, mixed prepositional phrases and mixed verb phrases are very recurrent structures in this corpus. In this constituents AA provides the relevant system morphemes (i.e. determiners, demonstratives, possessives, quantifiers, prepositions, and inflections) that form the different structures into which French elements are embedded. French on the other hand supply content morphemes (nouns, adjectives, verb stems, and adverbs) and internal EL islands (French noun phrases: French definite articles + French nouns).

Embedded French nouns, noun phrases, adjectives, adverbs and verbs respect AA word-order and grammatical rules. In addition, French verb stems display AA morphological characteristics. The description of mixed constituents has highlighted the diversity and frequency of this type of insertion when AA is the Matrix Language.

The study of mixed constituents also revealed the involvement of the two languages in the sense that the activation of the Matrix Language is higher in these constituents. So will the EL islands offer such diverse and recurrent structures if the activation of the Embedded Language increases?

2.3.2. The Blocking Hypothesis and the formation of EL islands:

In addition to the morpheme order principle and the system morpheme principle, which limit the role of the EL in mixed constituents to only supplying or providing EL content morphemes, the MLF model also adds a Blocking Hypothesis. The Blocking Hypothesis further restricts the role of the EL by stating that:

> *"In ML+EL constituents, a blocking filter blocks any EL content morpheme which is not congruent with the ML with respect to three levels of abstraction regarding subcategorization" (Myers-Scotton, 1993: 120).*

This means that not all EL content morphemes can occur freely in mixed constituents but only those that are sufficiently congruent[148] with their ML counterparts. Sufficient congruence is still not exactly defined in Myers-Scotton's (1993, 1997, 2002) works, however she provides some cases involving mismatch between ML and EL constituents. Problems of congruence include the status of morphemes in both languages i.e., if a given morpheme for instance is a content morpheme in EL but a system morpheme in ML, ML blocks the occurrence of EL morpheme. If an ML content morpheme is not congruent with its EL counterpart in terms of thematic role assignment (i.e. they assign different roles or have different sub-categorizations), the ML blocks the EL content morpheme from appearing in mixed constituents. Congruence also involves discourse or pragmatic functions that a morpheme encodes.

If the congruence is insufficient, compromise strategies will be used. They include bare forms[149], do-constructions[150] and EL islands. This corpus does not seem to display any instances of bare forms or do-constructions, so we will concentrate on analyzing EL islands.

2.3.2.1. EL islands:

EL islands have been extensively studied by the MLF model and have evoked much debate in the literature concerning such notions as congruence, activation of embedded language. Although EL islands violate the ML hypothesis, they are not considered as counter-examples to the MLF model neither are they 'optimal choices' as Myers-Scotton argues (2002: 98).

According to Myers-Scotton EL islands occur when an EL morpheme inhibited by the ML (i.e., either for being an EL system morpheme or an EL content morpheme that is not congruent with its ML counterpart) is accessed. The EL hypothesis is stated as follow:

> *"When there is insufficient congruence between the lemma underlying an EL content morpheme and its ML counterpart at one or more of the three*

[148] Congruence refers to a match between the ML and the EL at the lemma level with respect to linguistically relevant features. Two linguistic categories are congruent if they correspond in respect of relevant qualities (Myers-Scotton & Jake, 1995: 274). Myers-Scotton (2002:20) insists on the notion sufficient congruent rather than complete. Many locative or temporal prepositions are system morphemes.

[149] Bare form is an EL content morpheme that occurs in an ML constituent, but it lacks the ML system morphemes that make it well formed according to the ML morphosyntax. (Myers-Scotton,2002:21)

[150] Do-construction is another example of bare form. And it is the insertion of an EL verb without inflections or functional morphemes of the ML, instead the EL verb stem is inserted as a bar form but it is accompanied with an ML do verb which takes all ML inflections.

levels of lexical structure, the only way to access the EL element is in an EL islands" (Myers-Scotton, 1997:250)

So EL islands are considered as compromise strategies in the case of a lack of sufficient congruence between EL elements and their ML counterparts at lemma level.

EL islands, as defined earlier, are well-formed constituent (i.e. maximal projections) which obey the internal structure of the Embedded Language but which are inserted in grammatically appropriate points in mixed CPs according to the Matrix Language.

There are many examples of EL islands in this corpus including embedded noun phrases, adjective phrases, and prepositional phrases...etc.

2.3.2.1.1. The insertion of noun phrases as EL islands:

The insertion of French noun phrases which are considered as EL islands in the MLF model is recurrent in this corpus. To be an embedded French island, a nominal constituent should be realized entirely in French as a well formed noun phrase according to French morpho-syntactic rules; however it should respect grammar distribution of an AA noun phrase. French NPs may consist of determiner (definite or indefinite articles, demonstratives, possessive adjectives, or quantifiers) plus a following noun. They may also contain an adjective plus a noun or a noun plus a noun complement. French noun phrases are the category that is mostly inserted in this corpus.

2.3.2.1.1.1. The insertion of French noun phrases into AA frames (articles + nouns):

Articles are early system morphemes. In EL islands, French articles[151] are combined with nouns and they agree with them in gender and number. The insertion of French NPs that consist of a definite article and a noun in AA matrix structure is very frequent and it exceeds one hundred and ten (110) instances in this corpus (without those that are considered as internal EL islands). The following examples contain the insertion of French definite articles with their nouns:

[206] ana l-jʊm n-dir ***le possible*** baʃ na-ggadb-əh.

Me the-today 1PR-make ***the utmost*** to 3PR-catch-him.
'Today I will make the almost possible to catch him'.

[151] French articles are classified into definite (le, la, les) and indefinite (un, une, des) articles and they agree with the nouns they modify in gender and number {masculine singular (le, un); feminine singular (la, une); plural (les, des) and (l') which is a definite singular article that precedes nouns beginning with vowels and 'h' .

[207] dert-i ***le terme*** lli ga:l-ək ɛlih.

Did-2SG ***the term*** that said-you about-it.
'Did you use the term which he told you about'.

[208] t-wal-i ɛand-ək ***la relation*** mɛa ɬ-*tableau*.

3PRF-become-3SG have-you ***the relation*** with the blackboard.
'You will have a relation with the blackboard'.

[209] la dar-ʊ-li ***la ligature*** n-kʊn baɛda dar-t ***la troisième***.

If made-3PL-me ***the ligature*** 1PR-be already made-1SGF *the third*.
'I would have already had a third child before they have made me a tubal ligation'.

[210] badl-ɔ ***les horaires*** taɛ ***le train***.

Changed-3PL ***the timing*** of *the train*.
'Train timing have changed'

[211] kɔn ɟ-ʂib-ɔ ɟa-kl-ɔ ɣi ***les fritures***.

If 3PR-find-3PL 3PR-eat-3PL just ***the fried foods***.
'They like to eat only fried foods'.

[212] baʂʂaħ ***l'enseignement*** χir men ***l'administration***.

But ***the teaching*** better than ***the administration***.
'But teaching is better than working in the administration'.

[213] n-dir-ɔ ***l'inverse***.

1PR-do-1PL ***the opposite***.
'We will do the opposite'.

The above examples involve the insertion of French NPs that contain French definite articles (le, la, les, l') preceding French nouns and are well formed EL constituents according to French rules. This corpus also includes about forty eight 48 instances of embedded French NPs consisting of French nouns preceded by French indefinite articles (un, une, des) in AA structure as follow:

[214] ɟ-wal-i ɛand-ək ***un pouvoir*** ktar men sɔlɬa taɛ waʂi:la iɛlamiɟa.

3PR-become-3SG have-2SG ***a power*** more than power of media outlet.
'You will have a power more then the power of the media'.

[215] kan ɛand-i mrid ***un prètre*** baʂʂaħ kan *alcoolique*.

Was had-1SG patient ***a priest*** but was *alcoholic*.
'I had a patient a priest who was an alcoholic'.

[216] ɛand-i ***une cousine*** temma dar-ʊ-l-ha ***des problèmes***.

Have-1SG ***a cousine*** there make-3PL-for-her ***some problems***.
I have a cousine there whom they have made some problems.

[217] n-ħawsɔ n-dir-ɔ ***une sensibilisation*** l-had l-mard.

1PR-look for-1PL 1PR-make-1PL **a sensitization** for-this the disease.
'We try to sensitize people about this disease'.

[218] kaʝen ***des groupes*** lli ra-hɔm *déjà* ɛand ***des enseignants***.

There are ***some groups*** that are-3PL *already* at ***some teachers***.
'Some groups have already been taken by some teachers'.

[219] kan ʝa-ʃriː-l-əh ***des articles, des bouquins*** *et tous*.

Was 3PR-buy-for-him ***some articles, some books*** *and all*.
'He was buying for him articles, books and everything he needed'.

Hence the insertion of French NPs that are formed with French articles plus French nouns in AA larger frames is recurrent in all its forms: definite/indefinite, singular/plural, masculine/feminine articles. It is in fact more frequent than the insertion of single French nouns in this corpus. The internal structure of EL nominal islands respect French NP structure (i.e., articles precede nouns and agree with them in gender and number) however they are inserted in AA frames and function as AA noun phrases.

2.3.2.1.1.2. The insertion of French noun phrases into AA frames (possessives + nouns):

Possessives are early system morphemes so they come from the Embedded Language within EL islands. French possessives precede the noun they modify and they agree with them in gender and number. French nouns along with their possessives may be inserted as well-formed EL noun phrases in AA frame. There are eleven (11) embedded NPs that contain French possessives modifying French nouns and all of them are nouns that refer to names of relatives. There is no instance of a possessive pronoun modifying a possessed object. The following examples illustrate this:

[220] ***Ma belle soeur*** ra-hi ɣi ki ʒat mə *la syrie*.

My sister-in-law be-3SGF just came from *the Syria*.
'My sister in law has just come from Syria'.

[221] min n-*activ*-i n-ɛaʝjaɬ l- ***mes cousines, mes belles sœurs***…

When 1PR-*activate*-1SG 1PR-call for-*my cousins, my sisters in law*…
'When I activate the free option I call my cousins, my sisters-in-law…'

[222] tə-ddaːbəz mɛa ***son ami***.

3PRSG-fights with *her friend*.
'She fights with her friend'.

[223] ***Sa mère*** gatl-i belli ***ma mère*** ɛand-ha *les yeux claires*.

His mother told-me *my mother* has-she *the eyes light.*
'His mother told me that my mother has got bright eyes'.

[224] *C'est* ***mon cousin*** hadak w diːk mart ***mon cousin***.

This is my cousin that and that wife *my cousin*.
'This is my cousin ant that is his wife'.

[225] nti ***sa belle soeur*** l-kbiːra wella s-sɣiːra?

You *her sister-in-law* DEF-oldest or DEF-youngest?
Are you her oldest or youngest sister-in-law?

[226] ***Mon petit cousin*** jabɣi jahdar l-*français* bazzaːf.

'My little cousine like to speak *French* very much'.

In the above examples the French nouns (*belle soeur* 'sister in law', *ami* 'friend', *cousines* 'cousines', *mère* 'mother', *petit cousin* 'little cousine') which are content morphemes, form EL islands with the preceding possessives (*ma, mes, ma, mon* 'my' *son, sa* 'his') which are early system morphemes. Theses French NPs are inserted in AA frames and function as AA noun phrases.

2.3.2.1.1.3. The insertion of French noun phrases into AA frames (Quantifiers + Nouns):

Related to their status as early system morphemes, EL quantifiers come from the Embedded Language within EL islands according to the MLF model. The following examples contain French nouns preceded by French quantifiers:

[227] wallə-t ***chaque trois mois*.**

Become-3SGF ***every three months***.
'It has become every three months'.

[228] hɔma jə-tzawʒ-ɔ **plusieur-s femmes**.

They 3PRPL- mary-3PL ***several-PLAgr women***.
'They mary several women'.

[229] χatʃ j-ħɔɬ ***n'import quoi***.

Because 1PR-put ***anything***.

‘Because he puts anything’.

[230] d-daχal *les données* ***n’import quel moment***.

Enter *the data at* ***any moment***.
‘She can enter the data at any moment’.

[231] gɛa-d ***un certain temps*** mɛa-na.

Stayed-3SG ***a some time*** with-us.
‘He stayed with us some time’.

[232] tmani:n meljun ***tous les six moix*** ʃkun ja-ɛɬi-ha-l-i.

Please eighty millions ***all the six months*** who 3PR-give-it-to-me.
‘Who will give me eighty millions each six months?’

In these examples the French nouns are preceded by the quantifiers (chaque ‘every’, plusieurs ‘several’, certain ‘some’, tous ‘all’, n’import ‘any’). They both form EL islands. There are nine sentences in this corpus that contain inserted French quantifiers followed by French nouns.

Numeral quantifiers are also early system morphemes. In the corpus of the present study, we didn’t found mixed constituents with AA numerals modifying French nouns. On the other hand, French numerals modifying French nouns are frequently inserted in AA complement phrases as well formed EL islands. In fact it is very recurrent type of EL islands in this corpus (there are more than 51 EL French NPs consisting of French counted nouns preceded by French numerals). The following examples include EL islands consisting of French nouns preceded by French modifying numerals.

[233] ***Huit correspondances*** wella ***neuf correspondances*** ra-hɔm bi:n-na w bi:n-kɔm.

Eight correspondances or ***nine correspondances*** are-3PL between-us and between-you.
‘Eight correspondances or nine correspondances are between us and you’.

[234] dir-ah ***deux mois***.

Make 2SG-it *two months*.
‘Take it (treatment) for two months’.

[235] χɔs-ha ***trois produits***.

Need-3SGF ***three products***.
‘She needs three products’.

[236] qri:-t ***quatre vingts pourcent*** mə-l-*programme*.

Studied-1SG ***eighty percent*** from DEF-*program*.

'I have studied eighty percent from the program'.

[237] na-ɛalm-ʊ-hɔm ***un vendredi*** wella ***deux vendredis*** men-qbal.

1PR-tell-1PL-them ***one Friday*** or ***two Fridays*** of-before.
'We tell them one Friday or two Fridays before'.

[238] baqi ***deux déclarations***.

Remaining ***two declarations***.
'Remain two declarations'.

[239] ***Trois ans*** tə-lq-a ruħək ra:baħ ɣi ***dix millions***.

Three years 2PR-find-2SG youself winning just ***ten millions***.

The above examples clearly illustrate the fact that French numerals which are early system morphemes are embedded as EL islands in mixed CPs, when AA is the ML. French determiners (articles, possessives, and quantifiers) are early system morphemes and they have fulfilled AA requirement (i.e. they are inserted as EL islands along with French nouns).

2.3.2.1.1.4. The insertion of French noun phrases into AA frames (Nouns +Adjectives) and EL word-order:

Inserted French NPs may contain a noun modified by an adjective. The corpus of the present study offers about forty six (46) embedded French NPs containing French nouns modified by French attributive adjectives. The following examples display such patterns:

[240] ki ǰ-kʊn-ɔ ***des agents polyvalent-s*** n-qadd-ɔ nə-dd-ʊ-hɔm.

If 3PR-to be-3PL ***some agents varied –GAgr*** 1PR-can-3PL 3PR-take-3PL-them.
'We can hire them if they are varied agents'.

[241] hɔma ***une femme illètré-e*** ma-ɛand-hɔm-ʃ ɛaǰb.

They ***a woman illiterate-GAgr*** NEG-have-3PL-NEG shame.
'For them an illiterate woman is not shameful'.

[242] ***La semaine prochain-e*** ǰa-bd-ɔ.

The week next-GAgr 3PR-start-3PL.
'Next week they will start'.

[243] ma -nə-bɣi:-ʃ ***les filmes sous-titrés*** ǰ-ɛaǰ-ʊ-ni.

NEG-1PR-like-NEG **the films sub-titled** 3PR-make tired-3PL-me.
'I don't like the sub-titled films because they make me tired'.

The above examples include well-formed French NPs or EL islands inserted in AA frame. They are EL islands because they exhibit internal French structure i.e. they contain

French system morphemes (articles, gender and plural agreement suffixes ‘e’ and ‘s’ on adjectives) and they respect French word-order (N + Adj) which is also AA word-order for N-Adj combination. Yet AA also permits the insertion of French NPs when adjectives precede their nouns (i.e. when French has Adj + N order as opposed to Algerian Arabic N + Adj order) as follow:

[244] ***La prochain-e fois*** n-ʂaqsih.

The next-GAgr time 1PR-ask-him
‘Next time I will ask him’.

[245] ʒi:-t n-ʃʊf ***les ancien-s collègues***.

Come-1SG 1PR-see ***the former-PLAgr friends***.
‘I’ve come to see the former friends’.

[246] hadʊk ɛand-i mɛa-hɔm ***des bonn-e-s relations***.

Those have-1SG with-them ***some good-GAgr-PLAgr relations***.
‘Those I have with them good relations’.

[247] gɛad ***un bon moment*** baʃ gal-l-na mma-h ʒazajrija.

Stayed-3SG ***a good while*** to told-for-us mother-his Algerian.
‘He stayed for a good while then he told us that his mother is Algerian’.

[248] ɛand-hɔm ***des grand-s paniers*** j-χaw-ɔ fi-hɔm *les poubelles*.

Have-3PL ***some big-GAgr baskets*** 3PR-empty-3PL in-them *the garbage cans.*
‘They have big baskets in which they fill the garbage cans’.

[249] *Le cerveau* j-ʃad ***la dernièr-e information***.

The brain 3PR-keep ***the last-GAgr information***.
‘The brain keeps the last information’.

[250] ba:ɣ-i n-warr-i-k ***un autre coté*** taɛ l-ɛarʂ.

Want-1SG 1PR-show-1SG-you ***indef other side*** of the-wedding.
‘I want to show you the other side of the wedding’.

From the above examples it seems clear that these EL French islands not only contain EL system morphemes but also keep EL word-order. So EL islands remain a solution or a strategy of compromise in case of lack of sufficient congruence which is illustrated here by adjective-noun word order conflict between AA and French.

The insertion of noun-adjective combination is not always considered as an EL island. Consider the following examples:

[251] ja-bɣ-i ***des repas copieux***.

3PR-like-3SG ***some meals copious***.

‘He likes copious meals’.

[252] kɔnt-ɔ ddi:r-ɔ ***repas complet***.

Were-2PL made-2PL ***meal complete***.
‘You were cooking a complete meal’.

Both sentences contain a noun followed by an adjective and both of them are realized in French. Yet the first combination is an EL island and the latter is a mixed constituent. The first is a well-formed constituent (NP) according to French rules since French indefinite article ‘des’ is present. But the second French noun-adjective combination misses a French article and is embedded into an AA frame exhibited by the AA zero marking which expresses indefiniteness. This type of insertion is called collocation of content words and it is the insertion of more than one content word from the EL into the linguistic frame of the ML. These embedded word collocations keep their EL word order according to each other.

The following examples contain three French noun-adjective collocations; the first (*Information pratique* ‘Practical information’) embedded into AA indefinite NP frame displayed by the AA zero marking, and the second (*coté opérationnel* ‘operational side’) is inserted into AA definite NP structure projected by the AA definite article (l-). The thirds (*infection urinaire* ‘urinary tract infection’) is a French noun-adjective collocation governed by the AA zero marking expressing indefiniteness:

[253] ø ***Information pratique*** ta-ħtaʒ-ha fə l-***coté opérationnel***.

ø information practical 3PR-need-it in DEF-*side operational*.
‘Practical information is used in the operational side’.

[254] kan ɛand-i ø ***infection urinaire***.

Was to-1SG ***ø infection urinary***.
‘I had a urinary tract infection’.

[255] n-dir-ʊ-l-ha ø ***examen Clinique***.

3PR-make-3PL-to-her ***ø examination clinical***.
We make her a clinical examination.

These collocations are considered by Boumans (1998: 102) as a limitation to Matrix Language especially when the inserted elements’ internal word-order differs from that of the Matrix Language as in the following example:

[256] m-ɣall-i bazza:f hadi ***mauvaise affaire***.

Part-make-3SG high prices this ***bad deal***.
‘His prices are very high. This is a bad deal’.

Unlike noun-adjective word order in examples [253- 255] which is shared by AA and French, the adjective-noun word order in example [256] is exclusively French. These combinations are not well formed EL islands because they lack French articles and at the same time they cannot be considered as mixed constituents because their word order is not allowed by AA. So these examples are problematic to the MLF model.

2.3.2.1.1.5. The insertion of French noun phrases into AA frames (Noun + Noun complement):

French nouns and their complements which are expressed by the structure [NP + Preposition + NP] are also considered as EL islands because in addition to early system morphemes (articles), these islands contain a bridge system morpheme 'de' (of) as in the following examples:

[257] ɛand-i ***un peu de retard.***

Have-1SG **a little of delay**.
'I am late'

[258] χɔsn-i *un comptable* ɛanda-h ***cinq ans d'experience***.

Need-1SG an accountant have-3SG ***five years of experience***.
'I need an accountant who has five years of experience'.

[259] n-dir-la-h ***des séances de rattrapage***.

1PR-make-for-him ***some remedial classes***.
'I will give him remedial classes'

[260] ra-h ħaːl ***une école d'informatique***.

Be-3SG open-PROG **a *school of computer science***.
'He has a computer science school'.

[261] ɛand-i ***un module d'espagnol*** fə l-ħadara.

Have-1SG ***a module of Spanish*** in the ħadara.
'I have a module of Spanish in the -ħadara'.

[262] ana n-aɛɬ-i-k ***les conseils sur les dispositifs de l'état***.

I 1PR-give-1SG-you ***the pices of advice about the devices of the state***.
'I will give you pieces of advice concerning state's devices'.

[263] n-dir-ɔ ***un seul déclenchement par jour***.

1PR-make-1PL ***a single trigger per day***.
'We do ***a single trigger per day'***.

[264] j-*utilis*-i:-ha ***une fois par trois ans***.

3PR-use-3SG-it ***one time every three years***.

'He has to use it once every three years'.

French nouns in the above examples take French prepositional phrases as their complements and form EL islands that are inserted into AA frame. This emphasizes the fact that EL system morphemes -early system morphemes or bridge system morphemes- are embedded within EL islands in AA matrices.

2.3.2.1.2. The insertion of adjective phrases as EL islands:

The following examples include inserted French adjective phrases as EL islands into AA frame:

[265] rak-i t-ba:n-i ***un peu fatigué-e.***

Are-2FSG 2FPR-look-2FSG **a little tired-GAgr**.

'You look a little tired'.

[266] ɣa:di j-kun ***le plus important***.

Will 3PR-be ***the most important***.

'It will be the most important'.

[267] kajen li rahɔm ***moins cuits***.

there is which are **less cooked**.

'There are French sticks that are less cooked.'

In the above examples the French phrases *un peu* 'a little' *le plus* 'the most' and *moin*s 'less' are used as adverbs modifying the French adjectives '*fatiguée*' (tired),'important' (important) and *cuits* (cooked); forming EL islands that are inserted in AA frames.

2.3.2.1.3. The insertion of prepositional phrases as EL islands:

Embedded French prepositional phrases are frequent in this corpus. These embedded PPs are divided into complements and adjuncts. Complements are projected by the verb and their distribution is governed by the sub-categorization patterns of the verb. Adjuncts are optional constituents i.e. they are outside the predicate-argument structure projected by the main clause verb[152] and their occurrence being subject only to the requirement that the sentence makes sense[153]. The following examples include French embedded prepositional

[152] Myers-Scotton (2002: 140)

[153] Boumans (1998: 271).

phrases. Both prepositional phrases contain the preposition 'pour' (for). But while the first PP is a complement to the verb 'ʒib-ha', the second is an adjunct (i.e., an adverbial phrase of time):

[268] ʒib-ha ***Pour tout le monde.***

Bring-it *for* ***all the world***.
'Bring it for everybody'.

[269] ***Pour le moment*** ra-hɔm *cent soixante douze* m-saʒli-ːn ɛɔlʊm w ittisaːl.

For the moment are-3PL *one hundred seventy-two* Part-registered-3PL science and communication.
'For the moment there are one hundred seventy-two students registered in the department of science and communication'.

In fact most embedded PPs in this corpus are adjuncts i.e. adverbial phrases of time, frequency, place or manner as follow:

[270] ***Pendant un mois*** n-ɛaɟɟaɬ-l-əh ɟ-gʊl-li ra-na ħaɬiːn ɣi l-*brique* taɛ d-*douze.*

During a month 1PR-call-for-him 3PR-tell-to-me be-1PL exposing just the-*brick* of the-*twelve*.
'During a month each time I call him he told me that there are only the brick of twelve'.

[271] ***Après une semaine*** ɛad ɟ-ɬiħ-ɔ hɔma *en panne*.

After a week 3PR-fall-3PL they *in breakdown.*
'After a week they start to break down'.

[272] n-dɔn dar-ʊ-h ***en deux milles neuf*** wella ***en deux milles dix***.

1PR-think make-3PL-it ***in two thousand and nine*** or ***in two thousand and ten***.
'I think that they put it in two thousand and nine or in two thousand and ten'.

[273] kɔn-na ɣi bə l-*passeport* n-rʊħ-ɔ ***en France*** *et tous*.

Were-1PL only with DEF-passport 1PR-go-1PL ***to France*** *and all*.
'We used to go to France just with passport'.

[274] ana ***au plus tard*** l-ɛaʃra n-kʊn hna.

Me ***at the latest*** ten o'clock 1PR-be here.
'I will be here at ten o'clock at the latest'

[275] bassħ hɔma ja-fahm-ʊ-ha ***entre eux***.

But they 3PR-understand-3PL-it ***between themselves***.
'But they understand it between themselves'.

[276] ran-i ***sur micro***.

Am-1SG ***on micro***.
'I am working on the labtop'.

[277] ma:t ***avec une dentition complète***.

Died ***with a teeth full***.
'He died with full teeth'.

[278] ma-ɛand-əh ħata masʔulija ka zawʒ ***envers sa femme et ses enfants.***

NEG-has-3SG no responsibility as husband ***towards his wife and his children***.
'He htakes no responsibility as a husband towards his wife and his children'.

[279] ɛla bi-ha ***à chaque fois*** j-nadm-ɔ.

This is why ***at each time*** 3PR-organize-3PL.
'This is why they each time organize'.

[280] mri:d hada dar *réunion* ***sans autorisation*** men ɛand *les antorités*.

Crazy this made *meeting* ***without authorization*** from *the anthorities*.
'He is crazy because he made a meeting without taking permission from the authorities'.

[281] tə-bɛa-t-ha b-l-*huissier* well ***par courrier***?

3PR-send-3SG-it by-DEF- *bailiff* or ***by mail***?
'You will send it by bailiff or by mail'.

In addition to the above sentences that contain adjunct PPs that function as adverbs of time, place, frequency and manner, there are PPs that serve discourse functions. These PPs include conjunctive adjunct PPs that organize sequences in the discourse as in the following example:

[282] jə-bqa ɛan-na *un listing,* ***par la suite*** *un retour de l'entreprise*

3PR-leave for-us *a listing* ***by the following*** *a return of the company*
'We get a listing thereafter a return of the company'.

In the above example the adjunct prepositional phrase *'par la suite'* is used as a conjunctive phrase that organizes discourse sequences. Other PPs that function at the discourse level include modal adjuncts that express the speaker's attitude as follow:

[283] L'idée ***d'une manière générale*** ɛaʒbaːtə-h.

The idea ***in a general way*** pleased-him.
'He liked the idea in general'.

[284] ***Au contraire*** l-mra t-ziːd t-χaʃʃən raːs-ha.

On the contrary the-woman 3PRF-roughen head-her.
'On the contrary women become more stubborn when they are badly treated'.

Comparing inserted French prepositional phrases with mixed prepositional phrases[154], we noticed that unlike the latter which constitute verb complements the former are most of the time adjuncts prepositional phrases used adverbially. This finding supports Myers-Scottons' (1993, 2002) argument that:

> *"The more peripheral a constituent is to the theta-grid of the sentence (to its main arguments), the freer it is to appear as an EL island" (1993: 144).*

There are about eighty five (85) French embedded prepositional phrases in AA matrix structures in the corpus of the present study; most of them are adverbial phrases. So whether prepositions are system morphemes or content morphemes, French prepositional phrases are frequently inserted in AA matrices.

2.4. Conclusion:

Insofar as it is supported by the present data, the insertional approach of the MLF model has succeeded to a large extent in constraining the possible forms of AA/French intra-sentential CS patterns.

The Analysis of French nouns and French internal NPs embedded 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 (l-) 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. French nouns with their definite articles constitute the majority if not all of the inserted internal EL islands in this corpus and at the same time they outnumber the insertion of single French nouns in mixed NPs and mixed PPs (there are 38 internal French EL islands embedded into AA frame projected by AA prepositions as opposed to 19 French single nouns embedded in the same structure; and there are 80 internal embedded French NPs into larger AA NPs governed by AA demonstratives, possessives, quantifiers and the AA indefinite article 'waħd l-' as opposed to only 13 French single nouns inserted in the same structure). This evidence shows us to what extent the insertion of French nouns with their article is preferred and

[154] Mixed PPs are PPs in which AA prepositions either introduce a mixed NPs or internal embedded French NPs.

recurrent in this corpus compared to the insertion of French nouns with AA definite article (l).

French nouns and French internal embedded NPs are inserted in AA nominal constituents being modified with AA possessive construction [taɛ + pronoun], demonstratives, the indefinite article (wahd l-), the quantifier (ga:ɛ) and to a lesser extent by AA attributive adjectives. French single nouns are also embedded in AA frames without any determiner respecting AA grammar which expresses indefiniteness by means of bare or unmarked nouns. So whether French nouns are inserted with their articles or as bare forms they are submitted to AA grammatical rules.

Inserted French nouns and internal embedded NPs are modified by AA quantifiers (ga:ɛ), (kaʃ) and (bəzzaːf) in this corpus; yet they are not modified by AA numerals which is in fact allowed by the MLF model. The rarity of mixed constituents with AA numerals in this corpus is offset on the other hand by the frequency of EL islands with French numerals. French nouns are recurrently inserted with their numeral quantifiers as EL islands into AA structure (more than 51 instances).

Embedded French nouns and NPs behave as Matrix Language counterparts i.e. their distribution in AA clauses respects those of AA noun phrases' distribution in terms of grammatical functions and syntactic positions in AA clause. French noun phrases occur as subjects to AA verbs either preceding or following the verb, thus, respecting AA word-order. They also occur as complements to AA verbs and prepositions, as predicates to AA copula and even in AA zero copula structure.

The insertion of French adjectives in AA matrix structure is present in both its categories -attributive and predicative; however the insertion of French adjectives as predicates of AA copula construction is far more numerous (31 instances) than the insertion of French attributive adjectives (11 instances). French attributive adjectives are more embedded with French nouns forming EL islands inserted into AA frames. Embedded French noun-adjective combination is very frequent in this corpus (46 instances) and it retains French word-order when it is shared with AA word order (N + Adj) and when it opposes AA word order (Adj + N).

French PPs are also a recurrent type of constituent insertion in this data. The large majority of the embedded French PPs in AA clauses are adjuncts (i.e. adverbial phrases of time and place) not complements. This supports Myers-Scotton (2002: 141) suggestion that many EL islands are peripheral to the predicate-argument structure projected by the main clause verb.

The insertion of French adverbs depends on their status as content or system morphemes. Adverbs that modify other adverbs or adjectives are system morphemes according to MLF model. The data that we have investigated haven't displayed any utterance containing the insertion of such adverbs in AA clause and AA adverbs scarcely modify

French adverbs or adjectives. On the other hand French manner adverbs are the type of adverbs that are recurrently inserted into AA sentences followed by adverbs of time, frequency, model adverbs and sequencing adverbs.

French inserted verb stems behave as AA verbs in term of syntactic properties i.e. they respect AA word-order and respect AA sub-categorization restrictions. They also bear AA morphological characteristics by being inflected with AA inflections for past, present and participle. French inserted verb stems show subject agreement by retaining AA affixes that indicate subject pronouns. AA object clitic pronouns are also regularly attached to French embedded verb stems.

The MLF model seems to account for the majority of French insertions into AA matrix structures whether they are single content words or internal EL islands embedded into mixed constituents or EL islands inserted into bilingual CPs. However this does not mean that this corpus does not include some problematic cases that constitute a challenge to this model. Next chapter will deal with some controversial issues in the analysis of these findings and will also examine AA insertion into French matrix frames and see if it will generate such rich and diverse types of insertion as found when AA is the Matrix Language.

CHAPTER

CHAPTER THREE

Analyzing AA insertions into French matrices and a trial test of the MLF principles against the present data

3.1. Introduction:

The description of French insertions into AA matrix structures in the previous chapter revealed the productivity of AA structures with French single morphemes, internal EL islands and EL islands. Chapter 2 also shows the diversity and richness of French insertions into AA matrices which corroborate at large the practicality of the MLF model's principles in constraining patterns of AA/French CS. In order to complete the morpho-syntactic picture of the AA/French CS as practiced by the speakers in the corpus of the present study. The first section of this chapter will describe AA insertions into French matrix frames. The description of this direction of switching, will allow us to examine the role of the two languages when both of them are Matrix Languages.

The description of AA insertions into French morpho-syntactic frames will also allow us to check the validity of the System Morpheme Principle as it has been expounded by Myers-Scotton in her MLF model and its amendments. Switching from French to AA reveals some problematic instances in our corpus. These include for example the frequent insertion of AA single early and bridge system morphemes into French structures. We will adopt an alternative theoretical background to interpret these problematic patterns of switching. This theoretical background is the one expounded by Boumans (1998) in his Monolingual Structure Approach. Boumans (1998) introduces the notion of 'layered insertion'. Layered insertion or subsequent levels of insertions according to Boumans (1998) will provide solution to what seems to be counter-evidence to the Matrix Language Hypothesis.

After describing the two directions of switching and testing the ML hypothesis, this chapter aims to test the Uniform Structure Principle which is an additional principle added by Myers-Scotton (2002) in her latest version of the MLF model. This principle further gives preference to Matrix Language morpho-syntactic procedures in keeping the structure uniform across the CP and restricts the contribution of the Embedded Language in bilingual CPs. we will try to show how AA structures are maintained and preferred even if they contrast with French grammar.

The Uniform Structure Principle is sometimes challenged by the notion of congruence. Congruence in the MLF model underlies the Blocking Hypothesis and the EL Island Hypothesis. Congruence is a fundamental concept for the structural analysis of CS in general and for the insertional approaches in particular. This notion will be used in trying to interpret some previously observed CS structures. For instance we will try to find out why French nouns tend to be embedded with their articles as EL islands rather to be modified with the AA definite article (l-) in mixed constituents. EL islands which are considered by Myers-Scotton the result of a lack of sufficient congruence between the two languages at the abstract level, are according to the Uniform Structure Principle marked CS constituents compared to mixed constituents.

After that we will investigate a marginalized topic of analysis in the MLF model i.e. switching between finite clauses and certain discourse markers namely AA emphatic

pronouns. Analyzing this type of switching which takes place above the finite clause is considered as a challenge to the status of the CP, which is considered by Myers-Scotton a relevant unit for morpho-syntactic analysis. The challenge relies in the fact that although certain discourse markers are included in Myers-Scotton's MLF model and considered as part of the complement phrase's (CP) syntactic matrix structure, they can neither be considered as embedded elements nor can they be associated with the Matrix Language. AA emphatic pronouns are good examples of such discourse markers.

Arabic emphatic pronouns frequently precede French finite clauses. This type of switching does not only characterize the AA/French CS corpus of the present study, Arabic emphatic pronouns occur before clauses from other languages in other CS corpora including: Arabic/French CS, Boumans and Caubet, 2000; Palestenian Arabic/English CS, Myers-Scotton, Jake and Okasha, 1996; MA/Dutch CS, Boumans, 1998; MA/French CS, Ziamari, 2003.

Different interpretations to this type of switching are proposed in CS literature. We will briefly introduce some of them, giving more attention to Myers-Scotton's proposal to account for the presence of Arabic emphatic pronouns in other language contexts. In addition to emphatic pronouns, we will discuss the status of other discourse markers within Myers-Scotton's MLF model using the corpus of the present study.

3.2. AA insertions into French Matrix Structures:

Instead of being the Matrix Language, AA may also be the Embedded Language. In the previous chapter, we have already analyzed the different structures of AA/French intra-sentential CS when AA provides the morpho-syntactic frame into which French morphemes and constituents are embedded. In This chapter, we will devote a section to the study of different structures generated from AA/French intra-sentential CS when French sets the grammatical frame into which AA morphemes and constituents are inserted. This direction of CS from French to AA will be described only in one section because AA insertions into French matrices seems to be far less numerous than French insertions into AA matrix frames. In fact AA and French insertions do not only differ quantitatively but there are also important qualitative differences. This will become evident when the different structures are analyzed. AA CS structures include mixed constituents and EL islands. There is no instance of internal EL islands when French is the ML.

3.3.1. Mixed constituents: the insertion of AA single morphemes into French Matrix Frames:

In this corpus, there is no insertion of single AA nouns, verb stems, or adjectives in a French matrix frame. Mixed constituents when French is the Matrix Language, seems to be limited to the insertion of single AA adverbs as in the following examples:

[285]*J'ai essayé entre temps de décoller* ʃwija.

I tried between times to take off **little.**
'I tried meanwhile to detach a little bit'.

[286] *C'est un courant international* darwak.

This is a trend international **now**.
'This is an international trend now'.

[287] *C'est* kima *l'histoire de France.*

'*It is* **like** *the history of French*'.

[288] *Bon* hna *déjà c'est un coup.*

Well here already it is a blow.
Well this is a blow.

The mixed constituents that are present in this data when French is the ML, are neither numerous nor varied. In fact AA adverbs are the only inserted single elements in an AA structure and these content morphemes are ungoverned elements i.e. unlike nouns, verbs and adjectives, adverbs are neither predicates nor arguments. Their heterogeneity in terms of placement within the sentence makes it difficult to certify if they respect French grammar or AA grammar.

3.2.2. EL Islands: the insertion of AA constituents into French Matrix Frames:

Embedded Language islands are much more common than mixed components. Yet they are not as varied as when AA is the Matrix Language. EL islands in this corpus appear either as nominal constituents (NPs) or as prepositional phrases (PPs).

3.2.2.1. The insertion of AA noun phrases into French matrix frames:

AA noun phrases that are inserted in French structures include AA nouns modified by the AA definite article (**l**), AA indefinite articles (ka:ʃ) and zero article (ø), demonstrative

pronoun (da:k). An AA noun may also be inserted with its AA modifying adjective (examples [291] [295]) or with its complement clause (examples [293] [294] [297]) as follow:

[289] *Je me rappelle bien j'étais à Skikda* da:k l-waqt.

I remember well I was in Skikda **that DEF-time**
'I remember because I was in Skikda at that time'.

[290] wah *j'ai travaillé* l-jum.

Yes *I worked* **DEF-today**.
'Yes I worked today'.

[291] ana *je vais ramasser* d-drari s-sya:r ɣadwa s-sba:ħ.

I *I am going to collect* **DEF-children DEF-young tomorrow DEF-morning**.
'I'm going to collect young children tomorrow morning'.

[292] ana *J'ai profité* s-sala:t.

I *I have profited* **DEF-praying**.
'I have prayed a lot'.

[293] *on sait jamais* ʃ-ʃaɛb j-ʒi.

INDEF-PRON *know never* **DEF-people 3PR-come**.
'You never know may be the others will come'.

[294] ana *je trouve* ø ħaʒa ta-ɛʒabn-i aja *j'achète*.

I *I find* thing 3PR-like-3SG so *I will buy*.
'When I find something that I like I will buy it'.

[295] bala:k *tu trouves* ø ħaʒa waħdɔχra.

May be *you find* **thing other**.
'You may find another thing'.

[296] ana *j'essaye de lui rappeler* ø ɣadwa s-sba:ħ.

I *I try to remind him* **tomorrow DEF-morning**.
'I will try to remind him tomorrow morning'.

[297] *Si non vous appelez* ka:ʃ waħad j-ʒi:b-ha l-ək.

If not you call **someone** 3PR-bring-it for-you.
'If cannot bring it, call someone else to bring it for you'.

[298] ana *je vois* hakka.

I *I see* **that**.
'This is my opinion'.

3.2.2.2. The insertion of AA prepositional phrases into French matrices:

AA prepositional phrases that are embedded in a French frame are also very few in this corpus for this reason we cannot make any generalization i.e. whether they are part of predicate-argument structure or peripheral constituents. The following examples illustrate the insertion of AA prepositional phrases in a French structure:

[299] *Ils sont entrain de nous causer des problèmes* fi had l-ʔawdaːɛ.

They are spirit to cause us some problems in **this DEF-situations**.
'They are causing us problems in this situation'.

[300] *Il a un douche* fe s-**Senia** *je pense*.

He has a shower **in DEF-Senia**… *I think.*
'I think that he has a shower in Senia'.

[301] *Il s'adapte pas* mɛa l-qadus t-taħtani.

It does not fit **with DEF-tube DEF-lower**.
'It does not fit with the lower tube'.

[302] w məmbaɛd *j'ai sympathisé* mɛa-hɔm.

And after *I have sympathized* **with-them**.
'Then I have sympathized with them'.

[303] *J'ai répondu* ɛla kɔlʃi.

I have answered **about everything**.
'I have answered everything'.

[304] ħna *elle a fait un retard* mə tmania taɛ s-sbaːħ ħatta lə-tlaːta taɛ lə-ħʃiɟɟa.

We *it has done a delay* **from eight o'clock of the-morning to three o'clock of the-evening**.
'Our plane has delayed seven hours'.

[305] *Je vais lancer un colloque* b-wallɔ.

'I will start a conference **with nothing'**.

[306] *J'ai déposé une plainte* amaːma l-maħkama.

I have filed a complaint **in front of DEF-court**.
'I have lodged a complaint in the court'.

[307] *C'est à dire* ana *je fais le recrutement* li-k nta.

It means I *I do the recruitment* **for-2SG you**.
'It means that I do the recruitment for you'.

Thus as it has been observed and unlike the other direction of CS, where mixed constituents, EL islands and internal EL islands seems to be very common, these types of constituents are less numerous. Many CS patterns are absent when French is the ML.

3.2.3. Possible problematic cases for the Matrix Language Hypothesis when French is the Matrix Language:

French in some sentences does not completely fulfil its role as a Matrix Language. This is evident when some AA linguistic structures are realized in French matrix frames. These structures are considered as mixed AA constituents that contain French internal EL islands when they occur into AA complement phrases as in the following examples:

[308] ka:n mɛa-na **fə *la société***.

Was-3SG with-us **in *the company***.
'He was working with us in the company'.

[309] hadi ***la faute*** dajmen j-dir-u-ha.

This *the mistake* always 3PR-make-3PL-it.
'They always make the same mistake'.

However when the same structures occur into French CPs as illustrated by the following examples, they become problematic cases for the MLF model:

[310] *C'était* **fe *le couloire*.**

It was **in *the corridor***.
'It was in the corridor'.

[311] *On va créer une communauté à travers* had ***le site***.

INDEF-PRON is going to create a community through **this *the website***.
'We are going to create a community through this website'.

The Matrix Language of the above examples is French yet the noun phrase'had ***le site'*** and the prepositional phrase '**fe *le couloire'*** have the structure of AA nominal and prepositional constituents.

These mixed AA constituents inserted into French matrices constitute counter-evidence to Myers-Scotton's MLF model in the sense that they make the definition of the matrix language problematic. According to Myers-Scotton model system morphemes that constitute the structure of mixed constituents should come from the matrix languages (French is the ML in the above examples) and embedded language system morphemes can only be inserted within EL islands not alone. Indeed those AA system morphemes in the above examples can be perceived as the insertion of AA single system morphemes into French matrix frame.

Such insertion types are common when the two languages are in contact. In CS literature many linguists (Benhattab, 2011; Bentahilla and Davies, 1983; Boumans, 1998; Nishimura, 1986; Poplack, 1981; Treffers-Daller, 1994; Ziamari, 2003) have presented instances from their corpora characterized by this phenomenon. Here are some examples from different data sets to illustrate the insertion of single system morphemes:

Elle me pique f *la figure*.
It bites me **on** *the face*.
(MA/French CS, Bentahilla & Davies, 1983: 325).

Where are they, **los** *language things*?
DEF
'Where are they, the language things'?
(Spanish/English CS, Poplack, 1981: 175)[155]

Ik ben niet tevreden over eh__kwaliteit **dyal** *eh, ja,* **dyal**__*faculteit*.
I am not satisfied about er [the] quality of er, well, of [the] faculty.
"I am not satisfied with er the quality of er, well, of the faculty".
(MA/Dutch CS, Boumans, 1998: 317)

Een boekbespreking, ik heb het gedaan **f** *Tilburg*.
A book-review I have it done in Tilburg.
'A book review, I did it in Tilburg'.
(MA/Dutch CS, Boumans, 1998: 316).

Je sens waħd ***la froideur*** f dak *la personne*.
I feel INDEF-DEF-coldness in that –DEF- person.
'I feel coldness in that person'.
(Maroccan Arabic/French CS, Ziamari, 2003: 232).

AA system morphemes that form AA mixed constituents embedded into French matrices are not few in this corpus and they include the definite article 'l-', prepositions, demonstrative pronouns, the indefinite article 'waħd l-' the quantifier 'ɡaːɛ', and the bridge system morpheme 'taɛ'. These constituents can be divided into noun phrases and prepositional phrases.

The following noun phrases are embedded into French matrices, yet they are introduced by AA determiners: the definite article 'l-', demonstrative pronouns, the indefinite article 'waħd l-', quantifier 'ɡaːɛ', AA possessive construction [taɛ + pronouns] and AA numeral modified by AA prepositional phrases as follow:

[155] Cited in Boumans (1998: 80) and in Mahootian (2006: 520).

[312] *On va avancer un peu* l-***groupe*** taɛ sana rabɛa.

INDEF-PRON is going to move a little **DEF-*group*** of fourth year.
'We will move a little the group of the fourth year'.

[314] waħd l-***une heure*** *on se rappelle.*

INDEF DEF-*an hour* *INDEF-PRON call each other.*
'In an hour I will call you'.

[315] *Viens voir* waħd ***la console.***

Come to see **INDEF-*the console.***
'Come to see a console'.

[316] *Il y avait* dik ***l'amitié*** *entre nous.*

There was **that *the friendship*** *between us.*
'There was a kind of friendship between us'.

[317] *Je vous autorise* hadik ***l'après midi.***

I will authorize you **that *the afternoon.***
'I will give permission for the afternoon'.

[318] *Un village* ga:ɛ *il a illuminé.*

A village **all** *he has illuminated.*
'He has illuminated an entire village'.

[319] *J'ai choisi* χamsa taɛ ***les noms.***

I have chosen **five of *the names.***
'I have chosen five names'.

[320] ***L'avocation principale*** taɛ-ak *c'est l'enseignement.*

The main avocation **of-you** *it is education.*
'Education is your main avocation'.

[321] *Même* ***la vie*** taɛ-ah *quotidienne elle va tout changer.*

Even ***the life*** **of-his** *daily it will all change.*
'Even his daily life will completely change'.

[322] *Parce que c'est bon* ***les papiers*** taɛ-ah *sont en règle.*

Because it is ok ***the papers*** **of-him** *are in order.*
'It is ok the documents have been regulated'.

The above nominal constituents introduced by AA determiners contain French internal EL islands that have been described in chapter two; however they are themselves embedded into French complement phrases (CPs).

AA prepositions may also introduce French constituents when French is the Matrix Language of CPs as illustrated by the following examples:

[323] *Tu apprends des choses* **ɛla** ***la vie***.

You learn PART things **about** ***life***.
'You learn things about life'.

[324] l-*problème se pose* fə ***l'économie***.

DEF-*problem arises* **from** ***the economy***.
'Economy causes such problem'.

[325] *Il a des difficultés* fə ***un logiciel précis*** *qui est demandé* fə ***le marché.***

He has INDEF difficulties **in** ***a software specific*** *which is required* **in** ***the market.***
'He has some difficulties in specific software which is required in the market'.

[326] *On peut faire une déclaration sur l'honneur* ɛand ***l'APC***.

INDEF-PRON can make a sworn statement **in** ***people's municipal assembly***.
'We can make a sworn statement in people's municipal assembly'.

[327] ħna *on sait les besoins* taɛ ***l'entreprise***.

We *INDEF-PRON know the needs* **of** ***the company***.
'We look for the needs of the company'.

[328] ana *je fais un classement* taɛ ***les écoles***.

I *I do a classification* **of** ***the schools***.
'I do a classification of schools'.

[329] *C'est un projet* taɛ ***la pauvreté.***

This is a project **of** ***poverty***.
'This is a project about poverty'.

[330] *J'ai vu* belli *avec une greffe* taɛ l-***foie*** w taɛ l-***rein***, *elles sont tombées enceintes*.

I saw that *with transplantation* **of DEF-*liver*** and **of DEF-*kidney***, *they became pregnant.*
'I saw cases of women who underwent liver transplantation and kidney transplantation and became pregnant'.

[331] *Ils y'avaient des décès* fe ***les urgences***.

There were INDEF dead people **in** ***the emergencies***.
'There were dead people in the emergencies.'

[332] hadɔ ga:ɛ *c'est des conseils pour mettre l'état* taɛ ***toutes les informations*** *et particulièrement qui peux jouer* fe ***les décisions*** ***tawɛ-ak.***

These all *it is INDEF advices to put the status* **of** ***all the information*** *and particularly which can play out* **in** ***the decisions of-your***.

'These are advices that help you better use the available information in taking your decisions.'

These examples highlight the fact that linguistic structures are not that varied. They can be summarized into two types of components: nominal and prepositional. In those examples, French as a ML provides the relevant system morphemes at the CP level. Yet determiners and prepositions are realized in AA, the embedded language, creating structures that resemble those observed when the same language is the Matrix Language of the whole CPs.

Layered insertion seems to be a relevant solution to explain the above examples which constitute counter-evidence to the MLF model.

The concept of 'layered insertion' has been introduced by Boumans in his model called the Monolingual Structure Approach[156] (hereafter MSA) that he developed in his analysis of Moroccan/Dutch CS (Boumans, 1998). The Monolingual Structure Approach is an insertional model that views CS as:

> *"… The insertion of smaller or larger constituents from one language, to be called the Embedded Language, into a syntactic frame set by another language, the Matrix Language" (Boumans & Caubet, 2000: 113).*

In that the MSA does not differ from the MLF model; both are insertional models arguing that a grammatical structure containing morphemes from two languages can be attributed to the grammar of only one of these languages; the 'ML', rather than to the grammar of both languages or to the overlap of both grammars. Yet the major difference between them lies as Boumans states in "*the scope of the ML*" (Boumans & Caubet, 2000: 114). Unlike the MLF model which defines the Matrix Language solely at the CP (complementizer phrase) level, the MSA identifies the ML at two levels the finite clause level[157] and the phrasal constituent level[158] assuming that the ML of the finite clause is not

[156] The MSA is an insertional approach that is based on insights from a number of scholars including Hasselmo (1972, 1974), Bautista (1975, 1980), Klavans (1985), Nishimura (1986) and Myers-Scotton (1993).

[157] Boumans (1998: 76) adopts Klavans' (1985) definition of what she calls the Base Language for the ML on the finite clause level cited as follow : "the Matrix Language (ML) on the sentence level is the language of inflection bearing elements of the tensed verb". So according to Boumans, the verbal inflection (i.e. inflection for tense) is the best indicator of the ML on the finite clause level ; because of the constant correlation between the language of the inflection of the finite verb and the language to which basic word order (the order of the verb and its argumants) must be attributed. In addition there is more variation in verbal inflection systems than in constituent order which makes the inflection of the finite verb as a reliable criterion in cases where the

necessarily the ML of each constituent or island within this clause (Boumans, 1998: 77). This means that EL constituents (i.e. embedded language noun phrases and prepositional phrases) may also be themselves matrix structures in which elements of the other language are inserted (Boumans & Caubet, 2000: 117). Boumans call the insertion of an element or a constituent from one language into a constituent structure of another language which is inserted again in the finite clause structure of the former language, layered insertion.

So the above examples from AA/French CS corpus may be analysed as cases of layered insertion. Examples that contain embedded AA determiners are considered under the MSA as AA noun phrases (l-*groupe, Un village* ga:ɛ, χamsa taɛ *les noms*, dik *l'amétier*, had *le site*, waħd l-*une heure*, *la vie* taɛ-ah, etc.) embedded into French CPs and at the same time they provide nominal phrase structures that contain inserted French NPs (groupe, Un village, les noms, l'amitié, le site, une heure, la vie). Embedded AA prepositions are also analyzed under the MSA as prepositional phrases (ɛla *la vie*, fe *le couloire*, ɛand *la PC*, taɛ *l'entreprise,* etc.) inserted into French CPs and they are also matrix frames into which French NPs (la vie, le couloire, l'APC, l'entreprise) are embedded.

The above sentences are better considered as instances of layered insertions than singly occurring embedded AA system morphemes into French matrix structures for different reasons that have been already mentioned by Boumans (1998: 80). First, the insertion of functional morphemes is not attested in CS literature, in Boumans words "*functional morphemes insertion [...] falls outside normal patterns in CS*" (ibid. 80). Besides, even if the insertion of single system morpheme is possible, the above insertions show that the ML (French) grammatical rules are not respected because the patterns [indefinite + definite article waħd l-] in examples (311, 312) and [demonstrative + definite article] in examples (313, 314) satisfy AA grammar, yet they are ungrammatical sequences according to French noun phrase structures. The same is true for the AA construction [number + taɛ + NP] in example (316) and the possessive construction [NP + taɛ-pronoun] in examples (317-319) which does not exist in French. Moreover The quantifier 'ga:ɛ' (all) in example (315) respects AA word-order not French word order as it follows the French noun phrase it modifies (i.e. in AA, the quantifier 'ga:ɛ' follow or precede the noun phrase it modifies however its equivalent in French *'tout'* (all) must precede the noun phrase).

All the above cited arguments make the possibility of treating AA elements as inserted system morphemes into French matrix structures improbable because French grammar cannot account for this type of insertions. The most logical description seems to consider the previously cited examples as instances of layered insertion i.e. the AA embedded constituents

languages differ in word order and in cases where the languages share the same word order (Boumans, 1998: 76).

[158] Under the MSA, the ML on the constituent level is the language to which the internal structure of the constituent as expressed by the distribution of all morphemes within the constituent can be attributed (Boumans, 1998: 66).

in french CPs, are themselves matrix frames for the embedded French internal noun phrases. In the same vein, Boumans (1998: 81) argues that layered insertion[159]:

> *"Can account for what seems to be a counter-example to the generalization that single function morphemes are not inserted". Boumans (1998: 81)*

Despite the fact that Layered insertions provide an interpretation to the problematic cases in this data that involve the frequent insertion of AA single system morphemes when French is the ML of the CPs, it constitutes at the same time counter-evidence to the MLF model because it proves that the ML does change within the same CP. The fact that two morpho-syntactic sources can structure the complementizer phrase has been categorically rejected by Myers-Scotton (1993b, 2002). Since the first version of the MLF model (1993) to the latest version (2002), Myers-Scotton defends her point of view stating that:

> *"The Matrix Language can-and does-change from one CP to the next for some speakers in some corpora, even though there are not many examples of this in the codeswitching literature. This fact does not change the finding that within a single CP itself, evidence to date indicates the Matrix Language does not change within that unit." (Myers-Scotton, 2002: 66)*

If we compare the two counter-examples i.e. the insertion of AA single system morphemes into French CPs and the fact that ML can change within the same CP, we find that the first counter-evidence seems to hinder the efficiency of the two hierarchies (the ML vs. EL opposition and the content vs. system morpheme opposition) on which the MLF model is based. However accepting layered insertion i.e. the fact that Matrix Language can change within the same CP as an explanation to the obove CS instances will allow us to approach this type of switching within an insertional paradigm.

3.2.4. AA insertions into French Matrix Structures recapitulation:

It is clear at this stage of the analysis that the two languages, even if they both have the possibility of being the Matrix Language, AA and French do not generate quantitatively and qualitatively the same structures. Thus asymmetry characterizes the presence of these two languages in the corpus. Unlike the insertion of French into AA frames which is quantitatively numerous and structurally varied, AA insertions into French matrices is very limited.

Quantitatively AA insertions into French matrix frames are very few compared to French insertions into AA matrix structures. Moreover these insertions are limited to some structures. The analysis of the present corpus highlights the tendency that AA adverbs are the

[159] According to Boumans (1998: 81) "the idea of layered insertion is not really a substantial digression from the current matrix language models that recognize constituent insertion", Because as Boumans (ibid, 81) argues "as soon as one recognizes constituent insertion one is in fact assuming that one language is the ML on sentence level while another language projects the grammatical frame of the embedded constituent".

only inserted single morphemes in mixed constituents and these grammatical patterns don't exceed ten instances. AA EL islands embedded into French matrices are divided into noun phrases (about ten instances) and prepositional phrases (about nine tokens).

Qualitatively, AA/French CS data when French is the Matrix Language displays challenging switching instances. These instances seem to outnumber the insertion of AA single morphemes and EL islands into French matrices. These are the insertion of AA single system morphemes into French matrix frames. This type of insertions seem to be better considered as layered insertions i.e., the embedded AA system morphemes are in fact embedded AA constituents that provide matrix frames into which French nouns or noun phrases are embedded. The fact that the Matrix Language often changes within a single CP when French is the Matrix Language affirms the asymmetry between the two languages.

3.2.5. Overview table:

In order to provide a quick overview of the insertion types that occur with either matrix language, the main facts are summarized in the following table:

Mixed constituents: Mixed noun phrases		**French insertions into AA grammatical frames**	**AA insertions into French grammatical frames**
	Insertion of single Nouns	• Definite article (l-): 11 tokens. • Indefinite articles: 1- Zero article (ø): 35 tokens. 2- Indefinite article (waħd l-): 9 tokens. • Demonstratives + definite article (l-): 3 instances. • Possessive constructions [DEF article (l-) + French single nouns + taɛ + pronouns] : 5 instances. • Numerals : only one example. • Quantifier **(ga:ɛ):** only one example. • Quantifier (kaʃ): 3 instances. • AA Attributive adjectives: 8 instances	
	Insertion of	• Indefinite article (waħd +	

	Internal noun phrases [French definite articles + French nouns]	French definite articles + French nouns): 21 tokens. • Demonstratives + French definite articles + French nouns: 29 instances. • Possessive constructions [French definite articles + French nouns + taɛ + pronouns] : 31 instances. • Quantifier **(gaːɛ):** 18 tokens. • Quantifier (bəzzaːf): 2 instances. • AA Attributive adjectives: 10 instances	
	Adjectives	• The insertion of French attributive adjectives: 11 instances. • The insertion of French predicative adjectives: 31 instances	
Mixed constituents: Mixed prepositional phrases.	Insertion of single nouns.	• Insertion of single French nouns into AA prepositional phrase: 19 tokens	
	Insertion of Internal noun phrases [French definite articles + French nouns]	• Insertion of French definite nouns [French definite articles + French nouns] into AA prepositional phrase: 38 tokens.	
Mixed constituents: Mixed verb phrases.	Insertion of verb stems	• The insertion of French verb stems of the first group: 80 tokens. • The insertion of French verb stems of the second group and third group: 7 tokens. They are morphologically adapted by being attached to AA	

		inflection for past and present tense and past participle.	
	Insertion of adverbs.	• Insertion of French adverbs including (adverbs of time, adverbs of manner, adverbs of frequency, and model adverbs): 56 tokens.	• The insertion of AA adverbs: 4 instances
EL Islands:	EL Noun Phrases	• The insertion of French noun phrases [definite articles + nouns]: 110 instances. • The insertion of French noun phrases [indefinite articles + nouns]: 48 instances. • The insertion of French noun phrases [Possessives + nouns]: 11 instances. • The insertion of French noun phrases (Quantifiers + Nouns): 7 tokens • The insertion of French noun phrases (numerals + Nouns): 51 tokens. • The insertion of French noun phrases (Nouns +Adjectives): 46 instances. • The insertion of French noun phrases (Noun + Noun complement): 8 instances.	• The insertion of AA noun phrases: 10 instances.
	EL adjective Phrases	• The insertion of French adjective phrases [adverbs + adjectives]: 4 examples.	
	EL prepositional phrases	• The insertion of French prepositional phrase: 85 tokens most of them are adverbial constituents rather complements.	• The insertion of AA prepositional phrases: 9 instances.

3.3. The uniform structure principle:

In addition to the Matrix Language Principle and the Asymmetry Principle, Myers-Scotton (2002) adds another supportive principle i.e. 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". (Myers-Scotton, 2002: 120)*

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 Embedded Language structures are allowed if they obey Matrix Language 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 Uniform Structure Principle 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.

3.3.1. Uniform Structure Principle and AA word-order:

AA word-order is a good example of how AA observes its structural uniformity and superiority across bilingual CPs and mixed constituents. We have already observed how AA word order is imposed within mixed noun phrases in the case of embedded French internal noun phrases in AA structures governed by AA demonstratives (examples 84-86 in the second chapter) and AA ordinal numbers (examples 107-109 in the second chapter). Some of these examples are reproduced hereafter to illustrate the USP:

[333] ka:n *chargé* ***l'examen*** **l-lɔwal.**

Was *full* ***the examination*** **DEF-first**.
'The first examination was heavy'.

[334] ***s-Section*** **z-zawʒa** ħału-l-hɔm *quatre questions ouvertes*.

DEF-Section DEF-second gave-3PL-to-them *four questions open.*
'The second section was given four open questions.

[335] mɔhim ***l'espace*** **hadak**, zaɛma l-fikra hadik *toujours* qaɟma.

Important *the space* that, that is the idea that *always* exists.

'The important thing is that space or that idea always exists'.

[336] na-łlaɛ n-*régl*-i l-*problème* taɛ ***l'attestation*** hadik.

1PR-go 1PR-*regulate*-1PL DEF-*problem* of *the certificate* that.
'I will go to settle the problem of that certificate'.

In examples (333, 334), the French noun phrases are modified by AA ordinal numbers **'l-lɔwla'** (first) and **'z-zawʒa'** (second), and by AA demonstrative pronouns in examples (335, 336). In these mixed noun phrases, AA dictates its word order i.e. AA ordinal numbers and demonstrative pronouns follow the nouns they modify unlike their French counter-parts which precede the nouns.

AA word order is also imposed on bilingual complement phrases (CPs) when it is the Matrix Language. The following examples show how AA word order[160] is respected in mixed CPs in the case of subject placement:

[337] kmal ***le role*** **taɛ-ah**.

Finished ***the role*** **of-his**.
'His role has finished'.

[338] ki dʒi ***la décision*** n-ɛajja-ł lə l-*vendeur* w l- *l'acheteur*.

When comes ***the decision*** 1PR-call-1SG for- the- *seller* and for- *the buyer*.
'When the decision comes I will call the seller and the buyer'.

[339] wasl-ɔ ***les envahisseurs***.

Arrive-3PL ***the invaders***.
'The invaders have arrived'

[340] wqaɛ ***un petit problème***.

Hapened ***a small problem***.
'There was a small problem'.

[341] ʒaw ɛand-i l-ba:rəħ ***deux*** darɔ t-*test*.

Came to-me the-yesterday ***two*** made the-*test*.
'Yesterday two students came and did the test'.

[342] min j-kun ɛand-ək ***un petit problème*** mɛa *les journalistes*, ɛajł-i-l-i.

When 3PR-be to-you ***a small problem*** with *the journalists*, call-2SG-tome.
'When there is a problem between you and journalists call me'.

[160] In AA, the subject may precede or follow the verb however in French the subject must precede the verb.

[343] t-wal-i ɛand-i ***un listing*** taɛ ***les meilleures écoles***.

3PRF-become-3SG have-1SG **a listing of** ***the best schools***.
'I will have a list of the best schools'.

In addition to the above examples there are three other examples (04, 205, and 211) cited before. These instances illustrate the insertion of French noun phrases in AA matrix frames. These well-formed noun phrases function as subjects of AA sentences. They respect AA word-order by being embedded after AA verbs.

3.3.2. Uniform Structure Principle and sub-categorization requirements:

Being the ML, AA verbs not only impose their word-order but also their grammatical subcategorizations. In AA, verbs in progressive tense may take a noun phrase as a direct object as in the following example:

kɔnt/rani nwaʒʒəd l-fɬur.
I was/am preparing the lunch.

AA verbs in progressive tense may also take prepositional phrases as direct objects by using the preposition 'fə' (in) before the noun phrases as in the following example:

kɔnt/rani nwaʒʒəd **fə** l-fɬur.
I was/am preparing in the lunch.
'I was/am preparing the lunch'.

Consider the following examples in which AA verbs[161] take prepositional phrases as direct objects rather than noun phrases even though the verb stems and the NPs are French inserted constituents.

[344] ra-na n-*form*-ɔ **fə** *des groupes*.

To be-3PL 1PRS-*form*-1PL **in** *some groups.*
'We are forming some groups'.

[345] ra-ki tə-*prépr*-i **fə** l-*guide*taɛak.

Are-2F 2PRF-*prepare*-2SGF **in** DEF-*guide* your.
'You are preparing your guide'.

[161] In AA, verbs in progressive tense either take a noun phrase as a direct object 'kɔnt/rani nwaʒʒəd l-fɬur' (I was/am preparing the lunch), or they use the preposition 'fə' (in) before the NP and take a preposition phrase as a direct object 'kɔnt/rani nwaʒʒəd **fə** l-fɬur' (I was/am preparing (in) the lunch'.

[346] kɔn-t nə-*prépar*-i fə waħd d-*dossier*.

Was-1SG 1PRS-*prepare*-1SG **in** INDEF-DEF-*file*.
'I was preparing a file'.

In the above examples, AA imposes its verb subcategorizations by using the preposition fə 'in' before inserted French NP in example (344) and before inserted French nouns in examples (345, 346). This structure does not exist in French (e.g. **on form* ***de*** *des groupes* 'we form **in** some groups'). AA also permits the insertion of nouns and noun phrases as direct objects without using the preposition (e.g. ra-na n-*form*-ɔ fə *des groupes* 'we are forming some groups); a structure that is shared with French grammatical rules. Yet AA uses the marked structure with the preposition (fə) and imposes it on French inserted verb stems and French nouns in the above examples.

AA subcategorization restrictions are also satisfied in the case of AA nouns and their modifying adjectives. In addition to gender and number agreements, AA modifying adjectives agree with the nouns they modify in definiteness i.e. in AA noun phrases, AA adjectives modifying definite nouns are themselves accompanied by the definite article (l-). The following examples contain French nouns modified by AA attributive adjectives that agree with them in number, gender and definiteness:

[347] ana n-dir ***foulard*** kħal.

I 1PR-make **scarf black**.
'I usually put a black scarf'.

[348] hada:k ***un escroc*** kbi:r hada:k.

That ***a crook*** **big** that.
'That man is a big crook'.

[349] ma-fihɔm la ***des balcons*** kba:r la la terrasse.

NEG-in them NEG ***INDF-balconies*** **big** nor DEF-terrace.
'There are neither big balconies nor terraces'.

[350] badl-ɔ l-***programme*** ʒ-ʒdid.

Changed-3PL **DEF-*programme*** **DEF-new**.
'They have changed a new programme'.

[351] ***Les journaux*** s-sɣ-a:r ʝ-ħaws-ɔ ɣi ʝ-ɛamr-ɔ.

The newspapers **DEF-small-PLAgr** 3PR-want-3PL only 3PR-fill-3PL.
'The small newspapers want only to fill their pages.

In examples (347-348), AA adjectives are not accompanied by the AA definite article (l-) because they modify French indefinite nouns. However, AA attributive adjectives in

examples (350, 351) are preceded by the definite article (l-) because they modify French definite nouns.

In AA/French CS corpus of the present study, the French inserted adjectives satisfy AA nominal constituents' structure by taking the definite article (l-) as a determiner like the nouns they modify. Examples (134-137) that are cited in the second chapter when analyzing the insertion of French attributive adjectives in mixed constituents are reproduced hereafter to illustrate how AA maintains its uniformity throughout bilingual noun phrases:

[352] ɛłini l-kwaːɣał l-***origin-aux*** tawɛ-ək.

Give-me the papers **DEF-*original*-*PLAgr*** of-your.
'Give me your original papers'.

[353] kan-ɔ ja-hadr-ɔ ɛla *les classes* l-***propres***.

Were-3PL 3PR-speak-3PL about **the classes DEF-*proper***.
'They were speaking about the clean classes'.

[354] ʒa-j fə l-*boulevard* l-***principal***.

Come-3SG in **DEF-*boulevard* DEF-*principal***.
'It is located in the principal boulevard'.

In the above examples the Head features of the nouns are controlled within the noun phrase and imposed on the inserted adjectives to maintain the phrase consistency.

The uniformity of AA structures are also maintained in the case of AA demonstratives that modify French nouns i.e. AA demonstratives subcategorize for definite articles before nouns (examples 79-86 in the second chapter).

In AA, predicative adjectives or noun phrases may be introduced without a copula (i.e. with a zero copula (ø)) which is a violation to French grammar subcategorization. We have already cited some examples concerning the insertion of predicative adjectives in a zero copula (143-148). The following examples include the insertion of French nouns and noun phrases as predicates of an AA zero copula:

[355] hada hɔwa ***ø*** *a peu prés* ***la tâche*** taɛ-ək.

This he ø *roughly* ***the task*** of-you
'This is roughly your task'.

[356] hada hɔwa ***ø l'essentiel***.

This he ø ***the main thing***.
'This is the main thing'.

[357] hada mʃi ***ø problème*** taɛ-na.

This not ø ***problem*** of-us.

'This is not our problem'.

[358] hada ***ø un engagement*** *de la politique environnemental*.

It ø ***a commitment to environmental policy***.

'It is a commitment to environmental policy'.

[359] hadi ***ø ma grande mère***.

This ø ***my grandmother***.

'This is my grandmother'.

[360] kima n-*neuro* fi-ha ***ø quatre cours***.

Like *the neurology* in-it ø ***four lessons***.

'There are four lessons in neurology'.

The above examples show that despite the fact that many morphemes are French; the ML is AA because while these utterances are considered ungrammatical in French, they are meaningful according to AA grammar.

Thus the structure of AA as a ML is maintained and preferred even if it contrasts with the structure of the Embedded Language (French) as in the case of verb-subject and Adjective-noun word order, and even if the structure of the Matrix Language does not exist in the Embedded Language as in the case of definite articles before adjectives and after demonstratives, and as in the case of the insertion of predicates in a zero copula.

3.4. The congruence:

In the preceding chapters, we have already mentioned the importance of the notion of congruence in CS research. The scope of congruence or equivalence 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 by the two last hypotheses; the Blocking Hypothesis and the EL Hypothesis[162]. The use of a lexical item is motivated by a match or

[162] Both of them have been introduced in chapter 2.

compatibility between the two languages on 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 result in mixed constituents and insufficient congruence create EL islands. Myers-Scotton and Jake (1995) 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." (1995: 248)*

Sufficient congruence as Myers-Scotton (2002: 110) has admitted is not well defined independently from what does occur, yet the MLF model's explicative power relies on the concept of congruence. Besides, many recent studies have exploited the notion of congruence to explain some problematic code switching instances.

This section aims 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. To do so we will discuss four main observations in this data. First, we will try to understand the recurrent insertion of French nouns with their definite articles rather than the insertion of single French nouns. Second, the fact that French nouns are not used with AA numerals in mixed constituents even if it is allowed by the MLF model and they are instead frequently inserted with French numerals as EL islands calls for some explanation. Third, French nouns in EL islands are modified by French articles, French numerals, French adjectives and French quantifiers, however they are not used in this corpus with French demonstratives i.e., the absence of French demonstrative pronouns in EL islands. Finally, French possessives in French EL islands in this corpus are used only with French nouns that refer to names of relatives.

3.4.1. Congruence and definite articles:

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 noun phrases and prepositional phrases.

As internal EL islands, French definite articles[163] (le, la, les, l') accompanying French nouns occur after AA demonstratives, quantifiers, prepositions and they even replace the AA definite article (l-) in the composite determiner (waħd l-). French internal noun phrases embedded into AA noun phrases and prepositional phrases are also common when French is the Matrix Language of bilingual CPs. This evidence makes Boumans and Caubet (2000) state that:

> *"Preceding embedded French nouns, French definite articles (le, la, l', les) are used as if they were the AA definite article (l-), even in positions where they would be impossible in monolingual French." (Boumans and Caubet, 2000: 40).*

Indeed this phenomenon has been noticed by other scholars working on these two languages (Boumans and Caubet, 2000) and those working on MA/French CS data (Nait M'Barek and Sankoff, 1988; Ziamari, 2003). 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[164]; Boumans, 1998; Muysken, 2000; Myers-Scotton, 2002).

In some earlier studies French noun insertions when Arabic is the ML have been contrasted with Dutch noun[165] insertions in the Arabic structure. Different hypotheses have been formulated to explain the contrast between AA and MA/French noun insertions on one hand and MA/Dutch noun insertions on the other hand among them: French le/la resembles Arabic (l-) and Dutch *de/he* does not (Heath, 1989)[166]; French articles are obligatory in the noun phrase, 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 matrix language. 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

[163] Preceding French embedded nouns, French definite articles are used as if they were the AA article (l-) even in positions where they would be impossible in monolingual French (Boumans and Caubet, 2000:40). the AA definite article (l-) is used only with French singular masculine nouns replacing thus the French masculine singular definite article *le.*

[164] 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.

[165] 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 (i.e., after Arabic demonstratives, possessives and the composite indefinite article 'waħd'. 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 (l-) and are embedded with French nouns as EL islands.

[166] Cited in Muysken (2000).

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 following examples cited in Myers-Scotton (2002) include French noun *carnet* followed by the Wolof determiner *bi*. The second example includes French noun *problème* inserted as a bare form:

Am carnet bi, seet ko
Take notebook DET, look at it
"Take the notebook; look at it."

(Wolof/French; Swigart 1992: 172, cited in Myers-Scotton 2002:118)

Ezali probleme mo-nene te
Copula problem big NEG
"It's not (a) big problem."

(Lingala/French; kamwangamalu 1989, cited in Myers-Scotton 2002: 119)

The AA/French CS corpus at hand support 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 (examples 58-64 in the second chapter). The following examples illustrate this:

[361] gɔltə-l-hɔm ran-i bay-i n-ʃuf ***ø malade***.
Told-to-them be-1SG want-1SG 1PR ***ø patient.***
'I told them that I want to see a patient.'

[362] ma-ɛand-i-ːʃ ***ø donneur***. (renal transplantation: kidney failure)
NEG-have-1SG-NEG ***ø donor.***
'I don't have a donor.'

[363] ɣadi j-dir-ɔ ***ø conférence*** ɛla *les maladies*taɛ *le sang*.
Will 3PR-make-3PL ***ø conference*** about *DEF-diseases* of *DEF-blood*.
'They will make a conference about blood diseases.'

Based on this evidence, Myers-Scotton (ibid: 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." Myers-Scotton (2002: 119)*

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 structure) which explains the appearance of French determiners in AA constituent structure as she states (ibid: 119) in the following statement:

> *"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." Myers-Scotton (2002: 119)*

But how sufficient congruence between AA and French determiners is 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 have a determiner complex[167] as she states:

> *"I suggest that the reason[168] 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 'waḥd l-' and 'demonstratives + the definite article (l-)'. French on the other hand allow some combinations[169] but disallow others such as: indefinite article + definite articles (**un le* 'a the') and demonstratives + definite articles (**ce le* 'this the'). Myers-Scotton herself admits this by saying that:

> *"Those French elements under D (quantifiers, demonstratives, etc.)[170] do not replace Arabic ones in a mixed constituent; this is evidence that these features are*

[167] North African Arabic varieties in general and AA in particular have a determiner complex in their grammatical system i.e., in AA, more than a determiner can precede a noun as in the case of demonstratives which subcategorize for a definite article e.g. (had l-ktab : this the book 'this book'). The composite indefinite article (waḥd-l 'one the') is another determiner complex because it consists of two determiners.

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

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

[170] Muysken (2000: 86) and Myers-Scotton (2002: 122) assume different classification of Arabic, French and Dutch determiners within phrase-structure tree. Muysken suggests that in French the article corresponds to an element of the category D (determiners) including demonstratives, possessives, quantifiers, etc. however in Arabic, the definite marker does not belong to D (determiners which include Arabic (waḥd 'one' and

not equally congruent with those in French. But my point is that the overall determiner complexes are sufficiently congruent to support the configurations that do occur". Myers-Scotton (2002: 122)

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 (l-) 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." Myers-Scotton (2002: 97)

Third and most important is that there is a contradiction between Myers-Scotton's (2002) 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 determines. On the other hand, EL islands are considered by Myers-Scotton's MLF model as compromise strategies in 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 led Myers-Scotton (2002: 125) to explain the phenomenon using the Uniform Structure Principle by adding the following addendum:

Addendum I. in classic codeswitching, Matrix Language early system morphemes can be displaced in the Matrix Language frame for determiner complexes under two conditions: (i) if the abstract grammatical structure of Embedded Language early system morphemes is (nearly) identical to that of Matrix Language counterparts, then Embedded Language forms may satisfy Matrix Language

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demonstratives (had, dak, etc) but corresponds to a subordinate functional category of definiteness/number/gender (DNG) and project a DNG-P. Myers-Scotton on the other hand , suggest that French like Arabic has a determiner complex that has a D (determiner) node and a DNG node. Under D in Arabic, one finds demonstratives and the indefinite 'waḥd'. Under D in French, one finds demonstratives, quantifiers as well as partitives (tout, de).under DNG, French and AA share the obligatory marking of masculine or feminine gender on singular determiners.

structural requirements of the determiner complex (French in Arabic/French codeswitching). Myers-Scotton (2002: 127)[171]

Myers-Scotton adds this addendum to maintain the USP and to accounts for the Arabic/French CS data.

It seems that Myers-Scotton (2002: 122- 127) has been so occupied in explaining the Arabic determiner complex to the extent that makes her seek for another compromising addendum in addition to the USP and to the notion of congruence in trying to explain the frequent insertion of French nouns with their articles. Nevertheless Myers-Scotton's line of reasoning seems to be controversial since she insists on the fact that French noun phrase insertions are the result of sufficient congruence between Arabic and French determiner complexes (i.e. AA and French share the grammatical feature of a determiner complex in modifying a noun).

This phenomenon can be still approached using Myers-Scotton's notion of congruence and the USP. However, instead of concentrating on the feature of Arabic determiner complex which does not create any problem since the Uniform Structure Principle in the case of determiner complex is satisfied when AA is the Matrix Language[172]; 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 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 don't vary according to number and gender i.e. they don't 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. When French nouns are activated at the conceptual level, lemmas underlying early system morphemes (articles in this case) are also activated to add conceptual information to their heads (definiteness). In addition to definiteness, French nouns call for gender and number agreements[173] which AA articles lack.

[171] The second part of (addendum I.) concerns determiners in Arabic/ Dutch CS corpus.

[172] AA demonstratives and indefinite article 'waħd-' 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.

[173] French gender is formally marked on the singular article: definite *la*, indefinite *une* for feminine, and *le* and *un* for masculine. French Plural is marked on the nouns by the nominal affix ***–s*** (except for irregular nouns) but it is not pronounced (except in certain 'liaison' contexts). The French plural is explicitly 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.

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 on the other hand does not impose its structural uniformity within the embedded noun phrases (i.e. French nouns are scarcely embedded into AA constituents), yet these internal EL islands are still inserted within AA larger noun phases (AA maximal projections) and are submitted to AA Uniform Structure Principle (i.e. French noun phrases satisfy the AA indefinite article's and demonstratives' requirements and complete AA determiner complexes by providing definite articles before nouns). French nouns also satisfy the AA structural uniformity when they are inserted as EL islands within AA CPs by respecting AA word order.

So the presence or lack of sufficient congruence at the conceptual level -the first level of language production- which is responsible for activating content morphemes and associating them with early system morphemes explain the realization of these morphemes (early system morphemes) in the Matrix Language or the Embedded Language. The scope of congruence has been extended by the Uniform Structure Principle, recently introduced by Myers-Scotton (2002). This principle uses the notion of feature checking process in maintaining the uniformity across phrases.

3.4.2. Congruence and numerals:

Preceding nouns, Numerals are considered by the MLF model as early system morphemes. In mixed constituents numerals come from the ML and modify Embedded Language nouns. Numerals can also come from the Embedded Language but within EL islands modifying Embedded Language 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 MLF model except example [101] that has been cited in chapter two when analyzing mixed constituents and which is reproduced asfollow:

[101] ma-na-bɛat-l-ək-ʃ waħad ***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 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 this lack of sufficient congruence between AA and French is interpreted in the case of numerals?

In order to answer the above question, consider the following example which involve switching between a French numeral '*quinze*' (fifteen) and an AA noun 'χadda:m' (worker):

[364] mi:n d-gʊl ***quinze*** **χadda:m** maɛnat-ha ***quinze*** **χadda:m** ʝ-kʊnɔ *permanents, déclarés*, etc.

When 2PR-say *fifteen* worker means-it *fifteen* worker 3PR-be-3PL *permanent, registered*…etc.

'When you say fifteen workers it means fifteen workers that are permanent, registered…etc'.

The above example is considered as a counter-example to the MLF model since the numeral which is an early system morpheme comes from the Embedded Language (French) in mixed constituent and modifies the Matrix Language (AA) noun. According to the MLF model, numerals must come from the ML in mixed constituents or from the EL within EL islands. The other thing is that the French numeral *quinze* (fifteen) is used with a singular noun 'χadda:m' (worker) which violates French grammatical features i.e. in French noun phrases, numerals more than (1) are used with plural nouns.

So the above example violates the ML (AA) by providing the early system morpheme from the EL in mixed constituents and at the same time violates the EL (French) by providing a singular noun after the French numeral *quinze* (fifteen).

Thus there is insufficient congruence between AA numerals and their French counterparts. This lack of sufficient congruence 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 number 10 call for singular nouns. French numerals, on the other hand, subcategorize for plural nouns except number 1 which is used with singular nouns.

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:

[365] sbaħ dar-na **waħda** **# *une*** *surveillance*.

Morning did-1PL **one # *one*** *surveillance.*

'We had surveillance in the morning'.

[366] ki j-ʒi ɛand-əh **waħad # *un*** *cadre* j-χa:f mənn-ah.

When 3PR-come-3SG to-him one # one executive 3PR-be afraid3SG from-him.

'When a director comes to him he will be afraid from him'.

[367] ga:l **χamsa # *cinq*** *vigiles radiés*.

Said3SG five # five guards removed.

'It is said that there are five guards removed'.

In the above examples French nouns are preceded by AA numerals and French numerals. Yet the AA numerals are followed by a pause (#). This is may not be 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:

[368] ra-hɔm **χamsa** ga:l-l-ək *radiés* ***les vigiles***.

Are-3PL **five** said-to-you *removed* ***the guards***.

'They said that there are five guards removed'.

[369] hɔma ħasb-i:n ***les vigiles*** **χamsa** li ra-hɔm ħaɬ-i:n-hɔm men təmma ba:ɬal.

They think-3PPart ***the guards*** **five** that are-3PL put-3PPart-them from there for nothing.

'They think that the five guards are just put there for nothing'.

In example [368], the verb 'ga:l-l-ək' (is said) and the French adjective *radiés* intervene between the AA numeral and the French noun phrase *les vigiles*. In example [369], the AA numeral χamsa follows the French noun phrase *les vigiles.*

The other way to avoid using AA numerals before French nouns is using the AA construction (numeral + tɑɛ + NP) which is mentioned in chapter 2 when analyzing mixed constituents. The following examples are reproduced hereafter to illustrate how AA numerals and French nouns are used within the AA structure (numeral + tɑɛ + NP):

[370] ɛan-na **χamsa** tɑɛ ***les spécialités*** w rabɛa tɑɛ ***les stages*** fə l-ɛa:m.

Have-3PL **five of *the specialities*** and **four of *the trainings*** in the year.

'We have five specialities and four trainings in a year'.

[371] mra kbi:ra hija w raʒəl-ha ɛaʃra taɛ ***les chariots*** χarʒu-hɔm.

Woman old she and husband-her **ten of *the wagons*** brought-3PL-them out.
'An old woman with her husband have brought out ten wagons'.

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 'taɛ' forming AA prepositional phrases that function as complements to AA nouns (χamsa 'five', rabɛa 'four', ɛaʃra 'ten').

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

3.4.3. Congruence and Possessives:

As we have seen in the second chapter, French noun phrases are frequently modified by the AA analytic possessive construction [NP + taɛ-pronominal suffix] (more than 31 tokens) as in the following example:

[372] ***Les rèves*** taɛ-əh ja-tbəχr-ɔ.

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 siste in law', *son ami* 'her boyfriend', *mes cousins* 'my cousines', *mes belles soeurs* 'my sisters in law', *sa mère* 'her mother', *mon petit cousin* 'my little cousine').

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 'taɛ' (of) which assigns the possessed noun (*les rèves* in example [372]) to a possessor which is a pronoun suffix -əh (-him**)** that is affixed to the preposition 'taɛ' (of) forming the construction taɛ-əh (of-him). French possession, on the other hand, is expressed using possessive determiners before possessed nouns as modifiers that agree with them in gender (*mon/ma* 'my', *ton/ta* 'your', *son/sa* 'his/her', *notre* 'our', *votre* 'your', *leur* 'their') and number (*mes* 'my', *tes* 'your', *ses* 'their', *nos* 'our', *vos* 'your', *leurs* 'their') as in the following examples:

[373] ***Ma belle soeur*** ra-hi ɣi ki ʒat mə *la syrie*.

My sister-in-law be-3SGF just came from *the Syria*.

'My sister in law has just come from Syria'.

[374] min n-*activ*-i n-ɛajjaɬ l- ***mes cousines.***

When 1PR-*recharge*-1SG 1PR-call for-***my cousins***.

'When I recharge my mobile I call my cousins.'

[375] *C'est* ***mon cousin*** hadak.

This is my cousin that.

'This is my cousin'.

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 taɛ (of) in the AA possessive construction however, is a bridge system morpheme (late system morpheme) that is accessed later in the formulator during language production to complete the maximal projection of its head. The requirement are 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 taɛ (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 in AA and French at the Abstract Level during language production. AA makes use of a bridge system morpheme to link the possessed noun to the possessor pronoun, however French possessive adjectives are early system morphemes that precede and modify directly the possessed nouns without the need to any other morpheme.

This difference between the status of system morphemes that express possessive relation leads to compromising strategies which are usually EL islands as in the case of numerals and definite articles. Yet in the case of possessive constructions, mixed constituents with internal EL islands are the best solution to the lack of congruence since the AA possessive analytic construction allow the insertion of French nouns with their definite articles and at the same satisfy the Uniform Structure Principle which give preference to ML system morphemes in 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 except of course the case of nouns that refer to names of relatives.

Now the question that arises is: why French nouns which refer to names of relatives are used exclusively with French possessive adjectives within EL islands in this corpus?

Notice that names of relatives in AA are not used with the AA analytic possessive construction either (e.g. *l-ɔχt taɛ-i 'the sister of-me'; *l-ɛam taɛ-na 'the uncle of-me'). They are used with the synthetic construction i.e. the possessors are pronominal suffixes that are attached to the possessed nouns (e.g. ɔχt-i sister-my 'my sister'; ɛam-na uncle-our 'our uncle'). So when French nouns that refer to names of relatives are accessed they must be realized with their French possessives as EL islands because their AA counterparts are not used with the analytic possessive construction which is the only productive construction with embedded French nouns (i.e. the synthetic construction is not used with French nouns in this corpus)[174].

Indeed the congruence between the two languages involved in CS and the requirements of the ML (the Uniform Structure Principle) play a considerable role in explaining the frequency of some structures found in the corpus. However the notion of congruence cannot explain the total absence of EL islands with French possessives and French nouns other than those referring to names of relatives. Moreover it cannot explain the productivity of AA possessive constructions with French noun phrases when French is the ML of the whole CP (the case of layered insertions in examples)

3.4.4. Congruence and demonstratives:

Demonstratives[175] 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 (l-). French demonstratives on the other hand are used alone preceding the nouns.

In the AA/French CS corpus of the present study, French nouns are scarcely embedded after the AA demonstrative structure (demonstratives + the definite article l-) instead French definite noun phrases are recurrently inserted as internal EL islands after AA demonstratives (the insertion of French NPs instead of French nouns is due to the lack of sufficient congruence between the AA definite article and French nouns as has been explained before). 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.

[174] French nouns in this corpus are not morphologically adapted i.e. they are not used with gender or plural affixes neither are they used with possessive suffixes. The only affix that is occasionally attached to French nouns is the definite article (l-). the non-integration of switched nouns may be due to some sociolinguistic factors. Myers-Scotton (1993b, 177) reveals that when the EL is the language of more socio-economic prestige and if it is also prominent in education this will increase the non-integration of switched words and loanwords.

[175] 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.

Since there is insufficient congruence between AA demonstratives and their French counterparts, and since EL islands are the result of insufficient congruence between the ML and the EL, one would expects 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 follow:

[376] amala ***cet après midi*** nə-tlaq-ɔ.

Thus ***this afternoon*** 1PR-meet-1PL.
'Fine 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 its maintain 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. However they cannot account for the appearance of AA demonstratives structure with French internal islands in French CPs (layered insertions).

3.4.5 Congruence and Uniform Structure Principle recapitulation:

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 structure uniform across the CP. The USP of the Matrix Language is challenged by the lack of congruence between Matrix Language structures and Embedded Language structures. The lack of sufficient congruence may leads to compromising strategies among them the insertion of EL islands.

In AA/French CS corpus of the present study, the lack of congruence between the AA definite article and numerals and their French counter-parts explain the frequency of French EL islands with French definite articles and French numerals and the rarity of AA mixed constituents with these AA system early morphemes. In this case the insertion of EL islands is the only way to overcome the lack of congruence.

The insufficient congruence in the case of demonstratives and possessive relation has been dealt with through the insertion of French internal EL islands. In this way the AA possessive and demonstrative structures are preserved and the USP is maintained.

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).

If the notion of congruence and the Uniform Structure Principle as conceived by Myers-Scotton have succeeded to explain many CS structures when AA is the Matrix Language, it is far from being able to interpret others. For instance why any EL island consisting of a French demonstrative and a French noun is not present in this corpus? And why there aren't any EL islands with French possessives apart from those that are embedded with nouns that refer to names of relatives? And more importantly why in parallel certain combinations with AA demonstratives and possessive constructions are productive even when the Matrix Language of the CPs is French? At this level it seems that congruence as well as the USP are not able to account for these CS manifestations.

3.5. Challenges to the CP analysis in the case of discourse markers:

The MLF model has succeeded in accounting for many AA/French CS instances within AA finite clauses being them mixed constituents or EL islands. In the following section we will test the MLF model when switching take place at a level above the finite clause i.e. at the CP level and see if the Matrix Language as defined so far can account for this type of switching.

According to Myers-Scotton (2002: 55) the complement phrase (CP) which is the highest unit projected by lexical elements "*can be defined unambiguously in terms of phrase structure as a complemetizer or an element in Specifier (Spec) position followed by an IP*". So in the AA/French CS corpus of the present study, switching between certain discourse markers (as AA discourse emphatic pronouns, conjunctions and certain adverbs) fall within the scope of MLF model's unit of morpho-syntactic analysis.

Discourse markers are a heterogeneous group of expressions. They include: adverbs such as *now, here* sentence adverbs such as *finally, frankly, actually*; coordinate and subordinate conjunctions as *and, because*; particles such as *well, right*; interjections like *gosh*; phrases such as *for the time being* and even complete clauses such as *you know*.

Informants of the present study use various discourse markers they are either realized in French or AA. French discourse markers often occur with AA clauses; they include: sentence adverbs (e.g. *normalement* 'normally', *generalement* 'generally', *logiquement* 'logically',

enfin ‘finally’…etc) ; conjunctions (e.g. *parce que* ‘because’, *puisque* ‘since’), discourse particles (*bon* ‘well’, *donc* ‘so’), phrases (such as: *en general* ‘in general’, *en tout cas* ‘in any case’, *pour le moment* ‘for the moment’, *de toute façon* ‘anyway’, *au contraire* ‘on the contrary’, …etc) and clauses (*soi-disant* ‘so-called’, *c'est-à-dire* ‘that is to say’, *ça ce peut* ‘may be’, *ça veut dire* ‘it means’, *ça se voit* ‘it shows’…etc). AA discourse markers also occur with French clauses including (l-mʊhim ‘the most important thing’, zaɛma ‘so-called’, ‘supposed’, ɟaɛni ‘it means’, w ‘and’,tsəmma ‘so’, ba:ʃ ‘so that’, basːaħ ‘but’, belli, wella ‘or’ ga:ɛ ‘at all’…etc).

In the morpho-syntactic analysis of CS, discourse markers have been marginalized by most linguistic studies done on CS. This is due to the heterogeneity of these markers not only in CS but also in monolingual syntactic analysis as Boumans (1998: 106) states:

> *“Even in monolingual contexts the syntactic distribution of discourse markers cannot be fully explained within sentence grammar since they function entirely or partly on the level of discourse organization”. (Boumans, 1998: 106)*

In addition to their heterogeneity in terms of their classifications (they belong to different categories), there are also disparity in terms of their syntactic position. Some discourse markers appear within bilingual CPs with clauses from the other language e.g. adverbs, conjunctions, discourse particles and emphatic pronouns. Other discourse markers constitute monolingual CPs such as clauses (*you know*, c’est à dire). The latter class does not constitute any challenge to the MLF model and are not the object of the present study because, as Myers-Scotton (20002) has pointed out in her latest version of the model, they are monolingual CPs. To this category Myers-Scotton (2002: 55) adds exclamations such as (what! never!) by considering them as monolingual CPs that include a number of null elements.

What is important to the present discussions is the appearance of discourse markers within bilingual complement phrases (CPs) because they are within the scope of MLF model’s unit of syntactic analysis.

Nevertheless, even the former category of discourse markers that occur within mixed CPs is indeed heterogeneous. The heterogeneity of these discourse markers makes Myers-Scotton frequently redefine their status within her MLF model. In her first version of the model in 1993, Myers-Scotton (1993: 130-131) defines complementizers as system morphemes that must come from the Matrix Language in mixed constituents and from the Embedded Language within EL islands. In her version of of the model in 1997, Myers-Scotton (1997: 255) has modified her definition classifying discourse markers as content morphemes that assign discourse thematic roles such as Topic, Focus, or Contrast at the discourse level.

However even with Myers-Scotton’s recent definition of discourse markers, their status is not fully understood in terms of ML/EL dichotomy. This becomes clear in the way Myers-Scotton and Jake (1997a, 2001) and Myers-Scotton (2002) treat some discourse markers as

the Arabic emphatic pronouns and some adverbs and conjunctions in the Arabic/English CS corpus.

Arabic emphatic pronouns are according to Myers-Scotton (1997, 2002) content morphemes that have the discourse-relevant role of Topicalizer; however they are analyzed as being responsible in setting the matrix structure of the whole CP when they precede English finite clauses. In the same way some Arabic adverbs and conjunctions are considered as indicators of the Matrix Language at the CP level. In this section we will try to examine Myers-Scotton's interpretation of Arabic emphatic pronouns and other discourse markers within the Matrix Language approach to CS, and see if the CP as a unit of analysis can satisfactorily account for switching at the supra-clausal level as it did at the finite clause level.

3.5.1. Arabic discourse emphatic pronouns:

Arabic is a 'pro-drop' language i.e. subject in Arabic is marked on the finite verb by agreement. However free form personal pronouns in Arabic often precede the clause and are called discourse emphatic pronouns[176]. The following examples illustrate the use of AA verbs with and without the AA emphatic pronouns (the emphatic pronoun and its co-referent appear in bold characters):

[377] ana fɔ-t hadik *la periode* nti rak-i t-rabb-i.

I passed-**1SGF** that *the period* **you** are-**3SGF 3PRF**-raising-**3SGF.**
'I passed that period but you are raising children'.

[378]t-rɔħ-ɔ *la veille*?

2PR-go-2PL *the eve?*
'Will you go the eve of the day of competition?'

The AA emphatic pronouns are most of the time redundant used to mark emphasis in a general sense, or "to signal a change in Topic, sometimes implying contrast, e.g. between YOU and I" (Boumans, 1998: 126). Emphatic pronouns in Example [377] imply contrast between ana (me) and nti (you). In AA/French CS corpus of the present study, it is common for AA emphatic pronouns to precede French finite clauses expressing the same discourse functions as when they are used in monolingual utterances. The following examples from the corpus of the present study include AA emphatic pronouns preceding French finite clauses:

[176]An emphatic pronoun is a personal pronoun that refers back to another noun or pronoun in the sentence to emphasize it. Emphatic pronoun's co-referent in the adjacent clause is either an agreement subject of the finite verb, or a pronominal suffix. The pronouns co-referent is not restricted to any particular grammatical function in the clause. As a Topic, the emphatic pronoun is usually co-indexed with the subject. (Boumans, 1998: 126)

[379] hadak *le retour vous l'avez pas*. **ana *je*** *fais* hadak *le retour*.

That *the feedback you it have not*. **I *I*** *do* that *the feedback.*
'You don't have that feedback but our enterprise has such a feedback'.

[380] ana, non! **ana *je*** *trouve* ħaʒa ta-ɛʒəb-ni aɟa *j'achète*.

I, *not*! **I *I*** *find* thing 3SG-like-1SG so *I buy.*
'I don't! If I find something that I like I will buy it'.

In example [379] the speaker makes a contrast between his enterprise and his interlocutor's enterprise in terms of getting the feedback. In example [380] the speaker was talking about her husband's difficult and hesitant choice when he wants to buy anything. Then she shifts to herself as a topic.

In CS with Arabic, the occurrence of Arabic emphatic pronouns preceding finite clauses from other languages has been noticed by many scholars in many CS data sets. The following sentences show the occurrence of Arabic emphatic pronouns preceding French, English and Dutch finite clauses:

anaya, l-youm, ***je*** *m'en fous*
1PER SG, DEF-day, I me-REFL-of-it not care.
'personally, today, I don't care' (Algerian Arabic/ French, Boumans and Caubet, 2000: 147).

ɟeɛni **ana I** was really lucky
It means, 1PER SG I was really lucky.
(Egyptian Arabic/English, Myers-Scotton, Jake and Okasha, 1996: 26).

ana **Ik** vind't zo'n knuffeldiertje
pour moi, je l'ai trouvé comme une peluche
(Maroccan Arabic/Dutch, Nortier, 1990: 164)[177].

muhimm **nti-ya** *voor* **jou** *was het misschien ehm iets moeilijker*
Anyway 2F-EMPH for you was it maybe er somewhat more-difficult
'Anyway for you it was maybe more difficult'
MA/Dutch CS; Boumans 1998:129)

The topic pronoun (ana) in the three utterances is followed by French, English and Dutch pronouns; je, I and Ik respectively.

AA emphatic pronouns are also widely present in AA/French CS corpus of the present study, generally preceding French finite clause as illustrated by the following examples:

[177] Cited in Muysken (2000: 314).

[381] ana ***je*** *peux me déplacer*.

I ***I*** *can move.*
For me it is not a problem I can move because I have a car.

[382] ana *j'adore t-traditionnel*[178].

I *I like the traditional*.
I like the traditional wedding.

[383] mədəm hɔwa ***il*** *accepte* w kɔlʃi, *c'est bon*.

As long as **he** ***he*** *has accepted* and all, *it is ok.*
'As long as he has accepted it is fine'.

[384] hɔma waħad-hɔm ***ils*** *seront obligés de bien se former*.

They themselves *they will be obliged to properly train.*
'They will themselves realize that they have to properly train'.

[385] *Même* hɔma ***ils*** *vont pas vérifier*.

Even they *they will not verify*.
Even they will not check.

[386] ħna ***On*** *ne fait pas secrétariat*.

We *Indef-Pron don't do secretariat.*
'We don't do secretariat'.

[387] ana ***je*** *fais le recrutement à mon niveau*.

I ***I*** *do the recruitement at my level*.
'I do the recruitment'.

The occurrence of Arabic Topic pronouns with clauses from other languages has attracted attention of many researchers and has received different explanations.

Working on Egyptian Arabic/English CS, Eid (1992a, 1996) suggests that the occurrence of Arabic personnel pronouns before English clauses is doubling of subject pronouns and coined the term 'pronoun doubling' for this characteristic of CS with Arabic.

Boumans (1998) has lengthily spoken about this phenomenon in a chapter devoted to discourse grammar. Boumans (1998: 127) refuses Eid's suggestion on the ground that Topic pronouns are not 'necessarily' co-indexed with grammatical subjects[179]. In addition these

[178] Here she refers to 'the traditional wedding': *le mariage traditionnel*.

[179] According to Boumans (1998: 131) 'subject pronoun doubling' is only an impression resulting from the strong but incomplete correlation of Topic and subject in Arabic and the fact that English, Dutch or French unlike Arabic are not pro-drop languages so the subject pronoun is obligatory in the following English, Dutch or French finite clauses.

pronouns are also used in monolingual utterances before AA inflectional phrases not as subjects but to fulfil other discourse functions.

Unlike the above examples from AA/French CS data in which AA emphatic pronouns refer to French subjects in the adjacent French CPs, AA Topic pronouns in the following examples refer to other grammatical categories (in examples [386], AA emphatic pronoun refers to the object suffix (hɔm) , and in example [387] the emphatic pronoun refers to the French possessive pronoun (mon):

[388] hɔma ɟ-ʒiː-hɔm hadaːk *le cancer*.

They 3PR-come-**them** that *DEF-cancer*.
'We get the waste'.

[389] ana mon beau père, Allah ɟarħməh, était un très grand sportif.

I my father-in-law, god bless him, was a great sport man.
'My father-in-law was a great sport man'.

Boumans (1998) also argues that topic pronouns cannot be considered as embedded elements because personal pronouns[180] are functional elements that cannot be inserted as EL forms. Besides, the insertion of pronouns is not attested in CS literature. The other reason as Boumans (1998) argues is that these Arabic pronouns have a relation of a syntactic nature with the adjacent clause i.e., topic pronouns require a co-referent in the following clause. To those arguments, Boumans (1998) points to the fact that this kind of emphatic pronouns is uncommon[181] especially in English and Dutch. Consequently, Boumans (1998: 131) suggests that Arabic emphatic pronouns are discourse organization devices that can only be accounted for with reference to Arabic discourse grammar as stated below:

> *"The profusion of such pronouns in both monolingual Arabic and codeswitching varieties, as well as the fact that pronouns themselves are invariably in Arabic, clearly shows that we are dealing with a discourse organization device that must be attributed to Arabic grammar" Boumans (1998: 131).*

On the other hand, Myers-Scotton (1997: 256) argues that emphatic pronouns are content morphemes that have the discourse-relevant role of 'Topicalizer' and are in most syntactic analyses considered to occur in Specifier position of COMP of CP[182]. Provided that Myers-Scotton (1997, 2002) considers the CP as the relevant unit of analysis, so the analysis of this type of CS instances (topic pronouns preceding finite clauses in other languages) falls within the scope of the MLF model's morpho-syntactic analysis.

[180] According to Boumans (1998: 131) personal pronouns are paradigmatically organized function morphemes.

[181] Topicality is not indicated in this way in English or Dutch. In English for instance topicality is marked by using a higher pitch on subject pronouns or by phrases like 'as for me', 'speaking of him'.

[182] C (complementizer) is a head of CP (complement phrase), IP is a complement of C and is headed by I (inflection), I includes agreement and tense.

To this type of code-switching, Myers-Scotton, Jake & Okasha (1996) propose an Arabic CP as the matrix frame, and the finite clause (IP) is viewed as an embedded constituent (an EL island). Hence the AA sentences above according to Myers-Scotton and her associates' analysis are AA CPs in which French IPs are embedded.

Considering the AA topic pronouns as indicators of the ML and French finite clauses as EL islands in the previous utterances, makes the definition of the Matrix Language problematic. First what criteria are used in identifying the ML in the above utterances since Arabic emphatic pronouns according to Myers-Scotton (1997: 256) are content morphemes? Second this analysis puts the MLF model along the 4-M model on the stake since Myers-Scotton's ML hypothesis with its principles and the 4-M model give French the eligibility to be the ML in the above utterances. It is this language that provides the relevant system morphemes (i.e. outsider late system morphemes) that define the ML within the French finite clauses. Even in her latest version of 2002, Myers-Scotton continues to insist on the System Morpheme Principle in identifying the ML.

This analysis also contrasts with Myers-Scotton Uniform Structure Principle which affirms the morpho-syntactic dominance of the Matrix Language. In addition Myers-Scotton (2002:152) clearly insists on the fact that the activation of the Embedded Language must be lower than the Matrix Language. This suggestion is supported by the evidence that the majority of EL islands are formulaic expressions that are often adjuncts or internal EL islands under an abstract Matrix Language larger phrasal category. If the insertion of EL islands according to the MLF model is generally restricted and limited to those formulaic expressions how then can we explain the insertion of entire IP EL islands which is common in this CS corpus and in other CS data sets[183].

The syntactic position of the Spec (specifier of complementizer) that the Arabic topic pronouns occupy, according to Myers-Scotton analysis, has been questioned by Boumans (1998: 137). The Spec of CP position occupied by Arabic pronouns is located on the left-hand side of the C node which implies that anything in C node follows the emphatic pronouns in linear order. In actual utterances conjunctions precede the emphatic pronouns in the surface structure as in the following examples:

[390] ***Sauf que*** ħna c'est un peu grand.

Except that **us** *this is a little big.*

Except that our enterprise is a little big.

[391] bassaħ hɔma *ils sont fou*.

But they *they are crazy.*

[183] CS involving Arabic topic pronouns preceding finite clauses from other languages are found in: Algerian Arabic/ French CS, Boumans and Caubet, 2000; Egyptian Arabic/English CS, Myers-Scotton, Jake and Okasha, 1996; Egyptian Arabic/English CS, EIDS, 1992; Moroccan Arabic/Dutch, Nortier, 1990, MA/Dutch CS; Boumans 1998; MA/French CS, Ziamari, 2002.

‘But they are crazy’.

[392] ***Parce que*** hɔma *ils nécessitent un traitement spécialisé.*

Because **they** *they require INDEF treatment specialized.*
‘Because they require specialized treatment’.

[393] *Donc* hija ***c****’est une promesse de vente.*

So **it** ***it*** *is a promise of sale.*
So it is a promise of sale.

So these topic pronouns present a challenge not only to the Matrix Language definition at the CP level, but also their position within actual CPs defies the syntactic position so far proposed by Myers-Scotton (2002) for these pronouns within the CP.

There are other examples in this corpus that challenges the notion of the ML at the CP level. These include AA demonstrative pronouns followed by French finite clauses.

In AA it is common to find sentences without verbs. These are sentences with zero copulas as in examples (143-148) that contain French adjectives embedded in AA zero copula structures and examples (355-360) that contains French nouns embedded in AA zero copula structures. Examples [394], [395] illustrate the insertion of French adjectives and French nouns in AA zero copula structures respectively:

[394] haduk *les frites ø surgelé-s.*

Those *the French fries ø frozen*-PLAgr.
‘Those French fries are frozen’.

[395] hada *ø un engagement de la politique environnemental.*

This *ø a commitment to environmental policy.*
‘This is a commitment to environmental policy’.

In example [394] the AA demonstrative is a determiner modifying the following noun; however in example [395] the AA demonstrative is a pronoun replacing a noun.

In AA/French CS corpus, French nouns and adjectives may be embedded into AA zero copula structures as in the above examples. Instead of being followed by noun phrases or adjectives embedded into a zero copula, AA demonstrative pronouns are followed by French definite clauses introduced by a French demonstrative pronoun plus copula *c’est* ‘this is’.

[396] haduk *C’est des chrétiens.*

Those *this is INDEF christians.*
‘Those are christians’.

[397] hada *C'est un conseil*.

This *this is DEF advice.*
'This is an advice'.

[398] hada bruħah *c'est un malade*.

This himself *this is DEF sick person.*
He is a sick person.

[399] hadɔ *c'est des copies*.

These *this is INDEF copies.*
'These are copies'.

[400] hadi *c'est une promesse de vente.*

This *this is INDEF promise of sale*.
'This is a promise to sell'.

[401] hadi *c'est important.*

This *this is important*.
'This is important'.

[402] *Bon* hadɔ *c'est des services que nous offrons à notre clientèle*.

Well **these** *this is INDEF services that we offer to our customer*.
'Well these are services that we offer to our customer'.

[403] hada *c'est pas le programme* taɛna.

This *this is NEG DEF program* of-us.
'This is not our program'.

[404] hadik *c'est une politique* kima hakka.

That *this is INDEF politics* like that.
'That is a politics like that'.

It is difficult to decide which language is the Matrix Language in the above CPs. It is paradoxical to associate the AA demonstrative pronouns with a matrix structure that encompass the entire finite clause, and to consider the latter as an embedded constituent. Considering French as the ML cannot also account for the occurrence of the AA demonstrative pronouns before French clauses.

3.5.2. Complementizers, discourse markers and CP analysis:

Working on Arabic/English CS corpus, Myers-Scotton, Jake and Okasha (1996)[184] have found that 79 percent of all English verbs occurred in entirely English inflectional phrases preceded by an Arabic element. Since the CP is the relevant unit of analysis in the MLF model, Myers-Scotton and her associates (1996) propose that the ML of these CPs is Arabic headed by Arabic elements in complementizer position (conjunctions) and English finite clauses or inflectional phrases[185] are considered as well-formed embedded EL islands.

The following examples from Okasha (1996) Palestinian Arabic/English corpus cited in Myers-Scotton (2002: 146) illustrate such EL islands inserted into CPs headed by Arabic elements in complementizer positions. The first IP EL Island is *we get in the mood* embedded in the CP headed by the subordinating conjunction *liʔannu* 'because'. The second is *it is difficult* following *bas* 'but'. The third IP EL Island is *you feel like a queen* following sentence adverb of place *hina* 'here':

hunak binihki aktar **liʔannu we get in the mood** bas hooni **it is difficult**.
1P/IMP/speak more because/1P we get in the mood but here it is difficult.
'There we speak more because we get in the mood but here it is difficult'.
(Arabic/English; Okasha, cited in Myers-Scotton 2002: 146)

Kawnik el-waħeeda [$_{CP}$ **hina** [$_{IP}$ **you feel like a queen**]].
GER/be/2F the-one here you feel like a queen.
Being the only one here, you feel like aqueen.
Plestinian Arabic/English Okash Generation I corpus: cited in Myers-Scotton 2002: 147)

Myers-Scotton (1997, 2002) assigns the insertion of IP EL islands in the case of Arabic/English CS corpus as illustrated by the above examples to the structural mismatch between Arabic verbs and their English counterparts at the abstract level. According to Myers-Scotton, Arabic verbs are specified as perfect/imperfect at the lemma level (i.e. Arabic does not have 'stems' without tense/aspect specification so tense/aspect is indirectly elected along with the content morpheme (the verb) specifying them). However English verbs are only stems at the lemma level and tense/aspect is structurally assigned at the level of formulator. Therefore, when lemma underlying an English verb is accessed, it cannot receive Arabic verbal inflections because it does not contain the tense/aspect specifications that an Arabic verb exhibits at this level. As a result the only way to access an English verb is an EL island with all elements under INFL also from the EL.

[184] Cited in Myers-Scotton (1997:252-256) and in Myers-Scotton (2002: 145-147).

[185] Inflectional phrase (IP) is a proposition without a complementizer. Inflectional phrase is classified as an embedded island when it is realized in the embedded language and preceded by a ML morpheme that occupies the position of a complimentizer or specifier of COMP position. In the case of pronoun doubling the Arabic topic pronouns occupies the specifier of complementizer position.

If the English IP EL islands are the result of structural incongruence between English verbs and their Arabic counterparts at the abstract level, what is then the reason behind the insertion of French IP islands after the AA topic pronouns in the above examples and the insertion of French IP EL islands after AA discourse markers in the following utterances?

[405] *Je savais pas* [**belli** *tu es jalouse]*.

I did not know **that *you are jealous***.
'I did not know that you are jealous'.

[406] Djedda Saudia ɛla-ba:l-ha [**belli** *elle reçoit un tel nombre de voyageurs]*.

Jeddah Saudi in-mind-3SGF **that** *it receives such a number of travelers*.
'Jeddah Saudi knows that it receives such a number of travelers'.

[407] **kɔn** *c'était sur le coup.*

If *it was on the spot*.
'If it was on the spot'.

[408] **bassaħ** it faut respecter les chrétiens.

But *it must respect Christians.*
'But we must Christians'.

[409] tir-a ɛli-hɔm **w** *il a causé des problèmes.*

Shoot-3SG on-them **and** *he has caused INDEF problems*.
'He shot them and he has caused some problems'.

[410] **ba:ʃ** *la dilatation elle se fait vite.*

So that *DEF dilatation it becomes quick.*
Close your eyes so that the pupil of eye will dilate quickly'.

[411] **tsəmma** *c'est juste avant le rondpoint*.

So *it is just before the roundabout.*
'So it is just before the roundabout'.

[412] **[mənbaɛd** *on s'est croisées*], gaɛd-ət tə-dħak.

Then *INDEF-PRON was crossed*, become-3SGF 3PRF-laught.
'Then when we crossed each other, she has smiled with me'.

[413] da ʃɛa:l ran-i mrida [**hatta** *il fallait le faire*].

That how be-1SG sick **till** *it had to be done*.
'I was sick for long time until I decided to do it' (the surgery).

It is improbable that the reason behind the insertion of French finite clauses following AA emphatic pronouns and complementizers is the structural mismatch between AA verbs and their French counter-parts because French verbs in this corpus are frequently inserted into AA structure and inflected with AA inflections (more than 80 tokens) which means that French verbs are congruent with their AA counterparts. It seems that the notion of congruence does not satisfactorily explain these CS configurations.

French discourse markers are also used with AA clauses, particularly French conjunction *parce que* 'because' which is used more than twenty times before AA clauses.

[414] ***Pourtant*** *les fill* ǰsumo, *la mère* tsum, bassaħ *le père* lla.
Though DEF girls fast, DEF mother fast, but DEF father no.
'Though the girls fast and their mother too, their father doesn't'.

[415] *L'essential* hiǰa ma-ɛlaba:l-ha-ʃ ***donc*** ɛaǰłu-l-ha.
The most important thing she NEG-know-3SGF-NEG ***so*** call-to-her.
'The most important thing is that she does not know so call her'.

[416] hadi ***soit*** n-zid-u-ha *une rubrique* ***soit*** n-dir-u-ha fe l-wasł.
This ***either*** 1PR-add-1PL-her *INDEF topic* ***or*** 1PR-make-1PL-it in DEF-middle.
'Either we add this as a topic or make it in the middle'.

[417] ***Parce que*** nə-ɛraf ki nə-hdar.
Because 1PR-know how 1PR-talk.
'Because I know how to talk'.

[418] ***Mais*** saɛudiǰa:tjaɛarfɔ.
'***But*** Saudi women knows'.

Hence complementizers and other discourse markers come from either language within mixed CPs and are frequently juxtaposed with clauses from the other language.

Indeed it is difficult to approach this class of morphemes within Myers-Scotton's insertional model. It seems that discourse markers neither can be considered to be embedded into the language of the clause nor can they be treated as elements projecting the matrix structure for the embedded clauses. The Matrix Language as it is defined by Myers-Scotton does not explain the recurrence of these morphemes in many CS data sets neither does it give a separate criteria to define the Matrix Language at this supra-clausal level. So this type of CS constitutes a challenge to CP as a syntactic unit of analysis.

Moreover the occurrence of conjunctions, adverbs and discourse markers in the context of another language is very frequent in CS in general. Thus adopting *"the CP analysis for these phenomena" as Boumans (1998: 136) states:" implies that the insertion of IP constituents is a very common CS mechanism" (ibid: 136). "The recognition of the finite clause as commonly embedded constituent"* in turns contrasts with "*the general observation that constituent*

insertion becomes increasingly constrained with more complex constituents". (ibid: 146). This also corroborates Myers-Scotton's Uniform Structure Principle which constraint the insertion of EL islands and the activation of the Embedded Language.

Several aspects of discourse grammar cannot be dealt with satisfactorily within the MLF model as defined by Myers-Scotton. The definition of the ML as it is proves to be workable only at the finite clause level. However, at the CP level the notion of a matrix structure becomes blurred.

Although Myers-Scotton (2002) has proposed the CP as an appropriate unit of morpho-syntactic analysis, she does not give switching at the supra-clausal level, which includes complementizers and other discourse markers, a considerable importance in her model. Myers-Scotton indeed continues to deal with this phenomenon in her latest version of the model (2002) as a marginalized and an exceptional topic despite the growing evidence from so many CS data sets about the frequency of this type of switching. Myers-Scotton (2002) devotes only two pages entitled *grammatical motivations for islands* to discuss the insertion of English finite clauses into Arabic CPs headed by an Arabic element in complementizer or Specifier of complementizer position. Attributing this type of insertion in the case of Arabic/English CS to the lack of sufficient congruence between AA verbs and their English counter-parts implies that switching of complementizers and other discourse markers is uncommon and limited to the Arabic/English CS corpus. It is obvious from the place which these discourse markers occupy in Myers-Scotton's model that accounting for this type of switching turns up to be more complicated than simply associating these category of morphemes with a Matrix language above the clause level.

The complications concerning CP analysis make Boumans (1998) proposes the finite clause as a relevant unit of analysis for his Monolingual Structure Approach concluding his analysis of discourse markers from many CS corpora by stating that:

> *"Therefore, an alternative to a hierarchical matrix structure approach, and to syntactic analysis like the CP structure, is that these elements do not fill a slot in a matrix structure, nor do they project a matrix structure themselves. Instead they 'go looking' for their own position in or adjacent to a clause structure". (Boumans, 1998: 144/146)*

Muysken (2000) in his proposed taxonomy of CS classifies discourse markers as an alternational pattern of switching stating that:

> *"Content words such as nouns and adjectives are likely to be insertions, while* ***discourse particle*** *and* ***adverbs***[186] *may be alternations. Sentence Grammar and Discourse Grammar may be relatively autonomous with respect to each other" Muysken (2000: 97)*

It seems that the MLF model has reached the limits of its applicability at this point.

[186] Muysken's emphasis.

3.6. Conclusion:

In this chapter, the comparison between the two languages as matrices reveals a clear asymmetry in the roles of both languages. The terms (Matrix, Embedded) already contains the idea of asymmetry i.e. one language dominates the other. Yet the turnover can change the status of the two languages. In this corpus even when the status of both languages changes there are still an apparent asymmetry between AA and French. When Algerian Arabic is the matrix language, all structures are present. The latter is imposed qualitatively and quantitatively. French does not however have the same impact and does not play the same role assigned to a Matrix Language. Quantitatively, this language provides few structures and qualitatively these structures are not varied.

Yet in many cases, the turnover of the Matrix Language is not complete. When French becomes the ML for certain complement phrases (CPs) it cannot maintain its status as a ML for all the structures within bilingual CPs in the sense that AA structures appear within these CPs. These are AA nouns phrases or prepositional phrases that contain French internal EL islands (i.e. the case of layered insertion that was discusses before). This further reflects the asymmetry between AA and French.

The asymmetry between the two languages involved in CS reflects speakers' competence. Bilingual speakers in this corpus fare from being balanced bilinguals, they are more competent in AA. Therefore when they engage in CS having French as the ML, they are faced with some difficulties which make them change the Matrix Language.

Indeed speakers' competence is not only responsible for the change in the ML, but also it is behind generating rich and diverse structures when their mother tongue (i.e. AA) is the ML, and very rare and problematic structures when French plays this role.

This chapter has also discussed the Uniform Structure Principle and the issue of congruence between the two languages involved in CS. Congruence as well as the USP were sought to verify the validity of the MLF model and question its rigor in the interpretation of some CS irregularities in the structures generated from the contact between AA and French.

The impact of congruence and Matrix Language structural uniformity on the contact between AA and French was examined through four CS tendencies in this corpus. First, the frequent occurrence of French nouns with French definite articles as EL islands and internal EL islands and the rarity of their occurrence (i.e. French nouns) with the AA definite article (l-) within mixed noun phrases. Second, the recurrent insertion of French numerals modifying French nouns as EL islands and the absence of AA mixed noun phrases with AA numerals and French nouns. Third, the productivity of AA demonstrative and possessive constructions with French definite noun phrases even in French CPs and the absence of French EL islands with their French counter-parts. Finally, we tried to understand the fact that French nouns referring to names of relatives are the only inserted nouns that are modified by French possessives.

The notion of congruence and the Uniform Structure Principle as conceived by Myers-Scotton have been useful in explaining many CS patterns in this corpus; however they seem to be incapable in accounting for others. The notion of congruence for instance cannot offer an explanation to the absence of EL islands with certain French system morphemes such as possessives and demonstratives. They cannot alsoexplain the frequency of mixed constituents with AA demonstratives and possessives even when French is the Matrix Language of the CPs.

The resistance of certain AA structures in French morpho-syntactic environment as well as the absence of certain EL islands may be attributed to the asymmetry of speakers' competence in AA and French.

Another important point that was discussed in this chapter is the way Myers-Scotton interprets switching between certain discourse markers and finite clauses within the MLF model using AA/French CS corpus

In spite of the fact that complementizers, discourse particles, some adverbs, and Arabic emphatic pronouns are included within Myers-Scotton's insertional model since she proposes the complement phrase (CP) as a relevant unit of analysis; switching at the supra-clausal level was marginalized in her works. For this type of switching she proposes emphatic pronouns and other discourse markers to be the morphemes that set the ML at the CP level and finite clauses as embedded EL islands.

This analysis is not consistent with Myers-Scotton's criteria proposed to identify the Matrix Language. Matrix Language in Myers-Scotton's MLF model is the language that provides outsider late system morphemes; however emphatic pronouns and discourse markers are defined by Myers-Scotton (2002) to be content morphemes. Besides, many scholars (Boumans, 1998; Muysken, 2000) have referred to complications concerning the syntactic position of certain discourse markers not only in CS but also in monolingual complement phrases arguing that Arabic emphatic pronouns and some discourse markers function at the discourse level and cannot be dealt with satisfactorily within CP syntactic matrix structure. Thus the definition of the Matrix Language as defined in the MLF model proves to be workable only at the finite clause level. However, at the CP level the notion of a matrix structure becomes circular.

General conclusion

General conclusion

The Present study is an investigation of contact phenomena in Algeria. It follows two main directions or perspectives. The first perspective is descriptive and the second one is interpretive. The Descriptive perspective of our investigation introduces morpho-syntactic models in the analysis of phenomena such as code switching, code mixing and borrowing. It also revisits insertional approaches to code switching among which Myers-Scotton's (1993, 1997, 2002) insertional paradigm with its different amendments. The interpretive perspective of our study uses Myers-Scotton's basic explanatory principles and concepts that underlie the MLF model, the 4-M model and the Abstract Level model in order to interpret and explain the attested CS patterns.

Our investigation is based on fourteen hours of bilingual recorded conversations. It was assigned to study the results of the contact between AA and French on different levels: syntactic, morphological and supra-clausal level. These results are examined and interpreted on the basis of different theoretical paradigms. Besides code switching was examined in both directions i.e. the two languages have been analyzed as being Matrix Languages and as being Embedded Languages.

Our study starts with a modest trial to question the theoretical foundations of the different linguistic models that have marked for several decades the morpho-syntactic analysis of CS. As it has been stated above, our study is couched within an insertional perspective to the grammar of code switching and related contact phenomena. This research tendency is represented by Myers-Scotton's MLF model, which has undergone several adjustments but which is still considered by the contact linguistics research community as one of the most efficient models in the interpretation of code switching.

This choice has been motivated by the validity and strength of Myers Scotton's rigorous paradigm in explaining and interpreting CS grammatical outcomes. By choosing this framework, we wanted to question the MLF model's practicality in the case of an Algerian Arabic-French CS corpus by trying to answer the following question:

To what extent does the insertion paradigm or approach do justice to the grammatical regularities of AA/French CS behaviour?

The insertion of French in the AA morpho-syntax has revealed the abundance and frequency of different linguistic structures. These are mixed constituents, EL islands and internal EL islands.

The constant and long lasting contact between AA and French helps us define the characteristics of this corpus. There seems to be an apparent asymmetry between Algerian Arabic and French as dominant languages in our data. We have observed that Algerian Arabic seems to impose itself as a Matrix Language qualitatively and quantitatively. Qualitatively,

many single morphemes and a variety of combinations have been highlighted through different levels of analysis. Quantitatively, Algerian Arabic is the Matrix Language of several complement phrases and generates different linguistic structures.

AA/French CS seems to be primarily characterized by the insertion of French definite nouns (i.e. French definite articles + French nouns) in AA matrices. In addition to their occurrence as EL islands, this type of French noun phrases (i.e. French definite articles + French nouns) seem to be the most frequent and widespread CS pattern within mixed constituents too by being embedded as internal EL islands. This type of insertions (i.e. French definite articles + French nouns) outnumbers the insertion of single French nouns compared to the general tendency in CS that places nouns as being the category most embedded in many CS data sets. For this reason, we have analyzed the insertion of this type of internal EL islands along with the insertion of single nouns in mixed constituents.

In mixed constituent, French nouns, adjectives, verb stems, adverbs and internal NPs are regularly inserted into mixed nouns phrases, mixed prepositional phrases and mixed verb phrases framed by AA system morphemes (determiners, prepositions, inflections). Embedded French content morphemes and French internal NPs display AA syntactic requirements (word-order and subcategorization restrictions) and morphological features (verb inflections and the definite AA prefix l-).

French EL island insertions are also very common CS pattern in our corpus. French EL islands include noun phrases, prepositional phrases, and to a lesser extent adjective phrases. Apart from EL islands that are embedded to overcome some congruence problems, many EL islands are adjuncts (i.e. adverbial phrases) and formulaic expressions. This supports Myers-Scotton's (2002: 141) suggestion that many EL islands are outside the predicate-argument structure projected by the main clause verb. This according to Myers-Scotton (2002: 52) indicates that the level of activation of the Embedded Language is not the same as that of the Matrix Language when major constituents are constructed.

Indeed AA/French CS displays regular patterns of CS. The ML as defined in the MLF model can adequately account for the insertion of morphemes in mixed constituents and the insertion of constituents in mixed finite clauses when AA is the Matrix Language. This is not the case, however, when French is the Matrix Language.

There is an apparent asymmetry in the role of the two languages when they are Matrix Languages. French generate few structures. Some of these structures are problematic in the sense that they resemble structures produced when AA is the Matrix Language. These are AA noun phrases or prepositional phrases containing French internal EL islands. These structures that are present when French is the Matrix Language can be interpreted as insertion of single system morphemes which contradicts Myers-Scotton's ML Hypothesis and EL Island Hypothesis. Such constructions are also found in other CS corpora (Bentahilla and Davies, 1983; Treffers-Daller, 1994; Boumans, 1998; Benhattab, 2011; Ziamari, 2003).

This phenomenon found to be better accounted for within Boumans' (1998) insertional approach, which recognizes different levels of Matrix Language. Boumans (1998) attributes this type of insertions, in which French is the ML of the finite clause and mixed constituents have the structure of AA, to the coexistence of two Matrix Languages in a single CP: Matrix Language at the finite clause level and Matrix Language at the phrase level. Boumans (1998: 331) calls this construction 'layered insertion' or 'layered embedding'. In this way, this phenomenon can still be interpreted in term of insertion preserving, thus, the definition of the Matrix Language.

The data description according to this theatrical framework reveals that in the AA/French CS corpus either language assumes the role of Matrix Language, yet at the same time it is evident that the insertion patterns are entirely asymmetric for the two languages.

Quantitatively the asymmetry is reflected in the fact that the majority of all insertions consists of French elements in AA matrices. Qualitatively the attested types of French and AA insertions also differ widely. In addition AA insertions into French tend to be more grammatical in nature that is, they are often constituents rather than content words, and they often include AA function morphemes and French content morphemes (layered insertion). This type of AA insertions challenges the status of French as a Matrix Language. This instability of the Matrix Language, when French is the ML, seems to reflect our informants' asymmetry in terms of their competence in AA and French. Boumans and Caubet (2000) attribute this type of insertions to the unequal sociolinguistic status of AA and French for Algerian speakers.

To this point the larger part of the data was adequately described in terms of insertion patterns. However the concept of insertion as displayed by the ML hypothesis (i.e. the System Morpheme Principle and the Word-Order Principle) in the MLF model constitutes the first step in describing CS regularities in this corpus. These attested CS patterns in the present corpus raises the following questions: why do certain types of CS occur while others do not even if they are allowed by the MLF model? And why are certain CS instances recurrent and others rare, provided that they are granted by Myers-Scotton's insertional approach?

In addition to the descriptive paradigm given by Myers-Scotton that was the basis to describe our corpus, the MLF model with its supportive models (i.e. the 4-M model and the Abstract Level model) offer some explanatory principles in order to interpret the obtained CS structures. The basic concepts underlying these principles are the notion of congruence and structural uniformity which further enhance the notion of asymmetry.

These two concepts were used in order to interpret some marked CS patterns in our corpus. These include the frequent insertion of French EL islands containing French definite articles or French numerals modifying French nouns and the rarity of mixed constituents with the AA definite article and AA numerals. The productivity of AA demonstrative and possessive constructions with French definite noun phrases even in French CPs and the absence of French EL islands with their French counter-parts. These notions were also used to

interpret the fact that French nouns referring to names of relatives are the only inserted nouns that are modified by French possessives.

Providing such explanatory concepts as congruence and structural uniformity, the MLF model and the two supporting models- the 4-M model and the Abstract Level model- have shown flexibility in the analysis. Not only do they question the syntactic level but also the abstract lexical structure which explains many phenomena.

The notion of congruence and the Uniform Structure Principle as conceived by Myers-Scotton have succeeded to some extent to answer the above questions; however they have raised new questions and opened new directions for CS analysis.

For instance in the case of Embedded French nouns with their definite articles; the lack of sufficient congruence has explained the frequency of this type of EL islands, yet it cannot explain the insertion of French nouns after the AA definite article even if they are limited compared to the insertion of internal French noun phrases in the same structures. The notion of congruence cannot also offer an explanation to the absence of EL islands with French demonstratives and possessives. And more important it cannot explain the frequency of mixed constituents with AA demonstratives and possessives even when French is the Matrix Language of the CPs.

Relevant answers to these questions seem not be found within the present morph-syntactic paradigm. Thus the answers to the above questions may be sought in bilingual's competence or in other sociolinguistic variables because even competent bilinguals uses both of those CS realizations i.e. mixed constituents and EL islands.

In this perspective and as far as switching takes place at the finite clause level, The AA/French CS data at large has unveiled the possibility to be approached within a theoretical framework of the MLF model and corroborates the proposed definition of the Matrix Language on the finite clause level. There are, however, some CS patterns in this corpus which are considered to be problematic to Myers-Scotton's insertional approach. These are the occurrence of AA topic pronouns preceding French finite clauses and the status of discourse markers.

Discourses markers prove to be a heterogeneous class of words by many linguists. In the MLF model, discourse markers are undermined despite the fact that they are subsumed under Myers-Scotton's unit of analysis (i.e. under the heading of complementizers in the CP). They indeed have confronted the MLF model as an insertional approach and the CP as a relevant unit of analysis with problems in description and analysis. The frequency of occurrence of Arabic topic pronouns before finite clauses from both languages involved in CS in many CS data sets, present a real challenge to the MLF model design at the CP level. This challenge questions the validity of the unit of analysis, the status of discourse markers as content morphemes and the definition of the ML.

Switching of discourse markers in general and of Arabic emphatic pronouns in particular cannot be approached from an insertional paradigm according to many linguists (Bouman, 1998, Muysken, 2000 and Treffer-Dallers, 1994) because they can neither be considered as being morphemes that project the matrix structure for finite clause insertions nor can they be considered to be embedded elements in a matrix frame. In addition some scholars such as Boumans (1998) and Muysken consider discourse markers as functional elements. Muysken (20000) even claims that discourse markers operate at the level of discourse grammar not at the sentence grammar level. They therefore fall within a category of alternational code switching.

It is clear that Arabic emphatic pronouns and some discourse markers cannot be dealt with satisfactorily within CP syntactic matrix structure as proposed by Myers-Scotton. In addition the definition of the Matrix Language as defined in the MLF model proves to be workable only at the finite clause level. However, at the CP level the notion of a matrix structure becomes circular.

Given the complexity of the phenomenon and the theoretical frame chosen, this work does pretend neither to be exhaustive nor to be to the rigor expected in the analysis. It does not either pretend to have settled in thorny problems. The study presents some limitations and could be at the same time work opportunities and areas for future research.

First, supportive evidence from other data corpora in the AA sociolinguistic situation would demonstrate the frequency or rarity of the attested linguistic structures. From another sides the study relied on structural explanations to the observed CS patterns without incorporating the sociolinguistic aspects of CS that may broaden the scope of interpretation.

Comparing conversations of competent bilinguals in both languages with conversations of bilinguals that show a clear asymmetry in their competence may also be useful in explaining some attested CS patterns and may open new directions for exploration.

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Abstract

The purpose of the present study is to investigate the morpho-syntactic mechanisms underlying Algerian Arabic/French intra-sentential code switching as displayed by Algerian speakers in Oran. Our research work also questions the Matrix Language Frame model's practicality in describing and interpreting an Algerian Arabic-French bilingual corpus.

Data from naturally-occurring conversations is analyzed within Myers-Scotton's (1993, 1997, 2002) Matrix Language Frame model and its supportive models -the 4-M model and the Abstract Level model. Our investigation of bilingual language behaviour of Algerian speakers is conducted from a micro sociolinguistic perspective. This perspective is couched within the general field of contact linguistics. The approach used in the analysis of our data is to its majority a qualitative one. Our study is backed up by a quantitative analysis of recurrent code switching patterns. Our findings are also compared to other CS corpora especially those involving Arabic as a Matrix Language.

The chosen theoretical framework seems to be efficient to a large extent in the analysis of Algerian Arabic French code switching patterns. In addition this insertional paradigm has shown flexibility and rigor in explaining and interpreting the attested code switching mechanisms. The Matrix Language Frame model could also account for the specificity of this corpus i.e. the tendency and frequency of the insertion of French noun phrases [French definite articles + French nouns] in Algerian Arabic matrices. This type of French noun phrases seem to be the most frequent and widespread code switching pattern within mixed constituents by being embedded as internal Embedded Language islands and within mixed complement phrases by being inserted as Embedded Language islands.

The results also highlight the tendency that in the AA/French CS corpus both languages assume the role of the Matrix Language, yet there seems to be an apparent asymmetry between Algerian Arabic and French as dominant languages in the present data. Algerian Arabic seems to impose itself as a Matrix Language qualitatively and quantitatively. We consequently put forward the hypothesis that the apparent asymmetry between AA and French may be related to our informants' relative unequal competence in these languages.

The analysis of AA/French CS corpus within the MLF model signals and highlights two pronounced weaknesses of the model. These are the insertion of AA single system morphemes in otherwise French complement phrases and the frequent occurrence of discourse markers from both languages involved in CS with finite clauses from the other language. The first weakness could be dealt with within Boumans (1998) insertional approach. However the second weakness seems to constitute a real challenge to the MLF model as an insertional design and to the complement phrase as a unit of morpho-syntactic analysis proposed by this model. A future research work will give us more evidence on the practicality and challenges of the Insertional perspective to language contact in general and to the MLF Paradigm in particular.

Keywords:

Intra-Sentential Code Switching; Morpho-Syntax; Matrix Language Frame Model; Matrix Language; Embedded Language; Descriptive; Interpretive; Insertional Approach; Naturally-Occurring Conversations.