

A CROSS-LINGUISTIC STUDY OF DOUBLE PLURALITY IN BILINGUAL CODESWITCHING IN WEST AFRICA¹

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This paper investigates nominal plural marking in bilingual noun phrases by exploring data that exhibit codeswitching (CS) involving four West African languages and English or French. Of theoretical interest is the phenomenon of double plurality, by which a noun is inflected by two plural markers from separate languages. Working within Myers-Scotton's Matrix Language Frame model, the paper finds that whether double plurality takes place or not depends on the nominal plural system found in the recipient / base language involved in CS. In Ewe-English and Ewe-French CS in which the phenomenon is attested, the recipient language Ewe has only one plural marker. However, in Akan-English, Ga-English and Hausa-English CS in which the phenomenon is not attested, the recipient (invariably the African) language has multiple plural markers. Thus, by exploring these cross-linguistic differences in the expression of nominal plurality in bilingual clauses, the paper highlights the role that language typology plays in characterizing the morphosyntax of CS constructions.

Cet article met en exergue le marquage du pluriel du nom dans des syntagmes nominaux bilingues en explorant les données qui font usage du changement de code dans 4 langues de l'Afrique occidentale ainsi que l'anglais ou le français. Le phénomène d'une double pluralité double revêt un intérêt théorique : il y a en effet deux marqueurs du pluriel venant de deux langues différentes dans l'inflexion du nom. Suivant le modèle de la Langue Matrice de Myers-Scotton, cet article démontre que la double pluralité a lieu ou non suivant le système du pluriel du nom que l'on trouve dans la langue d'accueil ou la langue de base impliquée dans le changement de code. Dans le changement de code ewe- anglais et ewe-français dans lesquels ce phénomène est attesté, la langue d'accueil ewe n'a qu'un seul marqueur de pluriel. Cependant, dans le changement codique en akan-anglais, ga-anglais, et haoussa-anglais dans lesquels ce phénomène n'est pas attesté, la langue d'accueil qui est la langue africaine a plusieurs marqueurs du pluriel. C'est pourquoi, tout en explorant ces différences entre différentes langues dans l'expression de la pluralité nominale dans les syntagmes bilingues, l'article met en exergue le rôle que la typologie des langues joue dans la caractérisation de la morphosyntaxe des constructions des changements codiques.

0. INTRODUCTION

This paper investigates nominal plural marking in bilingual noun phrases found in Ewe-French, Ewe-English, Akan-English, Ga-English, and Hausa-English codeswitching, all of which are spoken in West Africa. The principal aim is to highlight the role that language typology plays in the phenomenon of double plurality in codeswitching (CS).

Double plurality is the most frequent type of what Myers-Scotton (1993) has called "double morphology", which is the CS phenomenon in which a content morpheme is inflected by two equivalent grammatical elements from separate languages. With double plurality, a noun is inflected by two plural forms from separate languages, including the

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language of the noun. This is shown in the following example where the doubly inflected noun, **COMPANY**, is from English and the plural markers, **-S** and **-wó**, are from English and Ewe respectively:

(1) **é-wɔ-é bé COMPANY-á-wó hã wó COLLAPSE**

3sg-do-3sg COMP company -PL too 3PL collapse

The result is that companies too they have all collapsed. (Ewe-English)

Instances of plural marking in CS involving the language pairs mentioned above presents an opportunity for us to scrutinize the role that language typology plays in permitting or inhibiting double plurality in CS.

Unless otherwise acknowledged, the examples of bilingual constructions discussed in the paper come from recordings made between April 2009 and October 2011 by a team of researchers whom this writer led² on a project called “Ewe Contact Research Project”, which was sponsored by the Office of Research, Innovation and Development (ORID) of the University of Ghana. The Ewe-English CS data, totalling twenty six hours of conversation, were recorded in Accra, Ho, Keta, and Akatsi (all in Ghana) while the Ewe-French CS data, totalling twenty five hours of conversation, were recorded in Lome and Avepozo in Togo. The same methodology was used in collecting both sets of data. Speakers (never more than six per recording session) were organized into a focus group to discuss various topics (including marriage ceremonies, marital life, domestic and religious issues, current affairs—especially political and economic—and the relevance of science and technology in human lives). Members of each group were native speakers of Ewe who are fluent in English (Ghana) or French (Togo). Each session was moderated by a research assistant who is competent in Ewe and English or in Ewe and French. Each session lasted at least one hour. The general format was for the moderator to introduce a topic and to ask a series of general questions that stimulate a debate. As the various speakers take turns to address the questions (an event that is often characterised by rebuttals, overlaps and reformulation of the questions by the speakers themselves), the moderator’s major task was to ensure that everyone gets an equal opportunity to speak. Speakers are not instructed to speak any particular variety of language (Ewe or English or French or Codeswitching) although the recordings show that most of the moderators used monolingual Ewe predominantly. The CS data that resulted can therefore be seen as naturally occurring. All the conversations recorded have been transcribed and typed out, making it easy to pick out the examples of bilingual NPs discussed in the paper.

1. THEORETICAL FRAMEWORK

1.1 THE MATRIX LANGUAGE FRAME MODEL

The theoretical framework used in this paper is an adaptation of Myers-Scotton’s Matrix Language Frame (MLF) model (1993, 2002), an adaptation spelt out in detail in Amuzu (2005a, 2005b, 2010, and forthcoming). Under this interpretation of the MLF

² See acknowledgement at the beginning of the paper.

model, there is the assumption that bilingual constituents (clauses and phrases) are structured on the basis of a morphosyntactic abstraction called *Composite Matrix Language*. The assumption in this kind of matrix language (ML) is that the two or more languages in CS contact complement each other in definable ways as the sources of the morphosyntactic abstraction (or abstract grammatical structure) that informs the building of bilingual constituents. Further, three assumptions underpin how the composite ML operates, and I spell them out immediately.

The first assumption is what Myers-Scotton's 4-M model stipulates: i.e., that there are four types of morphemes in human languages (see Myers-Scotton and Jake 2000:3ff and Myers-Scotton 2002:72). These are:

- **content morphemes:** nouns, verbs, adjectives, adverbs, and a few others.
- **early system morphemes:** grammatical elements that have conceptual affinity with their content morpheme heads, e.g. verb satellites (e.g. INTO in LOOK INTO meaning 'to consider'), noun plural markers,³ demonstratives, intensifiers, etc.
- **late bridge system morphemes:** elements that provide grammatical links between two units, e.g. copulas and possessive linkers
- **late outsider system morphemes:** critical grammatical elements, e.g. tense, modal, and aspect (TMA) markers, agreement inflections, case markers, etc.

The second assumption is that bilingual constituents are better understood in terms of the nature of their underlying abstract grammatical structures. This assumption stems from the view that the basis of syntax is the abstract representations underlying lexical items known as lemmas (Myers-Scotton and Jake 1995, 2001 and Myers-Scotton 2002). Briefly put, a lemma is the non-phonological set of information about a lexical item in a language which informs the lexical item's distribution as a surface-level element. Lemmas are supposed to be stored in speakers' mental lexicon of a language. They are thus language-specific. According to Myers-Scotton, "Lemmas contain lexical rules and these rules contain all the necessary information to realize surface constructions" (2002:14). Specifically, a lemma consists of three subsets of lexical rules concerning the lexical item's meaning and distribution:

- **lexical-conceptual structure**, i.e. details about the lexeme's semantic and pragmatic properties (e.g. does a noun encode Agent, Patient, or Experiencer?; and does a verb encode Action, State, or Process?)
- **predicate-argument structure**, i.e. details about the lexeme's syntactic properties (namely details about its thematic structure that would be mapped on to grammatical relations); i.e., for example, whether a noun conceptualized as Patient is to be expressed as Subject or as Object.

³ The notion that noun plurals are invariably early system morphemes will be re-visited in section 2.2; it will become evident that the noun plural in Ewe behaves more like a late system morpheme than an early system morpheme, a fact which will explain why it co-occurs in mixed NPs with the English plural S, which is an early system morpheme.

- **morphological realization pattern**, i.e. specifications about language-specific devices—like word order restrictions, agreement, tense / aspect marking system, etc—for realizing the lexeme’s grammatical relations with other lexemes in surface configurations, e.g.: Must a Subject come before its verb or may it occur elsewhere?; Are case-markers required on the Subject?; etc.

As will be shown shortly, this notion of lexical structure is useful in explaining how surface CS configurations containing double plurals evolve from the lemma information about the lexemes they accompany.

The third assumption is that language production is modular, involving four stages / levels of operation. These are the conceptual level, lemma level, functional level, and surface/positional level. I explicate these stages/levels of language production in Table 1, which is an adaptation of tables from Myers-Scotton and Jake (2001), Myers-Scotton (2002). It was first presented in Amuzu (2005a:20-21).

Table 1: The language production model

Conceptual Level	At this level, speakers make selections encapsulating the conceptual structures they wish to convey. What this means is that, pre-verbally, speakers make decisions regarding what their intentions are. Such pre-verbal speaker-intentions (which consist of universally available semantic and pragmatic information) are conflated as specific semantic/pragmatic feature bundles, or SP feature bundles, which are necessarily language-specific. Information is sent to the Lemma Level
Lemma Level	The language-specific SP feature bundles activate entries in the mental lexicon called lemmas, which support the realization of actual surface lexemes. Specifically, the SP feature bundles activate lemmas supporting content morphemes (such morphemes as verbs, nouns, and adjectives). These content-morpheme lemmas may also point to lemmas supporting early system morphemes - e.g. LOOK requires INTO in “to <u>LOOK INTO</u> something”. The lexical-conceptual structure of content morphemes is salient at this level. Information is sent to the Functional Level where a control centre known as <i>Formulator</i> operates.
Functional Level	The formulator interprets the language-specific lemma information about the content morpheme, which comprises the already salient lexical-conceptual structure and the two other sub-parts of lemma information: the predicate-argument structure and morphological realization pattern. Concerning predicate-argument structure, the formulator maps thematic structure onto grammatical relations. For instance, it detects how many arguments a verb takes and what thematic role the verb

	assigns each argument; it then maps the grammatical relations among these elements. Concerning the morphological realization pattern, the formulator detects what language-specific devices for word order, agreement, tense/aspect/mood marking, case marking, negation, etc., are suitable for expressing the morpheme's grammatical relations with other morphemes. Crucially, late system morphemes—or <i>functional elements</i>—are selected at this level to furnish the content morpheme's morphosyntactic requirements. Information is sent to the surface level.
Positional / Surface Level	Phonological and morphological realizations take place, i.e., the actualization of surface structure configurations is made.

Let us now return to specifics of the composite ML. Simply put, the composite ML hyPOThesis says that:

The donor language provides, from the lemma level, all lemma information (lexical-conceptual structure, predicate-argument structure and morphological realization pattern information) about this language's content morpheme, while the **recipient language** provides, at the functional level, the morphosyntactic means (i.e. morpheme order and late system morphemes) by which a grammatical frame is created to satisfy the lemma requirements of the content morpheme from the donor language.

I refrained from using the labels 'matrix language' and 'embedded language' which are associated with the MLF model because in this hyPOThesis, it is not being stipulated that a single language plays an absolute role of ML as is the case in what Myers-Scotton (1993, 2002) calls "classic CS". Rather, using these more neutral labels allows the hyPOThesis to outline how the kind of interaction between the two languages in (i) and (ii) makes them participants in a composite ML mechanism.

I shall provide details of the above hyPOThesis in table 3 below. Before I do that, let us scrutinize the specifics of the morphosyntax of the underlined Ewe-English NPs in (2), which I discuss in table 3.

- (2) **Wó dɔ STUDENT adé bé wò-a-flè DICTIONARY ná**
 3PL send student INDEF COMP 3sg-POT-buy dictionary for
SECRETARY-á
 secretary-DEF
 'They sent a student (with the instruction) that he buys a dictionary for the secretary.' ['A student was sent to buy a dictionary for the secretary']
 (Ewe-English)

Of interest here is how indefiniteness is expressed in the underlined NPs. Each noun, **STUDENT** and **DICTIONARY**, refers to an indefinite entity, a fact expressed

similarly in the English translation: both nouns take the indefiniteness article **A**. Note, however, that in the bilingual clause itself **STUDENT** and **DICTIONARY** distribute differently. While **STUDENT** is modified by the Ewe indefiniteness marker **adé** ‘a certain’, **DICTIONARY** occurs alone as NP. The question that must be answered is, ‘What causes the difference in the distribution of these English nouns in the bilingual clause despite the fact that both take the indefinite article **A** in the monolingual English version?’

The key to an answer comes from how indefiniteness is expressed in monolingual Ewe NPs. As I have shown in Amuzu (2009a:223), Ewe makes a grammatical distinction between indefinite nouns that express non-specific (or generic) reference and those that express specific (or non-generic) reference. A non-specific noun occurs without any overt marking for indefiniteness, as we find in example (3) below where **avù** ‘dog’, occurring as the subject-NP without an overt marking for indefiniteness, refers generally to *a typical member of a class of entities or referents*, namely dogs.⁴

(3) **avù fé núwɔna-é nyé é-sia**

Dog POSS handiwork-FOC COP 3sg-this

‘This is the work of a dog.’

(Amuzu 2009a:223)

On the other hand, a specific-but-indefinite noun is modified by the indefiniteness marker **adé** ‘a certain’, and such an NP is interpreted as referring to *a specific member of a class of entities that the speaker assumes the hearer does not know*. **Avùadé** ‘a certain dog’ expresses this sense in (4):

(4) **mè-kpɔ avù adé lè afé á mè fiá**

1sg-see dog a certain at house DEF inside now

‘I have just seen a dog in the house [i.e. I have just seen a (certain) dog in the house].’ (Amuzu 2009a:223)

English does not make this kind of distinction as the indefinite **A** may modify specific as well as non-specific indefinite count nouns (cf. Trenkic 2008). This is demonstrated in the underlined parts of the English translation versions of (3) and (4).

What is clear, therefore, is that it is the Ewe-based morphological distinction among indefinite nouns which is applied to the English nouns **STUDENT** and **DICTIONARY** in example (2) above. We find that by occurring with **adé**, **STUDENT** makes reference to a specific-but-indefinite entity/individual (i.e. the speaker has a particular student in mind who he assumes the hearer does not know at that point in the discourse). On the other hand, by occurring without an overt indefiniteness marker, **DICTIONARY** expresses non-specific reference (i.e., the speaker wants his hearer to know that a typical member of the class of entities called ‘dictionary’ was to be bought by a certain student).

⁴ In fact, **avù** in (3) may refer to more than one dog despite the absence of the Ewe plural marker **-wó**. This is in keeping with a principle in Ewe which makes **-wó** redundant when the noun head is generic. I will discuss this principle in more detail in relation to monolinguals examples in (6) and (7) and in the CS examples in (12).

How does the composite ML hypOTHESIS account for the different distribution of **STUDENT** and **DICTIONARY** in (2)? The answer is displayed in table 3, where I show how respective lemma information about **STUDENT** and **DICTIONARY** gets mapped onto Ewe morphosyntax.

Table 4: Production of NPs expressing indefiniteness in Ewe-English CS

Conceptual Level	Speaker plans to name some entities ('student' and 'dictionary') as having been involved in a proposition. As this is a pre-linguistic stage in language production, no content morphemes come to mind. Speaker goes into bilingual mode (Grosjean 2001).⁵
Lemma Level	The lemma supporting the English content morpheme STUDENT is activated; the lexical-conceptual structure of this content morpheme becomes salient. Included in this lexical conceptual structure is information that STUDENT is a <i>specific member of a class of entities that the speaker assumes the hearer does not know</i>. Similarly, the lemma supporting DICTIONARY is activated; the activated lexical-conceptual structure information about DICTIONARY, on the other hand, includes information that it is a <i>typical member of the class of entities called 'dictionary'</i>.
Functional Level	The formulator checks the predicate-argument structure and morphological realization pattern of STUDENT and DICTIONARY and matches such information with each morpheme's already salient lexical-conceptual structure: Contained in the predicate-argument structure of STUDENT and DICTIONARY is information that each is the head of its immediate syntactic unit (the NP being constructed). In respect to STUDENT, this information is matched with the lexical-conceptual structure information that it is a <i>specific member of a class of entities that the speaker assumes the hearer does not know</i>. In respect to DICTIONARY, this information is matched with the lexical-conceptual structure information that it is only a <i>typical member of the class of entities</i>. Concerning the morphological realization pattern, the formulator detects that both STUDENT and DICTIONARY are nominal heads of the NPs being configured. At this point, the speaker goes into EWE-ONLY MODE because of the application of the SMP and MOP⁶

⁵ The assumption is that for a bilingual constituent to be produced the speaker has to enter, at the conceptual level, what Grosjean (2001) calls "bilingual mode" (ostensibly because the social setting motivates, ala Myers-Scotton 1993, the interchangeable use of the two or more languages; CS would be inhibited if the bilingual is in "monolingual mode" as should happen if his addressee speaks only one of his languages).

	Backed by the System Morpheme Principle (SMP), Ewe supplies adé to express STUDENT's underlying lexical-conceptual structure; on the other hand, the SMP supplies a null morpheme to express DICTIONARY's lexical-conceptual structure. Backed by the Morpheme Order Principle (MOP), Ewe constrains the order in which STUDENT and adé occur.
Surface Level	Adé occur after STUDENT following Ewe morpheme order in the NP while DICTIONARY occurs alone.

1.2 FINDINGS FROM EARLIER MLF-MODEL-BASED RESEARCH ABOUT DOUBLE PLURALITY

Myers-Scotton (1993, 2002) and Amuzu (2009b, 2010) have observed that in bilingual noun phrases showing plural doubling, the nouns that get inflected by two plurals always come from the donor language (which Myers-Scotton would rather call 'embedded language') and never from the recipient language (Myers-Scotton's matrix language). Thus, **COMPANY** in the Ewe-English CS example in (1) above cannot be replaced by the Ewe counterpart **dɔwɔfe** because Ewe is the recipient language.

- (5) a. **é-wɔ-é** **bé** ***dɔwɔfé-S-** **wó** **hā** **wó** **COLLAPSE**
 3sg-do-3sg COMP company-PL-PL too 3PL collapse
 'The result is that companies too they have all collapsed.'

- (5) b. **é-wɔ-é** **bé** ***dɔwɔfé-** **wó-** **hā** **wó** **COLLAPSE**
 3sg-do-3sg COMP company -PL too 3PL collapse
 'The result is that companies too they have all collapsed.'

Another observation made (cf. Myers-Scotton 2006:207 and Amuzu 2009b:168-169) is that both plural markers need not follow the noun head. A plural markers' placement in relation to their noun head depends on whether they are prefixes or suffixes

⁶ The Morpheme Order Principle is:

In ML + EL constituents consisting of singly-occurring EL lexemes and any number of ML morphemes, surface morpheme order (reflecting surface relations) will be that of the ML. (Myers-Scotton 1993:82)

For the data under consideration, the Morpheme Order Principle enjoins Ewe to set morpheme / constituent order in all the mixed constituents.

The System Morpheme Principle is:

In ML + EL constituents, all system morphemes which have grammatical relations external to their head constituent (i.e., which participate in the sentence's thematic role grid) will come from the ML. (Myers-Scotton 1993:82)

The System Morpheme Principle, which partners the Morpheme Order Principle, enjoins Ewe to contribute all grammatical elements (late system morphemes) in mixed constituents.

in their respective language. Examples from Acholi-English CS spoken in Uganda and Nyangbo-English CS spoken in Ghana are very good illustrations of this point. From Acholi-English CS, where English is the donor language, Myers-Scotton (2006:207) cites **lu-CIVILIAN-S** ‘civilians’ in which **lu**, an Acholi plural prefix, occurs before the noun while **-S** occurs, as it should, as a suffix. Similarly, in **ba-SISTER-S** ‘sisters’, from Nyangbo-English CS, the Nyangbo prefix plural precedes **SISTER** while the English plural suffix follows it.

But perhaps the most important effort made so far with regard to the study of double plurality concerns how these observations were explained. For Myers-Scotton (2002), and for Amuzu (2005a, 2009b, and 2010), the explanation resides in insights about how lemmas supporting embedded/donor-language plurals and nouns can be activated jointly during bilingual language production at the lemma level. According to Myers-Scotton (2002:92), the phenomenon of inflecting embedded language (EL) nouns with two plurals relates to the fact that plurals, as early system morphemes under her 4-M model, have the kind of

...special relation to their heads that would promote their accessing when their Embedded Language heads are called in codeswitching. Like their heads, earlier [here, plurals] are conceptually activated, and a hypothesis under the 4-M model is that early system morphemes are salient at the same level as their content morpheme heads (at the lemma level—i.e. in the mental lexicon); (Myers-Scotton 2002:92)

Her point is that there is a conceptual or semantic bond between an EL noun and an EL plural to the extent that the two can be accessed together at the lemma level to appear as a semantic-syntactic unit in a mixed NP. She therefore explains that

The hypothesized scenario is the following: the speaker wishes to express her or his intentions by using an Embedded Language noun along with the concept of plurality. However, when the lemma for that noun is accessed, at the same time, its plural affix ‘slips in’, too. (Myers-Scotton 2002:92)

Myers-Scotton’s use of the terms ‘mistiming’ and ‘misfiring’ (2002:92) to describe the ‘slipping in’ of an EL plural to go with an EL noun is an attempt to highlight two interconnected points spelt out for Ewe-English CS in Amuzu (2005a, 2009b, and 2010) thus: (i) that the lemma level processes that lead to the picking of the EL plural are not default plural selection processes and (ii) that the default processes are accordingly activated later on, i.e. at the functional level, to select the required plural marker, the ML counterpart of the EL plural. It is the mistimed picking of an EL plural marker at the lemma level and the picking of the default ML plural marker at the functional level which result in the doubling of plurals on an EL noun at the surface level. The details of this phenomenon are provided in table 5 in the next section.

1.3 THE NEW QUESTION ABOUT DOUBLE PLURALITY

An important new question about double plurality is why it is possible in CS involving some language pairs but not possible in CS involving some other language

pairs. In addressing this question, I shall explore data from CS involving all the language pairs already listed in the introductory section.

2. EWE-ENGLISH CS

2.1 PLURAL MARKING IN UNMIXED EWE AND ENGLISH

Ewe has only one noun plural marker. This marker, **-wó** (PL), occurs in the fifth slot after its head nominal as shown in table 4 below.

Table 4: The Ewe Noun Phrase Structure (Amuzu 2005a:181)

-2	-1	0	+1	+2	+3	+4	+5	+6	+7	+8
por-NP	(INT1)	N PRO	(ADJ)	(CAR) D.	(OR) D.	(DET) (REL)	(PL)	(QT)	(INT2)	(CLS)
Kofi fe Kofi's éfe 'his' nye 'my'	nenem , ale, sigbe , 'such'		nyui 'good' lolo 'big' yeye 'new'	ɖeka 'one' eve 'two'	evelia 'second' búbu 'other' mamle 'last, remain- ing'	-(l)a 'the' aɖe 'a certain' ma that' si which'	-wó	katã 'all'	pɛ / ko 'only' hã 'too' boɲ 'rather' koɲ 'in particu- lar'	

The implication is that **-wó** (PL) may occur immediately after its head only if no adjective, cardinal, ordinal, or determiner/demonstrative also occurs. Thus, although **-wó** directly follows the head nominal **xɔ** 'building' in (6a), it occurs some morphemes away from the head in (6b) and (6c). The slot number of each morpheme in an NP is marked in accordance with the word order displayed in the table:

(6) a. **xɔ**₀ **-wó**₊₅ **lè** **agblè** **má** **dzí**

Building-PL be.at farm that TOP

'There are buildings on that plantation.'

(6) b. **xɔ**₀ **yéyé**₊₁ **-wó**₊₅ **lè** **agblè** **má** **dzí**

building new-PL be.at farm that TOP

'new buildings are on that plantation.'

(6) c. **xɔ**₀ **yéyé**₊₁ **énè**₊₂ **-a**₊₄ **-wó**₊₅ **lè** **agblè** **má** **dzí**

Building new four -DEF-PL be.at farm that TOP

'The four new buildings are on that plantation.'

Wó is, strictly speaking, not conceptually required as number marker in the Ewe NP. For instance, **xɔ** ‘building’ without **wó** in (6d), a version of (6a), may still refer to more than one entity:

- (6) d. **xɔ**₀ **lè** **agblè** **má** **dzí**
 Building be.at farm that TOP
 ‘There is a building / there are buildings on that plantation.’

The thing about **-wó** is that its occurrence in the NP depends on whether the head noun is generic or non-generic. A generic noun is defined here as a noun that is not modified by any element (e.g. the definite or the indefinite) from the +4 slot while a non-generic noun is one that is so modified. **Xɔ** in (6d) is generic because it is not specified from the +4 slot. Once the noun is specified from the +4 slot and **-wó** is not realized in the +5 slot, the singular reading of the noun is absolute:

- (6) e. **xɔ**₀_____ **-á**₊₄ **lè** **agblè** **má** **dzí**
 building -DEF be.at farm that TOP
 ‘The building is on that plantation.’

Now, when number is expressed elsewhere in the NP (e.g. in the form of a cardinal in +2 slot, as with **énè** ‘four’ in (6c) above), then the occurrence of **-wó** again depends on whether the head noun is generic or non-generic. **Wó** occurs when the noun is non-generic, as in (6c) where the noun head is modified from the +4 slot by the definiteness marker **-á** ‘the’. In contrast, **-wó** cannot occur in (7a) below because the noun is generic (i.e. it is not modified from the +4 slot):

- (7) a. **xɔ**₀_____ **yéyé**₊₁ **énè**₊₂ ***wó**₊₅ **lè** **agblè** **má** **dzí**
 building new four -PL be.at farm that TOP
 ‘Four new buildings are on that plantation.’

Since the noun is already quantified by **énè** ‘four’ and is generic, the NP is grammatical only when **-wó** is omitted from the +5 slot:

- (7) b. **xɔ**₀_____ **yéyé**₊₁ **énè**₊₂ **lè** **agblè** **má** **dzí**
 building new four be.at farm that TOP
 ‘Four new buildings are on that plantation.’

Below, we shall see how the grammatical principles that govern the occurrence of **wó** apply to the double plurality phenomenon in Ewe-English and Ewe-French CS.

2.2 DOUBLE PLURALITY IN EWE-ENGLISH CS

A much more detailed documentation of double plurality in Ewe-English CS appeared in Amuzu (2009b).

As expected (refer to section 1.2 above), only an English noun may carry two plural forms from separate languages: the English noun carries both **-S** and **-wó**. Such a noun is always followed immediately by **-S** (in keeping with the distribution pattern of **-S** in

The implication of the grammaticality of deleting **-S** but not **-wó** from bilingual NPs already showing double plurality is that only **-wó** is a grammatically relevant plural marker in those NPs. As argued in Amuzu (2009b, 2010), though optional, **-S** appears alongside the English nouns carrying **-wó** because it is an early system morpheme whose form is available to be pointed to by the lemma supporting a count English noun. The process is explicated with example (8a) in mind in the following table. The explanation of double plurality outlined in the table is that while **-S** pluralizes **MATERIAL** on semantic ground (i.e. **-S** is conceptually activated at the lemma level along with **MATERIAL**), **-wó** pluralizes **MATERIAL** on structural ground (i.e. **-wó** is obligatorily assigned the +5 plural slot following the application of the MOP and the SMP at the functional level).

Table 5: Production of mixed NPs showing double plurality in Ewe-English CS

Conceptual Level	Speaker thinks of more than one token of an entity or concept. As this is a pre-linguistic stage in language production, no content morpheme for the entity comes to mind yet. Speaker goes into bilingual mode (Grosjean 2001).
Lemma Level	The lemma supporting the English content morpheme MATERIAL (8a) is activated; the lexical-conceptual structure of MATERIAL becomes salient and the information includes the fact that <i>there is more than one tokens of it</i>. The lemma supporting MATERIAL points to the lemma supporting the plural marker -S because of the semantic link between the entity and the notion that there is more than one tokens of it. (As noted by Myers-Scotton (2002:92), a plural is an early system morpheme with strong semantic affinity with countable nouns lemmas.)
Functional Level	The formulator checks the predicate-argument structure and morphological realization pattern of MATERIAL and matches such information with the morpheme's already salient lexical-conceptual structure: Contained in the predicate-argument structure of MATERIAL is information that it is a head noun of the NP that is being constituted. This information is matched with the lexical-conceptual structure information that MATERIAL refers to more than one token. Concerning the morphological realization pattern, the formulator recognizes that MATERIAL requires a system morpheme to express its plurality and it ignores the fact that -S has already been picked at the lemma level to express plurality. At this point, the speaker goes into EWE-ONLY MODE because of the application of the SMP and MOP: Backed by the Morpheme Order Principle (MOP), Ewe syntactic procedures are invoked to satisfy MATERIAL's need for a plural form.

	This causes the projection of the +5 slot for a plural marker. Backed by the System Morpheme Principle (SMP), Ewe supplies -wó to fill the +5 slot.
Surface Level	MATERIAL therefore occurs with both -S and -wó . Other elements, where applicable (e.g. 8) b., may occur in between -S and -wó .

Now, while **-S** is optional in the NPs showing double plurality that we have so far discussed, a different picture emerges when we turn to bilingual NPs in which irregular plural nouns appear alongside **-wó**. An irregular plural noun is the fusion of a noun stem and the plural morpheme. Such forms, e.g. **CHILDREN**, must occur intact in mixed NPs where they are obligatorily pluralized once more by **-wó** (compare the acceptability of 11a with the unacceptability of 11b):

- (11) a. [₁NICE₁ CHILDREN₀] yà₊₄ **-wó**₊₅] a, mía gà dzì ɖe
 Nice children this PL TP 3PL.NEG1 REP give.birth some
 a-kpewó o a?
 FUT-add 3PL.NEG2 Q
 ‘These nice children, won’t you have some more to add to them?’
 (Amuzu 2005a:221)

- (11) b. NICE [**CHILDREN** yà *Ø] a, mía gà dzì ɖe...

That the lexicalised English plural noun must occur intact is illustrated by the ungrammaticality of (11) c.:

- (11) c. NICE [***CHILD** yà **-wó**] a, mía gà dzì ɖe...

It may indeed be argued that the lemma supporting an irregular plural noun is stored in the lexicon separately from the lemma supporting the singular noun counterpart. Once plurality is intended and the English lexicon is accessed, it is the irregular plural noun which is picked but is further pluralised by **-wó** because the SMP backs Ewe to supply a plural form obligatorily.

There is, however, one kind of bilingual NP in which **-S** is acceptable but **-wó** (PL) is not. This is the bilingual NP in which a generic English noun is inflected by **-S** and quantified by a cardinal, as we find in (12a) where **blávè** ‘twenty’ quantifies **COMPUTER**. Note that (12b) is ungrammatical because **-wó** is included:

- (12) a. wó- flè COMPUTER-S blávè ná FACULTY-á
 3PL buy computer-PL twenty for faculty-DEF
 ‘They’ve bought twenty computers for the faculty.’

- (12) b. wó- flè COMPUTER-S blávè ***wó** ná FACULTY-á
 3PL buy computer PL twenty PL for faculty-DEF
 ‘They’ve bought twenty computers for the faculty.’

The ungrammaticality of **-wó** in (12b) is due to the Ewe-internal rule—already discussed in connection with (7a) and (7b) above—which proscribes the occurrence of **-wó** when a head noun is generic and number is expressed elsewhere in the NP. Consistent with Ewe grammar, (12c) is acceptable because the entity referred to by the head noun is not generic; it is modified by **adé** ‘INDEF: a certain’, which means that the speaker has some specific entities (here computers) in mind which the hearer at this point in the discourse does not know:⁸

- (12) c. **wó - flè COMPUTER-S blávè adé -wó ná FACULTY-á**
 3PL buy computer-PL twenty INDEF PL for faculty-DEF
 ‘They’ve bought twenty computers for the faculty.’

Yet another special bilingual NP in which **-S** may occur but **-wó** may not is illustrated in the following examples:

- (13) a. **UNCLE bé né SEASON dzí dǒ ná cocoa lá, ye a- flè**
 Uncle say if season top reach for cocoa TP LOG-POT buy
[SANDAL-S á] ná-m
 sandal-PL DEF to-1sg
 ‘Uncle said when the season arrives for cocoa he will buy a pair of sandals for me. (Asilevi 1990:90)

- (13) b. **Mè- lè [FLOWER-S yá] dǒ-gé dé daddy fe**
 1sg be.at flowers PL this plant-INGR ALL daddy POSS
BACKYARD GARDEN - á mè
 backyard garden DEF in
 ‘I will plant these flowers in daddy’s backyard garden.’ (Asilevi 1990:23)

An English noun that occurs in this kind of structure is one whose referent “naturally occurs in pairs or groups, and/or when... [it] is generally referred to collectively” (Tiersma 1982:835). Such nouns are unmarked in the plural (Tiersma 1982:835), and Amuzu explains that **-wó** is therefore not required grammatically. When such nouns however take both **-S** and **-wó**, they would “signal that different kinds or different groups of the entities in question are being referred to” (Amuzu 2009b:167). For example, **SANDAL-S á -wó** will mean ‘the pairs of sandals’ and **FLOWER-S yá -wó** will mean ‘these kinds of flower’.

The distribution of **-wó** in the mixed NPs highlights the need to take a second look at the suggestion in the 4-M model discussed earlier that noun plurals are, universally, early system morphemes; i.e. that they are morphemes which are required conceptually by the lemmas supporting their nouns and that the lemma supporting them is activated at the lemma level. What we saw instead, in the monolingual examples in (6) and (7) as

⁸ Note that the pattern in (12c) is reminiscent of the pattern in (6c).

well as in the CS examples in (12), is that the occurrence of **-wó** in the +5 slot is not a strictly conceptual affair. Instead, it is more a grammatical affair as its occurrence depends on the presence or absence of other grammatical forms in the NP. The fact that the occurrence of **-wó** is sensitive to the structural properties of the NP means that it is a late rather than an early system morpheme. This explains why the system morpheme principle (SMP) ensures that under the conditions specified **-wó** be realized in the +5 slot even if the English **-S** is attached to the English head noun (revisit the discussion of 12c compared with 12a and 12b).

3. EWE-FRENCH CS

3.1 IMPLICATION OF THE FRENCH NOMINAL PLURAL BEING A SILENT MORPHEME

The nominal plural marker in French (incidentally **-S** as in English) is never pronounced, so regular French plural nouns are pronounced like their singular counterparts. The exceptions are irregular plural nouns, whose forms are phonologically different from their singular counterparts (e.g. **ANIMAL** ‘animal’ vs. **ANIMAUX** ‘animals’). Because of this absence of phonological distinction between singular nouns and their regular plural counterparts, it is not as straight forward (as in Ewe-English) to point out instances of double plurality in Ewe-French CS. I will, therefore, begin with the diagnostic means I employed to unveil the covert double plurality in mixed Ewe-French NPs containing the Ewe plural **-wó**.

What I did was that I returned to Ewe-French codeswitchers and asked them to help me transcribe portions of their speech that include the said bilingual NPs. The response I got was consistent: I was told that whenever noun plurality is intended (as must be the case when **-wó** accompanies a French noun), then following the French writing system the French noun must be spelt with a ‘s’ ending. Thus, my respondents would like me to spell **ÉTUDIANT** ‘student’ with a ‘s’ ending in (14) especially because **ÉTUDIANT** is in appositional relation with a plural personal pronoun, **mí** (1PL):

- (14) **Wó- kò-na mí PARCE QUE é-góme nyí bé wó-gbà kpò-na**
 3PL-laugh.at-HAB 1PL because 3sg-under be COMP 3PL-REP see-HAB
mí ÉTUDIANTS-wó sì nò-na kéké gblegbľě dē dzí
 1PL students-PL REL be.at-HAB motorbike spoilt at TOP

‘They laugh at us because it means that they still see us, students, sitting on a rickety motorbike.’

In other words, for these bilinguals the silent **-S** is a psychological reality in the mixed NPs already containing **-wó**, something they are only able to show overtly when they have to write down such mixed NPs.

It may be pointed out that by consistently writing French nouns with **s** ending, I am dubiously asserting that there is always double plurality when **-wó** pluralizes a French noun. There are, however, two kinds of bilingual clauses in which the instantiation of double plurality is not disputable because of some overt marking of plurality in French. They are exemplified in (15a-15b) and (15c and 15d) respectively:

- (15) a. **LES PAYS** **ANGLOPHONES-wó** **ONT DE L'AVANCE SUR NOUS.**
The.PL country.PL Anglophone.PL-PL have of the advance on 3PL
'The Anglophone countries are more advanced than us.'
- (15) b. **mà-gblɔ** **na** **wò** **bé** **INTELLECTUELS-wó** **má-tó** **na**
1sg.POT-say to 2sg COMP intellectual.PL -PL NEG1.POT-say to
wò **bé** **DES** **INTELLECTUELS-wó** **mú-dó** **BUS** **kpɔ o**
2sg COMP some.PL intellectual.PL-PL NEG2-board bus ever NEG
'I will tell you that intellectuals won't tell you that some intellectuals have never
boarded a bus.'
- (15) c. **míawó-a** **ANIMAUX-wó** **mí nyé-a?**
1PL-TP animal.PL-PL 1PL COP-Q
'As for us, are we animals?'
- (15) d. **wó-gblɔ-na** **bé** **ÉTRANGERS NOUVEAUX** **kè-wó vá,** **wó mú**
3PL-say-HAB COMP foreigner.PL new.PL REL-PL come 3PL NEG1
nyá **fíké** **wó la** **dzè** **lè VILLE-á** **mè** **o.**
know where 3PL POT lodge at city-DEF inside NEG2.
'It is said that new foreigners who have arrived (normally) do not know where to
lodge in the city.'

Examples (15a) and (15b) are overt cases of double plurality (despite the silence of -S) because apart from -wó there is grammatical plural marking in the form of French definite and indefinite plural articles. In (15a), **LES** encodes both plurality and definiteness in relation to the count noun **ANGLOPHONE** and in (15b) **DES** 'some' encodes plurality as well as indefiniteness in relation to the second instant of **INTELLECTUEL**. The 'presence' of -S on those nouns is anticipated from the perspective of the French spelling system because each plural article has to agree with the form of its head noun. With (15c), it is the phonology of the irregular plural **ANIMAUX** 'animals' which shows that the occurrence of -wó is a case of plural doubling. In (15d) it is the form of the adjective **NOUVEAUX** (the plural form of **NOUVEAU** 'new') which indicates that the speaker intended to express plurality in French besides doing so with -wó.

3.2 ON THE OBLIGATORY NATURE OF -wó IN MIXED NPS THAT ALREADY CONTAIN IT

Careful scrutiny of the Ewe-French CS data suggests that -wó may not be deleted from a mixed NP in which it is the only overt marker of plurality. The deletion of -wó from such an NP causes it to be interpreted as a singular NP because, as noted, -S is never pronounced. We find therefore that when we delete -wó from the underlined NPs in (16) and (17), the resulting NPs in (18) and (19) respectively attract a default singular interpretation.

- (16) **Lè afé adé-wó mè ané wó-xɔ DOMESTIQUES adé-wó a,**
 At house INDEF-PL inside TP if.3PL-get house.help.PL INDEF-PL TP,
BON, káká na vá kpɔ kò-a ké BON wó-vá xɔ ɲútsù-á.
 OK, as.soon.as 2sg.SUBJ.PURP see only-TP then OK 3PL-PURP-get man-DEF
 ‘In some homes, when they hire some maids, okay, before you are aware, okay,
 they have snatched the man (the husband).’
- (17) **é-lè Bible mè bé né game lè gógó-a**
 3sg-be.at Bible inside COMP if moment be REDU.approach-TP
FAUX PROPHÈTES-wó la nɔ vá.
 false prophet.PL POT be come
 ‘It is in the Bible that when the moment approaches false prophets will begin to
 show up.’
- (18) **Lè afé adé-wó mè a né wó - xɔ DOMESTIQUES adé - Ø a, BON...**
 ‘In some homes, when they hire a maid, okay....’
- (19) **é-lè Bible mè bé né game lè gógó-a FAUX PROPHÈTE-Ø la nɔ vá.**
 ‘It is in the Bible that when the moment approaches a false prophet will begin to
 show up.’

However, it is not possible to make sense of some mixed NPs from which an already present **-wó** is now deleted. The underlined NPs in (21), a version of (20), is not acceptable because **-wó** is missing:

- (20) **PAYS FRANCOPHONES-wó de wó le TROP CORROMPUS**
 Country.PL francophone.PL-PL FOC 3PL be much corrupt.PL
wú PAYS ANGLOPHONES-wó.
 than country.PL anglophone.PL-PL
 ‘Francophone countries, THEY are more corrupt than Anglophone countries.’
- (21) ***PAYS FRANCOPHONES- Ø de wó le TROP CORROMPUS wú *PAYS ANGLOPHONES- Ø.**
 ‘Francophone countries, THEY are more corrupt than Anglophone countries.’

Let us now turn to mixed pluralized NPs in which the noun is an irregular plural form. As in Ewe-English CS, the deletion of **-wó** from such mixed NPs renders them unacceptable. For example, (22), a version of (15c), is deemed unacceptable without **-wó** by my respondents.

- (22) **míawo-a *ANIMAUX-Ø mí nyé -a?**
 1PL-TP animals -- 1PL COP -Q
 ‘As for us, are we animals?’

The same thing applies to the version of (15d) in (23) below; it is deemed unacceptable because **ÉTRANGERS NOUVEAUX** ‘new foreigners’ occurs without **-wó**:

- (23) **wó-gblɔ-na** **bé** ***ÉTRANGERS NOUVEAUX** **kè-Ø** **vá** ...
 3PL-say-HAB COMP foreigner.PL new.PL REL come
 ‘It is said that new foreigners who have arrived’

Interestingly also, the singular forms of irregular French nouns and adjectives cannot co-occur with **-wó** as is the case in Ewe-English CS (compare with example 11c above).

- (24) **míawo-a** ***ANIMAL-wó** **mí** **nyé** - **a?**
 (25) **wó-gblɔ-na** **bé** ***ÉTRANGER NOUVEAUX** **kè-wó** **vá**

3.3 EXPLANATION OF THE PATTERNS

We saw that even if plurality on French nouns is expressed covertly with **-S**(as in the case of regular nouns) or overtly (as in irregular French nouns), it must be expressed again with **-wó**. This pattern is reminiscent of what obtains in Ewe-English CS, and I argue that the explanation I gave in table 5 in terms of the composite ML hypOTHESIS holds here as well: the French plural is activated conceptually as an early system morpheme at the lemma level to accompany the French noun but is taken for granted at the functional level where the system morpheme principle (SMP) causes **-wó**, a late system morpheme (see argumentation at the end of section 2.2), to also be picked to accompany the same French noun.

4. AKAN-ENGLISH AND GA-ENGLISH CS

4.1 DATA ANALYSIS

Unlike Ewe-English and Ewe-French CS, Akan-English and Ga-English CS do not exhibit the phenomenon where plural markers from two languages participating in CS co-occur on a noun stem (Amuzu 2009b). In Amuzu (2009b), it is argued that the absence of the phenomenon in the two cases of CS has to do with the fact that Akan and Ga, which are the recipient languages, have multiple (at least four) plural forms each.

Akan has two plural prefixes, namely the homorganic nasal plural prefix **N-** (i.e. **n-** / **ŋ-** / **m-**) and the prefix **a-**, and two plural suffixes namely **-foɔ** and **-nom**. Each of these forms is exemplified in (26). As for Ga, it has four plural suffixes: **-jì**, **-i**, **-bí'í**, and **-fó'í** (Agyei-Owusu, 2009); they are exemplified in (27).⁹ Akan nouns which carry the suffix **-foɔ** are particularly interesting because two changes occur in them when they become plural nouns. First, the prefix singular prefix **o-** or **ɔ-** that they carry in their singular form changes to the plural prefix **a-**, and the singular suffix **-ni** that they carry then changes to **-foɔ**; see the examples at the tail end of (26).

⁹ I am deeply grateful to Mr. Sampson Korsah, a graduate student of mine at the University of Ghana, for the Akan and Ga data he collected through interviews. I am also grateful to Millicent Quarcoo and Clement I. Appah for their comments on my analysis of the Akan-English CS data.

(26) Akan:

	Singular	Plural
N-	ɔ́bá ‘child’	ɲ̄-má ‘children’
	kràtáá ‘paper’	ɲ̄-kràtáá ‘papers’
	àsóré ‘church’	ɲ̄-sóré ‘churches’
a-	òsófó ‘pastor’	à-sófó ‘pastors’
	ɲ̄súó ‘water body’	à-súó ‘water bodies’
	òkòmfo ‘traditional priest’	à-kòmfo ‘traditional priests’
	òpònko ‘horse’	à-pònko ‘horses’
-nom	ohéne ‘a king’	ahéne ‘kings’
	nàná ‘ancestor’	nàná-nóm ‘ancestors’
	àséw ‘in-law’	ɲ̄séw-nóm ‘in-laws’
	wɔ́fà ‘uncle’	wɔ́fà-nóm ‘uncles’
	onùá ‘a brother’	anùá-nom ‘brothers’
-foɔ	òsùání ‘disciple’	àsùá-fóɔ ‘disciples’
	Ghánani ‘Ghanaian’	Ghánà-fóɔ ‘Ghanaians’
	òkùnàní ‘widow(er)’	àkùnà-fóɔ ‘widow(ers)’
	ògyídíní ‘believer’	àgyídí-fóɔ ‘believers’
	òkyèrèkyèrèní ‘teacher’	à-kyèrèkyèrè-fóɔ ‘teachers’
	òsráàní ‘soldier’	à-srààfóɔ ‘soldiers’
	òyàrèsá'ní ‘doctor/nurse’	àyàrèsá'fóɔ ‘doctor/nurse’
	òhyènkàní ‘driver’	àhyènkàfóɔ ‘drivers’

(27) Ga:

	Singular	Plural
-jì	nàné ‘leg’	nàjì ‘legs’
	shìkpɔ́jì ‘land’	shìkpɔ́jì ‘pieces of land’
	wɔ́lɔ́ ‘egg’	wɔ́jì ‘eggs’
-bí'í	gbé'kē ‘child’	gbé'kēbí'í ‘children’
	wàó ‘finger’	wàóbí'í ‘fingers’
-fó'í	òkwààfónyò ‘farmer’	òkwààfoí ‘farmers’
	àsrààfónyò ‘soldier’	àsrààfoí ‘soldiers’
-i	òsófó ‘pastor’	òsófó'í ‘pastors’
	tsɔ́ɔ'lɔ́ ‘teacher’	tsɔ́ɔ'lɔ́-i ‘teachers’
	òkplɔ́ ‘table’	òkplɔ́í ‘tables’

Evidently, which plural form an Akan or Ga noun picks is dependent upon some lexical and / or even socio-cultural factors; it is only the choice of one or the other variants of the Akan homorganic plural prefix that is phonologically conditioned. For example, some lexical/semantic considerations must inform why in Ga **wàó** ‘finger’ takes a different plural marker from what **nàné** ‘leg’ takes: **wàó** ‘finger’ takes **bí'í** as plural but **nàné** ‘leg’

changes form to take **jì** as plural (i.e. it becomes **nàjì** ‘legs’). Actually, another word for child in Ga is **bí¹** whose plural is **bí¹í** ‘children’, the form from which the plural **bí¹í** was grammaticalized. Fingers grow off the hand/arm and so may be seen as “children” of the hand/arm; by using **bí¹í** to pluralize **wàó** ‘finger’ and not say **nànè** ‘leg’, the Ga seem to be indicating that fingers are indeed ‘children’ of the hand/arm.

As noted, none of the Akan and Ga plurals may combine with the English –S to pluralize an English noun in Akan-English and Ga-English CS. And the important question is, how is nominal plural marked on English nouns in bilingual speech? The frequent pattern is for an English noun to occur with only the English plural –S in bilingual clauses:

- (28) **Saa mo FARM-S no, mo CORRESPONDENT-S a ε-wɔ hɔ no**
That your farm-PL DET your correspondent-PL who 3PL-be there DET
n-kaa ho asem n-kyere mo?
NEG-say skin matter NEG-tell you
‘Those farms of yours, your correspondents who are there, haven’t they told you anything about them?’
(Akan-English CS; Quarcoo 2009)
- (29) **PROBLEM-S no deε ε-bε-ba, na ye-bε-solve -o**
Problem-PL DET EMPH 3sg-POT-come and 1PL-FUT-solve-PT
‘As for the problems, they will come and we will solve (them).’
(Akan-English CS; Quarcoo 2009)
- (30) **MECHANIC-S é ní ò-bàá-tsé àmē-é**
Mechanic-PL DET that 2sg-FUT-call them-DEF
‘The mechanics that you call...’
(Ga-English CS; Agyei-Owusu 2009)
- (31) **Mì-!-nā mĩishèè yè PROVERB-S-é ní nyé -tsòó wó-!ó**
1sg-get happiness LOC proverb-PL-DET that 2sg-teach us-DEF
‘I am happy that you have taught us these proverbs.’
(Ga-English CS; Agyei-Owusu 2009)

Patterns like the ones in (32: Akan-English) and (33: Ga-English) are not acceptable to any of my respondents:

Akan-English:

- (32) ***n-TEACHER-S *a-TEACHER-S, *TEACHER-S-nom**
***a-TEACHER-S-foɔ** ‘teachers’
***m-PROVERB-S *a-PROVERB-S, *PROVERB-S-nom**
***a-PROVERB-S-foɔ** ‘proverbs’

Ga-English:

- (33) ***TEACHER-S—jì, *TEACHER-S-i, *TEACHER-S-bí¹í, *TEACHER-S -fo¹i**
***PROVERB-S—jì, *PROVERB-S-i, *PROVERB-S-bí¹í, *PROVERB-S -fo¹i**

In Akan-English CS, however, there are some English nouns (specifically English nouns that refer to practitioners of some professions) which take **--foɔ** as their plural marker (and do not double with **-S**). As with Akan nouns in (26) which carry **-foɔ** as their plural marker, two morphological changes are often made in the pluralization of such English nouns: (i) if the singular form of such an English noun would carry the singular prefix **o-** or **ɔ-**, that prefix would change to the plural prefix **a-** and (ii) the singular suffix **-ni** would then change to **-foɔ**:

(34) Akan-English:

Singular		Plural	
o-sogya-ni	‘soldier’	a-sogya-foɔ	‘soldiers’
ɔ-drɔba-ni	‘driver’	a-drɔba-foɔ	‘drivers’
o-teacher-ni	‘teacher’	a-teacher-foɔ	‘teachers’

In fact, respondents have observed that not all such English nouns follow these morphological realization patterns. For example, in the singular the noun **SECRETARY** occurs altogether bare and in the plural it only takes the suffix **-foɔ**: **SECRETARY-foɔ** ‘secretaries’. The singular noun **DOCTOR** is also preferred in the bare form but in the plural it takes both **a-** and **-foɔ**: **a-DOCTOR-foɔ** ‘doctors’. A slight variation is seen in the integration of **NURSE**: the singular is normally without prefix **o-** / **ɔ** but with the suffix **-ni** (i.e. **NURSi-ni**) while the plural is preferred with both plural markers **a-** and **-foɔ** (i.e. **a-NURSi-foɔ**). There are cases too where by suffixing **-foɔ** to an English noun a new but related noun is formed. This is the case with the derivation of **SCHOOL-foɔ** ‘students, academics’ from **SCHOOL**, a pattern modelled after the derivation of **fie-foɔ** ‘people at home, TV/radio audiences’ from **fie** ‘home’. However, it has to also be observed that not all English nouns which refer to professionals are allowed to take **-foɔ**. For example, **FARMER** and **MECHANIC** are not acceptable in any of the following morphological realizations to any of the respondents I consulted: ***a-FARMER-foɔ**, ***FARMER-foɔ**, ***a-MECHANIC-foɔ** and ***MECHANIC-foɔ**. They would take only the English **-S** when they occur in CS contexts (as we already saw with **MECHANIC** in 30).

Beside the use of the **a-** and **-foɔ** duo as noun plurals in Akan-English CS, there is a recent report that another plural suffix **-nom** may also be used, alone¹⁰, to pluralise English nouns that refer to practitioners of some professions. Apenteng (2013) provides the following examples and explains that “The type of loan words which take **-nom** in the data are those relating to sports (soccer)”. **-Nom** has a special meaning in (37) in which it occurs with Ramires and Mata, names of footballers playing with Chelsea FC, London: here it means ‘...and the like; ...and co.’

(35) **rɛfirɛɛ-nòm** ...

referee-PL

‘referees ...’

(Apenteng 2013)

¹⁰In Akan certain plurals are formed with a doubling of prefix **a-** and **-nom**, as **inonùá** ‘a brother’ → **anùá-nom** ‘brothers’. However such plural nouns are rare even in unilingual Akan.

(36) **làànsèmán-nòm ...**

linesman-PL

‘linesmen ...’ (Apenteng 2013)

(37) **te sɛɛ Ràmérɛ̀ɛ̀sé-nòm ɛne Mààtá-nòm ...**

COP like Ramires-PL

CONJ Mata-PL

‘likeRamires and the like as well as Mata and the like...’ (Apenteng 2013)

In the case of Ga-English CS, apart from pluralizing English nouns with **-S** the only other means by which English nouns are pluralized is by using the Ga form similar to **-foɔ**, namely **-fo'i**. And as with **-foɔ**, **fo'i** may only be used to pluralize English nouns that refer to practitioners of some professions (e.g. **TEACHER-fo'i** ‘teachers’ and **DOCTOR-fo'i**) though not some others (e.g. ***POLITICIAN-fo'i**).

4.2 EXPLANATION OF THE PATTERNS

The main point made in the previous subsection is that double plurality is not attested in Akan-English and Ga-English CS. Instead, only one plural may occur on an English noun in a bilingual clause. Two patterns were observed: either (i) the English noun carries only **-S** or (ii), where applicable, it carries **-foɔ** or **-nom** (in Akan-English) or **-fo'i** (in Ga-English). The question of theoretical interest is why the kind of double plurality we have observed in Ewe-English and Ewe-French CS is not attested in Akan-English and Ga-English CS.

One theory, which is attributable to Keir Hansford (p.c.), seeks to answer the above question in purely morphosyntactic terms. It is suggested there is a crucial difference between noun plurals in Akan, Ga, French, and English on the one hand and the Ewe plural **→wó** on the other. That is, while each of the plural in Akan, Ga, French, and English pluralises only the head of its NP (for which reason each of them attaches directly to the head noun), the Ewe **-wó** pluralises the entire NP rather than just the head (for which reason it may occur slots away from the head, in the +5 slot). According to the theory, Akan-English and Ga-English codeswitchers produce only one plural per NP because using an Akan/Ga plural as well as the English **-S** to pluralise a noun head would amount to pitching plurals that share syntactic scope against each other. Ewe-English and Ewe-French codeswitchers do not have to follow this obligatory one-plural rule because the scope of **→wó** and that of the English/French **-S** do not clash: while **-wó** pluralises the whole NP, **-S** pluralises just the head noun.

This theory is arguably attractive, mainly because it seems to have sorted out the cross-linguistic differences between Akan-English and Ga-English CS on the one hand and Ewe-English and Ewe-French CS on the other. However, it has a basic handicap: it does not provide any clues as to why only English/French nouns may be doubly pluralised in Ewe-English/French CS and, also, why in Akan/Ga-English CS, some English nouns can take Akan/Ga plurals but Akan/Ga nouns cannot take the English **-S**. An adequate theory of CS grammar should account for such morpheme distribution patterns as well.

As clarified earlier, the MLF model outlines the differential roles that languages participating in CS play: while one of them would function as the language of grammar (i.e. recipient language), the other one may only donate lexical or phrasal categories for insertion. English and French nouns occur with other-language plural markers because

English and French are donor languages. Ewe, Akan, and Ga nouns do not carry –S because they are not donor languages in these CS contact situations.

The outstanding question is why English nouns may not be doubly pluralised in Akan-English and Ga-English CS. The clue is in what the MLF model says about types of morphemes and about when during language production their underlying lemmas are activated. The forms **--foɔ** and **-nom** (Akan-English) and **-fo'i** (Ga-English) are derivational morphemes,¹¹ and derivational morphemes are early system morphemes under the MLF model (Myers-Scotton 2002). Incidentally, the English –S too is an early system morpheme (cf. Myers-Scotton, 2002:92). Thus, for –S to co-occur with any of the Akan/Ga plurals on an English noun, their underlying lemmas would have to be activated simultaneously, at the lemma level. This simultaneous activation of similar lemmas is blocked in preference for the activation of only one of them. Once –S is selected to pluralise an English noun, the selection of any of the Akan/Ga plurals is automatically inhibited and, conversely, once an Akan/Ga plural is selected to go with an English noun, the English –S is inhibited automatically. It is instructive to note that the plural morphemes involved in Ewe-English and Ewe-French CS do not present this kind of problem to codeswitchers. In those cases, double plurality is attested because there is no clash in the timing of the activation of lemmas supporting the cross-linguistic plural forms: –S and **-wɔ** are activated at different levels of language production. As already shown in Table 5 concerning Ewe-English CS, while –S is selected at the lemma level because it is an early system morpheme, **-wɔ**, being a late system morpheme, is selected at the functional level.

There is, however, another dimension to the absence of double plurality in Akan/Ga-English CS that should not be overlooked—the likelihood that Akan/Ga-English codeswitchers are side-stepping the complex Akan/Ga plural system when they opt to use only –S to pluralise most English nouns in bilingual clauses. The tendency may be viewed as a simplification strategy, which is a familiar phenomenon in language contact settings.¹² Ewe has only **-wɔ** as noun plural, so Ewe-English/French codeswitchers need not side-step the selection of **-wɔ** during CS. As observed in previous sections, it is even the obligatory plural in mixed NPs in which the English/French –S is also realised.

¹¹Appah (forthcoming) unequivocally argues that the primary function of **-foɔ** is to derive human personal nouns and that its function as a noun plural is a recent development. As indicated above, **-foɔ** is used to derive **-fie-foɔ** ‘people at home, TV/radio audiences’ from **fie** ‘home’ and **SCHOOL-foɔ** ‘students, academics’ from **SCHOOL**.

¹² For example, foreign nouns that are borrowed by noun-class languages are usually placed in one or two specific classes irrespective of the classes to which their equivalents in the recipient languages belong. This has happened in noun borrowings into Bantu languages, e.g. Swahili (Myers-Scotton 1993, 2002), and in Logba (Dorvlo 2008) and Kabiye (Essizewa 2007). For example, although Bantu languages have a number of different plurals (prefixes that mark different noun class plurals), borrowed plural words and most plural words in codeswitching always carry the **ma-** prefix, which is the prefix of Bantu class 6 (Myers-Scotton, p.c.).

5. HAUSA-ENGLISH CS

Hausa has an even more complex nominal plural system than those found in Akan and Ga. According to Roxana Ma Newman (1990:15), cited in Hellwig and McIntyre (2000:1), Hausa has “forty different plural formations” on the surface and “at least a dozen distinct plural patterns”. On the question of which plural form(s) a singular Hausa noun chooses, Hellwig and McIntyre (2000:1) notes that several researchers have

...succeeded in showing – at least partially – how the selection of a plural form is determined by the phonological characteristics of the singular noun, i.e., its tone pattern, vowel sequence, syllable weight, syllable quantity and kinds or place or articulation of the final consonant.

Some Hausa scholars are, however, quick to point out that the plural selection system is not always predictable. Burquest (1989), for example, provides the following sets of nouns with dissimilar endings that nonetheless choose the same plural forms:

(38)	Singular	Plural	
a.	jaakii	jaakunaa	‘donkey’
	harshee	harsunaa	‘tongue’
	riigaa	riigunaa	‘gown’
	kwandoo	kwandunaa	‘basket’
	rumbuu	rumbunaa	‘granary’
b.	fiilii	fiilaayee	‘field’
	wukaa	wukaakee	‘knife’
	zoomoo	zoomaayee	‘hare’
	tsuntsuu	tsuntsaayee	‘bird’

(Burquest 1989:268)

Not surprisingly, plural marking in Hausa-English CS resembles what we find in Akan-English and Ga-English CS: double plurality is avoided (Mohammed 2010). It is avoided when English nouns carry only –S (see examples 39 and 40) and it is also avoided when English nouns carry one of a limited number of Hausa plurals, as illustrated in (41) farther below:

(39) **JESSEY-su yafi namu sada BECAUSE ya-nada Colour-S biyu**
Jersey-3sg_POSS more 1PL/POSS expensive because 3sg-has colour-PL two
‘Their jersey is more expensive than ours because it has two colours.’
(Mohammed 2010)

(40) **Na iya buga BOY-S-nan**
1sg can beat boy-PL-DET
‘I can beat the boys.’
(Mohammed 2010)

(41)	Word	Singular	Plural ¹³
a.	gutter	gota	gototi
	master	masta	mastoti
	fridge	firiji	firijoji
	teacher	ticha	tichochi
	wire	waya	wayoyi
	soldier	soja	sojoji
	hospital	asibiti	asibitoti
	calendar	kalanda	kalandodi
b.	lorry	lore	loruka
	yard (material)	yadi	yadduka
c.	school	sukuru	sukurai
	police	polis	polisai

Note that the matching of Hausa plurals with the English-origin nouns is not fully predictable. For instance, **asibiti** and **yadi** have the same vowel ending but inflect for different plural markers. This pattern is reminiscent of what happens in monolingual Hausa, as we saw in (38).

6. SUMMARY AND CONCLUDING REMARKS

Previous works on double plurality using the MLF model (e.g. Myers-Scotton 1993, 2002; and Amuzu 2005a, 2009a, 2010) have established that the phenomenon stems from certain interrelated bilingual processes that commence at the lemma level and culminate at the surface level of language production. They have argued that when a donor-language plural is picked to accompany a donor-language plural noun at the lemma level (something that happens because of a strong semantic affinity between nouns and plurals), the equivalent recipient-language plural is also picked at the functional level to accompany the same donor-language noun (something that happens because the recipient language has the backing of the system morpheme principle to supply the default grammatical plural morpheme in mixed NPs). On the basis of this insight, this paper posed a new question: why is it that double plurality is attested in CS involving some language pairs but is not attested in CS involving some other language pairs?

In addressing this question, the paper explored data from CS involving five language pairs in West Africa: Ewe-French, Ewe-English, Akan-English, Ga-English, and Hausa-English. It has emerged that whether double plurality is characteristic of CS depends crucially on the nominal plural systems of the recipient language. Two typologies of language pairs in CS contact were uncovered with respect to the double plurality phenomenon.

¹³ I am deeply grateful to Mr. Sadat Mohammed, a graduate student of mine at the University of Ghana, the data, which he collected through consultations with speakers of Hausa in Accra.

In one typology, illustrated by Ewe-English and Ewe-French CS, double plurality is attested in various forms and this pattern was attributed to the fact that the recipient language (Ewe) has only one plural marker. It is explained that when the English / French plural *-S* is picked at the lemma level to accompany an English/French noun, double plurality results automatically because the SMP triggers the default picking of the lone Ewe plural *-wó* to accompany the same English/French noun.

The other typology of language pairs in CS contact includes Akan-English, Ga-English, and Hausa-English CS. Akan, Ga, and Hausa are the respective recipient language. Each of these languages has multiple plural forms and which form is chosen to pluralise a given noun depends on intricate language-specific linguistic considerations. Double plurality was shown to be inhibited because of this fact. Instead, plurality is expressed on donor-language (=English) nouns in one of two forms: either a donor-language noun carries only a donor-language plural (namely *-S*) or the donor-language noun, to a more restricted extent, carries one of the recipient-language plurals. This one-plural-per-English noun pattern we observed across the databases is also shown to be due to the fact that the Akan, Ga, Hausa, and English plurals are all early system morphemes. Thus, for *-S* to co-occur with any of the Akan/Ga/Hausa plurals on an English noun, their underlying lemmas would have to be activated simultaneously, at the lemma level. This simultaneous activation of similar lemmas is blocked in preference for the activation of only one of them. Once *-S* is selected to pluralise an English noun, the selection of any of the Akan/Ga plurals is automatically inhibited and, conversely, once an Akan/Ga plural is selected to go with an English noun, the English *-S* is inhibited automatically.

Thus, by exploring these cross-linguistic differences in the expression of nominal plurality in bilingual clauses, the paper highlighted the role that language typology plays in characterizing the morphosyntax of CS constructions.

ABBREVIATIONS

CFM	Clause Final Marker	INDEF	Indefiniteness	POSS	Possessive Linker
CFP	Clause Final Particle	INGR	Ingressive	POT	POTential Aspect
COMP	Complementizer	INT	Intensifier	PRES	Present tense
COND	Conditional	LOG	Logophoric	Q	Question
CONJ	Conjunction		Pronoun	REDU	Reduplication
COP	Copula	ML	Matrix Language	REL	Relativizer
DEF	Definiteness	MLF	Matrix Language	SG	Singular
EL	Embedded		Frame	SMP	System Morpheme
	Language	MOP	Morpheme Order		Principle
FOC	Focus		Principle	TP	Topic Marker
FUT	Future	NEG	Negative	1, 2, 3	First-, Second-,
		NOM	Nominalizing		and Third- persons.
			Suffix		
		NP	Nominal Phrase		
		PL	Plural		

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