

PRONOUNS AND NULL OPERATORS –
A-BAR DEPENDENCIES AND RELATIONS IN YORUBA

by

OLUSEYE ADESOLA

A Dissertation submitted to the
Graduate School - New Brunswick
Rutgers, The State University of New Jersey
in partial fulfillment of the requirements

for the degree of

Doctor of Philosophy

Graduate Program in Linguistics

written under the direction of

Professor Mark Baker

and approved by

Three handwritten signatures are written on three horizontal lines. The top signature is 'Mark Baker'. The middle signature is a stylized 'J' followed by a '2'. The bottom signature is a stylized 'M' followed by a 'H'.

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January 2005

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New Brunswick, New Jersey

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ABSTRACT OF DISSERTATION

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by OLUSEYE ADESOLA

Dissertation Director:

Professor Mark Baker

In this dissertation, I demonstrate that a clear understanding of the properties and behaviors of personal pronouns and null operators resolves some of the puzzles surrounding UG phenomena such as question formation, superiority effects, weak crossover effects, resumption, and the dependency relations between personal pronouns and their antecedents in the syntax of Yoruba, a Benue-Congo language spoken in Nigeria.

Furthermore, I show in this dissertation that the absence of superiority effects and (movement- triggered) weak crossover effects from Yoruba follows from the fact that the language does not have simple wh-movements. It uses null operator movement in its wh-questions and focus constructions. This also follows from the fact that the language has no words with wh-features. I show that the language indeed displays weak crossover effects in configurations that do not involve overt movement. I extend the analysis to Igbo which also does not have superiority effects. It does not display movement-triggered

weak crossover effects either. Thus, I claim that weak crossover is universal but wh-questions' derivational processes are not.

Also, I claim that null operators lack the D-feature that is required to check the EPP feature of the Tense. This explains what has been observed in the literature – (Danish, as in Mikkelsen 2000, Japanese, as in Takahasi 2001, Icelandic, as in Holmberg and Hróarsdóttir 2001) - that null operators cannot satisfy EPP requirements. I extend the analysis to Edo in which, like Yoruba and other languages that use null operator movement to derive wh-questions, the lack of D-feature in null operators forces an external merge of the expletive for EPP purposes.

Finally, I show that the so-called logophoric effects can be derived from the fact that certain pronouns are inherently A-bar dependent on a null operator in African languages.

DEDICATION

To God, the source of everything

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Chapter 1

Introduction

The goal of this work is to shed some light on the interactions of personal pronouns and null operators in overt syntax. It shows that a clear understanding of the properties and behaviors of personal pronouns and null operators will resolve some of the puzzles surrounding UG phenomena such as question formation, superiority effects, weak crossover effects, resumption, and the dependency relations between personal pronouns and their antecedents in the syntax of Yoruba, a Benue-Congo language spoken in Nigeria. This is especially interesting given the fact that a null operator has no phonological content.¹ It suffices to say that the effect of null operators in syntax is significant and pervasive.

First, let us consider some of what has been reported on null operators in the literature.

1.1 Null Operators

Null operators (whether derived or base generated) have increased in importance since they were originally identified in Chomsky (1980).² A derived null operator is the only empty category that is allowed to head an A-bar chain in overt syntax (Chomsky 1980, Browning 1987). Indeed, many researchers (including Epstein 1984, Lebeaux 1984, Borer 1986, and Yeo 1998) have done extensive work on the occurrences of null

¹ The fact that kids could learn the effects of null operators in syntax without receiving any explicit instructions could be a support for the innateness theory of language acquisition. Of course, observing adult speakers could not directly teach kids how to use a linguistic element that has no phonology.

² In this work, a derived null operator is an operator that heads an A-bar chain (as a result of movement). On the other hand, a base generated null operator is a null operator that mediates between a pronoun and its external antecedent. It is base generated in an A-bar position.

operators in world languages. First, we give a brief overview of the properties that have been identified with null operators in syntax.

The null operator is reported to be different from all other operators in a non-trivial way (see Yeo 1998). Apart from the fact that it is null- probably a PRO in an A-bar position (see Browning 1987) - it has some other properties that the other operators do not share with it. For example unlike wh-phrases like *who* (which requires a person) and *what* (which requires a thing), a null operator does not put any restrictions on what could be its referent (see Yeo 1998):

- (1) a. Who does John like?
Bill/*An apple.
- b. What does John like?
*Bill/An apple
- (2) a. An apple is difficult [NO [PRO to like t]]
- b. John is difficult [NO [PRO to like t]]

(Yeo 1998: 327)

Furthermore, a null operator is usually base-generated in an object position (Yeo 1998: 329). Consider the examples in (3) adapted from Yeo's work.

- (3) a. The girl is easy [NO [PRO to please t]]
- b. *The girl is easy [NO [t to please Bill]]
- c. The theory is hard for us [NO [PRO to believe t]]

- d. *The theory is hard for us [NO [PRO to believe [t to be true]]]

I show in chapter 3 of this work that the inability of the null operator to occur in a subject position has some non-trivial consequences for Yoruba syntax with respect to satisfying the EPP requirements of INFL.

Another property of the null operator that has been identified in the literature is the fact that null operators do not induce weak crossover effects (Lasnik and Stowell 1991):

- (4) *Mary asked me [who_i [PRO to persuade [his_i mother]][PRO to vouch for t_i]]
 (5) Who_i should be easy [NO_i [to persuade [his_i mother]][PRO to vouch for t_i]]

This property of null operators will play a central role in chapter 2 of this work.

I show in this dissertation that the properties identified above for null operators among others are also true in Yoruba. More than that, I show that Yoruba makes extensive use of null operators in constructions –e.g. wh- and focus constructions- that have received construction specific analyses in the literature. This realization leads to a unified account for the constructions in question.

Our characterization of null operators in Yoruba diverges from Yeo's (1998:324) assumption that null operators cannot satisfy the wh-criterion in syntax (cf. Rizzi 1991). For example, I show that Yoruba uses only null operator movement in the derivation of its particular version of wh-questions. Thus, a null operator can occur in the Spec CP of an interrogative complementizer (C_Q)

(6) Kí_i ni [CP NO_i C_Q Adé rà t_i]

what be Ade buy

‘what did Ade buy?’

1.2 The Yoruba Personal Pronouns

In addition to null operators, the other major player – in this dissertation- will be personal pronouns in Yoruba. Much work has been done on pronouns in the literature.³ In general, it is assumed that every language has pronouns, although they may behave in somewhat different ways from one language to another (Bresnan 1998). Following Safir (2004a), we assume in this work that pronouns can be described as reduced names or definite descriptions consisting only of grammatical features.

If one adopts Bresnan’s (1998) classification, there are five morphological types of pronouns. A minimally modified version of her list is given in (7).

- (7)
- a. Zero/null pronouns
 - b. bound pronouns
 - c. clitics
 - d. weak pronouns
 - e. independent/strong pronouns

³ The reader is referred to Bresnan (1998), and Safir (2004 a) and (2004b) among others.

Considering the fact that the first four types (7a-d) are considered to be reduced forms of the independent pronouns, they could be classified as super-reduced names or definite descriptions.

Our main interest lies in the Yoruba personal pronouns. These have been divided into two classes: clitics/weak pronouns and independent/strong pronouns (Pulleyblank 1986). This suggests that Yoruba has two morphological sets of pronouns - weak and strong- in contrast to English, which has only one set of pronouns morphologically. This subtle distinction will be useful in this work as we try to understand why the Yoruba pronouns differ from the English pronouns in some syntactic respects. We give an inventory of the Yoruba personal pronouns in table (8).

(8)

	Strong Pronouns		Weak pronouns		
	NOM/ACC	GEN	NOM	ACC ⁴	GEN ⁵
1 st Singular	èmi	èmi	mo	mí	L+ mi
2 nd Singular	ìwọ	ìrẹ	o	ó / ẹ	L+rẹ
3 rd Singular	òun ⁶	tirẹ ⁷ /oun	ó	un / V	M+rẹ
1 st Plural	àwa	àwa	a	wá	M+wa
2 nd Plural	ẹyin	ẹyin	ẹ	yín	M+yín
3 rd Plural	àwọn	àwọn	wọn	wọn	M+wọn

There have been numerous studies of the Yoruba pronouns (See Bamgbose 1967, 1990, Awobuluyi 1978, Pulleyblank 1986, Manfredi 1987, 1995, Akinlabi and Liberman 2000, Adesola 1999, 2001, Dechaine 2001, Dechaine and Witschko 2002 and Ajiboye 2003 among others). All sources agree that the distinction between weak and strong pronouns is important. The two kinds of pronouns have morphological and syntactic similarities and differences. Some analysts, including Pulleyblank (1986) classify Yoruba weak pronouns as clitics⁸ because of their morpho-syntactic features. Basically, the weak pronouns are monosyllabic in the language, whereas the strong pronouns are independent

⁴ We follow Akinlabi and Liberman (2000)'s assumption here that the clitics have high tone underlyingly.

⁵ We follow Manfredi (1995)'s notation here.

⁶ Manfredi (1995) assumes that this item is not a pronoun because it can act as a conjunction etc. We assume that it is necessary to appeal to homophony here.

⁷ The genitive case marker **ti** is obligatory with the 3rd Singular genitive

⁸ See Dechaine (2001) for a detailed discussion of Yoruba clitics.

phonological words. They are analyzed as nouns by Awobuluyi (1978) and Bamgbose (1990) because they have the phonological structure and functions of a canonical noun in the language. They also count as what Safir (2004a) describes as tonic pronouns.

What differs systematically among the authors' accounts is the characterization of how the pronouns are derived and their status in *wh*-questions, focus constructions and logophoric constructions. Of all the personal pronouns, the status of the third person (singular) pronoun has been the most controversial. Whereas, Awobuluyi (1999) claims that the so-called third person singular pronoun *ó* is not a pronoun in any context, Bamgbose (1990:114) considers it to be a pronoun. In Dechaine's (1992) account, *ó* is an agreement marker. The strong counterpart of the third person singular pronoun *òun* generates the same level of controversy. For example, Manfredi (1995) claims that it is not a pronoun while Bisang and Sonaya (1999) consider it to be a name. Abstracting away from the controversies, this dissertation will make use of the basic fact that Yoruba has weak and strong pronouns. Their dependency requirements are taken to be central to the way they behave in Yoruba syntax. In this dissertation, the contrast between weak and strong pronouns will be particularly important in chapter 4 when we investigate logophoricity in Yoruba.

Most of the remainder of this dissertation will focus on the third person pronouns, which enter into the widest set of dependency relationships.

Next, we comment briefly on the interaction of null operators and pronouns in syntax.

1.3 Null Operators and Pronouns

Pronouns have featured prominently in the discussions on how referents are tracked in discourse across languages. This extends to abstract phenomenon such as the weak crossover effects. However, until Lasnik and Stowell (1991) no one paid much attention to the distinctive impact of null operator in some of the configurations where pronouns are found. Lasnik and Stowell note that moving a null operator across a pronoun that depends on it does not induce weak crossover effects. The extension of weak crossover domain to the so-called superiority effects in Hornstein (1995, 2001) also opens another door to observing how operators and pronouns interact. The present work is the first to investigate the interaction of null operators and pronouns with respect to the so-called superiority effect. The present work is also the first to examine the near absence of weak crossover effects in Yoruba.

Another context in which researchers have examined the interaction of pronouns and operators is in the consideration of resumptive constructions - See for example Aoun, Choueri and Hornstein (2001), Ntelitheos (2002), McCloskey (2002). In the present work, we assume that null operator movement cannot be resumed – copy of a null operator cannot be replaced with a resumptive pronoun in its extraction site. I show, following Pesetsky (2000) that only feature movement leaves resumptive pronouns. As a result, null operator movement does not lead to reconstruction effects.

Another type of construction in which researchers have observed interesting interactions between pronouns and null operators is the logophoric construction (see Koopman and Sportiche 1989 among others). We assume following such work that

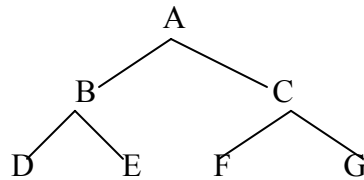
understanding the relationship between pronouns and null operators is essential to understanding what happens in logophoric constructions.

In general, we assume in this work that the structural relationship between pronouns and the operators that they interact with is important for understanding the impact of their interaction in syntax. The structural relationship that is relevant here is c-command. This is because the null operator must take scope over the pronoun before its effect can be observed. A null operator - derived or base generated - must c-command the pronoun that depends on it.⁹ In the present work, we assume that for A to bind B, A must c-command B. This relation is defined in Chomsky (1995:35) as in (9).

(9) **C-command**

α c-commands β if α does not dominate β and every γ that dominates α dominates β .

(10)



For example, in (10), B c-commands C, F, and G. C c-commands B, D and E while D c-commands E and conversely (Chomsky 1995:35).

⁹Following standard assumptions, we take binding to be co-indexation plus c-command. Safir (2004a) notes though that dependency does not require c-command. However, in all the data given in this work, A c-commands B wherever B depends on A. Thus, we will use the terms “A binds B” and “B depends on A” interchangeably.

Once a null operator c-commands a pronoun, the pronoun can potentially depend on it.¹⁰ The dependency relationship can be characterized as in (11).

- (11) **Dependency:** A depends on B if A does not c-command B, and A's referential value is determined as a function of the interpretive content of B.

We assume, following Safir (2004a), that dependency relations are regulated by the Form to Interpretation Principle, such that only the most dependent form that is available among the elements on the scale in (12b) can be used to express a dependent reading in each situation.

- (12) a. **Form to Interpretation Principle (FTIP)**

If x c-commands y and z is not the most dependent form available in position y with respect to x, then y cannot be directly dependent on x.

- b. **Most Dependent Scale:** syntactic anaphor >> pronoun >> name

(Safir 2004c)

Next we survey some of the problems that we plan to address in this dissertation.

Our goal is to show that each of the puzzles can be resolved once we have a full understanding of how null operators interact with personal pronouns.

¹⁰ We will describe the relationship between a null operator and the pronoun that depends on it in term of dependency in this dissertation. (See Safir (2004b) for more on dependency relations). However, we would still be using the more familiar traditional binding theory terms when they do not conflict with the dependency notion. Also, for the most part, we will use indices to represent the dependency relations that are identified in this dissertation. That is not to say that indices have official theoretical status in this work.

1.4 The Puzzles

The following sentences, which are not acceptable in English and many other languages, are perfectly acceptable in Yoruba.

Set One:

13. (a) Ta_j ni ìyá rẹ̀j fẹ̀ràn t_j ?

who be mother his like

‘who does his mother like?’ (*bad in English on the bound reading*)

- (b). Kí_j ni o fún olówó rẹ̀j t_j ?

what be you give owner its

‘what did you give its owner?’ (*bad in English on the bound reading*)

Set Two:

14. (a) Kí ni ta ni rà ?

what be who buy

‘what did who buy?’ (*bad in English*)

- (b) Kí_k ni o fún tani t_k ?

what be you give who

‘what did you give who?’ (*bad in English*)

The unacceptability of the examples in (13) in English and many other languages has been used to illustrate the effect of the Weak Crossover Condition in Universal Grammar (see Koopman and Sportiche 1982, Safir 1984, 2004). In a similar way, the unacceptability of the examples in (14) in English has been ascribed to the effect of the so-called superiority condition (see Kuno and Robinson 1972, Chomsky 1973). The

acceptability of the two sets of examples in Yoruba suggests that Superiority and Weak Crossover Effects are probably not universal. It is legitimate therefore to ask questions about why the effects of these two syntactic conditions, which regulate A-bar phenomena seem to collapse in Yoruba.

Furthermore, the following example, which is not acceptable in English is perfectly acceptable in Yoruba among other languages:

Set Three:

(15) Ta ni ìyá rẹ rí Olú

who be mother his/her see Olu

‘who did his mother see Olu’ (*bad in English*)

The unacceptability of (15) could be ascribed to an illicit wh-movement. In essence (15) could be said to have violated the so-called subject condition, which prohibits moving a phrase out of a subject. The relevant question here is why the sentence is acceptable in Yoruba. We assume that the sentence is acceptable because of the presence of a resumptive pronoun in the extraction site.¹¹ As noted earlier, only feature movement leaves resumptive pronouns. Although, null operator movement is the preferred operation in the derivation of questions in Yoruba, feature movement is used when null operator movement is not available – from inside an island.

¹¹ The impossibility of a resumptive pronoun in the English counterpart of (15) might be related to the restrictions on the use of resumptive pronoun in English questions as opposed to relative clauses, in which English allows resumptive pronouns (Safir 1986). Thus, if the Yoruba question as in (15) are indeed a sort of cleft as analyzed in this dissertation then it makes sense that Yoruba allows resumptive pronouns in its questions. Clefts are more like relative clauses than wh-questions.

In contrast to the sets of example given in (13) through (15), there are some sentence interpretations that are supported in English and other languages, which Yoruba restricts. For example, the following examples, which are bad in Yoruba on the bound reading indicated by the indices, are acceptable in English:

Set Four:

- (16) a. *Olú_i sọ pé ó_i rí bàbá òun_i
- Olu say that he see father him
- ‘Olu_i said that he_i saw his_i father’
- b. *Olu_i gbà kí ó_i rí bàbá òun_i
- Olu accept that he see father him
- ‘Olu agreed that he should see his father’

The unacceptability of the examples such as (16) has been described as an (anti)logophoric effect in the literature (Hagege (1974) and Clements (1975)). Several analyses have been proposed to account for such sentences in Yoruba.¹²

The four sets of examples that we have given above raise interesting questions about restrictions on the interpretive and the dependency patterns that are allowed in Yoruba. Whereas some work has been done on how to explain the paradigm in (15) and (16), little or nothing has been done on how to account for the paradigms in (13) and

¹² See Pulleyblank (1986), Manfredi (1987, 1995), Baker (1998), Safir (2000) Adesola (2001), Dechaine and Witschko (2002) and Ajiboye (2003) for some of the proposed analysis.

(14). It is our goal in this dissertation to account in a consistent way for the above sets of examples among other things.

1.5 **An Overview of the Chapters**

I show in this dissertation that the paradigms in (13) through (16) among others would receive a straightforward account if we pay a close attention to the interactions between null operators and pronouns in the language. The goal of this dissertation therefore is to provide a unified analysis for constructions such as wh-movement constructions, focus constructions and logophoric constructions, which involve occurrences of null operators and pronouns. It is our hope that an in-depth understanding of the properties of null operators will lead to some important contributions to the debate on some current issues in generative grammar including Superiority Effects, Weak Crossover Effects, Resumptive Constructions and Logophoricity.

There are five chapters in this dissertation. In the following, I highlight some of the key issues discussed in each of the chapters.

1.5.1 **Chapter 2**

One of the current issues in generative Syntax and Semantics is how to account for the presence or absence of superiority effects in languages (C. Barker and C-C. Shan. 2003). I discuss the phenomenon in chapter two. Descriptively speaking, a Superiority Effect is displayed in a language if moving a lower interrogative noun (e.g. **what** in (17)) instead of a higher one (e.g. **who** in (17)) leads to unacceptability as in (17).

(17) *What_i did who buy t_i

The unacceptability of (17) could be because languages prefer moving the first out of a sequence of two or more phrases, either of which would have served the same purpose. In this case, moving *who* to the sentence initial position is preferred to moving *what*, giving an acceptable sentence like *who bought what*. This phenomenon has been referred to as the Superiority Condition in the literature (Chomsky 1973). I show in chapter 2 that superiority is absent from Yoruba (18) (cf. Manfredi and Oyelaran 2000 and Adesola 2000). This is illustrated by the acceptability of (14a) repeated below as (18b) in contrast with its English equivalent.

- (18) a. Ta ni ó ra kí ni
 who be he buy what
 ‘Who bought what?’
- b. Kí ni ta ní rà
 what be who buy
 ‘what did who buy’ (*bad in English*)

Also, in chapter 2, I re-examine most of the proposals that have been made in the literature to account for the unacceptability of (17). I conclude following Hornstein (1995, 2001) (among others), that the Superiority Effect is in fact a special case of the

Weak Crossover Effect (WCO), which involves moving a quantifier such as *ẹnìkan* ‘someone’ in (19) across a pronoun (e.g. *rẹ̀*) that depends on it.

- (19) a. **Ìyá rẹ̀j fẹ̀ràn ẹnìkan_j*
 mother his like someone
 ‘His_j mother loves someone_j’ (*bad in English as well*)
- b. **[ẹnìkan_j [Ìyá rẹ̀j fẹ̀ràn t_j]]*
 someone mother his like

In chapter 2, I also provide a theoretical account for the absence of Superiority Effects and the near absence of WCO in Yoruba (20). I show that question formation in Yoruba actually involves null operator movement, which creates a configuration, which provides an external antecedent for the pronouns in the scope of the null operator, thereby neutralizing the effects of the Weak Crossover condition (and with it the effects of the so-called superiority condition) in Yoruba (cf. Safir 2004b). It is argued that the absence of the superiority effect in Yoruba follows naturally from the fact that WCO Effect is generally absent in constructions involving null operator movement in the language. It surfaces only in configurations that do not involve an overt movement as in (19) above.

- (20) [_{PredP} Ta_k ni [_{CP} [_{IP} NO_k ìyá rẹ̀_k fẹ̀ràn t_k]]]
 who be mother his like
 ‘Who_j does his_j mother like t_j’ (*bad in English*)

I also show that null operator movement in Yoruba is like tough movement constructions in English, which do not exhibit WCO (22) (Lasnik and Stowell 1991). For example, in (19b), as in structure (21), the WCO effect is absent because the variable left by the moved object null operator is bound by an external antecedent which is outside the scope of the null operator. The Yoruba example patterns in the same way with (22) in English.

21. $[_{\text{PredP}} \text{ Kí}_k \text{ ni } [_{\text{CP}} [_{\text{IP}} \text{ NO}_k \text{ } \emptyset \text{ } [_{\text{pro}_k \text{ person}}] (= \text{ta ni}) \text{ rà } t_k]]]]$
 what be NO C who buy

22. $[\text{John}_i \text{ was hard } [_{\text{NO}_i} [_{\text{PRO to persuade his}_i \text{ boss } [_{\text{PRO to vouch for e}_i}]]]]]$

1.5.2 Chapter 3

In chapter 3, I discuss the interaction of null operators and pronouns in resumptive constructions in Yoruba. Broadly speaking, a resumptive construction involves leaving a pronoun in place of a moved phrase.¹³ Two types of resumptive pronouns are identified for Yoruba in the chapter – the agreeing and non-agreeing resumptive pronouns.

I will show in chapter 3 that the reason why the non-agreeing subject resumptive pronoun is required in Yoruba is because a null operator cannot satisfy the Extended Projection Principle (EPP) requirement of T(ense). The EPP requires T to have a subject. Thus, the inability of T to attract the null operator into its Spec position forces the

¹³ See Perlmutter (1972), Borer (1984), Shlonsky (1992), Fox (1994), Pesetsky (1998, 2000), Aoun, Choueri and Hornstein (2001), Ntelitheos (2002), McCloskey (1990, 2002), and Boeckx (2003) for diverse views on resumptive pronouns.

insertion of an expletive pronoun in the subject position, to satisfy the EPP requirement of T. A consequence of this insertion process is that the subject RP is not required to agree in Phi-features (that is, in person and number) with the null operator nor with the c-commanding external antecedent (23 b), since it is not part of the chain.

- (23) a. Olá_i ni NO_i Ø ó t_i ra i_{ɕu}
 Ola be C 3s buy yam
 ‘It was Ola who bought yams’
- b. Olá àti Adé ni NO_i Ø ó t_i ra i_{ɕu}
 Ola and Ade be C 3s buy yam
 ‘It was Ola and Ade who bought yams’

The occurrence of a non-agreeing RP in the subject position contrasts sharply with the fact that agreement is required between a non-subject RP and its antecedent (24a).

- (24) a. [Àǎná àti Olá]_i ni Adé n ná lẹhìn tí’ Òjó bèbẹ fún wọ_n_i
 Aina and Ola be Ade PROG beat after COMP Ojo plead for them
 ‘Aina and Ola were the people who Ade beat after Ojo had pleaded for them’
- b. * [Àǎná àti Olá]_i ni Adé n ná lẹhìn tí’ Òjó bèbẹ fún un_i
 Aina and Ola be Ade PROG beat after COMP Ojo plead for him

In chapter 3, I also claim that the agreeing resumptive pronoun is a partial pronunciation of the trace of the moved phrase (cf. Pesetsky 1998).

1.5.3 Chapter 4

Chapter 4 is on logophoricity, which unlike the construction types discussed so far involves base generated null operators and pronouns. In Logophoricity, languages track discourse referents through the distinctive use of certain pronouns. In such a situation, one type of pronoun (*the strong form*) is required to have the same referent as an antecedent outside its own clause. The languages that require some particular pronoun to be obligatorily co-referent with a c-commanding antecedent usually disallow another form of pronoun (*the weak form in Yoruba*) from being co-referent with a c-commanding antecedent in the same context. The question then is why the strong pronoun must take an antecedent outside its own clause while the weak pronoun is not usually allowed to do the same in identical contexts. Various analyses have been proposed in the literature to answer this question.¹⁴ An example of the phenomenon is given in (25).

[òun_i]

25. Olu_i gbà kí { ó_{j,*i} } rí bàbá òun_i

Olu accept that he see father him

‘Olu agreed that he should see his father’

¹⁴ See Hagege 1974, Clements 1975, Comrie and Hyman (1981), Pulleyblank (1986), Koopman and Sportiche (1989), Manfredi (1987, 1995), Kinyalolo (1993), Baker (1998), Safir (2003), and Dechaine and Wiltscho (2002), and Ajiboye (2003)

In (25), the strong pronoun *òun* is required to take its antecedent outside the clause in which it occurs, whereas the weak pronoun *ó* is not allowed to have the same referent as its antecedent.

In chapter 4, we argue that what has been referred to as logophoricity in the literature is a natural consequence of the binding requirements of the pronouns in question. We propose that a pronoun can be used logophorically if and only if it is A-bar dependent on a null operator (cf. Koopman and Sportiche 1989, Baker 1998 and Safir 2004). Conversely, the pronouns that are usually barred from taking a c-commanding antecedent are those that are not A-bar dependent. Antilogophoric effects, only arise in Yoruba when an A-bar dependency relation between a weak pronoun and a null operator hinders a strong pronoun from fulfilling its own A-bar dependency relation. Thus, we do not need a construction specific analysis for the phenomenon known as logophoricity.

We conclude the dissertation in chapter five. There, we summarize the results of our findings on the interaction of null operators and personal pronouns with specific reference to Yoruba.

Chapter 2

WCO Subsumes Superiority Effects

For more than thirty years, generative grammar has been interested in accounting for the acceptability of (1) in contrast to (2). In (2), a lower wh-phrase has been moved when there was a closer wh-phrase that could have been moved. This phenomenon has been referred to as Superiority Condition in the literature (Kuno and Robinson 1972, Chomsky 1973).

- (1) Who do you think ___ bought what?
- (2) * What do you think who bought ___?

The paradigm becomes more challenging because the equivalent of the contrast between (1) and (2) has been reported in many languages thereby giving superiority effect the status of a phenomenon that is probably in Universal Grammar (UG). Indeed, many researchers including Chierchia (1991), Chomsky (1995), Wiltschko (1998), Huang (1995), Barker and Shan (2003), Hornstein (1995, 2001), Dayal (1996), and Boskovic (1999) have made some proposals on how to account for the unacceptability of examples such as (2). It is generally believed that there is superiority effect in every language.¹⁵ However, as widely reported as the contrast in (1) and (2) is, it seems that the phenomenon that it characterizes is not universal after all. There is at least one language

¹⁵ For example, Wiltschko (1998) argues for the presence of Superiority effects in German thereby re-analyzing the earlier claims to the contrary about the language.

in which the equivalents of (1) and (2) do not show any contrast, namely Yoruba. Consider the examples in (3).

- (3) a. Ta ni ó ra ḱini
 who be he buy what
 ‘Who bought what’
- b. Kí_i ni ta ní rà t_i
 what be who buy
 ‘What did who buy’ (*bad in English*)

Whereas, it is not surprising that (3a) is good in Yoruba, the acceptability of (3b) is not expected if superiority effects are universal as implied in the literature. The question then is- why is (3b) acceptable in Yoruba but not in English and many other languages? This is the question that I will attempt to answer in the rest of this chapter. Here, I argue that superiority effects are absent in Yoruba language. I claim that the absence of superiority effects in Yoruba is subsumed under the near absence of weak crossover effects in the language. This is accomplished by analyzing superiority effect, as an instance of weak crossover effects following Chierchia (1991) and Hornstein (2001) among others.¹⁶ This dispenses with superiority effects as an independent notion in syntax. My conclusion in

¹⁶ Whereas, this chapter is built around Hornstein’s assumption that weak crossover effects subsume superiority effects, I rely largely on Safir (2004)’s theory in my account for the near absence of weak crossover effects in Yoruba.

this respect is premised on the fact that the nature of movement that is allowed for (information seeking) interrogative sentences in English and Yoruba is different. As argued in section (2.4), Yoruba questions involve null operator movement, which does not induce weak crossover effects. Consequently, it silences superiority effects in the language. I show in this chapter that weak crossover effects are attested only in contexts where there is no overt movement in Yoruba. This suggests that the near absence of weak crossover effects in the language is restricted to constructions involving movement in overt syntax.

This chapter is divided into eight sections. In Section one, I highlight the motivation for movement operations in Yoruba. In section two, I examine the differences between English and Yoruba with respect to superiority effects. Section three is on Weak Crossover Effects in English and Yoruba while section four is on weakest crossover and the structure of the Yoruba questions. Section five is on the effects of genitive pronouns in weak crossover configurations. In section six, I explore three alternatives to the theory that I have adopted in this chapter. I show reasons why those alternatives are not optimal. I provide some cross-linguistic supports for my theory in section seven. Section eight is the conclusion.

In order to understand what is usually referred to as the Superiority effect in the literature, it would be very useful to first understand why constituents have to move. For example, if there were no need for movement, then it would be useless to start a discussion on moving one phrase before the other. So, in the next section, we turn our attention briefly to checking un-interpretable features in syntax.

2.1 The Triggers for Movement

We assume following Chomsky (1995) that movement is done only when there is a need to check some morphological features failing which, the derivation will not converge. The un-interpretable features are in the functional categories. We assume that the lexical items do not have an un-interpretable feature that must be checked (cf. Ndayiragije 1999). Put another way, movement is done for the benefit of functional items (the attractors) in Yoruba as in other languages. In that sense we can say that for every α that moves, α does not move because of its own greediness. It moves to satisfy the greediness of the attractor.

In general, all nominal and nominalized items can be moved in Yoruba (see Carstens 1986, Sonaiya 1988 and Awoyale 1985, 1990, 1997).¹⁷ This is seen primarily in focus constructions and wh-movement constructions in the language. Such overt movement violates Procrastinate, which requires that we wait until LF to do any operations if at all possible (cf. Lasnik et al 2000:183). However, the movement is obligatory since an unchecked strong feature is an illegitimate PF object, which would make the derivation to crash if it is left unchecked. The moved element usually lands in the Spec CP position in the language.¹⁸ In such a situation, the moved element (α) can

¹⁷ But see Awobuluyi (1978, 1987), Owolabi (1987), Oyelaran (1988), Adewole (1991) and Yusuf (1991) for some different approaches to the Yoruba focus and wh-movement constructions.

¹⁸ It has been argued in the literature that Spec CP and Spec FocP are distinct in Yoruba (Awoyale 1997). Our position in this chapter is that Yoruba focus is not licensed in the left periphery in Yoruba. If this is correct, then there might be no need to posit a (special) FocP for Yoruba language as first proposed in Awoyale (1995) and developed in Awoyale (1997), Rizzi (1997), and Aboh (1998)

only be moved upward. An object can be moved as in (4) or a subject as in (5) and (6).

The apparent exception is when a Wh-phrase occurs in-situ as in (7).¹⁹

- (4) Olú bèèrè pé kí_i ni Adé rà t_i (object movement)

Olu ask C what be Ade buy

‘Olu asked what Ade bought’

- (5) Ta_i ni ó t_i sọ pé kí Adé wá ní òla (subject movement)²⁰

who be he say C C Adé come at tomorrow

‘Who said that Ade should come tomorrow?’

- (6) Ta_i ni ó t_i wá ní aná (subject movement)

who be he come at yesterday

‘Who came yesterday?’

¹⁹ Perhaps the occurrence of “ni” with these question nouns also has something to do with their monosyllabic form. Nouns in Yoruba are canonically two or more syllables. It is not possible to have “ni” after ordinary nouns when they are not moved.

- (i) *Olú ni ra àpò
Olu ? buy bag
‘Olu bought a bag’

Another evidence that this might have something to do with the structure of “ki” and “ta” is seen in the fact that “ni” does not occur after the question noun *ibo* ‘where’. This other question noun is disyllabic therefore it does not need to be augmented.

- (ii) *Wọ̀n rí tani níbo ni (instead of: Wọ̀n rí tani níbo)
they see who where be
‘they saw who where?’

- (iii) ?? Mo ń ẹ̀ báwo ni (instead of Mo ń ẹ̀ bóo (báwo = bóo))
I PROG. do how be

²⁰ The fact that a phrase has been moved from the subject position might not be obvious because of the occurrences of resumptive pronouns in the language. See chapter 3 for extensive discussion.

(7) O rí ta ní ní ibè

You see who at there

‘Who did you see there?’ (You saw who there?)

Only one wh-phrase is present wherever we have a wh-phrase in each of the examples that we have cited so far in this section. In such a situation, the attractor attracts the wh-phrase to its specifier position.²¹ The choice of which wh-phrase to attract is not clear when there is more than one wh-phrase in a sentence, both of which are potential goals for the probe.

(8) Ta_i ní NO_i Ø ó t_i ra kí ní

who be he buy what

‘who bought what’

(9) Kí_k ní NO_k Ø ta ní rà t_k

what be who buy

‘what did who buy’ (*bad in English*)

b. *What_k did who_i buy t_k

²¹ A “wh-phrase” in this sense is a null operator with wh-feature.

The unacceptability of examples such as (9b) in English has been traced to a violation of the so-called superiority condition (Chomsky 1973, 1995). Researchers have made several proposals to explain why languages display superiority effects. These include:

- (10) analyzing superiority effects as ECP violations (e.g. Huang 1995:153),
- (11) assuming that focus movement is different from wh-movement and that only the latter displays superiority effects because the feature to be checked is in C (Boskovic (1999)),
- (12) accounting for superiority effects as a consequence of the Minimal Link Condition (Chomsky 1995)
- (13) analyzing superiority effects as weak crossover effects (e.g. Hornstein 2001).

What we are going to do in this chapter is to explore the possibility of accounting for the absence of superiority effects in Yoruba in term of these theories that have been used to show why languages display superiority effects.²² We consider the fourth possibility (13) first before we consider the other possibilities. Our conclusion would be that the absence of superiority effects in Yoruba is closely related to and in fact subsumed under the fact that the weak crossover effect is nearly absent in Yoruba.

In the next section, we discuss how to reduce superiority effects to WCO effects.


²² We will consider only three of such theories in the rest of this chapter. However, we could assume in principle that none of the other theories that are not discuss here could give a better account of the phenomenon that we are examining in Yoruba. For example it is hard to imagine that all wh-phrases in Yoruba would be D-linked (Pesetsky 1987) thus we cannot use the D-linking approach to Superiority to account for the absence of Superiority effects in Yoruba. There is no evidence that all wh-phrases in Yoruba are d-linked.

2.2. Superiority Effects as WCO Effects

Hornstein (1995, 2001 among others) argues that the superiority effect could be explained as an instance of the WCO effects. His analysis involves decomposing each in-situ wh-phrase into a bound pronominal and a nominal restrictor. For example *pro* + *thing* = *what*, while *pro* + *person* = *who*. Let us illustrate this with some concrete examples.²³

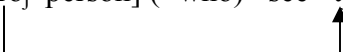
(14) *who*_j *saw* *what*?

(15) [_{CP} *who*_j [_{IP} *t*_j *saw* [_{pro}_j *thing*](=*what*)]



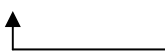
(16) * *what* *did* *who* *see*?

(17) *[_{CP} *what*_j [_{IP} [*pro*_j *person*](=*who*) *see* *t*_j]]

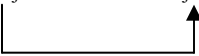


According to Hornstein's (2001) analysis, the reason why the representation in (15) is acceptable is because the pronoun is linked to a variable (that is, wh-trace) on its left whereas (17) is unacceptable because the pronoun is linked to a variable (that is, wh-trace) on its right. The latter is said to be a violation of the weak crossover condition. Under this analysis, (17) is analogous to the standard weak crossover effects as displayed in (19). We return to this shortly.

(18) *who*_j *t*_j *saw* *his*_j *mother*



²³ I follow Hornstein (2001) in the assignment of the indices used in the structures of the following examples. For example, he assumes that the decomposed **pro** part of the in-situ wh-phrase must have the same index with the moved wh-phrase in order to be fully interpreted at LF. This facilitates a pair-list reading, which matches things to the person that sees them.. The reader should note that the index on **pro** in each of the following examples concerning superiority is not as a result of movement.

- (19) * who_j did his_j mother see t_j
- 


Thus, if the above is correct, superiority effect reduces to illicit pronoun binding.


The analysis that we adopt for (14) and (16) above can be used to account for the other cases of superiority effects that have been observed in the literature. Consider the following examples.

- (20) Who_i did you give t_i what_k

- (21) * What_k did you give who_i t_k

The example in (20) is good while the one in (21) is unacceptable (see Barss and Lasnik 1986). This follows from the fact that there is an illicit pronominal binding in (21) causing the derivation to crash. For example, the structure for (20) is as given in (22), and (21) is represented in (23). Here again, the in-situ wh-phrase is decomposed into a dependent pronoun plus a nominal restrictor.

- (22) [CP who_j [IP you give t_j [pro_j thing](= what)]]
- 

- (23) * [CP what_j [IP you give [pro_j person](= who)] t_j]]
- 

The pronoun is linked to a variable to its left (as seen in structure (21)) and the sentence is acceptable. The unacceptable structure in (23) is another instance of the weak crossover effect. A pronoun is linked to a variable to its right. Thus the superiority effect

in (20) also reduces to a weak crossover violation. We assume in this work - following Hornstein (2001) - that every instance/occurrence of superiority effects can be explained in terms of weak crossover violations.


The foregoing assumption accounts straightforwardly for cases of the so-called pure superiority effect in which the moving wh-phrase is an object of a verb. Consider (24) and (25).

(24) Who_i did you persuade t_i to buy what_k


(25) *What_k did you persuade who_i to buy t_k

The example in (25) is also ruled out as an instance of the superiority effect. In the present system, we would say that (25) is unacceptable because it is a weak crossover violation. We illustrate the paradigm in (24) and (25) with the structures in (27) and (28); (28) represents the unacceptable form in (25).

(27) [CP who_j [IP you persuade t_j to buy [pro_j thing](= what)]



(28) * [CP what_j [IP you persuade [pro_j person](= who)] to buy t_j]



The foregoing discussion suggests that what has been referred to as superiority effect is indeed compatible with weak crossover violations (cf. Hornstein 2001 among others).

Everything taken together, the above assumption seems to account for the English data quite nicely. Now, we will outline how this works for Yoruba. On the surface it


seems that it does not account for the absence of superiority in Yoruba. Consider the following.

(29) Ta ni ó ra kí ni

who be he buy what

‘who bought what’


(30) [_{PredP} ta_j ni [_{CP} [_{IP} ó t_j rà [_{pro_j} thing](= what)]]



(31) Kí ni ta ní rà
what be who buy

‘What did who buy?’ (*bad in English*)

(32) [_{PredP} kí_j ni [_{CP} [_{IP} [pro_j person] (= ta) rà t_j]]



The structure in (30) represents (29) while (32) represents (31). With the representations in (30) and (32) we expect the example in (31) to be unacceptable. This is because - if we adopt the directional account (i.e. the leftness version of the WCO condition) given in Hornstein (1995, 2001)- structure (32) includes a pronoun that is linked to a variable to its right in (31). This is a typical weak crossover violation. However, that is not what is attested in the language. The example in (31) is clearly acceptable in Yoruba. This suggests that Hornstein’s directional account for the WCO effects cannot explain the Yoruba facts. It also suggests that we need to revise the representation in (32). First, we

will lay out some facts about the Yoruba focus constructions in order to provide a basis for revising the representation. Then, we will adopt an alternative WCO theory for Yoruba.

As we will argue in detail for Yoruba wh-questions in section (2.4) below, Yoruba also moves only a null operator in focus constructions:²⁴

- (33) $\bar{I}w\acute{e}_j$ ni NO_j \emptyset $Ol\acute{u}$ $r\grave{a}$ t_j
 book be C Olu buy
 ‘It was a book that Olu bought’

Here, there is a gap at the extraction site after verb *rà*. However, what is moved is not overt at the landing site in the Spec CP of the embedded clause. Thus both the head and the tail of the chain of the A-bar movement are null, as in the structure given in (35b) below.²⁵ The subject NP of the Predicate Clause headed by *ni* is in an argument position. If we consider both subject movement and object movement together then the emerging structures would look like (35a) and (35b) for (29) and (31) respectively. (In each of them, the *ni*-headed Predicate Phrase has an embedded clause.)

(34) **Null Operator Movement Chain**

The head and tail of null operator movement chain are null

²⁴ The status of the so-called focus marker *ni* is discussed in detail in section (2.4.1) below.

²⁵ It is not immediately obvious that the head and tail of the chain of null operator subject movement are null in Yoruba. This is clouded by the occurrences of “resumptive pronouns” and the EPP requirement that subject positions must be filled.

- (35) a. $[_{\text{PredP}} \text{Ta}_i \text{ ni } [_{\text{CP}} \text{NO}_i \ \emptyset \ [_{\text{IP}} \ \acute{o} \ t_i \ \text{ra} \ k\acute{i} \ \text{ni}]]]$
 who be NO C he buy what
 ‘who bought what?’
- b. $[_{\text{PredP}} \text{K}\acute{i}_k \text{ ni } [_{\text{CP}} \text{NO}_k \ \emptyset \ [_{\text{IP}} \ \text{ta} \ n\acute{i} \ \text{rà} \ t_k]]]$
 what be NO C who buy
 ‘What did who buy’ (‘or what was the thing that who bought’)

These structures contrast with the structures that have been proposed for the Yoruba focus constructions and *wh*-questions in the literature where the base generated NPs in the Spec of *ni* are said to be derived by movement rather than base generation (see Awoyale 1995, 1997, Rizzi 1997, and Aboh 1998). (Also, see section 2.4.1 below for the rationale for the base generation account.) The advantage of the present structures is that they can account for the near absence of the weak crossover effects in Yoruba unlike the traditional structures. In the present system, the correct LF structure for (32/ 35a) above is (36).

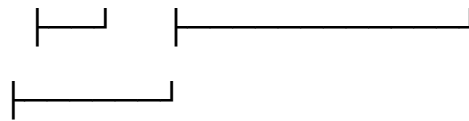
- (36) $[_{\text{PredP}} \text{k}\acute{i}_j \text{ ni } [_{\text{CP}} \text{NO}_j \ \emptyset \ [_{\text{IP}} \ [\text{pro}_j \text{ person}] (= \text{ta} \ n\acute{i}) \ \text{rà} \ t_j]]]$

Here, the pronoun has an external antecedent (*Kí* in (36)) that is outside the scope of the null operator that locally A-bar binds it.

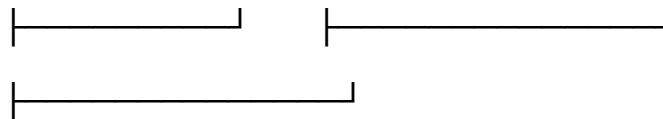
It has been argued in the literature that the availability of an external antecedent for a variable can neutralize WCO effects. Safir (2004b) provides an analysis for why weak crossover effects are not induced in null operator constructions. He claims that the

‘*his*’ in non-restrictive relatives such as (37) could depend directly on *Rex* instead of depending on the operator *who* or the *q*-variable of that operator. In the same way, the ‘*his*’ in a null operator construction such as (38) could depend on *Terry* instead of the null operator. In these cases *Rex* and *Terry* are external antecedents to the operators that are co-valued with them.

(37) *Rex, who his accountant loves t, is a Republican.*



(38) *Terry is tough [NO [for his mother to love t]]*



He concludes that -all that matters for the WCO effect to be overcome in operator constructions such as these is that the antecedent should be external to, and independent of, the operator - (Safir 2004b:141).

If we apply this to Yoruba, we can say that the presence of *Kí* as an external binder of the variable neutralizes WCO effects in (36). This explains why the so-called superiority effect is not seen in (32) compared to what is attested in English language. It is because such structures do not violate weak crossover - since no illicit pronominal binding is incurred.

This analysis extends naturally without any modification to other contexts where superiority has been reported to be attested in English and for which Yoruba does not

display such effects. For instance, consider the following examples derived from double complement constructions.

- (39) a. Ta_i ni o fún t_i ní kîni_k
 who be you give PRT what
 ‘Who did you give what?’
- b. Kî_k ni o fún tani t_k
 what be you give who
 ‘what did you give who?’ (*bad in English*)
- (40) a. Ta_i ni o yá t_i ní kîni_k
 who be you lend PRT what
 ‘who did you lend what?’
- b. Kî_k ni o yá tani t_k
 what be you lend who
 ‘what did you lend who?’ (*bad in English*)

We can posit (41) and (42) as the structures for (39a), (40a) and (39b), (40b) respectively.

- (41) [_{PredP} Ta_j ni [_{CP} NO_j Ø [_{IP} o fún/ yá t_j ní [pro_j thing] (= kîni)]]]
- (42) [_{PredP} Kî_j ni [_{CP} NO_j Ø [_{IP} o fún/ yá [pro_j person] (= ta) t_j]]]

These structures show that each variable has an external antecedent (Ta in (41) and Kí in (42)) which is outside the scope of the null operator that locally A-bar binds it; thus no weak crossover violation is expected. This in effect explains why the so-called superiority effect is not attested in either (39b) or (40b) (cf. example 42), in contrast with their English equivalents.

The analysis that we propose for the Yoruba examples in the above paradigms can also be used to explain the absence of superiority effect in the structurally more complex examples such as the pairs in (43) and (44). This could also be used to illustrate the so-called pure superiority effect in which the moving null wh-phrase is in the object position of a verb.

(43) a. Ta_i ni o rọ́ t_i láti ra kíni

who be you persuade to buy what

‘Who did you persuade to buy what?’

b. Kí_k ni o rọ́ tani_i láti rà t_k

what be you persuade who to buy

‘What did you persuade who to buy?’ (*bad in English*)

(44) a. Ta_i ni o yàn t_i láti ra kíni

who be you select to buy what

‘Who did you select to buy what?’

b. Kí_k ni o yan tani_i láti rà t_k

what be you select who to buy

‘What did you select who to buy’ (*bad in English*)

Also here, (43b) and (44b) are expected to display the so-called superiority effect contrary to fact. We assume that the reason why (43b) and (44b) are good is because there is an external antecedent for the variables in each of them too, so weak crossover is not at issue. Our representation for (43b) and (44b) would look like (45).

(45) [_{PredP} Kí_j ni [_{CP} NO_j Ø [_{IP} o rọ/yan [pro_j person] (=ta) láti rà t_j]]]

Thus, we maintain that superiority effect is subsumed under weak crossover effects. If it is right to subsume superiority effects under the WCO effects, then we propose that the notion of superiority effects be dispensed with in UG as a distinct phenomenon.

We have noted above that English displays Weak Crossover Effect while the effect is nearly absent in Yoruba. We now introduce more facts on Weak Crossover in the usual sense in the next section.

2.3 More Cross-linguistic Variation: WCO

In this section, we will provide additional support for our analysis of the near absence of weak crossover effects in Yoruba. First, consider the following examples.

(46) * Who_j does his_j mother like t_j

(47) * What_j did you give its_j owner t_j

(48) * What_j did you persuade its_j owner to give you t_j

These examples are not acceptable in English. Each of them involves an illicit pronominal binding. It involves moving a quantifier across a pronoun that depends on it. Therefore, a pronoun is illicitly linked to a variable to its right in each example. Directionally, their dependency patterns would look like the following:

(46') * Who_j does his_j mother like t_j



(47') * What_j did you give its_j owner t_j



(48') * What_j did you persuade its_j owner to give you t_j



The examples in (46) through (48) are bad because they violate the Weak Crossover Condition (see Chomsky 1976, Lasnik and Stowell 1991).²⁶

(49) **Weak Crossover Condition**²⁷

If a pronoun and a trace are bound by a quantifier, the trace must c-command the pronoun.

(Lasnik and Stowell 1991)

²⁶ See Koopman and Sportiche (1982) and Safir (1984) among several others for more on weak crossover effects.

²⁷ This is the c-command version of the weak crossover condition. Basically, the choice between the leftness version as used in the Hornstein's theory that we adopt and the c-command version as in this definition from Lasnik and Stowell does not matter in the present work. Therefore, we will use them interchangeably.

Interestingly, the Yoruba counterparts of the above examples are perfectly acceptable on the bound reading:

- (50) Ta_j ni ìyá rẹ̀j fẹ̀ràn t_j
 who be mother his like
 ‘Who does his mother like?’ *(bad in English on the bound reading)*

- (52) Ta_j ni ìya bàbá rẹ̀j fẹ̀ràn t_j
 who be mother father his like
 ‘Who does his grandmother like?’ *(bad in English on the bound reading)*

- (53) Kí_j ni o fún olówó rẹ̀j t_j
 what be you give owner its
 ‘What did you give its owner?’ *(bad in English)*

- (54) Kí_j ni o yá olówó rẹ̀j t_j
 what be you lend owner its
 ‘What did you lend its owner?’ *(bad in English)*

- (55) Kí_j ni o rọ olówó rẹ̀j láti fún ọ t_j
 what be you persuade owner its to give you
 ‘What did you persuade its owner to give you?’ *(bad in English)*

- (56) Kí_j ni o be olówó rẹ̀_j láti fún ọ t_j
 what be you beg owner its to give you
 ‘what did you beg its owner to give you?’ *(bad in English)*

The crucial question that arises then is why these examples are acceptable in Yoruba despite the fact that the Weak Crossover effect is expected to be Universal. Our claim in this section is that the unavailability of the Weak Crossover effects in the above examples in Yoruba is predictable. It is dependent on the type of movement operation that is used to derive them- null operator movement. We examine this in the next section.

2.4 Weakest Crossover and the Structure of Yoruba Questions

Following Lasnik and Stowell (1991), I assume that all the examples of null operator movement constructions for which WCO effects are expected but are absent can be taken as instances of weakest crossover effects. In this section, I will provide more examples and extend my analysis for the seeming absence of weak crossover effects in Yoruba to them. I maintain my earlier proposal that weak crossover effect is absent (in Yoruba) in any contexts for which the WCO effect is as a result of (overt) movement.

Furthermore, I assume that the movement operation that derives the Yoruba wh-questions is different from the type of movement that derives the English wh-questions. I assume that this accounts for the difference in how the languages pattern with respect to WCO effects. Also, I show in this section that WCO effects are seen in Yoruba in contexts that do not involve null operator movement, showing that the condition is universal, even though the constructions it manifests itself in are not.

Lasnik and Stowell (1991) have correctly noted that not all types of movement yield Weak Crossover effects. For example, the simple *wh*-movement found in questions induces WCO effects in English. Consider (57).

(57) * *who_j does his_j mother like t_j*

Here, *who* is moved across *his* into the Spec CP of the interrogative sentence. Following Hornstein's (2001) analysis, the pronoun is linked to a variable to its right in violation of the WCO condition.

Lasnik and Stowell (1991) identify some other types of movement that do not induce WCO effects. These include the movement operations that derive topicalization and tough movement, among others. The examples in (58) and (59) are instances of the tough movement constructions. Following Chomsky (1981) among others, Lasnik and Stowell (1991) assume that the English tough movement constructions are derived by moving a null operator to the Spec CP of the infinitival clause.

(58) *John_i is easy for his_i mother NO_i PRO to like t_i*

(59) *[John_i was hard [NO_i [PRO to persuade his_i boss [PRO to vouch for e_i]]]]*

There might be different explanations for the absence of WCO effect in (58) depending on whether "his mother" is the object of the preposition "for" or not. However, WCO effect is definitely expected in (59), but it is absent. There, the null operator A-bar binds its trace and the pronoun in the lower sentence. Also, the pronoun is linked to a variable

to its right in the sense of Hornstein (1995, 2001). This configuration violates the conditions that regulate WCO effect. Yet, the effect is absent in (59). Lasnik and Stowell (1991) conclude that WCO principles apply only to variables that are locally bound by true quantifiers. The weakest crossover constructions do not count as such. There, the operators are semantically non-quantificational.

For Lasnik and Stowell, a true QP is composed of a quantifier Q and a nominal term T defining a range R that Q quantifies over such that R is a possibly non-singleton set. For example, ‘which man’ and ‘everyone’ have the following components:

(60) Which man: which = Q, man = T, two or more men = R

(61) Everyone: every = Q, one = T, three or more individual = R

If we apply this to the Yoruba examples in (53) - (56), the null operator is non-quantificational.²⁸ If we are right that the null operator is non-quantificational in (53) – (56), then that suggests that its trace cannot be a (true) quantifier variable either. (Our analysis will still stand even if the null operator was quantificational. See footnote 28.) In the terms of the present system, WCO effects are neutralized in examples (53) – (56) because each of the pronouns has an external antecedent, which is outside the scope of the null operator that locally A-bar binds it. This explains why there are no WCO effects in (53) – (56).

²⁸ Actually, we can assume following Safir 2004 that it does not matter whether or not the null operator is quantificational. He notes that null operators are parasitically quantificational on their antecedents (Safir 2004:141).

If this is right, it shows that it is the way that wh-phrases move in Yoruba that erases WCO effects and consequently superiority effects which we take to be (subsumed) under WCO effects. Wh-questions are derived via simple wh-movement in English while they are derived via a tough-movement like operation in Yoruba. Indeed the structures of wh-questions are different in both languages. This hypothesis gets reinforced when the verbal status of the so-called focus marker *ni* in Yoruba is taken into consideration. We consider *ni*'s verbal status briefly in the next subsection.

2.4.1 The Verbal Status of *ni* in Yoruba

Yusuf (1990:84) identifies three types of *ni* in Yoruba: a copular verb, a focus construction marker and a wh-question marker. In his analysis, *ni* functions as a copular verb and as a focus marker. The *ni* in focus constructions and wh-movement constructions are usually analyzed as being the same (a focus marker) (see Yusuf 1990, Awoyale 1995, 1997 and Adesola 1997). In this chapter, we propose that *ni* is verbal in all those contexts: not only in the traditional copular constructions (as in Yusuf 1990), but also in focus constructions and in wh-movement constructions. Indeed, Dekydtospotter (1992) has analyzed the *ni* that occurs in the Yoruba focus constructions as a copular verb independently. In the same vein, Awobuluyi (1978), Adewole (1991) and Awoyale (1997) also recognize the verbal status of *ni*.²⁹

The item under investigation: *ni*, occurs as the only copular verb in the following:

²⁹ But see Oyelaran (1988) for a slightly different view about the status of **ni**

(62) Ọlórún ní ọba

God be king

‘God is a king’

Like the copular verbs that have been identified in other languages; *ni* is a **defective verb** (see Yusuf 1990).³⁰ It does not have tense or aspectual interpretation. It states a truth that holds at all times.³¹ It also bears clitic pronouns like other verbs in the language (see Awoyale 1997:6).³²

{ ọ }
{ ẹ }

(63)³³ Ènì tí ọ múra síṣẹ̀ ní { ńwọ }

{ ẹ }

person who he be-energetic at-work be you

‘Somebody who is energetic at work is what you are’

Here, either *ẹ* or *ọ* can cliticize to *ní*

Furthermore, *ni* can be preceded by a negation marker, like other verbs.³⁴

(64) Ṣadé yóò fẹ Olú

Sade will marry Olu

‘Sade will marry Olu’

³⁰ We will call it a Predicate head in this dissertation (cf. Baker 2003).

³¹ For example, the example in (62) has no specification for when God became king.

³² Only nouns and verbs bear clitics in Yoruba.

³³ The choice of which pronoun to be used is relatively free here.

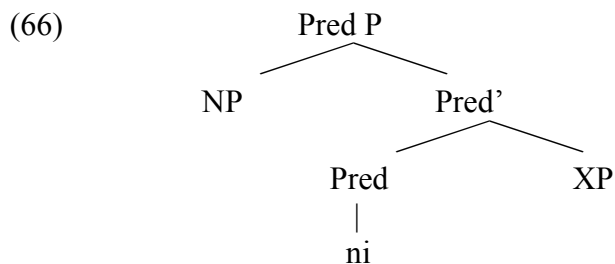
³⁴ A negation marker can only precede a verb/adverb it cannot occur immediately before a noun or a (post verbal) preposition.

(65) Olúk kúkú kọ ni NO Şadé yóò fẹ t_k

Olu really NEG be Sade will marry

‘It is certain that Olu is not the person that Sade will marry.’

Following Baker (2003), the predicative nominal in (62) is licensed by a predicate head, which is *ni* in (62). Baker assumes that a lexical item can be a verb only if it has a specifier (which it normally gets from an external merge). Taking this as the defining property of a verb, Baker (2003) assumes that any lexical item that belongs to another lexical category other than verb cannot have a specifier. These other categories are unable to theta-mark their specifiers the way the verb can. This is also the reason why a predicative nominal as in (62) has to be in the complement of a predicate head. The predicate head, which is a functional head, will theta-mark the specifier. This will look like (66) with the predicative nominal being X in the XP and *ni* being the functional category, Pred in Yoruba. (See Baker 2003 for crosslinguistics examples of Pred heads.)



This suggests that everything that can be predicative requires a specifier. Only a verb can theta-mark its specifier without needing to be the complement of a predicate head. This paradigm supports the assumption that only the verbs are the prototypical predicates in natural languages.

We assume in this dissertation that *ni* is also a predicate head in focus constructions, wh-movement constructions and the traditional copular sentences (see Awoyale 1985, 1990, 1995 among others for slightly different view about the status of *ni* in Yoruba syntax). In such configuration, *ni* heads the Predicate Phrase.

(67) Àḍíó ra àpò

adio buy bag

‘Adio bought a bag.’

(68) Àpò_j ni ohun_j tí Àḍíó rà t_j

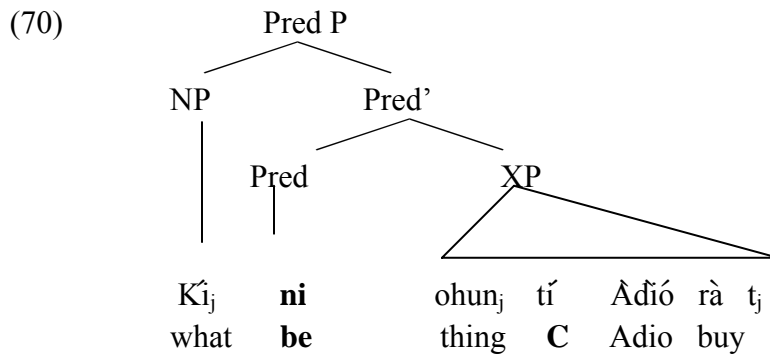
bag **be** thing C Adio buy

‘It was a bag that Adio bought.’ (A bag was the thing that Adio bought)

(69) Kí_j ni ohun_j tí Àḍíó rà t_j

what **be** thing C Adio buy

‘What did Adio buy?’ (what was the thing that Adio bought)



Supportive evidence for my claim that *ni* is a predicate head even in focus constructions and wh-movement constructions comes from the fact that wh-movement and focus

constructions can systematically be paraphrased with an embedded clause in which the complement (NP) of *ni* is modified by a relative clause. The complementizer of the embedded clause and the relative head could be overt (as *tí*) (71) or covert (72).

- (71) Ta_i ni ɛni_i tí ó_i ra iṣu
 who be person C he buy yam
 ‘Who bought some yams’ (who was the person that bought yams)

- (72) Ta_j ni NO_j Ø ó_j ra iṣu
 who be C he buy yam
 ‘Who bought some yams?’

In general, every clause introduced by *tí* as in (71) is subordinate in Yoruba and must be embedded in another sentence. This is why (74) is not a complete sentence. Whenever, a *tí*-introduced clause occurs in a complete sentence, it means that the sentence is bi-clausal consisting of a matrix clause and an embedded clause.

- (73) Obìnrin rí orò ní ànà (a sentence before relativization)
 woman see oro at yesterday
 ‘A woman saw Oro yesterday.’

(74) Obìnrin tí ó rí orò ní ànà (now a relative clause, but not a sentence)

woman C she see oro at yesterday

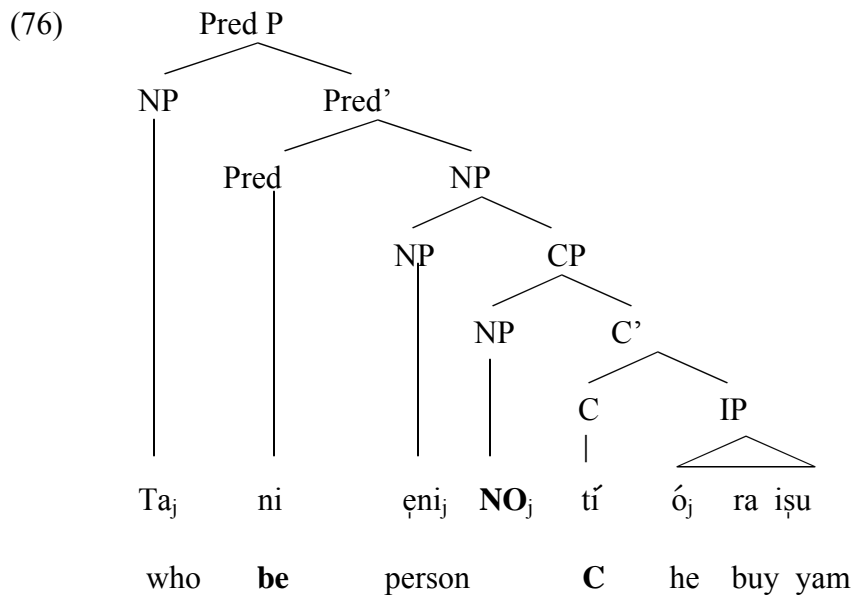
‘the woman who saw oro yesterday.’

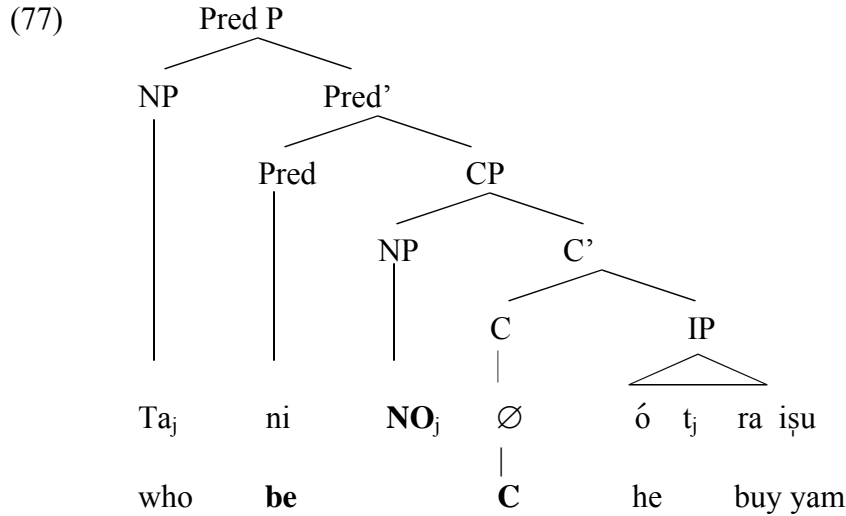
(75) Obìnrin tí ó rí orò ní anà ti ra ilé (now a sentence)

woman C she see oro at yesterday ASP buy house

‘The woman who saw Oro yesterday has bought a house.’

If this is right, it shows that there are indeed two clauses in (71) and (72). Their structures are given in (76) and (77) respectively.





These structures express the claim that the Yoruba wh-questions movement involves only a null operator, which moves to the specifier position of the CP of the embedded clause. The null operator is then obligatorily co-indexed with the (base generated) subject of *ni*, in a control related relation. This is more or less the structure of *tough movement constructions* in English (see Chomsky 1981, Lasnik and Stowell (1991)). If we are right to assume that only the null operator moves in the Yoruba structures in (77) and if Safir (2004) is right that crossover effects are neutralized when a base generated NP is an external antecedent to the null operator and its variable, then we explain why we do not observe the weak crossover effects in the examples that are wh-questions.

Furthermore, the subject NP of *ni* is in an argument position in (77) thus we do not expect a weak crossover effect, which is A-bar related.

In essence, my claim is that Yoruba focus/wh-movement constructions involve a bi-clausal coding of a proposition. This is like a feature that is identified with cleft constructions. Fichtner (1993) discusses three types of clefts in English language: the it-clefts (78), the simple clefts (79) and the wh-clefts (80).

- (78) It was the butler who served the wine
- (79) The one who served the wine was the butler.
- (80) The butler was the one who served the wine.

We contend that Yoruba does not have it-clefts. According to Fichtner, this particular structure involves the topicalization of the copular verb “BE”. If he is right, the fact that Yoruba does not have it-clefts can perhaps be deduced from the fact that the copular verb can neither be focused nor topicalized in the language.³⁵

- (81) * *níni ni Olú ni ọba*
 ? be Olu be king

We assume however that Yoruba has the wh-clefts and the simple clefts. These basically follow the same derivation as in English although the details might be a bit different for language internal reasons. Structurally, (82) and (84) are the same as (79) and (80). In

³⁵ The copular verb *ni* behaves differently from another copular verb *jé* which the languages uses. *Jé* can be nominalized for focusing .

- (i) *Ọlọrun jé ọba*
 God be king
 ‘God is a king’
- (ii) *Jijé ni Ọlọrun jé ọba*
 ? be God be king
 ‘It is actually the case that God is a king’
- (iii) *Jijé ni Adé yóò jé ọba*
 ? be Ade FUT be king
 ‘Ade will actually become a king’

Relevant to the difference is the fact that *Jé* is not timeless (see (iii)).

(82) the focused constituent is on the left periphery while it is on the right periphery in the example in (83).³⁶ The latter might be due to some movement operation. It might as well be due to the equative nature of copular constructions.

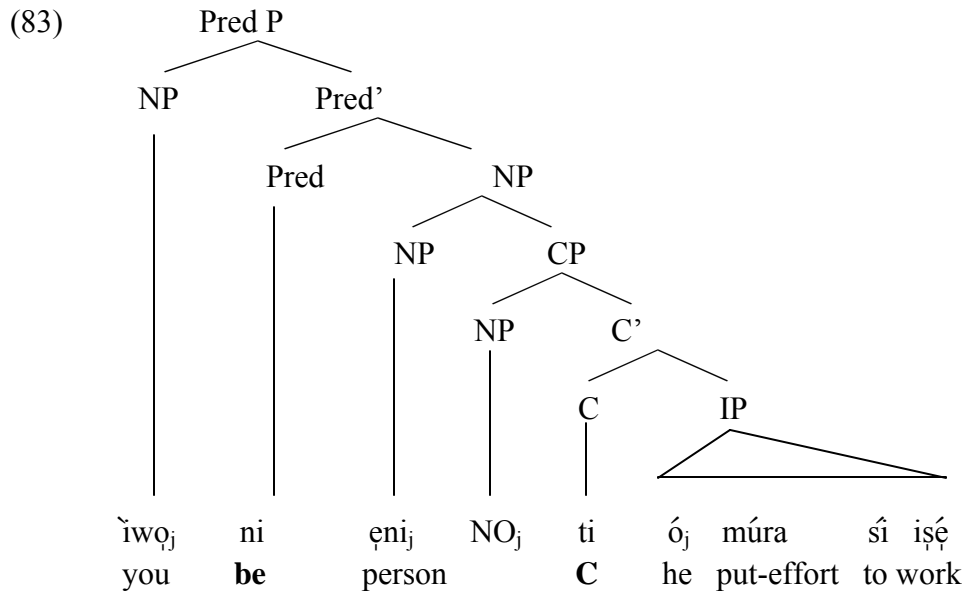
- (82) Ìwọ ni ẹni ńí ọ múra sísẹ̀
- you be person who he be-energetic at-work
- ‘you are somebody who is energetic at work’

³⁶ Note though that foci interpretations in the language could be pragmatic. For example, Awoyale (1997) identifies some focus constructions that do not involve the use of the so-called focus marker. Instead adverb/intensifiers (what he calls focus particles) are used.

- A. Adé **ṣáà** lẹ sí ilé ní ànà
- Ade nevertheless go to house at yesterday
- “The fact is that Ade went home yesterday”

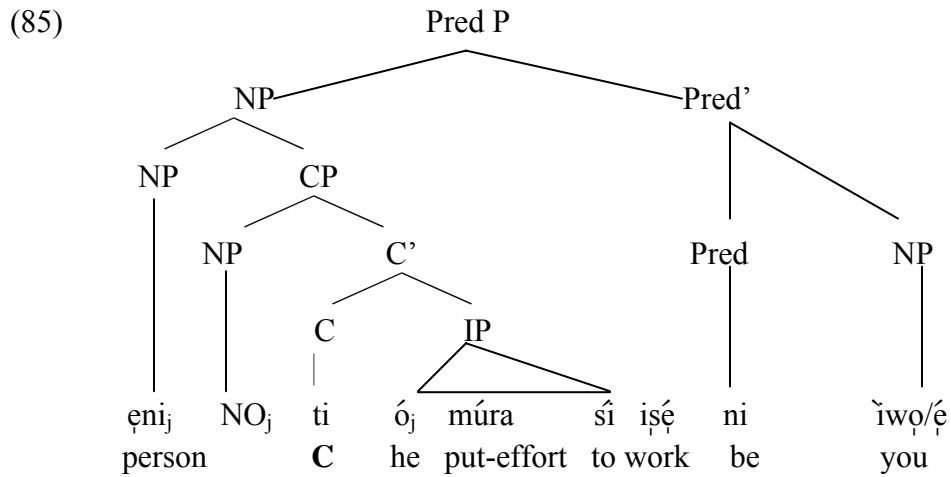
According to him, the focus particle takes scope over the whole sentence. Indeed, the intensifiers/adverbs might be the ones that are really making focus constructions in the language whether they occur overtly or covertly. They can occur after focused constituent.

- A (i). Olú ra ìwé
- Olu buy book
- “Olu bought a book”
- (ii) Ìwé (**ṣáà**) ni Olú rà
- book really be Olu buy
- “It was a book that Olu bought/ It is a fact that a book was what Olu bought”
- (iii) Olú (**ṣáà**) ni ọ ra ìwé
- Olu really be he buy book
- “It was Olu who bought a book / It is a fact that Olu was the person who bought a book”



The focus construction is also bi-clausal when the subject NP of *ni* is modified by a relative clause (84).

- (84) ɛni ti ó múra síșé ni `ıwɔ/ɛ
- person who he be-energetic at-work be you
- ‘somebody who is energetic at work is what you are’




We can see from the foregoing that the structure of focus constructions as in (83) and (85) is parallel to the structure of wh-movement (question) constructions as in (76). Therefore, we can conclude that the focus constructions and the wh-movement constructions are bi-clausal and that *ni* is the verbal element in the matrix clause in such constructions.

In general, we can conclude therefore that it is appropriate to analyze superiority effects as weak cross over effects. This will mean that what we have in the examples examined for superiority effects and the weak crossover effects so far are examples that could be used to illustrate the weakest crossover in Yoruba in the sense of Lasnik and Stowell (1991). The tough movement-like structure of the Yoruba wh-questions is the independently motivated reason why Yoruba does not display the weak crossover effects.

One of the predictions of the present analysis is that Yoruba would display Weak Crossover Effects in contexts that do not involve wh-questions. Indeed, there are WCO effects in Yoruba in contexts that do not involve wh-questions. Consider the following sentences in English:

- (87) a. * His_j mother loves everyone_j
 b. Everyone_j loves his_j mother
- (88) a. *His_j mother loves someone_j
 b. Someone_j loves his_j mother
- (89) a. * John gave its_j owner [every book]_j
 b. John gave every book to its owner.

The examples in (87a), (88a) and (89a) are not acceptable because a pronoun is linked to a variable to its right at LF (in the sense of Hornstein 1995, 2001). For example, the dependency pattern for (87a) would look like (90) after QR raises the quantifier to its scope position at LF..

- (90) * [Everyone_j [His_j mother loves t_j]]
- 


Crucially, WCO effect is also attested in the Yoruba counterparts of (87a), (88a), and (89a):³⁷

³⁷ Note however that backward anaphora is excluded more generally in the language. For example, (i) is ruled out even though the object is a non-quantificational name – unlike in English.

(i) * Ìyá rẹ̀j fẹ̀ràn Olù_j
 mother his like Olu

- (91) a. *Ìyá rẹ̀j fẹ̀ràn ẹ̀nìkòòkan_j
 mother his like everyone
- b. [ẹ̀nìkòòkan_j fẹ̀ràn ìyá rẹ̀j
 everyone like mother his
 ‘Everyone likes his mother’
- (92) a. *Ìyá rẹ̀j fẹ̀ràn ẹ̀nìkan_j
 mother his like someone
- b. Ẹ̀nìkan_j fẹ̀ràn ìyá rẹ̀j
 someone like mother his
 ‘Someone likes his mother’
- (93) a. *Olú fún olówó rẹ̀j ní [ájá kòòkan]_j
 Olu give owner its PRT dog each
- b. Olú mú [ájá kòòkan]_j fún olówó rẹ̀j
 Olu take dog each give owner its
 ‘Olu gave each dog to its owner’

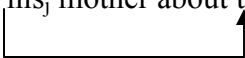
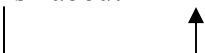
The dependency pattern of (91a) would look like (94).

- (94) * [ɛ̀nìkòòkànj̩ [ìyá rẹ̀j̩ fẹ̀rà̀n t̩j̩]]
 everyone mother his like


Furthermore, cases in which in situ wh-phrases induce Weak Crossover effects in English also have the same pattern in Yoruba.

- (95) a. * who_k told his_j mother about who_j
- b. * Ta_k ni [CP [IP ó sọ fún ìyá rẹ̀j̩ nípa tani_j]]
 who be he say to mother his about who
- c. * Ta_k ni [CP [IP ó ẹ̀ ọ̀fọ̀fọ̀ fún ìyá rẹ̀j̩ nípa tani_j]]
 who be he make gossip to mother his about who
for 'Who spread a rumor to his mother about who?'

The LF representation of the dependency patterns of (95a) and (95b) would look like (96) and (97). In each case, a pronoun is linked to an LF variable to its right (Hornstein 2001).

- (96) * [who_j [who_k told his_j mother about t̩j̩]]

- (97) * [Ta_j [ta_k ni [CP [IP ó t̩k sọ fún ìyá rẹ̀j̩ nípa t̩j̩]]
 who be he say to mother his about


In contrast, when an in-situ wh-phrase does not induce weak crossover effects in English as in (98), its Yoruba counterpart does not induce weak crossover effect either (99).

(101) Ta_j ni òya bàbá rẹ_j fẹ̀ràn t_j

who be mother father his like

‘Who does his grandmother like?’ (*bad in English on the bound reading*)

(102) Kí_j ni o fún olówó rẹ_j t_j

what be you give owner its

‘What did you give its owner?’ (*bad in English*)

(103) Kí_j ni o rọ olówó rẹ_j láti fún ọ t_j

what be you persuade owner its to give you

‘What did you persuade its owner to give you?’ (*bad in English*)

One feature that all of these examples have in common is the genitive pronoun *rẹ* which functions as the second variable. Now, this pronoun can also be used as a resumptive pronoun in Yorùbá, as shown in (104):

(104) Ta_j ni bàbá rẹ_j fẹ̀ràn Adé

who be father his like Ade

‘Who did his father like Ade’ (*bad in English*)

(104) suggests that unlike English, Yoruba expressly allows a genitive pronoun to be locally A-bar bound (Chris Collins and Mark Baker, personal communication). This could be stated as a grammatical principle, as in (105).

(105) **Genitive Dependency Principle (GDP)**

Genitive pronouns can be locally A-bar bound

In light of this, it is plausible to attribute the grammaticality of the examples in which weak crossover effects are expected (as in (101) - (103)) to the effect of the GDP. This would be an alternative explanation for some of the material covered in this chapter.

The problem with attributing the grammaticality of (101) - (103) to the effect of the GDP is that it is not general enough to capture all the facts of Yoruba in this respect. Other pronouns that are not particularly A-bar dependent have effects similar to (101) to (103) in weak crossover configurations. For example, accusative pronouns are not normally used as resumptive pronouns in Yoruba:

(106) *Adé_j ni Olú ří i_j

Ade be Olu see him

For 'It was Ade that Olu saw'

Thus we cannot claim that an accusative pronoun can be expressly A-bar bound in Yoruba. Nevertheless, an accusative pronoun can also occur in a configuration in which a weak crossover effect is expected but absent. Consider (107).

(107) Ta_i ni àwọn obìnrin tí (ó)/wọ̀n rí i_i kí t_i

Who be they woman COMP they see him greet

‘Who did the women who saw him greet’ (bad in English)

The bound pronoun interpretation is possible for the accusative pronoun in (107) despite the fact that this pronoun is not genitive. Thus, we can conclude that weak crossover alleviation is not merely due to special properties of genitive pronouns in the language.

Next we consider some of the theories that have been proposed to account for superiority (and weak crossover) effects in syntax.

2.6 Some Alternative Theories³⁸

As mentioned above, there are alternatives to our assumption that superiority effects can be reduced to weak crossover effects. In the next three subsections we briefly examine three other alternative theories vis-à-vis what they could tell us about the absence of superiority effects in Yoruba.

In the next section, we discuss how to reduce superiority effects to WCO effects.

³⁸ There are some alternative theories that I do not discuss in this chapter. However, we are sure that none of these alternative theories is more promising than the approach that we adopted here. For example, it is inconceivable to assume that all Yoruba wh-phrases are D(iscourse)-linked in order to explain why they do not display superiority effects (cf. Petsesky 1987 and the analyses that adopt the approach). Furthermore, it has been reported that “which-NPs” (the so-called D-linked wh-phrases) can display superiority effects in some context in English (David Willis 2003). (Some native speakers of English do not agree with this judgment.)

(i) Which king thought that which wizard was clever.

(ii) * Which wizard did which king think was clever.

Also, it is not plausible to account for superiority effects in Yoruba in term of the Phase Impenetrability Condition as in Takahashi (2002). Such assumption would suggest that (strong) phases (Chomsky 2001) are not universal. (If they were universal then superiority effects should be universal.)

2.6.1. Reducing Superiority Effects to ECP

It would appear that English allows an object *wh*-in-situ but prohibits a subject *wh*-in-situ as in the examples in (110). Following Huang (1995:153) the examples in (108) and (110) have the LFs in (109) and (111) respectively (see also Jaeggli 1982, Chomsky 1981).

(108) Who_i bought what_j

(109) [_{CP} [what_j who_i]_i [_{IP} t_i bought t_j]]

(110) *What_k did who_i buy t_k

(111) *[_{CP} [who_i what_k]_k did [_{IP} t_i buy t_k]]

Here, the trace of *what* is lexically governed by the verb in the acceptable example in (108) while that is not true for the trace of *who* in either example. Added to this, antecedent government is not available for the trace of *who* in (110). This is what triggers an ECP violation for (110). Thus ECP could account for why (110) is ruled out in English. What would be needed then is to see how ECP effects are suppressed in Yoruba to the extent that (105) is acceptable unlike its English counterpart. First we give the LF of (104a) and (105b) as (104b) and (105b) below.

(112) Ta ni ó ra kí ni

who be he buy what

‘Who bought what?’

(113) $[_{\text{PreP}} [_{K_i} \text{ ta}_i]_i \text{ ni } [_{\text{IP}} \text{ ó}_i \text{ rà } t_j]]$

(114) $Kí \text{ ni } \text{ ta } ní \text{ rà}$

what be who buy

‘What did who buy?’ (*bad in English*)

(115) $[_{\text{PredP}} [_{ta_i} \text{ kí}_j]_j \text{ ni } [_{\text{IP}} t_i \text{ rà } t_j]]$

As in the English examples, the trace of *kí* ‘what’ is lexically governed in (113). The main difference that accounts for the acceptability of (115) is that in Yoruba, there is a predicate head *ni*. This head could conceivably head govern the trace of the subject wh-phrase even when antecedent government is not available. The LF indices of the moved constituents might also be different in English and Yoruba. Suppose that, in (115), the index outside the square bracket in the Spec of the PredP was an *i* in Yoruba rather than a *j*. Then antecedent government would be available for the LF trace of the subject wh-phrase. If this is correct, it looks promising.

However, there are some theoretical challenges that the ECP account has to overcome. For example, one of the theoretical issues has to do with the notion of government. This notion is very crucial for the ECP account that we have outlined above. Therefore, if Chomsky (1995:173) is right that government is not a legitimate syntactic primitive, then the above ECP account cannot hold. More importantly, the ECP account does not generalize to cases of superiority effects that do not involve the local subject position. For example it cannot account for superiority effects in the so-called pure

superiority examples in (116) and (117) in which both wh-phrases are objects of a verb, and hence properly governed.

(116) Who did you command to read what

(117) *What did you command who to read

Also, the ECP account cannot be generalized to explain the near absence of WCO in Yoruba in any obvious way.

2.6.2. Wh-movement as Focus Movement

In this section, we consider another option. This is done in the hope that if we assume that the feature that requires checking resides in the moved element rather than the attractor then we should not expect superiority effects.

Drawing on data from Bulgarian and Serbo-Croatian, Boskovic (1999) suggests that the manifestation of superiority effects crucially depends on the element that has the feature that has to be checked for convergence. In his system, there can be superiority effects if and only if the feature that is to be checked is in the attractor. There cannot be superiority effects if the feature driving movement is in the element that is undergoing movement. More concretely, he assumes that the feature to be checked is in the C in wh-movement but it is in the element undergoing focusing in focus movement. Consequently, he asserts that focus movement is not subject to superiority effects whereas wh-movement is.

For Bulgarian, he notes that only the first wh-word that moves is an instance of true wh-movement which checks the +wh-feature of the C, all the other moved wh-words

are instances of focus movement. No lower wh-word can be moved for feature checking. This explains why (119) is excluded.

- (118) **kogo kakvo** e pital Ivan
 whom what is asked Ivan
 ‘whom did Ivan ask what?’

- (119) ***kakvo kogo** e pital Ivan
 what whom is asked Ivan

After the highest wh-phrase has been moved, the order in which the lower wh-phrases move does not matter.

- (120) koj **kogo kak** e tselunal
 who whom how is kissed
 ‘Who kissed whom how?’

- (121) koj **kak kogo** e tselunal
 who how whom is kissed

This pattern, he notes, shows that focus movement is not subject to superiority effects. Only wh-movement exhibits superiority effects. He notes that the reason why this is so is

because +wh-feature resides in the C while the +focus feature resides in the element to be moved/focused:

(122)	F	wh-phrase ₁	wh-phrase ₂	wh-phrase ₃
	+focus	+focus	+focus	+focus
	weak	strong	strong	strong

(123)	F	wh-phrase ₁	wh-phrase ₂	wh-phrase ₃
	+wh	+wh	+wh	+wh
	strong	weak	weak	weak

(Boskovic 1999:167)

Therefore, it is sufficient to move only one wh-word to check a +wh- feature as in (124).

(124) What did John give to whom when

However, it is not sufficient to move only one wh-word to Spec CP when focus is involved in Serbo-Croatian.

- (125) a. Ko sta gdje **kupuje**
 who what where **buys**
 ‘who buys what where’
- b. * ko **kupuje** sta gdje
 who **buys** what where
- c. * Ko sta **kupuje** gdje
 who what **buys** where
- d. * ko gdje **kupuje** sta
 who where **buys** what

Every wh-word must be moved as in (125a). Therefore he concludes that superiority effects arise only when the feature driving movement resides in the target but not when it resides in the element undergoing movement.

If we apply this reasoning to our discussion of superiority effects in English and Yoruba, it would seem that the feature that is to be checked resides in different elements in the two languages. A direct interpretation of this will be that English displays superiority effects because the strong feature that requires checking is in the C. If this is correct, it explains why English displays superiority effects. For Yoruba on the other hand it would mean that the reason why Yoruba does not display superiority effects is because the feature that is to be checked is in the element that is undergoing movement;

that is the *wh*-phrases. If this is correct, it then means that the Yoruba *wh*-movement behaves exactly like focus movement. Another way to say this could be that Yoruba does not have [+*wh*-feature]. It has only [+focus feature]. This looks like a desirable result for us especially since one of the main goals of this chapter is to offer a unified analysis for the Yoruba focus constructions and the Yoruba *wh*-movement.

However, there is at least one reason why the above assumption cannot be correct. If we treat the Yoruba *wh*-movement as focus construction, then we should not expect superiority effects. However, this theory does not capture the fact that some *wh*-phrases remain in-situ – unlike in Bulgarian.

(126) Ta ni ó ra kí ni

who be he buy what

‘Who bought what’

Furthermore, Yoruba does not allow more than one *wh*-phrase to move at once as Serbo-Croatian does. This suggests that Yoruba does not allow multiple *wh*-attractions (cf. Grewendorf 2001). Also, the above line of reasoning says nothing about WCO effects (in Yoruba) so there would be little hope for a unified analysis of the two differences.

Given these empirical resources, then it is certain that the strong feature that requires checking does not reside in the moved element in Yoruba. We can therefore conclude that treating Yoruba *wh*-movement as an instance of focus movement will not do any good to the issue at hand. Also, there is no support for the claim that the feature to

be checked in Focus movement resides in the element undergoing movement. The example in (126) shows that this could not be the case.

2.6.3 Minimal Link Condition and Superiority Effects

A third possibility is that superiority effect is a result of violating the Minimal Link Condition (Chomsky 1995). This is the alternative that I will consider in this subsection. Movement, as we assume in this chapter, can take place only when there is a need to check some un-interpretable feature of a functional head. In the spirit of minimalism, only the movement that is done with the least effort is supported. In essence, movement is subject to the principle known as shortest move. According to Marantz (1995:355) shortest move is the most technically specific economy principle. It takes over much of the work performed by Relativized Minimality, Subadjacency and the Head Movement Constraint in earlier versions of P & P theory. The requirements of “shortest move” are embedded in the economy condition known as the Minimal Link Condition (MLC). The Minimal Link Condition (MLC) requires that only the closer element that can check a particular feature should be moved. Even in A-movement, the same is expected. This seems to hold perfectly in English. Marantz (1995:352) reports that:

NP-movement in passive and raising moves what appears to be the highest NP in a structure to the first A-position above this NP (the subject position); when the closest A-position is filled, movement to a still higher position is blocked. Here, only the shortest possible move, the one requiring the least effort is allowed.

Consequently, any movement that violates the Minimal Link Condition should be universally ruled out. Chomsky (1995) defines the Minimal Link Condition as in (127).

(127) Minimal Link Condition

α can raise to target K only if there is no legitimate operation move β targeting K, where β is closer to K.

Chomsky (1995) defines the notion of closeness as in (128).

(128) ‘Close’ for attract /move: If β c-commands α and φ is the target of movement: β is closer to K than α unless β is in the same minimal domain as (a) φ or (b) α .

The MLC is part of the definition of move, and hence is inviolable. Only the shortest possible movements exist. That is only what “attract F” licenses.

(129) Attract-F

K attracts F if F is the closest feature that can enter into a checking relation with a sub-label of K.

One of the clearest tests that have been used to validate the universality of the MLC is its operational powers in sentences with multiple wh-phrases. For example only the first of two WH-elements in a clause can be moved to check the wh-feature of the

attracting C. As noted above, wh-movement is motivated by the need to check the wh-feature of the complementizer in interrogative clauses. Only one (the first) of multiple WH elements can move to check the strong feature of the C. This derives what is usually referred to as superiority effects in the literature (cf. Chomsky 1973, 1995:181). Structurally, this looks like (130). In the configuration in (130), the probe *T* requires a goal that has the feature α in order for *T* to check its own strong $[+ \alpha]$ feature. There are two potential goals, *XP* and *YP*, with the feature α , but *T* is allowed to attract only the closer goal - that is the *XP* in (130). This will ensure that the shortest chain is formed. Furthermore, the strong feature of the C must be checked only once in the derivation (cf. Bobaljik and Jonas 1996). This explains why (130a) is good while (130b) is not acceptable.

- (130) *T* [... *XP* _{α}*YP* _{α} ...]
- a. *XP* _{α} [*T* [... *XP* _{α}[*YP* _{α}]...]
- b. **YP* _{α} [*T* [... *XP* _{α}[*YP* _{α}]...]

More concretely, consider the examples in (131).

- (131) a. *Who*_{*i*} bought *what*_{*k*}
- b. **What*_{*k*} did *who*_{*i*} buy *t*_{*k*}

In these examples, *who* is the closer goal to the $[+wh]$ C probe. Therefore, the example in (131a) is acceptable because *who* is moved while (131b) is bad because *what* is moved

instead of *who*, which is closer to the attracting complementizer. The movement operation which could derive the example such as the one in (131b) is excluded because economy favors a shorter movement (131a). In other words, (131b) violates the Minimal Link Condition.³⁹ (Once the first *wh*-phrase has moved to check the strong *wh*-feature of the head of the CP in (131b), the movement of the second *wh*-element is unmotivated. The +*wh* feature on C has already been satisfied.) This is most especially true if movement is indeed a thing of last resort:

(132) Last Resort

Move F raises F to target K only if F enters into a checking relation with a sub-label of K.

It seems that every bit of the above argument on superiority effect holds for the English language.⁴⁰ (It is not surprising therefore that the above argument is one of the most prominent analyses on superiority effects in the literature.) Therefore, the natural expectation is that this will hold for Yoruba as well since the MLC is said to be a part of UG.⁴¹ However, Manfredi and Oyelaran (2000) and Adesola (2000) have noted the seeming absence of superiority effects in Yoruba. This is illustrated by the acceptability of (133b) in contrast with its English equivalent.

³⁹ The MLC account of superiority effects (as illustrated here) stands out as one of the major analyses on the phenomenon (Chomsky 1995). See Takahashi (2002) however for some argument against analyzing superiority effects in term of the MLC. For our own purposes, it is good to note that the MLC account cannot explain the absence of superiority effects in Yoruba.

⁴⁰ Except (perhaps) as in cases like (134).

⁴¹ But see Baker and Collins 2003 for a different view on the status of the MLC in UG.

(133) a. Ta ni ó ra kí ni

who be he buy what

‘Who bought what?’

b. Kí’ ni ta ní rà

what be who buy

‘What did who buy?’ (*bad in English*)

The fact that (133b) is acceptable suggests that there may be a cross-linguistic variation in the way that languages pattern with respect to the Minimal Link Condition (Chomsky 1995).⁴² This kind of cross-linguistic variation with respect to a foundational principle is not expected. Furthermore, the mere fact that sentences such as (134) are conceivable in English is also a pointer to the fact that the structural relation that the MLC seeks to derive is not absolute.⁴³

(134) ?? Which book_i did which man review t_i ?

The important question that arises here is what triggers the movement of the second wh-phrase if movement is strictly for feature checking. Moving the first wh-phrase should satisfy the checking requirements of the wh-feature in the head of the CP.

⁴² This suggests that the MLC should be parameterized such that it is flexible enough for languages where seniority does not determine what can be moved.

⁴³ Sentences like (134) are treated specially by appealing to the semantics of the “which-phrase” rather than the structure that the MLC regulates.

It seems to me that the least costly way to explain this surprising difference between Yoruba and English with respect to superiority effects would be to explore the “unless clause” in the definition of “Closeness” repeated as (135b) below.

(135) a. Minimal Link Condition

α can raise to target K only if there is no legitimate operation move β targeting K, where β is closer to K.

- b. ‘Close’ for attract /move: If β c-commands α and φ is the target of movement: is closer to K than α unless β is in the same minimal domain as (a) φ or (b) α

For example, the “unless clause” in (135b) can plausibly explain why either *ibo* ‘where’ or *kí* can be moved in (136) (cf. Ura 2000).

(136) O ra kí ni ní ibo (*underlying form*)

You buy what at where

- a. Kí_i ni o rà t_i ní ibo

What be you buy at where

‘What did you buy where?’

b. Ibo_i ni o ti ra kîni t_i ?

Where be you PRT buy what

“Where did you buy what?”

However, there is no easy or neat way to show that the wh-phrase in the subject position and the wh-phrase in the object position are in the same minimal domain in the derivation of (133a) and (133b). To begin with, such assumptions will make the wrong prediction for other languages. Furthermore, such assumptions would not generalize to more complex examples of superiority effects.

2.7. Potential Cross-linguistic Extension: Igbo and Buli

Our proposal in this chapter is that the absence of superiority effects in Yoruba is traceable to how wh-questions are derived in the language. I show that wh-questions are derived through null operator movement. I also show that null operator movement provides a configuration that neutralizes WCO effects. An effect of this is that WCO effects are only attested in sentences that are not wh-questions in the languages in question. This analysis predicts that languages that have only null operator movement for wh-question derivation should also pattern like Yoruba. This prediction is borne out in other languages. I use a few examples from Igbo, a Niger-Congo language spoken in Nigeria and Buli another Niger-Congo Language spoken in Ghana for illustration. First I give Igbo examples.

A copula verb is optional in wh-questions in Igbo (Victor Manfredi, personal communication):⁴⁴

(137) a. Ònyé bya-ra?

who came-AFF

‘who came?’

b. Ọ̀ bù ònyé bya-ra?

3s be who come-AFF

‘who came?’

This suggests that wh-questions in Igbo are similar to wh-questions in Yoruba in the way they are derived. So, the system proposed here predicts that both languages should behave in the same way with respect to Superiority effects and WCO effects. This prediction is borne out. Igbo does not display superiority effects either (Peter Ihionu, personal communication). The examples in (138) and (139) are acceptable in the language.

⁴⁴ An example of the Igbo copular constructions with the copular verb *bù* is in (i).

(i) Chínèkè bù Ézè
 God be king
 ‘God is the king’

(138) a. Ònyé zù-rù gínì

who buy-ASP what

‘Who bought what?’

b. Ò bù ònyé zù-rù gínì

3s be who buy-ASP what

‘Who bought what?’

(139) a. Gínì kà ònyé zù-rù
what C who buy-ASP

‘What did who buy?’ (*bad in English*)

b. Ò bù gínì kà ònyé zùrù
3s be what C who buy-ASP

‘What did who buy?’ (*bad in English*)

Here as in Yoruba, example (139) is expected to be unacceptable if superiority effects were universal. In the present system, (139) is acceptable because it does not incur a weak crossover violation. The base generated NP $G_{inì}$ provides an external antecedent to the null operator and its variable thereby neutralizing WCO effects. Indeed, WCO effects are also generally absent in configurations, which involve wh-questions in Igbo. Consider (140).

(140) Ọ̀ bù ònyé_k kà òné_k ya hùrù t_k n'ányá

3s be who be his mother love ?

‘Who does his mother love?’

The example in (140) is a classical example of the kind of structure that has been used to illustrate WCO effects in the literature. Thus it is expected to be bad under the reading in which *Ọ̀nyé* binds its own trace and the pronoun. However, the sentence is acceptable in Igbo. We assume that the reason why it is acceptable is because its structure provides the right configuration for WCO neutralization. *Ọ̀nyé* is an external antecedent to the null operator, which binds the pronoun and the trace of the null operator.

The foregoing does not mean that Igbo does not display WCO effects at all. It does obey WCO in structures that do not involve wh-questions. For example the example in (141) with an unmoved quantifier is unacceptable because it violates the WCO condition.

(141) * Òné_k ya hùrù onye ọ̀bùlák n'ányá

his mother likes everyone ?

‘his_k mother like everyone_k.’

The LF structure of (141) does not provide any means of neutralizing WCO effects. It patterns like the Yoruba examples that we discussed in section (2.4) above.

The pattern that we have observed in Igbo is also attested in Buli.⁴⁵ Buli also has a copular verb *ka*.

(142) Atim ka kparoa.

Atim be farmer

‘Atim is a farmer’

This copular verb is also used as the so-called focus marker in wh-questions. Thus, the wh-phrase is also in an A-position in the language. This suggests that Buli should behave like Yoruba and Igbo with respect to superiority effects and weak crossover effects. This is exactly what happens in the language. Buli does not display superiority effects. Both (143) and (144) are acceptable in the language.

(143) Ka bwa ali wana da ____

be what COMP who buy

‘What did who buy?’ (*bad in English*)

(144) Ka wana ali da bwa?

be who COMP buy what

‘who bought what?’

⁴⁵ The Buli data was provided by George Akanlig-Pare.

Furthermore, movement related weak crossover effects are not attested in the language. (145) is acceptable in the language as in Yoruba and Igbo.

- (145) Ka wana_k ati wa_k ma-wa a yaali t_k
 be who COMP 3sg mother ST like
 ‘Who does his mother like?’

On the other hand, weak crossover effects are observed where they are expected in configurations that do not involve movement. (146) is ungrammatical in the language.

- (146) *wa_k ma-wa a yaali awai_k.
 His mother ST like someone
 ‘His mother loves someone’

These examples suggest that Buli is like Yoruba and Igbo. Weak crossover effects are neutralized when the pronoun has an external antecedent but show up in non-movement configurations. All these converge to show that we do not need to parameterize WCO effects in languages, rather, we need to pay attention to how their wh-questions are derived to understand why WCO is absent in some cases.

2.8 Conclusion

This chapter has examined the absence of superiority effects in Yoruba language. We derived this from the near absence of the weak crossover effects in the language. In the process, we support theories in which superiority effects are reduced to an instance of WCO effects (Hornstein 2001). Thus, we suggest that superiority effect is not an independent notion in syntax. I show that Yoruba does have weak crossover effects like English except in constructions involving movement in overt syntax. This, I show, follows from the fact that the structure of wh-questions in English and Yoruba are different. Yoruba uses only null operator movement. The null operator is allowed to bind more than one variable/pronoun as long as the pronoun has an external antecedent that is outside its scope and is co-valued with it. When this condition is met, the resulting configuration neutralizes WCO effects. We have shown in this chapter that the condition is always met in Yoruba wh-questions and focus constructions. We show that the structure of wh-questions in Yoruba involves an ‘extra’ A-position. The NP in the A-position serves as an external antecedent to the pronoun in the scope of a null operator. Thus one of the inherent properties of wh-movement and focus ensures that WCO effects will not arise. It is not surprising therefore that there are no Weak Crossover effects in the Yoruba wh-movement and focus constructions. We also show in this chapter that Yoruba displays WCO effects in configurations that do not involve overt movement. Along the way, we have also shown that the Yoruba Focus constructions and the Yoruba wh-movement constructions are bi-clausal. We also show that both types of constructions have the same structure in Yoruba language.

Chapter 3 - The Agreeing and Non-agreeing Resumptive Pronouns

In the preceding chapter, we have explored one consequence that null operator movement approach to question formation has for syntax. There, we argued that the near absence of WCO effects in Yoruba is due to the fact that the language allows only null operator movement in overt syntax. This is because a null operator can bind a pronoun and a variable without any penalty whenever the variable has an external antecedent which is not in the scope of the null operator. This follows the analysis that has been proposed for tough movement constructions in English (Safir 2004, Lasnik and Stowell 1991). This chapter builds on the gains of the last chapter. Here, we will show yet another consequence of an overt movement of the null operator in which its feature deficiency disqualifies it from being used to satisfy the Extended Projection Principle (EPP). More concretely, we will show in this chapter that the reason why a non-agreeing subject “resumptive” pronoun is required in Yoruba is because a null operator cannot satisfy the EPP requirement of T. Thus, the inability of T to attract the null operator into its Spec position forces the insertion of an expletive pronoun in subject position, to satisfy the EPP requirement of T. A consequence of this insertion process is that the subject resumptive pronoun is not required to agree in Phi-features with the external antecedent (1b).

- (1) a. **Olá** ni NO Ø **ó** ra iṣu
Ola be C **3s** buy yam
‘It was Ola who bought yams’

b. **Qlá àti Adé** ni [CP NO_i Ø [IP **ó** [VP t_i [VP ra iṣu]]]]

Ola and Ade be C **3s** buy yam

‘It was Ola and Ade who bought yams’

The occurrence of a non-agreeing resumptive pronoun in the subject position contrasts sharply with the fact that agreement is required between a non-subject resumptive pronoun and its antecedent (2(b)).

(2) a. **Qlá_i** ni Adé n ná lèhìn tí’ Òjó bèbè fún **un_i**

Ola be Ade PROG beat after COMP Ojo plead for him

‘Ola was the person who Ade beat after Ojo had pleaded for him

(b) [**Àiná àti Qlá**]_i ni Adé n ná lèhìn tí’ Òjó bèbè fún **won_i**

Aina and Ola be Ade PROG beat after COMP Ojo plead for **them**

‘Aina and Ola were the people who Ade beat after Ojo had pleaded for them’

(c) * [**Àiná àti Qlá**]_i ni Adé n ná lèhìn tí’ Òjó bèbè fún **un_i**

Aina and Ola be Ade PROG beat after COMP Ojo plead for **him**

The examples in (1a) – (1b) and those in (2a) – (2b) suggest that there are two types of resumptive pronouns in Yoruba: the non-agreeing resumptive pronouns (1a) and (1b) and

the agreeing resumptive pronouns (2a) – (2b).⁴⁶ Our claim in this chapter is that the non-agreeing resumptive pronoun is inserted for EPP purposes while the agreeing resumptive pronoun is a partial pronunciation of the trace of the moved phrase. We do a detailed examination of the two groups of resumptive pronouns in the sections below. I conclude that the non-agreeing resumptive pronoun is derived by null operator movement while the agreeing resumptive pronoun is derived through feature movement.

3.1 An Overview of Resumptive Constructions

I begin with a brief summary of what researchers have reported in the literature on resumptive constructions. The occurrence of the resumptive pronoun in syntax has been vigorously investigated by various researchers (including Perlmutter 1972, Borer 1984, Shlonsky 1992, Fox 1994, Pesetsky 1997, 1998, 1999, Aoun, Choueri and Hornstein 2001, Ntelitheos 2002, McCloskey and 2002, and Boeckx 2003 among others) working on wh-movement, parasitic gaps, relativization and other related phenomena. Given the enormity of the work that has been done on resumptive pronouns, it is not surprising that there are several proposals on how best to analyze them. While some researchers, (e.g. Borer 1984) argue that resumptive pronouns are not derived by movement, others, (e.g. Aoun, Choueri and Hornstein 2001) claim that some resumptive pronouns are derived by movement while some are not. Suner (1998) takes a position similar to Chomsky (1982) where resumptive pronouns are introduced or inserted at the PF. For Boeckx (2003) the occurrence of resumptive pronouns is due to a sub-extraction process, which strands the

⁴⁶ The presence of resumptive pronouns in Yoruba, as shown in this chapter and the near absence of the WCO effects in the language, as shown in the preceding chapter could be a support for Safir 2004(b)'s claim that the use of resumptive pronouns in languages alleviates the effects of WCO.

resumptive pronoun after its complement NP has been moved. Added to these diverse proposals is the fact that the distribution of resumptive pronouns is not the same across languages. For example, Safir (1986:685) notes that relative pronouns in English license resumptive pronouns in contrast to interrogative pronouns. Even in languages that allow resumptive pronouns relatively freely, there is no cross-linguistically uniform pattern. For example, while a gap and a resumptive pronoun can alternate freely in some languages (e.g. Hebrew⁴⁷ (Boeckx 2001)) a resumptive pronoun is obligatory in all non-quantificational A-bar dependencies in some other languages (e.g. Greek (Tsimpli 1999)).

Some researchers concerned specifically with African languages have also made references to the occurrences of resumptive pronouns. For Pulleyblank 1986, Carstens (1986) (on Yoruba) and Koopman and Sportiche 1986 (on Vata), the occurrence of subject resumptive pronouns is due to the necessity to avoid an ECP violation when the subject is moved to Spec CP in wh-movement and focus constructions.⁴⁸ In the analysis of Adewole (1998), the occurrence of the subject non-agreeing resumptive pronoun is traceable to the fact that clitics are allowed to have a number (feature) mismatch with

⁴⁷ Although, see Sharvit (1999:591). She reports that only a trace/gap is allowed in questions with quantifiers. A resumptive pronoun is not allowed there.

⁴⁸ Pulleyblank also notes that Yoruba allows resumptive pronouns that do not agree with their antecedent in person/number both in the subject and non-subject position in focus constructions. The impossibility of examples such as (ii) shows that non-agreeing resumptive pronouns are not allowed in non-subject positions. Only the forms such as (i) with an agreeing resumptive pronoun in non-subject position are acceptable,

- (i) Adé àti Òjọ_i ni NO_i Olú ní bínú nítorí pé mo nífẹ́ẹ̀ wọn_i
 Ade and Ojo be Olu PROG angry because that I like them
 ‘who is Ade angry because I like him?’

- (ii) * Adé àti Òjọ_i ni NO_i Olú ní bínú nítorí pé mo nífẹ́ẹ̀ **rẹ́**_i
 Ade and Ojo be Olu PROG angry because that I like him

A different explanation would be required if (ii) is indeed possible in some dialect of Yoruba.

their antecedents in some languages. In a related work; Awobuluyi (1999) notes that the item *ó* is not a pronoun either in a derived or a non-derived structure in the language.⁴⁹

⁴⁹ Awobuluyi's analysis is based on the parallelism that he draws between *ó* and the so-called High Tone Syllable (HTS). He concludes that *ó* is simply a High Tone Syllable wherever it occurs in Yoruba (i). The HTS is a sort of adverb in his analysis. That suggests that *ó* is an adverb in (ib).

- (i). (a) *Súle é ra àga*
 Sule HTS buy chair
 'Sule bought a chair'
- (b) *Súlè ni ____ ó ra àga*
 Sule be HTS buy chair
 'It was Sule who bought a chair'
- (c) *Àga ni Súlè rà ____*
 chair be Sule buy
 'It was a chair that Sule bought'

An implication of this as shown in his paper is that the subject position is similar to the object position in movement constructions in that, movements from both positions leave a gap (i b) and (ic) contrary to the more usual analysis. He also claims that the subject position is always empty whenever a third person singular pronoun is used in the language as in (ii)

- ii. *Ø ó lọ, Ø ó sǐ tètè dé*
 HTS go HTS and quickly arrive
 For 'he went and he came back quickly'

It would be good to say a few things about Awobuluyi's analysis. His analysis is (partially) compatible with our proposal in the sense that he argues that *ó* is not a pronoun in focus construction/wh-question. His conclusion about the status of *ó* in such configuration is different from mine though. Although his analysis looks promising, there are at least two reasons why it might not be optimal: one reason is empirical; the other is theoretical. For example, there is no obvious way to show that *ó* is a HTS in (iii).

- iii. *Ta ni ó ra àga*
 who be 3s buy chair
 'who bought a chair'

In the present work, we will provide a unified analysis for the occurrence of *ó* in examples such as (i) and (iii).

Secondly; whereas, the problem of homonymy might becloud our understanding of the various occurrences of the item *ó* in Yoruba, it is not convincing that there is a motivation for Yoruba to violate the Extended Projection Principle only when a third person singular pronoun is to be used in the language as in Awobuluyi's analysis (ii). We assume that *ó* is a subject third person singular pronoun in all its occurrences in (ii); it could also be an expletive as in (iii). It contributes the third person pronoun reading to

A closer look at the divergent views and claims made in the above cited works shows that none of them captures the occurrences of resumptive pronouns in Yoruba perfectly. This is not very surprising. For example, if we follow Boeckx's (2003) classification, Yoruba belongs to the exception class since (unlike many languages but like Edo and Vata) it allows subject resumptive pronouns. Therefore the central goal of this chapter is to provide an accurate account of the Yoruba resumptive constructions with emphasis on wh-movement.

I make two proposals in this chapter. First, I propose that the reason why Yoruba uses a default pronoun *ó* in the subject position is because a null operator cannot satisfy the EPP requirement of T. So, the clitic *ó* is not truly a resumptive pronoun. This suggests that the occurrence of the subject expletive pronouns in the language is another consequence of the type of movement that is used to derive wh-questions and focus constructions in the language, namely Null Operator Movement. Furthermore, we propose that constituent movement out of an island is an instance of feature movement rather than phrasal movement. This is different from several proposals in the literature (Borer 1984, Shlonsky 1992, McCloskey 1990, 2002 and Aoun, Choueri and Hornstein 2001 among others) which argue that resumptive pronouns which occur in an island cannot be derived by movement since obedience to island restrictions is a diagnostic for movement. In the present work we assume following Perlmutter (1972) and Pesetsky (1998) that the reason why resumptive pronouns occur in islands is because of the UG

the meaning of the sentence. It also satisfies the EPP requirement of T. In all, the true status of *ó* in wh-movement and focus constructions would be very clear once we situate its occurrence within the broader nature of what UG allows in languages with null operator movement.

principle that prohibits leaving a pure gap inside an island. Our feature movement approach follows Pesetsky (2000). He identifies three kinds of movement- overt phrasal movement, covert phrasal movement and feature movement. The properties of feature movement shield it from island restrictions while ensuring convergence. The fact that it is this type of movement that is used in resumptive construction is supported by the cross-linguistic fact that resumptive constructions do not obey island restrictions. If Pesetsky's (2000) is right about the different types of movement that are allowed in UG, then it is a welcome development for the syntax of resumptive constructions.

Basically I recognize four types of A-bar chain formation in this chapter. They include the three that Pesetsky identifies as in the preceding paragraph. The fourth way to form an A-bar chain is through null operator movement. This is different from the other three in that both the head and the tail of the chain is null in null operator movement. I will lay emphasis on only two out of the four ways to form an A-bar chain as this chapter develops. These are null operator movement and feature movement. Out of the two, null operator movement is preferred in Yoruba.

This chapter is organized as follows. Section two illustrates the various occurrences of the resumptive pronouns in Yoruba. In section three, I discuss subject resumptive pronouns with particular reference to Yoruba. In section four, I lay out my proposal on the occurrences of resumptive pronouns in islands (following Pesetsky 2000). In section five, I examine the agreeing resumptive pronouns in Yoruba. Section six offers some discussion on some alternative theory that has been proposed in the literature (Boeckx 2003). Section seven is the conclusion.

3.2. The Distribution of Resumptive Pronouns in Yoruba

The first thing to note is that a resumptive pronoun does not alternate with a gap in Yoruba.⁵⁰ A resumptive pronoun is disallowed wherever a gap is possible and vice versa. For example, gaps are allowed when a phrase is moved from an object position as in the following examples. In all these cases, a resumptive pronoun is excluded. This is why the (b) and (d) examples are unacceptable in (3) – (6).

(3) Object of Verb

- a. Kí ni Àḍíó rà ____ (wh-question)
 what be Adio buy
 ‘what did Adio buy’
- b. * Kí ni Àḍíó rà á
 what be Adio buy it
- c. Àga ni Àḍíó rà ____ (focus construction)
 Chair be Adio buy
 ‘It was a chair that Adio bought’
- d. * Àga ni Àḍíó rà á
 Chair be Adio buy it

⁵⁰ This suggests that Yoruba resumptive constructions are different from Hebrew’s where resumptive pronouns could alternate with gaps (Sharvit 1999, Boeckx 2003)

(4) Shared object of Serial Verbs

a. Kí ni Olú rà ____ jẹ

what be Olu buy eat

‘what did Olu buy and eat’

b. *Kí ni Olú rà á jẹ

what be Olu buy it eat

c. Ewúré ni Olú rà ____ jẹ

goat be Olu buy eat

‘It was a goat that Olu bought, killed and ate’

d. *Ewúré ni Olú rà á jẹ

goat be Olu buy it eat

(5) Object of a Verb within a CP Complement

a. Kí ni Olú sọ pé Adé rà _____

what be Olu say that Ade buy

‘what did Olu say that Ade buy?’

- b. * Kí ni Olú sọ pé Adé rà a
 what be Olu say that Ade buy it
- c. Ewúré ni Olú sọ pé Adé rà ____
 goat be Olu say that Ade buy
 ‘It was a goat that Olu said that Ade bought’
- d. * Ewúré ni Olú sọ pé Adé rà a
 goat be Olu say that Ade buy it

(6) Object of Simple Preposition

- a. Kí ni Olú da omi sí ____
 what be Olu pour water to
 ‘what did Olu pour water into?’
- b. *Kí ni Olú da omi sí i
 what be Olu pour water to it
- c. Ẹ̀rẹ̀sì ni Olú da omi sí ____
 rice be Olu pour water to
 ‘It was rice that Olu poured water into’

- d. * Ẹ̀rẹ̀ṣ̣i ni Olú da omi sí i
 rice be Olu pour water to it

In contrast with the examples in (3) – (6), there are contexts in which a gap is excluded when a phrase is moved in Yoruba. In such cases, a resumptive pronoun is required. It is obligatory wherever it occurs as in the examples given below. Each of the sentences would be unacceptable if the resumptive pronoun was not present. In general, the Yoruba resumptive pronouns are seen in subject positions and inside the structures that Ross (1967) identifies as islands. Their occurrences are not dependent on any types of complementizers (cf. McCloskey 2002 for Irish). The following examples can be used to illustrate the range of occurrences of resumptive pronouns in Yoruba.

(7) Subjects

- a. Ta_i ni NO_i Ø ó t_i ra iṣu
 who be C he buy yam
 ‘who bought yams’

- b.. * Ta_i ni NO_i Ø ____i ra iṣu
 who be C buy yam

(8) Oblique object (for example object of complex preposition⁵¹)

a. Adé_i ni NO_i Ø [IP a sòrò nípa **rè_i**]

Ade be C we talk about him

‘Ade was the person who we talked about’

b. *Adé_i ni NO_i Ø [IP a sòrò nípa _i]

Ade be C we talk about

(9) Complex Noun Phrase⁵²

base: [IP [NP Ọmọbìnrin_i tí ó_i rí Olú] wá ní àná.]

girl C she see Olu come at yesterday

‘The girl who saw Olu came to this place yesterday’

a. [PredP **Olú_i** ni NO_i Ø [IP [NP ọmọbìnrin_j NO_j tí ó_j rí **ì_i**] wá ní àná]]

Olu be C girl C she see him come at yesterday

‘It was Olu whom the girl that saw him came here yesterday’

⁵¹ The preposition nípa is probably derived from a preposition ní ‘at’ and a nominal item *ipa* ‘path’

⁵² Unlike Chinese (Hang 1984), Yoruba also allows an extraction from a complex NP in the object position.

- b. * [_{PredP} **Olú_i** ni NO_i Ø [_{IP} [_{NP} ọmọbìnrin_j NO_j tí ó_j rí _____i] wá ní ànà]]
- Olu be C girl C she see come at yesterday

(10) Co-ordinate Structure

- a. **Olú_j** ni NO_j Ø [Òjó àti **òun_j / è_j**] rí Şadé
- Olu be C Ojo and him see Sade
- ‘It was Olu that Ojo and him saw Sade’

- b. * **Olú_j** ni **NO_j** Ø [Òjó àti _____j] rí Şadé
- Olu be C Ojo and see Sade

(11) Adjunct Island.⁵³

- a. **Ta_i** ni Adé bínú kúrò nílé [nítorí pé mo fẹ̀ràn **rẹ̀_i**]
- who be Ade angry leave from-house because that I meet him
- ‘Who did Ade leave home in annoyance because I liked him’

- b. ?? Ta_i ni Adé bínú kúrò nílé [nítorí pé mo fẹ̀ran _____i]
- who be Ade angry leave from-house because that I meet
- * ‘Who did Ade leave home in annoyance because I liked?’

⁵³ I think that a resumptive pronoun is somewhat optional here.

(12) Wh-Island

- a. [Olú àti Adé]_i ni mo bèèrè pé kí ni wọn_i rà
 Olu and Ade be I ask C what they buy
 ‘It was Olu and Ade that I asked what they bought’

- b. *[Olú àti Adé]_i ni mo bèèrè pé kí ni ó t_i rà
 Olu and Ade be I ask C what 3s buy

In each of the pairs of the examples given in (7) through (12), (a) is good while (b), which includes a gap, is excluded. In general, the data can be grouped into two sets. The first is a singleton set with only example (7). Here, the resumptive pronoun occurs in the subject position of a tensed clause (and is not inside an island). The examples in (8) through (12) are in the second group; the resumptive pronouns occur in non-subject positions. For each member of this group, a resumptive pronoun occurs in an island. Interestingly, the resumptive pronoun that occurs inside an island is required to agree in Phi- features with the null operator and the c-commanding external antecedent (13b). In contrast, a “resumptive” pronoun that occurs in a subject position is not required to agree in Phi- features with the external antecedent (14b).

- (13) a. [Àinà àti Olá]_i ni Adé n ná lèhìn tí Òjò bèbè fún wọn_i
Aina and Ola be Ade PROG beat after COMP Ojo plead for **them**
 ‘Aina and Ola were the people who Ade beat after Ojo had pleaded for them’

b. * [Àìná àti Qlá]_i ni Adé ní nà lèhìn tí' Òjó bèbè fún un_i

Aina and Ola be Ade PROG beat after COMP Ojo plead for **him**

(14) a. **Qlá** ni NO Ø **ó** ra iṣu

Qla be C **he** buy yam

'It was Qla who bought yams'

(b) **Qlá àti Adé** ni NO Ø **ó** ra iṣu

Qla and Ade be C **he** buy yam

'It was Qla and Ade who bought yams'

First, we discuss the occurrence of the non-agreeing resumptive pronoun in the subject position in the next section. We propose that the non-agreeing resumptive pronoun is derived by external merge rather than by move.

3.3. The Non-agreeing Resumptive Pronoun

Languages use different strategies in subject extraction: non-agreement, restrictions on the form of complementizer of the clause containing the subject (e.g. that-t effect in English), clausal pied-piping, and resumption (see Boeckx 2003, Richards 1997). We would say that Yoruba uses the last option: resumption. Some of the other languages, which use subject resumptive pronouns include Swedish (Engdahl 1985) and Vata (Koopman and Sportiche (1986)), which use resumptive pronouns only in the

subject position.⁵⁴ As noted above, a resumptive pronoun is obligatory whenever a subject (wh-)phrase is moved in Yoruba.

- (15) a. Ta_i ni NO_i \emptyset \acute{o} t_i ra $\grave{i}w\acute{e}$
 who be C 3s buy book
 ‘who bought the books’
- b. $[Ad\acute{e} \text{ ati } Ol\acute{u}]_i$ ni NO_i \emptyset \acute{o} t_i ra $\grave{i}w\acute{e}$
 Ade and Olu be C 3s buy book
 ‘It was Ade and Olu who bought books’

A pure gap is impossible in subject extraction in Yoruba. Thus the examples in (16) are excluded. (This is similar to what Shlonsky (1992) reports for Palestinian Arabic)

- (16) a. $*Ta_i$ ni NO_i \emptyset $___i$ ra $\grave{i}w\acute{e}$
 who be buy book
- b. $*[Ad\acute{e} \text{ and } Ol\acute{u}]_i$ ni NO_i \emptyset $___i$ ra $\grave{i}w\acute{e}$
 Ade and Olu be C buy book
 ‘Ade and Olu are the people who bought books’

⁵⁴ There are also reports though that most languages prohibit subject resumptive pronouns. Such languages include Irish, Welsh and Hebrew (Boeckx (2003)).

The fact that the examples in (15) are acceptable while those in (16) are not shows that Yoruba is not like German where it has been reported that resumptive pronouns are never more acceptable than gaps (Alexopoulou and Keller 2003). A comparison of the person and number features of the resumptive pronouns in (14(a)) with (124(b)) shows that Phi-feature agreement is not required between the subject resumptive pronoun and the null operator. In (14(a)), the number feature of the resumptive pronoun is singular as is the number feature of the null operator. In (14(b)) however, the number feature of the resumptive pronoun is singular while the number feature of the null operator is plural. This is a feature mismatch. This contrasts with the occurrences of the non-subject resumptive pronouns, which are strictly required to agree in Phi-features with the external antecedent, which R-binds the null operator (in the sense of Safir (1986)). An example of a resumptive pronoun that is required to agree in Phi-features with its external antecedent is given in (13) above.

Two questions might be asked on the paradigm in (15) and (16):

- (17) Why is the subject resumptive pronoun required in Yoruba (in clear contrast with other languages)? (Yusuf 1995:74)
- (18) Why can (person/number) agreement fail between the resumptive pronoun and the null operator in (15b)?

We attend to the first question first. Here, we propose that the reason why a gap is not allowed in the subject position is derived from the type of movement that has taken place in the structure. As we have seen in the last chapter, Yoruba *wh*-questions are formed through null operator movement. It is like moving an element without phonology overtly. This is compatible with the assumption that all movements are overt. Like movement in general, subject null operator movement is triggered by two features: the EPP requirement of the attracting probe and the corresponding feature that needs to be checked on the goal (Chomsky 2000). An A-bar chain is formed when a null operator moves to Spec CP. This has some consequences for syntax. For example, it has been known since Stowell (1988) and subsequent related work that null operator movement behaves in a way that is different from overt operator movement. Null operator extractions from the subject position yield unacceptable gaps (19) (for example, in “*as clause*” (Stowell 1988)). The unacceptable example in (19) contrasts with (21) where the null operator moves from an object position (Stowell 1988). In the present system, we can conclude that the reason (19) is excluded is because the null operator cannot satisfy the EPP requirement of the T. Thus, (19) contrasts with (20) where an overt *wh*-phrase is moved.

(19) *John owns the gun, as — shows/indicates that he is guilty

(20) John owns the gun, which shows/indicates that he is guilty

(21) Bill is a liar, as Mary already knows —

The unacceptability of sentences such as (19) led Stowell (1988) to the generalization in (22).

(22) A null CP operator must be governed by a lexical [+V] head at D-structure.

(Stowell 1988:10)

This suggests that what is missing in the examples in (16) and (19) is a kind of government for the subject trace of the null operator. This is a sort of ECP requirement.⁵⁵

While examining related data, Browning (1987:255) suggests that a null operator cannot be a proper antecedent governor.⁵⁶ In related but somewhat different work, Rizzi (1990:60) concludes that the reason why some languages use resumptive pronoun in a subject position is because of the requirement in (23). Unlike the accounts given by Stowell and Browning, Rizzi does not link the unacceptability of examples such as (15) and (19) above (in which the presence of an illicit trace in the subject position yields unacceptability) to any properties of the null operator movement.

23. A trace must be head governed.

(Rizzi 1990:60)

⁵⁵ Chomsky (1981:250) defines the Empty Category Principle (ECP) as in (i).

(i) The Empty Category Principle (ECP):
[_α e] must be properly governed

⁵⁶ She supposes though that the sentences with a subject trace of an infinitival or ECM clause would be less deviant than those with a subject trace in a complementizerless tensed clause. This is because, according to her (1987:276), tense plays an important role in the acceptability of sentences involving the trace of a null operator.

For languages that use subject resumptive pronouns, he claims that the INFL is too low to head govern the subject trace in the relevant way while the COMP is inert for government in such languages.

A combination of the proposals made by Stowell (1988), Browning (1987) and Rizzi (1990) points towards an ECP analysis for subject resumptive pronouns.⁵⁷ If they are right, their assumptions confirm the proposal of Carstens (1986) on why Yoruba uses the subject resumptive pronoun.

Carstens (1986) and Pulleyblank (1986) argue that the reason why Yoruba must use a subject resumptive pronoun is because antecedent government is not available for the trace of the moved element. Koopman and Sportiche (1986) also gave an ECP analysis for corresponding data in Vata. These proposals looked very attractive given our understanding of the UG then. However, the reasons why antecedent government was unavailable in the subject position remained obscure in those analyses. (See section 3.2.3 for more on why the ECP account is not adequate.)

In the present work, we assume that the unacceptability of the examples in (19) derives from the type of movement that takes place in the example: null operator movement. The null operator cannot be attracted to Spec TP to satisfy the EPP.⁵⁸

⁵⁷ The ECP has recently been reanalyzed in term of *the freezing principle* in Rizzi (2004:11)

- (i) The Freezing Principle:
A phrase meeting a criterion is frozen in place.

The idea is that the subject position is filled by a noun phrase in order to satisfy the subject criterion (that is, the EPP). Thus, the NP cannot be moved out of the subject position. (I think that this assumption would not account for the reported cases of ECP violations in non-subject positions.)

⁵⁸ This fact could be related to what has been reported for Icelandic in which phrases with no phonological contents cannot satisfy the EPP (Holmberg (2000) and Holmberg and Hroarsdottir (2002))

It has been suggested in the literature (Chomsky 1995 among many others) that certain functional heads - notably T - require a specifier (/subject). This is known as the EPP requirement. Put another way, EPP is the structural requirement that certain configurations should have a subject (Lasnik 2002). Suppose then that a null operator cannot satisfy the EPP requirement of T. Languages that have another way of doing subject extraction could move the *wh*-phrase overtly as in (20) while the languages like Yoruba, which has only null operator movement, uses an expletive pronoun to satisfy the EPP.⁵⁹ This assumption follows from the generalization in (24).⁶⁰

⁵⁹ We could then ask ourselves for the reasons why English does not use a resumptive pronoun to rescue (19) and similar examples. Here is a possible reason. Substantive economy condition (Hornstein 2001) prefers derivations with the least effort. For example, a gap is more economical than a resumptive pronoun. Thus, the availability of the derivations such as the one in (20) blocks any repair strategy to save (19), (although it is not obvious that (19) and (20) have the same numeration). It is like the blocking principle that has been proposed for the morphology of the irregular forms in English language for example. Another way to account for the absence of subject resumptive pronouns in the English examples is to assume that they actually involve the movement of an overt operator, which is deleted before spell-out (Mark Baker, personal communication). Under this assumption, the trace of the overt operator is able to satisfy the EPP requirement of T such that there is no need to insert an expletive pronoun. Consider the following examples. (ii) is probably derived from (i). (i) is clearly bad if an expletive is inserted into the subject position

- (i) The book which John says ___ fell from the shelf is 'Logical Form'
- (ii) The book ___ /**NO** John says ___ fell from the shelf is 'Logical Form'
- (iii) *The book ___ John says **it** fell from the shelf is 'Logical Form'

⁶⁰ We must note though that the true status of null operator with respect to EPP satisfaction in English is not fully resolved in this work. I assume following Stowell 1988, Browning (1987) among others that a null operator is generally deviant in the subject position in English.

- i. a. *John owns the gun, as — shows/indicates that he is guilty
- b. John owns the gun, which shows/indicates that he is guilty

However, it has been suggested to me that it is not generally true that “as clauses” in which a null operator potentially moves through Spec TP is bad in English (Chris Collins, personal communication). For example, the following example is acceptable. So, the unacceptability of (i) might have some other explanation other than the inability of a null operator to satisfy the EPP of T.

- ii. John owns a gun , as is well known

So, the unacceptability of (i) might have some other explanation other than the inability of a null operator to satisfy the EPP of T. We assume though that our analysis is basically on the right track. For example, the inability of a null operator to satisfy the EPP has also been independently motivated for Danish, (as in

24. A null operator cannot satisfy the EPP.

The nature of (24) becomes clearer in the light of the Minimalist Program. Movement happens only as a last resort. A goal α can be attracted by a probe β if and only if moving α would lead to the satisfaction of either some morphological requirement of α or β which could not be otherwise satisfied. Suppose concretely that the feature that the probe **T** requires in a potential goal is the D-feature as proposed in Chomsky (1995: 232).

Thus, the Extended Projection Principle (EPP) plausibly reduces
to a strong D-feature of I ...

(Chomsky 1995: 232)

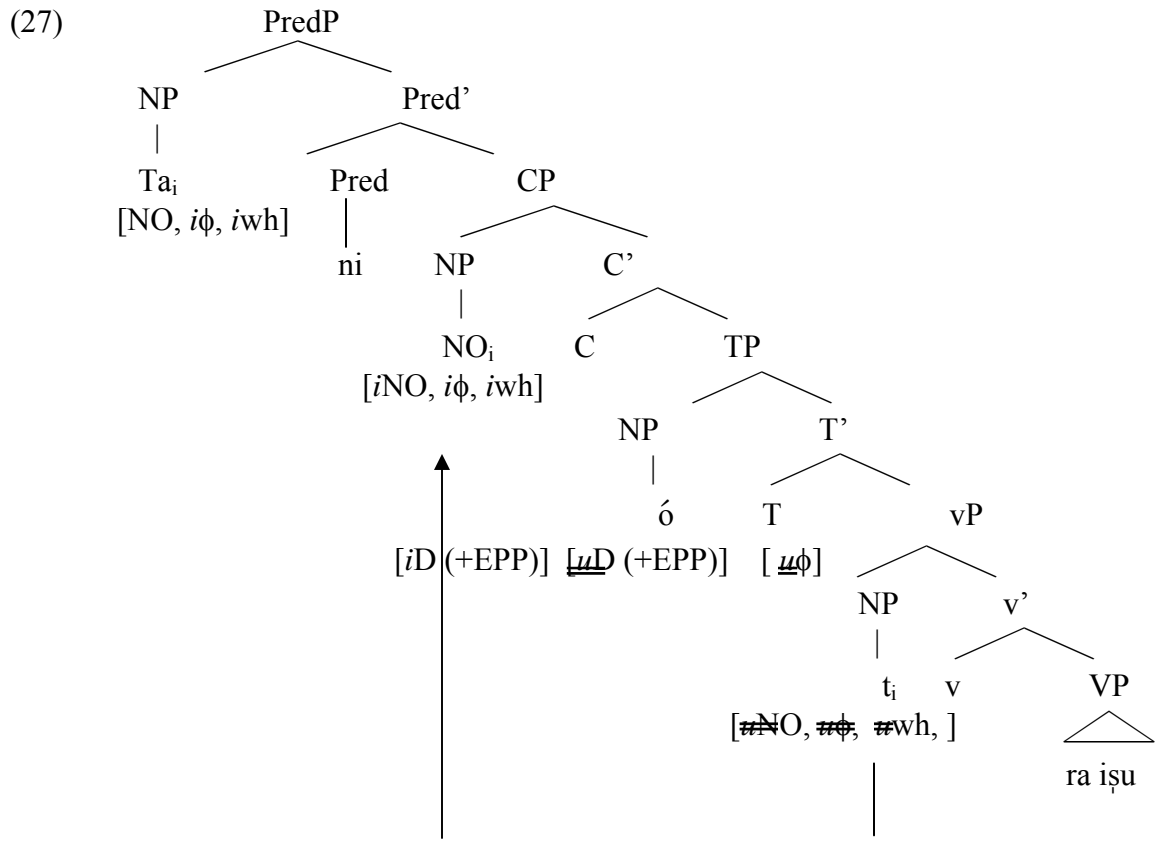
Suppose further that a null operator does not have a D-feature.⁶¹ It follows that, **T** cannot attract a null operator to the Spec TP because such movement will violate last resort, no morphological requirements is being satisfied. We conclude then that (24) is derived from the UG principle in (25) plus Last Resort.

25. A null operator does not have a D-feature.

Mikkelsen 2000), Japanese (as in Takahashi 2001), and Icelandic (as in Holmberg 2000 and Holmberg and Hroarsdottir 2002),

⁶¹ Note though that according to Chomsky (1998), the EPP is not to be stated as a D-feature (Thanks to Norbert Hornstein for bringing this to my notice). Even if his new position is right that the EPP is not a D-feature, the main claim of this proposal will still be valid for whatever feature is used to capture the EPP requirements. Our conclusion is that such feature is not present in a null operator.

One of the two possible ways to derive (15) is to assume that Spec TP is indeed an intermediate landing site for the null operator on its way from Spec vP to Spec CP. Under this possibility, we could say that the reason why there is a feature mismatch between the resumptive pronoun and the null operator as in (15(b)) is because of a partial deletion of the trace of the null operator, such that only the features that are minimally needed for convergence are preserved in the Spec TP in (15(b)). The base generated external antecedent [Ade ati Olu] R-binds the null operator (in the sense of Safir 1986). Supposed that R-binding requires i(dentity)-binding (that is, if α binds β , then α and β must share all features) then, we could say that the null operator does not i-bind the resumptive pronoun, since their features do not match perfectly. Based on this hypothesis, the derivation of (15(a) and (b)) would proceed as in (26). Here and in the subsequent examples and structures, OP = operator feature, ϕ -feature = number and person, FOC = focus feature, EPP = Extended Projected Principle, [u] = uninterpretable, [i] = interpretable, wh = wh-phrase feature, sg./singular = singular, pl./plural = plural, and 3rd = third person.



The two derivations in (26) and (27) both seem to be plausible. However there is no obvious language internal evidence in support of the derivation in (26). In contrast, it is possible to find some language internal support and probably some cross-linguistic support for the derivation in (27). We turn to this in the next subsection.

3.3.2.1 Language Internal Support for Hypothesis II

3.3.2.1.1 Expletive Constructions

Support for the expletive pronoun insertion advocated in hypothesis II can be found by comparing it with uncontroversial expletive constructions in the language. In

(27), the insertion of an expletive pronoun is more like what is attested in the regular expletive constructions in the language. Consider (28) which involves a “raising” verb *jọ* ‘seem’.

(28) Ó jọ pé Olú ti ní ìyàwó

It resemble that Olu ASP have wife

‘It appears that Olu is married’

In (28), the expletive pronoun *ó* is inserted to satisfy the EPP requirement of T. This is done by merge rather than by move. The expletive pronoun performs the same function in the following examples as in (28).

(29) Ó jọ pé ebi ní pa Adé

it resemble that hunger PROG. kill Ade

‘It seems that Ade is hungry’

(30) Ó jọ pé òjò ní rọ níta

it resemble that rain PROG. soft at-outside

‘It seems to be raining outside’

Note that the expletive pronoun seen in (28) – (30) is identical to the so-called “resumptive” pronoun in (31). On this hypothesis, (31) is derived by merge after the null operator has skipped the Spec TP on its way to Spec CP.

- (31) Ta_i ni NO_i ó t_i ra iṣu
 who be 3s buy yam
 ‘who bought yams’

This expletive insertion strategy explains why the element in SPEC TP does not agree in ϕ features (person and number) with the null operator in SPEC CP, which is R-bound by the c-commanding external antecedent as in (32).

- (32) [_{PredP} [Olú ati Adé]_i ni [_{CP}NO_i [_{IP} ó t_i ta iṣu]]]
 [_{iFOC}, $i\phi$ (3rd, Plural)] [_{iFOC}, $i\phi$ (3rd, Plural)] [3rd, Singular] [_{iFOC}, $i\phi$ (3rd, Plural)]
 ‘It was Olu and Ade who sold yams’

Similarly, all cases in which the subject resumptive pronoun does not agree in the person feature with the null operator as in (33) through (36) can also be explained with the expletive insertion strategy.

- (33) Èmi_i ni NO_i Ø ó_i ra àpò **1st Person Antecedent**
 I be 3s buy bag
 ‘I was the one who bought a bag’

- (34) a. Àwa_i ni NO_i Ø ó_i ra àpò
 we be 3s buy bag
 ‘We were the people who bought a bag’

- b. *Àwa_i ni NO_i Ø wón_i ra àpò
 we be they buy bag
 for ‘We were the people who bought a bag’

- (35) Ẹwọ_i ni NO_i Ø ó_i ra àpò **2nd Person Antecedent**
 you be 3s buy bag
 ‘it was you who bought a bag’

- (36) a. Ẹyin_i ni NO_i Ø ó_i ra àpò
 you (pl.) be 3s buy bag
 ‘You were the ones who bought a bag’

- (36) b. *Ẹyin_i ni NO_i Ø wón_i ra àpò
 you (pl.) be they buy bag
 for ‘You were the ones who bought a bag’

Note that the uncontroversial expletive **ó** that is seen in expletive constructions is also invariant and does not depend on (for example) the person /number feature of the embedded subject:

(37) **Ó** jọ pé Olú ní owó lówó

it resemble that Olu have money in-hand

‘It seems that Olu is rich’

(38) **Ó** jọ pé Olú àti Adé ni owó lówó

it resemble that Olu and Ade have money in-hand

‘It seems that Olu and Ade are rich’

The sentence becomes unacceptable if the form of **ó** changes to agree with the number feature of the embedded subject.

(39) * **Wón** jọ pé Olú àti Adé ní owó lówó

they resemble that Olu and Ade have money in-hand

for:’ it appears that Olu and Ade are rich’

This is parallel to the expletive **ó** that is found in the subject positions in focus constructions and local subject wh-movement constructions.

Note also that the fact that the examples in (34b) and (36b) are ungrammatical is an indication that the second alternative (partial feature deletion approach) cannot be the right hypothesis for Yoruba. For example, each of the examples can be derived by deleting the person feature of the moved phrase from the tail of its chain while leaving the number feature intact.

Further language internal support for the expletive insertion hypothesis can be found if we explore the expletive constructions in the language a little more. Therefore, in the next sub-section, I will discuss copy-raising constructions in Yoruba.

3.3.2.1.2. Copy Raising

The example in (40) is derived by raising [Ade ati Olu] from the Spec TP of the embedded clause into the Spec TP of the higher clause just as (41) and (42) are derived. These come from the same underlying source as the regular expletive constructions exemplified in the preceding subsection. The only difference is that the subject for the higher clause is derived via movement instead of by external merge as in the basic expletive construction in (37).⁶² The embedded NP raises to the matrix clause to satisfy the EPP requirement of the higher clause.

⁶² For example, the basic expletive construction in (i) is derivationally related to the copy raising example in (ii)

- (i) ó jọ pé òjò ń rọ níta (derived sentence)
 3sg resemble that rain PROG. fall outside
 ‘It appears that rain is falling outside’
- (ii) òjò_i jọ pé ó_i ń rọ níta (derived sentence)
 rain resemble that 3sg PROG. fall outside
 ‘Rain appears to be falling outside’

- (40) [Adé àti Olú]_i jọ pé wọ́n_i ní owó
 Ade and Olu resemble that they have money
 ‘Ade and Olu seem to be rich’

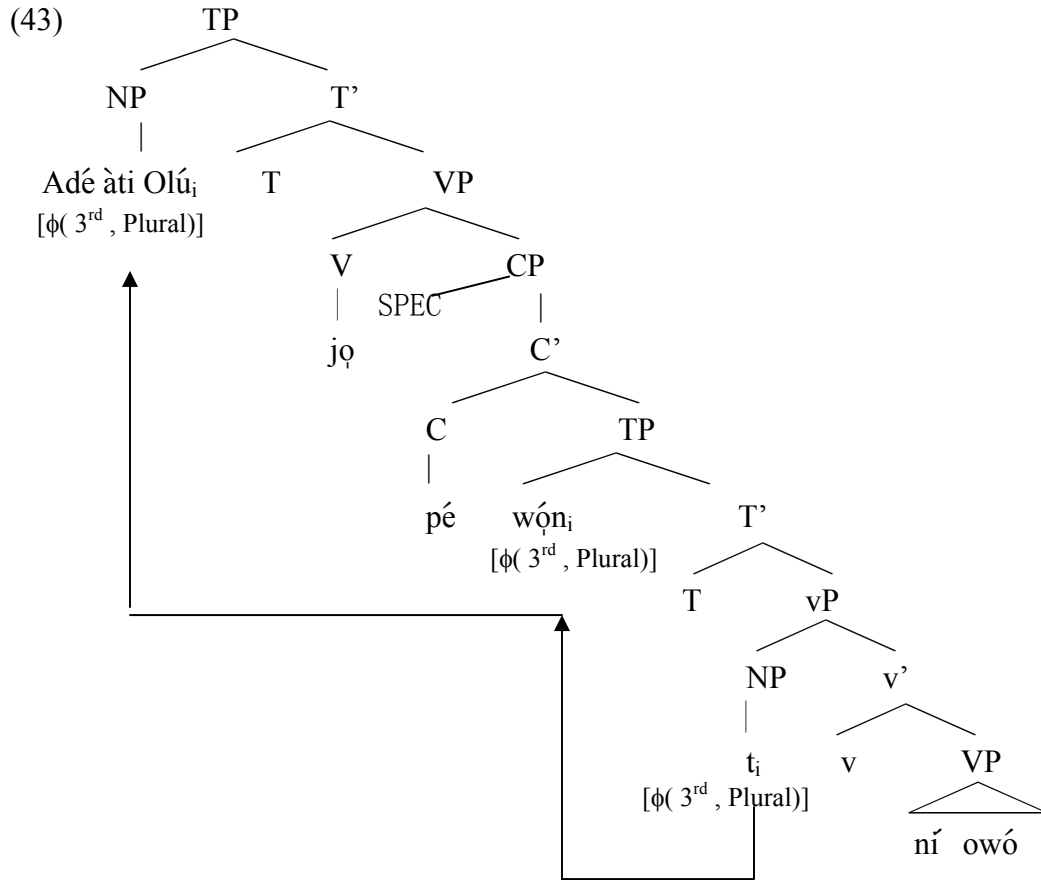
- (41) òjò_i jọ pé ó_i n rọ níta
 rain resemble that 3s PROG. fall outside
 ‘Rain appears to be falling outside’

- (42) ebi jọ pé ó n pa Adé ní Àárọ
 hunger resemble that 3s PROG. kill Ade at morning
 ‘Hunger seems to be affecting Ade in the morning’

In (40), the NP: [Adé àti Olú] undergoes A-movement from the Spec vP, through the Spec TP of the lower clause to the Spec TP of the higher clause for EPP purposes. The derivation of (40) would proceed as in (43). The same process derives (41) and (42). The latter are interesting because they are idiomatic. For example, the NP *ebi* ‘hunger’ that is raised in (42) does not refer to the physical appearance of an object.

It is important to note that when an NP is raised from the subject position as in (43) Phi-feature agreement is required between the resumptive pronoun and its c-commanding antecedent. This is because the NP actually lands at the Spec TP of the lower clause to satisfy the EPP requirement of T. Agreement is thus required between

the resumptive pronoun and its antecedent. This explains why (44) in which the resumptive pronoun does not agree in Phi-feature with its antecedent is excluded.



Suppose that partial deletion existed in Yoruba as implied by hypothesis I, then it could apply to the middle link of the A-chain in (43), to give (44).

- (44) * [Adé àti Olú]_i jọ pé ó_i t_i ní owó
- [φ(3rd , Plural)] [φ(3rd , Plural)] [φ(3rd , Plural)]
- Ade and Olu resemble that they have money

for: 'Ade and Olu seem to be rich'

But (44) is bad. This shows that the language does not allow feature deletion. In contrast, suppose null operator cannot check EPP features (as in hypothesis II). That does not apply to Raising – no null operator. So, this theory predicts correctly that the two subject pronouns will be different. We conclude therefore, that the expletive pronoun is inserted for EPP purposes in (27). This is because the null operator cannot be attracted to Spec TP to satisfy the EPP requirement of T. Furthermore, an expletive is not inserted in (45) – it is not even in the numeration - since the trace of the moved NP can satisfy the EPP requirement of T. This means that the null operator does not i-bind the expletive subject in the derivation in (27) above, otherwise feature mismatch would not have been allowed.

The phenomenon that we have described with the examples in (40) through (42) involves a type of argument movement that is known as copy-raising in the literature (Roger 1974). Copy-raising is different from the regular raising constructions in some non-trivial ways. The moved NP in the regular raising construction moves from a thematic position that does not have case into a non-thematic position which has case (see (46). In contrast, the NP that moves in copy-raising constructions moves from Spec vP into a argument position that has case (that is, lower Spec TP) before it moves to the matrix Spec TP (that is, higher Spec TP) (47).

(46) Peter seems to be in trouble

(47) Peter seems like he is in trouble

The name “copy-raising” is derived from the fact that the moved NP in a copy-raising construction leaves a pronominal copy in its extraction site. It must be the closest

possible NP that could be moved in line with the predictions of the MLC. Copy-raising is characterized in general terms in (48).

(48) **Copy Raising:**

a construction in which some constituent appears in a non-thematic position with it's A-position occupied by a pronominal copy.

(cf. Postdam and Runner 2001, following Roger 1974)

Copy-raising is not peculiar to Yoruba and English. It has been reported in many other languages. This suggests that it is not an uncommon phenomenon in languages. I give examples from two additional languages, Igbo and Haitian Creole, below.

(49) **Ézè_i dɪ m kà O_i hũ-rũ Adá** **Igbo** (Ura 1998)

Eze seems to-me COMP he see-ASP Ada

‘Eze seems to me like he saw Ada’

(50) **Jan sanble li pati** **Haitian Creole** Deprez (1992)

John seems he leaves

For all the four languages exemplified here, the moving NP raises from the Spec TP of a tensed clause. This is clearly at odds with the **Tensed S Condition** (Chomsky 1973) as redefined in Postdam and Runner (2001), which bars Argument movement from a tensed clause.

(51) **Tensed S Condition**

A-movement is impossible from a tensed clause.

(Postdam and Runner 2001)

There is no doubt that the Tensed S condition is not respected in copy-raising. Simply put, the construction shows that the effect of the Tensed S Condition is not a principle of UG to say the least.

We rely on Last Resort in our analysis of why a null operator cannot be attracted to Spec TP for the purpose of satisfying the EPP requirement of T. This raises the question of what is the trigger for the A-movement of the embedded NP from a tensed clause in copy-raising constructions. Indeed the possibility of violating last resort is the main reason why Lu (2003) posit a base generated account for copy-raising instead of the A-movement account given in Postdam and Runner (2001). I assume that copy-raising does not violate Last Resort.⁶³ Let me explain this briefly. In the regular raising construction (46), the moved NP has a theta role but it has to move because it needs a case. At the same time, the T(ense) of the higher clause needs to satisfy its EPP requirement. Thus, two purposes are fulfilled in the regular raising constructions: the moving NP gets case and the attracting T satisfies its EPP requirement. This is like what has been styled as the “Enlightened Self Interest” in Lasnik’s work (see Lasnik 1999). This is somewhat different from what happens in copy-raising constructions. The moved

⁶³ See an alternative analysis in Ura 1998. According to Ura, the raised NP *Eze* in the Igbo example reproduced in the text checks only the EPP feature in Spec IP of the embedded sentence. It checks its case feature in the matrix Spec IP. This does not explain what happens to the nominative case of the embedded sentence though.

NP already has case so there is no need for it to move for case purposes, as there is in the regular raising constructions. However, the higher T(ense) needs to satisfy its EPP requirement (47a) and the closest goal that it could attract for this purpose is the embedded NP subject. Thus the EPP requirement of the higher T is satisfied in copy-raising (47b). This is like what has been referred to as “Attract” in the literature (Chomsky 1995). The fact that a single NP is attracted to satisfy the EPP requirement of the embedded T and the higher T fits with the fact that the D-feature of a DP is interpretable. Thus it can be used more than once to check the relevant feature of the attracting probe. If this is right, it answers a question about what makes the embedded subject NP eligible for movement even though it has checked its case feature in the lower clause.

Another way of stating this theoretical concern with respect to copy-raising is by considering the nature of the A-chain that it forms which appears to have more than one case.⁶⁴ Deprez (1992) attempts to address this issue by claiming that the pronominal copy that the moved NP is said to leave in the extraction site is not part of the A-chain. According to her analysis, *Jan* is base generated in (an embedded) Spec₂ as the subject of something similar to a small clause. She notes that the pronominal copy *li* is a predicate variable that transforms the small clause into a one place predicate which assigns its external theta role to *Jan*. Thus the embedded tensed clause is the predicate of *Jan*. *Jan* receives theta in its base position but it has to raise to Spec TP of the higher clause for

⁶⁴ In this dissertation, we assume that this is not a problem. It is possible for example that a nominative case can be checked more than once.

case. This is much like what happens in regular raising constructions. In that sense (53) is derived from (52).

- (52) [[e] sanble [_{SC} Jan [_{PRED} li pati]]]
 seems John he leaves

- (53) [Jan_i sanble [_{SC} t_i [_{PRED} li pati]]]
 John seems he leaves

This looks like a promising account. However, Deprez's account does not extend to the Yoruba facts described above. For example it is impossible to reconcile the small clause account for copy-raising with the fact that the lower clause in Yoruba could have a different tense from the matrix clause (55). This is not expected if it were a small clause.

- (55) [Adé àti Olú]_i jọ pé wón_i yóò ní owó
 Ade and Olu resemble that they will have money
 'Ade and Olu seem like they will become rich'

The non-agreeing resumptive pronoun is not allowed in such configuration:

- (56) * [Adé ati Olú]_i jọ pé ó_i yóò ní owó
 Ade and Olu resemble that 3s will have money

Thus we conclude that the pronominal copy is part of the A-chain formed in copy-raising. It is a realization of the nominative case of the moved NP. So, real resumptive pronouns completely agree with their antecedents in Phi-features. This implies that, the “expletive” pronoun found in instances of subject extraction in Yoruba is not a true resumptive.

3.3.2.2. Cross-linguistic Support for Hypothesis II

In this subsection, we will provide some cross-linguistic evidence to show that a null operator lacks a D-feature in all languages. This would in turn support our hypothesis II, which seeks to explain the occurrence of the subject expletive pronoun as an item that is necessarily inserted for EPP purposes. We will provide a few examples from two unrelated languages: English and Edo. We start with English language.

As we noted above, it has been reported in English for example that null operator movement from the subject position is illicit. This explains why the (b) examples in the following are bad.

- (57) John owns the gun, which shows/indicates that he is guilty.
- (58) *John owns the gun, as — shows/indicates that he is guilty

Browning (1987) notes that a null operator is (probably) a PRO in an A-bar position. If this is correct, it predicts that the unacceptability of the example in which a null operator is moved from the subject position in English (58) could be replicated for PRO in A-position. This prediction is borne out. Baltin (1995) reports that attracting PRO to Spec TP for EPP purposes is also deficient - in control related sentences- in English.

- (59) The children tried to PRO all stay up late
 (60) * The children tried all PRO to stay up late

This confirms that there is a D-feature deficiency in PRO, alias the null operator.

Having shown that the inability of a null operator to satisfy the EPP requirement of T is not peculiar to Yoruba, the remaining issue is to show that the insertion of an expletive pronoun in cases when a null operator skips the Spec TP is not peculiar to Yoruba. We find supporting data in Edo, a Benue Congo language (Uyi Stewart, personal communication). Edo patterns exactly like Yoruba in the relevant respects.

- (62) ***Ozo** ore ____ gbe Uyi ewe
 Ozo be kill Uyi goat

- (63) **Ozo** ore ϕ gbe Uyi ewe
 Ozo be 3s kill Uyi goat
 ‘It was Ozo who killed Uyi’s goat’

- (64) **Ozo kere Osagie** ore ϕ gbe Uyi ewe
 Ozo and Osagie be 3s kill Uyi goat
 ‘It was Ozo and Osagie who killed Uyi’s goat’

The example in (63) suggests that the inserted expletive pronoun: ϕ is not required to agree in Phi-features with the null operator nor with the base generated NP that R-binds

the null operator. Indeed, the expletive pronoun that is used for EPP purposes in (63) and (64) is the same item that is used in the regular expletive constructions in the language.

- (65) ϕ rho vbe (*ibare)
 3s rain Loc outside
 ‘It is raining (outside)’

It is not a coincidence that we have observed exactly the same pattern in Yoruba. These data show that our analysis is on the right track. Therefore, we can conclude in favor of hypothesis II that if a null operator cannot satisfy the EPP then there is no need for the null operator to land in the Spec TP in Yoruba. This is why it skips Spec TP on its way from Spec vP to Spec CP in the derivation in (27). Since there is no other way to do an A-bar movement from the subject position other than through a null operator movement in Yoruba, the derivation is fixed by inserting an expletive pronoun to satisfy the EPP requirement of T.

Let us give a quick recap. We have shown in this section that the reason why the non-agreeing resumptive pronoun occurs in the subject position in Yoruba is because the null operator cannot be attracted to Spec TP. The reason why it cannot be attracted is because it cannot satisfy the EPP since it lacks the necessary feature (that is, D-feature) for satisfying the EPP. Thus it would be uneconomical to move a null operator to Spec TP. This explains why null operator movement from the subject position is unacceptable in languages like Danish, Icelandic, Edo, and Yoruba among others. In all the languages an alternative derivation has to be provided.

3.3.3 Why not ECP?

A legitimate question would be: how do we know that the EPP analysis that we have proposed is better than the ECP analysis that has been proposed in the era of the classical GB theory? The answer to this question is somewhat straightforward. There are two reasons to believe that the EPP approach is on the right track. The first reason is closely related to the answer that we would provide for the second question in (18) above: the failure of number/ person feature agreement between the resumptive pronoun and its (external) antecedent. The second reason has to do with the fact that resumptive pronouns are used in positions that are properly governed in the sense of the classical GB theory. This is not expected if the subject resumptive pronoun was simply used for government purposes. Also, there are instances in which a resumptive pronoun cannot be used even when government fails. This suggests that the use of resumptive pronoun in the Yoruba subject position cannot be because some form of government fails/is not available.

If it were really the case that the subject resumptive pronoun was used because of the need to satisfy the ECP then we should expect the use of a resumptive pronoun wherever government is not available. A possible example of this would be after the preposition **ní** ‘at’ in Yoruba (see Kayne 1981, Larson 1989).⁶⁵ Consider (66) – (68).

⁶⁵ Each of the Yoruba prepositions has a verbal homophone. Basically, the Yoruba prepositions can be divided into three groups with respect to stranding. The first group consists of the prepositions, which could be said to be proper governors in the sense of the classical GB theory. Examples of the prepositions in this group are *si* ‘to’ and *fun* ‘for’

(i) Kí ní Olú dà omi sí ____
 what be Olu pour water to
 ‘what did Olu pour water into?’

(66) Adé wà ní Bonston

Ade exist at Boston

‘Ade is in Boston’

(67) a. *Ibo ni Adé wà ní ____⁶⁶

where be Ade exist

b. *Ibo ni Adé wà ní i

where be Ade exist

(ii) Ta ni Adé ra àpò fún ____

who be Ade buy bag for

‘who did Ade buy a bag for?’

The possibility of (i) and (ii) in Yoruba suggests that the claim of Boeckx (2003) that languages that allow stranding don’t allow resumptive pronouns and vice versa might not be on the right track. Yoruba allows both.

The second group consists of the prepositions which could not be stranded. This would suggest that they are not proper governors in the sense of GB. (Thus, a resumptive pronoun would be expected for the purpose of the ECP. This expectation is not borne out.) Examples of the prepositions in this group are *ti/lati* ‘from’ and *ni* ‘at’

(iii) *Ibo ni Olú ti dé látí ____

where be Olu ASP arrive from

Intended reading: ‘where did Olu come from?’

(iv) *Ibo ni Olú wà ní ____

where be Olu exist at

Intended reading: where is Olu?

Only a pied-piping option is available for the intended reading in (iii) and (iv). The preposition can optionally be dropped after pied-piping in an acceptable version of (iv) (Adesola 1993).

The third group of preposition allow pied-piping and stranding. In addition, it could also allow resumption. A notable member of this group is *pelu* ‘with’, which is followed by a resumptive pronoun in (v).

(v) Kí ni Adé hó iṣu pẹ́lú u rẹ̀

what be Ade peel yam with it

‘what did Ade peel the yam with? / what did Ade use to peel the yam?’

⁶⁶ This could be an instance of the extended ECP (Kayne 1981).

- (68) Ní ibo ni Adé wà
 at where be Ade exist
 ‘where is Ade?’

Here, the language uses pied-piping as in (68) because the preposition cannot be stranded as in (67a). An explanation for the badness of (67a) from the ECP era is that the preposition cannot properly govern the “trace” of the moved element. Now, notice that a resumptive pronoun could not make up for the lack of government (67b). The ECP-based account cannot explain this. However, my account can: EPP considerations are not relevant here, that is why no resumptive pronoun is possible.

Our conclusion from this section is that the reason why Yoruba uses subject resumptive pronoun is because a null operator cannot satisfy the EPP requirement of T. An expletive pronoun is inserted to fill the subject position. Not surprisingly, the expletive pronoun can show a Phi-feature mismatch with its external antecedent.

Next, we explore another feature of null operator movement in syntax – the fact that it does not induce reconstruction effects.

3.3.4. Null Operator Movement and Reconstruction Effects

In the preceding subsections, I have shown that the reason why Yoruba uses an expletive pronoun in the subject position is because a null operator cannot satisfy the EPP requirement of T. Another feature of null operators that is relevant in the present work is that they do not induce reconstruction effects. (But see Munn 1994 for a different opinion.) Overtly moved phrases are sometime interpreted as if they were still in their

base positions. The interpretations of such reconstructed phrases have been used to account for the otherwise unexpected grammaticality or ungrammaticality of certain structures with respect to Binding theory. (See Fox 1999 and Safir 2004: 99-104 for some examples). For example, the presence of condition C reconstruction effects has been used to explain the ungrammaticality of (69). This is done on the assumption that the examples are interpreted at LF as if *Tom* was still in its base position thereby inducing a principle C effect since the *he* binds a reconstructed *Tom* at LF. (See Lebeaux 1988 for an argument/adjunct asymmetry account of similar examples.) What is relevant for our present purpose is that the counterparts of (69) in Yoruba are perfectly acceptable, as shown in (70).

- (69) a. *Which picture of Tom_i did he_i give John t
 b. *Which picture of Tom_i did he_i take t in Boston

- (70) a. Àworán olú_i wo ni ó_i fún Adé t
 picture olu which be he give Ade
 ‘Which picture of Olu did he give Ade’
 b. Àworán olú_i wo ni ó_i yà t ní Boston
 picture olu which be he snap/take at Boston
 ‘Which picture of Olu did he take in Boston’

We assume that the contrast between the examples in (69) and (70) is due to the type of movement that derives them. The examples in (70) are derived through null operator movement, which does not trigger any reconstruction effects (also, Safir, personal communication). If the examples in (70) involved moving a full noun phrase they would have displayed reconstruction effects as the examples in (69). This follows from the fact that move is copy and delete. Thus, we can only reconstruct a copy of what was moved. If a full noun phrase (e.g. an R-expression) was moved, its reconstructed copy will be an R-expression. Then, we expect Principle C effects at the relevant level of the derivation (69). Whereas, if a null operator was moved as in (70) there is no relevant internal structure to the reconstructed entity, since it is phonologically null. Therefore, we do not expect a Principle C reconstruction effect in such derivations. A related example that further reinforces our claim that null operator movement does not induce a reconstruction effect is given in (71). Principle C would have ruled out (71) if the pronoun *-wón/ ó* binds a reconstructed R-expression at LF. The grammaticality of the examples in (70) and (71) thus suggests that the moved elements are not full NPs that could reconstruct.

(71) [àwón àwóran_j olú] wo ni ó sọ pé wón_j/ó ti ya⁶⁷

they picture Olu which be he say that they ASP tear

‘which pictures of Olu did he say they are torn’ (bad in English)

⁶⁷ As discussed in section 3.5 below, two types of movement - feature movement and null operator movement - are possible for subject extraction in Yoruba. The expletive pronoun *ó* is used to satisfy the EPP when null operator movement takes place while an agreeing resumptive pronoun is used when feature movement takes place. Note that, even with feature movement, the agreeing resumptive is not a copy of a fully structured syntactic phrase. So, no reconstruction effect is expected even with the plural subject pronoun in (71), and indeed none is observed.

If the moved element in a Yoruba question was a full NP which could be reconstructed, the example in (73) could conceivably be acceptable (on par with its base form in (72)).

(72) Olú sọ pe ẹ̀nìkòòkan_i rí ìyá rẹ̀_i

Olu say that everyone see mother his

‘Olu said that everyone saw his mother’

(73) *Ìyá rẹ̀_i ni Olú sọ pe ẹ̀nìkòòkan_i rí t_i

mother his be Olu say that everyone see

Therefore we can conclude that unlike the full NP movement, null operator movement does not induce reconstruction effects, and the question formation always involves null operator movement in Yoruba.

Next, we turn our attention to another type of movement – feature movement- as we outline our proposal on how to analyze the occurrences of resumptive pronouns in islands.

3.4. Resumptive Pronouns in Islands: the Proposal

Most of the work that has been done on the resumptive pronouns across languages has some proposal about the occurrences of the resumptive pronouns in island contexts. Indeed, most researchers (e.g. Shlonsky 1992, McCloskey 2002, Aoun, Choueiri and Hornstein 2001 among others) have concluded that such resumptive constructions do not

involve movement. This is premised on the fact that obedience of island restrictions is a diagnostic for movement (Ross 1967). Furthermore, the occurrence of resumptive pronouns in islands is the basis for the conclusion of Sharvit (1999) that resumptive pronouns are not subject to constraints on extraction. For Boeckx (2003) and Zhang (2003), a resumptive pronoun is a stranded D wherever it occurs, especially in an island (Boeckx (2003)).⁶⁸ Other researchers tend towards a movement approach. For example Pesetsky (1998) assumes that island violations do not cause deviance when the position of a trace receives pronunciation (that is, becomes a resumptive pronoun). Expressing a similar view, Hornstein (2001) proposes that this type of resumptive pronouns is used as a COVERING that turns a gap into a pronoun to avoid an illicit chain. These proposals raise several questions. For example why would UG allow an extra step of gap covering? If a trace by itself is not economical because its introduction violates the inclusiveness condition (Chomsky 1995), covering would be a further violation of the inclusiveness condition. So why would so many languages prefer this “uneconomic” route? The answer is simple. It is because the languages need to ensure that the relevant derivations converge. Following the same line of reasoning, in this paper, we are going to assume, following Perlmutter (1972) and Pesetsky (1998) that the reason why a resumptive pronoun occurs in an island is because there is a UG requirement that disallows gaps inside islands.

⁶⁸ According to this view, it is the complement of the resumptive pronoun that is moved. Such a complement forms a constituent with the resumptive pronoun at the first merge (before movement takes place. This assumption is an apparent move to avoid violating the inclusiveness condition. The main argument that has been used to support the stranding theory is the assumption that resumptive pronouns in general do not agree with their antecedents (Boeckx (2003)). The fact that the agreeing resumptive pronouns are more prevalent in Yoruba (and some other languages) than the non-agreeing ones shakes the foundation of the stranding theory.

(74) **NO GAPS**⁶⁹

A pure gap is not allowed inside an island.

The dispute about the status of a trace in syntax is not limited to resumptive constructions.⁷⁰ An advantage that is claimed for the copy theory of movement in general is that it eliminates the need to postulate new objects (e.g. a trace)(Fox 2002:66). For example, consider the following simple extraction.

(75) Kí ni Adé rà ~~ṣí~~

what be Ade buy

‘What did Ade buy?’

The example in (75) is an instance of overt null operator movement. Here, the object wh-phrase is displaced. The lower copy (that is, the tail of the chain) is deleted because of its formal features. The formal features in the head of the chain are invisible after checking (Nunes 1999). Thus there is a trace in the position of the lower copy of the moved wh-phrase. The sentence is acceptable despite the possibility that it violates the inclusiveness condition, which requires that the output of a derivation may not exceed its input (Chomsky 1995). Another way to analyze (75) is to assume following Sabel (2002) that a

⁶⁹ The term “pure gaps” excludes gaps whose binders are also contained inside the island. An example is given in (i).

(i) I left after John took the book I wrote ____
(Chris Collins, personal communication)

⁷⁰ Of course if traces are not economical in resumptive constructions they would not be economical in non-resumptive constructions either.

chain should be understood as a set of positions occupied by only one occurrence of the moved element at different stages of the derivation. This is also the position that Chomsky 1999 advocates. If this is right, then there is no trace in (75).

Returning to resumptive constructions, Chomsky (1995) notes that the most economic movement operation is the one in which the smallest possible feature that is needed for convergence is attracted. Pesetsky (2000) develops this idea in term of feature movement. In the next section, I consider how his proposal works in resumptive constructions.^{71, 72}

3.4.1 Feature Movement

Pesetsky (2000) identifies three kinds of movement operations: covert phrasal movement, overt phrasal movement and feature movement. A covert phrasal movement moves a phrase. In essence the PF targets the tail of the chain for pronunciation. Put another way, the moved element would be pronounced in a trace position. Thus in the overt syntax it would look as if nothing has been moved. The movement is said to be covert in the sense that it does not affect the segmental phonology of the moved element, and it is phrasal because it is assumed that entire words are copied from the trace position. In-situ wh-phrases are good examples of the covert phrasal movement.

⁷¹ The fact that person number agreement fails between the resumptive pronoun and its antecedent is the major criticism of Boeckx 2003 of the movement approach and a great motivating factor for his main idea that resumptive pronouns are stranded determiners. There are at least two reasons why that view may not be correct. First, only the features that are moved for convergence are required to agree. Second, there is indeed a requirement for person number agreement between the antecedent and a resumptive pronoun in non-subject positions in Yoruba.

⁷² Our position here is close to Pesetsky's 1998 proposal that only some nodes of the trace of an antecedent (but not all the nodes of the trace) are pronounced as a resumptive pronoun. Although for him, a resumptive pronoun is like a lexicalized copy of the moving element. This is also in line with his 1997 proposal that resumptive pronouns are used when movement crosses an island (cf. Ross 1966).

Overt phrasal movement on the other hand moves a phrase overtly. As in covert phrasal movement, the trace position must be c-commanded by the complementizer to which the wh-phrase is moved. The head of the chain is the target of pronunciation at the PF or the interpretative component. The main difference between covert phrasal movement and the overt phrasal movement is that only the overt phrasal movement affects the segmental phonology of the moved item. It actually shows that something has been displaced in the overt syntax. Ordinary wh-movement is a good example of the overt phrasal movement.

The third type of movement in Pesetsky's typology is feature movement. This kind of movement is built on Chomsky (1995) proposal that movement is a "repair strategy" by which an un-interpretable feature F on a head K is deleted in response to movement to K of another instance of (interpretable) feature F. In essence, only the feature that is required for convergence is necessary to move (Chomsky 1995:262). The question that arises is why do we need to copy a whole phrase as in the phrasal movement if all that is needed for convergence is just some feature of the goal? This is suggested to be a mystery in a system that takes a covert phrasal movement to be the same as feature movement. Pesetsky (2000) separates feature movement from phrasal movements. He notes that feature movement is a kind of movement that establishes a relationship between expressions bearing a particular feature. This identifies the key difference between wh-in-situ and the behavior of the associate in the English language *there-construction*.

(76) There is a book on the table

(77) There are books on the table

Here, the merger of *there* as a specifier of T satisfies the EPP requirement of T. However it does not erase its un-interpretable number feature. This is because *there* does not bear the number feature (Chomsky 1995:273). Consequently, the feature must move from the associate DP inside the VP to T before the derivation can converge. The movement is covert. This is why no phonological changes are seen in the overt syntax. However, like phrasal movement, the probe must c-command the goal in feature movement. It would seem then that feature movement is the most economical of the three kinds of movement. Feature movement is the movement of the smallest unit that bears the feature that is relevant for convergence. It is like moving a morpheme out of a word. It does not leave a gap/trace; thus it cannot violate the inclusiveness condition. The properties of feature movement as identified in Pesetsky (2000) are as in (78).

- (78)
- a. Feature movement does not copy and delete phrases.
 - b. Feature movement does not display subjacency effects.
 - c. Feature movement does not interact with phrasal movement for the purpose of the Principle of Minimal Compliance as applied to subjacency effects.

Given the foregoing, there are at least two reasons why we believe that resumptive constructions involve only feature movement. These are itemized in (79) and (80).

(79) Resumptive constructions usually allow the pronunciation of both the head and the tail of its chain (except if a null operator is moved).

(80) In most languages, resumptive constructions do not display island effects.

We discuss (79) and (80) briefly in turn.

As noted above, the usual way to identify a covert phrasal movement is that the tail of the chain is pronounced whereas the head of the chain is pronounced in the overt phrasal movement. The third type of chain is the one in which more than one chain position is pronounced. In theory there is also a fourth type of chain in which no position in the chain is pronounced. This fourth type of chain is what is attested in null operator movement constructions. This is the primary movement operation in Yoruba wh-questions and focus constructions. Consider (81). No part of the A-bar chain is pronounced.

(81) Kí ni **NO_i** Àjàyí rà t_i

What be Ajayi buy

‘What did Ajayi buy?’

Given the structure of resumptive constructions we believe that it exhibits the third type of chain. It seems to allow for the pronunciation of more than one position in the chain: the resumptive pronoun and its antecedent (see Pesetsky 1998). (This shows that it diverges from null operator movement.) In fact, various researchers like Engdahl

(1985:9), and Pesetsky (1998) have alluded to this possibility in the literature. Therefore, the structure of resumptive constructions is compatible with feature movement as seen in the English *there- constructions* and other relevant constructions. Only the features that are necessary for convergence are moved. For example, suppose that only the OP-feature, the *wh*-feature along with the number feature are moved in case of the Yoruba *wh*-questions. Suppose further that it is the movement of such features that establishes a(n agreement) relationship between the resumptive pronoun and its antecedent. The derivation converges as long as the element in the extraction site and the antecedent agree in the relevant features. Thus, we could assume following Pesetsky (1998) that resumptive pronouns are like a partial pronunciation of features of the trace of the moved phrase. In that sense only the features that are necessary for convergence are pronounced at the tail of the chain.

The second reason why we believe that resumptive constructions undergo only feature movement follows from the consequences of feature movement as outlined in Pesetsky (2000). Since more than one member of the chain is pronounced, it follows that feature movement, does not technically leave a trace. If this is right, it avoids the danger of violating the inclusiveness condition since no new objects are introduced into the derivation. Secondly, it has been noted in the literature (Pesetsky 1998) that movement that does not leave a trace cannot violate subjacency. This makes sense since island restrictions are on leaving a gap inside an island (Pesetsky 1998). Therefore, if there is no gap in resumptive constructions then we do not expect island violations. Indeed, one of the properties of feature movement is that it does not violate subjacency. If we situate this within the enormous discussion on the resumptive constructions then it becomes very

clear that the simplest way to analyze true resumptive constructions is to assume that they involve only feature movement. For example, several researchers (Ross (1967), Shlonsky (1992), and Pesetsky (1998) among others) have produced cross-linguistic documentation which shows that resumptive constructions do not display island effects

Now let us illustrate how resumption neutralizes island effects with some concrete examples.

3.5. The Agreeing Resumptive Pronouns⁷³

The nucleus of Boeckx's (2003) argument on why stranding is the best way to account for the occurrences of resumptive pronouns is that resumptive pronouns do not usually agree with their antecedents (see section 3.6 for more on Boeckx 2003). We have shown in section (3.4) above that Yoruba also has non-agreeing "resumptive" pronouns in the subject positions. However, some types of resumptive constructions in Yoruba involve agreeing resumptive pronouns. When an extraction takes place from a non-subject position, the resumptive pronoun is required to agree in Phi-features with its antecedent.⁷⁴ This is why example (83) is not acceptable. Here, an extraction is made

⁷³ See more examples of the agreeing resumptive pronouns in Appendix A.

⁷⁴ In general, in Yoruba, resumptive pronouns are used in (non-subject) positions, which would have been taken for subadjacency violation in other languages (e.g. English) that do not have such a device. Also, contra Richards (1999:137) movement out of an island is done in Yoruba without any obvious respect for the Principle of Minimal Compliance. Consider (ia) and (ib).⁷⁴

- (i) a. Ọkùnrin_i **NO**_j ti [Ọjó àti ̀òun_j / ẹ_j] rí Ẹ́aḍé
 Man C Ojo and him see Sade
 'The man that Ojo and him saw Sade.'
- b. Ta_i ni Aḍé bínú kúrò nílé [nítorí pé mo fẹ́ràn **rẹ́**_i]
 who be Ade angry leave from-house because that I meet him
 'Who did Ade leave home in annoyance because I liked him?'

from an adjunct (an oblique object position). The requirement for agreement in this context insures that the antecedent can identify its trace normally despite the “barriers” between them.

(82) [Adé àti Olú]_i ni NO_i a ñ sòrò nípa wọn_i

[iFOC, $i\phi$ (3rd, Plural)]

[iFOC, $i\phi$ (3rd, Plural)]

[iFOC, $i\phi$ (3rd, Plural)]

Ade and Olu be we PROG talk about them

‘we were talking about Ade and Olu’

(83) *[Adé àti Olú]_i ni NO_i a ñ sòrò nípa rẹ̀_i

[iFOC, $i\phi$ (3rd, Plural)]

[iFOC, $i\phi$ (3rd, Plural)]

[iFOC, $i\phi$ (3rd, Singular)]

Ade and Olu be we PROG talk about him

Typically, subjacency violations arise when movement takes place from inside an island (cf. Ross 1967). Indeed such effect has been reported in some other languages. Observing this in Bulgarian, Richards (1997, 1999) proposes that the essential thing is that the Principle of Minimal Compliance has to be obeyed. The nucleus of this claim is that a subjacency obeying movement must precede a movement that does not obey subjacency. The idea is that the former licenses the latter.

- (ii) ? Koj senator koja kniga; otrece [malvata ce pravitelstvoto iska da zabrai t_i]
 which senator which book denied the-rumor that the government wanted to ban
 ‘Which senator denied the rumor that the government wanted to ban which book’
 (Richards 1999:138)

Here, the claim is that the subjacency obeying wh-phrase *koj senator* ‘which senator’ moves before the subjacency disobeying wh-phrase *koja kniga* ‘which book’. Therefore, the locality restriction has been minimally obeyed by the subjacency obeying wh-phrase. Consequently, the movement of the subjacency disobeying wh-phrase is licensed. There is no obvious way to show that the Principle of Minimal Compliance has anything to do with the acceptability of “non-local” movement in Yoruba. Only one wh-phrase moves at a time in the language. So, it is not plausible to say that a part of the derivation has already obeyed subjacency. Examples such as (i (b)) have been used to show that Yoruba does not display subjacency violations (Adesola 2000).

Of course the sentence would also be bad if a gap were left in the island instead of using a non-agreeing pronoun.

- (84) [Adé àti Olú]_i ni NO_i a ñ sòrò nípa _____i
- [iFOC, $i\phi$ (3rd, Plural)] [iFOC, $i\phi$ (3rd, Plural)] [iFOC, $i\phi$ (3rd, Singular)]
- Ade and Olu be we PROG talk about

It is not impossible to find an agreeing resumptive pronoun in subject position in Yoruba.⁷⁵ This is especially possible if we consider focus constructions in the language. The following are examples of cases where a subject resumptive pronoun can agree with its external antecedent in Phi-features.

- (85) a. Èmi ni **mo** ra àpò **1st Person**
- I be I buy bag
- ‘I was the one who bought a bag’

⁷⁵ This means that both the agreeing and non-agreeing resumptive pronouns are possible in the subject position (even in embedded subject positions). Either *ó* or *wón* is good in the embedded subject position in (i). The same is true in the relative clause in (ii). Gaps are not allowed in any of the examples.

- (i) **Olú ati Adé** ni Òjò sọ pé **ó/wón** ra iṣu
 Olu and Ade be Ojo say that they buy yams
 ‘It was Olu and Ade that Ojo said bought some yams’
- (ii) Àwọn obìnrin ti Olú rò pé **ó/wón** ti lọ sí Boston kò tǹ kúrò ní New York.
 They woman that Olu think that they ASP go to Boston NEG leave PRT New York
 ‘The women who Olu thinks that they have gone to Boston are still in New York.’

b. Àwa ni **a** ra àpò

we be we buy bag

‘We were the people who bought a bag’

(86) a. Ẹwọ ni **o** ra àpò

2nd Person

you be you buy bag

‘it was you who bought a bag’

b. Ẹyin ni **ẹ** ra àpò

you (pl.) be you(pl.) buy bag

‘You were the ones who bought a bag’

(87) a. Ọun ni **ó** ra àpò

3rd Person

he be 3s buy bag

‘It was him who bought a bag’

b. Àwọ̀n ni **wọ̀n** ra àpò

they be they buy bag

‘They were the people who bought a bag’

In this chapter, we would treat the above agreeing resumptive pronouns like the other agreeing resumptive pronouns seen in this section. This suggests that the derivation in which an agreeing resumptive pronoun is required is also possible from the subject position in Yoruba. Thus, two derivations are allowed for subject extraction: one involves

moving a null operator while the other involves feature movement. These are derived from two different numerations, which are equally economical. So, they do not compete with each other. Feature movement through the subject position involves moving phi-features (number and person) plus the D-feature that the null operator lacks.⁷⁶ Consequently feature movement can satisfy the EPP requirement of T while null operator movement cannot. On the other hand, null operator movement does not involve moving a D-feature. Only the OP-feature is moved. However, to ensure convergence, the numeration includes an expletive pronoun for EPP purposes. In essence, it is when only null operator movement takes place from the Spec of vP that Yoruba requires the insertion of an expletive pronoun in the subject position of the embedded clause. An expletive pronoun insertion is not allowed when feature movement takes place. This follows from one of the properties of feature movement; they leave resumptive pronouns (Pesetsky 2000).⁷⁷

One of the implications of this proposal is that feature movement and null operator movement should be expected to be possible from the object position as well. In principle this is the case. However, resumptive pronouns are not allowed when an object NP is extracted. They are ruled out by economy considerations. (e.g. the Shortest Derivation Requirement (SDR) proposed in Collins (1997:4) requires that the number of operations necessary for convergence be minimized.⁷⁸) A gap is more economical than a resumptive pronoun because resumption requires an extra step than leaving a gap in the

⁷⁶ Recall that we have established it in (25) that a null operator does not have a D-feature.

⁷⁷ If movement is agree, then it is not surprising that the resumptive pronouns left after feature movement always agree in number with the element in the landing site of the moved feature.

⁷⁸ Minimality applies only if Last Resort has been met (Collins 1997:22).

derivation.⁷⁹ (Note that there is no need to insert an expletive pronoun in the direct object position because there is no EPP requirement on the object position. This means that there is no expletive pronoun in the numeration that involves null operator movement from the direct object position.) So, null operator movement blocks feature movement from the direct object position.

The ‘irregularities’ in subject movement are not peculiar to Yoruba. Subject extraction is marked in many languages (Richards 1998). For example, in English there is a restriction on the type of complementizer that can be used when a subject is extracted: only a null complementizer is permitted.

- (88) a. Who did you think likes Paul
 b. *Who did you think that *t* likes Paul

There are also languages, which prohibit subject extraction totally. For example, a subject cannot undergo wh-movement in Quechua (cf. Imbabura Quechua, Hermon 1984:145)⁸⁰ This is probably in obedience to the freezing principle (Rizzi 2004).

- (89) *Pi –taj Maria ka [t chayamu-shka -ta] kri -n?⁸¹
 who WH Maria TOP arrive NL ACC believe 3.PRES
*for: ‘who does Maria believe *t* has arrived’*

⁷⁹ The extra step of resumption is like what Hornstein 2001 refers to as COVERING. I assume that a derivation that does not involve COVERING is more economical.

⁸⁰ Richards (1998) assumes that the reason why subject wh-movement is prohibited in Quechua is because the position is associated with two strong features, something he notes that PF cannot handle. Under his analysis, PF must ensure that the head of a strong feature must be pronounced. Thus if a position is associated with two strong features, PF would not know which one to pronounce.

⁸¹ (It is not obvious if the sentence would improve if the case on the wh-phrase was different from what it has in (92).)

This Quechua example is somewhat similar to Yoruba's in which subject extraction is also marked when null operator movement is used without expletive insertion.

- (90) *Ta_i ni NO_i ____ t_i ra i_ɸu
 Who be buy yam

While Quechua prohibits subject wh-movement it expressly allows object wh-extraction (91a) as does Yoruba (91b).

- (91) a. Ima -ta -taj Maria -ka [Juzi t miku- shka -ta] kri -n?
 What ACC WH Maria TOP Jose eat NL ACC believe 3. PRESS
 'What does Maria believe Jose ate?'
 b. Kí ni Olú rà ____
 what be Olu buy
 'What did Olu buy?'

In cases when subject NP extraction involves feature movement, a resumptive pronoun must be left at the extraction site. This is compatible with the requirements/characteristics of feature movement Pesetsky (2000). Furthermore, the resumptive pronoun must agree in Phi-features with the base generated NP that R-binds the operator (93).

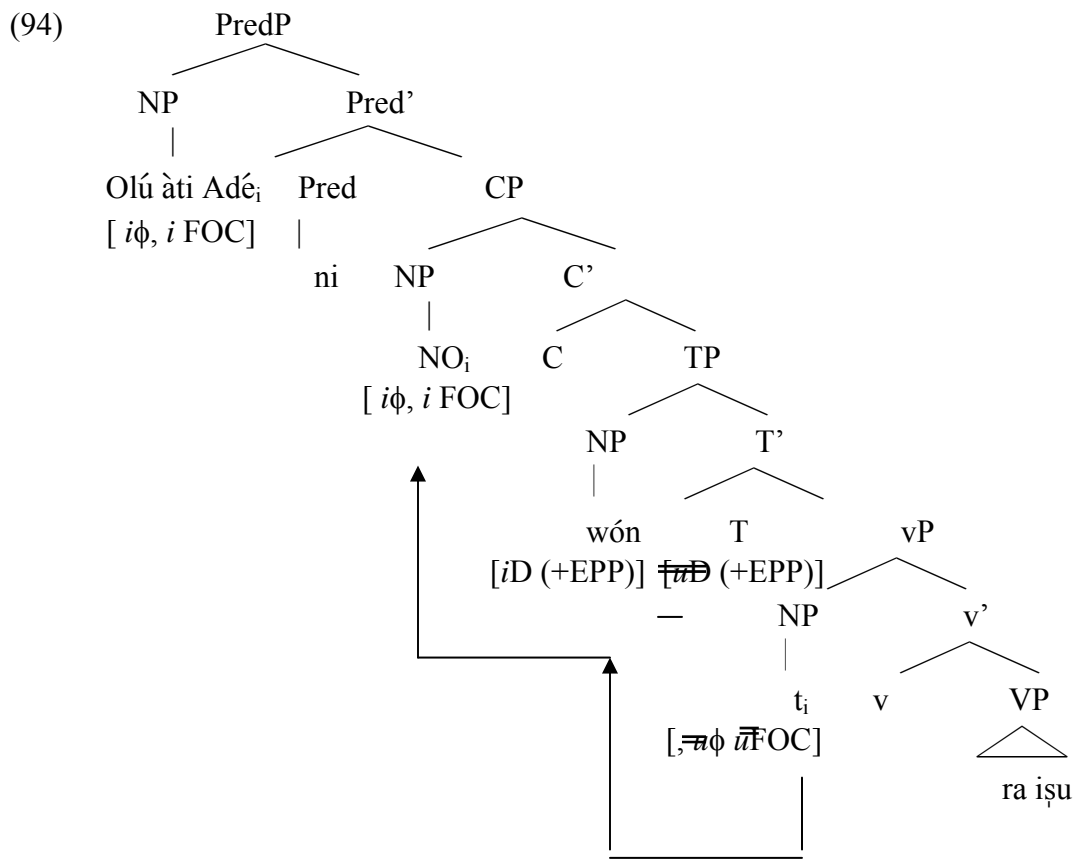
- (92) * Olú àti Adé ni t ra i_ɸu
 Olu and Ade be buy yam

(93) Olú àti Adé ni wón ra iṣu

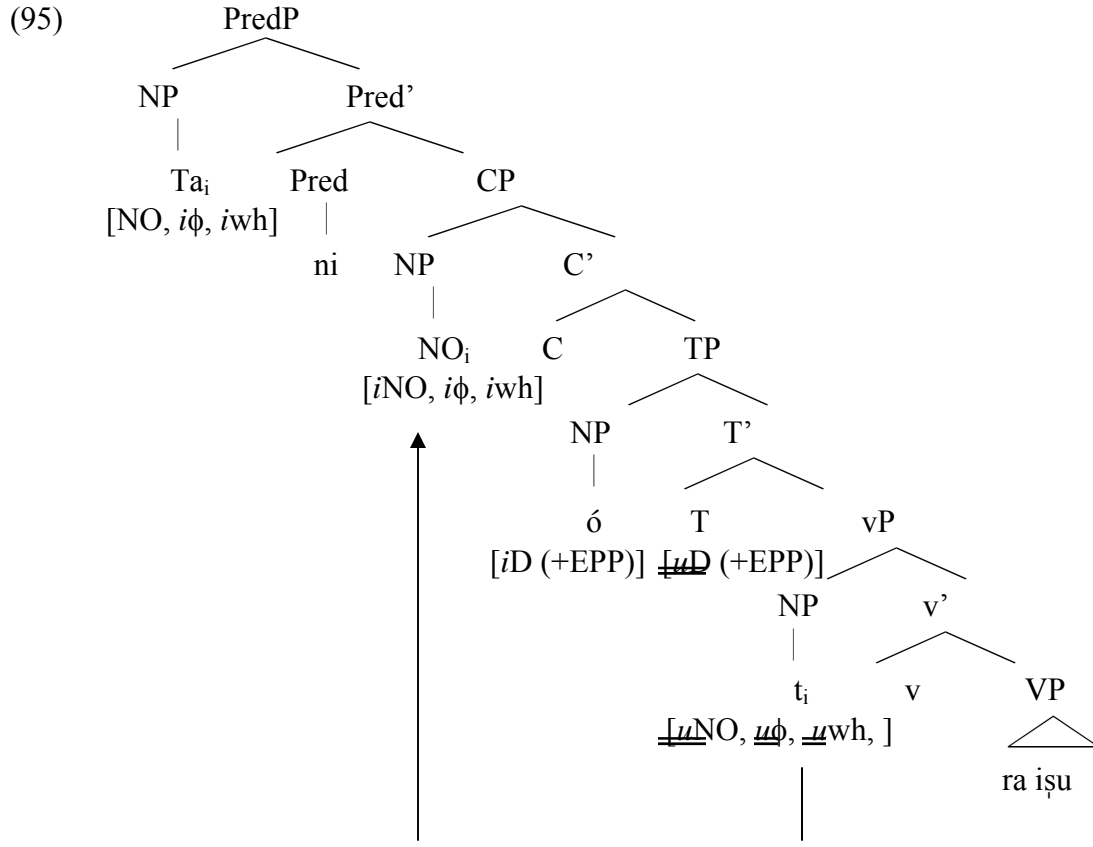
Olu and Ade be they buy yam

‘It was Ade and Olu who bought yams’

Thus we can conclude that there are two possible structures for movement from the subject position in Yoruba. When the moving subject undergoes null operator movement, it skips the Spec TP necessitating the insertion of an expletive pronoun for EPP. On the other hand when feature movement applies the lower copy has full features and can satisfy EPP in the usual way. The derivation for this would look like (94). This can be compared with (95), which is the null operator movement derivation, which we have seen several times.



‘It was Olu and Ade who bought yams’



Thus the derivation of the agreeing subject resumptive pronoun is slightly different from the derivation of the non-agreeing resumptive pronoun because of the types of movement involved in each case: feature movement for the agreeing resumptive pronouns and null operator movement for the non-agreeing resumptive pronouns.⁸²

Richards (1998) provides a somewhat different analysis for the non-agreeing resumptive pronoun. Consider (96).

⁸² The fact that the non-agreeing resumptive pronoun is more commonly used in that position suggests to us that null operator movement is preferred to feature movement.

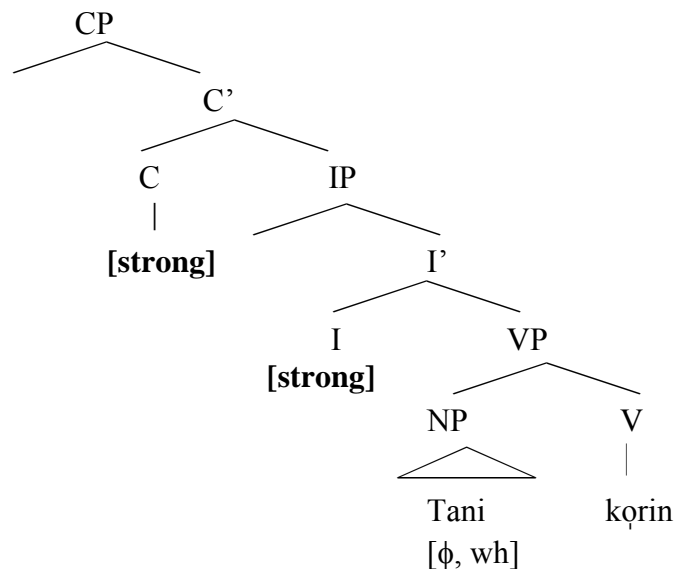
(96) Ta ni ó nı k rin

Who be 3s PROG sing

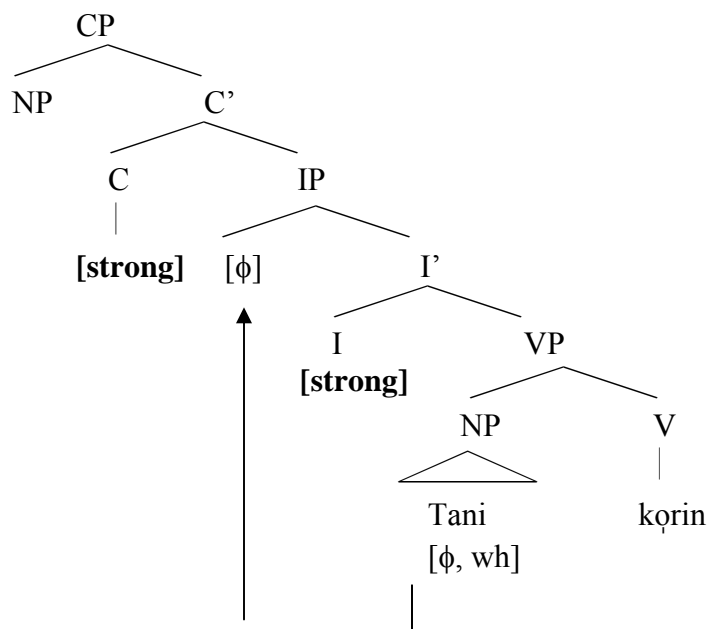
‘Who is singing?’

According to Richards’ analysis, the formal feature in Spec vP divides into two: $[\phi]$ and $[\text{wh}]$. The $[\phi\text{-feature}]$ moves to check the $[\phi]$ in Spec IP while the $[\text{wh-feature}]$ moves to check the wh-feature in Spec CP. Each of them is pronounced because they are strong features. The subject ϕ -feature chain is headed by the resumptive pronoun while the wh-feature chain is headed by the wh-phrase. The derivation proceeds in the following manner:

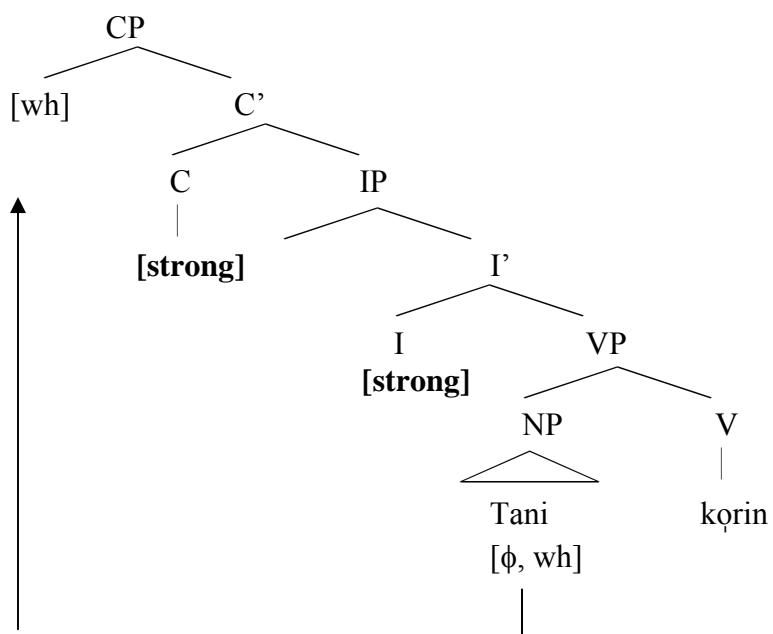
(97) the formal feature in Spec vP splits into two: $[\phi]$ and $[\text{wh}]$



(98) the $[\phi]$ feature moves to Spec IP



(99) The $[wh]$ feature moves to Spec CP



The basic assumption of Richards' analysis is compatible with the analysis that we have proposed in this chapter. The two analyses are only different in the ways in which they are executed. The main advantage of my analysis is that my account for the agreeing resumptive pronouns in A-bar movement also captures how the agreeing resumptive pronouns are derived in A-movement (that is, in copy-raising) without any modification. Richards' feature splitting approach cannot explain why agreement is enforced in cases that involve the agreeing resumptive pronouns.

To recap, once we assume feature movement for resumptive constructions we would have a unified analysis for the occurrences of resumptive pronouns in islands across languages.⁸³ This means that the emphasis should not be on the different types of resumptive pronouns (e.g. apparent, intrusive and true resumptive pronouns as in Sells 1984, 1987, Aoun, Choueiri, and Hornstein 2001 and Boeckx 2003). Rather, we should pay attention to the type of movements that are allowed. Since we cannot do away with movement in syntax, it would be economical to do away with polarizing types of resumptive pronouns. Indeed, Aoun, Choueiri and Hornstein (2001:373) conclude that movement is that primary way to derive resumptive constructions. They propose that, there could only be true resumptive pronouns (that is, those that are not derived by movement) when the apparent resumptive pronouns are disallowed (that is, in an island). In the present system, the resumptive pronouns that occur in islands are derived through

⁸³ The feature movement theory adopted in this chapter as is still needs some additional assumption about the nature of the features that could be moved and why they do not violate island constraints. The problem is partially solved if we assume following Chomsky that movement is *agree*. If this is right, it suggests that the only reason why agreement could be enforced between the constituents in nodes α and β is if they are related through a kind of movement. That said, the reasons why such movement operations need not obey island restrictions is still obscure.

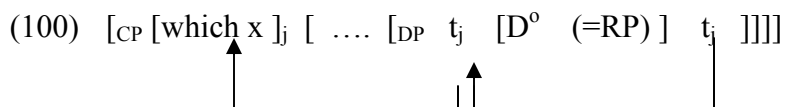
feature movement. The kind of feature that is moved from them would determine their content.

3.6. An Alternative Theory: Boeckx 2003

In this section, I will show some of the reasons why I believe that my analysis in this dissertation is more plausible than the known alternatives. In particular, I will comment briefly on Boeckx (2003), which appears to be the most detailed recent account of resumptive pronouns across languages.

3.6.1. Resumptive Pronouns in General

Boeckx (2003) seeks to provide a unified account for the occurrence of resumptive pronouns cross-linguistically. His basic assumption is that resumptive pronouns are residues of derivations. They are the results of some form of sub-extraction. More specifically, the NP complement of a resumptive pronoun is moved thereby stranding the resumptive pronoun. With that in mind, he concludes that resumptive pronouns are stranded determiners. He assumes further that resumptive pronouns and their antecedents are separate entities. The resumptive pronouns are not copies of their antecedents. They form a constituent with their antecedent at first merge (that is, the antecedent was the complement of the resumptive pronoun at first merge). Thus the derivation of resumptive pronouns will proceed as in (100).



If we apply this to Yoruba it seems to be able to account for the occurrence of resumptive pronouns in non-subject positions. In that sense (102) is derived from (101).

101. Olú rí ọba_j ti ó_j fẹràn [DP [D wọn] [NP Àìná àti Ọjó]]

Olu see king COMP 3s like them Aian and Ojo

102. [Àìná àti Ọjó]_i ni NO Olú rí ọba_j tí ó_j fẹràn [DP t_i [D wọn_i] [NP _____]]



Aina and Ojo be Olu see king COMP 3s like them

‘It was Aina and Ojo whom Olu saw the king who loves them’

In this derivation, the moving NP must first land in Spec DP before it moves to its ultimate landing site (i.e the Spec CP). This seems to work for resumptive pronouns in non-subject positions in Yoruba.

However, Boeckx (2003) does not account for the occurrence of subject resumptive pronouns in Yoruba.

(103) Èyin ni ẹ ra àga

you (pl.) be you(pl.) buy chair

‘You were the ones who bought a chair’

(104) Àwọn ni **wón** ra àga

they be they buy chair

‘They were the people who bought a chair’

He rightly acknowledges the fact that resumptive pronoun stranding cannot take place in the subject position. However, his attempt to derive the presence of subject resumptive pronouns in Edo, Yoruba and Vata seems to have missed the point. He suggests that the occurrence of subject resumptive pronouns follows from the fact that the languages have verbal complementizers (which he assumes do not trigger agreement) necessitating the insertion of a resumptive pronoun. Suppose that we assume following him that verbal complementizer do not trigger agreement, then subject resumptive pronouns should occur with only such complementizers. But this is not the case in the three languages. Subject resumptive pronouns can occur with verbal and non-verbal complementizer. For example, he rightly identifies *wéé* as a verbal complementizer in Edo (cf. Baker 1999). However, subject resumptive pronouns can also occur with *nè*, which is not a verbal complementizer in the language. An example of this is seen in (105) (Uyi Stewart, personal communication).

(105) Dè òmwán nè ọ́ hoo nè ọ́ dé èbé?

Who person that he want that 3rd sg. buy book

‘who does he want to buy a book?’

‘who bought a book’

Yoruba is also reported to have a verbal complementizer but the occurrence of subject resumptive pronouns is not restricted to the domain of the verbal complementizer alone.⁸⁴ This is an indication that the occurrence of local subject resumptive pronouns in Edo, Youba and Vata is not in any way related to the complementizer systems of the languages as claimed by Boeckx (2003).

3.7 Conclusion

In this chapter, we have made a careful exploration of the occurrences of resumptive pronouns in the Yoruba language. We compared the facts of Yoruba with what is attested in other languages. We also explored some properties of null operators that were not yet obvious in the preceding chapter (that is, the fact that a null operator does not have the D-feature).

⁸⁴ For example he links the occurrence of resumptive pronouns in Irish to cases in which the non-agreeing complementizer *aN* is used.

- (i) (a). An fear aL bhuail tú (Irish)
 the man C struck you
 ‘the man that you struck’
- (b). An fear aN bhuail tú é
 the man C struck you him

Basically, I have made two proposals in this chapter.⁸⁵ First, I showed that the reason why an expletive pronoun is inserted in subject position in Yoruba is because (the trace of) the null operator cannot satisfy the EPP requirement of T. We have also proposed that an agreeing subject resumptive pronoun is possible in the language when feature movement rather than null operator movement takes place from the Spec of vP.

⁸⁵ Up till now, we have been illustrating all our claims with weak resumptive pronouns. This does not mean that Yoruba does not have strong resumptive pronouns. An example of this is the 3rd person singular strong resumptive pronoun as in (i). (ii) is also out because of the gap.

- (i). Ta_i ni NO_i Ø òun_i nìkan ra ìwé
 who be C he alone buy book
 ‘who bought a book alone’

- (ii) *Ta_i ni NO_i Ø ___i nìkan ra ìwé
 who be C alone buy book

The relevant question then would be - why does Yoruba allow both the weak and strong subject resumptive pronouns? The possibility of the weak and the strong subject resumptive pronouns in Yoruba poses some challenge to the theories of pronoun complementarity (competition) (Safir 2004). For example, the weak resumptive pronoun is expected to out-compete the strong pronoun when both of them are available given the weak pronoun competition scale/hierarchy. Indeed, the only thing that might tease them apart is if the interpretations of (iii) and (iv) are different. As of now this is not obvious. The only thing that we can say is that there is a possibility of an intervention effect of the ‘*adverb/modifier*’: *nìkan* ‘alone’ on the occurrence of the strong pronoun. It seems that it connotes some sense of comparison. However, the same is possible if the adverb is used with the weak pronoun. Consider (iii) and (iv).

- (iii). Ta_i ni NO_i Ø ó_i nìkan ra ìwé mẹta
 who be C he alone buy book three
 ‘who bought three books alone’

- (iv). Ta_i ni NO_i Ø òun_i nìkan ra ìwé mẹta
 who be C he alone buy book three
 ‘who bought three books alone’

Note though that, an adverb/modifier is always required with the strong pronoun whenever it is used as a resumptive. This contrasts with the weak pronoun with which a co-occurrence with the ‘adverb’ is optional. Also, structurally, *nìkan* could be analyzed as a modifier for the strong pronoun *òun* in the above sentences. Indeed, *nìkan* can be moved with *òun* for focusing in Yoruba. In contrast, *nìkan* cannot be analyzed as a modifier of the weak pronoun in (iii).

- (v) òun nìkan ni Sọlá rí ní ọjà
 he alone be Sola see at market
 ‘It was only him that Sola saw at the market’

We claim that it is one of the basic properties identified for feature movement (Pesetsky 2000) that allows resumptive constructions to violate island restrictions. It is also part of the properties of feature movement that more than one chain position can be pronounced as in resumptive constructions. If this approach is correct, it solves the puzzle of why a resumptive pronoun can occur in an island in languages.

Appendix A - The Distribution of the Agreeing Resumptive Pronoun

In general, agreeing resumptive pronouns are found inside islands in Yoruba language. The following are examples of the occurrences of the agreeing resumptive pronouns in Yoruba.

A1 Possessive Phrase

Movement operations that extract items out of a complex subject phrase are not allowed. This is the so-called subject condition. For example (1) (which also illustrates possessor extraction) is bad in English. This is not surprising given the fact that subject extractions from an island are usually bad (Browning 1987:295).

(1) *Who_i does [t_i mother] sells books

Using familiar terms from the classical assumptions on subjacency, **who** is moved across two bounding nodes: an NP and an IP, into the spec of C in (1).⁸⁶ Such movement is not allowed.⁸⁷ A pied-piping alternative is used to produce (2) instead of (1).⁸⁸

(2) Whose mother sells yams?

⁸⁶ Thus, (1) could be said to have violated subject condition and the left branch condition.

⁸⁷ In Gavrusseva (2000)'s system a possessor is required to extract in two steps. It must first move into Spec DP before moving into the Spec CP. If he is right, the reason why (1) is bad might be because the intermediate landing site is not available in the island.

⁸⁸ Yoruba also have a construction that is equivalent to (2).

(i) [íyá ta]_i ni NO_i Ø ó_i ní ta iṣu
 mother who be C 3sg PROG sell yam
 'whose mother sells yams'

Here the possessor and the possessed are moved as in English.

Examples corresponding to (1) are good in Yoruba because the language allows resumptive pronouns in questions and because only feature movement takes place.

- (3) Ta_i ni NO_i Ø [ĩyá rẹ̀_i] ní ta iṣu
 who be C mother his PROG sell yam
 ‘who does his mother sells yams’ (bad in English)

Here, only the features that create agreement - the Op-feature, wh-feature and the number feature - are copied from the possessive NP in the subject position to the Spec CP. This allows a relationship to be established between the resumptive pronoun ‘rẹ̀’ and its external antecedent.⁸⁹ Following the same pattern as in the above sentence, a possessor can also be moved in a focus construction. Leaving a gap would result in unacceptability (4b).⁹⁰

⁸⁹ The form of the resumptive pronoun might have something to do with the way the genitive case has been associated with possessive NPs and polysyllabic items in general in the language.

⁹⁰ However, a possessed NP cannot be moved in Yoruba whether a resumptive pronoun is used or not.

- (i) *Iwé_i ni NO_i Ø [IP a rí ____i Adé]
 book be C we see Ade
 (ii) *Iwé_i ni NO_i Ø [IP a rí rẹ̀_i Adé]
 book be C we see Ade

This is possibly because possessed pronouns are not allowed in UG. Thus the whole phrase has to be pied-piped with the possessor

- (iii) Iwé Adé_i ni NO_i Ø [IP a rí t_i]
 book Ade be C we see
 ‘it was Ade’s book that we saw’

- (5) a. Adé_i ni NO_i Ø [IP a sòrò nípa rẹ_i] ⁹¹
 [iFOC, iφ(3rd, Sing.)] [iFOC, iφ(3rd, Singular)] [iFOC, iφ(3rd, Singular)]
 Ade be C we talk about him
 ‘Ade was the person who we talked about’
- b. *Adé_i ni NO_i Ø [IP a sòrò nípa _____i]
 Ade be C we talk about

A.2.2 Reason Clauses

Another context in which a resumptive pronoun is used when an extraction is done from an adjunct that expresses a reason. As in the preceding examples, a gap is not allowed here either (6b).

- (6) a. Ta_i ni Olú ń bínú nítorí pé mo nífẹ́ẹ rẹ_i
 who be Olu PROG angry because that I like him
 ‘Who is Olu angry because I like him?’
- b. *Ta_i ni Olú ń bínú nítorí pé mo nífẹ́ẹ _____i
 who be Olu PROG angry because that I like

⁹¹ This suggests that Yoruba is a bit similar to Polish in that only a resumptive pronoun is allowed when an oblique position is relativized in the language (Pesetsky 1998)

Note also that, Phi-feature agreement is required between the resumptive pronoun and its antecedent (7a). This explains why (7b) is not attested in the language.

- (7) a. [Adé àti Òjó]_i ni NO_i Olú ń bínú nítorí pé mo nífẹ́ẹ wọ́n_i
 [iFOC, $i\phi$ (3rd, Plural)] [iFOC, $i\phi$ (3rd, Plural)] [iFOC, $i\phi$ (3rd, Plural)]
 Ade and Ojo be Olu PROG angry because that I like them
 ‘It was Ade and Ojo who Olu was angry because I like them’
- b. * Adé àti Òjo_i ni NO_i Olú ń bínú nítorí pé mo nífẹ́ẹ rẹ̀_i
 [iFOC, $i\phi$ (3rd, Plural)] [iFOC, $i\phi$ (3rd, Plural)] [iFOC, $i\phi$ (3rd, Singular)]
 Ade and Ojo be Olu PROG angry because that I like them

This shows that the resumptive pronoun here is different in its nature from the one used in simple subject extraction in Yoruba.

A3. Complex NP

A3.1 *in subject position*

An extraction out of a complex noun phrase is also prohibited because it constitutes an island (Ross 1967). Given (8) as a base sentence, the only possible derivation is (9) where the extracted phrase leaves a resumptive pronoun. (10) is excluded because movement leaves a gap inside an island. We could also use these three examples to illustrate what we expect when movement violates the so-called subject condition according to which movement from a subject is prohibited.

(8) [IP [NP Ọmọb̀̀rin_i tí ó_i rí Olú] wá ní àná.]

girl C she see Olu come at yesterday

‘The girl who saw Olu came to this place yesterday’

(9) [PredP **Olú_i** ni **NO_i** ∅ [IP [NP ọmọb̀̀rin_j NO_j tí o_j rí **i_i**] wá ní àná]]

↑ Olu be C girl C she see him come at yesterday

‘It was Olu that the girl who saw him came here yesterday ‘

(10) * [PredP **Olú_i** ni **NO_i** ∅ [IP [NP ọmọb̀̀rin_j NO_j tí ó_j rí _i] wá ní àná]]

↑ Olu be C girl C she see come at yesterday

As in the examples of extractions from other islands, agreement is also required between the resumptive pronouns and its antecedent when a phrase is extracted from a complex noun phrase. This (agreement) requirement accounts for why (12) is out in the language.

(11) [PredP Ọjó àti Olú_i ni NO_i ∅ [IP [NP ọmọb̀̀rin_j NO_j tí o_j rí wọ̀n_i] wá ní àná]]

Ojo and Olu be C girl C she see them come at yesterday

It was Ojo and Olu that the girl who saw them came here yesterday’

(12)*_{[PredP Òjó àti Olú_i ni NO_i Ø [IP[NP ọmọb̀̀nrin_j NO_j tí ọ_j rí i_i] wá ní ànà]]}

Ojo and Olu be C girl C she see him come at yesterday

‘It was Ojo and Olu that the girl who saw them came here yesterday’

A3.2 Complex NPs in object Position

Yoruba also allows an extraction from a complex noun phrase, which occurs in an object position. Supposed that (13) is the base sentence, only the derivation in (14a), which leaves a resumptive pronoun is attested. A gap is ruled out as in (14b).

(13) Olú ri [NP ọba_j tí ọ_j fẹ̀ran Ojó]

Olu see king COMP he like Ojo

‘Olu saw the king who loves Ojo’

(14) a. Òjó_i ni Olú rí ọba_j tí ọ_j fẹ̀ràn rẹ̀_i

Ojo be Olu see king COMP he like him

‘It was Ojo whom Olu saw the king who loves him’⁹²

b. * Òjó_i ni Olú rí ọba_j tí ọ_j fẹ̀ràn ___i

Ojo be Olu see king COMP he like

⁹² This is the only reading that is possible for (95(b))

As in the examples in the previous sub-sections, Phi-feature agreement is also required in this configuration. (15b) is unacceptable because agreement fails between the resumptive pronoun and the null operator.

- (15) a. [Àìná àti Òjọ́]_i ni Olú rí ọba_j tí ó_j fẹ̀ràn wọ́n_i
 Aina and Ojo be Olu see king COMP he like them
 ‘It was Aina and Ojo whom Olu saw the king who loves them’
- b. * [Àìná àti Òjọ́]_i ni Olú rí ọba_j tí ó_j fẹ̀ràn rẹ̀_i
 Aina and Ojo be Olu see king COMP he like him

These examples are illustrative. All that we have said about possessor extraction, adjunct extraction and extraction from a subject extends to other cases where a resumptive pronoun is used in an island. In all the cases, only the feature movement is possible. It is not surprising therefore that this type of movement does not display subjacency effects in Yoruba and many other languages (Pesetsky 2000).

Chapter 4 Logophoric and Antilogophoric Effects in Yoruba

In the preceding chapters we have explored the properties and consequences of the interaction of pronouns and moved operators in syntax. In this chapter, we will expand the scope of our analysis of pronouns and operators to cases that involve the interaction of pronouns with a base generated null operator in logophoric constructions.

One of the ways in which languages track discourse referents is through the logophoric use of certain pronouns.⁹³ In such a situation, a designated pronoun form is required to be co-referent with an antecedent outside its own clause. The languages that require some particular pronoun to be obligatorily co-referent with a c-commanding antecedent often bar a second form of pronoun from being co-referent with a c-commanding antecedent in the same context. Various analyses have been proposed to explain this phenomenon in African languages: See Hagege 1974, Clements 1975, Comrie and Hyman (1981), Pulleyblank (1986), Koopman and Sportiche (1989), Manfredi (1987, 1995), Kinyalolo (1993), Baker (1998), Safir (2000), Dechaine and Wiltschko (2002), and Ajiboye (2003) among others.⁹⁴

4.1 An Overview of Logophoric Constructions in Yoruba

In this chapter, drawing data from Yoruba, we argue that what has been referred to as logophoricity in the literature is a natural consequence of the dependency requirements of the pronouns in question. Similar to Dechaine and Wiltschko (2002); I

⁹³ Some languages are reported to have pronouns that are only used for this purpose. (See Hagege (1974), Clements (1979) and Hyman and Comrie (1981).) However, we assume that there are no pronouns that are used only logophorically (cf. Dechaine and Wiltschko (2002)).

⁹⁴ Note that the type of logophoricity that is discussed in this chapter is different from the types that have been reported in non-African languages (see Sells 1987).

claim that there are only logophoric effects, but there are no (special) logophoric pronouns. I propose that only A-bar dependent pronouns can be used logophorically. Conversely, the pronouns that can be barred from taking a c-commanding antecedent are those that are not A-bar dependent. (See Dechaine and Wiltschko (2002) and Ajiboye (2003) for a different view). My assumption in this chapter is that the A-bar dependent pronouns are those that can be focused. For example, they can be used as a part of the sentence that answers wh-questions, thereby qualifying as having what Gundel (1999:295) calls a semantic focus. It is not surprising, therefore, that the logophoric constructions (as in (1a) and (1b) below) sometimes have a contrastive focus reading. If this approach is correct, it shows that we do not need a construction specific analysis for the phenomenon known as logophoricity.

The following are examples of sentences in which a pronoun is used logophorically in the Yoruba language. In (1 (a) and (b)), the so-called logophoric pronoun⁹⁵ *òun* (a “strong” pronoun- see chapter 1) is obligatorily required to take a designated argument of the matrix clause as its antecedent. On the other hand, the so-called anti-logophoric pronoun *ó* (a “weak” pronoun in Yoruba) is not allowed to have the same referent as the potential antecedent in its dominating clause(s) in the same context.

⁹⁵ Pronouns that are uniquely used to report the reported speaker’s perspectives are known as logophoric pronouns in the literature. Such pronouns are usually found in the complements of the verbs of speaking (c.f. Hagege 1974, Clements 1975, among others).

- (1) a. Olú_i ti kéde pé ó_{*i} rí bàbá òun_i
 Olu ASP annouced that he see father him
 ‘Olu has announced that he saw his father’
- b. Olú_i gbà kí ó_{j,*i} rí bàbá òun_i
 Olu accept that he see father him
 ‘Olu agreed that he should see his father’

The sentence in (2a) shows that the weak pronoun can co-refer with a c-commanding antecedent in some circumstances.

- (2) a. Olú_j ti kéde pé ó_{j/i} má a wá ní òla
 Olu ASP annouced that he will come at tomorrow
 ‘Olu has announced that he will come tomorrow’
- b. Olú_j ti kéde pé òun_j má a wá ní òla
 Olu ASP announced that he will come at tomorrow
 ‘Olu has announced that he will come tomorrow’

The question that arises here is why the strong pronoun must take an antecedent outside its own clause while the weak pronoun is barred from doing the same in some contexts but not others (cf. (1a) and (1b) but not (2a)).

The basic claim of this chapter is that the reason why a logophoric pronoun must take an antecedent outside its clause is derived from the fact that a pronoun that is used logophorically must be locally A-bar dependent on a *null logophoric operator* (see Koopman and Sportiche 1989, Baker 1998 and Safir 2000). Furthermore, we assume that a weak pronoun is freely allowed to depend on any c-commanding operator. However, such dependency relation can only be realized in the contexts in which a weak pronoun does not prevent a strong pronoun from satisfying its own dependency requirement. In essence, the only context in which a weak pronoun is barred from taking an antecedent outside its own clause is when allowing such relation will lead to a violation of the principle that requires a strong pronoun to be locally A-bar dependent on an operator. We also attempt to extend our analysis to more complex contexts such as cases of split antecedence and connected discourse, which have received relatively little attention in the analyses of logophoricity in African languages.

This chapter is divided into seven sections. In section two, I examine how Yoruba pronouns pattern in non-logophoric constructions. I show that the Yoruba strong pronouns cannot be Argument bound. This is because they are required to be \bar{A} -dependent. Section three examines what counts as a logophoric context in Yoruba. Section four explores cases in which a logophoric pronoun has a split antecedent. In section five, I discuss logophoric effects in connected discourse (that is, across sentence boundaries). In section six, I comment briefly on some of the alternative theories that have been proposed to account for logophoric and antilogophoric effects in Yoruba and I also discuss aspects of logophoricity in some other African languages. I conclude the chapter in section seven.

4.2 Yoruba Pronouns in Non-logophoric Contexts

Our focus in this section is on how Yoruba pronouns pattern in non-logophoric contexts. We assume that if we have a clear understanding of the structure of the single clause it will enhance our explication of the logophoric constructions, which obligatorily involve multi-clause (or complex) sentences. We will show in this section that the weak pronouns in Yoruba display the pattern of behavior which is characteristic of the so-called principle B of the classical Binding theory: weak pronouns must be free in their governing category, they can occur in argument positions and they can be argument bound. (We will explain this effect in terms of Safir's Form to Interpretation Principle (FTIP) in this chapter, however we will continue to make references to the more familiar principle B whenever such references does not contradict the predictions of the FTIP.)⁹⁶ Our conclusion on the strong pronouns (singular and plural) is a bit different. They can occur in argument positions and they also display the effects that principle B seeks to derive in as much as they are usually free within their governing category. However they are also susceptible to something more like principle C of the binding theory outside logophoric contexts, in that they cannot have any antecedent in non-logophoric constructions. They must be A-free because they are A-bar dependent. We conclude that,

⁹⁶ If one adopts the Form to Interpretation Principle (FTIP) (a more general principle that derives the effects of principles B and C) in Safir 2004, principle B ceases to exist.

- (i) **Form to Interpretation Principle (FTIP)**
 If x c-commands y and z is not the most dependent form available in position y with respect to x, then y cannot be directly dependent on x.
 (Safir 2004(a))

According to the FTIP, only the most dependent form is allowed to directly depend on an antecedent. For example, the fact that an anaphor is more dependent than a pronoun straightforwardly explains why a pronoun must be free in its governing category.

- (ii) John_i loves himself_i / * him_i

a strong pronoun must be locally dependent on a sort of null operator (a null topic operator) in a single clause sentence (cf. Huang (1984, 1989). On the other hand, we do not have any evidence to show that the weak pronoun is A-bar dependent in simple sentences.

Yoruba pronouns are specified for number. We will discuss the singular pronouns first before we turn to the plural pronouns.

4.2.1. The Singular Pronouns

In a simple sentence, a singular weak pronoun can occur in argument positions in Yoruba. It could be a subject as in (3) or an object as in (4).

(3) Ó wá

he come

‘he came’

(4) Adé rí i

Ade see him

‘Ade saw him

A strong pronoun can also occur in argument positions. Sentence (5) is interrogative. Sentence (6) is a sort of contrastive focus. Here, oun connotes that its

reference (say Ade) is the topic of the discussion out of several possible choices.⁹⁷ This is plausible if we assume that the topic is not new information (Buring 1999: 145). In both (5) and (6), *oun* is in the subject position. *Oun* occurs in the object position in (7(a)).

(5) *Òun nkó*⁹⁸_i

he ?

‘Where is he?’

(6) *Òun ti lọ sí Boston*

he ASP go to Boston

‘He has gone to Boston’

(7) a. *Adé_i rí òun_{j,*i} ní àná*

Ade see him at yesterday

‘Ade saw him yesterday’

b. *Adé_i rí i_{j,*i} ní àná*

Ade see him at yesterday

‘Ade saw him yesterday’

⁹⁷ See Bisang and Sonaiya (1999) for a slightly different view on the strong pronouns. (They assume that the Yoruba strong pronouns are names. However, the fact that the Yoruba strong pronouns can be A-bound in multi-clause sentences suggests that they are not names which are expected to be free)

⁹⁸ *ńkó* is an interrogative verb

- c. \acute{O}_i ti ri' ara $r\grave{e}_i$
 he ASP see body his
 ‘he has seen himself’

The examples in (7a) and (7b) also show that both the weak and strong pronouns are regulated by the FTIP which requires that only the most dependent must be used to derive each intended reading. The reflexive, which is more dependent than either the weak or strong pronouns, is available for the intended bound reading as in (7c). This is why those examples are not acceptable.⁹⁹ The effect of the regulative power of the FTIP is also observed when a strong pronoun c-commands a weak pronoun or vice versa:

- (8) * \acute{O}_i ri' $\grave{o}un_i$
 he see him

- (9) * $\acute{O}un_i$ ri' i_i
 he see him

In the examples in (5) through (7), *oun* refers to a person who is the topic of the discourse. For example, suppose that there is a conversation between Speaker A and

⁹⁹ There is a particular context in the Yoruba questions where the second person singular pronoun does not obey the FTIP. An example of this is given in (i). (A reflexive *ara r\grave{e}* ‘yourself’ is also possible in the position of the pronoun in the object position.) Note though that this is only possible in yes/no questions. It is also restricted to second person singular alone.

(i) O_i \grave{o} ri' $\phi_{i,*j}$ $b\acute{i}$
 You NEG see you QM
 ‘Can’t you see yourself’ (or ‘Did you see yourself?’)

Speaker B. *Oun* can only be used (in a simple sentence) to refer to a person who has been mentioned earlier in the discourse. A sample dialogue between speakers A and B is given below. Here, *oun* in (10 (c)) refers to Ademola. (See 10 (b))

(10) Dialogue

SPEAKER A:

- (a) Ta ni ó kù tí è n
 who be he remain that you PROG

wá nínú àwọn ọmọ Àjàó?

seek among they child Ajao

'Which of Ajao's kids are you still looking for?'

SPEAKER B:

- (b) Adémólá

'Ademola'

SPEAKER A:

- (c) Mo ti rí òun lánàá.

I ASP see him yesterday

'I have seen him yesterday'

Weak and strong pronouns do not always behave in the same way in Yoruba even in simple clauses. There is at least one crucial difference between them. The former can be Argument bound inside a mono-clausal sentence while the latter cannot. The examples in (11) show that the singular weak pronoun can be A-bound while the examples in (12) show that A-binding is impossible for a singular strong pronoun in a simple sentence.

- (11) a. Òun_i ti rí bàbá rẹ̀_i

He ASP see father his

‘He has seen his father’

- b. Ó_i ti rí bàbá rẹ̀_i

He Asp see father his

‘He has seen his father’

- (12) a. *Ó_i ti rí bàbá òun_i

he ASP see father him

for ‘He has seen his father’

- b. *Òun_i ti rí bàbá òun_i

He ASP see father his

for ‘He has seen his father’

c. * Òun_i ti rí ara òun_i

He ASP see body his

For ‘he has seen himself’

d. * Adé_i ti rí bàbá òun_i

Ade ASP see father his

For ‘Ade has seen his father’

Each of the examples in (12) shows that a strong pronoun- *oun* -cannot be A-bound in a simple sentence.¹⁰⁰ This resistance to A-binding does not follow from its simple pronoun features.¹⁰¹ We assume that this suggests that *oun* is A-bar dependent in simple

¹⁰⁰ (12(c)) is especially revealing. It suggests that an anaphor derived with a strong pronoun is deviant in the most local context. It could only be used when it is embedded in a complex sentence (i).

- (i) Olú sọ pé òun rí ara òun (nínú gílààsì)
 Olu say that he see body his inside glass
 ‘Olu said that he saw himself in a mirror’

¹⁰¹ This assumption can be extended to the other strong pronouns in the language. For example the 2nd person singular strong pronoun *iwọ* cannot be Argument bound either.

- (i) * O_i ti rí bàbá ìwọ_i
 you ASP see father you
 ‘You have seen your father.’
 (ii) * Ìwọ_i ti rí bàbá ìwọ_i
 you ASP see father you
 ‘You have seen your father’

The configuration involving the 1st person singular strong pronoun is not as bad. It is only degraded. This may be due to the special way 1st person pronouns (singular and plural) pick their referents.

- (iii) ?? Mo ti rí bàbá èmi
 I ASP see father me
 ‘I have seen my father’

sentences in the language. I attribute this to the Strong Pronouns Licensing Principle (13).

(13) **Strong Pronouns Licensing Principle (SPLP)**

A strong pronoun must be locally A-bar dependent on an operator.

The essential requirement of the SPLP is that every strong pronoun that occurs in Yoruba must be A-bar dependent. In a simple sentence, it is locally A-bar dependent on a null operator (which we assume is a topic operator), which keeps track of the referents in the discourse. What I mean by dependency is described in (14). I also adopt Safir's (2000) definitions of the kinds of dependency relations that are relevant to the SPLP in (15) and (16).

(14) **Dependency:** A depends on B if A does not c-command B, and A's referential value is determined as a function of the interpretive content of B.

(15) **A-bar Dependency**

X is A-bar dependent on Y if Y is in an A-bar operator
and X depends on Y.

-
- (iv) ?? Èmi ti òrì bàbá èmi
I ASP see father me
'I have seen my father'

We can therefore conclude that Yoruba strong pronouns are not purely pronominal because they cannot be argument bound. They are A-bar dependent.

- (16) a. **Locally dependent:** X is locally dependent on Y if X depends on Y and there is no Z such that Z c-commands X, X depends on Z, and Y c-commands Z.
- b. **Locally A-bar dependent:** X is locally A-bar dependent on Y if X is Locally dependent on Y and Y is an A-bar operator.

(15-16, from Safir 2000)

The relations in (14) through (16) and the requirement that strong pronouns be locally A-bar dependent (13) explain why the examples in (12) are unacceptable. For example, the embedded *oun* is A-bar dependent in (12(a)). It requires a local A-bar binder, which can be satisfied by base generating a null topic operator in the Spec CP of the clause. However, the example is excluded because there is an intervening potential antecedent: the *ó* in the subject position, which c-commands *oun* and which *oun* depends on. The null topic operator c-commands the intervening binder contrary to (16(a)). In each of the examples in (12), there is some Z (*ó*, *òun* or *Adé* as the case may be) on which the embedded strong pronoun *oun* depends and this Z is c-commanded by the closest possible A-bar binder of the strong pronoun. All these follow from the requirement of the SPLP. The examples in which *oun* appears in argument positions in a simple sentence have the representations such as the following.

- (17) NO_i [TOP] Òun_i ñkò

he ?

‘Where is he?’

(18) NO_i [TOP] Òun_i ti lọ si Boston

he ASP go to Boston

(19) NO_j [TOP] Adé_i rí òun_j ní àná

Ade see him at yesterday

‘Ade saw him yesterday’

(20) NO_i [TOP] Òun_i ti rí bàbá rẹ_i

He ASP see father his

‘He has seen his father’

In each of these grammatical examples, *oun* is locally \bar{A} -dependent on a null operator.

In general, we seek to defend the SPLP in the rest of this chapter and derive the rest of logophoric phenomena from it. For example, the SPLP is not violated in the sentences such as (6), (7), (8a) and (11a) where *oun* occurs in argument positions. It is locally A-bar dependent. The occurrence of *oun* in those sentences may therefore be based on the fact that both the speaker and the hearer know the referent, which is the topic of the discourse (that is, the topic of the discourse is someone who is known to the speaker and the hearer). (It picks one out of many possible alternatives). Thus, its referent is solely recoverable from discourse. If this is correct, it compares with the assumptions of Huang’s (1989’s) about Discourse Oriented languages. *oun* in Yoruba behaves like zero topic noun phrases whose referents are also recoverable from discourse. (The only difference is that unlike the null topic noun phrases *oun* cannot be omitted. This could be

because Yoruba is not generally a pro-drop language.) The behavior of *oun* in the sentences in (6), (7), (8(a)) and (11(a)) also partly confirms Manfredi (1995:95)'s assumption that *oun* is an A-bar topic.¹⁰²

In contrast, the ungrammatical examples in (12) have one thing in common - they have an intermediate local A-binder - in violation of the SPLP.

(12') a. NO_i [TOP] *Ó_i ti rí bàbá òun_i

he ASP see father him
for 'He has seen his father'

b. NO_i [TOP] *Òun_i ti rí ara òun_i

He ASP see body his
For 'he has seen himself'

c. NO_i [TOP] *Adé_i ti rí bàbá òun_i

Ade ASP see father his
For 'Ade has seen his father'

4.2.2 The Plural Pronouns

In this section, we consider the plural pronouns. The patterns that we observed in the singular forms are also attested in plural pronouns¹⁰³.

¹⁰² This is also somewhat similar to Edo where the strong pronoun must be moved for focusing (Baker p.c.).

The referential indices of plural pronouns can be represented as a set of integers (cf. Sportiche (1985), Lasnik (1989) and Baker (1992) among others). The dependency relation between a plural pronoun and its antecedent does not need to be exhaustive. For example, it is possible for a plural weak pronoun to depend on the singular weak pronoun in sentences such as (21) given an appropriate context. For example, if *Ola* and *Adio* are standing in front of a mirror and *Adio* looks at the mirror, the singular weak pronoun *o* can be used for *Adio*. In this case *Adio* is still part of the referent of the plural pronoun *won* in a sentence such as (21). The acceptability of (21) points to a weakness in the regulative power of the classical principle B. The expectation here is that principle B should rule out (21) contrary to fact¹⁰⁴. The acceptability of (21) may be due to the fact that the referent of the singular pronoun *O* is a member of the group that the plural pronoun *won* refers to. Couched another way, the possibility of the plural weak pronoun

¹⁰³The plural pronouns still have other uses in the language apart from functioning as pronouns. A plural pronoun can be used as a plural marker with any noun in simple sentences in Yoruba. This may be because Yoruba does not mark plurality on its nouns morphologically.

- (i). Ajá n gbó
 dog PROG bark
 ‘The dog is barking’
 (ii). Àwọn ajá n gbó
 They dog PROG bark
 ‘The dogs are barking’

The ‘plural pronoun’ in (ii) does not require any antecedent. It is a determiner.

¹⁰⁴ Note that there is no assurance that this situation can be saved by assuming binding by identity for the classical Principle B violations. Examples such as the one repeated in (i) below will still remain unexplained (even by the FTIP). (See footnote (92) for more discussion.)

- (i). O_i ò rí ɔ_{i,*j} bí
 You NEG see you QM
 ‘Can’t you see yourself’ (or ‘Did you see yourself?’)

won in (21) could be an effect of the competition theory as construed in Safir (2004a). In that sense, the weak pronoun *won* is possible in (21) because no competing reflexive is available.¹⁰⁵ This is regulated by the FTIP (repeated below as (21b). Put in Safir's (2004a:60) words. "The FTIP evaluates a form with respect to a given potential antecedent. Not every dependent form is available to compete with others when we consider what the given antecedent is." This explains why the plural weak pronoun *won* is excluded when a competing reflexive is available (22).

(21) a. Ó_{i} ri' wón_{i,j} nínú gílààšì¹⁰⁶

he see them in glass

'He saw them in the mirror'

b. **Form to Interpretation Principle (FTIP)**

If x c-commands y and z is not the most dependent form available in position y with respect to x, then y cannot be directly dependent on x.

c. **Most Dependent Scale:** syntactic anaphor>>pronoun>>name¹⁰⁷

(Safir 2004c)

¹⁰⁵ A somewhat similar example with respect to form availability in English is given in Safir (2004(a): 60).

(i) *Gloria* says that *Shana* loves **herself*/*her*.

According to Safir, in (i) "the most dependent form available is *herself*, but *herself* is not available with respect to *Gloria* although it is available with respect to *Shana*. We do not want *herself* to outcompete *her* in a position where *herself* is excluded by Principle A, which I assume still is in force."

¹⁰⁶ We use multiple indices for plural pronouns throughout this work for the sake of clarity and explicitness. They do not have any theoretical status.

¹⁰⁷ Safir 2000 notes that strong pronouns are more dependent than weak pronouns in logophoric contexts.

d. **Direct Dependency**

y can directly depend on x if y does not c-command x and there are no intermediate antecedents between y and x.

The third person plural pronoun has two forms: *wón* (weak) and *àwón* (strong). A plural weak pronoun can occur in argument positions in a simple sentence. In such configuration it patterns like the English plural pronoun. It must be free within its governing category. This is why the examples in (22 (a)) and (23) are excluded under the bound readings. (22b) out-competes (22a) because it has a more dependent form for the intended reading– a reflexive.

22¹⁰⁸ (a) * Wón_{i,j} rí wón_{i,j}

They see them

b. Wón_{i,j} rí ara wón_{i,j}

They see body their

‘They saw themselves’

(23) * Awón_{i,j} rí àwón_{i,j}

They see them

¹⁰⁸ The plural pronouns in examples (22) and (23) could be construed as honorific. They cannot co-refer.

A plural weak pronoun can also depend on a singular weak pronoun (24) or on a plural weak pronoun (25).

(24) $\acute{O}_{\{i\}}$ ri bàbá wón_{i,j}

he see father them

‘He saw their father’

(25) Wón_{i,j} rí bàbá wón_{i,j}

they see father them

‘They saw their father’

Furthermore, a plural weak pronoun can also depend on a plural strong pronoun as in example (26) below.

(26) Àwón_{i,j} ò ti i rí bàbá wón_{i,j}

They NEG ASP see father they

‘They have not seen their father’

We can conclude from (21) through (26) that the plural weak pronoun *wón* does not require any additional assumptions; like its singular counterpart, it can occur in argument positions, it is susceptible to the FTIP and it can be A-bound.

The plural strong pronoun does not pattern in the same way with the plural weak pronoun in argument dependency in simple sentences. Sentences (27a) and (27b) are excluded in Yoruba.

(27) a. * Wón_{i,j} rí bàbá àwón_{i,j}

They see father them

‘They saw their father’

b. * Àwón_{i,j} ti rí bàbá àwón_{i,j}

They ASP see father they

‘They have seen their father’

The examples in (27) pattern like those in (12) above. Their embedded strong pronouns have intermediate A-binders in violation of the SPLP. Their structure would look like (27’).

(27’) a. *NO_i [TOP] Wón_{i,j} rí bàbá àwón_{i,j}

They see father them

‘They saw their father’

b. *NO_i [TOP] Àwón_{i,j} ti rí bàbá àwón_{i,j}

They ASP see father they

‘They have seen their father’

The unacceptability of (27a) and (27b) suggests that the plural strong pronoun requires more assumptions than regular pronouns since it cannot be A-bound in simple sentences. Note however that it can occur in both subject and object positions in the language, just as we observed for the singular strong pronoun (28) – (30).

(28) Àwọn òkò

they ?

‘Where are they?’

(29) Àwọn tí lọ sí Ojà

they ASP go to Market

‘They have gone to the market’

(30) Àdìó rí àwọn ní ànà

Adio see them at yesterday

‘Adio saw them yesterday’

This paradigm suggests that *àwọn* is also dependent on an A-bar null operator like the singular strong pronoun in non-logophoric constructions. In essence every occurrence of *àwọn* in a simple sentence refers to a set of people of who form the topic of the discourse. This means that the representations of the sentences in (28) through (30) will

4.3 Logophoric Contexts in Yoruba

In this section we will examine what determines the choice of one form of a pronoun over another in complex sentences in Yoruba.¹⁰⁹ We will explore the syntactic features that determine such a choice in this section. Our general conclusion will be that a logophoric pronoun must be locally A-bar bound in obedience to the SPLP while a weak pronoun is generally allowed to take a c-commanding antecedent. The only context in which a weak pronoun is not allowed to take a c-commanding antecedent is when such a relation will lead to a violation of the requirement that a strong pronoun must be locally A-bar dependent.

¹⁰⁹ One possibility is to assume following Safir (2000) that a logophoric construction yields a de-se reading. This reading arises when the subject (or for our purpose an argument) of the propositional attitude verb is aware of self-reference by use of the co-construed pronoun (cf. Safir 2000). Following from Chierchia (1989), the representation for the self-reference reading will be something like (a) while that of the non-de-se reading will be something like (b). These are for the sentence *Pavarotti believes that his pants are on fire*

- (a) λx [believe (x, x's pants are on fire)](P)
 (b) believe (P, λx [x's pants are on fire])

Here, the representation in (a) has a property that is missing in (b). The 'believer' in (a) has some self consciousness that the 'believer' in (b) does not have. Thus, it is the self knowledge connotation of the lambda in (a) that expresses the de se reading is possible for (a). The absence of self knowledge in (b) yields a non-de se reading.

Adapting this to Yoruba logophoric constructions, Yoruba uses different pronouns to represent the readings in which the 'believer' has a self knowledge (a) and the one in which it is possible that the believer is not conscious of the fact that he was talking about himself (b). In concrete terms, in Yoruba, a strong pronoun is used when self-reference is intended by the reported speaker (or believer) (c) while a weak pronoun is used when it is possible that the reported speaker (or believer) does not know that he was in fact referring to his own house (d). Thus Yoruba uses a strong pronoun for de-se reading and a weak pronoun can be used for a non-de-se reading.

- (c) Olú gbàgbọ́ pé ilé òun ti wó
 Olu believe that house he ASP fall
 'Olu believes that his house has collapsed'
- (d) Olú gbàgbọ́ pé ilé rẹ ti wó
 Olu believe that house his ASP fall
 'Olu believes that his house has collapsed'

Every logophoric construction involves a logophoric verb, which selects a (tensed) CP complement. This CP is able to host a base generated null operator in its specifier position. We assume following Koopman and Sportiche (1989), Baker (1998) and Safir (2000) that the presence of a null operator in logophoric context licenses the presence of a strong pronoun, which therefore gets a logophoric reading. In Yoruba, nothing stops a weak pronoun from referring to the matrix NP when there is no strong pronoun that requires a local A-bar binder in the embedded sentence. In other words, there is no so-called antilogophoric effect (that is, the restriction that disallows a weak pronoun from taking a c-commanding antecedent) in Yoruba when a strong pronoun is not present in a sentence. Consider the example in (34).

- [oun_i]
- (34) Olú_i ti kéde NO_{{i}[+LOG]} pé {ó_{ij}} n' bọ lóla
- Olu ASP announce that he PROG come tomorrow
- ‘Olu has announced that he is coming tomorrow’

In (34), there is a logophoric verb *kéde* and yet there is no antilogophoric effect – i.e. no prohibition against the weak pronoun taking a c-commanding antecedent in a multi-clause sentence. This is because the dependency relation between the weak pronoun *ó*, the null operator and the higher subject antecedent *Olú* does not violate the SPLP. A clear kind of “antilogophoric” effect is seen in (1) repeated as (35) and (36) below. Here, *ó* is bad on the bound reading, not for its own sake but because it blocks the local A-bar binding of *òun*.

- (35) Olú_i sọ NO_i[+LOG] pé ó_{j,*i} rí bàbá òun_i
 Olu say that he see father him
 ‘Olu said that he saw his father’

- (36) Olú_i gbà NO_i[+LOG] kí ó_{j,*i} rí bàbá òun_i
 Olu accept that he see father him
 ‘Olu agreed that he should see his father’

We can propose (37) based on the facts in (34) through (36).

(37) **Logophoric Operator Licensing Condition**

A logophoric operator in Spec CP can license a strong pronoun which is in the CP complement of a logophoric verb.

First we will give a few examples of the verbs that can license logophoricity.¹¹⁰

After that, we will discuss how the strong pronoun interacts with them.

4.3.1 The Logophoric Verb

Our basic claim in this sub-section is that what antecedes a logophoric pronoun depends on the choice of verb. For example, some logophoric verbs allow only their

¹¹⁰ See more examples of logophoric verbs in appendix B.

subject to be the antecedents for the logophoric pronoun that occurs in the clause that they introduce (38a), while others allow only their non-subject to be the logophoric antecedent (38b). Furthermore, some logophoric verbs allow either their subject or their non-subject argument to antecede the logophoric pronouns (38c). This lexical variation is reminiscent of the obligatory control seen in control constructions (cf. Koopman and Sportiche 1989). In essence the (thematic properties of) logophoric verb determines what controls the logophoric operator. For example the subject of the logophoric verb will be the antecedent if the logophoric verb is a subject control verb. In the examples in (38), the “controlee” (the null logophoric operator) is obligatorily coindexed with the controller (*Olu* or *Ade* in (38c)).

- (38) a. Olú_i şèléří fún Adé NO_i[+LOG] pé òun_i ń bọ
 Olu promise for Ade that he PROG come
 ‘Olu promised that he is coming’ (subject control)
- b. Adé sọ fún Olú_i pé kí òun_i lọ kí bàbá Ọjó
 Ade say to Olu that that he go greet father Ojo
 ‘Olu told Ade that he should visit Ojo’s father’ (object control)
- c. Olú_i gbà fún Adé_j pé kí òun_{i/j} lọ kí bàbá Ọjó
 Olu accept for Ade that that he go greet father Ojo
 Olu agreed with Ade that he should visit Ojo’s father’ (subj. / obj. control)

Verbs that cannot select a (tensed) clausal complement cannot license logophoricity. This is because the host of the required null operator will not be available (39).

- (39) a. Olú_i yóò lɔ rí i_j /òun_j ní òla
 Olu will go see him at tomorrow
 ‘Olu will go to visit him tomorrow’
- b. Olú_i fẹ lɔ rí i_j /òun_j ní òla
 Olu want go see him at tomorrow
 ‘Olu wants to go and visit him tomorrow’

The only thing that remains to be determined is whether there are verbs that can take a full/tensed CP complement but are not able to license logophoricity. The result of such enquiry is that there are some verbs that can take CP complements but (yet) cannot license logophoricity. The common property of such verbs is that they can take an expletive subject.¹¹¹ For example the verb *jò* ‘appear / looks like’ selects a CP but it cannot license logophoricity even if a strong pronoun is embedded in the clause that it introduces since there will be nothing to control the logophoric operator (40).

¹¹¹ It seems that verbs which can take infinitival complements cannot license logophoricity either. This might be because non-finite clauses involve subject or object control inherently.

(40) Ó jɔ pɛ́ ó_i rí òun_j

EXPL look like/appear that he see him

‘It appears that he saw him’

The expletive subject of the verb *jɔ* ‘appear / looks like’ cannot be taken to be the antecedent of the embedded strong pronoun *Oun*. Each of the pronouns in the embedded clause refers to a different person in discourse. This shows that the logophoric null operator is not possible in (40). Our conclusion from this is that it is important that a logophoric verb be present in a logophoric construction. A related effect of having non-logophoric verb (that selects a CP complement) is that any strong pronoun embedded in its CP complement is not required to be anteceded outside the clause that contains it. For example, the strong pronoun in (40) is not required to take an antecedent within nor outside its clause. The two properties that we have identified for a non-logophoric verb - an ability to take an expletive subject and the fact that a strong pronoun embedded in their CP complement is not required to have a particular syntactic antecedent - are both illustrated in (40).

4.3.2 The Strong Pronoun and the Null Operator

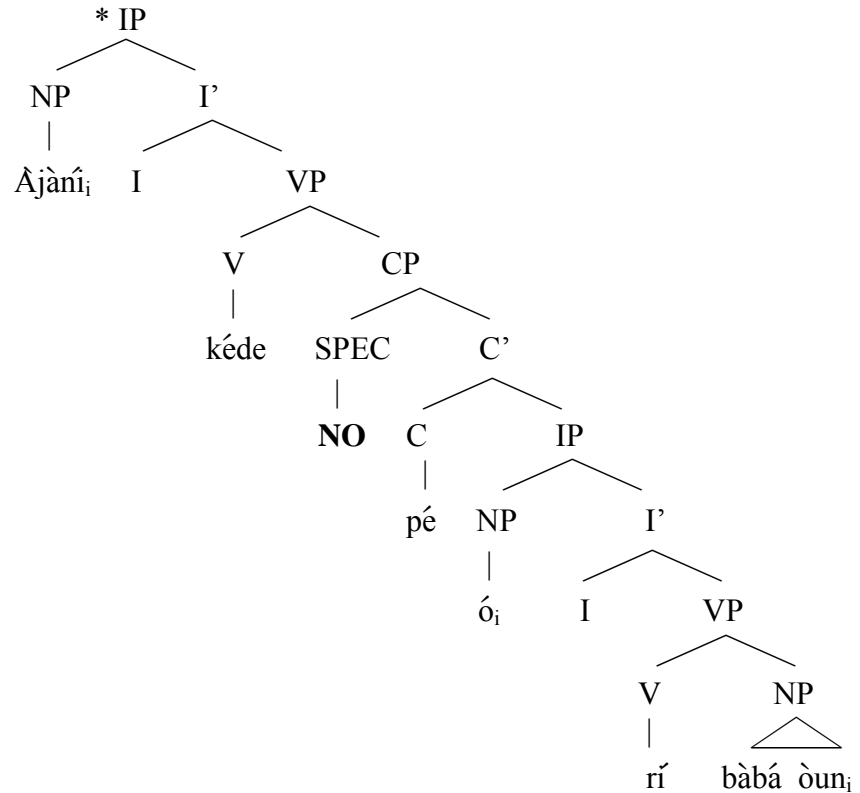
In this section we will consider why it is crucial to have a strong pronoun and an operator in a sentence in order to derive logophoric and antilogophoric effects. We will also investigate the structural conditions on the strong pronoun, the weak pronoun, and the null operator in logophoric constructions.

- (41) a. *Àjàní_i kéde NO_i pé ó_i rí bàbá òun_i

Ajani announce that he see father his

‘Ajani announced that he saw his father’

b.



(42) **Strong Pronouns Licensing Principle (SPLP)**

A strong pronoun must be locally A-bar dependent on an operator.

However, the weak pronoun is allowed to co-refer with the subject of the logophoric verb when no strong pronoun (logophoric pronoun) is present in the embedded sentence.

- (43) Olú_i ti gbà NO_{i[+LOG]} kí ó_{i/j} má jẹ ìrẹ̀sì mọ́

Olu ASP accept that he NEG eat rice again

‘Olu has agreed that he should not eat rice again’

- (44) Olú_i tí kéde NO_{i[+LOG]} pé ó_{i/j} n' bò lóla
Olu ASP announce that he PROG come tomorrow
'Olu has announced that he is coming tomorrow'

This suggests that what is crucial in (41) is the presence of a strong pronoun without which there will be no antilogophoric effect. So, strong and weak pronouns are okay (as in (34) above) as long as the weak pronoun does not c-command the strong pronoun as in the structure in (42b). Note though that (43) and (44) are adjudged to be unacceptable in Pulleyblank (1986) and Manfredi (1987, 1995), but the sentences are in fact good.

One of the (general) properties of the complementizer that Chomsky (1995:199) points out is its ability to host a null operator in its specifier position. In logophoric constructions, it introduces the CP that the logophoric verb selects. The null operator that the CP hosts serves as the local A-bar binder for the strong pronoun. I assume that the base generated null operator has a [+LOG] feature. The name of this feature is derived from the name of the construction: **logophoric** construction. We use it only as a convenience, to differentiate a logophoric operator from other operators (e.g. a topic operator). (The feature has no theoretical status.) Recall that we have established that the strong pronoun requires an A-bar antecedent in the preceding section. The weak pronoun is not A-bar dependent but it can have an A-bar antecedent as long as the SPLP is not violated. Thus, a weak pronoun is able to co-refer with the subject of the logophoric verb when it does not c-command a strong pronoun, which is required to be A-bar dependent. Next, we consider their structural relationship in more detail.

The structural relationship between the pronouns and the logophoric operator has an important effect in a logophoric context. A strong pronoun always requires a binder. In a logophoric construction only one element qualifies as a good binder: a logophoric operator. In (47), two dependency relations are attested. First, the logophoric operator depends on the logophoric antecedent in a way somewhat similar to the R-binding (Safir 1986). We have also seen that this relationship is comparable to obligatory control. Second, the strong pronoun A-bar depends on the logophoric operator. The representation in (48) is excluded because the logophoric pronoun is not A-bar bound.

(47) [Olú_i sọ [CP NO_{i[+LOG]} pé òun_i rí Ade]]

Olu say that he see Ade

‘Olu said that he saw Ade’

(48) * [Olú_i sọ [CP pé òun_i rí Adé]]

Olu say that he see Ade

The only context in which a strong pronoun seems not to be directly locally A-bar dependent (in an acceptable sentence) is when it is c-commanded by another strong pronoun which is A-bar dependent on an operator. Example (49) illustrates this.

(49) Olú_i rò NO_{i[+LOG]} pé òun_i, yóò wá kǐ bàbá òun_i

Olu think that he will come greet father his

‘Olu thought that he would visit his father’

Strictly speaking, the embedded strong pronoun violates the SPLP. However, this configuration is allowed in Yoruba. The fact that the first strong pronoun obeys the SPLP is presumably what saves the dependency relation of the second strong pronoun, which does not directly obey the SPLP. Thus the second strong pronoun obeys the locality requirement of the SPLP in a slightly extended sense. This type of situation is regulated by the Principle of Minimal Compliance (50) (Richards 1998).

(50) a. **Principle of Minimal Compliance**

For any dependency D that obeys constraint C, any elements that are Relevant for determining whether D obeys C can be ignored for the rest of the derivation for the purpose of determining whether any other dependency D' obeys C.

b. **Relevance:** An element X is relevant to determining whether a dependency D with head A and tail B obeys constraint C if

- i. X is along the path of D (that is, $X = A$, $X = B$, or A c-commands X and X c-commands B). *and*
- ii. X is a member of the class of elements to which C makes reference.

(Richards 1998: 601)

The import of the Principle of Minimal Compliance is that a well-formed dependency can save an ill-formed dependency from violating the same constraint/principle. According to Richards, the portion of the structure in which a constraint is obeyed can be ignored for

the purpose of computing further obedience of the constraint in question. Thus, if we ignore the first instance of *oun* in (49) which itself clearly satisfies the SPLP, then the second *oun* does count as locally \bar{A} -bound by the logophoric operator. Thus, the SPLP is obeyed. A similar example, due to Richards himself, is seen in (51b) where the fact that the second *his* is left-linked to the trace of *who* alleviates the WCO violation that would have been incurred by the fact that the first *his* is right-linked to the trace of *who*. Note that the reason why (51a) is bad is because of the WCO effect. (51c) is better than (51a) and (51b) because it does not violate the WCO condition at all.

- (51) a. * Who_i did his_i mother introduce t_i to Bill?
 b. ? Who_i did his_i mother introduce t_i to his_i teacher.
 c. Who_i did John introduce t_i to his_i teacher

(Richards 1998:603)

In a similar way, we can explain the acceptability of (49) as an effect of the Principle of Minimal Compliance. With this case taken care of, we can conclude therefore that the SPLP is in full force in Yoruba.

Dechaine and Wiltschko (2002) and Ajiboye (2003) claim that the strong pronoun must be A-bar free while the weak pronoun must be A-bar bound in Yoruba - the exact opposite of my analysis. This is based on the assumption that only the weak but not the strong pronoun has an A-bar binder in the Yoruba focus and wh-movement constructions. They further assume that there are no strong resumptive pronouns in Yoruba. Thus, it seems to make sense to assume that the weak pronoun is A-bar dependent in logophoric

examples provide no support for the idea that it is the weak pronoun that is A-bar dependent rather than the strong one.

Furthermore, we have also shown in a footnote in the preceding chapter that Yoruba does indeed have strong resumptive pronouns. We repeat some examples below.

(53) a. Ta_i ni NO_i Ø Olú ra ìwé òun_i nìkan¹¹⁴

who be C Olu buy book him alone

‘Who did Olu buy only his books?’

b. Ta_i ni NO_i Ø òun_i nìkan ra ìwé

who be C he alone buy book

‘Who bought a book alone’

(b’) *Ta_i ni NO_i Ø ____i nìkan ra ìwé

who be C alone buy book

So, strong pronouns can be A-bar dependent in wh-movement constructions as well. Thus, there are empirical and theoretical reasons to justify our claim that a strong pronoun rather than a weak pronoun is A-bar dependent in logophoric sentences. Note that we have also shown in section two that strong pronouns are also A-bar dependent in

¹¹⁴ The exact role of ‘nìkan’ in licensing the strong form of the pronoun here is not very clear in these examples. However, it can still be used even when there is no focusing. It can as well be moved as a modifier with ‘oun’ or any other nominal item in the language for focusing. The embedded sentence is also good even if it was not embedded as in (52). All that is required is that the ‘oun’ must be bound by a null topic operator as we have shown in the text.

non-logophoric sentences. It is A-bar bound by a null topic operator.¹¹⁵ Thus, it is more plausible to conclude that only a strong pronoun always A-bar dependent in both logophoric and non-logophoric constructions (including focus and wh-movement constructions).

The position of the null operator in a logophoric context is what defines its scope and what it can bind. This is in line with (54).

(54) The scope of the logophoric operator is its c-command domain.

This means that it is essential that the null operator c-commands the strong pronoun for a logophoric expression to be acceptable. For example, the representation in (55) is excluded since the null operator does not c-command the strong pronoun. In contrast, example (56) is legitimate since the null operator does c-command the strong pronoun.

(55) *Olu_i sọ fún ọrẹ òun_i NO_i[+LOG] pé ó_j ri bàbá wọn ní qjà

Olu say to friend his that he see father they at market

for: 'Olu told his friend that he saw their father at the market'

¹¹⁵ The topic operator and the logophoric operator can co-occur. Their co-occurrence does not violate any known principle since they occupy different Spec CPs. See more on the interaction of these base generated null operators in the concluding chapter.

- (56) Olú_i sọ NO_{i[+LOG]} pé ọ̀ré òun_i wá
 Olu say that friend he come
 ‘Olu said that his friend came’

As result, the strong pronoun ends up being co-referent with a c-commanding logophoric antecedent (57) which controls the null logophoric operator by transitivity of dependency (cf. Koopman and Sportiche (1986)).

- (57) Olú_i sọ NO_{i[+LOG]} pé Àdùkẹ̀ fẹ̀ràn òun_i
 Olu say that Aduke love him
 ‘Olu said that Aduke loves him’

The logophoric operator mediates between the logophoric antecedent and the strong pronoun. This we note above is required, so that the strong pronoun can meet its requirement for a local A-bar dependency. Thus we can assume (58) based on the above facts.

- (58) The logophoric operator must be controlled by the logophoric antecedent.

4.3.3 Antilogophoricity

As I have already mentioned, the so-called antilogophoric effect is derived when the SPLP is violated when a weak pronoun is A-bar bound in Yoruba. Some additional examples of this are given in (59).

- (59) a. *Olú_i sọ NO_i[+LOG] pé ó_i rí baba òun_i
 Olu say that he see father his
For ‘Olu said that he saw his father’
- b. *Olú_i sọ NO_i[+LOG] pé Adé fún un_i ní owó òun_i
 Olu say that Ade give him PRT. money his
For ‘Olu said that Ade gave him his money’
- c. *Olú_i fẹ́ kí ó_i fún bàbá òun_i ní òwo
 Olu want that he give his father PRT. money
 Olu wanted him to give his father some money /
 Olu desired that he should give his father some money’

The examples in (59) are excluded in Yoruba because the embedded strong pronoun is not locally A-bar dependent on an operator, violating the SPLP. It contrasts with (60) in which both the weak pronoun and strong pronoun can be locally A-bar dependent on the same operator, because there is no c-command relation between them.

- (60) Olú_k sọ NO_k[+LOG] pé bàbá rẹ̀k_j tí rí ìyá òun_k
 Olu say that father his ASP see mother his
 ‘Olu said that his father has seen his mother’

The example in (60) also confirms our assumption that a weak pronoun is allowed to take the matrix subject as its antecedent in Yoruba as long as such relation does not lead to a violation of the SPLP.

The same analysis can be extended to (61) which is structurally different from (60). Here, the non-logophoric pronoun is not locally dependent on the null operator, but rather on a strong pronoun. The indirect A-bar dependency of the embedded weak pronoun in (61) does not lead to a violation of the SPLP and the strong pronoun is locally A-bar dependent on the null operator, so the sentence is fine.

(61) Adé_i sọ NO_{i[+LOG]} pé òun_i ti rí ìwé rẹ̀_{i/j}

Olu say that he ASP see book his

‘Olu said that he has seen his book’

It is clear from the above discussion that c-command relationships play a crucial role in the dynamics of logophoric constructions. Note that the c-command relation between the strong and the weak pronouns in the embedded sentence is asymmetric. When the weak pronoun c-commands the strong pronoun, co-reference with the matrix subject is excluded (59), whereas, co-reference is allowed if the strong pronoun c-commands the weak pronoun (61), and if there is no c-command relationship either way (60).

We have observed above that the strong pronoun is required to take an antecedent outside its own clause. We have also been assuming that an operator mediates between the strong pronoun and its logophoric antecedent. If the logophoric operator binds the

strong pronoun then the pronoun is a variable by definition (cf. Huang (1984, 1989). We thus assume that *oun* is a semantic variable of some sort. The fact that it can be A-bar dependent on a logophoric operator as in example (47) shows that it can be a variable. Another example that suggests that *oun* can be a semantic variable can be seen in (62). Here, the example shows that *oun* can in fact have a quantifier as its ultimate antecedent.

- (62) [Oḱùnrin kòḱkan]_i ń bèèrè NO_{i[+LOG]} pé ṣé ó_{j,*i} fẹ̀ràn òun_i
 man each PROG ask that QM he like him
 ‘Each man wanted to know whether he loves him’

In example (62), the value of the strong pronoun *oun* is dependent on every particular instance of man that we select. The foregoing confirms that *oun* is a pronominal variable in Yoruba. It is pronominal both in non-logophoric contexts and in logophoric contexts because it obeys principle B of the classical Binding theory. Added to this, it is a variable in both logophoric contexts and non-logophoric contexts because it must depend on a null operator.

We summarize some of the dependency relations observed in this section between the logophoric antecedent, the logophoric operator, the strong pronoun and the weak pronoun in table (63)

(63)

	Must be locally A-bar dependent on a null operator	Must be dependent on a logophoric antecedent	Can bind a weak pronoun	A strong pronoun can depend on it
Logophoric Operator	-	✓	✓	✓
Strong Pronoun	✓	✓	✓	✓ (in a logophoric context)
Weak Pronoun	Not required	Not required	✓	prohibited

4.4 Split Antecedence

One topic that has not been discussed much in previous analyses of logophoricity in African languages is the ability of a strong pronoun to take a split antecedent. (An exception is Kinyalolo's 1993 discussion of Fon.) An example of this in Yoruba is given in (64). Here, the strong pronoun *awon* takes the subjects of the first and second logophoric verbs *ni* and *so* as its antecedents simultaneously. The plural strong pronoun is also locally A-bar dependent on the null logophoric operator. Suppose then that, at LF, we can unpack each plural pronoun into two or more conjoined pronouns (**pros**) depending on how many referents it has, where at least one of the pros must have a [+strong] feature if the plural pronoun is a strong pronoun. (See Vassilieva and Larson (2001) and den Dikken et al (2001) for more on plural pronoun decomposition.) In contrast, the feature [+strong] is not allowed for any of the **pros** if we unpack a plural weak pronoun into the individual pros. Under this decomposition proposal, the relations between the pros and their antecedents for the example in (64(a)) will be as represented in (64(b)). *Aina* and *Ade* are external antecedents for the pronouns in (64). They control

null operators in each of the complements. Both of the conjoined pronouns fulfil their A-bar dependency requirements in the representation.

- (64) a. $\tilde{A}ĩn\acute{a}_{\{i\}}$ $nĩ$ $NO_{i[+LOG]}$ $Ad\acute{e}_{\{j\}}$ $s\phi$ $NO_{j[+LOG]}$ $p\acute{e}$ $b\grave{a}b\acute{a}$ $\grave{a}w\phi n_{\{i,j\}}$ $y\acute{o}o$ $l\phi$ si $Boston$ $nĩ$ ϕla
- Aina say Ade say that father they will go to Boston at tomorrow
- ‘Aina said that Ade said that their father will go to Boston tomorrow’

- (b) $[\tilde{A}ĩn\acute{a}_{\{i\}} \dots [_{CP} NO_{\{i\}} Ade_{\{j\}} \dots [_{CP} NO_{\{j\}} C [pro_{[+strong]\{j\}} , pro_{[+strong]\{i\}}] \dots]]$
-

Note that the singular strong pronoun as examined in the preceding section cannot have a split antecedent. This simply follows from the fact that it can refer only to a single entity. Recall that, one of the things that have been independently established in the literature (cf. Higginbotham (1983), Sportiche (1985), Lasnik (1989) and Baker (1992) among others) is that plural pronouns can take split antecedents.

In table (63), we gave a summary of the dependency relations involving singular pronouns in logophoric constructions. In this section we will establish the fact that the same dependency relations are attested with the plural pronouns in logophoric contexts. By dependency here, I mean exhaustive dependency. According to Safir (2004(a)), exhaustive dependency can be described as in (65). This suggests that exhaustive dependency is analogous to i(dentity)-binding as defined in (66). Thus the two notions are used interchangeably in this work.

(65) **Exhaustive Dependency**

If the antecedent is divided into an n-tuple of atoms, the dependent depends on every atom of its antecedent.

- (66) X is i-bound by Y iff Y c-commands X and X and Y have identical referential index sets. (cf. Sportiche (1985:465))

The unique antecedence requirement of an anaphor shows that exhaustive dependency is what Principle A requires. This is why (67) and (68) are excluded while (69) is acceptable. (69) satisfies Principle A with identity of index, so that, *Olu* i-binds *ara rẹ̀* ‘himself’ in (69).

- (67) * Olú_i àti Adé_j fẹ̀ràn ara rẹ̀_j

Olu and Ade like body his
‘Olu and Ade like himself’

- (68) * Olú_{i} fẹ̀ràn ara wọ̀n_{i,j}

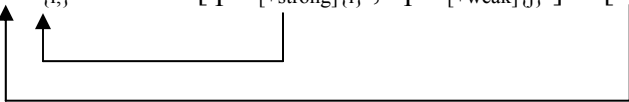
Olu like body they
* ‘Olu likes themselves’

- (69) Olú_i fẹ̀ràn ara rẹ̀_i


Olu like body his
‘Olu likes himself’

The logophoric operator must exhaustively depend on the logophoric antecedent in every logophoric construction. This is true even when the plural pronouns are involved. Consider examples (70) through (73).

- (70) Olú_{i} sọ fún Adé_{j} NO_{i} [+LOG] pé bàbá àwọn_{i,j} yóò wá kí òun_{i}
 Olu say to Ade that father they will come greet him
 ‘Olu told Ade that their father will visit him’

- (71) [Olú_{i} ... Adé_{j}... [CP NO_{i} C [pro_{[+strong]{i}} , pro_{[+weak]{j}}] ...[òun_{i}]]]
- 

- (72) *Olú_{i} sọ fún Adé_{j} NO_{i} [+LOG] pé bàbá àwọn_{i,j} yóò wá kí òun_{j}
 Olu say to Ade that father they will come greet him
 ‘Olu told Ade that their father will come to greet him’

- (72') [Olú_{i} ... Adé_{j}... [CP NO_{i} C [pro_{[+strong]{i}} , pro_{[+weak]{j}}] ...[òun_{j}]]]
- 

(73)a. Olú_{i} sèlérí fún Adé_{j} NO_{{i}[+LOG]}pé bàbá òun_{i} yóò lẹ́ kí olùkó àwọn_{i,j}

Olu promise to Ade that father him will go greet teacher them

‘Olu promised Ade that his father will visit their teacher’

b. *Olú_{i} sèlérí fún Adé_{j} NO_{{j}[+LOG]}pé bàbá òun_{j} yóò lẹ́ kí olùkó àwọn_{i,j}

Olu promise to Ade that father him will go greet teacher them

‘Olu promised Ade that his father will visit their teacher’

These examples confirm that identity of index is the right notion for the type of control (obligatory control) that is attested in logophoric constructions (cf. Koopman and Sportiche 1989).¹¹⁶ If it was not an obligatory control relation, but one that permitted overlap of reference, the singular strong pronoun in object position of V2 should be able to take either the subject or object of V1 in (72) as its antecedent. The unacceptability of (72b) suggests that that cannot be the case. If the strong pronoun object of V2 were able to refer to either the subject or object of V1 in (72), then we could have said that i-binding is not required for the type of control that takes place in logophoric constructions. However, the object NP of V1 is excluded from such relation. It cannot be the antecedent of the strong pronoun object of V2. This suggests that the right representation is the one in which the logophoric operator has only the index of the subject of V1 (72’). Here, the subject of V1 is identical to the logophoric operator while one of the decomposed parts of the plural pronoun exhaustively depends on this logophoric operator. The identity of

¹¹⁶ Recall that we note in the preceding section that the logophoric verb determines what argument controls the logophoric operator.

index between *Olu* and the logophoric operator in (72) follows from the fact that the verb *sɔ* ‘say’ is a subject control verb. This indirectly accounts for why the embedded singular strong pronoun can refer to only the subject of V1 but not its object in (73). If the operator were to have the indices of both the subject and the object of V1 because they jointly antecede the embedded plural strong pronoun, the expectation would be that the embedded singular strong pronoun should be able to refer to either the subject or object of V1 contrary to fact.

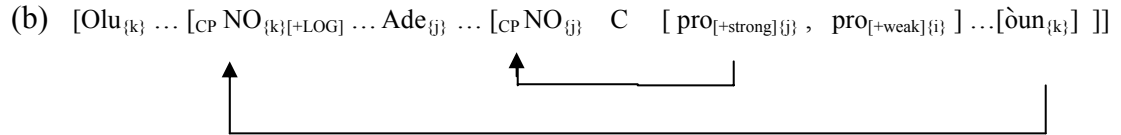
Our conclusion from the above examples (72-73) is that the logophoric operator must exhaustively depend on the logophoric antecedent. This makes sense since a null operator cannot be decomposed like the plural pronouns, since it has no intrinsic lexical content.

Recall also that as noted above, the strong pronoun must depend on the logophoric operator in logophoric contexts. This follows from our conclusion in the preceding section that the strong pronoun is A-bar dependent. The unpacked strong pronouns depend on the logophoric operator in the following examples. The representations in (74b) and (77b) are examples of the dependency relations that are attested in the examples. (The representation in (75b) shows an example of an excluded dependency relation.

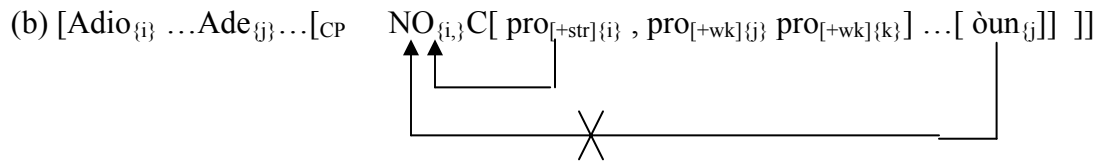
74(a). Olú_{k} ní NO_{{k}[+LOG]} Ø Adé_{j} sɔ NO_{{j}[+LOG]} pé àwɔn_{i,j} rí òun_{k}

Olu say that Ade say that they see him

'Olu said that Ade said that they saw him'

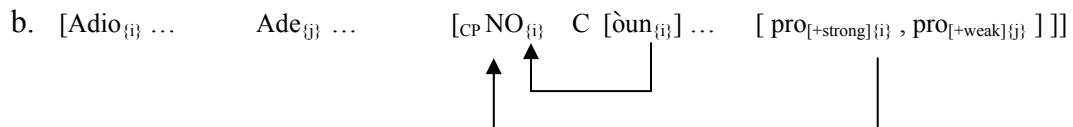


- 75 (a). Àdió_{i} seleri fún Adé_{j} NO_{{i}[+LOG]} pé àwọn_{i,j}yoo lo kí bàbá òun_{i,*j}
- Àdió promised to Ade that they will go greet father him
- ‘Àdió promised Ade that they will visit his father’



- (76) Àdió_{k} ní NO_{{k}[+LOG]} Òjó_{i} sọ fún Adé_{j} NO_{{i}[+LOG]} pé àwọn_{i,l} rí bàbá òun_{k}
- Àdió say Ojo say to Ade that they see father him
- ‘Àdió said that Ojo said that they saw his father’

- (77) a. Àdió_{i}so fún Adé_{j} NO_{{i}[+LOG]} pé iya òun_{i} rí bàbá àwon_{i,j}
- Àdió say to Ade that mother him see father them
- ‘Àdió told Ade that his mother saw their father’



In each of the above examples, one of the parts of the decomposed plural pronouns exhaustively depends on the logophoric operator.

The example in (75) also shows once again that a strong pronoun can be locally bound by another strong pronoun (which is itself A-bar bound) as we observed in the preceding section. However, this seems to be more straightforward with identity binding (as in 75') which is not attested between the pronouns in (75).

(75') a. Àdió_{i} ran Adé_{j} léfí NO_{{i}[+LOG]} pé àwọn_{i,j,k} rí bàbá àwọn_{i,j,k} ní ojà

Àdió sew Ade at-ear that they see father them at market

‘Àdió reminded Ade that they saw their father in the market’

b. [Adio_{i} ... Ade_{j} ... [CP NO_{i} C[pro_{[+str]{i}} , pro_{[+wk]{j}} pro_{[+wk]{k}}] ... [[pro_{[+str]{i}} , pro_{[+wk]{j}} pro_{[+wk]{k}}]]]]



The examples in (75) and (75') show that a strong pronoun requires an exhaustive dependency in a logophoric construction.

Furthermore, on the surface, it appears that the embedded strong pronouns in (75), (75') and (76) violate the SPLP. However, as we have seen above, the Principle of Minimal Compliance can be used to explain why examples like these are acceptable since the second strong pronoun in each case does count as locally A-bar bound once we ignore the first strong pronoun in the evaluation of how the rest of the structure obeys the SPLP. This reasoning based on the PMC combines smoothly with the decomposing of pronouns to give the desired results.

We can conclude therefore that the examples in (74) through (77) conform to the requirement that the strong pronoun must be locally A-bar dependent on an operator.

There is one more thing to note from the examples in (73) through (75'). In our discussion of logophoric verbs, we observed that the choice of the verb determines what will be the antecedent of the strong pronoun. Many logophoric verbs allow only their subjects to be the antecedent for the strong pronoun that occurs in the clause that they introduce, while a few allow their non-subjects to be the logophoric antecedents. Some other logophoric verbs allow either their subjects or non-subjects to antecede the strong pronouns. We can enrich this observation with the pattern of dependency in the examples in (73) through (77) above. This gives us a clear idea of the relationships that exists between a logophoric antecedent, a logophoric operator and a strong pronoun in logophoric constructions. The summary in (79) characterizes such relationships. Here, the fact that identity of index is required between the logophoric antecedent and the logophoric operator is a function of the type of control that is allowed in logophoric contexts (Koopman and Sportiche (1986)). Also, the dependency relation in the examples in (75) and (76) shows that each part of the decomposed plural pronoun that has the feature [+strong] must exhaustively depend on a logophoric operator.

- (79) In a configuration where there is an X, X a strong pronoun, a Y,
 Y a logophoric operator and a Z, Z a logophoric antecedent
 Y must depend exhaustively on Z and the decomposed parts of X that have
 [+strong] features must depend on a Y exhaustively.

A plural weak pronoun can also take split antecedents as in (80) as long as this relation does not lead to a violation of the SPLP. In (80) and (81) each of the pronouns is locally A-bar dependent on a null operator.

(80) Olú_{i} àti Àiná_{j} sọ NO_{i,j} [+LOG] pé bàbá wọn_{i,j} ti rí àwọn_{i,j}

Olu and Aina say that father they ASP see them

‘Olu and Aina said that their father has seen them’

(81) Olú_{i} àti Àiná_{j} sọ NO_{i,j} [+LOG] pé bàbá àwọn_{i,j} ti rí àwọn_{i,j}

Olu and Aina say that father they ASP see them

‘Olu and Aina said that their father has seen them’

The SPLP is not violated in (82) either.

(82) a. Àdió_{i} so fún Adé_{j} NO_{i} [+LOG] pé iya won_{i,j} ti rí oun_{i}

Àdió say to Ade that mother them ASP see him

‘Àdió told Ade that their mother saw has seen him’

b. Àdió_{i} so fún Adé_{j} NO_{i} [+LOG] pé iya awon_{i,j} ti rí oun_{i}

Àdió say to Ade that mother them ASP see him

‘Àdió told Ade that their mother saw has seen him’

In the same way we can explain the degraded status of (83) in light of the violation of the SPLP. It is not surprising therefore that (84) (which is another instance of

the effect of the Principle of Minimal Compliance) is much more acceptable than (83). In (83), the closer binder for the embedded strong singular pronoun is part of the plural weak pronoun *won*. (This shows that both parts of decomposed pronoun have the same c-command domain as the original plural pronoun had.)

(83) ?? Olú_{i} sọ fún Adé_{j} NO_{{i}[+LOG]} pé wọn_{i,j} yóo lo kí babá oun_{i}

Olu say to Ade that they will go greet father his

‘Olu told Ade that they will visit his father’

(84) Olú_{i} sọ fún Adé_{j} NO_{{i}[+LOG]} pé àwọn_{i,j} yóo lo kí babá oun_{i}

Olu say to Ade that they will go greet father his

‘Olu told Ade that they will visit his father’

Recall from our examination of occurrences of the singular pronouns in logophoric contexts that a logophoric operator can freely bind a weak pronoun. The only context in which a logophoric operator cannot bind a weak pronoun is when such a relation would hinder a strong pronoun from fulfilling its own dependency requirement. A plural weak pronoun can also locally A-bar depend on a logophoric operator. Examples of this are given in (85) and (86).

(85) Olú_{i} sọ fún Adé_{j} NO_{{i}[+LOG]} pé wọn_{i,j} máa jọ lọ sí Boston ní ìròlẹ̀

Olu say to Ade that they will together go to Boston at evening

‘Olu told Ade that they will go to Boston in the evening’

- (86) Olú_{i} ní Adé_{j} sọ NO_{{i,j}[+LOG]} pé bàbá wọ̀n_{i,j} ń bèèrè wọ̀n_{i,j}
 Olu say Ade say that father they PROG. ask them
 ‘Olu said that Ade said that their father is looking for them’

In fact both singular weak pronoun and a plural weak pronoun can take the subject of the attitude verb as their antecedents when they co-occur:

- (87) Olú_{i} sọ NO_{{i}[+LOG]} pé bàbá rẹ̀_{i/k} rí wọ̀n_{i,j} ní ọjà
 Olu say that father his see them at market
 ‘Olu said that his father saw them in the market’

Recall also that, a weak pronoun can depend on a strong pronoun in a logophoric construction (88). (89) shows that this is also true for plural pronouns.

- (88) Olú_i sọ pé NO_{i[+LOG]} òun_i yóò lọ kí bàbá rẹ̀_i
 Olu say that he will go greet father him
 ‘Olu said that they will visit his father.’

- (89) Olú_{i} sọ pé NO_{i[+LOG]} àwọ̀n_{i,j} yóò lọ kí bàbá rẹ̀_{i}
 Olu say that they will go greet father him
 ‘Olu said that they will visit his father.’

On the other hand, a weak pronoun cannot A-bind a strong pronoun in any logophoric constructions. This is why the following examples are excluded. The examples in (90) and (91) violate the SPLP. This is analogous to what we observed while discussing the singular pronouns.

(90) * Olu_{i} ní NO_{{i}[+LOG]} Ade_{j} sọ NO_{{j}[+LOG]} pé wọn_{i,j} n pe bàbá awọn_{i,j}

Olu say Ade say that they PROG call father them

‘Olu said that Ade said that they are calling their father’

(91) * Olu_{i} ní NO_{{i}[+LOG]} Ade_{j} ati Aina_{k} sọ NO_{{j,k}[+LOG]} pe wọn_{i,j,k} n pe baba awọn_{i,j,k}

Olu say Ade and Aina say that they PROG call father them

‘Olu said that Ade and Aina said that they are calling their father’

Here, the plural weak pronoun binds the plural strong pronoun that it c-commands. This does not mean that a weak pronoun is never a good antecedent for a strong pronoun. A weak pronoun can antecede a strong pronoun if the weak pronoun is not in the scope of the null operator that binds the strong pronoun (92).

(92) a. Ó_{i} sọ NO_{i} pé òun_{i} ti ri iyá òun_{i}

he say that he ASP see mother his

‘he said that he has seen his mother’

- b. Wón_{i} sọ NO_{i} pé àwón_{i} ti ri bàbá àwón_{i}
 they say that they ASP see father them
 ‘They said that they have seen their father’

From our discussion in this section, we can determine the type of dependency relations that are allowed/required for an A to depend on a B in a logophoric construction. This is illustrated with table (93). (B c-commands A in each of the relations)

93.

B → A (depends on...) ↓	Logophoric antecedent	Logophoric null operator	Weak pronoun	Strong pronoun
Logophoric Null Operator	Exhaustive dependency	Not applicable	Not applicable	Not applicable
Strong Pronoun	At least a part must exhaustively depend on the logophoric antecedent	At least a part must exhaustively and locally depend on the null operator	Exhaustive local dependency prohibited	No restrictions
Weak Pronoun	Not required	Not required	Not required	Not required

We can conclude therefore that the analysis that we proposed for the well-studied logophoric data in the preceding section is able to explain the split antecedence phenomenon that we observed in logophoric context once the necessary assumption about pronoun decomposition is built into it.

4.5 Connected Discourse

One interesting phenomenon that has not received much attention in generative linguistic work on African language logophoricity is the fact that logophoric effects are seen across sentence boundaries (Clements 1975, Adesola 2001). An example of logophoric and antilogophoric effects across sentence boundaries is in (94).

(94) [IP Olú_i sọ NO_{i}[+LOG] pé ó_{j,*i} ki bàba òun_i nítorí pé bàbá òun_i fún un_j ní owó.]

Olu say that he greet father his because that father he gave him ? money

NO_{i}[+LOG] Ø [IP Ó_{j,*i} tún yin bàba òun_i fún işé tí bàba òun_i şe fún un_j.]

C He also praise father his for work that father his do for him

‘Olu_i said that he_{j,*i} greeted his_i father because his_i father gave him_{j,*i} some money. He_{j,*i} also praised his_i father for a job welldone’

Here, we observe that the logophoric and antilogophoric effects observed in the first sentence continue in the following sentence. Note that an operator can bind only what it takes scope over. It therefore looks like it is a problem to account for why the logophoric effect in the first sentence continues into the second sentence. A closer look at the example reveals however, that the effect still falls within the purview of the analysis proposed here with a slight extension. In essence, in this type of environment, a logophoric operator can be licensed in the Spec CP of the following clause to create a situation in which its antecedent matches that of the preceding clause. It is in fact possible

to conjoin the two sentences (either with a covert or an overt conjunction) and derive the same meaning as (94), as shown in (95).

(95) [IP Olú_i sọ NO_{{i}[+LOG]} pé ó_{j,*i} kî bàbá òun_i nítóńí pé bàba òun_i fún un_j ní owó]

Olu say that he greet father him because that father his give him? money

Àti NO_{{i}[+LOG]} *pé* [IP Ó_{j,*i} tún yin babá òun_i fún işẹ tí òun şe fún un.]

And that he also praise father his for work that he do for him

‘Olu_i said that he_{j,*i} greeted his_i father because his_i father gave him_{j,*i} some money. *And that* He_{j,*i} also praised his_i father for a job welldone. ‘

The fact that the overt conjunction comes with a complementizer suggests that the language has made a provision for the insertion of a copy of the logophoric operator in the Spec CP of the second sentence. The sentence is excluded if the conjunction does not have a complementizer; (unless words such as *siwaju sii* ‘furthermore’ is used as a bridge between the two sentences).

Significantly, the reference pattern of the second sentence changes automatically if we introduce another perspective. For example, the weak pronoun in the subject position of the second sentence can refer to the matrix subject of the first sentence in a configuration like (96).

(96) Olú_i sọ NO_i pé ó_{j,*i} kí òun_i nítorí pé òun_i fún un_j ní owó .

Olu say that he greet him because that he give him PRT money

Ó_i tún sọ pé ó_{j,*i} ní bínú sí baba òun_i

He also say that he PROG. angry at father him

‘Olu_i said that he_{j,*i} greeted him_i because he_i gave him_{j,*i} some money. He_i also said that he_{j,*i} is annoyed with his_i father’

Note that we cannot use the overt conjunction to conjoin the two sentences in (96). (97) is excluded.

(97) [_{IP} *Olú_i sọ NO_i pé ó_{j,*i} kí òun_i nítorí pé baba òun_i fún un_j ní owó.]

Olu say that he greet him because that father his gave him PRT money

Àti NO_{{i}[+LOG]} pé [_{IP} Ó_i tún sọ pé ó_{j,*i} ní bínú sí baba òun_i]

And that He also say that he PROG. angry at father him

Furthermore, if we introduce another sentence in between the sentences in (94), the logophoric and the antilogophoric effects will be lost. Consider (98). The sentence loses its acceptability if we leave the pronouns as they were in (94); they do not have access to their referents anymore in (98).

(98) *Olú_i sọ NO_ipé ó_{j,*i}kí bàbá òun_i nítorí pe babá òun_i fún un_j ní owó

Olu say that he greet father his because that father his gave him ? money

Oótó ni pé baba Olú fún Ojó ní owó .

True be that father Olu give Ojo ? money.

It's true that Olu's father gave Ojo some money

Ó_{j,*i}tún yin bàbá òun_i fún iṣẹ ti babá òun_i ẹe fún un_j.

He also praise father his for work that father his do for him

We can conclude from the examples that we give in (94) through (98) that the second (logophoric) operator is co-indexed with the first (logophoric) operator in (94), thereby giving an effect as if the first operator took scope over the two clauses forcing logophoric and antilogophoric effects.

4.6 Logophoricity in Other African Languages

Like Yoruba, many other African languages also use a designated pronoun to report what's going on in the minds of other people, their beliefs, thoughts, perceptions, feelings and so on. As noted above, the pronoun so designated must be in the complement of an attitude verb in order to derive the desired reading. Several scholars have done extensive papers on how to account for the occurrence and behavior of the

designated pronouns which are used in such constructions in African languages.¹¹⁷ We highlight some of their conclusions in this section. For example, in an article on Abe, Koopman and Sportiche (1989) assume that the anti-logophoric effect is due (in large part) to a feature mismatch between the null operator (which is the null subject of the verbal complementizer) and the Abe version of a weak pronoun. In a related work Baker (1998) assumes that the strong pronoun in Edo is locally A-bar dependent because of its [+FOC] feature.

As noted above, only strong pronouns are used logophorically in Yoruba. The same is true for Edo. Even the so-called dedicated logophoric pronoun in Ewe – *yè*, is morphologically similar to the first person strong pronoun – *nyè* in the language. In general, the behavior of strong pronouns is fairly consistent across African languages. This is especially true if we look at the pronouns in non-logophoric constructions. For example, only the strong pronouns can take a modifier in Yoruba, Edo and Ewe. Also, like nouns, strong pronouns do not change their (case) forms whether they occur in a subject or an object position. One difference is that in Edo and Ewe, the strong pronoun must always occur in focus in non-logophoric constructions.

(99) *Ìrèn òré Òzó gbé* (Edo, from Baker 1998)

him FOC Ozo hit

‘It’s him that Ozo hit’

¹¹⁷ See Hagege (1974), Clements (1975), Comrie and Hyman (1981), Pulleyblank (1986), Koopman and Sportiche (1989), Manfredi (1987, 1995), Kinyalolo (1993), Baker (1998), Safir (2000), Schlenker (2000), Dechaine and Wiltschko (2002), Ajiboye (2003) and Bond 2004 among others.

(100) Eya-e dzo (*Ewe*, from Agbedor 1996)

3rd –FOC go

‘It’s he/she that has gone’

In contrast, strong pronouns can remain in-situ in Yoruba, as shown in (18) - (20) above.

Even in logophoric contexts, the pronouns’ behaviors are not too different. It is possible for a weak pronoun to be used to report what’s going on in other people’s mind when no strong pronoun is available in a logophoric context.

(101) Àjàyí_i ti kéde NO_{i[+LOG]}pé ó_{i/j} n’ bò lóla (*Yoruba*)

Ajayi ASP announce that he PROG come tomorrow

‘Ajayi has announced that he is coming tomorrow’

(102) Òzó_i hòó nè ò_{i/j} mién íghó (*Edo*, Baker 1998)¹¹⁸

Ozo want that he find money

‘Ozo wants (him) to find some money’

When the strong pronoun is available, it is used for logophoric readings. Its referent is the designated logophoric antecedent.

¹¹⁸ Baker notes that there is a special complementizer effect in logophoric contexts in Edo which is not present in (102) because a different complementizer is used. Compare (102) with (115).

- (103) Òzó_i miànmíán NO_{i[+LOG]} wẹ́!ẹ́ Àdésúwà` tié èbé irẹ̀n_i (*Edo*, Baker 1998)

Ozo forgot that Adesuwa read book his

‘Ozo forgot that Adesuwa read his book.’

- (104) Olú_i sọ NO_{i[+LOG]} pé Ojó rí òun_i (*Yoruba*)

Olu say that Ojo see him

‘Olu said that Ojo saw him’

The structural relations between a strong pronoun and a weak pronoun are important in a logophoric context in the various languages. If a weak pronoun c-commands a strong pronoun in the scope of a logophoric operator, then the referent of the weak pronoun cannot be the designated logophoric antecedent. This effect is called anti-logophoricity in the literature.

- (105) Òzó_i hòó NO_{i[+LOG]}nè ọ̀j/*_i mién íghó írẹ̀n_i (*Edo*, Baker 1998)

Ozo want that he find money his

‘Ozo wants that he find his money’

- (106) Olú_i fẹ́ NO_{i[+LOG]} kí ọ́j/*_i rí owó òun_i (*Yoruba*)

Olu want that he see/find money his

‘Olu wants him to find his money’

However, if the strong pronoun c-commands a weak pronoun in a logophoric context, it is possible for the referent of the weak pronoun to be the designated logophoric antecedent.

(107) Òzó_i tá NO_{i[+LOG]} wẹ́!ẹ́ irẹ̀n_i fián èbgé ẹ̀rẹ̀_{i/j} (Edo, Baker 1998)

Ozo said that he cut body his

‘Ozo_i said that he_i cut his_{i/j} body

(108) Adé_i sọ NO_{i[+LOG]} pé òun_i ti rí ìwé rẹ̀_{i/j} (Yoruba)

Olu say that he ASP see book his

‘Olu said that he has seen his book’

In general, it is the A-bar dependency requirement on the strong pronoun that forces it to take a designated logophoric antecedent in logophoric contexts. Consider the Edo example in (109). Here the strong pronoun *irẹ̀n* is locally A-bar dependent on the null logophoric operator. This relation yields a logophoric reading.

(109) Òzó_i miànmíán NO_{i[+LOG]} wẹ́!ẹ́ Àdésúwà tié èbé irẹ̀n_i

Ozo forgot that Adesuwa read book his

‘Ozo forgot that Adesuwa read his book.’

The same analysis can be extended to Abe (Koopman and Sportiche 1989) and Ewe (Agbedor 1996). Consider (110) and (111). Here, as in Edo, the strong pronouns – *n* in Abe and *ye* in Ewe, are A-bar dependent on the null logophoric operator. This yields a logophoric reading.

(110) Yapi_i hE NO_{i[+LOG]} kO n_i ye sEdi (Abe)

Yapi say that he is handsome

‘Yapi said that he is handsome’

(111) Ama_i nya NO_{i[+LOG]} be ye_i wɔ vodada (Ewe)

Ama know that she make mistake

‘Ama knows that she made a mistake’

Thus, we can conclude from the foregoing that logophoric constructions in African languages are similar. However, there are some striking differences between the languages in the same type of constructions. For example, Unlike in Yoruba and Edo, it is impossible for a non-logophoric pronoun to serve as the logophoric antecedent for the logophoric pronoun in Abe (Koopman and Sportiche 1989):

(112) O_i kolo ye n_{j,*i} wu Api (Abe, Koopman and Sportiche 1989)

he want COMP he see Api

(113) *Ó_i gbà kí òun_i rí Adé* (*Yoruba*)

he accept COMP he see Ade

‘He agreed that he should see Ade’

(114) *Ọ_i hòó nè èmèrí lèlé írèn_i* (*Edo*, Baker – fieldwork notes)

he want COMP Mary follow him

‘He wanted Mary to follow him’

In (112), the non-logophoric pronoun is not allowed to be the designated logophoric antecedent to the logophoric pronoun. In contrast, the non-logophoric pronoun is allowed to be the ultimate antecedent of the logophoric pronoun in (113) and (114). This suggests that the requirement for a strong pronoun to have a logophoric antecedent is more important in Edo and Yoruba than the specification of what can antecede the logophoric pronoun as in Abe.

Furthermore, the third person object weak pronoun is not allowed to have the designated logophoric argument as its antecedent in Edo whereas it is allowed in Yoruba in a similar configuration. This is perhaps the most striking difference between the languages under consideration. Consider the examples in (115) and (116).¹¹⁹

¹¹⁹ The contrast between (102) and (115) with respect to the antecedent of the weak pronoun could be because of the types of verbs and complementizers that occur in the.

- (115) *Òzó_i miànmíán wé!é Àdésúwà tié èbé éré_i (Edo, Baker 1998)

Ozo forgot that Adesuwa read book his

‘Ozo forgot that Adesuwa read his book’

- (116) Olú_i sọ pé Adé fẹ̀ràn bàbá rẹ̀_{i/j} (Yoruba)

Olu say that Ade like father his

‘Olu said that Ade likes his father’

In (115) the weak pronoun *é̀ré* is not allowed to have a logophoric antecedent unlike the Yoruba weak pronoun *rẹ̀* in (116) which is ambiguous between the logophoric antecedent *Olu* and another referent in discourse.

It is plausible to ask why the weak pronoun is not absolutely excluded from taking the logophoric argument as its antecedent in Yoruba the way it is in Edo. The answer to the question is not entirely clear to me as of now. The best thing is probably to leave it open as a future research project. One possible analysis that could be explored in greater details in the future is to explain the difference in term of the Form to Interpretation Principle (FTIP). For example, it could be the case that in Yoruba unlike Edo, the two pronoun forms (weak and strong) are available structurally for the desired logophoric reading. Safir (2004:102) proposes some strategies to deal with cases of non-complementarity among forms that are expected to be in competition; these are summarized in (117).

(117) Strategies for apparent non-complementarity of distribution

- a. Interpretations are distinct.
- b. Forms tie on the most dependent scale.
- c. There are distinct numerations (apart from the target).

It is not inconceivable to explain the non-complementarity between weak and strong pronouns in Yoruba in terms of any of the strategies listed in (117). However, for the purpose of the present work, we tentatively assume that the reason why both of them are possible in Yoruba is because the strong pronoun *òun* and the weak pronoun tie on the dependency scale for the desired reading. Thus, the strong pronoun is not in competition with the weak pronoun - option (117b) - (Ken Safir, personal communication). If this speculative proposal is the right approach, the next issue will be how to explain the fact that the weak and the strong pronouns tie in Yoruba on the dependency scale but not in Edo. The answer to this inquiry is not straightforward.

We could possibly find an acceptable answer to the question if we appeal to the features that are combined to form the pronouns. For example, it is likely that the features that are combined to derive the weak and strong pronouns in Yoruba are more similar than the features that combine to form the weak and strong pronouns in Edo. Recall that we have shown above that the strong pronoun must appear in focus in Edo (99). That requirement is not in effect in Yoruba. Suppose that the weak pronoun and the strong pronoun are made of person and number features in Yoruba and that the Yoruba strong pronoun has an optional focus feature. This suggests that they are more similar than in Edo where the strong pronoun and the weak pronoun are similar in having the person and

number features but they always differ in the feature [+ FOC], which is obligatory for the strong pronoun but impossible with the weak pronoun (Baker 1998). Therefore, the weak and strong pronoun are in competition in Edo in contrast to Yoruba. The details of this proposal is left for future research.

Our conclusion in this subsection is that although there are some differences between logophoric constructions across African languages, the basic principle that derives logophoric readings is essentially the same.

Next we comment briefly on some of the alternative theories that have been proposed to account for logophoric and antilogophoric effects in Yoruba.

4.6.1 **Alternative Theories on the Yoruba Logophoric Constructions**

A few analyses have been proposed for the Yoruba logophoric constructions. In this sub-section, we will give a very brief comment on the most prominent analyses of the phenomenon. We start with Pulleybalk (1986). In his account of antilogophoric effect, he notes that the reason why the weak pronoun is disjoint in reference from all potential antecedents is because it is a variable. Thus, it is required to be free of all c-commanding (potential) antecedents in the scope of the operator. In the present work, we have shown that a weak pronoun is allowed to take the c-commanding matrix subject as its antecedent as long as this relation does not lead to a violation of the principle that requires that a strong pronoun must be locally A-bar bound. In essence, the anti-logophoric effect arises in Yoruba only when a weak pronoun c-commands a strong pronoun that requires a local A-bar binder.

Manfredi (1987, 1995) arrives at a slightly different conclusion from Pulleyblank's on why the weak pronoun cannot take an antecedent outside its own clause in Yoruba. He suggests that this is because the domain of the weak pronoun extends into the clause that immediately dominates its own clause. He posits an extension of the domain of condition B to account for the effect. In essence, Condition B prohibits the weak pronoun from taking an antecedent in the clause that immediately dominates its own clause. One basic problem with his analysis is that it predicts that sentences such as (118) are not possible in Yoruba, contrary to fact.

Ajiboye (2003) follows the assumptions of Dechaine and Wiltschko (2002). He assumes that the weak pronoun is A-bar dependent while the strong pronoun is A-bar free. As we noted above, this assumption is inadequate for Yoruba. It is based on the supposed fact that the weak pronoun that occurs in focus and wh-questions in Yoruba is A-bar dependent. We have shown above that the weak pronoun is an expletive pronoun rather than a resumptive pronoun. We have also shown that the Yoruba strong pronoun is required to be A-bar dependent in logophoric and non-logophoric constructions. Relatedly, Dechaine and Wiltschko (2002) also propose that the complementarity between the two forms of pronouns (the strong and the weak pronouns) is an effect of the blocking principle (cf. Williams 1997). In this work, we assume that the blocking principle approach is weakened by the fact that the weak pronoun is allowed to be co-referent with a c-commanding antecedent. (The only constraint is that such relation should not violate the SPLP.) For example (118) is a perfect sentence in Yoruba.

- (118) Ajayi_i ti kéde NO_{i[+LOG]}pé ó_{i/j} n' bò lóla
 Ajayi ASP announce that he PROG come tomorrow
 ‘Ajayi has announced that he is coming tomorrow’

4.7 Conclusion

In this chapter we have considered the interaction of the Yoruba weak and strong pronouns with a base generated null operator in logophoric contexts. I show that the strong pronoun is A-bar dependent in all types of constructions in Yoruba while the weak pronoun can be A-bar free. We suggest the different types of dependency that are allowed between the null logophoric operator and the two types of pronoun. We conclude that the strong pronoun must be o-bound by a logophoric operator. We also show that the matrix subject can antecede a weak pronoun if and when THIS relation does not lead to a violation of the SPLP, which requires a strong pronoun to be locally A-bar bound.

Furthermore, we extend the analysis to the logophoric effects found in two sets of new data: split antecedence and connected discourse in Yoruba. We also extend the analysis proposed here to Edo and Abe. In all, although the types of null operators considered in this chapter are base generated, they are consistent with the analysis of moved null operator that we have seen in the previous chapters.

Appendix B: **On Logophoric Verbs**

Here, we give additional examples of verbs that can license logophoricity. We will identify the verbs following the verb classification given in Levin (1993) in most cases. Some logophoric verbs allow only their subjects to be the antecedents for the strong pronoun that occurs in the clause that they introduce, while some allow only their non-subjects to be the logophoric antecedents. Furthermore, some logophoric verbs allow either their subjects or non-subjects to antecede the strong pronouns. We indicate the type of antecedent that some of them allow in terms of the control relations between the logophoric operator and the logophoric antecedents in the following data.

(a) Marvel Verbs (Psych-Verbs)

- i. Olú_i ń dunnu pé òun_i rí bàbá òun_i *(subject control)*

Olu PROG rejoice that he see father his

‘ Olu is rejoicing that he saw his father’

- ii. *Olú_i ń dunnu pé o_i rí bàbá oun_i

Olu PROG rejoice that he see father his

(b) Correspond Verbs (Verbs of Social Interaction)

- i. Olú_i gbà fún Adé_j pé kí òun_{i/j} lọ kí bàbá Òjó (*subj. / obj. control*)

Olu accept for Ade that that he go greet father Ojo

Olu agreed with Ade that he should visit Ojo's father'

- ii. * Olú_i gbà fún Adé pé kí ó_i lọ kí bàbá òun_i

Olu accept for Ade that that he go greet father his

Olu agreed with Ade that he should visit his father'

(c) Verbs of Transfer of Message (that is, Verbs of Communication)

- i. [Omọkùnrin kòṛòkan]_i ní bèèrè bí ó_{j,*i} fẹ́ràn baba òun_i

boy each PROG ask QM (if) he like father his

'Each boy was asking whether he loves his father'

(d) Verbs of Saying

- i. Adé_i so pé ó_{j,*i} rí bàbá òun_i (*subject control*)

Ade say that he see father his

'Ade said that he saw his father'

ii. Olú_i nî Ø ó_{j,*i} rí bàbá òun_i

Olu say that he see father his

‘Olu said that he saw his father’

(f) Complain Verbs

i. Adé_i fí èhónú hàn pé ó_{j,*i} bú bàbá òun_i

Ade protest that he abuse father his

‘Ade complained that he abused his father’

(g) Knowledge Verbs

i. Olú_i mò pé ó_{j,*i} rí bàbá òun_i

Olu know that he see father his

‘Olu knew that he saw his father’

ii. Olú_i mò pé Ø_{j,*i} kò rí òun_i

Olu know that he NEG see him

‘Olu knew that he did not see him’

(h) Desire Verbs

- i. Olú_i fẹ́ kí ó_{j,*i} fún bàbá òun_i ní òwo

Olu want that he give his father ? money

Olu wanted him to give his father some money /

Olu desired that he should give his father some money'

- ii. Olú_i níretí pé ó_{j,*i} fẹ̀ràn bàbá òun_i (subject control)

Olu hope that he like father his

'Olu hoped that he likes his father'

(i) Response Verbs

- i. Olú_i dáhùn pé ó_{j,*i} fẹ̀ràn bàbá òun_i

Olu answer that he like father his

'Olu answered (saying) that he loves his father'

(j) Result Verbs

- i. Olú_i kabamò pé ó_{j,*i} rí bàbá òun_i

Olu regret that he see father his

'Olu regretted that he saw his father'

(k) Perception Verbs

i. Olú_i gbọ́ pé ó_{j,*i} rí bàbá òun_i

Olu hear that he saw his father

‘Olu heard that he saw his father’

Each of the above logophoric verbs (among others) has the ability to license logophoricity. They select (tensed) CP complements that have the ability to host a base generated null operator in their Spec CP. This null operator is the logophoric operator. The logophoric operator mediates between the (embedded) strong pronoun and the logophoric antecedent that binds it. This mediation follows from the fact that a strong pronoun requires a local A-bar binder for which the logophoric antecedent will not be qualified since the logophoric antecedent occupies an argument position.

Chapter 5 Conclusion

This dissertation has examined the principles regulating the interaction of pronouns and operators with specific reference to Yoruba. It shows that having a good understanding of the dependency patterns of the Yoruba pronouns provides a great insight into some of the variations that Yoruba displays with respect to certain nearly universal phenomena such as superiority effects, weak crossover effects, island restrictions and so on.

Furthermore, this work confirms that different types of A-bar movements have different consequences for syntax. For example, it shows following Lasnik and Stowell (1991) that null operator movement does not induce weak crossover effects. Superficial differences come from the fact that even “simple” wh-questions involve null operator movement in Yoruba. Thus, there is an external antecedent, which is outside the scope of the null operator to bind the position. Such a structure allows a null operator to bind more than one variable without any syntactic deviations.

We have also traced the non-agreeing nature of the so-called subject resumptive pronoun to a deficiency in the properties of a null operator. I show that, like in many other languages (e.g. Danish, as in Mikkelsen 2000, Japanese, as in Takahasi 2001, Icelandic, as in Holmberg and Hróarsdóttir 2001), a null operator cannot satisfy the EPP requirement of the tense in Yoruba. Hence, it could not be cyclically moved through the subject position on its way to Spec CP in the derivation of Yoruba’s information seeking questions and focus constructions. Thus, an expletive pronoun is usually inserted into the subject position to create a subject in the specifier position of the tense node for EPP purposes. This is what surfaces as a non-agreeing “resumptive pronoun” in the subject

position. It is analogous to the expletive pronoun which is inserted into the subject position of the regular expletive construction.

This dissertation also shows that the insight that we can gain by examining the interaction of pronouns and null operators is not restricted to configurations which involve movement. There is also an interaction of pronouns with the base generated null operators also holds the secret to understanding some other phenomenon in syntax. Here we pay some attention to how logophoric and anti-logophoric effects are derived in the African languages with particular reference to Yoruba. I show that the phenomenon usually referred to as logophoricity follows from general principles of grammar. Logophoric effect for example is an effect of the language specific principle, which requires a strong pronoun to be A-bar dependent. On the other hand, an anti-logophoric effect is the interpretive violation assigned when an A-bar dependency of a weak pronoun hinders a strong pronoun from meeting its own A-bar dependency requirement.

5.1 The Dependency Patterns of the Yoruba Personal Pronouns

In general, we considered two types of personal pronouns - the weak and the strong pronouns. Each type has a consistent behavior throughout Yoruba syntax. The strong pronoun is always A-bar dependent while the weak pronoun has no such restrictions. We derive the so-called logophoric and anti-logophoric effects from the A-bar dependency requirement of the strong pronoun. We suggest that the weak pronouns are better resumptive pronouns than strong pronouns in cases where feature movement takes place in Yoruba.¹²⁰ This makes sense if Pesetsky (1998) is right that resumptive

¹²⁰ Recall that feature movement must leave a resumptive pronoun (Pesetsky 1999)

pronouns are like partial pronunciations of the trace of a moved phrase. Thus the use of weak pronouns as resumptive pronouns is probably more economical than using strong pronouns for the same purpose. This follows from fact that the weak pronouns have less structure which allows them to be clitics – they are super reduced definite descriptions. It also somewhat follows Safir's (2004a: 239) Weak Pronoun Competition.¹²¹

- (1) a. **Weak Pronoun Competition:** To determine whether a given form (or null pronoun) is permitted to represent the backgrounded topic, pick a weaker pronoun on the scale, substitute it in the numeration for the given form, and see if the derivation converges. If substitution with a weaker form converges, then the given form cannot represent the backgrounded topic reading. If no substituted form converges, then the given form can represent the backgrounded topic reading.

- b. null pronoun >> clitic >> destressed pronoun >> tonic pronoun >> r-expression
(Safir 2004(a))

In (1b), Yoruba weak pronouns are clitics while the strong pronouns are tonic pronouns.

5.2 On the Interaction of the three kinds of Null Operators

The null operators that we saw in this dissertation are of two types –derived and base generated null operators. The derived null operator is the kind of operators found in

¹²¹ Recall that the Yoruba weak pronouns are clitics (Akinlabi and Liberman 1999)

the Yoruba *wh*-/focus constructions. On the other hand, the base generated null operators are of two kinds – topic and logophoric null operators.

The derived null operators are produced via movement. They head a chain, which has no phonological content in the head or tail positions. As discussed in chapter two, the derived null operator features prominently in the derivation of *wh*-questions and focus constructions in the Yoruba language. In fact, it is plausible to say that Yoruba uses only null operator movement in its questions and focus constructions. This follows from three facts:

- (i) The question nouns in Yoruba are base generated in the Specifier position of a predicate head.
- (ii) The so called focus marker - *ni* which we analyzed as a predicate head in this work is verbal (Yusuf 1990), Dekydtospotter (1992) and Awoyale (1997)).
- (iii) Yoruba has no words with [+*wh*]- features.

The base generated null operators are somewhat different from the derived null operators. The base generated null operators occur only in environments that do not involve movement. The topic null operator is subject to a principle similar to the bijection principle (Koopman and Sportiche 1982). Only one variable can depend on it at a time (see (3)). It occurs to license the occurrence of a strong pronoun in an argument position in the language (2).

- (2) a. NO_j [TOP] Adé_i rí òun_j ní àná

Ade see him at yesterday

‘Ade saw him yesterday’

- b. NO_i [TOP] Òun_i ti rí bàbá rẹ_i

He ASP see father his

‘He has seen his father’

- (3) a. * NO_i [TOP] Òun_i ti rí bàbá òun_i

He ASP see father his

for ‘He has seen his father’

In contrast to the topic null operator, one or more variables can depend on a logophoric operator. This, I show, is regulated by the Principle of Minimal Compliance.

- (4) Olú_i rò NO_i [+LOG] pé òun_i, yóò wá kǐ bàbá òun_i

Olu think that he will come greet father his

‘Olu thought that he would visit his father’

The derived null operator that is seen in focus construction and wh-questions is somewhat similar to the logophoric null operator. It’s trace and a parasitic gap can be licensed in its scope. It is also similar to the null topic operator in the sense that it cannot be vacuous.

- (5) Ola_i ni NO_i Sadé n ná ___i lẹ́hìn tí Àḍiọ̀ bẹ̀bẹ̀ fún un_i
 Ola be Sade PROG beat after COMP Adio plead for him
 ‘Ola was the person who Sade beat after Adio had pleaded for him’

Table (6) summarizes the dependency patterns allowed by the various null operators, based on the data that we have seen in this dissertation.

6.

	No variables	One variable	Two or more variables
A topic operator can bind	no	yes	no
A logophoric operator can bind	yes	yes	yes
A wh-/focus null operator can bind	no	yes	yes

The three kinds of null operators that we have identified in this dissertation- the topic operator, the logophoric operator and the wh-/focus null operator- can co-occur in the same sentence. For example, the topic operator and the logophoric operator can co-occur. Their co-occurrence does not violate any known principle since they occupy different Spec CPs. Both of them appear in sentences such as (7) and (8) given an appropriate context. Suppose Mr. A asks Mr. B about *Olu*. Mr B can reply with (7) in which *oun* refers to *Olu* which is the topic of the discussion. *Oun* must co-refer with

Adio, the logophoric antecedent, when such context is not available (8). In that case, *oun* is dependent on the logophoric operator.

- (7) NO_j TOP Āđiό sọ NO_i[+LOG] pé òun_j náà tẹlé Adé lọ sí Boston
 Adio say that he also follow Ade go to Boston
 ‘Adio said that he also followed Ade to Boston’

- (8) Āđiό_i sọ pé NO_i[+LOG] òun_i náà tẹlé Adé lọ sí Boston
 Adio say that he also follow Ade go to Boston
 ‘Adio said that he also followed Ade to Boston’

In (7) the topic operator licenses òun to take *Olú* (who is the topic of the discussion) as its referent while the logophoric operator licenses òun to co-refer with *Āđiό* in the logophoric expression in (8). The important thing here is that, the closest binder of a strong pronoun must be an A-bar element. This does not require the strong pronoun to be bound by the closest operator. The following example also shows this clearly:

- (9) Āđiό_i sọ pé NO_i[+LOG] Adé rò NO_j[+LOG] pé òun_{i/j} yóò di ọba
 Adio say that Ade think that he will become king
 ‘Adio said that Ade thinks that he will become the king’

In (9), any of the two base generated operators can bind the strong pronoun, distance notwithstanding. What is important is that the strong pronoun must be locally A-bar bound. This is in accordance with the SPLP, repeated below as (10).

(10) **Strong Pronoun Licensing Principle**

A strong pronoun must be locally A-bar bound by a null operator

The base generated logophoric operator and the derived null operator can also co-occur in a sentence.

(11) Ta_i ni NO_i \emptyset $Olú_j$ $sọ$ NO_j $pé$ $òun_j$ $rí$ t_i

who be Olu say that he see

‘who did Olu say that he saw’

The example in (11) also shows that the non-logophoric operator does not block wh-movement. It does not create an island as the derived null operator does (see chapter 4).

(12) Ta_i ni NO_i \emptyset $Olú_j$ $sọ$ NO_j $pé$ $ó$ t_i $rí$ $òun_j$

who be Olu say that 3sg see him

‘who did Olu say saw him’

When they co-occur, the logophoric operator can A-bar bind the strong pronoun in its scope as long as the strong pronoun is not a resumptive pronoun ((11) and (12)). However, the strong pronoun must be dependent on a derived null operator whenever the strong pronoun is the resumptive pronoun providing the only variable position for the moved operator. An example of this is given in (13 (b)). This restriction also explains why the representation in (14) is not acceptable in Yoruba.

- (13) a. Òjó_i sọ NO_i pé Adé ra ìwé òun_i nìkan
 Ojo say that Ade buy book his alone
 ‘Ojo said that Ade bought his book alone’
- b. Ta_i ni NO_i Ø Òjó_j sọ NO_j pé Adé ra ìwé òun_i nìkan
 who be Ojo say that Ade buy book his alone
 ‘Whose book did Ojo say that Ade bought alone’
- (14) * Ta_i ni NO_i Ø Òjó_j sọ NO_j pé Adé ra ìwé òun_j nìkan
 who be Ojo say that Ade buy book his alone

Thus the examples confirm that a logophoric operator does not need to bind a variable whereas a wh-/focus null operator must not be vacuous. It must bind a variable (compare (13) and (14)).

5.3 Flashback

This dissertation has contributed to our understanding of the syntax of empty categories with specific reference to null operators – derived and base generated. The fact that we have shown that a null operator cannot satisfy the EPP requirement of T in both Yoruba and Edo (like Danish, Icelandic and Japanese) suggests that the properties of null operators are rather consistent across languages. Thus we can say that it is (at least nearly) universal.

Also, the fact that we are able to explain the so-called (non-agreeing) subject resumptive pronouns in term of the EPP effectively removes Yoruba, Edo and all other languages that use such non-agreeing resumptive pronouns from the exceptional class that has been ascribed to them in the literature (e.g. Boeckx 2003).

Furthermore, the fact that children acquiring Yoruba and Edo can figure out the dependency patterns between personal pronouns and null operators in different types of constructions (especially in *wh*-questions) without being explicitly taught them suggests that language acquisition does indeed have a significant innate component. It is not conceivable that kids could imitate adults in such aspects of language acquisition since null operators are not pronounced.

Finally, the fact that we are able to explain the absence of superiority effects and the near absence of weak crossover effects in term of parametric differences in the question formation process between Yoruba and English suggests that weak crossover is indeed universal, as is assumed in the literature.¹²²

¹²² Some instances of weak crossover effects have also been reported in languages that allow scrambling (See Frank, Lee and Rambo 1995 for example)

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Publications

Articles

1998	Kó in Yoruba Syntax. in Journal of Nigerian language and Literatures, No. 6, 30-33, Lincom International, Department of African Linguistics, Unterschleissheim/Munchen, Germany
1998	The Linguistic Forms of Ààrẹ̀-Àgò Aríkúyẹ́rí. in ALÓRE, Ilorin Journal of the Humanities, University of Ilorin, Ilorin, Vol. 9, No.1,

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