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**ASPECTS OF LANGUAGE CONTACT:  
A VARIATIONIST PERSPECTIVE ON CODESWITCHING  
AND BORROWING IN IGBO-ENGLISH BILINGUAL DISCOURSE**

**A Dissertation**

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of the requirements for the degree of  
DOCTOR OF PHILOSOPHY  
in Linguistics**

**August 1997**

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0-612-28339-9

## ABSTRACT

This study is based on empirical data collected from bilingual speakers of Igbo (a Kwa language) and English, in an environment propitious to the use of both languages.

The study examines two of the most widely discussed constraints on CS namely, *Free Morpheme Constraint* and *Equivalence Constraint* (Poplack 1980). The controversy surrounding these and other constraints on CS arise primarily from the problems of drawing a clear distinction between CS and borrowing. Distinguishing between these language contact phenomena has been particularly difficult with singly-occurring lexical items from one language incorporated into the discourse otherwise of the other. Some studies do not determine the status of these lone items as CS or borrowing, but present them all the same either as evidence for, or counterexamples to existing constraints on CS. Other studies recognize the dangers in confounding CS and borrowing and suggest ways of drawing the necessary distinction. However, these researchers do not adhere to their own methods, which, in any case, are either impossible to operationalize, or totally arbitrary and, hence, unsuitable for the task at hand. All these problems result from not having a corpus suitable for empirical research and not following a scientific methodology like we do in this study.

Our investigation begins by determining the status of lone English-origin items incorporated into otherwise Igbo discourse. In order to determine whether these are CS or borrowings, we use the principles of variation theory to make a detailed assessment of the behavior of these forms in the context of the entire bilingual system. Our method entails a systematic comparison of the lone items with: (a) unmixed stretches of Igbo (b) unmixed stretches of English and (c) multiword fragments of English (unambiguous CS) juxtaposed to Igbo. Since CS items are qualitatively and quantitatively similar to their counterparts in the language which lexified them, while borrowings assume the behavior of their counterparts in the recipient language, our method effectively disambiguates the contentious lone English-origin items by comparing their patterns of behavior with respect to predetermined diagnostics, vis-à-vis their counterparts in the unmixed stretches of the two languages as well as unambiguous CS. If the lone English-origin items patterned like their counterparts in unmixed stretches of English and unambiguous CS, they would be classified as CS. If, on the other hand, they patterned like their counterparts in unmixed stretches of Igbo, there would be no doubt that they are borrowings into Igbo.

As expected, our results produced conclusive evidence that these lone English-origin items are borrowings into Igbo. In all the examined criteria namely, *vowel harmony* and *affixation*, the lone English-origin verbs patterned like their counterparts in unmixed stretches of Igbo, but differed from unmixed English and unambiguous CS. The English-origin nouns on their part also behaved like their counterpart in unmixed stretches of English in such areas as *determiner usage*, the use of *generic reference*, the *linear structure of NPs*. The lone English-origin adjectives were incorporated into Igbo as adjectival nouns, the most productive adjectival category in Igbo. These lone English

origin adjectives followed the copula *di* (BE) in the same proportion as their counterparts in unmixed Igbo.

Once the borrowed items have been identified and separated from the *bona fide* CS, we found that, with very few exceptions, the switches between Igbo and English occurred at points where the structures of the two languages are linearly analogous. Thus, Igbo-English CS is constrained under equivalence.

## ACKNOWLEDGEMENTS

In the pursuit of my academic career from the continent of Africa to Europe and finally to North America, I have become indebted to so many people in so many ways. While it is impossible to mention here the names of all my benefactors, this section will not be complete without my expressing my gratitude to a few individuals whose magnanimity and encouragement -both moral and material- saw to the fulfilling this dream.

The superb undergraduate training I received from the University of Lagos, Nigeria, formed the bedrock of my academic career. The late Prof. Nnabuenyi Ugonna, Dr. Sam Uzochukwu, Asonye Uba-Mgbemena and Dr. Ohiri Anichie all deserve special thanks not only for their excellent lectures, but in addition for reminding me that a first class degree was not an end in itself.

My knowledge of and interest in Linguistics as a science was immensely broadened while I studied at the University of Cambridge, England. I thank particularly Dr. Terence Moore who directed my M.Phil. thesis and Dr. Margaret Deucher who first introduced me to sociolinguistics.

My sojourn at the University of Ottawa totally revolutionized my way of looking at linguistic science. Under the tutelage of Prof. Shana Poplack, I became, more than ever before, conscious of the inherent variability underlying human speech and the fact that elements in a body of natural speech are systematically conditioned by co-occurring quantities. My background as a multilingual with easy access to data on bilingual speech performance presented me with an excellent opportunity to study these patterns of co-occurrence in the speech of Igbo-English bilinguals. This dissertation, therefore, bears not

my imprint alone but also that of Shana Poplack. My gratitude goes to her and to all my informants in Nigeria and Canada.

I extend my gratitude to all the faculty of the Department of Linguistics, University of Ottawa, whose lectures and seminars prepared me adequately for the rigors of writing this dissertation. These professors include: J.-Mark Authier, Helen Goodluck, Philip Hauptman, Paul Hirschbular, Henrietta Hung, John Jensen, Konrad Koerner, Andre Lapierre, Ian Mackay, Gerald Newfield, P.G. Patel, Maria-Luisa Rivero and Eta Schneiderman. I also thank Shana Poplack, Salikoko Mufwene, Helen Goodluck, Eta Schneiderman, Gerald Newfield and Marjory Meechan for comments that led to a substantial improvement of this work. They are, of course, not responsible for any remaining errors.

Several individuals and bodies provided financial support that gave my academic career a boost. My study at the University of Lagos was made financially possible by my family and friends, including: Anayo Eneagor, Richard Ekwe, Basil Onyia, Evarest Ene, Mary Aneke, P.M.C. Nebo, Chris Ejikeme Ogakwu and a cross-section of members of Umuoka Village, Udi. The Association of Commonwealth Universities funded my study at the University of Cambridge by way of an Overseas Development Association (ODA) Scholarship. This scholarship was administered by the Cambridge Commonwealth Trust. Sydney Sussex College, Cambridge, provided me with a safe haven throughout my stay in Cambridge. At the University of Ottawa, the School of Graduate Studies and Research provided an Entrance Scholarship while the Department of Linguistics offered several Research and Teaching Assistantships which sustained me through the greater part of the period of this research. Dana Mullen instituted a Linguistics award of which I was the first recipient. Shana Poplack, Helen Goodluck and Konrad Koerner all went beyond the

call of duty to provide several summer employment that alleviated my fiscal constraints. I say many thanks to these individuals and bodies.

When I arrived the cold city of Ottawa feeling like a fish out of water, the kindness of total strangers proved to me that strangers are just friends we have not met. I was particularly touched by the magnanimity of Lawrence Duru and Kofi Saah. In subsequent years, I benefited immensely from the friendship of Konrad Koerner and Helen Gooluck. I pray for God's blessing on you all.

I found special friends in Svitlana Budzak-Jones, Sali Tagliamonte, Danielle Turpin, James Walker, Marjory Meechan and Keltie Purcell. It was nice working with you guys at the Sociolinguistics Lab. I have also enjoyed the friendship of several graduate students of the Department of Linguistics, University of Ottawa, including: Galia Alexandrova, Afsaneh Amini, Olga Arnavdova, Peter Cadwell, Michelle Folley, Abdul-Hamid Godoua, Stephen Goyette, Dawn Harvey, Louise Jasmin, Angelique Kotsopoulos, Peter Lazic, Carmen LeBlanc, Margarete Ling, Elizabeth Malver, Subhadra Ramachandran, Ahmad Moinzadeh, Laura Proctor, Shahla Raghibdoust, Vera Rollof, Danijela Stojanovic and Gerard Van Herk.

My friends outside the University of Ottawa also deserve special mention for believing in and standing by me throughout my academic career, and especially during the writing of this dissertation. I would like to thank particularly Anayo Eneagor and Omenka Iwu Ikwubuzo, who have proved true the saying that *nwanne di na mba*. May the Almighty continue to bless you two for the good seed you have sown. I also thank Chikwendu Ibebunjo, Uju Ikeme, Douglas Socrates Anele, Malcolm Finney, Raphael Ogom, Emeka Anamanya, Raji Atobiloye, Olalekan Edagbami, Geoffrey Uzoagbara, Catherine Chando,

Patience Akpan. Bestway Zottor. Emeka Udemba. Chimezie Amaka. Gea de Jong, Chigozie Nnabuihe, and Charles Ogbulogo.

I am blessed with the best family anyone could ask for. Special thanks go to Cathy, Ngozi, Bob and Joe for their prayers, financial and emotional support. Thanks are also due my many cousins, especially Chidi Ene, Mercy Agu, and Ebele Aneke. My brother Ikechukwu (Papa T) and my sister Chika have shown me so much love and support at all times. They are the best siblings in the whole world.

I would not have gotten anywhere without the love and support of my parents. I thank them for always placing all their emotional and physical resources at my disposal. My gratitude also goes to my wife Njideka (Mkpulu mma) for her patience while this thesis was being prepared.

Finally and most importantly, I would like to thank the Almighty God for showering me with blessings beyond my wildest dreams. The completion of this program is but one of many such blessings.

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# Chapter 1

## *Introduction*

### **1. Background of the study:**

Research has shown that intense contact between two languages may engender one of several linguistic phenomena including codeswitching (CS), lexical borrowing, language death, language birth (in the case of pidgins), convergence, stylistic reduction, incomplete language 2 acquisition or interference. But of all these manifestations, CS and borrowing have dominated both theoretical and empirical research on language contact. Poplack (1993) defines CS as “the juxtaposition of sentences or sentence fragments, each of which is internally consistent with the morphological and syntactic (and optionally, phonological) rules of the language of its provenance” (p.225), and borrowing as “the adaptation of lexical material to the morphological and syntactic (and usually, phonological) patterns of the recipient language.” (p.256)

The study of CS has been approached from different perspectives including attitudinal, socio-pragmatic and syntactic. Researchers interested in the attitudinal aspect of CS focus on examining the attitudes of the speaker, or community member, towards CS.

Those who seek explanation for CS at the social-pragmatic level (e.g. Gumperz and Hernández-Chavez, 1971; Gumperz, 1976/1982; Gumperz and Hernandez-Chavez, 1976; Dennison, 1971) see the phenomenon as a stylistic act performed by bilinguals. Some of these researchers seek to determine the interactive purpose of CS, its communicative function as well as what social and pragmatic factors condition codeswitched discourse. Others have used work in CS as evidence for bilingual competence. Poplack (1980), for

instance, linked ethnographic observations with linguistic analysis, and revealed that CS required varying degrees of competence.

Researchers interested in the syntactic aspect of CS (e.g. Poplack, 1980b; 1993; Poplack and Sankoff, 1984; Poplack et al., 1988; Poplack et al., 1987; Poplack and Meechan, 1995; Meechan and Poplack, 1996; Muysken, 1991, 1995; Hasselmo, 1972, Petersen, 1988; Pfaff, 1979; McClure, 1981; Myers-Scotton, 1992, 1993; Bentahila and Davies, 1983, 1995; Eliason, 1991; Bokamba, 1987; Timm, 1975; Sridhar and Sridhar, 1980; Belazi et al, 1994; Nortier, 1990, among many others), seek to determine the syntactic constraints on CS. Basically they seek to answer the fundamental question: at what points do speakers alternate between the two languages in their repertoire? This aspect of CS will also be discussed in this dissertation.

### **1.1. Types of Codeswitching:**

The study of the syntax of CS has led to the delineation of various types of the phenomenon. Poplack (1980) classified CS into: *tag switching*, *intersentential switching* and *intrasentential switching*. The use of the three CS types is directly correlated with the bilingual's level of competence in the two languages in his or her repertoire.

*Tag switching* involves the insertion of tags from one language into a discourse framed by the other as in (1) from Igbo-English CS, where the English tag *you know* is inserted into a discourse framed by Igbo. At least in the Puerto Rican community which Poplack examined, tags are subject to minimal syntactic restrictions, and are, therefore, more common with less balanced bilinguals. (Poplack, 1980)

- (1) Ànyị nà-èje egwu *you know* (1/025)<sup>1</sup>  
 We AUX-go dance you know  
 "We go to the dance, you know"

*Intersentential CS* involves switching from one language to the other at clause boundaries. This is illustrated in (2) from Igbo-English CS. Intersentential CS requires a higher degree of competence in the two languages than does *tag switching*. This is because each clause must conform to the grammatical rules of each of the languages.

- (2) Ha nà àbja be anyị. *Sometimes they play, sometimes they don't*  
 They AUX come house us Sometimes they play, sometimes they don't  
 "They come to our house. Sometimes they play, sometimes they don't" (5/122)

*Intrasentential Codeswitching* involves switching from one language to the other within the confines of a single clause as in (3) from Igbo-English discourse. Poplack has argued that this type of CS involves the greatest syntactic risk, since switching requires that the syntactic specification of both languages be obeyed at the switch point. Intrasentential codeswitching, therefore, requires the greatest level of competence and is indeed engaged in by balanced bilinguals.

- (3) Kà ànyị mee party anyị *with our boyfriends* (1/031)  
 Let us do party our with our boyfriends  
 "Let us throw our party with our boyfriends"

Being the only type of CS subject to syntactic constraints, intrasentential CS has been the focus of much controversy among researchers working on the syntactic aspect of

---

<sup>1</sup> Numbers in parenthesis indicate speaker code and counter number of the tape. The following codes are used in glosses: AUX = auxiliary, CL = clitic, ENCL = enclitic, IMP = imperative, INCEP = inceptive, INF = infinitive, NEG = negative, PART = participle, PERF = perfective, PFX = prefix, PST = past, SFX = suffix, V = vowel. We adopt Emenanjo's (1978) tone-marking convention as follows: High tones are left unmarked; low tones are marked with a grave accent ( ` ); step tones are marked with a bar ( ¯ ).

codeswitching. A number of constraints have been proposed to characterize this type of CS, some on particular language pairs, others more generally. Intrasentential CS will be discussed in chapter 7 of this dissertation, where we examine, among other things, the operation of two of its proposed constraints, using data from the contact between Igbo, a Nigerian language of the Kwa family, and English, an Indo-European language. In the next section, we offer some background on the linguistic situation that gave rise to Igbo-English CS in Nigeria.

### ***1.2. The Linguistic Situation that Gave Rise to Igbo-English CS in Nigeria***

Nigeria, a former British colony with a population of nearly 100 million people, is unarguably the largest country in the continent of Africa. With more than 250 ethnic groups (Brann, 1978; Adegunle, 1976; Ahukanna, 1990) and over 400 mutually unintelligible languages (Bamgbose, 1995; Ahukanna 1990), it is also one of the most culturally, ethnically and linguistically diverse. With the amalgamation of the northern and southern protectorates of Nigeria in 1914, the British colonial administrators at the time lumped together people of diverse ethnic, cultural and linguistic backgrounds into what has now become the Federal Republic of Nigeria.

Three of the over 400 languages of Nigeria, namely Igbo, Yoruba and Hausa, are considered the major indigenous languages. Igbo is spoken in South Eastern Nigeria, Yoruba in the South Western Nigeria and Hausa in Northern Nigeria. In addition to these indigenous languages, English, the language of the colonial administration and Nigerian Pidgin English (NPE), the contact language, still flourish for reasons that become clear shortly.

As pointed out by Bamgbose (1995), a major preoccupation of Nigeria (and indeed many African countries) is how to ensure the continued oneness, or national integration, of the many ethnic groupings that make up the country. It is believed that differences between indigenous languages keep the people apart, perpetuate ethnic hostilities, weaken national loyalties and increase the danger of separatist sentiments. (Schwarz 1965). This belief is echoed by Alexandre (1972:88) who suggested that each local language is intimately related to an ethnic culture; thus, use of a local language reinforces attachment to ethnicity, thereby going against the current of national sentiment. Such sentiments as above gave rise to the quest for a national language as a means of achieving this national integration.

But the adoption of a national language for Nigeria has been a volatile issue. In spite of numerous debates, the choice of one of the three major languages as the official language has been as elusive as finding a needle in a hay stack. Myers-Scotton (1993a:27-28) noted some of the reasons for this official language dilemma in Africa. First, there is no single group with both enough numerical and political dominance over the others to make its language the natural choice. Second, none of the three major groups is willing to see the other prevail. This is not surprising since language defines a people, and dominant language means dominant power.

Apart from the three major languages, another candidate for national language status is NPE. Not only is it considered a language of solidarity, it is seen as a neutral language. Bamgbose, however, points out the major drawbacks of NPE as a national language. First, its language development status is almost non-existent since there are neither grammar books nor a standard orthography. Second, there is no large population to back it up. Even though it is the unofficial language of the armed forces and the police, and is

popular in coastal areas and urban centers, it is virtually unknown in large areas of the country. Third, it is likely to be unacceptable to the majority of the people who argue that English might as well be retained rather than replaced with an English-based pidgin.

It is, then, this difficulty in choosing an indigenous language as the official language that has resulted in the continued existence of English as the official language of education and administration in Nigeria, long after the colonial circumstances that gave rise to it have been dismantled. English is considered to be acceptable as an official language by many because of its neutrality.

In addition to its neutrality, Dua (1996) notes that the social and political elite, who are generally highly educated in the colonial language, have a major stake in its propagation, since its continued use allows them a major share of lucrative jobs and advances their social position and power. The same can be said of the developed nations, especially the ex-colonial masters, since the continued use of the colonial language provides a good market for their products.

Early education begins in a local language in nearly all the public schools. A few elitist private nursery and primary schools, however, introduce English to the pupils much earlier. Secondary and post-secondary education are almost exclusively in English. Therefore, all Nigerians who have received formal education may be considered bilingual in English and at least one other Nigerian language. Those without formal education tend to be monolingual in a local language, or bilingual in NPE and a local language, depending on their level of contact with people of other ethnic and or linguistic backgrounds. This inter-ethnic contact happens almost exclusively in the cities, which serve as a melting pot for people from all ethnic and linguistic backgrounds. Thus, in addition to workplaces and schools, the speakers in Nigeria also have extensive contact

with English in market places, buses and other public places. For many Nigerians, therefore, the switching from one language to the other may be considered a norm and as indicated by Ahukanna (1990), "a dynamic reality."

### **1.2.1. Igbo-English Bilingualism:**

Native speakers of Igbo reside predominantly in five Eastern states of Nigeria, namely Abia, Anambra, Ebonyi, Enugu and Imo. These states are referred to as *Alaigbo* (Igboland). Native speakers of Igbo are also minorities in two other Eastern States, namely Delta and Rivers. Some of the largest commercial centers in West Africa are located in the area known as Igboland. This has given rise to intense contact between the native speakers of Igbo and people from other ethnic groups in Nigeria and other countries of the world. In addition, most city residents in Igboland are office workers, traders, teachers and students. All of these are occupations that require intense contact with people of other linguistic backgrounds. It is, therefore, not surprising that language mixing is prevalent among the Igbo.

As is the case in most communities, the attitude of the Igbo towards language mixture is negative. The mixture of English and Igbo, be that as CS or borrowing, is derogatorily referred to as *Engligbo*. Campaigns against Igbo-English mixture have been on-going since the early 70s. These campaigns have manifested themselves in the form of newspaper articles, television and newspaper commentaries and books and articles in journals. Ahukanna (1990:179) quotes a radio announcer as describing the mixture of Igbo and English as "linguistic sabotage."

Nwafor (1971:44) described *Engligbo* as "a new medium of communication, which is a hybrid of the English and Igbo languages." To him, Igbo-English mixture is a conscious display of the knowledge of a prestigious language, English, by educated Nigerians. Okeke (1984) described the mixture of Igbo and English as "igbonization" and strongly cautioned that "these igbonizations are to be very much discouraged." (p.54)

In reaction to the diversity of interpretations given to the mixture of Igbo and English, Ahukanna (1990), relying on judgment tasks and random surveys, set out to investigate among other things:

(a) to what extent Igbo-English mixture could be regarded as function of the dominance of English in the Igbo-English bilingual, and (b) whether Igbo-English mixture is a conscious display of a more prestigious language, namely English. He reports that speakers of Igbo and English claim they continue to indulge in Igbo-English mixture for four principal reasons: (a) Igbo is not rich enough in vocabulary, (b) Igbo native speakers like to display their knowledge of English (c) English has become more habitual to most Igbo native speakers, and (d) English words are often shorter and easier to use.

We shall not be concerned with the causes of language mixture among Igbo-English bilinguals. It shall suffice to say that in spite of the regimentation and the widespread negative attitude towards it, the mixture of Igbo and English remains a norm. In this dissertation, we shall be concerned with describing the syntax of this bilingual norm.

## Chapter 2

### 2. Previous Studies of Syntactic Constraints on Intrasentential Codeswitching

CS research has, no doubt, flourished in the past two decades. Researchers have approached the phenomenon from nearly all fields of linguistics, including, syntax, psycholinguistics and, of course, sociolinguistics. Bokamba (1987:35) suggests that CS has fascinated researchers for three reasons: (i) it is a newly (re)discovered phenomenon, (ii) it remains mysterious and elusive so far and (iii) it presents a challenge to contemporary linguistic theories which are largely based on monolingual and mono-dialectal data.

After over two decades of unceasing research in the area, CS can no longer be seen as a newly discovered phenomenon; yet the fascination has remained unabated. The mystery has given way to controversy while the challenge has intensified. This challenge has been most evident in the attempt to construct a CS grammar that would be empirically adequate and universally valid for all language pairs involved in CS. For some researchers, the challenge extends to attempting to integrate CS into mainstream theoretical linguistics by constructing theories or constraints on CS that follow the hierarchical templates associated with theoretical syntax.

In this chapter, we examine some of the previous works in the field of CS. Given the enormous amount of research on CS, no attempt will be made at an exhaustive review of the literature. We focus instead on examining:

- (i) a trajectory of research on CS grammar, with emphasis on the controversial areas;
- (ii) the nonce borrowing hypothesis;

- (iii) some of the major constraints formulated to account for points in discourse at which it is permissible to alternate between the languages involved in CS; and
- (iv) some of the contributions studies of African languages have made to CS research.

## **2.1. A Trajectory of the Research:**

In the early years of research on CS, these alternations of two languages in discourse were considered exceptions to the systematicity of syntactic variation (Labov 1971), or random linguistic behavior (Lance 1975). But starting from the works of Gumperz & Hernández-Chavez (1971, Gumperz (1976/1982; Blom & Gumperz (1972), enough evidence of regularities in CS behavior accumulated to compel researchers to abandon these earlier views. Poplack (1984) notes that the amount of energy and zeal devoted to refuting these earlier claims led to the adoption of the opposite view, that is, that CS grammar is very highly constrained (Hasselmo, 1972; Petersen, 1988; Pfaff, 1979; Poplack, 1978/81; McClure, 1981, Kamwangamalu, 1989; Poplack 1993, Poplack and Meechan, 1995, Myers-Scotton, 1992, Myers-Scotton, 1993, Myers-Scotton & Jake 1995).

### **2.1.1. The Controversy:**

Determining the exact nature of syntactic constraints on intrasentential CS has divided researchers into several camps. Some researchers, on the basis of counter-examples, have examined and rejected every proposed constraint on intrasentential CS, either on the grounds that no such constraints are generalizable without a prior and general linguistic typological knowledge of all existing language pairs (Bentahila & Davies, 1983; Eliasson, 1991; Goke-Pariola, 1983), or on the grounds that all the existing constraints

are inadequate and, therefore, underscore the hopelessness of formulating such constraints in the first place (e.g. Bokamba, 1987). Others, by far greater in number, however, argue for the existence of CS constraints. The conviction of the necessity for such constraints has resulted in the proliferation of syntactic constraints on intrasentential CS (Timm, 1975; Sridhar & Sridhar, 1980; Gumperz, 1982; Wentz & McClure, 1976; Pfaff, 1979; Poplack 1981; di Sciullo et al., 1986; Kamwangamalu, 1989; Myers-Scotton, 1992; Myers-Scotton, 1993; Belazi et al., 1994 etc.). All of the proposed constraints seek to characterize the nature of bilingual grammar. Precisely, they seek to answer two theoretical questions: 1) What grammar is utilized when two languages are mixed (intrasentential codeswitching)?<sup>2</sup> 2) At what point is it permissible to switch from one language to the other?

But in spite of the multiplicity of CS constraints, and the appreciable progress from the stage in which CS was regarded as exceptions to syntactic variation to the present stage of intense empirical investigation on the subject, there remains a lack of consensus on an explanatorily and descriptively adequate bilingual grammar for the following reasons: 1) The structures which most of the proposed constraints are meant to account for appear to differ from one author to another. Many researchers, therefore, analyze as CS structures the likes of which others exclude as borrowings. 2) It is not always clear whether the constraints are generalizable to CS, borrowing, both or neither. In fact, some researchers deny the existence of any distinction between CS and borrowing. 3) In many of these studies, the authors rely on data from introspection (the disadvantages of which are detailed below) as opposed to real empirical data. Even when empirical data are used,

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<sup>2</sup> A codeswitch may also take place across clause boundaries. This is known as *intersentential codeswitching*. The constraints on codeswitching have no purview on this kind of switching since the two languages involved in the switch entertain no syntactic link.

they are often not all analyzed in an empirically adequate manner. We will return to this point in our discussions of particular theories on intrasentential CS.

One of the most challenging problems for CS research concerns determining the constraints on CS, that is, delineating points in discourse at which it is permissible to switch from one language to the other *intrasententially*.

Two of the most widely discussed constraints on intrasentential CS are the *Free Morpheme Constraint* and the *Equivalence Constraint* (Poplack, 1980). The *Free Morpheme Constraint* (hereafter FMC) predicts that a true switch may not occur between a free morpheme from one language and a bound morpheme from another. Apparent changes of language are observed when a free morpheme has been borrowed into the language of the bound morpheme, in which case, there would be no switching, only a continuation of the recipient language. The *Equivalence Constraint* (hereafter EC) predicts that the order of sentence constituents immediately adjacent to, and on both sides of the switch point must be grammatical with respect to both languages involved simultaneously in CS.

The FMC and the EC have been so central to most discussions on CS constraints that it is claimed that other "more particularistic constraints posited previously, for example, that single determiners or subject pronouns cannot be switched (Timm, 1975; Gumperz, 1976; Wentz, 1977), or any other such restrictions, are not borne out empirically, except where they are consequences of the two general constraints," namely FMC and EC (D. Sankoff and Poplack, 1981:7). Since then, several studies have challenged both the FMC and the EC. According to those who challenge the FMC and EC, the two constraints, at best, account for CS involving Indo-European languages, which show little inflection and exhibit similar word order and, therefore, offer few opportunities for violating the

constraints. These researchers argue that the constraints crumble when tested on highly inflectional or agglutinative languages and language pairs with differing word order. Tokens resembling *meaniri* in (4a) as well as *bedroom ha* in (4b) have been offered as counter-examples to the FMC and EC respectively (e.g. Nartey, 1982; Luambo, 1985; El-Noory, 1985; Bokamba, 1987; Petersen, 1988; Eliasson, 1989; Kamwangamalu, 1989; Myers-Scotton, 1992, 1993 etc.)

- (4a) Ì ghòtàrà ihe m **mean-iri?**(1/037)  
 You understand thing I mean-PST  
 "Do you understand what I mean?"
- (4b) Ànyị bànyèrè n'ime **bedroom ha** nọdụ (1/040)  
 We enteredinside bedroom their stay  
 "We entered inside their bedroom and stayed there"

The token in (4a) supposedly violates the FMC because the free morpheme *mean* from English co-occurs with a bound morpheme *-ri* from Igbo. The sequence *bedroom ha* supposedly violates the EC because the surface word order of the two languages does not match. The possessive determiner *ha* follows the noun *bedroom*, the canonical structure in Igbo, but an unacceptable structure in English.

Most of the research purported to demonstrate the violations of the FMC and EC are based on anecdotal reporting of isolated examples taken out of context. Note, however, that the FMC does not rule out all types of mixture of two languages; it only predicts that a specific type of mixture, namely CS, may not occur between a free morpheme from one language and a bound morpheme from another. This means that borrowings, most of which are linguistically integrated (as per the early formulations of the FMC), and, thus, superficially feature elements from the two languages, do not constitute violations of the

FMC. For such examples as (4a) to constitute violations of the FMC, they have to be empirically demonstrated not to be borrowings but to be CS. By the same token, the EC does not rule out the co-occurrence of two words which are etymologically from two languages at non-equivalence sites, if one of the items is borrowed, but only if the sequence of the two forms actually constitutes a CS. Therefore, for the sequence *bedroom ha* to be a violation of the EC, it has to be shown that *bedroom* has not been *borrowed* into Igbo but has been *switched* into English. Thus, as indicated by (Sankoff et al. 1990), “we cannot falsify the prohibitions against switches at certain points, nor can we substantiate positive predictions about switches at other points, unless we can prove that the attesting examples are not borrowings.”

It is noteworthy that most of the purported violations of the FMC and the EC comprise *lone* lexical items from one language in the discourse framed by the other. These lone items may feature morphology from the other language as in (4a) or may be bare as in (4b). When they are bare, the lone items are particularly problematic because their surface form offers no insight as to their language membership. Thus, unlike multiword fragments, the status of which is easily discernible, since their structure is internally consistent with the morphological and syntactic rules of the language in which they are lexicalized, lone items are inherently ambiguous as to their status as CS or borrowing.

This thesis is aimed at examining the purported violations in the literature by testing the validity of the FMC and EC on the bilingual discourse involving two typologically different languages, namely Igbo, a Nigerian language of the Kwa family, and English, an Indo-European language.

As detailed in chapter 3, these data are best suited for this enterprise for several reasons:

1) They are quantitatively robust rather than invented. 2) Igbo and English are

typologically distinct and, therefore, offer many areas of contrast suitable for testing the constraints. For instance, Igbo features a complex system of verbal morphology which is inextricably conditioned by the morphological process of vowel harmony. Consequently, it provides numerous examples of the mixture of Igbo and English morphemes at the level of the word as in *mean-iri* in (4a), the same type of token often presented as counter-examples to the FMC. Also, at the level of major constituents, e.g. NP, Igbo has word order which, while differing from that of English, is similar to the word order of some of the languages from which data has been presented to challenge the EC (e.g. Myers-Scotton (1992, 1993, for Swahili-English; Madaki, 1983, for Hausa-English; Nartey, 1982, for Adamme-English and Goke-Pariola, 1983, for Yoruba-English). Thus, the claim that the EC cannot account for the mixture of African and Indo-European languages will be verified. 3) Our data is so copious that the supposed counter-examples to the constraints occur in large enough number, such that if they are actual violations of the constraints, a call for a re-evaluation of the constraints would be in order. But if, on the other hand, they are not violations of the constraints, they should provide robust support for the constraints, given the abundance of opportunities for such constraints to be violated.

This thesis, thus, addresses the problem of constraints on intrasentential CS, as detailed above, by testing the validity of the FMC and the EC on Igbo-English bilingual discourse. Such a quantitative test is unprecedented in the study of Igbo-English contact. As a *sine qua non* to this enterprise, the thesis tackles the problem of distinguishing between CS and borrowing, another major problem in language contact studies. This problem is rife, especially as it concerns lone lexical items from one language incorporated into the discourse framed by another language as in (4a & b) above. Disambiguating the status of these lone incorporations, as we have indicated, is a crucial empirical enterprise without which no insight can be gained concerning the nature of bilingual grammar.

Once the manifestations of language contact as CS and borrowing have been unambiguously distinguished, using the methods described below, we will proceed to discuss the *constraint problem* (Muysken, 1990:18). Rather than make *a priori* assumptions of permissible switch points, as has become the practice in CS literature, with a few notable exceptions, every point at which a switch actually occurred in the speech of our informants will be delineated. Such CS points are then evaluated as to whether they constitute sites of structural equivalence or conflict between the two languages. If all or most of the switch points constitute sites of equivalence, there can be no doubt that a constraint like equivalence must be operative. This would provide support for the EC. But if all or most of the switches occur at points where the structures of the two languages are in conflict, then we may conclude that EC does not account for Igbo-English CS. In this case, we will proceed in investigating further what constraints best account for the CS of Igbo-English bilinguals.

The major contribution of the thesis, therefore, lies not only in using typologically different language pairs and innovative diagnostics to demonstrate how the types of language contact phenomena can be distinguished, but also in describing the nature of Igbo/English contact using the variationist framework which relies on naturally occurring empirical data.

## **2.2 The Nonce Borrowing Hypothesis:**

It is uncontroversial in the literature that borrowing involves the grammatical structure of only one language, the recipient language, with the donor language playing little but an

etymological role. It is also uncontroversial that what distinguishes borrowing from other manifestations of language contact is the level of integration of the borrowed item to the patterns of the recipient language. Where there is disagreement is on the nature of the integration that assigns an item the status of borrowing. Should we follow Myers-Scotton, (1992, 1993) and Myers-Scotton and Jake (1995 etc.) in defining borrowing in terms of social integration (which Poplack, D. Sankoff and Miller (1988) referred to as widespread diffusion) or should borrowing be primarily defined in terms of linguistic integration, that is, morphological, syntactic and often phonological integration (Sankoff et al., 1990, Poplack et al, 1984, Poplack and Meechan 1995, Meechan and Poplack, 1996 etc.)?

Myers-Scotton argues that a borrowed item has to satisfy the criterion of widespread diffusion, irrespective of whether or not it is linguistically integrated into the recipient language. According to her, what is important in assigning an item the status of a borrowing is whether the word is in widespread use and recognizable by the monolingual speakers of the recipient language.

An argument similar to Myers-Scotton's had earlier been made by Pfaff (1976) who argued that we cannot claim that a lexical item is borrowed unless we are able to determine whether a base language equivalent existed; and if so, whether it is in use and recognizable by the monolingual speakers of the recipient language.

However, while Pfaff does not demonstrate how the diffusion criterion is to be operationalized and the kind of sample required to do this, Myers-Scotton claims that a word which appears three times in her corpus is in widespread use and, therefore, is borrowed. This criterion is, of course, arbitrary and unacceptable as a scientific measure of diffusion. In fact, with the exception of Poplack et al. (1988), the kind of sufficiently

large corpus and rigorous scientific methodology required to measure widespread diffusion is lacking in the literature.

Sankoff et al. (1990) recognize that some borrowed items satisfy the criterion of widespread diffusion. They, however, maintain that widespread usage cannot be a defining factor for borrowings since available evidence indicate that some borrowed items may not be recognizable to the monolinguals speakers of the recipient language. They draw a distinction between two types of borrowings, namely *established loanwords* and *nonce borrowings*. Established loanwords are syntactically, morphologically and often phonologically integrated into the recipient language. In addition to linguistic integration, established loanwords are also recurrent, widespread or recognized by host language monolinguals. Nonce borrowing shares with established loanwords the characteristic of being linguistically integrated. However, the latter need not be recurrent or widespread. In other words, nonce loans may have been uttered by a single speaker once and may not be recognized by the recipient language monolinguals.

Some researchers have rejected the nonce borrowing hypothesis. Eliasson (1990) claims that there is no clear criteria for determining nonce loans. His major objection is that the hypothesis "will have extremely cumbersome structural and lexical consequences" for the Maori language from which his data were obtained. He argues that the phonotactics and lexicon of Maori would be enormously enlarged if nonce loans are posited to account for what he describes as "hybrid items", namely single word co-occurrence of Maori and English. Eliasson concluded that "the nonce theory is an auxiliary hypothesis proposed to supplement the free morpheme constraint." (p. 25)

In her own objection to the nonce borrowing hypothesis, Myers-Scotton (1992:181-82) argues that no explanatory value is gained in exchange for introducing the category of

nonce borrowing. She claims that instead, such introduction amounts to creating a category of quasi-borrowings which only masks the similarities between the production process and the end products of CS and borrowing.

But in spite of the criticisms against this hypothesis, evidence abounds to indicate that the concept of borrowing cannot be adequately explained without positing the hypothesis of nonce borrowing. For instance, in most studies done within the variationist framework, it has consistently been found that lone lexical items from one language incorporated into the discourse of another language show similar patterns as their counterparts in the language into which they are incorporated, while differing from unambiguous CS, an indication that such lone incorporations have been borrowed. Although such borrowed items have not always been classified as nonce or established for reasons that become clear shortly, there is every indication that not all such borrowings are widespread in the community. Therefore, unless one posits the nonce borrowing hypothesis, it is difficult to explain the behavior of these lone items.

The continued rejection of the nonce borrowing hypothesis implies positing the view that a borrowed item becomes widespread in a community instantaneously and is used by all monolinguals simultaneously. This conception of the borrowing process is untenable. As Haugen (1950) rightly stated, "it is clear that every loan now current must at some time have been appeared as an innovation. Only by isolating this initial leap of the pattern from one language to another can we clarify the process of borrowing."

Haugen's suggestion is corroborated empirically in Poplack et al. (1988) which featured a study of English loanword usage in five francophone neighborhoods in Ottawa and Hull, the national capital region of Canada. The authors extracted 20,000 English-origin tokens from the informal speech of 120 speakers. They set out to determine the degree of

linguistic and social integration of English into French. In order to investigate the relationship between the length of time a borrowing has been attested and its present frequency of use, the authors compared the number of speakers using each borrowing with the borrowing's individual date of attestation in written sources. They found that borrowed items in their Ottawa-Hull Corpus tended not to be recurrent. In fact, the proportion of borrowed items that can be considered widespread in the community was only 7%. Interestingly, they found that frequency of use of a particular lexical item directly correlated with the level of attestation in written sources. The earliest attested were most likely to become widespread in the community. Thus, at least some of the nonce borrowings uttered by one person at one point will become attested in the written sources over time, although there is no way of predicting which.

A linguistic corroboration of this comes from, among others, the facts of gender assignment in the corpus. Although there was variability in gender assignment to loanwords, there was a tendency for a decline in the variability with increased frequency of a particular word.

The same pattern is observed for plural inflection in English-origin nouns in the same corpus where it was found that the tendency for the English-origin nouns to be inflected with French morphology increased with increased frequency of use of a particular noun. All of these findings are incontrovertible evidence that the difference between a nonce borrowing and an established loanword resides in its attestation history and diffusion across the community, but not its linguistic form or function.

We will see in this thesis, that in addition to established loanwords, the nonce borrowing is part of the Igbo-English bilingual repertoire. We adopt the view that a nonce borrowing is novel, uttered by one speaker just one time. Such a loan may or may not gain currency.

If it gains currency, it may become assimilated into the monolingual lexicon and, thus, attain the status of an established loanword.

As mentioned above, determining when a lexical item is socially integrated is inherently problematic unless one is equipped with a sufficiently large corpus as in Poplack et al. (1988), the only study of its kind to date, or one is willing to make arbitrary distinctions (e.g. 3-occurrence metric). We possess no such data, and thus, we refrain from any attempt at determining the status of forms through diffusion. Instead, we focus on the co-occurring patterns in discourse. English-origin items which pattern linguistically like their unmixed Igbo counterparts, while at the same time differing from unmixed English portion and unambiguous CS, will be categorized as borrowings, regardless of level of social diffusion.

### **2.3. Constraints on Intrasentential CS:**

In this section, we examine more critically some of the constraints on CS proposed as alternatives to the FMC and the EC. We shall specifically focus on the Government Constraint (di Sciullo et al. 1986), the Matrix Language Frame Model (Myers-Scotton 1993b), and the Functional Head Constraint (Belazi et al. 1994). We shall examine these constraints in the light of data from Igbo and attempt to determine whether or not they indeed make better predictions than the FMC and the EC.

#### **2.1.2. Government Constraint:**

As is customary in CS research, di Sciullo et al. (1986) examine and reject earlier constraints on CS. They claim that the EC can be faulted on three counts.

Their first claim is that for the EC to be applicable, there has to be *categorial equivalence* between the two languages (p.3). According to them, the EC cannot make the right prediction because a number of categories occur in specific languages but not in others, leading to categorial non-equivalence. Put differently, the EC cannot make the right predictions because the categories of different languages cannot precisely correspond.

There is no doubt that categorial equivalence should be a consideration on EC. This fact has been addressed recently in the works of Muysken (1990) as well as Meechan and Poplack (1996). In the latter, it was demonstrated that the importance of categorial mismatch will vary according to the degree to which the languages involved in the contact situation differ, as determined by quantitative analysis of the distribution and usage of the categories in question in each language. The authors also demonstrated that in the event of a categorial mismatch, a language specific mechanism may be employed to establish categorial equivalence, as is the case in Fongbe-French discourse, where the Fongbe *do* (BE) was used to establish an equivalence site between the two languages. Thus, inherent categorial mismatch between two languages cannot *a priori* be taken to constitute a valid objection to the EC, unless the authors have tested the constraint on languages with categorial non-equivalence and found that the constraint is violated. There is, however, no evidence that this is the case for di Sciullo et al. (1990).

The second objection is that EC is formulated exclusively in terms of linear sequence, rather than in terms of structural relations. They claim that principles of grammar are formulated on hierarchical relations and that it is inadequate since the EC deviates from hierarchical ordering.

This type of argument is not new in linguistic literature. In his *Course in General Linguistics*, Saussure advanced two principles of linguistic science. The first is the arbitrary nature of the sign, and the second, the linear character of the signal. But while linguists have commonly cited and discussed the first principle, the second principle has received little attention because as Saussure himself noted, "this principle is obvious, but it seems never to be stated, doubtless because it is considered too elementary." (p. 70) Thus, even though there is no evidence that a theory of grammar that includes only hierarchically defined constraints is explanatorily more adequate than one formulated on linear terms, objections to the linear-based formulation of the EC have often been cited as a weakness. It is our view, however, that a linear based constraint which accounts for the facts is to be preferred to a "sophisticated" hierarchically defined constraint which does not.

The third objection is that the EC leaves unexplained, for Spanish-English, why certain allowable switch points show hardly any cases of switching. This objection is also untenable. The EC predicts that a switch may not occur at points in discourse where the two languages are not equivalent. It does not predict that a switch will occur at all points where there is equivalence. Not all "grammatical" constructions in unmixed discourse occur with the same frequency either. Indeed, it has been amply demonstrated over the last 3 decades by Labov and associates, that these differences in frequency of occurrence of linguistic structures are the norm rather than the exception, and that possibilities of occurrence of variable structures are predictable on the basis of both linguistic and extra-linguistic contextual features.

After rejecting the EC based on the objections discussed above, the authors went on to propose the Government Constraint which states that "when a government relation holds

between elements, there can be no mixing; when the relation is absent, mixing is possible." (p.4)

What the government constraint predicts then is that there can be no CS between governor and what is governed. Under the Chomsky (1981) version of government adopted by the authors, there should be no switching between: (i) a complementizer and its governing head (ii) a preposition and a following noun, (iii) a determiner and the noun, and (iv) a noun and an adjective which modifies it etc. Nortier (1990) explicitly tested this and other constraints in her Dutch-Moroccan Arabic data. Although all it would take to invalidate the government constraint is one counterexample, since the constraint is claimed to be an absolute constraint. Nortier found that not just one, but most of the switches in her data violate the government constraint. How did this constraint fare with respect to Igbo-English CS? Consider the following examples from Igbo-English CS:

- (5a) Everybody *àmagoro* *nà* this guy called you (Mimi/166)  
 Everybody knows that this guy called you  
 "Everybody knows that this guy called you"
- (5b) *I lee anya nà* the real money, you'll see the difference (Mimi/125)  
 You look eye PREP the real money, you'll see the difference  
 "If you looked at the real money, you'll notice the difference"

In (5a) above, the CS boundary is between an Igbo complementizer *na* and an English IP complement. In (5b), the preposition comes from Igbo while the NP complement comes from English. Tokens such as these, which violate the Government Constraint, abound in our data. As we see in chapter 7, 16 tokens (or 2%) of our unambiguous CS data are switches between Igbo complementizers and English IP complements. If we included lone English-origin items (which di Sciullo et al. also consider to be CS, though we do not), this proportion would undoubtedly be much higher. We also found that switches

between an Igbo preposition and an English NP complement comprise 14 tokens (2%) of the same corpus. This proportion would undoubtedly also rise were we to extend our count to other linguistic items which do not meet our definitional requirements as intrasentential CS. Although we go into this in detail in chapter 7, we must point out that both of these switch sites constitute equivalence sites between Igbo and English. Hence, in accordance with the EC, and contra the Government Constraint, CS occurs at those sites.

We found no instances of switches between determiners and NPs and only 1 switch between an adjective and an NP which it modifies. The Government Constraint, thus, appears to make the correct prediction here for our data. However, as we show in chapters 5 and 6 respectively, NP-internal positions are non-equivalence sites between Igbo and English, hence the absence of switches in these environments follows equally well from the EC, which the proponents of the Government Constraint reject. Thus, we see that the Government Constraint does not make the correct predictions for our data, except where such predictions are already accounted for by the EC.

The common occurrence of tokens such as in (5a) and (5b) across language pairs, contrary to the predictions of the Government Constraint, led Muysken (1991) to suggest that the class of governors as well as the domain of government was too large, hence the numerous counterexamples to the Government Constraint. He redefined government in terms of L-marking rather than C-command.

According to Chomsky (1986b:15), "A L-marks B iff A is a lexical category that theta-governs B." When government is defined in the more restricted sense of L-marking, the Government Constraint, no doubt, makes a more accurate prediction. For instance, the switch between the complementizer and its IP complement as in (5a) above is no longer

ruled out. This is because it is standardly assumed that the complementizer is not a lexical category; it does not have a real semantic content and, in fact, can be deleted in some languages including English (Chomsky, 1986; Haegeman, 1991:485)<sup>3</sup>. But even this more restricted definition of government does not totally salvage the constraint. For instance, the constraint still counterfactually predicts that a switch cannot occur between a PP and its governing head. We noted above that such constructions, illustrated in (5b), occur too frequently in Igbo-English data to be due to chance. Moreover, the quantitative acceptability of this CS site had already been established in Poplack (1980) and Sankoff and Poplack (1981). Thus, the government constraint neither accurately describes the data on CS, nor does it make better predictions than the EC which it set out to replace.

### 2.1.3. The Matrix Language Frame Model

As mentioned above, the MLF (Myers-Scotton, 1992, 1993) assumes no qualitative distinction between CS and borrowing. The distinction between CS and borrowing is measured in terms of frequency and widespreadness. The MLF model is crucially dependent on the premise that in a CS utterance, one of the two languages plays the dominant role. This dominant language is called the *matrix language* (ML), hence the title of the model. The other language is called the *embedded language* (EL). According to the model, any CS utterance may be made up of one of three configurations: (i) ML+EL constituents in combination showing morphemes from the two languages, (ii) ML islands which show morphemes from only the matrix language and (iii) EL islands which show morphemes from only the embedded language.

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<sup>3</sup>

See Bresnan, J. (1970) for arguments in favor of semantic content of complementizers.

In the first type of constituent, that is the ML + EL constituent, the ML builds the frame. Whether a morpheme from the ML and EL is selected to appear in this ML + EL constituent depends on the status of the morpheme as *system* or *content morpheme*. System morphemes are those with a plus setting for the feature [Quantification]. These are described as categories which "pick out individuals or events" (Myers-Scotton, 1992:6). They include quantifiers, specifiers and inflectional morphemes. Content morphemes are those with a minus setting for [Quantification]. In addition, these must be thematic role assigners and thematic role receivers. They include nouns and verbs.

As is the case in the ML + EL constituent, the determination of what morpheme appears in the EL also depends on the status of the morpheme as system or content morpheme.

The provisions of the MLF model are contained in four hypotheses: (i) the Matrix Language Hypothesis, (ii) the Blocking Hypothesis, (iii) the EL Trigger Hypothesis and (iv) the EL Implicational Hypothesis.

The Matrix Language Hypothesis states that the morphosyntactic frame for ML + EL constituents is set by the ML. Two principles ensure the effect of this operation: *the morpheme order principle* which states that in such combination, the ML determines the morpheme order. (ii) The *system morpheme principle* states that in ML + EL combination, all the productive system morphemes must come from the ML while the EL contributes the content morphemes. The implication of the matrix language hypothesis is that CS is blocked where these two principles are violated.

The Blocking Hypothesis states that the ML blocks the appearance of EL content morphemes which are not *congruent* with their counterparts in the ML.

The EL Trigger Hypothesis states that whenever an EL morpheme appears, which is ruled out by the ML hypothesis or the Blocking Hypothesis, the constituent containing such EL morpheme must become an EL Island.

The Implicational Hierarchy Hypothesis makes provision for optional EL Islands which are idiomatic or frozen expressions and which are peripheral to the main grammatical arguments.

The first problem with a model like the MLF which treats CS as consisting in the insertion of forms from one language (the embedded) into a frame built by the other (the matrix) is the age-old and yet unresolved problem of unambiguously identifying the matrix language in all cases. Myers-Scotton considered and rightly rejects earlier proposals towards the solution of this problem. She cited Klavans (1983) and Treffers-Daller (1991) who both claimed that the matrix language equals the language of the main verb. Myers-Scotton notes that Nortier (1990) rebutted this claim as it is unsupported by her Moroccan Arabic/Dutch CS data. Myers-Scotton also considered the psycholinguistic criterion of relative proficiency and dismissed it as being of limited value unless combined with sociolinguistic data.

In the light of the shortcomings of these proposals, Myers-Scotton suggested alternative methods of identifying the matrix language. These include "the relative frequency of morphemes from the ML and the EL in the interaction type which includes the CS data under study." (p.67). Implied in this suggestion is that the speakers' L1 is likely to be the matrix language, and indeed the language in which the speaker is more proficient in a CS situation.

Again Myers-Scotton is not oblivious of the problems attendant to this method including (i) that the speaker may not necessarily be more proficient in his L1; (ii) that the speakers' L1 may not be a participant in the CS and (iii) that there are communities in which it is difficult to determine the speakers' L1.

This view also implies that proficiency equals more use of a particular language in a bilingual's repertoire. As far as we know, however, this premise has never been empirically tested.

Myers-Scotton also proposed a Sociolinguistic criterion for identifying the matrix language. According to her, ML is the dominant language across the community in terms of the number of interactions in which it is the more socially unmarked choice. Again this proposal is fraught with difficulties. First, the definition of "community" is not without controversy. Second, as she herself pointed out, when CS itself is the unmarked choice, as it the case in most African countries, it can no longer be useful to determine the matrix language through this method. She suggests that in this case the language with the more morphemes is the matrix language. But since the MLF model does not first draw a distinction between CS and borrowing, a point to which we return in a moment, it is not clear what criterion, etymology or the function in a particular discourse, is to be used to assign morphemes to languages. In other words, is an etymologically English morpheme borrowed into Igbo to be counted as an Igbo or an English morpheme during morpheme counting? It is also not clear how the zero marked forms would be counted in languages where forms may not require overt morphology. Finally, it is not clear how the MLF would identify the matrix language in the case of copious intrasentential CS between the two languages. Thus, the problem of identifying the matrix language constitutes the first big setback for the MLF model.

The second problem for the MLF model is that unlike the Equivalence Constraint which Myers-Scotton rejects, and which relies on the quantitative patterning of forms in the interpretation of results and is, thus, able to bring to light differing patterns of CS across communities, the MLF model assumes the position of all or nothing. Its goals are, therefore, to predict in all cases: (i) "which utterances containing CS forms will be considered well-formed (and which, therefore, are predicted to be possible occurrences)" and (ii) "which such utterances are not well-formed and, therefore, will not occur, unless they are stylistically marked (in order to serve some socio-pragmatic purpose, such as emphasis)" (Myers-Scotton 1992:75).

But like any other model to which is arrogated absolute and universal applicability, "in contrast to every other science of human behavior" (Poplack, 1991), the MLF was soon faced with counter-examples which must be explained away or the "frame" of the model would collapse. Meechan (1996) pointed out some of the escape hatches which were, of necessity, created to maintain the invincibility of the model. She also rightly noted that the absolute strength of the model is also its greatest weakness. Let us consider some of the statements of the principles in the model.

*The System Morpheme Principle* states that in every combination of ML and EL, the ML builds the frame. It is obvious that counterexamples to this abound. However, this does not matter since the model makes provision for the ML and EL changing roles in a discourse. This vacillation, it is explained, may be a result of changes in pragmatic or social situation. Therefore, every counterexample could be explained as being "stylistically marked (in order to serve some socio-pragmatic purpose)" and since there was no empirical study of the socio-pragmatic roles of the ML and EL, this claim can be neither verified nor falsified. We are, therefore, not certain as to whether the ML + EL

combinations in which the EL builds the frame is a clear violation of the System Morpheme Principle and, therefore, of the MLF model.

As already mentioned, the blocking hypothesis states that "in ML + EL constituents, a blocking filter blocks any EL content morpheme which is not congruent with the ML with respect to three levels of abstraction regarding categorization" (Myers-Scotton, 1992:120). Myers-Scotton claims that "two entities (linguistic categories in this case) are congruent if they correspond in respect of relevant qualities" (Myers-Scotton, 1992:120). As vague as this definition is, the details of its operation within the model is not much different from the workings of the EC, which Myers-Scotton rejects. In fact, the strong point of the *Blocking Hypothesis* seems to be its appeal to the notion of Equivalence, albeit in a different guise.

A more serious problem for the notion of congruence as used in the MLF model is pointed out by Meechan (1996): "since Myers-Scotton's method consists of examining only counterexamples for congruence violation, there is considerable danger that the resulting explanations are ad hoc. We have no indication as to how many of the unproblematic ML + EL constituents also show some degree of noncongruence." This criticism is in order. Myers-Scotton claims that non-congruence occurs in the following contexts: (i) when a morpheme which is realized as a system morpheme in the ML is conversely realized as a content morpheme in the EL; (ii) if the content morphemes are different in terms of thematic role assignment and (iii) if the content morphemes differ in terms of discourse and pragmatic functions (p.121). If this claim is in order, then one expects more non-congruence between language pairs than the MLF leads us to believe. Muysken (1991) has, in fact, suggested there are hardly any two languages without mismatches. The most obvious of this type of mismatch is when one language uses, for instance, as nouns or verbs, forms used in other languages as adjectives, hence such terms

as *adjectival nouns* and *adjectival verbs*. This type of non-congruence in subcategorization restrictions is much more common than the MLF portrays. Empirical studies show that one way in which languages handle structural and categorial non-equivalence is through borrowing (Poplack and Meechan, 1995, Budzhak-Jones and Poplack, forthcoming, Turpin, 1995). Since the MLF model rejects the distinction between CS and borrowing (we return to this very shortly), one expects a lot more non-congruence, and consequently a lot more violations of the Blocking Hypothesis, to exist between the two languages than the model leads us to believe there is. There is, however, no report that this is the case.

Finally, the claim made by Myers-Scotton that there exists no distinction between CS and borrowing has been contradicted in all language pairs studied quantitatively. Poplack and Meechan (1996) showed that lone French-origin nouns in otherwise Wolof and Fongbe discourse patterned like unmixed Wolof and Fongbe nouns with regard to their modification structures. They showed these to be borrowed. At the same time, they showed these lone nouns to pattern differently from the nouns both within French multiword fragments (unambiguous CS) as well as in unmixed French. In other words, borrowings were objectively shown to differ from CS empirically. Budzhak Jones and Poplack (In press) and Budzhak-Jones (In preparation) both examined the status of lone English-origin nouns in Ukrainian discourse. Their research showed that overtly marked English-origin nouns establish the same patterns of marking variability as the unmixed Ukrainian nouns, a result which would be inexplicable if the lone nouns were not borrowed. Turpin (1995) also examined the lone English-origin nouns in French discourse and found that they too patterned like the unmixed French, suggesting that they were borrowed, but at the same time differed from unambiguous CS to English.

It is also in this rejection of the distinction between CS and borrowings that our data mostly contradict the MLF. We will show that etymologically English lone nouns incorporated into Igbo are quantitatively and qualitatively different from the English nouns occurring in longer unambiguous CS to English. The same findings will be shown to hold for etymologically English verbs and adjectives borrowed into Igbo.

In the light of this empirical testimony to the differing patterns of CS and borrowing in several language pairs, there can be no doubt that the confounding of the two language contact phenomena in the MLF model is unwarranted and, hence, a serious flaw for the model. In fact, the MLF appears to be more adequate as a model of borrowing rather than CS. Its predictions differ little from those of other models of borrowing (e.g. Poplack, Sankoff and Miller, 1988). But when presented as a model of CS, the model runs into difficulties which can only be dealt with as exceptions (islands) or with other "sociolinguistically" motivated escape hatches.

#### 2.1.4. **The Functional Head constraint:**

Belazi et al. (1994) began with the hypothesis that competent or balanced bilinguals and marginally competent bilinguals demonstrate differing CS behaviors. This hypothesis is in line with Poplack's (1980) suggestion that intrasentential CS involved a greater degree of competence in the two grammars, whereas intersentential switches do not require as much bilingual competence. Belazi et al. also assume that intrasentential CS is not random. They go on, however, to argue that none of the earlier constraints, including the Government Constraint (di Sciullo, Muysken and Singh 1986), Free Morpheme Constraint (Poplack 1981), Equivalence Constraint (Poplack 1981) and Constraint on Closed-Class Items (Joshi 1985), was adequate to account for intrasentential CS.

Belazi et al. presented several examples of purported violations to these constraints; however, all are anecdotal, and unsubstantiated with empirical data. Specifically for the FMC and EC, they admit that the constraints go a long way towards accounting for the attested patterns of CS. But they insist that the constraints were insufficiently restrictive and, thus, allowed the grammar to overgenerate. They claim that the FMC fails to explain why switching is impossible between certain free morphemes. For the EC, they also claim that switches failed to occur at many points where they were perfectly permissible. It is not, however, clear how they determined the points where CS is permissible or what sort of data they used.

Recall from 2.3.1. that similar objections to the EC have been made by di Sciullo et al. (1986). We stated, in response to this objection, that the EC predicts where CS may occur - at equivalence sites. It does not predict that CS *must* occur at all equivalence sites. In fact, not even in unmixed portions of the languages is there a guarantee that grammatical constructions, all of which are permissible, occur with the same frequency, if at all, in a given discourse. In fact, a major goal of the variationist enterprise is precisely to explain such discrepancies in frequency. Thus, objecting to the EC on the ground that CS did not occur at some equivalence sites is invalid.

In addition to these, Belazi et al. repeat the familiar argument that the EC would weaken the theory of grammar as a whole since the constraint is formulated on linear terms and "a theory of grammar that includes constraints formulated on linear terms is weaker than a theory of grammar that includes hierarchically defined constraints"(p.227).

Again, this is a repeat of the objections raised in di Sciullo et al. (1986). We reiterate that what is crucial is for a theory or a constraint to account for the data for which it was

formulated. If a constraint based on hierarchical relations fails to account for the data, as we have shown to be the case in, for example, the Government Constraint, it offers no insight into the nature of bilingual grammar, irrespective of how elegant it may appear.

In response to what they perceived are shortfalls of the earlier constraints, Belazi et al. proposed the *Functional Head Constraint* based on Abney's (1987) proposal that a special relation exists between a functional head and its complement. Unlike lexical heads (e.g. nouns and verbs), functional heads (e.g. complementizers and determiners) f-select their complements. Belazi et al. argue that if f-selection is a member of a set of feature-checking processes, and if we assume that one of the features being checked is language, then the functional head requires the language feature of its complement to match its own feature. They, therefore, state the *Functional Head Constraint* as follows: "the language feature of the complement f-selected by a functional head, like all other relevant features, must match the corresponding feature of the functional head." (p.229) Simply put, this constraint claims that a functional head, such as a complementizer, must come from the same language as its complement. Thus, switching is disallowed, among other places, between a Complementizer and its IP complement, as was already predicted by the Government Constraint.

We have already shown that this prediction is incorrect. A perusal of published data in Poplack (1980), Sankoff et al. (1988), among others, also demonstrate the falsity of such claims. We have indicated that such switches freely occur between Igbo complementizers and their English IP complements. This was shown in (5a) above, reproduced for convenience below as (6).

- (6) Everybody    *àmagoro*    *nà*    this guy called you (Mimi/166)  
 Everybody    knows            that    this guy called you  
 "Everybody knows that this guy called you"

The Functional Head Constraint was not formulated based on any empirical evidence. All the data presented were anecdotal citations of isolated examples taken from other scholar's published research. Perhaps this is why its predictions are so easily falsified when confronted with empirical data.

Thus, the Functional Head Constraint has not in any way better accounted for even the anecdotal data its authors selectively presented than the earlier constraints which the authors rejected.

## **2.2. *Codeswitching Research Involving African Languages:***

Most of the early research on CS constraints concentrated on Indo-European languages, especially Spanish-English. In fact, it was on the basis of such Indo-European languages that most of the constraints on CS, whether particularistic (e.g. Gumperz, 1976/1982; Timm, 1975; Lipski, 1978; Pfaff, 1979) or more general (e.g. Poplack, 1981), were first formulated. It soon became a recurrent criticism of the constraints on CS that they were based on typologically similar languages pairs where there were few chances of violation. Most of the criticism followed the early observation in Sankoff and Poplack (1981:7) that "it is not clear how the free morpheme constraint might operate in a situation involving English and some highly inflected or agglutinative languages, nor what might be the scope of the equivalence constraint for languages with highly different word orders."

As a result of these criticisms, it became clear that research in CS would benefit immensely by examining typologically different language pairs. The flourishing bilingualism among educated Africans who are usually fluent in one or more African

languages, as well as the language of their erstwhile colonial masters, provided excellent opportunities to take CS research to the next level. Thus, there has been an upsurge of research involving the contact between African languages and European languages from which they usually differ typologically. We have already discussed Myers-Scotton's proposal for the MLF which received much illustration from her Swahili-English data. Below, we briefly review some of the other recent works involving African languages, paying particular attention to the data presented to challenge the existing constraints on CS.

### 2.2.1. Adanme/English Contact:

Nartey (1982) tested the FMC and the EC using data from the contact between Adanme-English CS. Adanme is a Kwa language spoken in Ghana. Based on such examples as in (7), Nartey concluded that constraints like the FMC and the EC "only account for Indo-European languages." Consequently, he proposed that "a different set of rules may be needed to account for CS involving African languages, especially the Kwa languages which tend to behave similarly with respect to this phenomenon."

(7a) a      NE      mi      *helpe* (c.f. Nartey, 1982:185)  
 They COP      me      help      (PRES PROG)  
 "They are helping me"

(7b) i                              na      yoyo      *slim*      ko (c.f. Nartey, 1982:187)  
 I (PAST TONE)      see      girl      slim      ART  
 "I saw a slim girl"

Although Nartey claims that a different set of rules may be needed to account for CS involving African languages, he provided no examples of such rules.

Nartey's basis for dismissing the FMC is that a sentence like (7a) violates the constraint since it involves a mixing of an English verb, *help* with an Adanme tense marker, *e*. He also dismisses the EC because in (7b), the English adjective *slim* follows an Adanme noun *yoyo* resulting in a [N + Adj] structure which violates the syntax of English and consequently the EC. We note, once again, that *help* and *slim* are lone other language items, and hence need to be proved to be CS.

Nartey recognized that drawing a distinction between CS and borrowing was inevitable in any attempt to determine the status of the supposed counter-examples to the constraints. But his position seems to be that only established loanwords which are recognizable by the native speaker could be considered borrowed. He claims that in his data, nearly all such borrowings are nouns. He was, thus, quick to denounce any claims that *help* and *slim* in (7a) and (7b) respectively, may be instances of borrowings. He reasons that such items are not recognizable to the monolingual speaker of Adanme. Nartey admits that his definition of loanword may be too narrow, but tries to rescue his claim by stating that the words he dismissed from the list of loanwords "do not refer to concepts, objects or roles that are restricted to the discourses of educated people." (p. 186). In other words, the contentious forms are not nouns, and, therefore, according to Nartey, cannot be borrowings. Without dwelling on the misrepresentation such an assertion belies of the historical record, we note that instances of verbs etymologically of one language inflected with morphology from another as in (4a) repeated as (8a), or nouns etymologically of one language modified with elements of another as in (4b) repeated as (8b), abound in the literature (see also Chana and Romaine (1984) for data from Panjabi-English).

- (8a) Ì ghòtàrà ihe m mean-iri?(1/037)  
 You understand thing I mean-PST  
 "Do you understand what I mean?"

- (8b) Ànyị̀ bányèrè n'ime *bedroom* ha nòdu (1/040)  
 We entered inside bedroom there stay  
 "We entered inside their bedroom and stayed there"

But as we show in subsequent chapters with data from Igbo-English CS, these structures in themselves do not necessarily constitute a problem for the FMC or the EC unless we can demonstrate that *mean* and *bedroom* in (8a) and (b) above, respectively, are codeswitches. Since it is clear that a word does not have to refer to concepts, objects or roles in the discourse of people to qualify as a loanword, Nartey's claims that *helpe* and *slim* are not borrowed into Adammè is as suspect as his rejection of the FMC and EC.

### 2.2.2. Yoruba-English Contact:

Goke-Pariola (1983) attempted to determine the rates of mixed utterances from Yoruba to English and vice versa. Based on the fact that a switch may take place at different points in discourse including what he refers to as the adjunct position, the main verb position and the subject position as in (9a) through (9c), he concluded that "the switches from Yoruba to English and from English to Yoruba, as is sometimes the case, are random." (p.41)

- (9a) *More so*, awon ti won ranomo won lo si ilu oyinbo... (c.f. Goke-Pariola, 1983: 41)  
 "More so, those who send their children overseas..."
- (9b) Nwon, ma ti *ban* iyen (c.f. Goke-Pariola, 1983: 41)  
 "They have banned that."
- (9c) *Se e ri*, *interpretation* yin yen *strong* (c.f. Goke-Pariola, 1983: 41)  
 "You see, your interpretation is strong."

As was the case with Nartey's examples, Goke-Pariola's, as illustrated with *ban* in (9a), and with *interpretation* and *strong* in (9c), are lone items whose status has not been determined. Confronted with the problem of distinguishing between CS and borrowing in the speech of Yoruba-English bilinguals, Goke-Pariola leaned towards treating all mixed utterances as borrowings into Yoruba. According to him, "someone listening to the conversation and who is not a native speaker of Yoruba would not be able to point out the English linguistic items much of the time. This is because they are phonologically assimilated into the Yoruba sentence." (p.44) In addition, Goke-Pariola notes that in nominal modification, the pattern is that of Yoruba and not English.

While this study is laudable in recognizing the importance of quantitative analysis and the need to distinguish between CS and borrowing in language contact, it has some methodological problems.

First, Goke-Pariola's use of the terms *switches* and *borrowings* is confusing and sometimes contradictory. In some instances, he refers to as *borrowings* the same items he earlier describes as *switches*. Second, it is difficult to see how Goke-Pariola's conclusion, that switches from Yoruba to English and vice versa was random, follows from the data he presented. The fact that Yoruba-English mixing is asymmetrical and features many switch points (as is the case in most language pairs), does not in any way warrant the interpretation that the CS is random. Research in the variationist framework has consistently shown that with a proper set of diagnostics, patterns emerge.

Also the focus on phonological integration as the *only* yardstick distinguishing between borrowing and CS is unmotivated, especially as there was no systematic study of the phonology of the unmixed English of the same speakers. Moreover, Poplack, Sankoff and Miller (1988) showed that phonological integration is not in and of itself a predictor of

CS or loanword status. Phonological integration is subject to inter- and intra-individual variability as well. This is further complicated, in some instances, by pre-existing similarities in the phonological systems of the two languages in the bilingual's repertoire. (Poplack and Sankoff, 1984; Sankoff, Poplack and Vanniarajan, 1990; and Sankoff, Poplack and Miller, 1988).

### 2.2.3. French/English-Bantu Contact:

Kamwangamalu (1989) was concerned with the structure of Bantu-French language mixture. He claims that in any mixture of French and the Bantu languages, namely Ciluba, Kingala and Swahili, the resultant structure is always the structure of the Bantu language involved. This may involve 1) the dropping of the French determiner as in (10a), where the required French determiner *une* does not precede *punition*, 2) the assumption of Lingala word order as in (10b) where the adjective *propre* (clean), which Kamwangamalu incorrectly claims should precede the noun in French, follows the Lingala noun, and 3) the inflection of the French verb with Bantu affixes as in (10c) where a French verb *rendre* (return) takes Ciluba plural prefix *ba-* and reciprocal suffix *-angana*.

(10a) *Kindumba ezali punition te* (c.f. Kamwangamalu, 1989:)  
 “prostitution is not punishment”

(10b) *Zaire ezali mboka propre* (c.f. Kamwangamalu, 1989:)  
*Zaire is a country clean*  
 “Zaire is a clean country”

(10c) *Ba-aka-rendr-angana vistes ya bungu quand elle etait ici* (c.f. Kamwangamalu, 1989:)  
 ‘They visited each other a lot when she was here.’”

Kamwangamalu sees the examples in (10a and b) as violations of the EC and (10c) as a violation of the FMC. Let us examine these purported violations carefully.

First, etymologically French nouns appear without determiners when incorporated into Lingala discourse. Kamwangamalu claims this to be a violation of the EC but offers no evidence that these French-origin nouns have not been borrowed into Lingala. The same goes for the French verb *rendre* (return) in (10c). Notice that all the examples, including *propre* (clean) to which we return shortly, involve lone French-origin items being incorporated into the discourse of the Bantu language. We know that these lone incorporations are notoriously ambiguous as to their language membership. In the few studies where their status as CS or borrowing has been explicitly tested, they have in most cases been found to function as borrowings into the language of the discourse. (see Eze, 1995; Poplack and Meechan, 1995, Turpin, 1995, as well as this thesis, to mention just a few). Kamwangamalu's claims, thus, appear to be more descriptively adequate for the borrowing strategies of the Bantu languages involved rather than as counterexamples to CS constraints. We show in subsequent chapters that similar tokens to the ones presented appear in our data, but pose no problems for either the EC or the FMC. Instead, they offer robust support for these constraints.

What about Kamwangamalu's claims that the word order that is maintained in a French-Bantu mixture as in (10b) is that of the Bantu language? We will not contest this claim since, if these French items are being borrowed into the Bantu languages, the resulting structure will, of course, be that of Bantu. We will, however, point out that contrary to Kamwangamalu's representation, the example in (10b) shows that the word order maintained is compatible with both French and Lingala. In French, just like in Lingala, the adjective *propre* in its mean *clean* follows the noun.

Aside from his presenting inadequate counterexamples for existing constraints, the *Matrix Code Principle*, which Kamwangamalu offered as an alternative to the constraints which he rejected has some fundamental problems. The principle states that “in every code-mixed discourse involving language 1 (L1) and language 2 (L2), where L1 is identified as the matrix code (i.e. host code) and L2 as the embedded code (i.e. guest code), the grammar of L2 must conform to the morphosyntactic structure rules of L1, the language of discourse.” (p.157)

The first problem with this principle is that it takes for granted that the matrix code is always identifiable. We saw above that the identification of a matrix language is an unresolved issue in the literature. Kamwangamalu's principle shares this fundamental problem with Myers-Scotton's Matrix Language Frame Model discussed above.

Another serious problem concerns how the Matrix Code Principle would handle multiword fragments of French juxtaposed with items from Bantu, as is the case with *quand elle etait ici* (when she was here) in (10c). According to the principle, the clause *quand elle etait ici* (when she was here) should assume the structure of Ciluba but not that of French. This is clearly not the case.

#### 2.2.4. Hausa-English CS

Madaki (1983) examined Hausa-English CS. He recognizes the ambiguity often inherent in language contact phenomena as to their status as CS or borrowing. He treats an item as borrowing if it “is the *only one* commonly used in the speech community to refer to the event/object.” (p. 34). But for him a term is codeswitched “if the term used has an

equivalent in the language of discourse and the equivalent term is not a deliberate coinage with very low frequency." (p.34-35)

These definitions have severe problems. Madaki does not present any quantitative data and, thus, offers no insight as to how we would determine whether or not an item is a deliberate coinage, nor did he offer a solution to the age old problem of measuring frequency. It is, therefore, not clear how he proposes to determine whether a lexical item is the "only one" commonly used in the speech community.

The idea that a codeswitched item is one for which there is a native language term suggests that a borrowed item can have no native language synonym. This is contradicted by empirical facts. Evidence from nonce borrowing (D. Sankoff et al., 1990), for instance, suggest that speakers may borrow lexical items from one language on the spur of the moment. This is irrespective of whether or not a lexical item representing the same concept exists in the borrowing language.

One of Madaki's claims is that speakers switch from one language to the other as a result of lexical need. According to him, one of his speakers "switched out of the language of discourse in order to get an appropriate expression" and switched back to Hausa, the language of discourse, afterwards.

This claim is also counterfactual. First, it is not clear how Madaki knows what constitutes the "appropriate expression." Poplack (1984) showed that "true code-switching (i.e. in which individual switches cannot be attributed to stylistic or discourse functions) in the study of the Puerto Rican community was largely confined to skilled bilinguals. If it were the case that CS was a result of lexical need, one would expect to see less fluent bilinguals engage more in CS, whether inter- or intrasentential. This is not, however, the

case. Instead, studies show that CS is a bilingual norm, an integral part of the community linguistic repertoire, and a mode of interaction similar to unmixed speech (Poplack, 1984).

Madaki treats as "singly switched" any single items that is preceded and followed by Hausa, i.e. a sandwiched English word (p.83). These so-called singly switched items correspond to the lone lexical items from one language incorporated into the discourse of the other language. We have already mentioned that these items are inherently ambiguous and unless they are compared with their counterparts in the unmixed portions of the two languages, they cannot *a priori* be said to be CS or borrowing.

The fact that Madaki did not draw an appropriate distinction between CS and borrowing casts a shadow of doubt on his findings which he claims lend support to the EC. He had observed that "Hausa-English CS occurs at those syntactic junctures where the structures of the two languages are congruent or coincide," (p.11); that is at equivalence sites. But we do not know how many of these English origin items occurring at "equivalence sites" are true CS and how many are English-origin items borrowed into slots that are fortuitously equivalent in the two languages.

#### **2.2.5. Wolof/Fongbe-French Language Contact:**

The works of Poplack and Meechan (1995) and Meechan and Poplack (1996) on Wolof-French and Fongbe-French language contact represent two of the few studies involving African languages carried out using the variationist framework. They found that the lone French-origin nouns incorporated in Wolof and Fongbe discourse pattern like nouns

within unmixed Wolof and Fongbe but differently from nouns within multiword fragments of French, with regards to their modification structures. These lone French-origin nouns they identified as borrowings into Wolof and Fongbe.

Poplack and Meechan found that multiword fragments were rare in both Wolof-French and Fongbe-French. These multiword fragments comprise three classes of materials: (i) unambiguous CS which have the structure of French but not Wolof, (ii) French multiword fragments, which though similar to the unambiguous CS, pattern like unmixed Wolof material and (iii) French-origin materials in Fongbe-French discourse featuring the internal structures of French but occurring at syntactic boundaries compatible with only Fongbe.

The first class of materials, that is the unambiguous CS, categorically obey the equivalence constraint, testimony to the fact that CS in their data was constrained under equivalence. The second class was classified as French borrowings into Wolof, having been revealed by a comparison of their structure and distribution to pattern like unmixed Wolof nouns as well as lone French-origin nouns in Wolof discourse. The third class of materials, which featured only in Fongbe-French discourse, was shown to resemble the category called *constituent insertion* (Sankoff and Nait M'Barek, 1990).

The work of Poplack and Meechan is crucial in several respects: (i) they demonstrate how an operational distinction could be drawn between CS and borrowing, especially in the inherently ambiguous lone lexical incorporations from one language into the discourse of another. (ii) they demonstrate an overwhelming support for the Equivalence Constraint by relying on empirical data analyzed using a rigorous scientific framework, (iii) they demonstrate how bilingual speakers of the languages handle data that do not conform to equivalence.

### **2.3. Conclusions:**

We see from this chapter that most of the previous studies on intrasentential CS share some common problems. First, all of the constraints being proposed to replace the FMC and EC are absolute constraints which very easily crumble when confronted with empirical data. This is not surprising since the inherent variability of human language precludes total conformity to any prescriptive constraints. Second, most of the studies are not based on empirical data. While the proponents of the constraints on CS concentrate on seeking hierarchical constraints that would conform to the templates of theoretical syntax, empirical data are de-emphasized. Again, it is not surprising that these constraints fail to stand the test of empirical data. Even those who have used empirical data have not treated such data in a proper way. For instance, Myers-Scotton has a total of 100 speakers living in Nairobi Kenya, even though very little data were extracted from each speaker. More serious, however, is the fact that at no time were the utterances presented as examples of the many hypotheses situated in the context of, and compared with any of the unmixed languages, namely Swahili and English. As we show in subsequent chapters, this is a fundamental flaw.

Another fundamental flaw for most of the studies is the failure to distinguish between CS and borrowing. Some studies suggest ways of distinguishing between CS and borrowing, but do not apply these criteria themselves. This is perhaps because the criteria are impossible to operationalize in the first place. This is the case with the methods that suggest treating a word as a borrowing only when such a word is recognizable by the native speaker. Other studies suggest the "three occurrence" metric. This in itself is totally arbitrary and fails to draw a clear-cut distinction between the two language contact

phenomena. Thus, with the exception of Poplack and Meechan (1995) and Meechan and Poplack (1996), these studies have not been undertaken using scientifically adequate methodology which does not confound CS and borrowing. The present study is an attempt to contribute towards filling this gap.

## Chapter 3

### 3. Methodology:

While reviewing the literature in the previous chapter, we showed that most of the studies in the area of language contact are flawed by the use of inappropriate data, especially data from introspection. But even those who used empirical data have not handled the data in an empirically adequate manner. In this chapter, we describe the variationist methods of data elicitation and manipulation as employed in this thesis.

#### 3.1. Variationist framework:

The framework of empirical linguistics adopted here is the quantitative paradigm incorporated in variation theory (e.g. Labov, 1971; Labov, 1984; Sankoff, 1982; Sankoff, 1988; Sankoff, 1974; Sankoff & Labov, 1985; Poplack, 1993 among others). In its more general conception, the variation framework involves "the scientific investigation of language use as manifested in a natural(istic) context; the statistical analysis of variation in language forms as illuminated by features of their linguistic and extra-linguistic environment; and an interpretive assessment of linguistic function with an accounting for grammatical structure in discourse as well as the wider socio-cultural mechanism of language change" (Sankoff 1988, Tagliamonte, 1991).

One of the set goals of this framework is accounting for *grammatical structure in connected discourse* (Sankoff 1988). In our particular case, the objective is to account for the resultant structures of the contact between Igbo and English, in the speech of the bilingual speakers of these languages.

The traditional idea of the variationist framework centered on examining variables in the sense of *alternate ways of saying the same thing* (Labov 1971, 1984). However, variationists have come to recognize that “when a corpus of natural speech is studied, whether produced by one or several speakers in one or different contexts, it is not only the contrast between what is said versus what does not seem to be said which must be accounted for, but also that certain elements occur more frequently than others and that these frequencies, not just presence and absence, are systematically conditioned by co-occurring quantities” (Sankoff 1982). As a result of this development, there has been an upsurge of research on language contact using the variationist framework (e.g. Poplack, 1995; Poplack, 1985; Poplack & Sankoff, 1984; Poplack et al., 1987a; Poplack et al., 1987b; Meechan & Poplack, 1996; Eze, 1995; Budzhak-Jones & Poplack, 1995 and Turpin, 1995). Efforts have been geared towards using this framework to determine patterns of language mixture in several language pairs, some typologically similar as in French/English (Turpin, 1995) or Spanish/English mixture (Poplack et al., 1987), and others typologically different as in Igbo-English (Eze, 1995), Ukrainian/English (Budzhak-Jones & Poplack, 1995; Budzhak-Jones, forthcoming), Fongbe/French, Wolof/French (Poplack and Meechan, 1995; Meechan and Poplack, 1996), and Tamil/English (Sankoff et al., 1990).

The variationist framework is associated with four cardinal principles. These are: (i) the use of appropriate informant, (ii) the use of appropriate data, (iii) the principle of accountable reporting and (iv) the circumscription of the variable context. These principles are detailed in Poplack (1993) and summarized below:

### **3.1.1. The use of appropriate informants:**

The bilingual behavior of a community cannot be ascertained by the study of the speech of one individual, be (s)he the analyst or an informant. The variationist framework relies on the speech of the individuals who share the regularity of social acts, including speech, in a recurrent and ordered fashion. It is only in the speech of such individuals with shared community norms that speech patterns representative of the community can be found.

### **3.1.2. The use of appropriate data:**

The use of appropriate data implies among other things that: 1) Data be collected in an environment propitious to its natural occurrence; 2) Data be representative of the speech patterns of members of the community. Such data must reflect the community norm in order for the results to be generalizable; 3) There must be enough tokens of the specific language contact phenomenon that is being investigated to allow for patterns to emerge.

### **3.1.3. Principle of accountable reporting:**

This principle requires not only that all relevant examples of a phenomenon in the data set be incorporated into the analysis, but also, all of the contexts in which it could have occurred but didn't (Labov 1966).

### **3.1.4. Defining the object of study**

Poplack (1993) considers the circumscribing the variable context or defining the object of study as perhaps the most controversial issue in the study of language contact phenomena. According to her, "the first step a variationist will take in assessing contextual effects on the occurrence of one or another variant of a variable is to define the envelope of variation."

The variable context should be circumscribed in a way that ensures that the researcher does not make any *a priori* assumptions as to the language membership of the contentious forms. This means that all occurrences of the tokens of the form under investigation in the corpus must be included in the analysis.

This is particularly important in the analysis of bilingual data where defining the object of study principally translates into determining whether the particular other-language material may be best treated as a CS, a borrowing or some other manifestation of language contact. Since these manifestations of language contact are inherently ambiguous especially in the case of lone items, the analyst must examine all occurrences of language contact phenomena in order to determine their status as CS or borrowing. This is accomplished by comparing their patterning with the patterns found in the unmixed portions of the two languages, as we demonstrate in subsequent chapters of this thesis.

### **3.2. *The importance of empirical study:***

Linguists have in general tended to rely on three sources for data: (i) native speaker intuition, otherwise referred to as *grammaticality judgment*, (ii) data from the linguists' intuition, otherwise referred to as *data from introspection* and (iii) empirical data collected from native speakers of the language.

In the earlier studies in CS, researchers made use of grammaticality judgments in data elicitation. Speakers were asked to judge utterances as to whether such utterances were acceptable or not. Grammaticality judgments are however fraught with difficulties. Notable among these difficulties are the fact that: (i) It is possible for the judgments of two native speakers to vary with respect to a particular utterance; (ii) As noted by Treffers-Daller (1991), such judgments tend to reflect attitudes towards language mixture rather than grammaticality or otherwise. Because CS is often a stigmatized variety, most speakers have been known to judge ungrammatical or to deny the very utterances they have been recorded using.

Data from introspection is most popular in theoretical linguistics. They usually consist of isolated examples of speech data either heard or invented by the author. Tokens such as these have often been reported as counter-examples to constraints on CS. This type of reporting is faulty for three principal reasons: 1) There is a clear qualitative and quantitative difference between what is grammatically possible in a language and the recurrent and systematic patterns which actually obtain in the speech of members of a speech community. Thus, even though the analyst is able to "invent" a supposed counter-example to an existing constraint on language mixing, it offers no evidence that such a token may occur in the speech of bilinguals in the speech community. 2) You cannot introspect a loanword, which by definition enjoys a certain degree of insertion in the community and the lexicon. 3) Because the constraints on CS are not absolute constraints, as they have sometimes been viewed (e.g. Myers-Scotton, 1992, 1993; Nartey, 1982, Bokamba, 1987; Eliasson, 1989; Kamwangamalu, 1989 etc.), but are created to account for as much of the data as economically as possible, a few instances of even actual counter-examples cannot be taken to constitute evidence that such constraints should be

abandoned. A single occurrence cannot invalidate a pattern. It is only when a particular constraint can be shown to be frequently violated that a call for revision is in order.

Given the problems with the two types of data often used in the CS literature, only an empirical study which examines language as actually used by the speakers can offer insight into language contact. Such studies are based on (tape)recorded speech of the speakers, as is the case in this dissertation.

### **3.3. Data collection:**

Because we aimed at collecting authentic natural language in interactional situations, our sampling was done via personal contacts among speakers who know each other well and who share the same social network in two of Nigeria's metropolitan cities, namely Enugu and Lagos. All speakers also belong to the same social network as the researcher. In addition, the following conditions were set for inclusion in the sample:

- All speakers must have Igbo or English as their first language;
- All speakers must use Igbo and English in their daily lives;
- All speakers must have a high school diploma or better from Nigeria, where English is the official language of education.
- All speakers must live in big cities and interact with people who speak other languages.

The benefits of a sampling method which focuses on speakers sharing the same social network with each other and with the research cannot be overemphasized, especially for the study of a stigmatized language contact phenomenon such as CS. One such benefit is

the creation of an environment that is propitious to the use of natural speech. This assists in generating a speech sample representative of the way the people actually speak.

The informants comprise 20 adult Igbo-English bilinguals ranging in age from 18 to 45. Of this number, there were 9 women and 11 men. The informants include teachers (N = 3), traders (N = 5), students (N = 9). In addition to these occupations, there were also 1 clerk, 1 contractor and 1 homemaker in our sample. The following table summarizes the occupation and sex of our informants.

**Table 1: Distribution of informants according to occupation and sex**

<b>Occupation</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
Teachers	2	1	3
Traders	5	-	5
Students	4	5	9
Contractor	-	1	1
Home maker		1	1
Office worker	-	1	1
<b>Total</b>	<b>11</b>	<b>9</b>	<b>20</b>

All speakers are bilingual, being fluent in both Igbo and English. All were born and raised in Nigeria and have Igbo as their first language while English was learned at school age. The speakers are all highly educated with 7 of them having University degrees. Of the remaining 13, 3 were University students while 10 were high school graduates. Having studied in Nigeria where English is the official language and the

language of all advanced education, the speakers have all been educated almost entirely in English.

**Table 2: Level of education of informants**

<b>Education level</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
University Graduate	4	3	7
University Student	-	3	3
High School	7	3	10
<b>Total</b>	<b>11</b>	<b>9</b>	<b>20</b>

Fourteen of the speakers were resident in Nigeria at the time of interview. All 14 speakers lived in big cities. Recall from our discussion in chapter 1 that there is intense language contact in Nigerian cities. In addition to living in big cities, all speakers reported using Igbo at home with their families.

Six of the speakers were residing in Canada at the time of interview. Of those residing in Canada, five resided in Ottawa and one in Montreal. Even though Igbo speakers did not reside in any blocks as has been the case in many immigrant communities (see e.g. Poplack, 1980a), they all belonged to Igbo associations in Ottawa and Montreal and maintained strong ties with Igbo speakers in both Canada and Nigeria as a condition for inclusion in the sample. All spoke English at work and in other public situations.

One would expect that the 6 speakers resident in Canada would use English a lot more than the speakers resident in Nigeria, and that this disparity in usage would affect their speech patterns. Our preliminary study of the speech patterns of the speakers resident in

Canada vis-à-vis those resident in Nigeria revealed that this is not the case. We found no qualitative or quantitative differences in the speech patterns of these speakers<sup>4</sup>. We will, therefore, not separate the two categories of speakers in the rest of our study.

In issues of language contact, one social factor that is expected to play a major role is language use. Only speakers who, on a daily basis, use the two languages in contact can justifiably be termed balanced bilinguals deserving inclusion in a sample used to study language contact. The demographic information supplied by our informants and the researcher's personal knowledge of these speakers assured us that they all use Igbo and English in their daily lives, and hence are balanced bilinguals meeting all the stated conditions for inclusion in the sample.

Because manifestations of language contact are often stigmatized, as is the case of Igbo-English CS, often stereotypically referred to as *Engligbo*, eliciting informal or vernacular speech is not always an easy task. One way of resolving this problem is the use of interlocutors who are either in-group members or who fulfill the conditions for in-group membership. For this reason, data were collected by me among speakers with whom I share the same social network. Most of the speakers were friends or friends of friends. This uniquely qualifies this corpus as one of the few datasets collected by an analyst who

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<sup>4</sup> It is not surprising that the speech patterns of our Canadian residents did not differ from those of the Nigerian residents. All the Canadian residents migrated to Canada as adults who were already fluent in Igbo before leaving in Nigeria and none had been in Canada for more than three years prior to the time of the interview. In addition, they reported the use of Igbo in their daily lives in Canada. Our preliminary result is also in line with that of Tagliamonte, Poplack and Eze (1997) who observed little or no influence of English on the plural marking patterns of their NPE informants resident in Canada at the time of interview. In fact, their study showed that phonological factors which have recurrently been shown to condition the marking of plural in English were of no effect for their speakers, while the factors of animacy and nominal reference which have no effect in English condition the plural marking of their speakers.

not only satisfies the bilingual requirement, but is also a member of the speech community under study.

Our quest for naturalistic data representative of the vernacular also requires that we circumvent the *Observers Paradox* (Labov, 1984; Poplack, 1989). This entails the use of devices which minimize the effects of the interview situation. Interview protocols were formulated to contain questions which enable the informants to recreate some emotional experiences and consequently pay less attention to their speech (Poplack 1989). For instance, the Nigerian data was collected in the summer of 1994, a time of severe political instability in Nigeria. Most city (e.g. Lagos, Enugu, Port Harcourt) residents were emotionally involved in the political on-goings in the country, and did not hesitate to discuss these situations passionately.<sup>5</sup> Our interview protocol was designed to elicit such emotion by asking informants for their views on the political issues at stake. The length of the interviews was at least one hour of the speech of each informant. Although we did not engage in any surreptitious recordings, the use of unobtrusive lavalier microphones further lessened the effect of the interview situation.

The resulting corpus contains copious examples of all the types of language contact phenomena that are of interest to us, including, items within unmixed portions of each of the languages, lone items from one language incorporated into the discourse otherwise of the other language, as well as items within multiword fragments of both languages. Such copious occurrence of the contact phenomena under study is crucial in variation studies, since sufficient data are required to establish patterns of occurrence and co-occurrence.

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<sup>5</sup> Our speakers were guaranteed complete anonymity. They were informed beforehand that: (a) their real names would not be used under any circumstance as each speaker was assigned a pseudonym. (b) their speech would be used purely for academic purposes. (c) no views, whether political or otherwise, expressed in the course of the interview would have any repercussion on them.

### 3.4. *Method of analysis:*

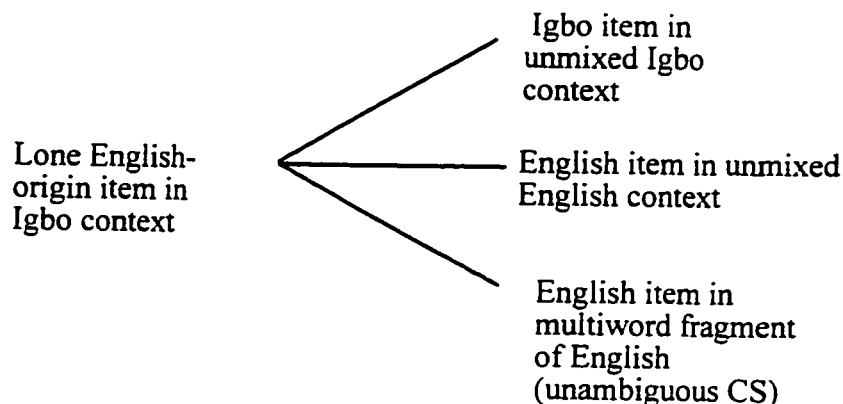
#### 3.4.1. *The Comparative Method:*

Central to this thesis is the comparative method of analysis first introduced in Sankoff *et al.* (1990). This method involves using facts of variability and drawing on especially (but not exclusively) the differing properties of the unmixed portions of the two languages to determine the status of contentious forms.

This method begins with the assumptions that a codeswitched item exhibits patterns similar to its counterparts in its language of origin (the donor language), while a borrowed item exhibits patterns similar to its counterparts in the language into which it is incorporated (the recipient language). This means that with regards to some predetermined diagnostics (mostly the areas where the two languages differ), English-origin lexical items contained in multiword fragments of English should pattern like their counterparts of unmixed English, while Igbo lexical items contained in multiword fragments of Igbo should pattern like their counterparts of unmixed Igbo. On the other hand, Igbo-origin items *borrowed* into English should pattern like unmixed English and not unmixed Igbo, while English-origin items *borrowed* into Igbo should pattern like unmixed Igbo and not unmixed English. Thus, crucial in this comparative method are not only the contentious forms, say the lone lexical incorporations, but also the unmixed portions of each language which occur in the same dataset.

In order to determine the status of lone English-origin items, therefore, a three-way comparison is carried out as shown in the following diagram:

**Figure 1: A three-way comparison of data (c.f. Poplack and Meechan 1995)**



We return to the definition of these contexts shortly. It will suffice for now to note that this method enables us to test the behavior of lone English-origin lexical items in Igbo discourse including verbs as in (4a) repeated for convenience as (11a), nouns as in (3b) repeated as (11b) and adjectives as in (11c).

(11a) Ì ghòtàrà ihe m *mean-iri?*(1/037)  
 You understand thing I mean  
 "Do you understand what I mean?"

(11b) Anyị bànyèrè n'ime *bedroom* ha nòdu (1/040)  
 We entered inside bedroom their stay  
 "We entered inside their bedroom and stayed there"

(11c) Ọ dì *shy* (3/243)  
 "He is shy"

The comparative method is most revealing in areas where there are structural contrasts between the two languages. We, therefore, focus on these areas of structural contrast. For instance, verbal affixation is conditioned by the rule of vowel harmony in Igbo, a rule which is absent in English. This means that if the lone English-origin verbs in Igbo

context as exemplified in (11a) above adhered to the rule of vowel harmony, just like the unmixed Igbo verbs, there can be no question as to which language was underlying them. We would be justified in classifying such verbs as borrowings into Igbo. In this case, the verb *mean-iri* cannot be taken as constituting a violation of the FMC since it is the product of the process of borrowing which is independent of CS and its constraints. But if the lone English-origin verbs systematically fail to participate in Igbo rules, and at the same time follow English rules, then we have no option but to classify them as codeswitches since they are retaining the rules of English, their language of origin.

The same procedure is applied to the lone English-origin nouns as in (11b) using a different set of diagnostics. There exists a structural contrast between Igbo and English in, among others, the areas of *modifier usage*, *linear structure of the NP* and *the expression of nominal reference*. If the lone English-origin nouns in Igbo discourse are codeswitches, the comparative method will reveal them to pattern like their counterparts in unmixed English and multiword codeswitches from Igbo to English. If this could be established, the sequence *bedroom ha* in (11b) would constitute an actual violation of the EC. But if the method shows the lone items to pattern like their counterparts in unmixed Igbo as well as multiword CS to Igbo, the items can only be construed as borrowings and not counter-examples to the EC.

The diagnostic areas for adjectives include the type of adjectival expression as well as the preceding verbal element. Igbo uses predominantly adjectival nouns while English uses predominantly true adjectives. Thus, there is categorial non-equivalence in the use of adjectives in the two languages. This means that if the lone English-origin adjectives in Igbo contexts, though semantically true adjectives, show co-occurrence tendencies typical of unmixed Igbo, then we must classify them as borrowings. In this case again, the CS constraints would have no purview over them. But if they show patterns of English, then

we have to treat them as codeswitches to the language and proceed to determine the effects of such categorial non-equivalence on CS constraints.

In the case of unambiguous CS, where the comparative method *per se* may not be relevant, the quantitative technique still enables us to determine the frequency and patterning of switched elements.

### **3.5. Defining the Corpora**

It is our contention that no valid characterization of bilingual grammar can proceed without a prior classification of forms. In CS research, the issue of determining which portion of the bilingual discourse belongs to which of the languages is an unresolved issue. We have already discussed the problems encountered by studies which attempt to determine the matrix language based on some theoretical and or social factors. Here we present an alternative method of defining the corpora following the works of Poplack and Meechan (1995), Eze (1993, 1995) and Turpin (1996). We classify our bilingual corpus into three divisions: *the unmixed materials*, *the lone lexical items* in other-language discourse and *the multiword fragments*. These theoretically yield 6 corpora as shown below.

#### **3.5.1. Unmixed Materials:**

The unmixed portion of the data comprises two corpora, namely unmixed Igbo and unmixed English materials. A lexical item is considered to be in the unmixed Igbo context if it is bordered on both sides by Igbo materials, as is the case of the noun *nwata*

in (12a), or is bordered only on one side by Igbo materials, provided it appears clause-initially or clause finally as in *asusu* and *mmadu* in (12b) and (12c) respectively.

- (12a) A-nà           `m     akwò   *nwatà* n'     àzụ (1/132)  
 CL-AUX     I     carry   child   PREP   back  
 "I carry a child at the back"
- (12b) *Asùsù*           be     anyị   dị     ichè   ichè (6/010)  
 Language   home   our    is     different   different  
 "Our languages vary"
- (12c) Haà   wepùta           ùtàrì   ahù   shù-we       *mmadù* (1/052)  
 They   brought           canes   that   whip-INCEP   person  
 "They brought out the canes and started whipping people"

As in unmixed Igbo, a noun was coded as unmixed English if it is bordered on both sides by English materials as in the case of the noun *plan* in (13a), or is bordered only on one side by English materials, provided it occurs clause-initially or finally as in the cases of *education* and *food* in (13b & c), respectively.

- (13a) I can't have any *plan* for my future (4/044)
- (13b) *Education*, she couldn't go anywhere. (8/390)
- (13c) There is no more *food* (6/086)

This classification applies to all categories of speech studied here, including verbs and adjectives.

### 3.5.2. Lone lexical items incorporated into the discourse of another language.

As in the unmixed materials, we shall distinguish between two categories of lone other-language materials: lone English-origin nouns in otherwise Igbo context and lone Igbo nouns in otherwise English context.

A noun is considered a lone English-origin noun in Igbo discourse if such noun is etymologically English, but appears in a structure that is Igbo, as illustrated in *confession*, *manager* and *accident* in (14a) through (14c) below:

- (14a) A      nà      àchọ   inweta      *confession*   n'      aka    ha (2/138)  
 CL    AUX   want   INFget      confession   PREP   hand   they  
 "One is seeking to get a confession from them"
- (14b) *Manager*   bùnù   onye      nọ-zì   òbòdò   oyibo (8/358)  
 Manager      is      person   stay-PRES   land   foreign  
 "The manager is now abroad"
- (14c) Ihe      niile   agazie      n'      *accident* (1/076)  
 Thing   all      went      PREP   accident  
 "Everything was considered as an accident"

An Igbo noun is considered to be in an English context if it is bordered on both sides by English items as exemplified with *ite* in (15) below:

- (15) They   will   start   bringing      *ite*   to take back food (8/188)  
 They   will   start   bringing      pots   to take back food"

### 3.5.3. Multiword fragments

A sequence of more than one lexical item (excluding compounds, frozen expressions, etc.) from the same language was classified as a multiword fragment. Again, illustrating

with sequences involving nouns, the following fall under the category of *multiword fragments* :

(a) A stretch of English items juxtaposed within a sentence with Igbo materials, as in *But the person* in (16a);

(b) A sequence of Igbo items, juxtaposed within a sentence with English materials as in *nwa ahu amaghi nne ya* in (16b).

(16a) *But the person*      *gakwa aru oru* (U/066)  
 But the person      will work work  
 “But the person will work”

(16b) In real fact, *nwa ahu amaghi nne ya* (3/168)  
 In real fact, child      that know-NEG      mother it  
 “In real fact, that child does not know its mother”

The classification of items according to corpora may then be summarized as in Table 3.

**Table 3: Classification of items in the corpora.**

#	Language configuration			Classification
	Preceding context	Noun	Following context	
1	Igbo	<b>Igbo</b>	Igbo	Unmixed Igbo
2	English	<b>English</b>	English	Unmixed English
3	Igbo	<b>English</b>	Igbo	Lone English in Igbo context
4	English	<b>Igbo</b>	English	Lone Igbo in English context
5	Igbo	<b>English</b>	English	English multi-word fragments
6	Igbo	<b>Igbo</b>	English	Igbo multiword fragments

The classification of items according to corpora as described above has a number of advantages over the earlier methods. First, it circumvents one of the most disturbing problems in CS study, namely the identification of the matrix language. We saw in the previous chapter that this is yet an unresolved issue which has greatly impacted some of the constraints on intrasentential CS. Second, it affords us the opportunity of comparing the distribution and patterning of items from different corpora. The comparative method cannot proceed without such distribution.

What, then, are the benefits of the comparative method, especially in the quest to disambiguate other-language materials incorporated into the discourse of another? Rather than make unproven claims about the status of forms, the method allows us to situate such contentious forms within the framework of the entire set of contextual possibilities available to the bilingual. We are, thus, able to take account of the unmixed contexts, the lone other-language incorporations as well as the multiword contexts. When patterns of the contentious form are compared with the patterns of all available possibilities, we are in a position to determine the context with which such forms correlate and consequently their language membership. The comparative method, therefore, offers one of the most scientific means of determining the patterns of bilingual behavior.

### **3.6. Coding procedures:**

From 30 minutes to one hour of tape-recorded conversation of each of the speakers described above, all utterances of every speaker was extracted, irrespective of language. For the sake of clarity, we will discuss the coding procedures in relation to the different studies that appear in subsequent chapters.

## CHAPTER 4

### 4. Lone English-origin verbs in Igbo discourse:

#### 4.1. Introduction:

Single words with morphology from another language as in (17a-d) have been widely reported as violations of Poplack's (1980) and subsequent formulations of the *Free Morpheme Constraint* (FMC) which, as stated in chapter 1 of this thesis, predicts that a *switch* may not occur between a bound and free morpheme if the free morpheme is not morphologically, syntactically (and optionally phonologically) integrated into the language of the bound morpheme (see, for example, Bokamba, 1987; Berk-Seligson, 1986; Petersen, 1980; Nartey, 1982 and Myers-Scotton, 1992, for discussion).

- (17a) Ì ghọtàrà ihé m *meaniri*?(1/037)  
 You understand thing I mean  
 "Do you understand what I mean?"
- (17b) tajbqa *j-confronter* ces *idees*  
 he keeps IMPERFECT-oppose these ideas (Bentahila and Davies 1983)
- (17c) *I'm lav-ing* pandakages (Petersen 1980)  
 'I am make-ing pancake-s'
- (17d) han som blev *kill-ad* i kriget (c.f Petersen 1980)  
 'he who was kill-ed in the war'
- (17e) Ò ga-ghi ème gi *irritate* (2/202)  
 It will-NEG do you irritate  
 'It will not irritate you'

Tokens such as those in (17) have been reported from virtually all language pairs studied in the context of CS, including Arabic/French as in (17b), Danish/English as in (17c) and Swedish/English as in (17d).

All the research purported to demonstrate the violations of the FMC are, however, based on anecdotal reportings of isolated examples taken out of context. But as mentioned in chapter 1, the FMC does not altogether rule out single word mixture of those two languages; it only predicts that a specific type of mixture, namely CS, may not occur between a free morpheme from one language and a bound morpheme from another. This means that borrowings, most of which are linguistically integrated, and thus, superficially feature elements from the two languages, do not constitute violations of the FMC. Anecdotal reporting of data is thus not helpful in determining the status of these single-word mixtures since it does not allow us to see whether the form in question is actually a CS or a borrowing.

For such examples as in (17) to constitute violations of the FMC, they have to be empirically demonstrated not to be borrowings but to be CS. To demonstrate for instance that the English-origin verb in (17a) is a CS, we would have to show that it does not grammatically pattern like unmixed Igbo verbs, and does pattern like English verbs. To demonstrate that it is a borrowing, we would have to show the opposite; that is, that it patterns grammatically like unmixed Igbo verbs and does not pattern like English verbs. The type of rigorous methodology and adequate data required to do this have been lacking in the literature. Consequently, such forms as in 1 whose status as CS or borrowing has not been determined, have remained contentious and are continuously being presented as exceptions to the FMC.

In this chapter, we principally test the validity of the FMC by examining the status of English-origin verbs occurring with Igbo morphology as exemplified in (17a). In addition to the single Igbo verbs with morphology from Igbo, we also examine the lone English-origin verbs which appear in otherwise Igbo discourse but feature no morphology as illustrated with *irritate in* (17e) above. This will serve as the commencement of our inquiry into the status of lone English-origin materials incorporated into the discourse of Igbo, an inquiry that continues in the next two chapters.

The operational definition of CS and borrowing adopted in this chapter and in the rest of the dissertation are as given in Poplack, Sankoff and Miller (1988b) and Poplack (1993 etc.) and reproduced in chapter 1. According to these definitions, CS is the juxtaposition of sentences or sentence fragments, each of which is internally consistent with the morphological and syntactic (and optionally, phonological) rules of the languages of its provenance. Borrowing on the other hand, is the *adaptation* of lexical material to the morphological and syntactic (and usually, phonological) patterns of the recipient language.

We have stated in chapter 2 above that we draw no distinction, except quantitative, between a *nonce* borrowing and an established loanword. To recapitulate, we maintain that, unlike established loanwords which are widespread and recurrent, nonce borrowings need not be attested in the monolingual lexicon. Other than that, these nonce borrowings are structurally identical to established loanwords.

Assuming these operational definitions of CS and borrowing, the status of forms such as those in (17a) is easily demonstrable using both the variationist framework, which relies on the distribution and patterning of forms rather than on relations of all or nothing, and

the comparative method, which enables us compare these lone English-origin verbs with their counterparts in the unmixed languages, based on set diagnostics.<sup>6</sup>

We focus here on two such diagnostic areas, namely morphophonemic and morphological. The morphophonemic diagnostic will compare the application of vowel harmony (VH) on English-origin-verbs with Igbo morphology and unmixed Igbo verbs. VH is an area that has not been examined in any work on CS and borrowing known to us. The morphological diagnostic will compare the affixation processes in English-origin verbs with those of unmixed Igbo and unmixed English verbs. If the English-origin verbs quantitatively fail to pattern like unmixed Igbo verbs in terms of these diagnostic areas, but instead pattern like English verbs, then we can conclude that they remain English verbs and are, therefore, single-word CS. If, on the other hand, they pattern like unmixed Igbo verbs, we are left with only one conclusion, namely that these English-origin verbs have been borrowed into Igbo and, irrespective of etymology, must be considered Igbo verbs, if only for the nonce, over which the FMC has no purview. If the English-origin verbs in (17a) are shown to quantitatively pattern like borrowings, this would weaken the status of the purported violations as counter-examples to the FMC.

#### **4.2. Coding**

Our object of study being the verbs, we have extracted all verbs from one hour of the speech of all informants, irrespective of the language of the etymology of these verbs. The copula, being invariably bare forms<sup>7</sup> in both languages, were excluded from the

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<sup>6</sup> Note that we do not compare the lone English-origin verbs with multiword fragments because there were English nouns in multiword fragments of English do not have Igbo affixes. The diagnostics of vowel harmony and affixation employed here do not, therefore, apply to them.

<sup>7</sup> By this is meant that Igbo does not attach affixes to the copula. We also did not find any instance of an English copula taking an Igbo affix even though English draws a distinction between the present and past forms of the copula. Including the copula will disproportionately increase the number of bare verbs in the data and yield spurious

analysis since it will not make an appropriate diagnostic for the behavior of English-origin verbs. Over 2,100 verbs were retained then for quantitative analysis. Those retained comprise over 1,000 unmixed Igbo verbs and an approximately equal number of English-origin verbs in mixed discourse. Also retained were 100 unambiguous unmixed English verbs.<sup>8</sup> Unmixed English verbs are included here to allow for a systematic comparison between them and the English-origin verbs in otherwise non-English context. This will enable us determine whether the English-origin-verbs in otherwise non-English contexts are behaving like English verbs or unmixed Igbo verbs with which they will also be compared. All three categories of verbs were separately coded for the same range of factors where possible, to make for easy and systematic comparison of the behavior of these verbs according to the diagnostic areas.

The coding system is created to allow for at least three independent analyses to determine the behavior of verbs according to these diagnostic areas. All factor groups and the factors included in each are further described in the relevant sections, followed by a summary of the predictions and results. Other findings are also reported as the need arises.

In order to effectively compare the English-origin verbs with their counterparts from the unmixed portions of the languages, we must understand the operation of the criteria used as diagnostic in these languages. Hence, we begin by examining the diagnostic areas in Igbo and English. Note, however, that since vowel harmony is not a rule of English, its description is necessarily limited to its operation in Igbo. Also, the discussion on

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results. One may want to argue, however, that the fact that the English copula fails to take Igbo affixes is because the Igbo equivalents of these copulas do not take affixation, an indication that the English verbs that took Igbo affixes are actually functioning as Igbo verbs.

<sup>8</sup> A verb is regarded as unmixed English if it is bordered on both sides by English materials and unmixed Igbo if bordered on both sides by Igbo materials. The term mixed discourse will be used to refer to contexts in which a verb is bordered on one side by Igbo materials and on the other by English materials.

affixation is disproportionately weighted towards Igbo, given that the language is presumably less familiar to the reader.

#### 4.2.1. Vowel Harmony

##### 4.2.1.1. *Vowel Harmony in Igbo:*

Igbo, unlike English, possesses a system of VH which equally divides the eight vowels of Igbo into two harmony sets<sup>9</sup>:

(18) Set A: i, e, u, o

Set B: ị, ẹ, ụ, ọ

There have been indications in the literature that Igbo VH is controlled by the advanced tongue root position (ATR) in the articulation of the vowels. Group A vowels are characterized by a relatively advanced tongue root position when they are articulated and can, therefore, be marked [+ATR] while group B vowels are characterized by a relatively retracted tongue position during their articulation and can consequently be designated [-ATR] (See Stewart, 1971; Emenanjo, 1978). Figure 2 (cf. Emenanjo, 1978:4) shows the position of these vowels in an Igbo vowel chart:

#### Figure 2

#### Igbo Vowel Chart

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<sup>9</sup> Apart from *e* and *a* from sets A and B respectively, the difference between the vowels of the two sets are orthographically realized by inserting diacritics under the vowels of set B.



At first sight, this diagnostic appears difficult to operationalize for the reason that some English vowels do not exist in Igbo. Igbo, for instance does not have the vowel /ʌ/. How then can we determine whether the English vowel of *hurt* in (20a) harmonizes with the vowel of the Igbo affix *-ri* or not? Also, since Igbo does not have long vowels or diphthongal glides, how is the vowel of the English-origin verb *like* in (20b) to be treated with respect to the rule of VH? Theoretically, one would also expect a problem with the vowel /ɛ/ in (20c). This vowel exists in several dialects of Igbo such as Udi, but not in the standard. How would the speakers of the dialects in which /ɛ/ does not exist handle the English origin verb *select* with respect to VH in the case of (20c) where it takes Igbo affixes?

- (20a) Q     *hurt-i-ri*     my feelings (2/380)  
 He     hurt-V-PST     my feelings  
 ‘He hurt mu feelings’
- (20b) Ya     `onweya     *like-i-ri*     ya (2/019)  
 He     himself     like-V-PST     him  
 ‘He himself liked him’
- (20c) Anyị     *seleOt-i-chaa*     onweānyị (1/041)  
 We     select-V-ENC1     ourselves  
 ‘We finished selecting ourselves’

These differences between the vowels of English and Igbo do not, however, pose any problem for our data, nor for VH as a diagnostic for determining the status of these English origin verb. Even though English origin verbs such as *hurt* are attested in my data, the vowel /ʌ/ in it is not. Instead, the vowel /ɑ/ is used in its place<sup>11</sup>. Also, glides are not attested in the data so that /ai/ of *like* in (20b) above is realized as a sequence of two

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<sup>11</sup> We note that Nigerian English in general is an *r*-less dialect.

vowels /a/ and /ɪ/. What the speakers appear to be doing, therefore, is using the Igbo approximations of the vowels that are not common to both languages.

In Igbo, a verb may also be formed by the concatenation of two verb roots (compounding) as in (21) where the combination of the stems *gba* (dance) and *nye* (give) gives the meaning of *dancing with*.

- (21) Boys *nà-à-gba-nye-re*                      ha      egwu (1/201)  
 Boys AUX-PART-dance-give-PST them      dance  
 'Boys were dancing with them'

VH is not as clear-cut for compound verbs as it is for simple verbs. Because the two elements in a compound verb are verb roots and not affixes, they may not necessarily harmonize as is the case in (21) where the vowel of *gba* (dance) comes from group B while that of *nye* (give) comes from group A.<sup>12</sup> However, affixes attached to compound verbs must harmonize with the root nearest to them as the participle *a-* in (21) further shows. We observe that the prefix *a-* is from the same vowel group as the first position vowel in the verb *gba*. The vowel of the *-rV* suffix *-re* on the other hand is selected from group A, harmonizing with *nye*. We will describe this kind of harmony in compound verbs as compound harmony as opposed to simple vowel harmony applicable in simple verbs.

#### 4.2.1.1.1.Factors

##### 4.2.1.1.1.1.Vowel group of verb:

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<sup>12</sup> It must be noted that full VH is not ruled out in compound verbs but only if the vowels of the two roots are from different groups in which case compound harmony results in a way that becomes clear shortly. The compound verb *bu-je* (carry to) for instance, has two roots *bu* (carry) and *je* (to). Note that the vowels of the two roots are from group A. The past form of this verb is then realized by the affixation of the *-rV* suffix as in *buje-re* (carried to). We see then that there is simple harmony between the vowel of the affix and the vowels of the stem.

To test for the application of vowel harmony, verbs were coded for the vowel group of the verb. A verb may have vowels that are equivalent to or approximate vowels from group A as in (22a) or group B (in bold print) as in (22b). A verb may also have vowels from the two groups as in the case of compound verbs in Igbo and certain English origin verbs. In this case, a group A vowel may be followed by a group B vowel as in (22c) or vice versa as in (22d).

- (22a) M *feel-ie* that o nwee-na *another edge over me* (2/050)  
 M feel-PST that he has-PERF another edge over me  
 'I felt that he now has another edge over me'
- (22b) *work-**u**-ghi* (4/2.50)  
 It work-V-NEG.  
 'It did not work'
- (22c) Mu *na* ya ***e-discuss-u**o* ya (4/2.53)  
 I and he PART-discuss-SUFFIX it  
 'He and I will discuss it'
- (22d) *Some of them na- a- hallucinate* you know (2/205)  
 Some of them AUX.-PART-hallucinate you know  
 'Some of them hallucinate you know'

#### 4.2.1.1.1.2. Vowel Group of Prefix:

Testing the application of vowel harmony requires not just determining the vowel group of the verb but also that of the affixes. All English origin verbs with Igbo prefixes have been coded for whether the prefix is from group A as in (23a) or B as in (23b). This is to ascertain whether certain affixes have a higher tendency to occur with a particular vowel group.

- (23a) ǀ ma-kwà ihe bu i-beat-i mmadu  
 CL know-ENCL thing is PFX-beat-V person  
 'Do you know what it means to beat a person'
- (23b) Anyị na-a- plan wedding  
 We AUX.-PART- plan wedding  
 'We are planning a wedding'

#### 4.2.1.1.1.3. Vowel Group of suffix:

As with the prefix, verbs with suffixes were coded for the vowel group of these suffixes as in (24a) for suffixes with group A vowels, and (24b) for suffixes with group B vowels.

- (24a) Ha ejezie wag-i.e. war (1/026)  
 They go wage-PST war  
 'They went and waged a war'
- (24b) Ha realize-ì-ri nà pàpa anyị adi--ghị wicked (1/013)  
 They realize-PST that father us be-NEG wicked  
 'They realized that our father was not wicked'

#### 4.2.1.1.1.4. Application of vowel harmony

One crucial factor in determining whether English origin verbs are adapting to Igbo is whether the affixes they take are being conditioned by the rule of vowel harmony in the same way as the unmixed Igbo verbs and their affixes (See Emenanjo 1978). Verbs have been coded for whether vowel harmony applies fully as in (25a) or does not apply at all as in (25d) for unmixed stretches and (25e) for lone English origin verbs. Because English origin verbs may not have vowels from the same group, since vowel harmony is not a rule of English, we expect the rule of compound harmony to apply in some of the

English origin verbs in a way similar to the compound harmony of compound verbs in Igbo where prefixes harmonize with first position vowel and suffixes with last position vowel. English origin verbs have, therefore, been coded as to whether their prefixes harmonize with first position vowel as in (25b) and suffixes with the vowel of the last position vowel as in (25c).

- (25a) Mmadù      gà-àgwa      ya      **chang-ie**  
 Person will-tell      him      change-SUFFIX  
 'Someone will tell him to change'
- (25b) Some of      them *nà*      -a-      **hallucinate**  
 Some of      them AUX-PART-      hallucinate  
 'Some of them hallucinate'
- (25c) Ndi      **commit-i-ri**      petty      crimes  
 People commit-PST      petty      crimes  
 'People who committed petty crimes'
- (25d) A      **na-a**      **jide**      ya      aka (L/013)  
 CL      AUX      hole      him      hand  
 "It is held in the hand"
- (25e) Ha      **nà-a**      **define**      ya      kà      ndi      ọcha (5/20.13)  
 They      AUX      define      it      like      those      white  
 "They define it like the whites"

#### 4.2.1.1.5. Number of vowel groups in verb:

English origin verbs have also been coded for the number of vowel groups in them. English origin verbs with only one vowel group such as in (26a) should show simple harmony in the same pattern as simple verbs of occurring in unmixed stretches Igbo if such English origin verbs are being integrated into Igbo. Also, English origin verbs with more than one vowel group as in (26b) should show compound harmony in the same way

as compound verbs of Igbo if they are being integrated into Igbo. Violations of the VH rule should result in English origin verbs if the English origin verbs are not integrated into Igbo.

(26a) Pàpa anyị **support-iri** ̀anyi (2/092)  
 Father us support-PST us  
 ‘Our father supported us’

(26b) Some of them **na-a-hallucinate** (1/205)  
 Some of them AUX-PART-hallucinate  
 ‘Some of them are hallucinating’

#### 4.2.1.1.1.6. Type of Igbo verb:

To replicate for the purpose of comparison the coding of *number of vowel groups* in English origin verbs, all verbs occurring in unmixed stretches of Igbo have been coded for the type of verb they are, that is whether they are simple verbs (27a) or compound verbs (27b). It is expected that simple harmony will be favored when the verb is a simple verb since compound verbs need only adhere to the rule of partial vowel harmony.

(27a) Hà **alụ-wa** gi (2/159)  
 The marry-INCEP you  
 ‘They have started marrying you’

(27b) Ha **gbà-gbàrù** ya (1/161)  
 They shoot-killed him  
 ‘They shot him to death’

#### 4.2.1.2. Results and analysis :

The first diagnostic for measuring the integration of English origin verbs to Igbo is the rule of vowel harmony. Table 4 compares the application of vowel harmony between the English origin verbs and Igbo verbs occurring in unmixed stretches of Igbo.

**TABLE 4: Application of vowel harmony on ENGLISH ORIGIN VERBS and UNMIXED (MONOLINGUAL) IGBO verbs**

Language of origin of Verb	Simple harmony		Compound harmony		No harmony		Total
	N	%	N	%	N	%	N
English origin	787	90	82	9	1	-	870
Unmixed Igbo	864	94	54	6	1	-	919

The most striking result as can be seen from this table is that outright violations of vowel harmony are extremely rare in verbs both of English origin and unmixed Igbo stretches. Only 1 such violation occurred in each. This runs contrary to what is expected if the English origin verbs are not integrated into Igbo. We find from this table that English origin verbs showed a high percentage of simple harmony (90%) similar to the 94% of simple harmony of the unmixed Igbo verbs. Compound harmony accounts for 9% of the English origin verbs and 6% of the unmixed Igbo verbs. The results are strikingly similar and clearly demonstrates that on the basis of vowel harmony, an all important morphophonemic rule of Igbo, the English origin verbs are being integrated into Igbo.



Verb										
Simple Verb	770	99	4	1	2	-	1	-	777	85
Compound Verb	94	66	27	19	21	15	-	-	142	15
<b>Total</b>	<b>864</b>	<b>94</b>	<b>31</b>	<b>3</b>	<b>23</b>	<b>2</b>			<b>919</b>	

**Table 6: Application of vowel harmony according to number of vowel groups in ENGLISH ORIGIN VERBS**

Number of Vowel groups in Verb	Simple Harmony		Prefix = first position vowel		Suffix = last position vowel		No Harmony		Total	
	N	%	N	%	N	%	N	%	N	%
1 Vowel group	785	100	-	-	1	-	-	-	786	90
2 Vowel groups	-	-	38	45	45	54	1	1	84	10
<b>Total</b>	<b>785</b>	<b>90</b>	<b>38</b>	<b>4</b>	<b>46</b>	<b>5</b>	<b>1</b>	<b>-</b>	<b>870</b>	

How then can we describe the behavior of English origin verbs with vowels from more than one group? Since there was only one violation of the rule of vowel harmony in English origin verbs, and since in all such cases, prefixes harmonized with first position vowel (45%) and suffix with last position vowel (54%) as can be seen from Table 6, it is evident that the speakers are subjecting these verbs to the same morphophonemic rule of vowel harmony in exactly the same way as it applies to compound verbs occurring in unmixed stretches of Igbo. This strict compliance to the rule of vowel harmony (even to the finest details of compound harmonization) of the English origin verbs offers us the first piece of concrete evidence that English origin verbs are being treated like Igbo verbs

and, therefore, constitute borrowings and not CS. These cannot, therefore, be seen as violations of the FMC.

## 4.2.2. Affixation

### 4.2.2.1. Affixation in Igbo and English

Igbo verbal morphology features a rich variety of tense/mood/aspect affixes. As already indicated, the process of affixation in Igbo is inextricably linked with the rule of VH in the sense that the vowels of all affixes must also harmonize with the vowel(s) of the verb stem in the way described above. What follows now describes the range of affixes in Igbo:

**Infinitive:** This is formed by prefixing a harmonizing *i/i-* to the stem of the verb as in (28a) and (28b):

- (28a) Group A      Ha    chọ̀rọ̀            i-nye    ya    egō̄ (2/069)  
 They    wanted INF- give    him    money  
 ‘They wanted to give him money’
- (28b) Group B      Ha    nwereike i- hu            gị    (1/016)  
 They    may    INF-see            you  
 ‘The may see you’

### Negative verb form marker -ghi/ghi

- (29a) Group A      Ndi    a            eje-ghi<sup>13</sup>            akwukwọ (1/032)  
 People this    go-NEG            book  
 ‘These people did not go to school’

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<sup>13</sup> It has become common in current literature to write the negative suffix as *ghi5* (group B) irrespective of the harmony group of the vowels of the verb to which it is attached. The vowels of this negative suffix are nonetheless still clearly conditioned by the rule of vowel harmony in oral speech.

- (29b) Group B      Ufọdu ha      ama-ghị (2/004)  
 Some them know-NEG  
 'Some of them did not know'

Affirmative **Indicative** verb form marker  $-rV^{14}$  where  $V$  is the last vowel of the verb root.

- (30a) Group A      È nyè- rẹ      ya      ọgwụ (2/323)  
 CL give-IND him/her medication  
 '(S)he was given a medication'
- (30b) Group B      Ha      màà-rà      ihe      o      gà      àbụ (3/3.00)  
 They know-IND thing it will be  
 'They know what it will be'

The inflectional open vowel suffix  $-e/-a$ ;  $-o/-o$  used in **imperatives**

- (31a) Group A      Nnenna, ri- e      raịsị (1/021)  
 Nnenna, eat-IMP rice  
 'Nnenna, eat some rice'
- (31b) Group B      Ju- o      m      ajuju  
 Ask-IMP me question  
 'Ask me a question'

The **participle** prefix  $e/-a-$

- (32a) Group A:      Nnu anyị ji e- ri      ihe      agwula. (1/137)  
 Salt we use PART-eat thing finish-PERF  
 'Our salt was finished'
- (32b) Group B:      M      ga-a-l ụ      nwoke a (1/111)  
 I will PART-marry man this  
 'I will marry this man'

<sup>14</sup> The  $rV$  suffix in the examples in (7) denote actions in the past. This is however not the only context in which the  $rV$  suffix may occur. The following example shows a present stative form taking the  $rV$  suffix.

Ada mà-rà mma  
 Ada VB- $rV$  beauty  
 'Ada is beautiful'

Since nothing crucial lies on this, I follow Emenanjo (1978) in using the term indicative for this affix irrespective of whether it marks action in the past or a stative in the present.

The inflectional **perfective** marker **(e)-le/(a)-la**:

- (33a) Group A: I mebi-**ele**(4/116)  
 You spoil-PERF  
 'You have spoiled'
- (33b) Group B: Onyeisi gi **achu-la** gi n'oru(4/107)  
 Boss you chase-PERF you PREP'work  
 'Your boss has dismissed you from work'

Extensional suffix marking **inception -we/-wa**

- (34a) Group A: Nòdu ebe a **ri-we** ya (1/023)  
 Stay place this eatINCEP it  
 'Stay here and it'
- (34b) Group B: Ha gàa **nà-wa** egō (3/0.46)  
 They go receive-INCEP money  
 'They should go and start receiving money'

**Conditional suffix:**

- (35a) Group A E **fegheri-e** gi, ò fee zàà (1/041)  
 CL swing you, it fly brightly  
 'If you are swung around, it will fly brightly'
- (35b) Group B M **nùchakwa-a** ya si kpè-we ya (1/058)  
 I fight it, let judge-INCEP it  
 'If I finish fighting, let them starting judging it'

English has limited verbal morphology when compared with Igbo. We will summarize this in the present, past, future, perfect and progressive (Quirk and Greenbaum, 1973).

The *present* is inflected with -s on verbs with third person singular subjects (e.g. *he eat-s*). With all other subjects, there is no overt marking on the verb. (e.g. *we eat*)

The *simple past* form of the verb takes *-ed* for regular verbs (e.g. *knock-ed*) while the stem undergoes suppletion in irregular verbs (e.g. *went*).

*Future* time is expressed by means of modal auxiliaries *will* and *shall* (e.g. *he will go, I shall go*).

The *present perfect* is marked with *have/has* and a form of the verbal suffix *-ed* (e.g. *have/has lived*). The past perfect may be marked with *had* (e.g. *had lived*).

The *present progressive* takes the copula *am/is* and the verbal suffix *-ed* (e.g. *I am running, he is running*). for verbs with singular subjects and *are* for verbs with plural subjects (e.g. *we/they are*). *Past progressive* is marked with *was* (I *was*) for verbs with singular subject, and *were* (e.g. *we were*) for verbs with plural subjects. Future progressive is marked with the modal *will/shall+BE* (e.g. *we will be*).

The *infinitive* is marked with *to* (e.g. *to go*)

#### 4.2.2.1.1.Factors:

##### 4.2.2.1.1.1.Presence of Morphology:

Morphology is obligatory for all Igbo verbs except copulas (e.g. *bu* 'be', *di* 'is', and *no* 'be at'), certain stative verbs (e.g. *ji* 'hold', *bu* 'carry/bear [on the head/chest]) and stative auxiliaries in dialects that have them (habitual *na*, future *ga* and unfulfilled (*ka*) (Dechaine, 1993)). It is, therefore, expected that all other English origin verbs adapted to Igbo would take Igbo affixes obligatorily as do Igbo verbs. To test this, we have coded

for whether the English origin verb takes Igbo morphology as in (36a), or is bare as in (36b).

(36a) Just watch-*ja* mgbe o biara (2/183)  
Just watch when she comes

(36b) o ga-*ghi* eme gi irritate (2/202)  
it will-NEG do you irritate  
"it will not irritate you"

#### 4.2.2.1.1.2. Actual morpheme:

Verbs were coded for the actual affix which they receive with a view to testing whether English origin verbs take particular Igbo morphemes in greater proportion. This will also enable us determine whether the English origin verbs and the unmixed Igbo verbs are taking the same affixes and in the same proportion or not. All the Igbo affixes already described in section 2 as marking *participle*, *indicative*, *inceptive*, *negative*, *conditional*, *imperative* and *infinitive*, are assigned separate codes.

#### 4.2.2.1.1.3. Type of affix:

Verbs were coded for the type of affixes attached to them, that is, whether they took prefixes as in (37a), suffixes as in (37b) or enclitics as in (37c). An Igbo verb may take more than one type of affix hence English origin verbs were also coded for whether they took both prefix and suffix as in (37d), prefix and enclitic as in (37e), suffix and enclitic as in (37f) or prefix, suffix and enclitic as in (37g).

- (37a) Ha anaghì àbìá e-chase anyì (2/008)  
 They AUX-NEG come PART-chase us  
 ‘They do not come to chase us’
- (37b) *At last* kà ha realize-i-ri nà pàpa anyì òdìghì etu  
 At last that they realize-V-PST that father us BE-NEG like  
 ahù  
 that  
 ‘It was at last that they realized that our father was not like that’ (2/013)
- (37c) Ọ rise-i-gidèrè ruo bishop (3/27.48)  
 He rise-V-continually reach bishop  
 ‘He continually rising until he became a bishop’
- (37d) Hospital a-cure-ghì gi (1/026)  
 Hospital PART-cure-NEG you  
 ‘The hospital did not cure you’
- (37e) I mago, na-e- proteŋt-ìkanu ndì weaker vessels  
 you know, AUX-PART.-protect-ENCL. people weaker vessels  
 ‘You know, protecting the weaker vessels’ (2/042)
- (37f) Ha changiziri ihe niile (3/20.02)  
 They change+PST thing all  
 “They changed everything”
- (37g) Anyì e-chorusiziere ya (3/24.10)  
 We PART-chorus-ENCL him  
 ‘We then chorused it for him’

The need to assign a separate code to every affix type is to test whether certain affixes pattern differently from others in terms of our diagnostics.

#### 4.2.2.1.1.4. Serial construction:<sup>15</sup>

<sup>15</sup> There is considerable ambiguity as to what really constitutes a serial construction in Igbo. While Lord (1973) argued that there was no serialization in Igbo, Welmers (1973), Emenanjo (1978) and Dechaine (1993) all contend that there is serial construction in Igbo. Welmers (ibid) and Dechaine (ibid) both however distinguish between serial constructions and consecutives in Igbo. For the purpose of this paper, I adopt Dechaine’s (ibid:201) definition of serial construction as “a succession of verbs and their complements (if any) in a single clause with one subject and one tense or aspect value”. All verbs that satisfy this definition as well as those listed in Emenanjo (1978) were coded as serial verbs.

What is known of serial construction in African languages indicates that only the first verb in such constructions may be marked for temporal reference (Sebba, 1987). Subsequent verbs in the series are left bare and are understood to be in the same temporal relation as the first verb. In Igbo the situation is similar in that serial construction is the only context in which a full Igbo verb may not take any morphology. However, it need not be the first verb in a serial construction that takes the morphology. In fact, according to Manfredi (1991), not every initial verb in a serial construction bears morphology. Emenanjo (1978) also indicated that some non-initial verbs in a serial construction may take extensional affixes. What seems to be important then, is that one of the verbs in a serial construction bears morphology while the rest may be left bare.

We have, therefore, coded for serial construction with the expectation that if an English origin verb is following the grammar of Igbo, it should remain bare only if it is one of a succession of verbs with the same subject as in (38a) and (38b). We expect that all verbs that are not in a serial construction as in (38c) would receive morphology if a grammar analogous to that of serial construction in Igbo were operative, that is, if the English-origin verb is borrowed into Igbo.

(38a)  $\text{\textcircled{O}}$     *rise-i-gidèrè*    ruo    bishop (3/27.48)  
 He    rise-V-continually    reach    bishop  
 ‘He continually rising until he became a bishop’

(38b)  $\text{\textcircled{A}}$ nyị    gafèchaa    n’ùdo    biazia    *meet-ie*    the boy (1/143)  
 We    passed in    peace    come-meet-PST    the boy  
 ‘We passed in peace and then came and met the boy’

(38c) M    *believe-ighi*    in    love (3/34.36)  
 I    believe-NEG    in    love

'I do not believe in love'

#### 4.2.2.1.1.5. Type of serial construction:

Examination of the data revealed that there are two types of serial constructions into which the English origin verbs enter. We have labelled these *non-me-type* and *me-type* constructions. While the former, exemplified in (39a), is attested in the unmixed Igbo speech studied here, the latter, as in (39b), is not.

(39a) *Lee etu m si disappoint-i ya (1/205)*  
 Look how I follow disappoint-V him  
 'This was how I disappointed him'

(39b) *A-choghi m ime gi offend (2/087)*  
 CL wantNEG I do you offend  
 'I do not want to offend you'

The differences between these two types of serial construction resides in the selective nature of the verbs that appear in the *eme-type* construction and the order in which these verbs occur. While it is widely assumed in the literature (e.g. Lord, 1973; Welmers, 1973; Dechaine, 1993; Manfredi, 1990) that any Igbo verb may appear as the initial or subsequent verb in an Igbo serial construction, we find that only one verb *me* (do) appears in the *eme-type* serial construction. What is the nature of this verb *me*?

In Igbo, the verb *me* is usually an active verb which requires a direct object as its complement. Like any other Igbo verb, *me* occurs with the appropriate affix to mark grammatical relation as in *i-me* (*infinitive*), *e-me* (*participle*), *me-ghi* (*negative*), *me-re* (*indicative*), *me-le* (*perfective*), *me-e* (*imperative*) and *me-we* (*inceptive*). In fact, the

behavior of *me* in unmixed speech appears to be entirely parallel to that of other Igbo verbs. In serial construction with English origin verbs, however, the situation is different. Here *me* appears invariably as the initial verb in the series. We return to the implication of this sequencing condition shortly.

Distinguishing between these two types of serial construction will prove useful in determining the status of some English origin verbs which are not inflected with Igbo affixes. We expect to see a pattern in the way the bare verbs enter into these constructions.

#### ***4.2.2.2. Results and analysis***

We shall note from the outset that while English origin verbs in our corpus are inflected with Igbo morphology in a manner to be described shortly, the reverse is not the case. Igbo verbs in the corpus did not take English affixes at all. In all lone verb mixture of the two languages, English provided the stem and Igbo the morphology. This occurred irrespective of whether the discourse was Igbo, that is where the English origin verb is bordered on both sides by Igbo materials, or mixed, that is where the English origin verb is bordered on one side by each of the languages. We have noted that affixation is obligatory in Igbo except for verbs in serial construction and a few copulas as in (40) not included in this analysis for the reason already stated.

- (40) Anyị niile nọ ebe ahụ (1/250)  
 We all were place that  
 'We were all there'

We see from Table 7 that the English origin verbs categorically took Igbo morphology when not in serial construction. Moreover, the rate of affixation with Igbo morphemes on English origin verbs parallels that of unmixed Igbo verbs. This can be seen by comparing Table 7, which shows the distribution of English origin verbs according to whether or not they have affixes and the type of construction in which they occur, with Table 8, which shows the same distribution for unmixed Igbo verbs.

**Table 7: Distribution of affixes on ENGLISH ORIGIN VERBS according to type of construction**

	Igbo Affix		Bare		Total	
Variant	N	%	N	%	N	%
<b>Type of Construction</b>						
Non-serial	785	100	-	-	785	80
Serial	85	45	106	55	191	20
<b>Total</b>	<b>870</b>	<b>89</b>	<b>106</b>	<b>11</b>	<b>976</b>	

**Table 8: Distribution of affixes on UNMIXED IGBO VERBS according to type of construction**

	Igbo Affix		Bare		Total	
Variant	N	%	N	%	N	%
<b>Type of Construction</b>						
Non-serial	811	96	31	4	842	82
Serial	108	59	75	41	183	18
<b>Total</b>	<b>919</b>	<b>90</b>	<b>106</b>	<b>10</b>	<b>1025</b>	

In Table 8, we see that 96% of the verbs in non-serial construction are inflected with Igbo affixes. The remaining 4% are conditionals which are variably marked with tone rather than morphology as in (41).

- (41) O   puta                   from prison, ya    aha   kà   `mkpisi  
 He   come out    from prison, he   size   like   stick  
 'If he comes out of the prison he would weigh like a stick' (2/220)

A comparison of tables 7 and 8 shows that the English origin verbs follow the system of Igbo morphological marking whereby all verbs are marked except for those in serial construction. We also find that the English origin verbs mirror the unmixed Igbo verbs in showing a preference of non-serial construction to serial construction. While 82% of unmixed Igbo verbs are in non-serial construction, 80% of English origin verbs are in the same kind of construction. Serial construction accounts for only 18% of the unmixed Igbo verbs and 20% of the English origin verbs. This similar quantitative patterning shows that the English origin verbs are being adapted to Igbo grammar morphologically.

Let us now examine the actual morpheme with which these English origin verbs are inflected and compare them with the affixes with which the Igbo verbs are inflected. Table 9 reveals that the English-origin verbs take exactly the same affixes as Igbo verbs. But most importantly, we find that both categories of verbs take the same affixes in similar proportion.

**Table 9: Distribution of Igbo affixes on English-origin verbs and unmixed Igbo verbs**

Morpheme	English-origin verb		Igbo verb	
	N	%	N	%
Participle	329	38	346	38
Indicative affirmative	356	41	329	36
Negative	40	5	81	9
Infinitive	42	5	54	6
Conditional	41	5	23	3
Perfective	14	2	36	4
Inceptive	23	3	32	4
Imperative	14	2	17	2
<b>Total</b>	<b>868</b>	<b>100</b>	<b>918</b>	<b>100</b>

The bulk of the affixes in verbs both of English origin and unmixed Igbo comprise the participle and the indicate affirmative. The participle has exactly the same rate of occurrence of 38% for English origin verbs and Igbo verbs. The rates for indicative affirmative is also strikingly similar in both corpora, 41% for English origin verbs and 36% for unmixed Igbo verbs. Even the less frequently occurring affixes such as infinitive, negative, inceptive and imperative show similar proportions between English origin verbs and Igbo verbs. This striking similarity in the frequency of occurrence of the affixes cannot be due to statistical fluctuation. Rather it is a strong re-affirmation of what is known of borrowed items, that they pattern like their counterparts in the recipient language. The result from the quantitative distribution of affixes on the English-origin verbs and the unmixed Igbo verbs thus offers a strong ground for us to conclude that the English origin verbs are functioning as Igbo and not English verbs irrespective of the etymological role played by the latter. In other words, we have another basis to conclude

that these English origin verbs are borrowings and not code-switches. The result from affixation, therefore, converges with those already presented from vowel harmony to demonstrate beyond the shadow of a doubt that the co-occurrence of English-origin verbs with the morphology of Igbo cannot be interpreted as violations of the FMC. They indicate instead that Igbo is incorporating these English origin verbs through the process of borrowing, a process quite different from CS which the FMC is meant to characterize.

Referring back to Table 7, we see that there are 106 (11%) of the English origin verbs in otherwise Igbo and mixed discourse which have no morphology whether English or Igbo. These bare verbs are not directly relevant for testing the FMC which is our focus in this chapter. However, for the sake of completeness and given that the status of bare forms is contentious both in the literature and in subsequent chapters of this thesis, we also examine these verbs. Of course we know that many items are ambiguous. But we can use the variationist method to infer the status of these items.

All 106 bare English origin verbs appear in serial-type construction. Recall that we identified two types of serial construction into which English origin verbs may enter: the non-*me* constructions as in (39a) and the *me*-type construction as in (39b). Table 7 shows the distribution of the two types of constructions in the corpus.

**Table 10**

**Distribution of BARE verbs in the corpus according to the type of serial construction they occurred in.**

Serial type	BARE VERBS	
	N	%
Non-eme type	11	10
Eme type	95	90
Total	106	100

Only 11 (10%) of the bare verbs appear in the non-*eme* type construction. Since this type of construction is entirely compatible with serial constructions in Igbo but is alien to English, and since serial construction is an environment in which an Igbo verb may be bare, the English origin verbs in non-*eme* constructions may be considered as functioning as Igbo verbs. These are also borrowings into Igbo. What then is the status of the remaining 95 (90%) of the bare verbs? We shall consider two possibilities here.

One possibility is that they are single word CS. We are, however, reluctant to espouse this proposal. This is because CS is a productive process and is only constrained syntactically but not lexically. But all 95 verbs being examined appear in constructions in which they are preceded by the same Igbo verb *me*. In other words, unlike what is expected in CS, the construction is lexically restricted.

The second possibility is that the *me*-type constructions are borrowings. Two reasons make this possibility more attractive. First, We have demonstrated with overwhelming evidence that the English origin verbs with Igbo affixes in otherwise non-English discourse behave like Igbo verbs and are, therefore, better treated as borrowings. It makes sense to infer from this that the bare verbs in the same type of discourse may be following the same pattern as their counterparts with Igbo affixes. Second, the use of verbs with the same semantic content of *me* as a loanword incorporation device has been reported for several language pairs studied in the context of CS. (See e.g. Kachru, 1978; for Hindi/English; Madaki, 1983; for Hausa/English; Chana and Romaine, 1984, and Romaine, 1986; for Punjabi/English; and Sankoff et al., 1990, for Tamil/English.) In all these languages, the dummy verb with the semantic content of English *make* or *do* bears all aspectual information allowing the borrowed verb to remain bare. This is entirely

consistent with the behavior of the *me*-type construction in our corpus and forces us to lean towards treating these bare verbs as borrowings into Igbo as well.

#### ***4.2.2.3. Discussion and Conclusions***

We have used the variationist framework to examine the behavior of lone English origin verbs in otherwise non-English context. Using as criteria vowel harmony and affixation, we have compared the behavior of these lone English origin verbs with those occurring in unmixed Igbo stretches. Starting with vowel harmony, we have seen that 1), there were no violations of vowel harmony in either English origin or unmixed Igbo verbs; 2), the rule of vowel harmony applies fully on English origin verbs with one vowel group in the same way as simple verbs occurring in unmixed stretches of Igbo; 3), the rule of compound harmony applies on English origin verbs with two vowel groups in the same way as compound verbs of unmixed Igbo. Thus, on the criterion of vowel harmony, we have seen that the English origin verbs are behaving like unmixed Igbo verbs. We interpreted this as the first piece of evidence that the English origin verbs in otherwise non-English context are being treated as if they are borrowed into Igbo.

Affixation offered converging evidence that the English origin verbs are borrowed into Igbo. We saw that the English origin verbs took the same affixes and in the same proportion as unmixed Igbo verbs. The lone English origin verbs that remained bare are seen to appear categorically in serial construction, the only construction in which Igbo verbs may also remain bare. We also saw that majority of these verbs are preceded by an Igbo verb *me*, which is semantically identical to the dummy verb used in several language pairs as a loanword incorporation device.

Against the backdrop of overwhelming evidence presented above, which incontrovertibly demonstrates the lone English origin verbs with morphology from Igbo to be borrowings and not CS, the veracity of the numerous counter-examples to the FMC is called into question. There is no doubt that the mixture of morphemes which are etymologically from two languages abound in many language pairs in contact. But whether these single word mixtures are CS or borrowings can only be determined when such forms are subjected to rigorous quantitative analysis as we have done here. If the quantitative analysis reveal them to be CS, then and only then can they be presented as counter-examples to any existing constraint on CS. But if the quantitative analysis reveals them to be borrowings as is the case in Igbo-English discourse discussed in this chapter, then such forms cannot constitute legitimate counter-examples to CS constraints, since the forms in question are products of a process quite independent of CS.

## Chapter 5

### 5. Lone English origin nouns in Igbo discourse:

#### 5.1. Introduction:

In the immediately preceding chapter, we determined the status of lone English origin verbs with morphology from Igbo as well as those that are bare. We concluded that, given the overwhelming evidence pointing to the fact that these verbs are being used by the speakers as if they were Igbo verbs, such lone verbs must be borrowings into Igbo. Consequently, since all co-occurrences of English-origin verbs with Igbo morphology were borrowings and not CS, which means that there were no CS boundaries between English-origin verbs and Igbo affixes, the FMC is not being violated in Igbo-English bilingual discourse involving lone verbs.

In this chapter, we focus on the lone English origin nouns in Igbo discourse as in (42) below:

(42a) ʔanyị jìchà paper ̄anyị (4/006)  
 We hold+ALL paper us  
 “We all have our papers”

(42b) A nà àchọ inweta confession n' aka hā (2/138)  
 CL AUX want Inflate confession PREP hand they  
 “One is seeking to get a confession from them”

Recall from chapter 1 that the EC predicts that the order of sentence constituents immediately adjacent to and on both sides of the switch point must be grammatical with respect to both languages involved simultaneously in CS. Notice, however, that in (42a),

the possessive determiner *anyi* from Igbo modifies the English origin noun *paper*. Since in English the modifier precedes the noun while in Igbo the reverse is the case, it follows that the order of the constituents in *paper anyi* is not acceptable in English even though it is in Igbo. Notice too that in (42b), the English origin noun *confession* appears without a determiner. Since a determiner would be obligatory in this context in English even though it is not in Igbo, we, again, have a structural mismatch. But should the mentioned NPs in isolation be presented as counter-examples to the EC as is often done in CS literature?

We have stated in the preceding chapters that the only condition under which such tokens as in (42) may constitute violations to EC (and indeed any other constraints on CS) is if we can show that such tokens are not borrowings but CS.

Unlike in the case of the lone English origin verbs which featured Igbo morphology in the same manner and proportion as Igbo verbs, lone English origin nouns in Igbo discourse feature no morphology and, therefore, offer no insight in form as to their language membership. However, by focusing on areas of typological contrast between Igbo and English as in the previous chapter, the quantitative method should reveal whether these lone English origin nouns are CS or borrowings. Such areas of contrast include *modifier usage*, *expression of nominal reference* and *the linear order of the NP*.

Assuming that borrowed forms follow the patterns of the recipient language while codeswitched forms retain the patterns of the donor language as encoded in the definitions of these phenomena (Poplack 1993 etc.) and detailed in the preceding chapter, and focusing on the areas of structural contrast between Igbo and English as enumerated above, we shall proceed in comparing the patterns of distribution of lone nouns with patterns of their counterparts in the unmixed portions of the two languages. If lone nouns

show patterns similar to Igbo but different from English, then we have evidence that they are being treated as Igbo; that is, as borrowings and not CS. If they show patterns similar to English but different from Igbo, then we may conclude that they are retaining the structure of English, in which case they may be CS.

If the result of this quantitative analysis of the behavior of lone nouns using the mentioned diagnostics reveal the lone English origin nouns to be CS, then such tokens as in (44) may constitute violations of the EC. If, on the other hand, they are borrowings, then we may conclude that the EC is not being violated NP-internally in Igbo-English discourse as tested in this chapter.

## **5.2. Coding and analysis:**

### **5.2.1. The Variable Context:**

As already indicated in chapter 1, it is a crucial feature of the variationist framework that the variable context or object of study be circumscribed in a way that ensures that the researcher does not make any *a priori* assumptions as to the language membership of the contentious forms. This means that all occurrences of the tokens in the corpus must be included in the analysis. However, in order to ensure a systematic comparison and avoid skewing the data, the researcher must impose some analysis on the circumscription of the variable context. Accordingly, we have excluded the following types of data:

**5.2.1.1. Proper names:**

Following (Poplack, 1995), proper nouns which often behave idiosyncratically with respect to determiners, as exemplified in (43), have been excluded:

- (43) Ha nachiwezie back to *Enugu* (5/022)  
 “They went back to Enugu”

**5.2.1.2. Nouns with unproven etymology:**

All nouns which are ambiguous with respect to their language of etymology have been excluded. *Tombo* and *dodo* in (44a) and (44b) respectively, though clearly not English, are also not etymologically Igbo and may have originated from any other Nigerian language.<sup>16</sup> These nouns whose etymology as loanwords into Igbo are uncertain are, therefore, excluded from our variable context since they cannot be assigned membership to any of the corpora under study.

- (44a) Inukwanu **tombo** abughi na i jighi ego (7/112)  
 INF+drink tombo be+NEG that you have+NEG money  
 “To drink tombo does not mean that you do not have money”

- (44b) Ha niile nyere ya **dodo** (W/184)  
 “They all gave him plantain”

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<sup>16</sup> Only three such tokens occurred in the data.

### *5.2.1.3. Nouns in structures other than Igbo and English:*

Because most of the speakers are fluent in other Nigerian languages, a few English and Igbo nouns (N = 5) were found in stretches of these other languages, such as Nigerian Pidgin English (NPE), illustrated in (45). These nouns were excluded since they are not relevant to determining the status of lone English origin nouns in Igbo discourse, which is the focus of this chapter.

- (45) You goh carry your **book** (K/086)  
 “You will carry your book”

All the tokens retained as part of the variable context from the tape-recorded conversations of the speakers described in chapter 3 were extracted. This came to a total of 3,545 nouns. We will return to the exact breakdown of these nouns shortly.

Since our immediate goal in this chapter is to determine the language membership of some contentious nouns by means of the quantitative method, all nouns were then classified according to whether they belonged to the unmixed material, lone other language material or multi-word fragments as described in chapter 3.

Once all the tokens were classified, we proceeded to examine the overall distribution of nouns in each corpus as shown in Table 11 below:

CLASSIFICATION	Unmixed		Lone Nouns		Multiword fragments containing Nouns		Total	
	N	%	N	%	N	%	N	%
English	261	7	649	18	934	26	1844	
Igbo	1653	47	3	-	45	1	1701	
Total							3545	

We shall note here a contrast from many studies in which the lone items accounted for an overwhelming majority of the other language materials in mixed discourse while multiword CS are rare (Poplack, and Meehan 1995; Sankoff et al. 1990). Here, we find that the reverse is the case. Multiword fragments of English involving nouns account for the majority of the other language materials in mixed discourse (26%). Lone English-origin nouns in Igbo discourse account for 18% of other language materials.

### **5.2.2. Factors and Results:**

All nouns retained were coded for a number of factors considered relevant for determining the status of lone nouns in line with our areas of emphasis, namely areas where Igbo shows some typological contrast with English. The factor groups coded for are further described below. As in the previous chapter, we will first present the factors coded for, our predictions and then the results for the particular chapter.

### 5.2.2.1. Type of determiner:

One of the areas in which Igbo differs from English is determiner usage. Igbo has no definite article, although definiteness is sometimes achieved by the use of demonstratives *a* (this) and *ahu* (that) postposed to the noun. Igbo also lacks the indefinite article. Indefiniteness may, however, sometimes be marked with the number *otu* (one). In English, on the other hand, all nouns receive some sort of determination except in the following contexts identified by Quirk et al. (1985:274):

- Plural count nouns and noncount nouns:  
*Chestnuts/milk/folk music.*
- Some nouns with generic interpretation :  
*Tigers/men/women*
- Nouns that indicate category or type:  
*Leather/coffee/tea*
- Nouns following *by* and indicating means of transportation:  
*travel/come by bicycle/bus/car*  
*communication by radio/telephone/mail*
- Times of the day and night:  
*at dawn/before night/morning*
- Seasons  
*in (the) spring/in (the) summer*
- Meals:  
*Stay for breakfast/supper/lunch*  
*have brunch/cocktails*  
*at supper*
- Illness  
*Measles/anaemia/diabetes*
- Parallel structures  
*day by day/arm in arm/face to face*

- Fixed phrases:  
*take advantage of/ set fire to/get word of etc.*

Unlike English, zero determination is the canonical structure of Igbo. All nouns are bare except when a definite interpretation is required, in which case a demonstrative appears following the noun. Therefore, if a grammar analogous to that of Igbo operates at the level of the NP involving lone English-origin nouns in Igbo discourse, that is, if the lone nouns are being treated as borrowings into Igbo, their pattern should parallel that of Igbo. This means that they should show a preference for zero determiners. In contrast, if most or all are borrowed into Igbo, the use of overt determiners may also occur at a rate similar to that of unmixed Igbo. If, on the other hand, a grammar like that of English is operative at the NP level, that is, if the lone-English-origin nouns are functioning as CS into Igbo, they should show patterns of determination parallel to English. This means that they would show a preference for overt marking of determiners.

We isolated three types of determiners, namely definite, indefinite and zero. Nouns have been coded as definite if they are modified by any of the following:

- The English definite article (where used with definite reference) as in (46);
- The English demonstratives such as *this, that, these and those* as well as the Igbo demonstratives *a* and *ahu* as in the examples in (47);
- A numeric quantifier co-occurring with a definite article or a demonstrative as in (48);
- A possessive determiner when the possessed is definite as in (49).

(46) *The husband*      jì      egō, (J/069)  
"The husband has money"

(47) I      ghotaghị      ihe      nà-      ème      *that*      *time*. (K/076)  
You understand-NEG      thing      AUX      happen      that      time  
"I did not understand what was happening at that time"

(48) It was only about **five months** that I interacted with Chika (K/069)

(49) M wee shìzia **my father** nekwe ihe mere (1/059)  
 I then said my father look thing happened  
 “I then said to my father, look at what happened.”

Nouns coded indefinite include the following:

(a) Nouns with indefinite determiners *a, an, some*, and so on as in (50);

(b) Nouns modified with any quantifiers co-occurring with indefinite articles or demonstrative as (51).

(50) *It's an opportunity* igwa gi ya (C/6.16)  
 It's an opportunity INF+tell you it  
 “It's an opportunity to tell you”

(51) *Before then* o rutechaa **mmadu** niilē (6/042)  
 Before then, it reached person all  
 Before then, it reached every person”

Nouns which have no overt definite or indefinite markers were coded in two separate categories: *bare nouns* and *nouns with other modification*.

A noun is coded *bare* if it has no markers at all as in (52a & b)

(52a) M̀̀nà ò naghì apa **egbè** (1/009)  
 But he AUX-NEG carry gun  
 “But he does not carry guns”

(52b) Ọ ò dì kà onye gara **hospital** (2/030)  
 He looks like person went hospital  
 “He looks like a person who has been to (the) hospital”

A noun is coded as *with other modification* if it has no definite or indefinite marker but is modified by an adjective as in (53 a&b) or a relative clause as in (53c)<sup>17</sup>

(53a) Ha agaghị eme **ihe** **ojo** again (2/027)  
 They AUX-NEG do thing bad again  
 “They will not do bad things again”

(53b) Onye **o** nwèrè **equal right** here (4/030)  
 Person every has equal right here  
 “Every person has equal rights here”

(53c) Ya nwà bù **contractor** na esiri **ndi** Shell nni (9E/009)  
 He EMPH i contractor AUX cook people Shell food  
 “He is the contractor that cooks for the staff of Shell”

Table 12 is a graphic representation of the distribution of nouns according to determiner usage.

Table 12: Patterns of noun modification on lone ENGLISH origin-nouns in Igbo context (lone nouns) compared with Igbo nouns in unmixed Igbo and English nouns in unmixed English stretches.								
	Igbo nouns in unmixed Igbo		Lone English-origin nouns in Igbo		English nouns in unmixed English		English nouns in multiword fragments of English	
	N	%	N	%	N	%	N	%
Definite	418	25	154	24	163	64	659	71
Indefinite	119	7	6	1	50	20	132	14
Other Mod.	76	5	52	8	16	6	54	6
Zero	1035	63	435	67	27	11	84	9
Total	1648		649		256		929	

<sup>17</sup> Nouns categorized as *other modification* were actually coded for the exact type of modification they have, and were only collapsed in the condition file.

Table 12 shows that there is a clear difference between English and Igbo in terms of determiner usage. We see that 25% of the unmixed Igbo nouns are modified with definite determiners. This number is lower than that of nouns in unmixed English stretches (64%), which as expected, has roughly the same rate as unambiguous switches to English (71%). This clearly indicates that Igbo behaves differently from English with respect to definite modification. In addition, it shows that CS forms retain the structure of their language of origin. Hence the nouns in multiword fragments of English show similar definite marking as unmixed English.

How do lone English-origin nouns behave when compared to these corpora? We find that the lone English-origin nouns incorporated into Igbo show a similar rate of definite marking as nouns of unmixed Igbo. The former has 24% definite determiners and the latter 25%. We see, therefore, that the lone English-origin nouns in Igbo discourse are not retaining the structure of English with respect to the use of definite determiners. Instead, they are behaving more like nouns of unmixed Igbo, the language into which they have been incorporated. Based on the criterion of definite determination, therefore, these lone English-origin nouns in Igbo discourse cannot be classified as CS, but rather, as etymologically English-origin nouns borrowed into Igbo.

Turning now to indefinite determination, we first note that indefinite determiners are used less frequently than definite determiners across all corpora. But even though the data for indefinites are sparse across corpora, we still observe a pattern of modification identical to that found in definite determination. Only 7% of Igbo nouns have indefinite determiners. This is again different from the rate of occurrence of indefinite determiners for nouns both within unmixed portions of English and within multiword fragments of English. The rates of indefinite determination for the latter two are again, by this criterion, also roughly the same, 14% for multiword fragments and 20% for unmixed

English. Note that the statistical difference (4.3) between the two figures is found not to be significant.<sup>18</sup> Again, when we compare nouns within unmixed portions of English and nouns within multiword fragments of English with the contentious lone English-origin nouns, we see a replication of the pattern witnessed for definite determination. Lone English-origin nouns feature indefinite determiners only 1% of the time while nouns in unmixed Igbo feature indefinite determiners 7% of the time. Though the statistical difference (36.0) between the two is significant, the rate for lone English-origin nouns is again closer to the rate for unmixed Igbo (7%) than it is to nouns either within unmixed English or multiword fragments of English, an indication that indefinite modification of lone nouns follows more the grammar of Igbo than that of English, the donor language. These lone nouns cannot, therefore, be seen as CS.

The result from the category *other modification*, comprising nouns modified with adjectives and relative clauses and featuring no definite or indefinite determiners, is equally interesting. The rate of occurrence is similar for all corpora, 5% for unmixed Igbo, 8% for lone English-origin nouns and 6% each for nouns both of unmixed English and multiword fragments, respectively. The comparative method seems to be silent here with regards to the status of lone English-origin nouns in Igbo discourse since nouns pattern alike across corpora. This result, though not informative in determining the status of lone nouns, is crucial in demonstrating the need to focus on areas of contrast for this type of enterprise. Recall that adjectival modification and relative clauses comprise the category *other modification*. Since adjectives feature in both languages, there is notional

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$$\chi^2 = \sum_{i=1}^2 \frac{(x_i - n_i \delta)^2}{n_i \delta (1 - \delta)}$$

18

where  $\frac{x_1}{n_1}$  and  $\frac{x_2}{n_2}$  are the proportions of the marker in question in Igbo and English and  $\delta = \frac{x_1 + x_2}{n_1 + n_2}$ . Significance was set at 0.01 level (6.64).

and (in the case of some adjectival nouns) structural equivalence between Igbo and English,<sup>19</sup> in terms of adjectival modification. There is, thus, structural and notional equivalence between the two languages with regard to relative clauses. Thus, in the category *other modification*, there are very few conflict sites between Igbo and English.

We turn now to the category *zero modification*. Recall that this is another crucial area of contrast between English and Igbo given that zero modification is more restricted in English than in Igbo. Here, we observe lone nouns have the highest rate of zero determination (67%). This is only comparable to the rate of zero for unmixed Igbo nouns (63%). While CS and English pattern alike in terms of zero modification occurring in 9% and 11% of cases, respectively, their rates contrast sharply with the rate of lone English-origin nouns (67%). Clearly, lone nouns again differ from nouns in both CS to English and unmixed English but are similar to nouns of unmixed Igbo.

So far, we have discussed the determiner usage of lone English-origin nouns and compared them with that of English nouns within multiword fragments as well as the nouns of the unmixed portions of the two languages. For purposes of completeness, let us examine the lone Igbo-origin nouns in English discourse and see how they compare with nouns within multiword fragments of Igbo as well as the nouns occurring in the unmixed portions of the two languages.

The results in Table 13 reveal that only 3 lone Igbo-origin nouns occurred in English discourse, (1 token with a definite determiner and the remaining 2 with zero

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<sup>19</sup> Igbo features a small number of true adjectives, which constitute a closed class, and a wide range of adjectival nouns. Most of the adjectival nouns of Igbo appear in predicative position just like English predicative adjectives. See chapter 6 for a detailed discussion of adjectival strategies in Igbo.

modification), while lone English-origin nouns in Igbo discourse are frequently incorporated into Igbo discourse (18%), as seen in Table 13.

An obvious explanation for this asymmetry is that most of the discourse was carried out in Igbo, so that there was a lot more Igbo structures incorporating English lexical items than vice versa.

<b>Table 13 :Patterns of noun modification on lone IGBO-ORIGIN nouns in English context compared with unmixed Igbo and English nouns as well as Igbo nouns within CS to Igbo.</b>								
	Unmixed Igbo		Igbo in multiword fragments		Lone Igbo in English		Unmixed English	
	N	%	N	%	N	%	N	%
Definite	418	25	21	47	1	33	163	64
Indefinite	119	7	4	9	-	-	50	20
Other Mod.	76	5	1	2	-	-	16	6
Zero	1035	63	19	42	2	67	27	11
Total	1648		45		3		256	

Notice from Table 13 that the nouns within multiword fragments of Igbo (N = 45), show the same patterning as unmixed Igbo nouns: 47% Vs 25% for definite determiners, 9% Vs 7% for indefinite, 2% Vs 5% for *other modification* and 42% Vs 63% for zero. All of these numbers are sharply different from those of unmixed English which has 64% definite, 20% indefinite, 6% of *other modification* and only 11% zero. This finding confirms in the other direction what is already known about CS, namely that they are internally consistent with the internal structures of the languages of their lexifier. These nouns within multiword fragments are different from the lone items, which behave like the languages that form the discourse in which they appear, that is, like borrowings into that language.

### 5.2.2.2. Type of nominal reference:

Igbo nouns with zero determiners (which may be considered the unmarked case) normally receive generic reading. According to (Welmers 1973:220), Igbo typically expresses generic reference by means of bare nouns although a distinction has to be first drawn between animate and inanimate nouns. All bare inanimate nouns receive generic interpretation while bare human nouns have specific reference. Individuation can only be expressed through the addition of specific modifiers or a combination of plural markers and demonstratives *ndi a* (these ones) or *ndi ahu* (those ones) in which case there is no generic reading. Thus, the animacy distinction cross-cuts those of nominal reference and determination (see also Tagliamonte et al. 1997).

In English, the situation is different. There does not seem to be any direct correlation between the animacy of the noun and generic reference. Also, generic interpretation is not restricted to bare nouns. Instead, the definite article *the*, the indefinite article *a(n)* as well as the *zero determiner* may all be used to express generic reference, albeit under stated conditions (Quirk et al. 1985: 281-2). In addition to this use of determiners, a generic reading is often indicated morphologically with *-s* for plural nouns in English.

We expect that if all or most of the lone English-origin nouns are borrowings, then those of them surfacing bare should have generic reference in line with the grammar of Igbo. But if all or most of them are CS, they should pattern with nouns both within multiword fragments of English and unmixed English in showing reduced rates of zero-marked nouns with generic reading, and these in permissible sites for determiner omission in English as detailed in 5.1.2.1. above.

We reserve the term *generics* here for nouns that are not semantically understood as definite in any sense as in (57a & b), where definiteness is understood not in terms of the presence of a definite determiner but in terms of reference to a specified object. As pointed out by Quirk et al. (1985:281), all three major forms of article (*the*, *a/an*, and zero) may be used with members of a class *in toto* to make generic reference, as in the following: (a) *the bull terrier* makes an excellent watchdog; (b) *a bull terrier* makes an excellent watchdog; and (c) *bull terriers* make excellent watchdogs.

Quirk et al. (1985:281-287) identified the following defining criteria for generics, irrespective of type of determiner:<sup>20</sup>

- Nouns that pick out any representative member of a class:  
     The best way to learn *a language* is to live among its speakers.  
     *The tiger* is becoming extinct  
     *Tigers* are becoming extinct.
- Nouns that indicate an undifferentiated whole:  
     *Cigarettes* are bad for your health  
     *Hydrogen* is lighter than *oxygen*
- Nouns that indicate the class as specified by its typical specimen:  
     A great deal of illness originates in *the mind*.  
     Marianne plays *the harp* very well.

Following the above mentioned criteria identified by Quirk et al. (1985), we coded the following types of nouns from our data as generic irrespective of determiner type:

(54a) *The research done by criminologist*, police ga-euse ya (2/014)  
 “The research done by criminologists, the police can use it”

(54b) Maazi ga- egbu mmadu (W/224)  
 Maazi will kill person

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<sup>20</sup> Examples are provided in Quirk et al. (1985:279-287).

“Maazi will kill a person”

(54c) You cannot change **the prison system** (2/123).

	<b>Igbo nouns in unmixed stretches of Igbo</b>		<b>Lone English-origin nouns in Igbo</b>		<b>English nouns in unmixed stretches of English</b>		<b>English Nouns in Multiword fragments of English</b>	
	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>	<b>N</b>	<b>%</b>
Generic	591	36	295	46	23	9	46	5
Non-generic	1061	64	353	54	238	91	887	95
Total	1652		648		261		933	

What we see from Table 14 is that there are a lot more generics in unmixed Igbo (36%) than there are in unmixed English (9%). We also see that the lone English-origin nouns in Igbo discourse have roughly the same rate (46%) of generics as unmixed Igbo, but differed from both unmixed English and unambiguous CS (5%).

How are these generics marked in the corpora? According to table 14 below, Igbo marks generics with zero 95% of the time. Again, this rate parallels the rate of zero generic marking for lone English-origin nouns (93%). English on the other hand, has a reduced rate of zero marked generics (70%), just like nouns within multiword fragments of English (80%). Once again we see the lone English-origin nouns patterning like nouns in unmixed stretches of Igbo, but differently from nouns in unmixed stretches of English and unambiguous CS.

	<b>Igbo nouns in unmixed</b>	<b>Lone English-origin nouns in</b>	<b>English nouns in</b>	<b>English Nouns in</b>

	stretches of Igbo mixed Igbo		Igbo		unmixed stretches of English		Multiword fragments of English	
	N	%	N	%	N	%	N	%
Zero Generic	561	95	275	93	16	70	37	80
Modified generic	30	5	20	7	7	30	9	20
Total	591		295		23		46	

What can be gleaned from the results presented above is that: (i) The same speakers are using more generic reference when speaking Igbo than when speaking English; and (ii) Bare nouns have a much wider range of use in Igbo. Among such use is generic reference. How do we explain these results?

The first result is explained in Welmers' (1973:220) observation that in Igbo, "inanimate nouns are generic in almost any context", unless specifically individuated. While we do not deal with the complicated animate/inanimate distinction in Igbo here, it will suffice to note that this already assigns generic reference to approximately half of the noun class by default. No such rule has been reported for English. It is, therefore, not surprising that the same speakers are using more generics when speaking Igbo and by extension in their lone English-origin nouns in Igbo discourse.

The second result, and a more important one for our immediate purpose is that bare nouns have a wider range of use in Igbo than in English, including in the use of generics. The explanation for this is also aptly summed up by Welmers (1973:220-221). Referring to nonpersonal animate nouns, Welmers states: "an unmodified noun in this category is specifically singular." Put differently, all singular non-human nouns of Igbo are by default bare.

Taken together, Welmers' two observations above indicate that being bare is the default for Igbo nouns. If the bare noun is inanimate it is generic; but if the bare nouns is animate non-human, it is singular. It is, therefore, not surprising that bare nouns are shown in our data to have a wide range of use, including in generic reference. And the fact that the lone English-origin nouns in Igbo discourse display this wide range of use of bare nouns in all contexts, also including generics, demonstrates incontrovertibly that they are borrowings into Igbo.

### 5.2.2.3. Structure of NP

Further corroborative evidence that lone nouns are being treated as borrowings in Igbo is provided by the internal structure of the NP. We have claimed that the structural contrast between the NP of Igbo and English offers excellent grounds for testing the equivalence constraint. We define structural contrast as any difference in the linear order of the elements in the NP. In Igbo, most modifiers are postposed. English is different in this regards in that most of its modifiers are preposed. Thus, there is a structural contrast in the order of the elements in the NP in the two languages. Table 16 below presents a graphic summary of the nominal modifier placement in Igbo and English.

**Table 16: Comparison of noun modifier positions in Igbo and English.**

Language	Position 3	Position 2	Position 1	N	Position 1	Position 2	Position 3	Position 4	
Igbo	Num	One X	Adj. Prep.	O	Adjectiv	Numeral	Dem.	Relative Clause	
English	Nu	Nu	Det	Adj	Prep.	U	X	X	Relative

m	m	N	Clause
<i>One</i>			

Table 16 shows that the few equivalence sites between English and Igbo include prepositions, which precede in both languages as in (55 a & b), relative clauses which follow in the two languages as in (56 a & b) and the number *one* which also precedes in both languages as in (57a & b). A few of the adjectival (or the so called qualifactive) nouns<sup>21</sup> of Igbo (Emenanjo 1978) have also been observed to precede the nouns they modify as is the case in *ezigbo* ‘good’ in (58).<sup>22</sup> Contexts in which a zero determination is permissible in English also qualify as equivalence sites as is the case in (59).

(55a) À      nà-      amù      aka      èkpè      na      nka (W/027)  
 CL      AUX-      learn      hand      left      PREP      old  
 “Does one learn to be left-handed at an old age?”

(55b) Ọ      nọ      in      many places even in schools (2/181)  
 It      BE      in      many places even in schools.  
 “It is in many places, even in schools”

(56a) She has **features that are not from the family** (8/388)

(56b) Nwaànyị      m      jèrè      gote      the vegetable      nye      m      oroma  
 Woman      I      went      buy      the vegetable      gave      me      orange  
 “The woman I went to buy the vegetable from gave me an orange” (9/062)

(57a) That's the **one** snag (3/139)

<sup>21</sup> The term *qualifactive nouns* was used by Emenanjo (1978) to refer to Igbo nouns used to expressed adjectival meaning. This corresponds to the term *adjectival nouns* in other African languages.

<sup>22</sup> Welmers (1973) and Emenanjo (1978) have argued convincingly that qualifiers like *ogologo* and *ufodu* are nouns in associative construction with the nouns they modify and not adjectives. We shall return to this in chapter 6.

(57b) Ànyị nà ha nà- àsụ otù ihe. (6/014)  
 We and they AUX- speak one thing  
 “We and they speak the same thing”

(58) I ma nà m bù ezigbo mmadu (3/016)  
 You know that I BE good person  
 “You know that I am a good person”

(59) He was eating **yam** (9/017)

The prediction, then, is that if lone nouns are being treated as CS, they should appear more in structures that are English but not Igbo. Conversely, if lone nouns are being treated as if they were borrowed into Igbo, we should find them to be felicitous in structures that are Igbo but not English.

To operationalize this test, all nouns have been coded for whether they appear in NPs that have an Igbo but not English structure like in *Noun + Possessive* in (60a), an English but not Igbo structure like in *Determiner + Noun* in (60b) or an equivalent structure like in the number *One + Noun* in (60c)<sup>23</sup>.

(60a) Ànyị jichà *paper* ānyị (4/006)  
 We hold+ALL paper us  
 “We all have our papers”

(60b) Ò choghị kà m *take* over *the job* (4/025)  
 He want+NEG that I take over the job  
 “He did not want me to take over the job”

<sup>23</sup> A few nouns (N = 4), such as in the example below, were found in palindromic (or portmanteau) constructions (Sankoff et al. 1990). These involve nouns featuring both English and Igbo demonstratives as in the example below. Constructions like these naturally pose a problem for the syntax of bilingual discourse. In our case, for instance, the structures can neither be said to be English nor Igbo. We consider such nouns idiosyncratic especially as all four nouns were produced by the same speaker for whom it may be an ad hoc strategy to avoid treating the English origin nouns either as Igbo or English. The four tokens were consequently excluded from this particular calculation.

That cash ahụ i ji mgbe ahụ agwula (6/163)  
 That cash that you hold time that finished  
 “That cash you had is finished”

- (60c) Ha kpàgà nkàta n' office one day (K147)  
 They tell story PREP office one day  
 "They were telling stories in the office one day"

The result from the structure of the NP, as shown in Table 17, further confirms the status of the lone English-origin nouns incorporated into Igbo as borrowings and not CS.

**Table 17 :Distribution of nouns according to the type of language structure of the NP in which it occurs.**

	Unmixed Igbo nouns in Igbo		Lone English in Igbo		Unmixed English nouns in English		English nouns in English multiword	
	N	%	N	%	N	%	N	%
+Igbo English -	1587	96	580	89	19	4	45	6
+English Igbo -	1	-	-	-	372	83	655	89
Equivalent	64	4	69	11	59	13	38	5
Total	1652		649		450		738	

Table 17 shows that lone English-origin nouns occurred in structures that are Igbo but not English 89 % of the time. This is comparable to the unmixed Igbo nouns, which occur in structures that are Igbo but not English 96% of the time. There, thus, can be no doubt that the speakers are using the lone English-origin nouns in the same structures as they use the unmixed Igbo nouns.

As expected, nouns within unmixed English and nouns within multiword fragments of English are vanishingly rare in structures that are exclusively Igbo. Only 4% of the nouns

within unmixed English, and 6% of nouns within multiword fragments of English, are of this type. These negligible percentages of what may be seen as violations of unmixed English grammar shows that the speakers' knowledge of Igbo is only minimally interfering with the structure of their English. We will briefly examine some of these anomalous structures?

It is interesting to note that these all involve the omission of the English determiner or the omission of a plural marker in contexts where English permits zero determiners but requires a plural marker. The examples in 61 illustrate the two types of violations.

(61a) *You cannot be librarian without*      enweghi      degree (2/183)  
 You cannot be librarian without      have+NEG      degree  
 "You cannot be a librarian without having a degree"

(61b) They are like **zombie** you know (2/167)  
 "They are like zombies, you know"

Turning now to the structures that are exclusively English, we find that only *one* Igbo noun featured in a structure that is entirely compatible with English but not compatible with Igbo. We may treat this single token shown in (62) below as a borrowing into English.

(62) *There has never been anything in this*      ndu      m      mere (3/119)  
 There has never been anything in this      life      I      do  
 "I have never done anything in this life"

Notice also that as shown in Table 17, there were no lone English-origin nouns featuring in contexts that are entirely compatible with English but not compatible with Igbo. The speakers, thus, clearly did not use lone English-origin nouns in the same structures as they use English nouns as we now see.

Nouns within multiword fragments of English and nouns of unmixed English appeared in contexts compatible with English but not Igbo 89% and 83% of the time, respectively. When we consider the high rate of nouns within multiword fragments (89%) in contexts that are compatible with English but not compatible with Igbo and the fact that lone English-origin nouns did not occur in this context, the contrast is more than striking. If these lone English-origin nouns and the nouns within multiword fragments are of the same kind, how would we explain such sharp contrast? We must, therefore, conclude that the lone English-origin nouns in Igbo discourse are not CS. Rather, they must be treated as if they have been *borrowed* into Igbo.

Equivalent structures within an NP are sharply limited across corpora. We find that 11% of lone English-origin nouns occurred at such equivalence sites. Nouns of unmixed Igbo occurred at an even lower rate at such equivalence sites (4%) than lone English-origin nouns (11%). The paucity of equivalent structures is also true for nouns in multiword fragments of English (5%) and nouns of unmixed English (13%).

In sum, we can say that lone English-origin nouns appear overwhelmingly in structures that are exclusively Igbo, thereby patterning like nouns of unmixed Igbo. The few remaining nouns appear in constructions that are (fortuitously) felicitous in both Igbo and English. Strikingly, no lone English-origin nouns appears in a structure which is felicitous in English only. Nouns within multiword fragments of English, on the other hand, are felicitous in structures that are exclusively English, thereby patterning like nouns of unmixed English. This is incontrovertible evidence that lone English-origin nouns are borrowed rather than codeswitched into Igbo..

The results from determiner usage, type of nominal reference and the structure of NP all converge to provide us with compelling evidence that lone nouns are being treated by the speakers as if they have been borrowed and not code-switched into Igbo.

### **5.3. Discussion and Conclusions:**

We set out in this chapter to determine whether the EC is being violated NP-internally in Igbo-English bilingual discourse, given the structural contrast between the two languages. In order to do this, we necessarily had to distinguish between CS and borrowing to avoid the recurrent error in CS literature where tokens which may be borrowed forms are presented as counter-examples to CS constraints. Using quantitative methods as well as diagnostics which make use of the contrasting properties of Igbo and English, we have been able to show that lone English-origin nouns incorporated into Igbo discourse are being treated as if they have been borrowed, and not code-switched into Igbo. We saw that whatever criterion we employed, be it the use of determiners, the type of nominal reference or the linear structure of the NP, the lone nouns overwhelmingly and consistently patterned like unmixed Igbo nouns but not nouns in either unmixed English or multiword fragments of English. All of these lines of evidence taken together, irrefutably demonstrate, not only that lone English-origin nouns incorporated into Igbo discourse are very different from English nouns, but that they are strikingly similar to unmixed Igbo nouns. We, thus, conclude that these lone English-origin nouns are borrowings and not code-switches.

It follows then that if the lone nouns are borrowings and not CS, examples of the type illustrated in (42b) cannot constitute counter-examples to the EC, since if the EC applies

to borrowed items, this is fortuitous, a result of interlingual coincidence at the structural sites in question. The EC is a condition on CS. Therefore, the EC is not being violated in Igbo-English discourse, in spite of the structural contrast between the two languages.

## Chapter 6

### 6. Lone English-origin adjectives in Igbo discourse:

#### 6.1. Introduction:

In chapter 5 above, we tested the EC on Igbo-English discourse by examining the internal structure of NPs involving lone English-origin nouns in Igbo discourse. We found that these lone nouns are borrowings into Igbo, hence not only NP-internal combinations of English-origin nouns with Igbo modifiers but also insertions of English-origin nouns with no modifier do not constitute violations of the EC. In our continuing quest to resolve the ambiguity surrounding the status of lone-English-origin incorporations into Igbo discourse, as a precondition to testing the constraints on intrasentential CS, we examine in this chapter the status of lone English-origin adjectives in Igbo discourse as in (63) below:

- (63) O        d̩        shy (3/243)  
       He        BE        shy  
       “He is shy”

Adjective as a distinct category in syntax has been difficult to define. As has already been noted in many studies (e.g. Meechan and Poplack, 1993, Bhat, 1994), establishing a set of criteria which characterizes the adjectival category and differentiates it from other categories like nouns, verbs and adverbs is very problematic. The traditional definition of adjectives as words which denote properties and qualities is clearly inadequate in the light of nouns like *whiteness* and *height*, in English, for instance. Alternative approaches such as the use of morphosyntactic properties and syntactic functions have also become

untenable in the light of languages which show little or no morphological marking, and in borderline cases exemplified by such lexical items as *ablaze*, which need to be regarded as adjectives but which do not occur in the primary function of modifying a noun (Quirk et al. , 1972:234).

The various attempts to define adjectives as a distinct category and to differentiate them from other categories have been troubled by two main types of problems: (1) their failure to account for variations inside word classes (the occurrence of subgroups and borderline cases) and (2) their failure to be general enough to apply to all languages (Bhat 1994:12).

This situation is exacerbated in African languages especially, where some forms that may be characterized as adjectives in European languages are better treated as either nouns or verbs even though there may exist a few true adjectives in these languages. This is the case in Igbo where the exact definition of what constitutes an adjective has remained one of the moot areas of the grammar (Emenanjo 1982:115). We return to the nature of Igbo adjectives in some detail below. For now, it will suffice to indicate that the difficulty in defining the adjectival category, not only in African languages, but also amongst other world languages, makes the adjectival phrase one of the most frequently cited sites of structural conflict among language pairs studied in the context of CS (e.g. Poplack and Meechan, 1995, Meechan and Poplack, 1996; Nortier, 1989 and Treffers-Daller 1991 to mention a few).

The type of mismatch that arises when one language uses a category to perform a function that is performed by a different category in the other language has introduced a new dimension to the controversy surrounding the definition of equivalence. Is equivalence to be seen in terms of structural equivalence, categorial equivalence, notional

equivalence or all three? Where there is structural equivalence but no notional equivalence or vice versa, how does this affect CS?

Muysken (1991) claims that there can be no exact match between categories in all languages, so that if equivalence is interpreted in terms of structural equivalence only, then CS should be blocked in language pairs when categorial equivalence cannot be established. In his view then, "the recognition of categorial equivalence is the first step in the process of syntactic convergence". Meechan and Poplack (1996), on their part, contend that the importance of categorial mismatch will vary according to the degree to which the languages involved in the contact situation differ, as determined by quantitative analysis of the distribution and usage of the categories in question in each language. They tested six possible outcomes of categorial non-equivalence including whether (i) switching is inhibited by categorial non-equivalence; (ii) switching is blind to categorial non-equivalence; (iii) switching is triggered by categorial non-equivalence; (iv) notional equivalence is somewhat translated into categorial equivalence; (v) equivalence is established if the categories have partial overlap in features in the sense of Chomsky (1970) etc.; and (vi) equivalence is established via a language-internal mechanism specialized for the incorporation of non-equivalent categories. Their results indicate that in the event of a categorial mismatch, a language specific mechanism may be employed to establish categorial equivalence.

The results from Meechan and Poplack show clearly that categorial non-equivalence cannot trigger CS. They also show that CS is neither blind to categorial non-equivalence (hence the recourse to language internal mechanism to provide equivalence) nor is notional equivalence translatable to categorial equivalence. If the latter were the case, the recourse to a language internal mechanism to establish equivalence would be unwarranted. But does the use of a language internal mechanism to resolve the problem

of categorial non-equivalence apply universally in all cases of categorial mismatch between two languages in contact?

This chapter affords us the opportunity to contribute to this debate and to test some competing claims. As we see shortly in more detail, adjectival expression in Igbo may be achieved by one of many means, including the use of adjectival nouns, true adjectives, relative clauses and nouns in association. Since the use of adjectival nouns is not an option in English, we have a case of categorial mismatch. What is the importance of this categorial mismatch, and how does it affect CS in Igbo-English discourse? The answer to this question will depend on the quantitative importance of the adjectival category in the languages. In what follows, we examine the adjectival category in Igbo-English bilingual discourse.

Our discussion in the previous chapters has made it clear that since our method draws heavily on the patterns of the unmixed languages, no comparison can be effected without a knowledge of such patterns. Thus, the entry point to an analysis of this type should be determining what constitutes an adjective in the two languages.

But unlike in case of nouns and verbs where there is little ambiguity in the identification of the forms under study, identifying what is an adjective is sometimes a herculean task. The fuzzy nature of adjectives introduces the risk of forms which may be adjectival being excluded on account of unclear category membership. This would be inimical to the analysis, and contravene the principle of accountable reporting.

In the light of this problem, we use the term “adjectival expression” rather than the more restrictive term “adjective” to refer to all discourse which serves to qualify a noun.

For Igbo, true adjectives, adjectival nouns and noun-noun constructions as illustrated in (64) through (65), are included as adjectival expressions. For ease of reference, we will henceforth refer to these expressions as Igbo adjectives.

*Igbo True Adjective:*

- (64) Ọ nṅwokwe onye ojii ọ muoro ya nwa (1/458)  
 He married person black she bore him child  
 "He married a black person and she bore him a child"

*Igbo Adjectival Nouns*

- (65) Aka m̄ dikwa mma (9/473)  
 Hand me BE beauty  
 "My hand is beautiful"

*Igbo Noun-noun Constructions:*

- (66) Anyị nà-èri azụ iyi (1/119)  
 We AUX-eat fish river  
 "We were eating the river fish"

For English, adjectival expressions as used in this study comprise: true adjectives, participles and noun-noun constructions, as illustrated in (67a) through (67c). We will henceforth refer to these expressions as English adjectives.

*English True adjective:*

- (67a) He is an *old man* (5/077)

*English Participial:*

- (67b) So the guys got *tired* of us (8/174)

*English Noun-noun construction:*

- (67c) You cannot change the **prison system** (2/123)

## 6.2. Coding:

Once all the tokens featuring the expression of adjectival meaning (N = 1001)<sup>24</sup> were extracted, each token was subsequently categorized according to the corpus to which it belonged. Following the same procedure as in chapter 4 for verbs and 5 for nouns, all adjectives were classified according to whether they occurred in unmixed stretches of Igbo as in (68 a&b), *unmixed stretches of English* as in (69a &b), multiword fragments of English as in (70a &b), multiword fragment of Igbo as in (71), or were lone English-origin adjective in otherwise Igbo discourse as in (72):

*Unmixed stretch of Igbo:*

(68a) Màmá ya bù onye ọ́cha (3/111)  
 Mother his is person white  
 "His mother is a white person"

(68b) Aka m òkwa **mma** (9/473)  
 Hand me BE beauty  
 "My hand is beautiful"

*Unmixed stretch of English:*

(69a) He is an *old man* (5/077)

(69b) It is very *narrow* (2/141)

*Multiword fragments of English:*

(70a) Ọ̀ sì nà mụ ama emake *a good wife*. (1/435)  
 He said that I will+NEG make a good wife.  
 "He said that I will not make a good wife"

(70b) Ọ̀ dì very **kind** (1/083)  
 "He is very kind"

*Multiword fragment of Igbo:*

(71) Ọ̀ na-aku **ezigbo preach** but he was a rascal (4/233)

<sup>24</sup>

See table 17 below for the distribution of the adjectival expressions across corpora.

He give+CONT good preaching but he was a rascal  
 "He used to preach very well but he was a rascal"

*Lone English origin adjective in otherwise Igbo discourse:*

(72)  $\dot{O}$  di shy (3/243)  
 He BE shy  
 "He is shy"

Table 18 shows the distribution of the adjectives in the corpus according to corpora.

CORPUS	N	%
English adjectives in multiword fragments of English	322	36
Igbo adjectives in unmixed stretches of Igbo	266	30
Lone English-origin adjectives in otherwise Igbo discourse	167	19
English adjectives in unmixed stretches of English	133	15
Igbo adjectives in multiword fragments of Igbo	1	-
<b>Total</b>	<b>890</b>	<b>100</b>

We see from Table 18 that 133 (15%) English adjectives appeared in unmixed stretches of English. The same table shows that 322 English adjectives appeared within multiword fragments of English. This forms 36% of the data.

There are also 267 (30%) Igbo adjectives occurring within unmixed stretches of Igbo. Only one token (less than 1%) of the Igbo adjectives occurred within multiword fragments of Igbo.

Another 167 (19%) English-origin adjectives appeared surrounded by Igbo discourse, qualifying them as lone English-origin adjectives incorporated into Igbo discourse.

Having included all qualifying expressions and categorized them according to corpus, we are now in a position to examine, in greater detail, the use of these expressions across corpora, as we seek to explicate the status of the 167 lone English-origin adjectival expressions incorporated into the discourse of Igbo. We will start by examining adjectival usage in unmixed Igbo followed by adjectival usage in unmixed English. We will then examine the lone English-origin adjectives and compare their behavior with the patterns seen in the two unmixed languages. If they behave like the adjectival expressions seen in unmixed Igbo, we must conclude that they are borrowings into Igbo. If, on the other hand, they behave like the adjectival expressions witnessed in unmixed English, we must conclude that they adhere to the grammar of English and are, therefore, CS. Either way, corroborative evidence will then come by comparing the patterns found for the lone adjectives with the patterns in the unambiguous CS.

### **6.3. *Adjectival meaning in Igbo***

The nature of Igbo adjectives has attracted considerable controversy in the literature. Not surprisingly, given the fuzzy nature of the adjective as a distinct category in many of the world's languages, the debate centers on the definition and exact number of Igbo adjectives.

For some researchers, (e.g. Thomas, 1913; Igwe, 1971 and Okonkwo, 1974), Igbo adjectives constitutes an open class, comprising true adjectives as in *ocha* (white) in (70a) as well as adjectival or qualifactive nouns such as *mma* (beauty) in (70b). For this group, any form used to express adjectival meaning belongs to the class of adjectives.

For other researchers, (e.g. Adams, 1932; Ward, 1936; Green and Igwe, 1963; Igwe and Green, 1964; Carnochan, 1966; (Carrell, 1970; Welmers and Welmers, 1969; Emenanjo, 1973; Emenanjo, 1982 and Maduka-Durunze 1990), Igbo adjectives comprise only a small set of elements, the true adjectives. According to Emenanjo (1982: 124), those who claim that there are many adjectives in Igbo seem “to have allowed semantic notions to intrude where grammatical criteria should predominate.” For Emenanjo and his associates, then, only a small set of 8 true adjectives, which form 4 pairs of antonyms, can be classified as Igbo adjectives (Welmers and Welmers, 1969; Welmers, 1973; Dixon, 1982). These are as shown in table 19.

**Table 19**

**The class of true adjectives in Igbo** (c.f. Welmers 1973:259).

ukwu “big)	nta “small”
ọhuru “new”	ochie “old”
oma “good”	ọjọọ (bad)
ọcha (white, bright)	ojii (black, dark)

### 6.3.1. True Adjectives

True Igbo adjectives have two crucial properties: (1) they occur only after the nouns they modify; (2) they occur only in attributive contexts. In addition to these, Emenanjo (1978) earlier noted that Igbo adjectives do not occur after the copula *di* (BE).

### 6.3.2. Adjectival Nouns

The adjectival noun category is the more productive adjectival formation class in Igbo, and comprises a wider set of items, including *mmā* (beauty), *njọ* (ugliness) *ùtọ*

(sweetness), *ilu* (bitterness), *ogologo* (tallness), *mkpumkpu* (shortness), *oberē* (smallness), *nnukwu* (bigness), to mention only the most frequent ones. These, unlike true adjectives, may occur both in attributive as well as predicative positions as in (73a&b) respectively.

(73a) I      mà      ná      m      bù      **ezigbo**      mmadù (4/016)  
 You know that I BE good person  
 "You know that I am a good person"

(73b) O      ná-àtò      **utò** (8/036)  
 It AUX+sweet sweetness  
 "It is sweet"

When adjectival nouns precede their head nouns, they become emphatic in their descriptive meaning or ambiguously suggest an inherent (as opposed to a descriptive) meaning (Maduka-Durunze, 1990). Unlike true adjectives, adjectival nouns are said to be felicitous in the environment of a preceding copula *di* (BE), a copula that can only be followed by a noun (Welmers, 1973: 259). Recall that as mentioned above, the basic assumption is that Igbo true adjectives occur only attributively and never with the copula *di*. Maduka-Durunze (1990) and Welmers (1973) have both used the presence of *di* as an indicator that a form is an adjectival noun rather than an adjective (Welmers, 1973:259-260; Maduka-Durunze 1990). The nominal status of these adjectival nouns is also confirmed by their occurring in associative constructions with other nouns which they qualify.

### 6.3.2.1. Variant forms

There also exist in Igbo, some non-basic forms of the true adjectives which may be dialectal variants of the basic forms. They include: *omaricha* (emphatic form of *oma*), *njokiri* (emphatic form of *ojoo*), *ajo* ( a slightly stronger form of *ojoo*) and *nnukwu*

(emphatic form of *ukwu*). With the exception of *ajo* (badness), these non-basic forms share all the properties of adjectival nouns. They occur both prenominally and postnominally and may be used after the copula *di* (be). They may also be used both attributively and predicatively. The distributional features of these non-basic forms have motivated (Maduka-Durunze 1990) to classify them with adjectival nouns even though they are considered only dialectal variants of the true adjectives.

In summary, Igbo expresses adjectival meanings with:

- A closed set of true adjectives which typically occur attributively after the nouns. All eight true adjectives occurred in our data;
- A wider range of adjectival nouns which may occur attributively before or after the noun, and predicatively independent of a noun;
- Other nouns following the ones they modify in associative constructions.

Table 20 shows the distribution of forms used in adjectival modification in the unmixed Igbo portion of our corpus.

	Before Noun		After Noun		Predicative Position		Total	
	N	%	N	%	N	%	N	%
Adjectival nouns	41	23	33	18	102	58	175	66
True adjectives	-	-	62	100	-	-	62	23
Nouns in associative construction	-	-	29	100	-	-	29	11
Total							266	

Adjectival nouns constitute a majority (66%) of adjectival meaning in Igbo. The majority of these adjectival nouns (58%) appeared in predicative position. Of those that appeared

in attributive context, (23%) appeared before the nouns they modify while (18%) appeared postnominally.

True adjectives account for only 23%. These true adjectives categorically appear in attributive context following the nouns they modify.

Nouns in associative construction occurred less frequently than all the others. Only 11% of Igbo nouns appeared in associative construction with other nouns. In associative construction, all Igbo nouns categorically appear after the nouns they modify.

These results support the current view in the literature that the favored strategy for the formation of adjectival meaning in Igbo is the use of adjectival nouns. The results also support the widespread observation on adjective placement, that is, that most Igbo adjectives, whether adjectival nouns or true adjectives, follow the nouns they modify. How do these compare with adjectival usage in the English of our speakers?

#### **6.4. *Adjectival meaning in English***

English has a wide range of true adjectives. Some of the principal features shared by English adjectives are listed by Huddleston (1984: 299):

- (i) They have the functional potential of occurring as heads in adjectival phrases which function as pre-head modifiers in NP structures. This is the attributive use of adjectives in English as illustrated in (74a);
- (ii) They have the functional potential of occurring as head of phrases functioning as predicative complement in clause structure. This is the predicative use of adjectives in English as illustrated in (74b).
- (iii) They have the

functional potential of occurring as heads in phrases functioning as post-head modifiers in NP structures. This is the postpositional use of adjectives in English as in *someone very intelligent* (c.f. Huddleston, 1984). No such token occurred in our data.

(74a) It was not quite a **white** jacket (3/258)

(74b) They don't feel **jealous** (3/284)

It is clear that no one of these properties is unique to adjectives but only adjectives possess all four. Adjectives like *afraid* as in *he is afraid* cannot be used attributively. Adjectives like *main, principal and mere* as in *he is the principal actor* cannot be used predicatively. Finally, adjectives like *designate*, and *elect* as in *president elect*, are used neither attributively nor predicatively.

The most important feature of English adjectives seems to be the ability to function both attributively as in (74a) and predicatively as in (74b).

Like in unmixed Igbo, noun modification may be done in English by using another noun in association as in (66) for Igbo. As we see shortly, however, nouns in associative construction occur very infrequently in the English of our informants.

A small set of English adjectives appear in NP positions as is the case of *the poor, the blacks* etc. Even though these adjectives exhibit nominal behavior, they have some peculiar properties including typically referring to humans (Nkemji, 1995). Such adjectives with generic reference are vanishingly rare and did not appear at all in our data.

	Before Noun		After Noun		Predicative Position		Total	
	N	%	N	%	N	%	N	%
True adjectives	68	54	-	-	56	46	121	91
Nouns in associative Construction	7	100	-	-	-	-	7	5
Participial Adjectives	3	60	-	-	2	40	5	4
Total							133	

As we see in Table 21 above, the majority (91%) of adjectival expression in English is done with true adjectives which are roughly equally distributed between attributive position before the nouns (54%), and predicative position independent of a noun (46%). Noun-Noun modification occurs to a lesser extent (5%).

### **6.5. Comparison between the adjectival expressions of Igbo and English:**

From the foregoing, it becomes clear that Igbo differs from English as follows:

- Igbo uses predominantly adjectival nouns (66%), true adjectives (23%) and noun-noun construction (11%). English uses predominantly true adjectives (91%) and to a lesser extent nouns in association (7%) and participles (4%). Thus, there is a *de facto* categorial mismatch in the adjectival processes of the two languages, at least insofar as usage preferences are concerned.

- While Igbo true adjectives follow the nouns they modify, English true adjectives precede the nouns. There is, thus, a structural non-equivalence between the two

languages, with regards to true adjectives. The following table summarizes adjectival placement in the two languages:

<b>Adjective Type</b>	<b>Noun Modification (Attributive)</b>		<b>Predicate</b>
	<b>Before Noun</b>	<b>After Noun</b>	<b>Following Copula</b>
Adjectival Noun	Igbo	Igbo	Igbo
True Adjective	English	Igbo	English
Participles	English	X	English
Noun-noun Construction	English	Igbo	X

Having clarified adjectival placement in the two languages, we will proceed to determine the status of lone English-origin adjectives in our corpus by examining their placement patterns as well as their quantitative distribution vis-à-vis the adjectives in the unmixed stretches of the two languages as well as in unambiguous CS.

### **6.6. Lone English-origin adjectives in Igbo discourse:**

English-origin adjectives in our corpus are predominantly true adjectives of English (83%) as we see in Table 23 below. Another 15% of the lone adjectives are participles, while 2% (4 tokens) are nouns in association with other nouns. The distribution of the lone nouns in our data is not much different from that found in Meehan and Poplack (1996), where virtually all the lone French-origin adjectives in Wolof discourse were true

adjectives. As explained by the authors, this is not surprising since "most of the adjectival stock in the French of these speakers is of this type." Table 22 above shows that 91% of the adjectival expression in the unmixed English of our informants are also true adjectives.

Bearing in mind that in English attributive position, adjectives, whether true, participial or noun-noun construction, occur before the noun, while their counterparts in Igbo occur after the noun, let us now more closely examine Table 23 which shows the distribution of lone English-origin adjectives incorporated into Igbo discourse according to the position in which they occur.

	Before Noun		After Noun		Predicative Position		Total	
	N	%	N	%	N	%	N	%
True adjectives	-	-	-	-	138	100	138	83
Participles	-	-	-	-	25	100	25	15
Noun-noun Constructions	-	-	4	100	-	-	4	2
Total							167	

The most striking behavior of the lone English-origin adjectives in Igbo discourse, as can be seen from Table 23 is that they are extremely selective with regards to the type of structures in which they appear. Only four English-origin nouns used adjectivally occur attributively in Igbo discourse. All four tokens, as shown in Table 23 and illustrated in (75), occur after the nouns they modify, in structures parallel to nouns in associative constructions in Igbo. Lone English-origin adjectives did not occur before the nouns they modify. In other words, all four lone English-origin nouns occurring attributively assume the placement structure of Igbo rather than that of English. This is the first indication that these lone English-origin adjectives are borrowed into Igbo.

In addition to their placement pattern, we find that the four tokens are made up of three instances of the lexical items *meeting* and *wedding*. These words are in widespread use by monolingual speakers of Igbo. Notice that *ego meeting* (meeting money) is not directly derivable from English *dues*. The four tokens, thus, participate in constructions known as *calques* or *loan translations* - the importation of a structural pattern from one language as a compound expression with a different meaning in another. (Firchow et al., 1972:165; Lehiste, 1988:20).

(75a) Ọ      gà-      àkwụ      ụgwọ      *meeting* (C/5.58)  
 He      will      pay      fee      meeting  
 "He will pay meeting dues"

(75b) Ha      gà-      ètínye      akwụkwọ      *wedding* (U/070)  
 They      will      put      paper      wedding  
 "They will submit a wedding paper."

(75c) Ọ      dighi      ènye      ya      egò      *meeting* (C/6.0)  
 He      do+NEG      give      her      money meeting  
 "He does not give her meeting dues"

(75d) Ọ      bù      ya      naānị      nà-      akwụ      ụgwọ      *meeting* (C/6.2)  
 It      is      her      only      AUX      pay      money meeting  
 "Is she the only one who pays meeting dues?"

Let us now turn to the predicative position where we have the majority of the lone English-origin adjectives.

The predicative position is structurally equivalent in the two languages. In each, the adjective follows a verbal element. One way of determining the status of lone English-origin adjectives incorporated into Igbo is to examine the verbal element which the lone

items follow and compare their distribution with those of the unmixed stretches of Igbo as well as with unambiguous CS of English.

### 6.6.1. Preceding verbal element:

It is claimed that an Igbo adjective is determined by the verbal element with which it is associated. True Igbo adjectives do not occur predicatively and, hence, do not appear after the existential copula *di* (BE). Adjectival nouns, on the other hand, are said to occur overwhelmingly with the copula *di* (Emenanjo, 1978; Maduka-Durunze, 1990).<sup>25</sup>

We will now test the distribution of adjectival nouns in unmixed Igbo in the environment of *di* vis-à-vis other copulas and main verbs. Table 24 shows the distribution of Igbo adjectival nouns according to the type of verbal element they follow.

**Table 24 :Distribution of Igbo adjectives in unmixed stretches of Igbo according to preceding verbal element**

	<i>di</i>		Other Copula		Main verb		No verb		TOTAL N
	N	%	N	%	N	%	N	%	
Lone Adjectives	58	57	4	4	40	39	-	-	102

As expected, true Igbo adjectives did not follow *di*. This is consonant with the features of Igbo adjectives as presented in the literature (see Welmers, 1973; Emenanjo, 1978; Maduka-Durunze, 1991). On the other hand, the majority (57%) of the adjectival nouns

<sup>25</sup> Noun-noun construction did not occur predicatively in our data (see table 22 above). Therefore, for determining the frequency of Igbo adjectives in the environment of a preceding verb, we are left with only the adjectival nouns.

occur in the environment of a preceding *di*. Of the remaining 43%, 39% follow main verbs while 4% follow other copulas. Again, this is in accordance with the position in the literature that adjectival nouns of Igbo are felicitous in the environment of a preceding *di*. There, thus, seems to be harmony between prescription and actual usage.

Recall that 162 lone English-origin adjectives occur in predicative position in Igbo discourse (Table 23). What are the preceding verbal elements for these lone English-origin adjectives?

**Table 25 :Distribution of Lone English-origin adjectives according to preceding verbal element.**

	<i>di</i>		Other Copula		Main verb		No verb		TOTAL N
	N	%	N	%	N	%	N	%	
Lone Adjectives	142	87	-	-	21	13	-	-	163 <sup>26</sup>

Table 25 shows that the overwhelming majority (87%) of the lone English-origin adjectives in Igbo discourse follow the existential copula *di*. This is comparable to the situation in Fongbe-French discourse (Meechan and Poplack 1993) where French adjectival expressions follow Fongbe *do* (BE), a copula with the same semantic content and distribution as the Igbo *di*. However, unlike in Fongbe-French where *do* did not occur at all before adjectives in unmixed Fongbe, even though it is not precluded in the grammar of the language, we have seen that in unmixed Igbo, the majority of the adjectival nouns also follow *di*, albeit at a lower rate than the lone English-origin

<sup>26</sup> This number is made up of 138 (85%) English-origin "true" adjectives and 25 (15%) English-origin participial adjectives.

adjectives (compare Tables 23 and 24). This means that the English-origin adjectives in Igbo discourse, and the adjectival nouns of unmixed Igbo occurring in predicative position, are both favored in the environment of a preceding *di*. Therefore, unlike in Fongbe-French, *di* is not being used in Igbo-English discourse as a device for establishing categorial equivalence where none existed. Rather, the use of *di* on lone English-origin adjectives mirrors the pattern for adjectival nouns of unmixed Igbo, thereby offering strong evidence that these lone items are being incorporated as borrowings into Igbo. In other words, it appears as if the speakers are treating the lone English-origin adjectives as if they were adjectival nouns of Igbo.

The question that immediately arises is that of a possible motivation for this category-hopping. That is, English-origin adjectives (true and participial) being incorporated into Igbo as adjectival nouns rather than as true adjectives of Igbo.

We will recall that Igbo true adjectives form a closed class of only 8 items (see Table 18) while the adjectival noun category is the productive class for adjectival formation in Igbo. One would, therefore, expect Igbo to borrow into the productive class, as we see from our data, rather than into a closed class. This type of result has also been reported by Meechan and Poplack (1996), who found that "where there is a choice, loanwords will be borrowed into the more productive lexical class of the languages (as can be inferred by hierarchies of "borrowability" where closed functional classes are less likely to incorporate loanwords than open classes" (See also Haugen, 1950; Poplack et al., 1988; and Treffers-Daller 1990).

But even though we lean towards treating these lone English-origin adjectives as borrowings on the basis of evidence so far presented, we must recall that the environment following *di* is an equivalence site between the two languages, so that nothing precludes

CS from occurring at such sites. In other words, nothing precludes the speakers from switching after *di* as they did after *do* in Fongbe. This does not seem to be the case in our data as we see from the following examination of English adjectives occurring within multiword fragments of English.

### 6.7. *Adjectives within multiword fragments of English.*

We saw in Table 18 that a total of 322 (32%) of all adjectival expressions in the data appear within stretches of English which satisfy our requirement for inclusion as adjectives within multiword fragments as illustrated in (76) below. A closer examination of the examples in (76a & b) shows that adjectives within multiword fragments in the corpus fall into two categories determined by position of the adjective in the stretch. Notice that by the inclusion of tokens such as in (76a), we are not concerned with the CS boundary (which is discussed in the next chapter), but with determining the distribution of adjectives which occur *within* stretches involved in CS.

(76a) O      si      nà      mu      ama      *emake a good* wife. (1/435)  
 He    said    that    I      will+NEG    make a good wife.  
 "He said that I will not make a good wife"

(76b)            O      di      *very kind* (1/083)  
                   "He    is      very    kind"

Table 26 below gives the overall distribution of adjectives within multiword fragments of English which are retained as unambiguous codeswitches for the purpose of comparison.

	English ADJ + English Noun		English Noun + English ADJ		Verb + English AdJ		Total	
	N	%	N	%	N	%	N	%
True adjectives	225	80	-	-	57	20	282	88
Nouns in associative Construction	30	100	-	-	-	-	30	9
Participles	8	80			2	20	10	3
Total	263	82			59	18	322	

We observe from Table 26 that true adjectives constitute 88% of adjectives within multiword fragments of English. Nouns in associative construction occurred 9% while participles occurred 3% of the time within multiword fragments of English.

How do the unambiguous codeswitches compare with lone English-origin adjectives with regards to preceding verbal elements? Table 26 shows the distribution of preceding verbal elements in codeswitches. Note that we will only be concerned with the 59 tokens (true adjectives and participles) which occur in predicative position (Table 27).

**Table 27: Distribution of adjectives in unambiguous CS of English according to preceding verbal element.**

	<i>di</i>		Other Copula		Main verb		No verb		TOTAL N
	N	%	N	%	N	%	N	%	
Adjectives in CS	41	69	8	14	9	15	1	2	59

We find that the adjectives within multiword fragments of English occurred in the environment of a preceding *di* 69% of the time. This number is significantly lower than the rates already witnessed for lone English-origin adjectives in the environment of *di* (Table 25), which accounted for 87%. Therefore, the lone English-origin adjectives which overwhelmingly follow *di* differ from unambiguous CS, thus, confirming our borrowing analysis for these lone English-origin adjectives.

This borrowing analysis for the lone English-origin adjectives also confirms Meechan and Poplack's findings that where there is more mismatch, there will be less CS. In addition, it explains why there is also a paucity of borrowings in the attributive position even though the structural and categorial mismatch between the languages does not preclude borrowings but only CS. Borrowing is rare in the attributive position because the speakers are simply incorporating the borrowed items via the structure they prefer in their unmixed language, that is via adjectival nouns which are felicitous in predicate position.

### **6.8. Discussion and Conclusions:**

We saw in this chapter, that there is a structural and categorial non-equivalence in the adjectival positions of Igbo and English. Structurally, Igbo differs from English in that some of its adjectives may follow the nouns they modify. Categorially, Igbo differs from English in that the former allows only some true adjectives, which are only used attributively, but the favored adjectival strategy is clearly the use of adjectival nouns in predicative position. Our task was then determining the effect of this structural and categorial non-equivalence in the mixture of Igbo and English at the adjectival level.

Specifically, we sought to test the EC in the light of this structural and categorial mismatch.

We found that in the attributive context where there is both structural and categorial non-equivalence between Igbo and English, multiword CS did not occur at all. The only instance of language mixture in such contexts comprise 4 etymologically English nouns which we have identified as *calques* or *loan translations* into Igbo. This is overwhelming support for the EC. If it were the case that a constraint such as EC was not operative, the speakers should have no problem codeswitching in the attributive context. We concluded then that it is both the structural and categorial non-equivalence in the attributive context that conspire to rule out the occurrence of CS in that position.

In the predicative position where we observed structural equivalence but categorial non-equivalence, we noticed less clear results with respect to the status of the lone English-origin adjectives. Further evidence, however, made us lean towards treating these lone English-origin adjectives in predicative position as if the speakers were incorporating them into Igbo as adjectival nouns.

This latter result has a number of interesting implications for the interpretation of the EC. First, it shows that the EC is not only a linear-based constraint, but that categorial equivalence is a crucial factor in CS grammar. Second, it shows that lack of categorial equivalence may negate structural equivalence and block CS. Categorial equivalence may, of course, be established through some other mechanism as is the case in Fongbe-French as reported in Meechan and Poplack (1996).

Our results support those of Meechan and Poplack who found that "a greater degree of categorial mismatch would be associated with a tendency against codeswitching." CS

failed to occur in all contexts where Igbo shows either categorial or structural non-equivalence with English in the use of true adjectives. The results also support in part Muysken (1991) only as far as he contends that categorial non-equivalence is taken seriously so that switching is not allowed in a categorial non-equivalent site.

## Chapter 7

### 7. Multiword Fragments

#### 7.1. Introduction:

In chapters 4, 5 and 6, we have distinguished between CS and borrowing in single lexical items from one language incorporated into the discourse of the other language. We explained that these lone items are inherently ambiguous and that determining whether they are CS or borrowing is a *sine qua non* to any adequate analysis of constraints on intrasentential CS. Our analyses revealed all, or the majority of the lone English-origin items incorporated into Igbo discourses, be they nouns, adjectives or verbs, to be borrowings into Igbo. This exercise has now set the stage for us to consider the remainder of the data, namely multiword fragments as defined in chapter 1.

Several scholars have recently tested the EC on different language pairs. Based on these researches, several claims have been made, some demonstrating the robustness of the EC, others rejecting the constraint as not accounting for the data.

Nortier (1989) tested the EC on the Dutch-Moroccan Arabic CS. According to her, Moroccan Arabic has both SVO and SOV word order. Dutch has SVO in main clauses and SOV in subordinate clauses. Based on this, Nortier predicted possible switch points for these languages if a constraint like equivalence were operative.

Nortier found that the EC was hardly ever violated in major constituents in her data. However, she claims that switching within constituents which occurred in Dutch-

Moroccan violated the EC. For instance, there were switches between Nouns and adjectives which should not be allowed since there was a contrast in adjectival placement in the two languages. In Moroccan Arabic, the adjective follows the noun while in Dutch, the adjective precedes the noun. Switching between demonstratives and Nouns also occurred frequently even though they are not allowed by the EC. Moroccan Arabic requires a second determiner (the definite article) which cannot occur in Dutch. Nortier concluded that "on the whole, the equivalence constraint seems to be valid for major constituents (S-O-V)." She goes on to indicate that "within constituents, however, the equivalence constraint appears to lose strength." (p. 172)

Nortier's claims echoes those of di Sciullo, Muysken and Singh (1986) who argued that the EC may be robust in major categories which are shared by all languages while language specific categories pose problems for the constraint. On the basis of this argument, di Sciullo et al. had proposed the Government Constraint discussed earlier in chapter 2.

Treffers-Daller tested the EC on the bilingual discourse of Dutch, a language which favors VSO order, and French, an SVO language. She concludes that "the equivalence Constraint does make correct predictions in many cases ... if one assumes that equivalence need hold at constituent level only." (p. 257)

It is not surprising that these scholars found the EC seemingly operative at the level of major constituents only. The findings that EC does not operate below the level of major categories may be attributed to a serious methodological shortcoming in nearly all the researches: the failure to distinguish between CS and borrowing, especially with respect to incorporations from one language in the discourse of another. It is below the major category level that we find these inherently ambiguous lone items, which if not properly

disambiguated yield spurious results. For instance, Nortier claims there should be no switches between demonstratives and nouns as well as between adjectives and nouns because of the differing word orders of the two languages. This is in order but only if the said nouns are indeed CS. If these nouns have been borrowed into the language of the adjectives or the determiners, then these should not be presented as tokens to test the EC. Since Nortier did not first determine the status of the nouns, that is whether or not they have been borrowed into the language of the demonstrative, these claims that EC is violated NP and AP-internally are dubitable. This is so especially given the mountain of evidence that has accumulated to show that the lone items are more likely to be borrowed rather than switched. Thus, Nortier's nouns which co-occur with adjectives and determiners from the other language are akin to the lone nouns in our data. But Nortier's analysis stops there. Where this thesis is innovative is in testing these lone items with regards to their distribution in discourse. We have demonstrated that the lone English-origin nouns in our data take Igbo demonstratives just like the nouns in unmixed stretches of Igbo. There is, therefore, a good chance that most of the constituents which are purported to pose problems for the EC belong to the category of borrowings over which the EC has no purview.

Having first distinguished between CS and borrowing, how then does the EC fare in Igbo-English discourse when tested upon data not contaminated with borrowings? We will begin with a brief introduction to the sentence structure of Igbo. Once again, we assume the reader's familiarity with English and will not delve into the structure of English.

## **7.2. *The sentence structure of Igbo:***

In sentences involving full NPs as in *nwa ahù* in (78) Igbo typically has an SVO word order.

Igbo subject NPs would presumably be generated in the Spec of AGRsP position in a structure compatible with Chomsky's minimalist program (Chomsky 1992) or in the Spec of IP in earlier versions of the GB theory (e.g. Chomsky 1981), hence the Subject Verb Object (SVO) order of the language as we see in (77).

- (77a) *Nwa ahù amaghinne ya* (3/168)  
 Child that know+NEG mother it  
 "That child does not know its mother"

Igbo pronouns have traditionally been classified into two categories: dependent and independent. Table 28 below shows the two types of pronominals.

**Table 28 Igbo pronominals**

<b>Dependent pronouns</b>	<b>Singular</b>	<b>Plural</b>
First person		
Second person	<i>i/i<sup>27</sup></i>	
Third person	<i>o/o</i>	
Impersonal	<i>a/e</i>	
<b>Independent pronouns</b>		
First person	<i>M(u)</i>	<i>ànyi</i>
Second person	<i>gi</i>	<i>unù</i>
Third person	<i>ya</i>	<i>ha</i>

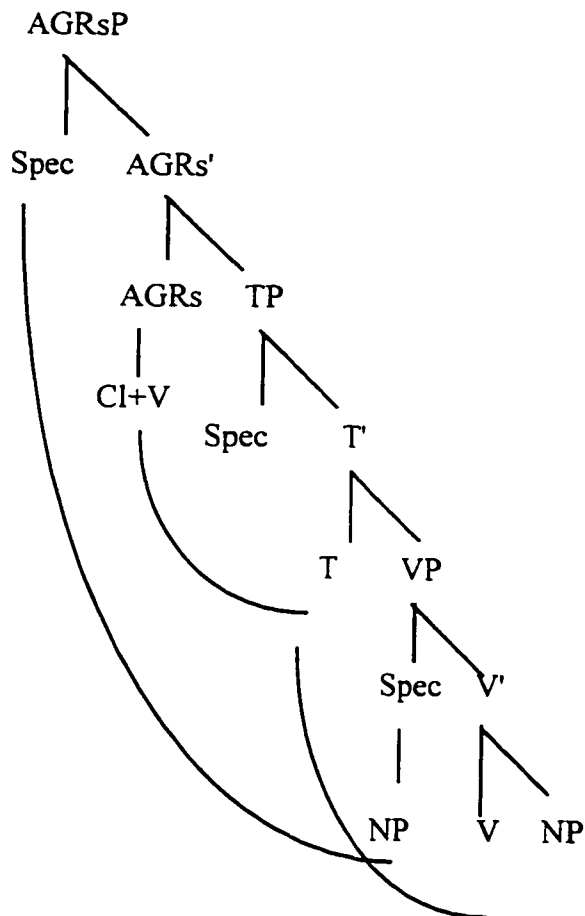
The independent pronouns exhibit a full range of syntactic behavior and have the same distribution as the full NPs. Thus, just like the full NPs, they are generated in the Spec of

<sup>27</sup> The dependent pronouns are monosyllables conditioned by the rule of vowel harmony.

AGRsP and the structures in which they occur are typically SVO as we see in (78) illustrated with figure 8.

- (78) Ànyị́ anaghị́ eje n'ulò ha (3/25.00)  
 We AUX+NEG go PREP+house they  
 "We do not go to their house"

**Figure 3: A surface Phrase Marker showing the derivation of a simple Igbo sentence.**



The dependent pronouns, on the other hand, exhibit a syntactically differing behavior from the full NPs. Among other things: (i) they cannot be conjoined with other pronouns

or with full NPs; (ii) they cannot be modified with the emphatic marker; (iii) they cannot appear in cleft or genitival constructions and (iv) they cannot co-occur with prepositions. Also, unlike full NPs and dependent pronouns, they are crucially conditioned by the rule of vowel harmony. In other words, the dependent pronouns must harmonize with the vowels of the verbs with which they occur. For these reasons, the dependent pronouns have been analyzed as subject clitics.

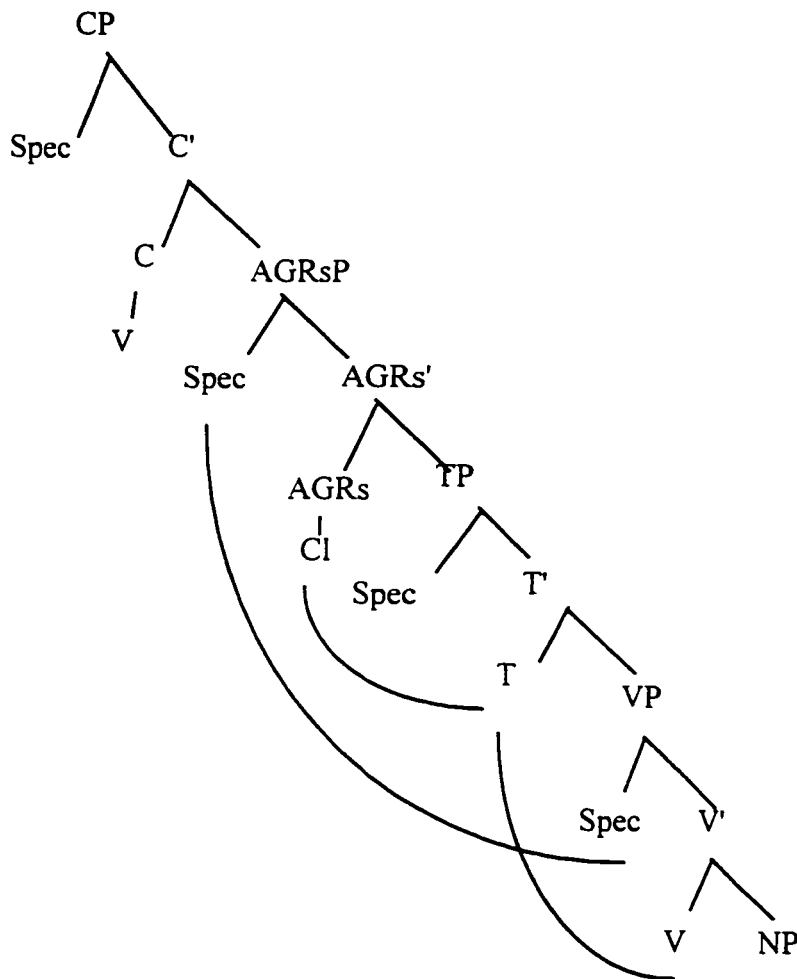
The syntactic behavior of two of the Igbo pronouns, namely 1st person singular *m* (I), and third person plural *ha*, also differ remarkably from the behavior of others. These pronouns variably occur both as full pronouns and as pronominal clitics. When functioning as full pronouns, they appear before the verbs as in (79a and b). But when they occur as pronominal clitics, they follow the verbs thus creating a VSO word order in Igbo as in (80) where the subject *m* (I) appears after the verb+negation *amazighi*.

- (79a) M      gà      àbja      Ottawa (4/0.14)  
       I      will      come      Ottawa  
       "I will come to Ottawa"
- (79b) Ha      mèghèrè      ụzò (1/008)  
       They      opened door  
       "The opened the door"
- ((79) À-mazi+ghị      m      aha      *the guy* (6/087)  
       CL-Know+Neg      I      name      the guy  
       "I no longer know the guy's name"

This VSO order has often been described as Subject Inversion (Manfredi, 1990) and as V - to- COMP (Eze, 1995; Saah and Eze, In press ). In this situation, the Igbo verb moves from its position through a legitimate process of Long Head Movement (Rivero 1991b, 1993, 1994) to the Spec of AGRsP position, as demonstrated in figure 5 below. Thus, the

verb appears before the pronominal NP subject *m* or *ha* yielding a VSO order as we see below:

**Figure 4: A surface Phrase Marker showing the position of the Verb and Clitic after Long Head Movement.**



In Igbo, therefore, there is both the SVO and VSO word order, although the latter features only in the environment of two pronouns, namely *m* (I) and *ha* (they). This observation is expected to have implications for the EC. We will return to this shortly.

For now, we examine the quantitative distribution of the two word order types featuring *m* and *ha*. Table 29 shows that only 2% (1/61) of the *ha* are inverted. Therefore, the majority of the *ha* are not inverted, and, thus, maintain the SVO order as in full NPs. But for *m*, the situation is different. We see that majority of the *m* (60%) are inverted. We, thus, have more VSO order in structures involving the first person singular *m* in Igbo. Note also that *m* occurred more than twice as much as *ha* in the data (70% Vs 30%).

<b>Table 29 :Distribution of <i>m</i> and <i>ha</i> in unmixed Igbo according to whether they are inverted or not.</b>						
	<b>Inverted (VSO)</b>		<b>Non-inverted (SOV)</b>		<b>Total</b>	
	N	%	N	%	N	%
M	84	60	56	40	140	70
Ha	1	2	60	98	61	30
Total	85	42	116	58	201	

### **7.3. Some Predictions for Igbo-English CS:.**

Given that English is strictly SVO while Igbo variably allows VSO in very restricted contexts, the EC would predict as follows for Igbo-English CS:

- (i) That in non-inverted sentences displaying SVO, switches can occur freely between subject NPs and verbs as well as between verbs and object NPs in the two languages;
- (ii) That in inverted sentences, switching should be disfavored, if not blocked, between the verb and subject and between subject and object.

#### **7.4. Results and analysis**

How do these predictions hold up against the data? To answer this question, we noted all points in which there was a switch from Igbo to English and vice versa. Table 30 shows the different switch points.

**Table 30 : Composition of Constituents**

SWITCH SITE	RATES	
	N	%
Igbo Verb and English NP	438	49
English NP and Igbo VP	159	18
Igbo NP an English PP	55	6
Igbo NP and English Adverb	36	4
English Adverb and Igbo NP	29	3
English NP and Igbo relative clause	27	3
Clefted English NP and Igbo Subject NP	20	2
Igbo indirect object and English direct object	19	2
Igbo Complementizer and English NP	16	2
Igbo PP and English NP	14	2
Igbo Conjunction and English NP	14	2
Igbo NP and English NP	12	1
Igbo NP and English VP	11	1
Igbo NP and English PP	10	1
Igbo Verb and English Adjective	5	1
English NP and Igbo Comp	4	-
Igbo VP and English Tag	4	-
Igbo Adverb and English NP	4	-
Igbo NP and English Complementizer	3	-
English NP and Igbo Tag	2	-
English VP and Igbo PP	2	-
Igbo NP and English Conjunction	2	-
Igbo NP and English Conjunction	2	-
English NP and Igbo PP	2	-
Igbo NP and English Conjunction	1	-
English PP and Igbo VP	1	-
Igbo VP and English Comp	1	-
English indirect object and Igbo direct object	1	-
Igbo NP and English Relative clause	1	-
English NP and Igbo Conjunction	1	-
English conjunction and Igbo Complementizer	1	-
English Adverb and Igbo VP	1	-
TOTAL	898	

A total of 34 switch points were observed in our data. An overwhelming majority (49%) of the switches involve switching between an Igbo verb and an English direct object NP

as in (81). A small number (19 or 2%) of other direct object switches occurred between an Igbo indirect object pronoun and an English direct object as in (82) below:

(81) O      gà-      àbù      *a shock* (2/044)  
       "It      will      be      a shock"

(82) My parents      bù      ihe      na-enye      m      *that money* (1/226)  
       My parents      are      thing      AUX-give      me      that money  
       "My parents are the ones who give me the money"

This result is not surprising since the preNP position has been widely cited as a favorable CS point (Berk-Seligson, 1986; Poplack, 1980; Treffers-Daller, 1991).

NP-internal position is a non-equivalence site for Igbo-English discourse. Recall from chapters 5 and 6 that Igbo modifiers follow the nouns they modify while English modifiers precede the nouns they modify. There was no switching NP-internally, a non-equivalence site. Instead, the speakers switched at the pre-NP position, an equivalence site.

This interpretation may also explain the results from Dutch-Moroccan CS as described in Nortier (1989). Nortier reported that the EC operated at the level of major constituents only. However, in Dutch-Moroccan discourse, the NP-internal positions are non-equivalence sites, just like in Igbo-English discourse. The boundaries between major constituents, which include the boundary between the verb and its NP complement, are equivalence sites, again just like Igbo English CS. This evidence supports the EC.

The second most common switch point is between an English NP and an Igbo VP as in (83).

- (83) *The woman* àshì ya kwùò ùgwò (2/079)  
 "The woman asked him pay debt"  
 "The woman asked him to pay a debt"

This type of switch represents 18% of the switches in the data. All 158 of this type of switch appear at sites of structural equivalence between Igbo and English. Again, the speakers appear to prefer switching after major constituents where the two languages are structurally equivalent.

Except for 1 token (see e.g. 92 below), switches involving other major constituents also categorically obeyed the EC. For instance, switches between Igbo verbs and English PPs as in (84a), which account for 6% of the data, all appear at equivalence sites. This is to be expected since the PP is an equivalent site in the two languages. In fact, unlike the NP-internal position where there were no switches because of the structural non-equivalence between the languages, a few switches (2%) occurred PP-internally between Igbo prepositions and English NPs as in (84b). This is a strong piece of evidence that the equivalence constraint holds. Otherwise, it is difficult to explain the fact that speakers avoided switching NP-internally, a non-equivalence site, but switched PP-internally, an equivalence site.

- (84a) Mụ̀ nà ya gà èbinwui *the same house* (3/099)  
 I and she will live in the same house  
 "She and I could live in the same house"

- (84b) Ànyị̀ jèrè nà *their market place* (E/081)  
 We went PREP their market place  
 "We went to there market place"

Switches also occurred between Igbo NPs and English adverbs as in (85a). These switches account for 4% of the data and feature only one violation of the EC as in (85b). We will return shortly to discuss such tokens as (85b) in more detail. Notice that this involves the inverted Igbo subject clitic *m* which we have indicated may occur following an Igbo verb as in the example (85b) below:

(85a) I        buọla            ezigbo            mmadù *all these years of your life*  
 You   BE+PERF    good            person all these years of your life  
 "You have been a good person all these years of your life" (2/036)

(85B) So    ihe    m        mà    bù        nà        anàtàrà m        *one day*  
 Only thing I    know is        that    returned    I        one day  
 "The only thing I know is that I returned one day" (8/334)

Switches between English Adverbial Phrases and Igbo NPs account for 3% of all switches. One feature of these switches is that the Adverbial Phrase is always dislocated as we see in (86). All 30 of such switches obey the EC.

(86) *This year*[PAUSE]    ì        gà-        àchì (6/104)  
 This year [PAUSE]    you    will    rule

Also accounting for 3% of all switches are switches between English Nouns and a modifying Relative Clauses of Igbo as in (87).

(87) *It's such injustice*    a        nà-            ème    ụ̀nụ̀aka (9/072)  
 It's such injustice    CL    AUX+CONT    do    children  
 "It is such injustice being done to children"

Also accounting for 2% of the switches are those between Igbo conjunctions and an English NPs. Again all of such switches occur at equivalence sites between the two languages as we see in (88)

- (88) Di            ya    *nà*    the woman    *adiḡhi*        na    *mmã*  
 Husband      her    and    the woman    BE+NEG      in      good  
 "Her husband and the other woman are not in good terms" (C/25.51)

Switches between clefted English NPs and Igbo NPs occurred 2% of the time. As expected, all of these occurred at equivalence sites as we see in (89)

- (89) *This person*, a            *kpòchiri*        *yà*    again (2/081)  
 This person,                CL    locked him    again  
 "This person was locked up again"

Other switch sites which occurred only 1% of the time include: igbo NP and English VP as in (90a), English NP and Igbo complementizer as in (90b), Igbo NP and English PP as in (90c) and Igbo subject clitic (inverted) and English NP as in (90d), which, as noted earlier, violates the EC.

- (90a) *The boy*            *bjàrà*    *yie*                    *màma*            *ya* (1/140)  
 The boy            came    resemble            mother    his  
 "The boy resembles his mother"

- (90b) *He said as a first son* *nà*    *ya*    *chòrò*            *iuse*                    *ego*    *ya*  
 He said as a first son            that    he            wanted use+INF            money    his  
 "He said that as a first son, he wanted to use his money" (1/072)

- (90c) *Kà*    *anyi*    *mee*    *party*    *anyi*    *with our boyfriends* (1/083)  
 Let    us    do    party    us    with our boyfriends  
 "Let us do our party with our boyfriends"

- (90d) *So*    *ihe*    *m*    *mà*    *bù*    *nà*    *ànàtàrà m*    *one day*  
 Only    thing    I know    is    that    returned    I    one day

"The only thing I know is that I returned one day" (8/334)

Although several other switches from English to Igbo and vice versa occurred at other boundaries, they were very infrequent and account for less than 1 % of all switches. These very infrequent switch sites include: Igbo NP + English tag<sup>28</sup>, English NP + Igbo tag, Igbo complementizer + English NP, Igbo NP + English conjunction, English PP + Igbo VP, Igbo VP and English PP and English adjective + Igbo noun. Of all these infrequent switch sites, only one, namely that between an English adjective and an Igbo noun, as seen in (92) below where an English adjective *real* modifies an Igbo noun *nne* (mother), violates the equivalence constraint. You will recall that in Igbo, the adjective follows the noun while in English, the adjective precedes.

- (91) The real        *nne ya, nwa ahù amaghì* (3/169)  
 The real        mother her,    child that know+NEG  
 "Her real mother. the child did not know"

The results presented above are striking. As can be seen from Table 31, only 3% (24/898) of the CS in Igbo-English discourse did not occur at sites where the two languages are structurally equivalent. 97% of the CS appear at equivalence sites. This is already a demonstration of an overwhelming support for the EC.

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28 It is interesting that tag switches are infrequent in our data, accounting for less than 1%. Tag switches have been shown to be the easiest type of CS. This is because tags have little or no syntactic relation to the rest of the sentence, so that the chances of grammatical contravention is limited. In the New York Puerto Rican community, the non-fluent bilinguals utilized tags as a device for engaging in CS without the constraints of having to respect grammatical requirements (Poplack, 1980). In the light of this, one may want to argue that tags are infrequent in our data because our speakers are all competent bilinguals who are not restricted to switching only at tag environments. While this is a plausible argument, it may not be the only explanation available for infrequent tag switches in our data. In fact, Poplack, Wheeler and Westwood (1989) found that tag switches were infrequent in their Finnish-English data. Even the least English-proficient speakers in their sample did not switch at tag environments more than 6% of the time. The logical conclusion is, therefore, that tag switches, just like all other switch types, are not a common switch type in certain communities, including ours.

**Table 31 : Distribution of CS according to whether or not they occurred at equivalence sites**

	N	%
Equivalence site	873	97
Igbo structure but not English	24	3
English structure but not Igbo	1	-
<b>Total</b>	<b>898</b>	<b>100</b>

Table 31 shows that EC accounts for much of the CS data for Igbo-English CS. This is an indication that most of the purported counterexamples reported from languages with identical word order, especially at the constituent level, may be an artifact of the confounding of language contact phenomena, namely CS and borrowing. Having said this, let us now turn to, and examine in some detail, the 3% of the CS which occurred at non-equivalence sites.

### **7.5. Multiword fragments at non-equivalent sites:**

We observed that there are three types of non-equivalence structures involving multiword fragments. These are: (i) clauses in which English-origin nouns appearing at right boundaries, as in (92a), do not feature overt determiners where required in English, though not in Igbo, in violation of the principle of *no omissions* (Poplack, Wheeler and Westwood, 1989)<sup>29</sup> (ii) where an English-origin multiword fragment takes an Igbo possessive modifier as in (92b) (iii) and clauses involving the inverted Igbo clitics as shown in (92c) and an Igbo NP in a multiword fragment taking English modification as in (91) repeated as (92d).

<sup>29</sup> Poplack, Wheeler and Westwood (1989:396) identified four principles of the EC: (i) principle of *no crossover*, (ii) principle of *monolingual grammaticality*, (iii) principle of *omission*, and (iv) principle of *no repetitions*.

- (92a) I kpòchigo Ø *gate by this time?* (5/020)  
 You locked gate by this time  
 "Have you locked the gate by this time?"
- (92b) ì chézoola ihe *English name* m bù (4/016)  
 You forgot thing English name my be  
 "Have you forgotten what my English name is?"
- (92c) So ihe m mà bù nà anàtàrà m *one day*  
 Only thing I know is that returned I one day  
 "The only thing I know is that I returned one day" (8/334)
- (92d) *The real* nne ya, nwa ahù amaghì (3/169)  
 The real mother her, child that know+NEG  
 "Her real mother, the child did not know"

Table 32 shows the distribution of the multiword fragments in non-equivalent sites.

Table 32: Distribution of multiword fragments at non-equivalent sites. t		
Type of multiword fragment	N	%
Inversion of <i>m</i> and <i>ha</i>	10	48
English-origin NPs with zero determiners	8	38
English-origin NPs with Igbo modification	3	14
English adjective co-occurring with Igbo NP	1	-
Total	22	100

The least frequent type of multiword fragments at non-equivalence sites is the example given in (92d) above, where an English true adjective modifies an Igbo noun. We consider this an exception to the EC. There is, however, only one such token.

The next frequent type of multiword fragments at non-equivalence sites are the two tokens featuring English-origin NPs which bear Igbo modification as listed below:

(93a) Enwèrè            m        *English*        *name* àbuo (4/017)  
 Have                I        English        *name* two  
 "I have two English names"

(93b) Ì            chèzoola            ihe        *English*        *name* m        bù (4/016)  
 You forgot            thing English        *name* my        be  
 "Have you forgotten what my English name is?"

First, these multiword fragments of English with Igbo modification differ from other multiword fragments, all of which bear modifications lexicalized in English. In this respect, these multiword fragments with Igbo modification resemble the lone English-origin nouns in Igbo contexts which bear Igbo modifications. Second, notice that all of the modifiers appear postnominally, the canonical position for modifiers in Igbo. Third, all three sentences were produced by the same speaker for whom this may be a strategy of incorporating English-origin material into his Igbo discourse. Most importantly, *English name* is arguably a compound or treated as such by the speaker. We, therefore, suggest that these apparent English multiword fragments are indeed borrowings into Igbo rather than CS.

What about the 8 multiword fragments of English which appear with no overt determiners as shown in (92a)? Although zero is permitted in certain contexts of English as we saw in chapter 5, we note that none of the nouns in the 8 tokens appeared in a context where zero is permissible in English. In other words, all 8 violate the syntax of English. However, they categorically obey the syntax of Igbo. Recall that zero modification is the preferred strategy for nouns in unmixed Igbo as well as the lone

English-origin nouns in Igbo discourse. They, therefore, resemble Igbo nouns in unmixed stretches, as well as the borrowed lone English-origin nouns in Igbo discourse.

Do these constitute a violation of the EC? We suggest that this is very unlikely. Notice that the nouns involved in this longer stretch, appear at the boundary with Igbo, a point where any etymologically Igbo noun could also occur. Since these nouns are without determiners, thus resembling lone English-origin nouns borrowed into Igbo discourse, nothing indicates that the contentious nouns are not also borrowings into Igbo. In that case, the switch point would be after the noun *gate*, for instance, and not before it as it appears on the surface. This analysis is corroborated by the fact that the lexical item *car*, which is widely used in unmixed Igbo speech, and which appeared a few times in the lone English-origin nouns, accounts for three of the 8 tokens in this category of multiword fragments without overt modification.

It is, therefore, justifiable to say that these apparent exceptions to the EC are, in fact, borrowings rather than CS and that the switch points in (92a) are after the noun *gate*. These nouns should, therefore, both be treated as switches between Igbo NPs and English ADV which we discuss below.

The third and more crucial type of multiword fragment occurring at non-equivalence sites involves the inverted Igbo pronominal clitics *m* and *ha*, which yield VSO order as in (93a). There were 10 tokens of these switches making it the most common occurrence of multiword fragments at non-equivalent sites in our data.

Just like the one token of English adjective modifying Igbo noun as in (88), we consider these switches involving pronominal clitics and consequently a VSO order for Igbo actual violations of the EC. Quantitative evidence exists to show that Igbo-English speakers are

"aware" of the structural non-equivalence between Igbo and English in such structures and are avoiding codeswitching at such points.

### 7.5.1. A Quantitative Analysis of the VSO order in Igbo

First, examining the sentences involving inversion carefully, we noticed that they are categorically of the type V+ S + O where the verb and the subject (clitic) come from Igbo and the object comes from English. In all cases, therefore, the switch is between the Igbo subject clitic and the English object NP.

Recall from Table 29 that the inversion of *m* is the preferred strategy in unmixed Igbo speech. Recall also from the Table 30 that, in line with earlier observations in the literature, preNP position is the most viable position for CS, the object NP is the most frequently switched constituent in our data (49%). Therefore, inversion is not only the preferred strategy in Igbo sentences involving *m* but the switch in inverted sentences occurs at a point where CS is most prolific in Igbo-English CS. We would, therefore, expect a massive violation of the EC in Igbo-English CS. Consider, however, Table 33 which shows the distribution of inverted clitics appearing only in sentences involving CS according to whether or not they occur at CS boundary.

	Boundary		Non-boundary		Total	
	N	%	N	%	N	%
Inverted	10	30	19	70	29	63
Non-Inverted	-	-	17	100	17	39
Total	8	18	36	82	44	

Table 33 shows that the clitics appeared at CS boundaries 30% of the time. In the majority of the cases however (70%), they occurred in the unmixed Igbo portion of the stretch as in (94) below:

- (94) Ebidogo            **m**        gbawa *car before you were born* (4/043)  
       Started            I        driving car before you were born  
       "I had started driving a car before you were born"

Given the high propensity of CS before English NPs, one has to interpret this low rate of occurrence of inverted clitics at CS boundaries as an indication that speakers are avoiding switching at a site where Igbo exhibits structural non-equivalence with English.

Our examination of the multiword fragments appearing at non-equivalent sites, therefore, indicates that the only actual violations of the EC in Igbo English CS amounts to 11 or less than 1% of our 898 tokens. It can, therefore, be said that the EC accounts for Igbo-English CS in a straightforward manner.

### **7.6. Discussion and Conclusions:**

In this chapter, the methods of the variationist theory has enabled us to examine closely the operation of the EC on Igbo-English CS. We found that Igbo-English discourse offers overwhelming support for the EC in spite of structural non-equivalence in some contexts. In these contexts, we found that the speakers' strategy for handling non-equivalence was to situate the CS boundary elsewhere, rather than at the non-equivalent boundary.

How do these findings compare with others in the literature? Our results corroborate the findings in some other studies across several language pairs where the EC enjoys a great deal of robustness (Poplack and Meechan, 1995; Meechan and Poplack, 1996 etc.)

In other studies where EC appears to be operational in certain contexts but not in others, we contend that these may be due to methodological shortfalls, notably the confounding of CS and borrowings. For instance, Nortier (1989) submits that there was hardly any violations of the EC in major constituents but that switching within constituents which occurred in Dutch-Moroccan violated the EC. According to her, there were switches at non-equivalent sites including between nouns and adjectives as well as determiner and nouns. There is little doubt that most of the purported violations belong to the category of single items. But in our data, we have shown these to be borrowings into Igbo. If this is the case in Dutch-Moroccan, then the purported violations may actually be borrowings over which the EC has no purview.

We found a few multiword fragments of Igbo which appear at non-equivalent sites. These were typically etymologically English nouns which appeared bare or which took Igbo modifiers. We considered the properties of these items and came to the conclusion that they resemble the lone English-origin nouns in Igbo discourse which are indeed borrowings into Igbo. This seems to corroborate the findings in the literature which show that not all sequences of more than one lexical item from one language are codeswitches. Several types of multiword fragments which quantitatively and qualitatively exhibit differing properties from CS under equivalence have been identified in the literature.

Sankoff and Naït M'Barek (1990) first identified the category of *constituent insertion* in their Arabic-French bilingual discourse. These insertions are multiword fragments of French, which, while retaining their French internal structure, are completely embedded

in an Arabic discourse, and, thus, satisfy Arabic word order requirements. More recently, constituent insertions have recurred in the works of Meechan and Poplack (1995) on Fongbe/French discourse. In their data, the French-origin constituent insertions are also completely embedded in Fongbe discourse while retaining their French structure. In addition they show a tendency to surface bare, a feature they share with the lone French-origin items in Fongbe discourse.

A different type of non-CS multiword fragments was also found by Poplack and Meechan in their Wolof/French data. These are the multiword fragments which show the internal structure of both French and Wolof but which appear at syntactic boundaries compatible with Wolof only as in (95) below:

(95a) *oui oui meme age bi la*  
 yes yes same age DEF FOC  
 [Yes, yes, it's the same age] (c.f. Poplack and Meechan 1995:215)

(95b) *fexeel ba nekk citete de liste bi rek*  
 try+IMP until be PREP head of the list DEF ADV  
 [Try to be only at the head of the list] (c.f. Poplack and Meechan (1995:215)

Poplack and Meechan reviewed several lines of evidence to show that these multiword fragments exhibit many of the characteristics of loanwords rather than CS. These include the fact that (a) they feature undetermined nouns just like the lone French-origin nouns in their data, but unlike any of the multiword French nouns; (b) they are also completely embedded in Wolof discourse just like the borrowed nouns; (c) the 'N de N' constructions typically consist of idiomatic or frozen expressions functioning as compounds; (d) the

attributive adjectives are preposed as opposed to the situation in the French of the same speakers and (e) their modification patterns reflect the situation in unmixed Wolof.

In view of the foregoing, it is clear that not all multiword fragment are CS under equivalence, but that other language contact phenomena may occur as multiword fragments.

## Chapter 8

### 8. Conclusions:

In this thesis, we have used the principles of the variationist framework (Poplack 1993, Poplack et al. 1987, Sankoff et al. 1990), and empirical data from natural bilingual discourse, to examine the applicability of the FMC and the EC to Igbo-English bilingual discourse. This examination enabled us to tackle two fundamental problems associated with language contact, namely the *demarcation problem* and the *constraint problem* (Muysken, 1990). Our study represents one of the very few that have tackled the demarcation problem by systematically disambiguating CS from borrowing and, hence, avoiding the possibility of presenting tokens of undetermined status either as evidence for, or as counter-examples to, constraints on CS.

Disambiguating CS from borrowing, especially in the case of single lexical items from one language incorporated into the discourse of the other language, has not been a common undertaking in language contact literature. Some researchers considered the distinction necessary but failed to agree on the method to effect the differentiation while others claim that the distinction was unnecessary. But even among those who attempted to draw a distinction between CS and borrowing, only very few have taken into account the nature of the unmixed portions of the two languages in contact. We have presented overwhelming evidence which demonstrates beyond a doubt that not only can the two language contact phenomena be distinguished systematically, consistently and unambiguously, but that such distinction is an inevitable precursor to any serious search for a resolution of the constraint problem. We have also shown that an ambiguous item, say lone English-origin nouns in Igbo discourse, cannot be assigned language

membership on a case-by-case basis, but rather by a detailed assessment of their behavior in the context of the entire system, including the unmixed portions entering into the contact situation. This is because loanwords are distributed among syntactic slots in the same way as native words, while variability of morphological marking is statistically parallel for borrowings and native words (D. Sankoff et al., 1990). A major contribution of the thesis is, therefore, a demonstration of the need for an examination of the unmixed languages in the bilingual's repertoire in any attempt to disambiguate bilingual behavior.

Beginning with lone English-origin verbs featuring Igbo morphology and incorporated into the discourse of Igbo, we presented innovative diagnostics such as *vowel harmony* and *affixation*, which enabled us draw a clear-cut distinction between CS and borrowing. We found very little violations of the rule of vowel harmony in both the unmixed Igbo verbs and the lone English-origin verbs in Igbo discourse. The patterns of application of simple vowel harmony was very similar in the two corpora. The patterns of application of compound harmony also corresponds to the patterns observed for unmixed Igbo verbs. This is certainly an indication that what is activated when an English-origin verb takes Igbo morphology is the grammar of Igbo and that English only plays an etymological role, as is expected of a donor language in a borrowing situation.

Corroborative evidence for the conclusion that the lone English-origin verbs with Igbo morphology occurring in Igbo discourse functioned as Igbo verbs came from the patterns of affixation of such lone English-origin verbs. They took exactly the same affixes and in similar proportion as their counterparts of unmixed Igbo.

Even when an English-origin verb in Igbo discourse fails to take any morphology, we found that such verbs were inevitably in serial constructions where they are preceded by an Igbo verb *me* which elsewhere functions like any other transitive verb of unmixed

Igbo. Interestingly, *me* did not precede unmixed Igbo verbs in serial construction. We interpreted *me* as a loanword incorporation device, especially as it is syntactically and semantically analogous to such loanword incorporating devices found in other languages. Thus, the lone English-origin verbs without morphology were being subjected to the same rules as the serial verbs of unmixed Igbo, albeit with the restriction of occurring with a specialized Igbo initial verb. We, thus, categorize these as borrowings as well.

What are the implications of these findings for constraints on intrasentential CS, particularly the FMC? Since these lone English-origin verbs co-occurring with Igbo bound morphemes are borrowings, it follows that they do not violate the FMC as the latter is a constraint on CS and, thus, has no purview over borrowings. Consequently, since all the purported violations of the FMC comprise tokens of the likes we have shown to be borrowings, we suggested that the claims that they violate the FMC are unfounded, unless they have been subjected to a quantitative analysis and seen to pattern like CS. Data from Igbo-English, therefore, provides robust support for the FMC.

Next, we examined the status of lone English-origin nouns which appear in Igbo discourse. Unlike the verbs, these nouns appear with no morphology. The status of such nouns is even more contentious since the nouns are bare and, therefore, offer no clue in form as to their language membership. However, using as diagnostics some differing properties of the two languages, including patterns of nominal modification, temporal reference and the linear order of elements in the NP, we have been able to assign the lone English-origin nouns in Igbo discourse language membership.

Our examination of patterns of modification revealed that lone English-origin nouns in Igbo discourse favored zero determiners in the same proportion as the nouns of unmixed Igbo. Both of these differ from the patterns we observed for nouns of unmixed English

and the unambiguous CS where overt determiners were favored in line with what is known of the grammar of unmixed English.

On type of nominal reference, we saw that Igbo preferred zero generics. The lone English-origin nouns followed Igbo in this respect.

These patterns recurred when we examined the structure of the NP. We found that the lone English-origin nouns followed the type of linear ordering found in unmixed Igbo where modifiers follow the nouns they modify. In other words, these lone nouns again differed from nouns within unmixed English and multiword fragments, which both prefer the order where the modifiers preceded the nouns.

All of these lines of evidence point to the fact that the lone nouns are borrowed into Igbo. How does this impact on the EC? Recall that the EC would be violated should CS occur NP-internally in Igbo-English CS since Igbo modifiers canonically follow the noun while English modifiers precede the noun. We saw, however, that most of these NP internal combinations of the two languages featured lone English-origin nouns which we now know to be borrowings in Igbo. Since it is the Igbo structure that is activated in such contexts, these cannot constitute exceptions to the EC. Thus, the NP provides us with the first robust support for the EC in Igbo-English bilingual discourse.

We also examined the lone English-origin adjectives that occur in Igbo discourse. We found that such lone adjectives did not occur as attributive adjectives where they would introduce a structural conflict if they modified an Igbo noun. Instead, nearly all the lone English-origin adjectives occurred in the predicative position, a context which is equivalent in both languages. While one may be tempted to treat them as CS and consequently, as support for the EC, further examination precludes such treatment. We

found that the majority of these lone English-origin adjectives followed an Igbo copula *di*, a copula known for co-occurring with adjectival nouns of Igbo. Our quantitative assessment of the distribution of these lone adjectives with respect to the verb they follow revealed that the speakers were indeed treating these adjectives as if they were adjectival nouns of Igbo. However, because these preceding *di* creates an equivalence environment between the two languages, the lone English-origin adjectives are inherently ambiguous, so that the application of the comparative method cannot decipher their status due to interlingual coincidence.

We noted that the results from adjectival expression in our data have a number of interesting implications for the interpretation of the EC. First, it shows that EC is not just a linear based constraint but that categorial equivalence is a crucial factor in CS grammar. This supports Muysken's (1991) suggestion that equivalence entails categorial as well as structural equivalence. Second, it shows that non-categorial equivalence may negate structural equivalence and block CS. Categorial equivalence may, of course, be established through some other mechanism as is the case in Fongbe-French as reported in Meechan and Poplack (1996).

Our analysis of lone items above show that irrespective of what lexical category we examine, be it the noun, the verb or the adjective, we find a consistent pattern, namely that lone items pattern like the unmixed language into which they are incorporated. At the same time they differ from their counterparts within multiword fragments as well as those within unmixed portions of their languages of origin. This finding has a number of implications for CS research. First, it irrefutably demonstrates that a qualitative and quantitative difference exists between CS, contrary to the view held in some quarters. Second, it demonstrates that this distinction can actually be empirically drawn by using the variationist framework which relies on the quantitative patterning of forms in

discourse. Third, it shows that there were very little violations of the FMC and the EC in discourse involving a co-occurrence of Igbo and English, two typologically distinct languages, either on single lexical items or on phrasal categories.

With respect to multiword fragments, we also found very few violations of the EC. This is in spite of the differences in the word order of the languages as resulting from VSO order introduced by the V-to-Comp movement in Igbo sentences involving subject clitics *m* (I) and *ha* (they). We found that even though such VSO was the preferred strategy in unmixed speech, the percentage of switches at such sites was very small indicating that the speakers of Igbo avoided codeswitching at such boundaries as this would violate the EC. There is, therefore, no doubt that Igbo-English CS is constrained under equivalence.

We hope that the findings in this thesis and the methodology employed will contribute further towards the elimination of some of the controversies surrounding CS research, controversies which arise in the first place as a result of confounding of language contact phenomena. It is also hoped that by demonstrating how we could disambiguate between CS and borrowing as a prelude to testing the EC, we have contributed towards a better understanding of bilingual grammar.

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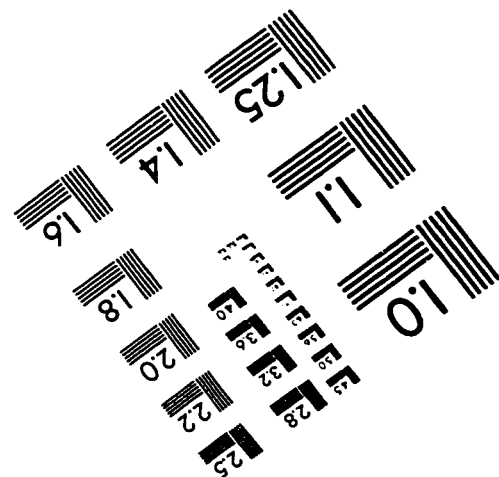
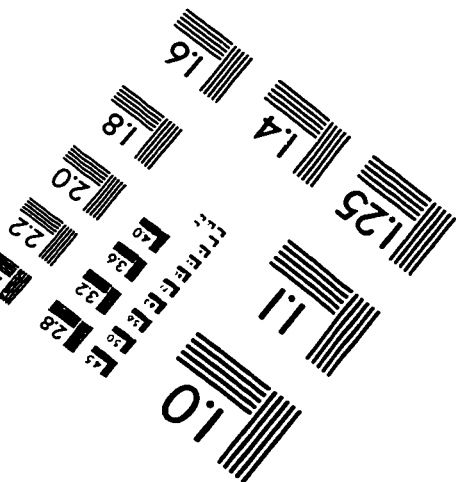
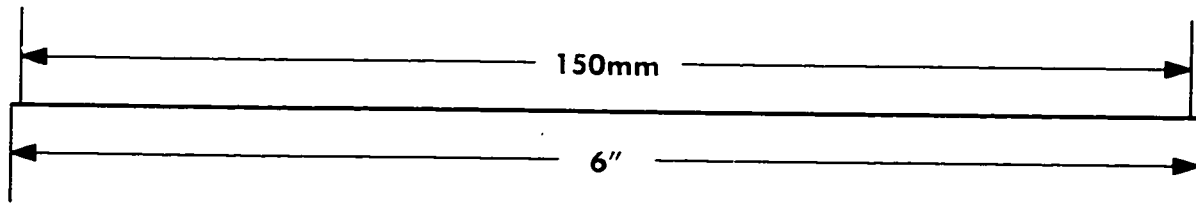
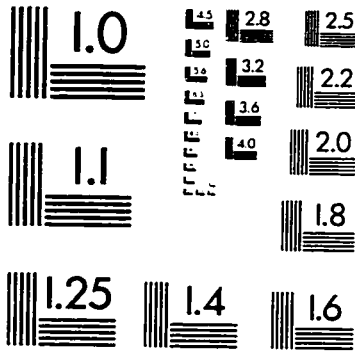
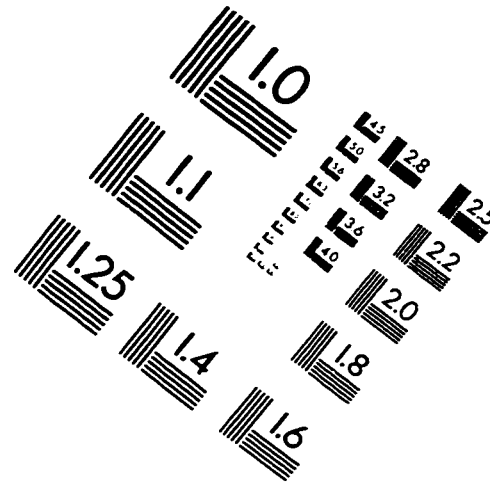
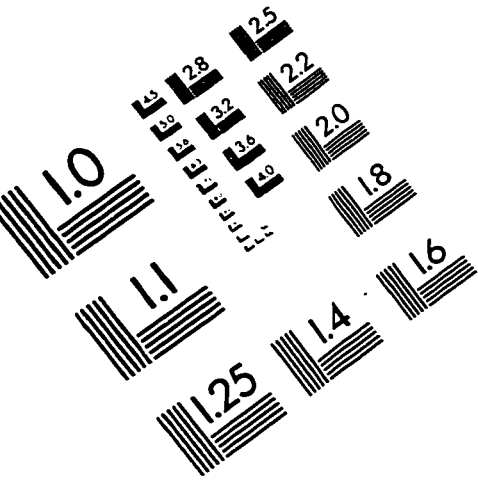
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