

Kiswahili-English on Public Signage: A Morpheme-By-Morpheme Approach

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Communication could be oral and written. These forms of communication may be formal or informal depending on the setting, people involved, age and class. Codeswitching is an informal form of communication. It is used most at times in oral communication. However, in recent times, its has been used extensively in written communication. This has raised issues as to whether written communication can also be a possible platform for informal communication. This study investigates codeswitching on public signage by Kiswahili –English bilinguals. The study examines how Kiswahili –English bilinguals use the two languages on public signage by structurally analysing how Kiswahili and English words are distributed in a given mixed constituent. To achieve this, Kiswahili-English codeswitched data was gathered from tokens of public signage from Kenya specifically, Nairobi. Using the Matrix Language Frame Model of Myers-Scotton, the study observes that theories propounded for oral codeswitching data could be used to analyse written communication (public signage texts) data because writers adhere to the syntax of both Kiswahili and English as stipulated by the tenets of the Matrix Language Frame Model. This is possible when the aim is to solely look at text items on public signage without keen considerations to the graphics therein that is, if the analysis is based purely on syntax. The study therefore recommends that the importance of codeswitching especially on public signage is evidence of how language is used and as accepted by members of a speech community.

Keywords: codeswitching; public signage; morphosyntax; Matrix Language; Kenya; Kiswahili-English bilinguals.

1. Introduction

The phenomena of using two languages in the day-to-day conversations of interlocutors is a common practice. These practices have found their ways into written discourses (Siebenhaar, 2006 for Swiss German-Standard German CS; Yu, 2008 for Chinese-English CS; Cardenas-Claros and Ishayanti, 2009 for Spanish-English CS; Duah and Marjie 2013 for African languages and English). The Kiswahili-English bilinguals who are also bi-literate in speaking and writing Kiswahili and English have extended such bilingualism on public signage, otherwise known as Linguistic Landscape

Public signage in this study¹ comprise advertising billboards and commercial signposts. These are mainly public road signs, advertising, street names, place names, commercial billboards, and public signs on government buildings. Public signage are advertisements designed to catch people's attention and create a memorable impression very quickly. This makes a reader think about the advertisement after sighting it. Even in driving, one could wait and read or just catch some important information on the board.

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These forms of written communication are not conversational such as where there is instant or spontaneous response from the partner or target reader. However, the readers or respondents of the public signage act or respond by either purchasing the product or following the instruction, that is, if it is to give directions. This explanation is captured in Beasley (1997) who says that language of advertisement has become one of the most intense communication codes, which is realized in constant interaction² between individuals, wherever they are and the world at large. It has therefore acquired its name as speech act³.

This study therefore explores codeswitching on public signage as commonly known as advertising billboards in any shape or form in Kenya's bilingual Kiswahili-English setting.

1.1 Language of advertisement in Kenya. Advertising is to openly sponsor goods, services, or ideas through any medium of public communication (Wells et al., 1998). Formerly, advertisements were merely an announcement, but today advertisements are available in written forms with graphic modifications, coloured pictures, and the presence of photos coupled with language (Shartiely, 2005). The language on advertising billboards/ commercial signposts according to Graedler (1999) and Sebba (2013) have special forms of graphics and language. Research has shown that most spoken forms of advertisements as well as written forms have mixture of two languages. These languages and pictures are sharing limited space where almost 90% of the space on the public signage is occupied by one language at an initial position as a heading. The switches can also be in paragraph-final (end of paragraph) or text-final position (end of text) or sometimes graphically separated from the text proper.

The multilingual nature of our society (Pérez-Sabater & Maguelouk-Moffo, 2020), especially in Kenya has recently resulted in the increasing use of Kiswahili and English by most writers of public signage in advertising their products. The argument is that a considerable number of public signage in Kenya have widespread use of English with Kiswahili in advertisements, on public signage and, indeed, on the streets. Nevertheless, it is also a fact that some specific advertisements are exclusively in Kiswahili whereas others are in English only. Again, there are others that are in the other local languages in Kenya. For instance, most advertisements in Eldoret use Kalengin Language and Kisumu-Luo Language. In Kisii and Kakamega, Kisii and Luhya languages are used respectively.

2. Literature Review

The use of two or more languages in a communicative event has been defined as codeswitching or codemixing depending on the theoretical angle one is coming from or depending on the forms and shapes of the linguistic items of the languages involved. The term codeswitching has undergone a lot of definitions and modifications. The term codeswitching has been used as a cover term for codemixing or any other form of switch (Muysken, 2000). For some decades now, codeswitching (CS) has been studied in various languages both in oral and written communication. Weinrich (1953) states that codeswitching is the alternation of two or more languages from word level to sentence level. It was later defined by Auer (1998), as the systematic alternation of two or more languages during a conversation. Auer explains this with two pairs of language alternation categories. According to Auer (1998), codeswitching deals with participant-related versus discourse-related. He argues that participant-related type of switch deals with the persons involved whereas discourse-related deals with the topic being discussed.

² By constant interaction, Beasley means that such language has some form of conversational elements between the advertisers and the advertisees.

³ Speech act is an utterance that has performative function in language and communication.

Myers-Scotton (1993a & 2000) and Poplack (2004) discuss codeswitching as those that involve the alternation of multiword units from different languages and could be inter-sentential and intra-sentential. They depart from the argument of use of singly-occurring items where Myers-Scotton argues in the affirmative. In her work, Myers-Scotton (2000) explains that codeswitching could be inter-sentential that is, the use of two languages outside the sentence or the clause level (i.e. at sentence or clause boundaries) and intra-sentential switching occurs within a sentence or a clause. She also defines inter-utterance as switching between utterances. She further argues that codeswitching is a grammatical process and so aspects of such grammatical categories should be considered.

In the light of the foregoing definitions, codeswitching as per this study is adopted from Myers-Scotton (1993a), which deals with foreign words inserted at inter-sentence, intra-sentential levels and inter-utterance levels. This is chosen because her definition deals with single and multiword items that are used in such communicative events such as the ones in this study. Thus, the study focuses on occurrence single, multi words or phrases of foreign words within sentences, which could be intra-sentential, inter-sentential and or inter-utterance.

Research on the verbal language behaviour of the Kiswahili-English bilinguals in Kenya has shown that codeswitching is used pervasively because of the language policies where Kiswahili and English are used as both official and national languages as well as language of instruction from basic through to the secondary levels (Myers-Scotton, 1993; 2002; Ogechi, 2002; 2003). Marjie (2010) and Duah and Marjie (2013) have also shown that Kiswahili and English bilinguals exhibit a similarly high tendency to switch codes in their text-based communication, in chats rooms, emails and phone text messages.

Generally, language on public signage has also seen the use of English with local languages in many parts of the continent. Backhaus (2007), Torkington (2009) and Akindele (2011) in their studies focus on languages in the urban cities on public signage. They based their work mostly using both quantitative and qualitative methods. Data gathered in their study under government-related signs were classified as top-down signs, whereas all other signs (that is, signs that are not government-based) were considered to be bottom-up signs. According to Backhaus, although Tokyo is a largely monolingual society with only 3.6% registered foreign residents, the city presents a surprisingly multilingual landscape with English appearing more frequently on bottom-up signs, whereas Japanese is predominantly found on top-down signs present in over 97% of the cases.

Backhaus (2007) explains that whenever there is a translation or transliteration available on the public signage, then the sign has been designed for people of foreign backgrounds (a multilingual format). However, if there is no translation or transliteration then it means that the sign is a multilingual sign made for the Japanese population. Backhaus interprets signs of a non-official nature as an impression of foreignness, which could be real or fake. Multilingual information on signs can be written in two ways. A sign may contain two or more languages thus, expressing a multilingual nature or several signs containing one language each. He explained that what happens in most multilingual signs in Tokyo is that contents are displayed in separate frames attached not too far from each other. Kenya's situation is that of a multilingual sign made for the Kenyan population. Backhaus (2007) argues that while in most cases all necessary directions are available in Japanese and English, there are bilingual versions of the sign that are not particularly helpful to people who may know the latter but not the former.

Unsurprisingly, according to Torkington (2009), all public signs are in Portuguese only, since Portuguese in Rua da República Algarve is the only official language. The study found four examples of 'transgressive' items in Portugal (all small stickers calling for social action, placed on top of other signs or unauthorized places). According to Torkington (2009), the choice of language

on these stickers appears to have been chosen according to the intended receiver of the message or the area. This scenario is replicated in Kenya where in most cases local languages are used with English in the catchment area. Torkington (2009)'s conclusion observes that English appears on almost 50% of signs in the Rua da República in Almancil because it is a tourist destination. This confirms the assertion by other scholars that throughout the world tourist destinations increasingly have a great deal of English in their Linguistic Landscapes since English is internationally recognized as the *lingua franca* for tourists. This may be as a result of economic activities and globalization.

While it is laudable to analyse types of public signage and for which category of people as Backhaus has explained it is equally important to look at how the languages are used within a linguistic analysis as this current research intends to. We observed that besides exploring the symbolic functions of this specific Linguistic Landscape, particularly through linguistic code preference, the main objective of Torkington's case study was to explore how Linguistic Landscape contributes to the discursive construction of place-identity. This was to be understood as the relationship between the discursive construction of place and the discursive construction of the individual and collective identities of those who inhabit the place.

In his work, Akindele (2011) contributes to the discussion on Linguistic landscape in a study undertaken in the capital city of Botswana, Gaborone. The aim of Akindele's study is to show that Linguistic Landscape can provide valuable insight into the linguistic situation of Gaborone in Botswana, looking at the common patterns of language usage, official language policies, prevalent language attitudes, and the long-term consequences of language contact, among others. The results from interview sessions by Akindele with some shop owners reveal that the choice for English Language on signs is considered to attract customers since most Gaborone residents that patronize the shops understand English. The use of Chinese is targeted towards a few Chinese immigrants who do not understand English or Setswana. The naming of the shops in Chinese, Setswana and mostly English is for economic purposes and also to attract potential customers. From the above findings, Akindele concludes that the study of linguistic landscape of Gaborone has shown that the city is moving towards multilingualism in English, Setswana and Chinese.

On the same idea of multilingualism, Jingjing (2013) focusing on the shop signs of Beijing, looks into possible approaches to studying signposts in China since most works into this area have looked at translations of sign posts. Jingjing's research attempts to analyze the multilingual signs found in the shops of Wangfujing Street, and indicates how the multilingual linguistic landscape is constructed under the current language policy of China. Jingjing (2013) collected 89 shop signs with the nameplates of the shops along each side of Wangfujing Street. These included names of boutiques, big department buildings, bookshops, gift supermarkets, banks, restaurants etc. The signs were divided into four groups: Chinese, Chinese-English, other languages and images. This was to address issues such as how languages are used in the shop names, whether languages used in shop signs depended on the type of shop, and whether the language policy influenced the formation of the linguistic landscape of Wangfujing Street.

Jingjing (2013)'s findings reveal that 7 languages are used in the shop signs, namely: Chinese, English, Japanese, French, Spanish, German, and Arabic. The result shows that out of the 89 shop signs, 64 (72%) (Chinese monolingual & Chinese-English bilingual) used Chinese characters, 46 (52%) signposts are English-related signs (English monolingual & Chinese-English bilingual). Jingjing's (2013) study confirms other studies that English would have a significant presence in shop signs in Wangfujing Street. The presence of a particular language used on the signpost depended on the type of shop. English would usually dominate foreign and multinational shops. Jingjing (2013) admits that language policy in China did not have any effect or the policy does not restrict the use of foreign languages in signs posts, it allows the presence of many foreign

scripts, especially English, on the signboard of Wangfujing Street. Thus, in the background of globalization, English is playing an increasingly important role in China as a lingua franca for matters such as business, information, international travel. As we have observed in most of the researches under review, English has always been the main language used in many countries even before other local languages are considered and Kenya is not an exception.

2.1 Significance of the study. Most studies undertaken on public signage have largely looked at the correlation between text and graphics on particular public signage (Backhaus, 2007, Sebba, 2013). Other studies on Linguistic landscape also focused on the use of English and the number of other languages used in various countries. Most of the works concentrated on number of languages used on public signage, which languages outnumbered other languages, reasons for choosing two or more languages on public signage and the effect of language policies on public signage (Torkington, 2009; Akindele, 2011; Jingjing, 2013) etc.

In the foregoing, arguments being made are that language theories propounded for various fields i.e spoken or written should be exclusive to such fields (Sebba, 2009 & Sebba, 2013). This has been made without looking at the fact that there seem to be some resemblances in the use of language regardless of the field. Other debates also are that language on public signage cannot be solely analysed without looking at the pictorial aspects (Gorter, 2006c; Backhaus, 2007; Sebba, 2013). This current study argues that graphics on public signage may be ignored if the purpose of the study is to mainly do a purely structural analysis of languages. The current paper analyses the morphosyntax of Kiswahili-English on public signage. Observations made from the preceding studies point to the fact that the use of two or more languages is increasing in written linguistic landscape. It is against this backdrop that the current study aims at looking at the adherence of syntactic regulations pertaining to the use of Kiswahili and English when writing by the writers of public signage.

3. Theoretical Discussion

This study will be guided by The Matrix-Language Frame Model (MLF model) proposed by Myers-Scotton (1993a). It accounts for the grammatical structure of mixed construction in intra-sentential codeswitching relating to the fact that bilinguals use two languages in a given conversation. The MLF model recognizes one language as the Matrix Language (ML), otherwise the host language and the other language as the Embedded Language (EL, guest language). This Model shows how two languages participating in a language alternation discourse, one of the participating languages i.e ML dominates the sentence structure and sets the morpho-syntactic frame. In Myers-Scotton (1993a:77), the ML determines the morpheme order as well as contributes the “syntactically relevant system morphemes”. She argues that ML provides the morpho-syntactic frame for the sentence, within which lexical items from the EL may occur.

The EL on the other hand, contributes some content elements and this language is used with the ML, but plays a lesser role. In this study, Kiswahili is mostly the ML and English is the EL. This means there is more use of Kiswahili because it provides the sentence structure and sets the morpho-syntactic frame. Thus, the sentences as a whole are dominated by Kiswahili grammar. This may change during one stretch of discourse where we may find some English-based constructions, but such changes are not common. Simply put, the EL inserts lexical items into the grammatical structure of the ML.

The MLF model proposed by Myers-Scotton (1993a) is assumed to have a psycholinguistic background. It identifies the Complement Phrase⁴ (CP) as the unit of analysis in CS. The CP could be realized in three constituents. A CP implies a constituent consisting of a proposition-expressing part plus an accompanying complementiser-like element that may or may not be null (Myers-Scotton & Jake, 2000a:1071). Further, 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”. The CP may be full or reduced. The data for this study mostly deal with complete CPs, thus, simply put, sentences.

There may also be mixed-structure constructions. Myers-Scotton believes that there are certain processes that take place before the production of mixed constituents. These mixed constituents are formulated at the abstract level (Levelt, 1989) called the lemma level⁵. This consists of the structural information with regard to lexical-conceptual level, predicate-argument structure and the morphological realization pattern needed to complete the constituent produced by the content morpheme. These are abstract levels and are supposed to be stored in the speakers’ mental lexicon of a language (Myers-Scotton, 2002).

At the “conceptual level” one decides on an ML frame for the constituents. At this same level, certain speaker pre-linguistic intentions activate the language-specific semantic-pragmatic feature bundles that become lemmas in the mental lexicon. Lemmas are abstract features that underlie surface level morphemes. An illustration in this regard could be a noun lemma which may select a plural lemma (for example, an early system morpheme; this will be explained in subsequent sections) in order to satisfy the noun phrase (NP) requirements of a language.

When the lemma is activated, messages are sent to the formulator at the “functional level” (acting as the “engine room” in the production process) to produce morpho-syntactic frame requirements of a content morpheme in a specific language which is the second realization. This indicates matching thematic structures unto grammatical relations that is, whether they are agents or subjects or the number of arguments a verb should take in a predicate-argument structure. It could also indicate the morphological realization pattern where grammatical relations are realized on the surface such as the word order, agreement, tense, mode, negation. This is summarized according to Myers-Scotton (2002:14) as follows:

- *The lexical-conceptual structure* explains the lexeme’s semantic and pragmatic properties. Examples are whether a noun is an Agent, Patient or Experiencer? Or whether a verb encodes action, state or process?
- *At the predicate-argument structure*, the lexeme’s syntactic property is discussed. This mainly talks about the thematic structure that would be mapped on to grammatical relations. It looks at whether a noun which is conceptualized as Patient is to be expressed as Subject or Object.
- *Morphological realization pattern* discusses specifications about language specific devices such as word order restrictions, agreement, marking of tense- aspect etc. This is done so as to realize the lexeme’s grammatical relations with other lexemes in surface configurations. Here it checks whether a subject comes before a verb or occurs

⁴ Complement phrase is the structure that syntactically expresses the predicate-argument of a clause and all other structures that are required to make the clause structure meaningful in a discourse (Myer-Scotton et al 1996). In this instance, our unit of analysis is a dependent clause and or a full sentence.

⁵This means that production operations are assumed to be lexically driven because lemmas supporting content morphemes are supposed to play crucial roles.

elsewhere or whether a case maker is required on the subject in some languages. An example is zero articles or determiners in Kiswahili.

- The positional level is where lexemes finally take up their phonological shapes (Myers-Scotton, 1995). There are also surface structure constructions and agreement in terms of the types of inflections the words need to take.

3.1 Content versus System Morphemes. The MLF model distinguishes between content and system morphemes because the ML and the EL do not participate equally in a constituent structure. Content Morphemes are those that assign and receive thematic roles. They are also called theta roles. Most verbs, predicative adjectives and some prepositions are thematic role assigners. Therefore, whilst verbs assign thematic roles, morphemes such as nouns, pronouns, descriptive adjectives receive these theta roles. They are referred to as arguments namely: agents, patients, experience, or thematic role receivers. Discourse markers could also be grouped under content morphemes because they assign discourse thematic roles. Content Morphemes have a minus feature for quantification [– Quantification]. Therefore, quantifiers are not categorized under content morphemes.

Contrary to Content Morphemes are System Morphemes. System Morphemes do not assign or receive thematic roles. They are all affixes and some functional or grammatical words. Unlike Content Morphemes; System Morphemes have plus feature for quantification [+Quantification]. They “pick out individuals or events” with morphemes such as tense and aspects and adverbs. Prototypical System Morphemes include determiners, articles, tense/ aspects, possessive, pronouns, quantifiers, specifiers, and inflectional morphology etc.

Under System Morphemes, there are what is called *Early System Morphemes* and *Late System Morphemes*. They are produced at the ⁶lemma level. Myers-Scotton & Jake (2001: 98) claim Early System Morphemes “are always realized without going outside of the maximal projection of the content morpheme that selects them” and “their form depends on the content morpheme with which they occur”. They occur to fulfil the grammatical obligations in the constituents. They are contributions to the “mapping up to the conceptual structure to the lemma-like content morphemes”. Examples of Early System Morpheme could be plural affixes, determiners, tense and aspects etc.

On the other hand, Late System Morphemes neither assign nor receive thematic roles nor at the lemma levels. They are activated at the formulator level when the lemma sends directions to construct a grammatical constituent. They only have content by adding content to the verb, not on their own. An example is ‘up’ in ‘look up the number’ (Myers-Scotton, 1992). This means that whereas early system morphemes come from only the ML, for example a plural maker *ma* in *madoctors* in Kswahili-English CS, Late System Morphemes may come from the EL because they are affixed on the EL content morphemes to make meaning. In the above examples, at the conceptual level, the lemma underlying the verb may point to ‘into’ (as in look into) a Late System Morpheme so as to satisfy the speakers’ intention. This means that whereas Early System Morphemes come from only the ML, Late System Morphemes may come from the EL because they are affixed on the EL content morphemes to make meaning.

3.2 The Matrix Language Hypotheses. Under the MLF model is a set of hypotheses propounded by Myers-Scotton, namely: The Matrix Language Principle, The Uniform Structure principle, the Matrix Language Hypothesis, the Asymmetry Principle, the ML Blocking

⁶ Lemmas are abstract features that underlie surface level morphemes.

Hypothesis and the EL Trigger Hypothesis. Three of these hypotheses of the MLF model relevant to this current research are (i) the Matrix Language Hypothesis consisting of Morpheme Order Principle and System Morpheme Principle, (ii) the ML Blocking Hypothesis and (iii) the EL Trigger Hypothesis.

Two principles under the Matrix Language Hypothesis discuss participation of the different languages involved in language alternation. They are;

The 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 be that of the Matrix Language.

The System Morpheme Principle: in Matrix Language + Embedded Language 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, 1993a:83).

According to the theory, the Morpheme Order Principle states that mixed constituents of all morphemes (ie single lexemes from EL and all other morphemes from the ML) by default must conform to the morpheme order in the ML. With the System Morpheme Principle in mixed constituents, all System Morphemes, which have some relation with the head of their noun phrase will come from the ML. Below are examples from our data to test these hypotheses.

- (1) M I: kwa kweli huyu jamaa **music** y-ake official ni bomba
 ADV Marker true DEMP guy music SM-3SG official COP great
 'Truly, this man's official music is great'

As noted, the Morpheme Order Principle states that all constituents from the EL and any other ML system or content morpheme must be in conformity with the syntactic structure of the ML in mixed constituents. Therefore, in (1) *yake* and 'official' come after 'music' instead of 'his official music' in English, because in Kiswahili adjectives and possessives take their prefixes from the head noun.

3.3 The ML Blocking Hypothesis. The ML Hypothesis says that in a given mixed constituent consisting of ML and EL morphemes, Content Morphemes could come from both ML and EL. But sometimes the EL Content Morphemes are blocked from occurring under the Blocking Filter. "A blocking filter blocks any EL Content Morpheme which is not congruent with the ML" (Myers-Scotton, 1993a:120; Amuzu, 1998). It is argued that EL Content Morphemes may be blocked from occurring in mixed constituents because it has no congruent ML morpheme. An illustration is where the counterpart of EL Content Morpheme is a system morpheme in the ML. An example is found in Kiswahili where pronouns are clitics, but they are content morphemes in English because they receive thematic roles. Counter examples of these are violations of the Blocking hypothesis. Some prepositions in Kiswahili are Systems Morphemes and so English prepositions that are Content Morphemes cannot occur. For example in Kiswahili, the preposition 'to' becomes a system morpheme when it occurs with the verb *kwenda* 'go'. In this language, 'go' usually assigns the thematic role itself so 'to' cannot occur with an EL noun in the complement. An example is in a conversation:

- (2) HU: jana ni-li-enda church just ku-mw-ona girl
 yesterday 1SGSM-PAST-go church just INF-3SGOBM-see girl
 ‘Yesterday I went (to) church just to see (a) girl’.

EL Content Morphemes could occur when they have counterparts in the ML with regards to three levels. The first is Lexical Conceptual Structure. The second has to do with Predicate-Argument Structure and finally the Morphological Realization Patterns. In cases such as the example 2, the EL content morphemes could occur because the ML has its counterpart and so prepares a slot for the EL to occur. Here the EL Content Morpheme occurs with the ML System Morpheme in agreement with the System Morpheme Principle, but they occur in their ‘Bare forms’. Bare forms are “EL content morphemes that lack the requisite ML System Morphemes that would make it well-formed in a ML frame. They are often nouns.” (Myers-Scotton 2002:21).

3.4 EL Island Trigger Hypothesis. Myers-Scotton argues that EL Islands are morphemes from the same language and must conform to the grammatical structure of the EL (including both content and system morphemes). There is a possibility of having EL islands that occur as a result of the EL trigger hypothesis. This hypothesis stipulates that EL trigger allows EL morphemes that are not congruent with the ML counterpart to occur. This means that all morphemes will come from the EL and will be in consonance with the EL grammatical structure such as having adjectives and quantifiers before their head nouns because they trigger an EL island. An example could be a noun with a pre modifier (English) rather than a noun with a post modifier (Kiswahili) followed by an EL content morpheme resulting in an island. An example in this regard is the following.

- (3) MM: na-m-penda lakini her friends wa-na-ni- chukia sana
 1SS-3SGOBM-love but her friends 3PL-PRES-1SGOBM-hate very.much
 ‘I love her but her friends hate me very much’.

The above exemplifies ‘her friends’ as English island rather than ‘friends her’ (because demonstratives come after nouns) in Kiswahili sentence. This is an example of obligatory EL Hierarchy Hypothesis. It could also be possible for EL islands to occur optionally through the EL Hierarchy Hypothesis which in turn is based on two sub-hypotheses. It argues 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. The other states that the more formulaic in structure a constituent is, the more likely it appears as an EL island” (Myers-Scotton, 1992:27). EL Islands show “structural dependency relations” (Myers-Scotton, 1992 and 2002).

3.5 Position of the Current Study. The position of this study is that the MLF has undergone transformations ever since its birth with updated versions such as the 4-M⁷ model, which is a model of morpheme classification. It does not replace the MLF model on content and system morphemes. Instead, it offers a more precise description of morpheme types in light of their

⁷ Late system morphemes neither assign nor receive thematic roles nor are they activated at the lemma level. Under late system morphemes there are Bridge late system morphemes and Outsider late system morphemes. They are activated at the formulator level when the lemma sends directions to construct a grammatical constituent.

syntactic roles and how they are activated in the language production (Myers- Scotton & Jake, 2000: 340-341), especially among immigrants or foreigners who use the language of the guest country (which they are not so competent in) more often. The data is a written form and because it is using a model proposed for spoken data, we find it appropriate to use the MLF model of 1993 which best explains the data explicitly because it has the basics of the model and was propounded for the same Kiswahili-English speaking communities. Again, our data on Kiswahili-English bilinguals are those who are still residents in Kenya and are at least competent in Kiswahili and English both in speaking and in writing.

Regarding revisions of the MLF with the 4-M Model, this is what Myers-Scotton wrote to distinguish between Classic and Composite CS:

What does the MLF model accomplish? In a word—and the word is “asymmetry”—the MLF model offers a synthetic characterization of the constraints that apply to bilingual distributions in CS. A few disclaimers clarify limits on the model. First, the model applies only to classic CS; this is CS in which the source of the morpho-syntactic frame of the bilingual clause is clearly and consistently only one of the participating languages. Thus, the model was not designed to explicate all language contact phenomena. Still, portions of the model do apply to what I call composite CS, as well as to other contact phenomena. In composite CS, generally one language is the identifiable source of most of the abstract grammatical structure of the clause—but just not all of it. That is, composite CS is defined by the fact that *both* participating languages are sources of the abstract structure of the clause. Certainly, I argue that the model’s notion of asymmetry does apply across bilingual data in general. Finally, the model was intended to apply only to participating varieties that are not mutually intelligible, although it may apply to otherwise as well. [Myers-Scotton 2008: 26]

4. Data and Methodology

The data for this study was collected from public signage otherwise known as advertising or commercial billboards in some literature (see Backhaus, 2009). According to Backhaus (2009), these are typically found in high-traffic areas such as alongside busy roads, although some could be found in obscure places. The data on public signage collected comprised commercial advertisements on the main streets of Nairobi which was captured by photographing. According to Backhaus (2009) and Shohamy & Gorter (2009), linguistic landscape analysis relies on photography and visual analysis. Thus, the hub of data gathering method is to engage in photography which systematically document distinct social spaces. Photographed tokens of public signage were taken on the streets including those on health issues, communication networks, business and corporate bodies such as banks and multinational companies since the main aim of this research is to analyze the use of Kiswahili - English on the public signage.

The selection of this type of data collection was also purposively done since we could not gather all public signage all over the city. With escorts⁸ from the city officials and help of a commercial cab driver⁹, we used 4 Sundays in Nairobi. Weekends were used because they were not busy days. The picture taking started from 9am EAT to 4pm EAT on each day. In all, we used

⁸ These people were security escorts from Nairobi.

⁹ We want to acknowledge the support of Driver GG at Nairobi main lorry station (Accra Road). We should also state here that the driver was also aware of the concept, thus the use of Kiswahili-English on public signage, and so he knew where we could find most of them. Some interactions with some people on the subject matter gave us a few insights into the project. This means people are aware of the concept.

9am- 12 pm and 2pm-4 pm making 40 hours on 4 Sundays. The pictures were taken through the principal roads in Nairobi from Accra Road, River road, Ruthuri Avenue and around Thika and Mombassa Roads. These are public. Permission was however sought from the National council of Science and Technology in Nairobi. We did not include sign posts on shops of individuals for ethical reasons.

The choice of data for the research was done because it is intended to analyze the use of two grammars that is Kiswahili and English on such public signage. These mainly collected instances of sentences and or phrases. 150 tokens of pictures of public signage were taken. The public signage were divided into three groups: those that had only Kiswahili writings, only English writings and those with a mixture of Kiswahili-English. Although 150 photographs of signage were collected, those that were relevant to this current study were used. We did not use public signage that were written in English with or other local languages. Public signage of place names, street names were also not used. Those could be used in future research.

Location	English only	Kiswahili only	Kiswahili-English	Total
Nairobi	50	50	50	150

Table 1: Sampling of Public Signage in Nairobi

5. Morphosyntactic Analysis of Codeswitching on Public Signage

The focus in this section¹⁰ is to look at the language used on such signage and their morpheme distribution of Kiswahili and English given the distinct basic morphosyntactic structures of the two languages. Although Kiswahili and English have S-V-O word order, Kiswahili is an agglutinative language in the verbal phrase, with considerable prefixing and suffixing (Ashton 1947). For example:

- (4) Sarah a- li-m-piga John
 SUBJ SM-PAST-OBM-beat OBJ
 ‘Sarah beat John’

The unmarked word order is S-V-O, as shown in example above. Here the subject Sarah and the object John occur at subject and object positions respectively. The nouns have class systems which determines the subject prefix that should be used but without determiners, articles and particles. The verb is embedded in a verbal complex which consists of subject agreement *a-* just after the subject, followed by tense *-na-*, then object agreement *-m-* and then the verb root *pig-*. The verb is followed by one suffix which indicates mood (in this case *-a*). The subject can be omitted and the person and number features of the subject are recoverable from the rich subject verb agreement. The verbal complex behaves as a unit in Kiswahili. Comparing English with Kiswahili, English does not have noun classes but have determiners, particles and articles. In example 3.1 above, English does not have agglutination with subject markers and object markers marked on the verb. Thus, both languages have NP, VP, PP, Adv.P, ADj. P, CP but the units that make up the constituents may vary.

On public signage, Sebba (2013) explains that ignoring the visual/ graphic aspect is unproblematic if the type of analysis to be done is concerned purely with matters as syntax, lexis or text-internal cohesion. He added that such concerns are, in fact, similar to some of the

¹⁰ This section on morpheme distribution will deal with only text items without necessarily looking at the graphics.

researchers studying codeswitching in spoken language and treating written texts as units of ‘plain text’. This, he argues, probably serves such researchers best. Also, apart from the public signage beautifying the environment with its colour and graphic nature, other writers such as Leung (2006), Wang and Chen (2006), Leung (2010) and Harris (2009) have argued that the use of foreign languages especially English with a local / native language in advertisements is a marketing strategy. Our data record public signage of bilingual nature with the use of two languages. Here are examples of phrases of Kiswahili-English public signage.



Figure 1: Public signage with Kiswahili -English phrases



Figure 2: Public Signage with Kiswahili-English Words

The pictures above show the use of Kiswahili-English phrases on public signage. On the public signage we see in figure 1, there are *kata bima ya lady jubilee* ‘stake a an insurance policy with lady jubilee’ and *nyati cement, tofali kibao, faida kibondoni* ‘buffalo cement, plenty bricks, good profit’. Then in figure 2, there are *share a coke na* meaning ‘share a coke with’ and *bonga points, dial 126# now* ‘talk points...’. This explains that although writers are advertising their goods, they are aware of the bilingual nature of the community. Again, the language of advertisements generally requires economy of space and short phrases and so, they could sometimes be just words. Therefore, because writers need to bring some particular information to the forefront, they therefore use short words rather than long sentences on public signage (Giussani, 1997). In such cases, writers avoid the use of some linguistic elements¹¹, but try to bring out the most relevant information.

¹¹ These linguistic elements also known as linguistic particles could include function words such as ‘a’, ‘the’, ‘auxiliary verbs’, etc.

5.1 Patterns of Morpheme Distribution on Public Signage. This section looks at some patterns of morpheme-by-morpheme distribution of Kiswahili-English on public signage taking keen considerations of types of morphemes used in both languages. Remember also that the Matrix Language is Kiswahili and the Embedded Language, English. The data found Kiswahili and English content morphemes on public signage.

- (5) ZUKU i-na-patikana hapa, televisheni ya digital
Zuku SM-PRES-available here, television CLM-of digital
'Zuku is available here, digital television'.
- (6) nunua textiles za safari kwa bei poa
buy textiles of journey for price good
'Buy safari textiles at good prices'.
- (7) karibu hotel kw-etu
welcome hotel SM-1PL-POSS
'Welcome (to) our hotel'.

It is possible to have contents morphemes from both the Matrix and Embedded Languages in mixed constituents as the MLF theory propounds. Examples 5, 6 and 7 above show content morphemes from both Kiswahili and English on public signage. It is realized that in each of the examples there is a content morpheme from Kiswahili and English for which Kiswahili is the matrix language and also dictates the word order of the phrases. For instance, in example (5), *televisheni ya digital* has *televisheni* before *digital* with a connector *ya*, showing that *televisheni* has been put into class 9; this connector is used in order to join the two nouns together. This could have read as *digitali televisheni* if the word order was supposed to be in English. In example (6), *nunua textiles za safari* where 'textiles' although an English word becomes head of the noun phrase with the modifier *safari* joined by *za*. Again in example (7), there is *karibu hotel kwetu* where 'hotel' is the head noun and *kwetu* as the possessive. This adheres to the Kiswahili *Head-Possessive- Agreement* where the head noun is followed by the possessive. Also, *karibu* in Kiswahili does not have the preposition 'to' because it is, itself a theta role assigner and so the preposition 'to' is blocked from occurring before the English word 'hotel' as proposed by the Blocking Hypothesis.

5.2 Loss of Linguistic Particles in Kiswahili NPs on Public Signage. As writings on public signage comprise short sentences, in such instances, linguistic particles and functional words are omitted in Kiswahili noun phrases. Linguistic particles or functional words are grammatical articles such as 'a' and or determiners 'the', quantifiers, pronouns etc (Klammer et al., 2009). These linguistic items are omitted in order to keep the reader's attention and to catch the relevant information even when driving along. Let us note here that Kiswahili does not have particles and determiners anyway. Below are some examples to explain the phenomena.

- (8) nunua smartphone u-pat-e dakika 100, SMS 100,
buy smartphone 2SM-get-SUBJ minute 100, short.Messages.service 100,
MB 100 kila mwezi
mobile.data 100 every month
'Buy (a) smart phone (and) get 100 minutes, 100 SMS 100 MB every month'.

- (9) tembelea booking office ya Jambojet
visit booking office of Jambojet
'Visit the Jambojet booking office'.

The Morpheme and System Morpheme Principles explain that loss of system morpheme from the ML may not be a violation of the principles if they are not relevant to the syntax of the language. Kiswahili does not have articles 'a' or determiners 'the' and so their omissions in public signage text do not necessarily violate the principles. In examples (8) and (9) above, one could have expected the particle 'a' occurring with 'Smartphone' in example (8), then a determiner 'the' occurring with 'booking office' in (9).

Again, there should have been ... *na* after 'smartphone' and before ...*upate* in example (8). However, the functional word *na* has been omitted and according to the System Morpheme Principles, all affixes and some function or grammatical words are system morphemes. In Kiswahili, a critical look at the connective *na* in such examples functions as a System Morpheme and their absence in the clauses do not cause the loss of meaning of what is being conveyed. Therefore, a deliberate attempt can be made to push function words into the background. This process of not emphasizing function words is known as *reducing* (see Mew & Seaton, 2007). In this sense, a speaker chooses exactly which words to emphasize based on the message he or she is trying to send. Furthermore, the morphological realization pattern of language of public signage allows that it be brief and concise. Let us not forget that language of advertisement is to bring out the most relevant information (Grbavac, 2006; Gorter, 2006 and Edelman, 2010).

5.3 Kiswahili System Morphemes with English Content Words on Public Signage.

Kiswahili System Morphemes with English content morphemes are also found on public signage written together in the Kiswahili verbal phrase. These forms of system morphemes found in our data consist of Kiswahili reflexive pronouns, causative suffixes, subjunctive forms and infinitive markers occurring with English content morphemes. A few examples are outlined below:

- (10) ji-smartphon-ish-e
REFL-smartphone-CAUS-SUBJ
'Be smartphoned/buy for yourself a smartphone'.
- (11) Ni ku-soma na ku-drive, win 10 pickups with Daily Nation
it.is INF-read and INF-drive, win 10 pickups with Daily Nation
'It is to read and to drive, win 10 pickups with Daily Nation'.

The Matrix Language Hypothesis stipulates that all system morphemes from the ML could occur with content morphemes from the EL. This is possible if the sentence structure is that of the ML. Example (10) above shows Kiswahili sentence structure, where Kiswahili system morpheme *ji-*, a reflexive pronoun, then with *-ish-* a causative form and finally, with a subjunctive *e*, all occurring with an English content morpheme 'Smartphone'. The example (11) shows the Kiswahili infinitive marker *ku* a system morpheme, occurring with an English verb 'drive', a content morpheme. Another explanation can be given to example (11) where we may argue that the verbal phrase is a noun gerund or verbal noun. In Kiswahili noun gerunds, where the verb is used as a noun, the infinitive form *ku* is still used and it precedes the verb. In both examples, we observe that the verbal phrases are written together (agglutination) characterizing Kiswahili verbal phrase.

5.4 Use of Simple Aspective Tenses in Mixed Constituents on Public Signage. The type of tense found on public signage is the simple aspective tense. We need aspect to tell us whether the action is ongoing or completed (Matthews, 1981 Mew & Seaton, 2007). However, examples from the language of public signage have clauses or phrases that do not show whether the action is ongoing or complete. Here are a few examples in that regard.

- (12) kwa huduma bora za graphics, picha na video karibu JM studios
for service good CONJ graphics, pictures CONJ video welcome JM studios
'For good graphics, pictures and video services welcome (to) JM studios'.
- (13) nunua smartphone y-ako ya Tigo
buy smartphone 2SGM-POSS of Tigo
'Buy your Tigo smartphone'.
- (14) ongea u-ji-shindi-e rewards
talk 2SM-REFL-win-PREP rewards
'Talk (and) win rewards'.

In language production under the MLF model, all tenses are System Morphemes and their restrictions can be traced to Morphological Realization Patterns and Positional Levels of the words or phrases in a language. The Morphological Realization Pattern discusses specifications about language devices, which determines the word order restrictions and agreements such as marking of tense, aspect and surface structure constructions. These patterns set the morpheme's grammatical relations with other morphemes such as agreement in terms of the types of inflections the words need to take. When the grammatical structure is now realised in the mental faculty, information is then sent to the articulator in order to realize the lexeme's grammatical relations with other lexemes in surface/final constructions and their phonological or the shapes they finally take.

From the above explanation, Kiswahili is the dominant language and dictates the tense and other system morphemes via the Morpheme Order Principles and the System Morpheme Principles; sets a slot for the English verbs to occur with the tense. Because Kiswahili is the language in control of the syntax, it supplies the required verbal morphology and ensures that Kiswahili word order is obeyed in mixed constituents. In this case, if the tense is not very relevant to the syntax of Kiswahili as well as language of public, because the morphological realization pattern of the language permits such word order and the types of inflections the words need to take in their final forms; for instance, tenses therefore can be restricted or dictated.

In the examples above, such occurrences conform to the morphological realization pattern of Kiswahili where the phrases have verbs that are inflected for simple or indefinite aspects because the language of public signage does not usually show the ongoing or complete state of an action in particular. These types of languages are usually known as 'illocutionary act'¹²; directives or persuasive language'. Thus, this type of language is used to communicate to the people every time and everywhere without stating whether the offer, direction or action is completed or not. Aspective sentences or phrases still convey the intended meanings by strategically focusing on the very relevant information considering the number of words that has to be arranged on a public

¹² These types of language are usually conditional in nature, which could be termed as directives and commissives. These do not have polite forms such as 'please', 'could you' etc. They are usually followed by what could also be known as persuasive language such as 'and win', 'enjoy free' etc.

signage due to space. Again, the advertisers assume the patronisers are aware of the products and so the language used does not prevent the patroniser from purchasing the product.

5.5 English and Kiswahili Hierarchical Islands on Public Signage. Efforts made by advertisers to target and persuade consumers¹³ have become stronger and more creative. The language on public signage is stage-managed to convince and or appeal to patronisers. Some advertisements comprise two versions of the same written in both languages whereas others are written only in either the ML or the EL. With these kind of phrases, the ML or EL triggers both content and system morphemes to occur only in the ML or EL whether they have counterparts in the matrix language or not. Here are a few examples of public signage written in the ML and their translated versions in the EL



Figure 3: Public Signage with the Same Information in Kiswahili and English

We also found some advertisements solely written in Kiswahili and others solely written in English. Below are some examples in figure 4 in that regard.

¹³ These consumers are usually bilinguals because the language has become natural to them as their way of life.



Figure 4: Public Signage with Advertisements in only Kiswahili or English

6. Conclusion

This paper discussed a morpheme by morpheme analysis of language used on public signage. It considered only the text items. In the analysis, the study argued that language used on public do not have the respondents physically present. Using the MLF, it is noted that our ML is Kiswahili and the EL, English. This was confirmed where the sentence structures adhered to Kiswahili where the words were structurally interdependent. It also recognised Kiswahili and English content morphemes distributed in mixed constituents on public signage.

Thereafter, we noticed that the language of public signage does not make use of particles and determiners because such linguistic forms do not exist in the ML. Furthermore, it was realised that the aspective tense that is usually used is the simple aspective tense where writers felt that public signage are adverts that should appeal to consumers every day, every time and everywhere. They are also sometimes accompanied by some persuasive words. In all of these, writers of public signage make sure that the most relevant information is conveyed to consumers. Although, the study looked at Kiswahili-English advertisement in mixed constituents, the data captured some advertisements with EL and ML islands, that is, advertisements of the same kind in both Kiswahili and English whereas others had advertisements solely in one language.

Abbreviations

ADV-	Adverbial
DEMP -	Demonstrative of Proximity
SM -	Subject Marker
SG-	Singular
COP-	Copular verb
PAST -	Past Tense
INF-	Infinitive
OBM-	Object marker
SS-	Singular Subject
PL-	Plural
PRES-	Present Tense
SUBJ-	Subject
OBJ-	Object
CLM-	Class marker
POSS-	Possessive
SUBJ-	Subjunctive
REFL-	Reflexive

CAUS-	Causative
CONJ-	Conjunction
PREP-	Prepositional

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Appendix 1: some sample Pictures of Public Signage



