

THE APPARENT ABSENCE OF SUPERIORITY EFFECTS IN YORÙBÁ

MULTIPLE WH-CONSTRUCTIONS

by

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## **ABSTRACT**

This study investigates the syntactic structures of wh-constructions in interrogative constructions in Yorùbá. The study's primary objective is to determine whether superiority effects are absent or present in wh-constructions. Chomsky's (1995) Minimalist Program has been utilized as the theoretical framework for this study. The research was conducted by implementing syntactic processes in order to investigate and describe Yorùbá wh-question formations. The results of the Yorùbá data analyzed show that, to form wh-questions, Yorùbá wh-words front to the sentence initial position, followed by a focus marker. Yorùbá is argued to permit the fronting of only one wh-phrase; other wh-phrases (if any) must remain in situ. Contrary to Adésolá's (2005, 2006) assertion that wh-phrases are base generated in their surface position in Yorùbá, resulting in no superiority violations, I argue here that wh-constructions in Yorùbá involve genuine syntactic movement. It is demonstrated that wh-movement in the language, which has been standardly described as being insensitive to the superiority condition, does, in fact, exhibit observable superiority effects.

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## LIST OF ABBREVIATIONS

ACC	Accusative
DAT	Dative
DO	Direct Object
EPP	Extended Projection Principle
Foc	Focus
FocP	Focus Phrase
HTS	High Tone Syllable
IO	Indirect Object
IP	Inflection Phrase
IP	Inflection Phrase
LC	Leftness Condition
LF	Leftness Condition
LF	Logical Form
MASC	Masculine
MFS	Multiple Filled Specifier
MFW	Multiple WH Fronting
MLC	Minimal Link Condition
MP	Minimalist Program
NOM	Nominative
NOp	Null Operator
PL	Person Plural
PredP	Predicate Phrase
Pro	Pronoun
PRTC	Particle
PST	Present Tense
QM	Question Marker
QP	Question Particle
RP	Resumptive Pronoun
SG	Singular Person
SVO	Subject Verb Object
WCO	Weak Cross-over

## CHAPTER 1: INTRODUCTION

### 1.1 Background

This work examines the apparent absence of superiority effects in Yorùbá multiple wh-constructions. Multiple wh-questions are questions in which the speaker asks about more than one thing. Subsequently, these questions contain more than one wh-phrase. Some English examples are shown in (1) and (2). A well-attested pattern within these kinds of constructions is that the lower wh-phrase does not move above the higher (or superior) wh-phrase see (1b) and (2b). This tendency is referred to as the *superiority condition*. The superiority condition is a constraint on the ordering of wh-phrases in sentences with more than one wh-phrase. This condition has been a central issue within the framework of minimalism (Chomsky 1995). The movement constraint is attested in an earlier statement of Kuno & Robinson (1972), which states that preposing of a wh-phrase across another wh-phrase is not allowed. With an economy need for syntactic derivations to make the shortest move possible, Chomsky & Lasnik (1993) and Chomsky (1995) postulate that only the closest wh-phrase can be attracted for movement to C.

- (1) a. Who went where?  
b. \*Where did who go?
  
- (2) a. Who do you think \_\_\_ bought what?  
b. \* What do you think who bought \_\_\_?

However, Adésolá (2006) argues that superiority effects are not observed in Yorùbá wh-constructions. The acceptability of the sentence in (3b) seems to violate the superiority condition.

- (3) a. Tai ni o rò pé t<sub>i</sub> ó ra kíni  
 who be you think that RP buy what  
 ‘who do you think bought what’
- b. kí<sub>j</sub> ni o rò pé taní rà t<sub>j</sub>  
 what be you think that who buy  
 ‘What do you think that who bought?’? (*bad in English*)

(Adesola 2006:309)

In example (3b), the object wh-phrase is moved above the subject wh-phrase to [Spec CP] and the sentence is grammatical. This suggests that the superiority condition may not be universally observed in languages that exhibit wh-movement to [Spec CP].

In this thesis, I give a structural account within the Minimalist Program (Chomsky 1995) to explain that superiority effect is actually observable in Yorùbá and that its appearance is predictable based on a focus analysis of wh-movement.

## 1.2 Yorùbá and Its Speakers

Yorùbá is a tone language spoken in Southwest Nigeria by an estimated 30 million speakers (Fagbolu et al. 2016), plus about 2 million second-language speakers (Simons & Fennig 2018). Yorùbá, Igbo and Hausa are the three major languages spoken in Nigeria. Hausa and Igbo are mainly spoken in the north and southeast part of Nigeria respectively. According to Oyetade (2007), Yorùbá is prominently spoken by the ethnic Yorùbá people in Lagos, Oyo, Ogun, Osun, Ondo, and Ekiti. It is also spoken in



neighbouring countries of the Republic of Benin, Cote d'Ivoire, Togo, Sierra Leone, Gambia and Ghana (Campbell 1991).

Yorùbá is classified as part of the Niger-Kordofanian<sup>1</sup> language group. Niger-Kordofonian is divided into two sub-groups: Niger-Congo and Kordofanian. Niger-Congo is further sub-divided into the West Atlantic, Mande, Gur, Kwa, Benue-Congo, and Adamawa-Ubangian families. Yorùbá belongs to the Yoruboid cluster of the Defoid subbranch of the Benue-Congo branch of the Niger-Congo language family.

As a result of the Trans- Atlantic slave trade which sent an estimated 12 million enslaved Africans of diverse ethnolinguistic origins to the America between the 16<sup>th</sup> and 19<sup>th</sup> centuries (Lewis 2021), Yorùbá speakers are now found in the United States, United Kingdom, Cuba, Brazil, Saint Lucia, Grenada, and Trinidad and Tobago. After the slave trade was abolished, many former slaves stayed back and their descendants, language, beliefs, and culture are now part of the communities (Adewole 1987).

Yorùbá's impact in various regions of the world, particularly Nigeria, has made it a widely spoken language across the world. Due to its extensive usage, both local and foreign researchers have undertaken significant research on the language. Yorùbá grammar has been well documented, which is undoubtedly one of the reasons for its international renown. According to Adeniyi (2004), the pre-eminence of Yorùbá has been clearly established in previous studies like Greenberg (1963) and Bamgbose (1963).

In Nigeria, Yorùbá is used as a language of instruction in pre-primary and lower primary schools, as well as a curriculum topic in secondary schools. Yorùbá is also studied in the university, both in Nigeria and abroad, and it is extensively utilized in the

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<sup>1</sup> The Niger-Kordofonian classification by Bock & Mheta (2013) is not universally accepted.

media, on radio and television stations throughout the country. Code-switching between Yorùbá and English is an act for many people who are speakers of other Nigerian languages but who are not fully fluent in either Yorùbá or English.

Yorùbá is mostly used in homes and in official contexts such as village or tribe gatherings. In formal or official circumstances, standard English is utilized.

In casual circumstances, Yorùlish, a creolized version of English is spoken. The latter combines English grammar and vocabulary with Yorùbá vocabulary.

### **1.3 Yorùbá Dialects**

The term *Yorùbá* refers to a collection of dialects that are mutually intelligible to varying degrees. Yorùbá dialects vary greatly in their linguistic structure, including differences in phonology, grammatical structure, and vocabulary. Dialects of Yorùbá can be found all across West Africa. Ketu, Nago, Ije, Ajase, Idaita, and Tsabe are Yorùbá dialects spoken in Benin, whereas Ana and Itsa are Yorùbá dialects spoken in Togo. Yorubá dialects are also spoken across the African Diaspora, most notably in the Caribbean. The Yorùbá dialect in Brazil is known as Nago, and the dialect in Cuba is known as Lucumi (no longer used as a spoken language).

Yorùbá, like many other African languages, was first studied by missionaries who wanted to translate the Bible for evangelical purposes. The writing and study of the Yorùbá language and culture among Sierra Leone's established free slaves were results of these efforts (combined with the abolished slave trade). In 1849, these Yorùbá people, known as Aku, pioneered language writing and study, resulting in Yorùbá being one of

the first West African languages to have a written grammar and lexicon. Since then, work on the language has proceeded.

In 1884, the Bible was translated to Yorùbá by one of the free slaves, Samuel Ajayi Crowther, resulting in the creation of a written form of Yorùbá that is widely used across dialects. Yorùbá dialectal forms in Nigeria can be divided into five regional groups: North-West Yorùbá (NWY); North-East Yorùbá (NEY); Central Yorùbá (CY); South-West Yorùbá (SWY); South-East Yorùbá (SEY). Because the 'geographic' dialects found in each group have varying degrees of mutual intelligibility, these groupings are characterized by phonological, lexical, and grammatical differences. However, a consensual standard form has emerged, and it is now widely accepted as the format for writing and teaching the language.

This form, which is similar to SWY, is understood by speakers of all dialects and continues to function as a means of communication for all speakers. This form is taught in schools and is generally spoken (or written) by educated native speakers to those who speak various dialects (Bamgbose 1966a). In the 1960s and 1970s various orthography committees were established by both government and academic groups to consider and then revise the language's standard orthography.

The significant revisions that were made in 1966 produced several grammars, dictionaries, and light books which are the primary foundation for the invention and implementation of the standard Yorùbá orthography, and hence the standard teaching of Yorùbá language in schools and broadcast on radio and television.

## 1.4 Yorùbá wh-questions

Wh-words are content words in Yorùbá. They are lexical items with associated lexical characteristics. According to Borsley (1991), they are words used in an interrogative sentence that require a more specific answer than just yes/no. All languages have their own peculiar interrogative questions; therefore, they vary in their grammatical structure.

Following Akanbi (2016), wh-words in Yorùbá are as follows:

### (4) Wh-words in Yorùbá

(a) <i>ta</i>	‘who,whom’
(b) <i>kí</i>	‘what’
(c) (n) <i>íbo</i>	‘where’
(d) <i>èlò</i>	‘how much’
(e) <i>mélòó</i>	‘how many’
(f) <i>báwo</i>	‘how’
(g) <i>kílode</i>	‘why’
(h) <i>wo</i>	‘when/which’

(Akanbi 2016:415)

These wh-words contain distinguishing characteristics that distinguish them from one another. Each marker has unique features that set it apart from the others. For example, *ta* has the feature [+human], *kí* has the feature [-animate and +animate (animals)], and *bawo* has the feature [+manner], among others (Akanbi 2016).

## 1.5 Organization of work

Chapter 2 of this thesis discusses the apparent absence of superiority effects in Yorùbá. Chapter 3 presents a literature review on wh-movement and minimalism. Chapter 4 focuses on prior research on the apparent absence of superiority effects in some

languages that exhibit wh-fronting, while Chapter 5 focuses on the theoretical analysis of this research, laying out the main points of this argumentation along with conclusions.

## **CHAPTER 2: THE APPARENT ABSENCE OF SUPERIORITY EFFECTS IN YORÙBÁ**

### **2.1 Introduction**

This chapter focuses on Adésolá's (2005) analysis on the movement of wh-phrases and apparent violation of superiority effects in Yorùbá. Adésolá argues that wh-phrases do not move in Yorùbá, rather, they are base generated in the surface position because they do not move, superiority conditions do not apply and, hence, superiority is not actually violated. While his explanation is able to account for the apparent superiority violations, it fails to account for other features of the language, specifically the presence of resumptive pronouns in interrogatives with subject wh-phrases. I review Adésolá's work on wh-phrase and his take on wh-movement in Yorùbá (section 2.2).

### **2.2 Adésolá (2005)**

In chapter 1, I explained that the examples in (1b) and (2b) below were ungrammatical in English because a structurally lower wh-phrase moves above a wh-phrase higher in the sentence

- (1) a. Who bought what?  
b. \*What did who buy t?
  
- (2) a. Who<sub>i</sub> did you persuade t<sub>i</sub> to buy what<sub>j</sub>?  
b. \*What<sub>j</sub> did you persuade who<sub>i</sub> to buy t<sub>j</sub>?

Adésolá follows Hornstein (1995) weak crossover (WCO) account, which explains the data above as a case of illicit pronoun binding that involves moving a quantifier (example 4) across a pronoun that depends on it. This follows from Postal (1971), which states that


a pronoun cannot be bound by a Wh-operator that is fronted over it. In view of this, Chomsky (1976) proposed the leftness condition, stating that “a pronoun cannot be linked to a variable on its right”. Examples (4) and (5b) are ungrammatical because in each, a pronoun is linked to a variable on its right.



(3) Leftness Condition (LC):

A pronoun cannot be linked to a variable to its right

(Chomsky 1976:342)

(4) \* $[\epsilon_{nikan}_j$  [  $\dot{y}á$   $r\grave{e}_j$   $f\acute{e}r\grave{a}n$   $t_j$  ]]  
 someone mother his like  
 ‘His<sub>j</sub> mother loves someone<sub>j</sub>’ (bad in English as well)



(5) a.  $who_j$   $t_j$  saw  $his_j$  mother  
  
 b. \* $who_j$  did  $his_j$  mother see  $t_j$   


In order to analyze the superiority condition as a special case of WCO, Hornstein (1995) decompose each *in situ* wh-phrase into a bound pronominal and a nominal restrictor. For example, pro + thing = what, and pro + person = who, as analyzed with Yorùbá examples in (6) and (7).

(6) a.  $ta_i$   $ni$   $ó$   $t_i$   $ra$   $kíni$   
 who be RP buy what  
 ‘Who bought what’

b. [<sub>PredP</sub> ta<sub>i</sub> ni [<sub>CP</sub> ó t<sub>i</sub> ra [<sub>proj</sub> thing ] (=kí) ]]



(7) a. k<sub>i</sub> ni tani rà t<sub>j</sub>  
 what be who buy  
 ‘What did who buy?’ (bad in English)

b. [<sub>PredP</sub> k<sub>i</sub> ni [<sub>CP</sub> [ pro<sub>i</sub> person ] (= ta) rà t<sub>j</sub> ]] (bad in English)



(Adésolá 2005:31)

Following example (6a), with the LF form in (6b), the pronoun is linked to a variable on its left, the linking is acceptable following the *leftness condition* (see 3). In example (7a), with LF form in (7b), the pronoun is linked to a variable on its right, and hence it is expected to violate the leftness condition and be ungrammatical. However, it turns out to be grammatically fine in Yorùbá.

To accommodate and account for the Yorùbá data, Adésolá revises Hornstein's (1995) theory. He argues that wh-phrases in Yorùbá are base generated in their surface position, stating that what is moved is the null operator. The null operator moves while the wh-phrases remain in their surface position. The structure in (6) and (7) above will yield the results in (8) and (9) below. The LF structure of (9) is shown in (10).

(8) [<sub>PredP</sub> ta<sub>i</sub> ni [<sub>CP</sub> NOp<sub>i</sub> ∅ [<sub>IP</sub> ó t<sub>i</sub> ra k<sub>i</sub> ni ]]]  
 who be NOp C RP buy what  
 ‘who bought what?’

(9) [<sub>PredP</sub> k<sub>i</sub> ni [<sub>CP</sub> NOp<sub>j</sub> ∅ [<sub>IP</sub> tani rà t<sub>j</sub> ]]]  
 what be NOp C who buy  
 ‘What did who buy?’ (‘or what was the thing that who bought’)

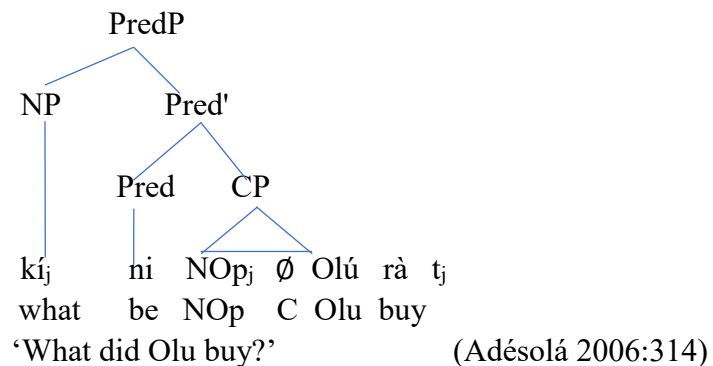
(10) [<sub>PredP</sub> k<sub>i</sub> ni [<sub>CP</sub> NOp<sub>j</sub> ∅ [<sub>IP</sub> [pro person] (= ta ni) rà t<sub>j</sub> ]]]



In example (10), the pronoun has an external antecedent (*ki*) that is outside the scope of the null operator that locally A-bar binds it. Adésolá states that the presence of ‘*ki*’ as an external binder of the variable neutralizes the WCO because ‘*ki*’ is locally bound by nothing. It is generated in the position where it appears at surface structure. What is moved is a null operator. The tail and head of a null operator is null, thus prohibiting any illicit binding of the PRO to a trace on its right. Hence, the outcome of (9) results in the absence of a WCO (or superiority) effect in (10)

To summarize, Adésolá argues that wh-movement in Yorùbá does not involve movement of a phrase as in English but involves null operator (NOP) movement. He argues that the *ní* that follows the wh-phrases *ki* and *ta* is a verbal element that takes a clausal complement with a moved null operator (NOP). Only a null operator is moved 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 *ní* in a control like manner (Adésolá 2005:314), avoiding the condition for WCO (or superiority) effects.

(11)



While the null operator analysis presents a solution for the apparent absence of superiority violations in Yorùbá, it also yields complications for the analysis of resumptive pronouns in wh-phrases in the language. I discuss this in the next section.

### 2.3 A Weakness in Adésolá’s (2005) Analysis: Resumptive Pronouns

One major issue arises with Adésolá’s (2005) analysis of wh-constructions. Consider the following example provided by Adésolá (2010) where there is an insertion of the morpheme *ó*:

- (12) a. *ta<sub>i</sub> ni NOP<sub>i</sub> ∅ ó ra ìwé*  
           who be C RP buy book  
           ‘Who bought the book’
- b. [*Adé àti Olú<sub>i</sub> ni NOP ∅ ó ra ìwé*  
       *Adé and Olu be C RP buy book*  
       ‘It was Adé and Olu who bought the book’

(Adésolá 2010:69)

Adésolá (2005) argues that wh-words are base generated in their surface position. Hence, *ta* in example (12a) is generated in the position where it appears at surface structure. What is moved is a null operator. While this lack of movement can explain the lack of superiority effects as shown in (12a), it cannot explain the presence of the morpheme *ó* in that same construction. Adésolá (2010) explains that this morpheme is a resumptive pronoun and explains that it appears because the wh-phrase was moved. The question to ask here is: is there movement or not?

Furthermore, when the resumptive pronoun is absent, the resulting sentence is ungrammatical, as in (13a and b). Adésolá (2005) provides no explanation for why this might be.

- (13) a. \*ta<sub>i</sub> ni NOp<sub>i</sub> ∅ \_\_\_<sub>i</sub> ra iwé  
           who be C           buy book
- b. \*[Adé àti Olú]<sub>i</sub> ni NOp<sub>i</sub> ∅ \_\_\_<sub>i</sub> ra iwé  
           Adé and Olu be C           buy book

(Adésolá 2010:69)

To address this issue, let us first consider Adésolá's (2010) explanation for the presence of resumptive pronouns in wh-construction. Adésolá draws on work by Stowell (1987) regarding *unacceptable gaps*. Stowell explains that the extraction of a null operator from the subject position results in an *unacceptable gap*. This is illustrated in (14) where the null operator is moved from an object position. Following Stowell (1987), example (14a) contrasts with (14c), where the null operator is moved from an object position. Hence, (14a) is ungrammatical because the null operator does not satisfy the EPP requirement of T because a null CP operator must be governed by a lexical [+V] head at D-structure. Example (14a) contrasts with (14b), where an overt wh-phrase is moved.

- (14) a. \*John owns the gun, as shows/indicates that he is guilty  
       b. John owns the gun, which shows/indicates that he is guilty  
       c. Bill is a liar, as Mary already knows

Adésolá (2010) proposes that a resumptive pronoun is inserted in (12) because Yorùbá does not permit a gap in the subject position. The gap is not permitted due to the null operator movement Yorùbá exhibits. Adésolá states that, unlike overt operator movement, null operator extractions from the subject position does not permit unacceptable gaps, as in (14a).

## 2.4 The Status of Resumptive Pronouns in Yorùbá

What appears to be the third person subject pronoun is the morpheme used as a resumptive pronoun to replace a moved subject. The contradiction between Adésolá's (2005) and (2010) analysis of wh-movement in Yorùbá emanates from the insertion of resumptive pronouns. In Adésolá's (2005) analysis, he argues that wh-phrases are base generated in the position they appear at surface structure, while in his analysis in (2010), he provides an example where there is an insertion of resumptive pronoun used to replace a moved wh-phrase (see examples (12) and (13) above). Awobuluyi (2001) is the first linguist to argue about the status of this pronoun. He argues that the morpheme should be referred to as a high tone syllable (HTS) since it behaves like the HTS that usually occurs between the noun subject and the verb that follows it. To understand his point of view, see example (15) from Akanbi (2018).

- (15) a. Òjọ́ ó        sun  
          Ojo HTS    sleep  
          ‘Ojo slept’
- b. Ayò    ó        lẹ  
          Ayo HTS    go  
          ‘Ayo went’
- (Akanbi 2018:36)

The insertion of *ó* is optional, as the high tone on it can assimilate to the tone on the preceding vowels, making the high tone on *Ojó* a long tone and the low tone on *Ayó* a low-high contour tone, and the sentence will still be grammatical, as shown in (16).

- (16) a. Òjọ́    sun  
          Ojo    sleep  
          ‘Ojo slept’

- b. Ayó lọ  
 Ayo go  
 'Ayo went'

Following Awobuluyi's claim, in (17), the morpheme in the subject position can only be regarded as an HTS and not a third person pronoun.

- (17) a. — ó lọ si oko  
 HTS go PP market  
 He went to the market

- b. — ó pa eku  
 HTS kill rat  
 He killed the rat

(Akanbi 2018:36)

This claim implies that the pronoun that should have been in the underlined subject location has been removed and despite the lack of an overt subject, the phrase is nonetheless grammatically correct. Supporting Awobuluyi's claim, Akanbi (2018) argues that Yorùbá should be regarded as a pro-drop language.

A

B

- (18) a. — ó lọ si oko  
 ProHTS go Prep farm  
 'He went to the farm'

- ⊖ ko lọ si oko  
 Pro Neg go PP farm  
 'He did not go to the farm'

- b. — ó lo si ibe  
 Pro HTS go Prep there  
 'He went to the place'

- ⊖ yoo lo si ibe  
 Pro fut go PP there  
 'He will go to the place'

(Akanbi 2018:41)

In the data given by Akanbi (2018) above, the HTS surfaces after the third person singular subject pronoun has been obligatorily dropped. As noted by Akanbi, the HTS

emerges between the subject and the verb that immediately follows it. As demonstrated in the B section of the data, this HTS does not appear at all. The HTS does not appear within a negative structure or a structure that indicates the future marker, which is a regular occurrence in Yorùbá. The HTS is obligatorily dropped. The discussion and analysis above are reviews of scholars stands on the status of resumptive pronouns in Yorùbá, the most recent argument being Akanbi's pro-drop argument.

My assumption with respect to the so-called resumptive pronoun in subject position is that it is inserted under [Spec TP] to host the HTS. If a lexical item is present in [Spec TP], the HTS simply attaches to that lexical item. That is, the so-called subject resumptive pronoun only appears when movement out of [Spec TP] has taken place.

## **2.5 Conclusion**

In this chapter I reviewed Adésolá's (2005) account for the apparent lack of superiority effects in Yorùbá. He argues that wh-phrases are base generated in the surface position they appear. This assumption avoids having a pronoun linked to a variable to its right (thus the leftness condition is satisfied) and there is no WCO effect; similarly, there is no movement from a lower wh-phrase above a higher wh-phrase. Thus, there is no violation of superiority. Adésolá's analysis diverges from the conventional overt wh movement that has been used to account for wh-phrases in Yorùbá (see Awoyale 1995; Awoyale 1997; Sonaiya 1989; Rizzi 1997; Aboh 1998). More problematically, however, it contradicts his other work on wh-phrases, which requires movement, namely Adésolá's (2010) analysis of resumptive pronouns from embedded wh-clauses. Furthermore, in chapter 5, I demonstrate that superiority effects are, in fact, observable in Yorùbá.

In this thesis, I will assert that wh-constructions do involve movement in Yorùbá. This is in line with most of the existing literature on wh-movement and resumptive pronouns in the language. However, this assumption still leaves us with the original question: why is the superiority condition seemingly violated in Yorùbá? To shed light on this and provide a framework for an alternative analysis, I review, in chapter 4, the literature on wh-movement in another set of languages that appear to violate the superiority condition. In the next chapter, I will give an overview of the minimalist program.

## **CHAPTER 3: THE THEORETICAL ASSUMPTIONS OF THE MINIMALIST PROGRAM**

### **3.1 Introduction**

This chapter provides an overview of the theoretical framework adopted in this thesis. The minimalist program is used in this thesis to structurally account for the apparent violation of superiority effects in Yorùbá. Section 3.2 focuses on the motivation of the minimalist program and the two basic operation of the program while section 3.3 focuses on Wh-movement within the framework of the minimalist program.

### **3.2 The Minimalist Program**

The Minimalist Program (henceforth MP: Chomsky, 1995) developed from the Principles and Parameters Theory (Chomsky 1981). MP is designed as a guiding principle to develop upon the earlier syntactic theories, and it is initiated to eliminate construction specific rules that are conceptually unnecessary from the grammar. MP eliminates the deep (DS) and surface structure (SS) level of representation. The only levels of linguistic structure are two interface levels, phonological/phonetic form (PF) and logical form (LF) (Chomsky 1995). PF interacts with the articulatory-perceptual (AP) performance system for speech perception and production and LF interacts with the conceptual-intentional (C-I) performance system. Any existing well-formedness conditions apply only to the PF and LF interface levels, and only these levels can receive full interpretation. The moment at which the derivation is conveyed to the PF and LF components is referred to as spell-out. The Minimalist Program posits only two basic operations, Merge and Move. These are described in turn.



### 3.2.1 Merge

The term "Merge" (also known as external merge) refers to the operation that brings together two syntactic objects, such as  $\alpha$  and  $\beta$ , to create a new syntactic object, such as  $\{\alpha, \beta\}$  (Chomsky 1995). To put it another way, two objects,  $\alpha$  and  $\beta$ , are combined into a set that is not ordered and its label is determined by the head which may be  $\alpha$  or  $\beta$ .

(1) Merge ( $\alpha, \beta$ )  $\Rightarrow$   $\{\gamma \{\alpha, \beta\}\}$

The merged element will take on the properties of either of the two items that were merged into it,  $\alpha$  or  $\beta$ . The head determines the label, which in turn identifies the properties of the phrase. The Merge operation is binary and recursive because the operation applies only to the root. When  $\alpha$  and  $\beta$  is merged,  $\alpha$  or  $\beta$  cannot further merge with another object but the object that has been merged can combine with another object  $\gamma$ , in a subsequent step. The goal of Merge is to combine two objects. For example, *[drink]* and *[milk]* can be merged, forming a VP *[drink milk]*. The VP *[drink milk]* can then proceed for further merge but *[drink]* and *[milk]* cannot. However previously merged objects, like, for example, *[milk]*, can be *moved* to combine with another object. This is a new operation, called Move, and is described below.

### 3.2.2 Move

The operation Move (also known as Internal Merge) also combines elements, but one of the elements being combined comes from inside itself. For example, the *what* in [he saw what] can be moved from inside [he saw what] to the sentence initial position to merge

with [he saw] resulting in [what he saw]. According to Chomsky (1995), a feature F raises to a target K only if F enters into a checking relation with a feature of the head of K, technically a sublabel of K. Chomsky (1995) explains the Move operation as follows:

(2) Move: Given the syntactic object  $\Sigma$  with the terms K and  $\alpha$ , Move targets K

(i) raises  $\alpha$ , and

(ii) merges  $\alpha$  with K to form the new syntactic object (Chomsky 1995:250)

Move operations are guided by economy conditions to avoid complex operation in favour of the simpler ones. This includes conditions on when and how Move occurs. Further, Move is crucially restricted by a property of Last Resort and only occurs if derivations will not be completed with Merge alone. Movement occurs as a way to check uninterpretable features (Chomsky 1995). The raising of a constituent to another position is driven by the property of Last Resort as a morphological necessity to check the feature of a particular head. If these features are not checked, the derivation will not converge. According to Chomsky (1995), “a feature F raises to a target K only if F enters into a checking relation with a feature of the head of K, technically a sublabel of K”.

When movement does happen, movement will always take the shortest route possible. This is formalized as the Minimal Link Condition (MLC; Chomsky 1995).

(3) Minimal Link Condition (MLC):

K attracts  $\alpha$  only if there is no  $\beta$ ,  $\beta$  closer to K than  $\alpha$ , such that K attracts  $\beta$

(Chomsky 1995:311)

The MLC prevents a longer movement from taking place if a shorter valid movement is available; if  $\beta$  is closer to K and might enter the same checking relation as K, movement of  $\alpha$  to K is blocked by  $\beta$ .

### 3.3 Wh-movement in Minimalism

Wh-movement involves the movement of an interrogative to a higher position in the clause. This interrogative must require a more specific answer than just 'yes/no' (Borsley 1991). Radford (2004) explains that in English, these interrogatives include wh-words like *what*, *which*, *where*, *when*, *who*, *why*, and *how*. Various explanations for wh-movement have been proposed in the generative literature. Within Government & Binding theory, the occurrence of a wh-word at the sentence-initial position is a result of overt wh-movement caused by the Move- $\alpha$  rule. According to Abedi, Moinzadeh & Gharaei (2012), wh-words shift from their root place in the D-structure to the CP specifier position. The wh-word *landing position* is the ultimate position to which the wh-word moves. Within the Minimalist Program, Chomsky (1995) asserts that wh-movement occurs as a way to check uninterpretable [+wh] features on C. He explains that in interrogative sentences, the [+wh] feature on C needs to be checked; if this feature is not checked, the derivation will fail. Wh-phrases raise to Spec CP by Last Resort to check the uninterpretable [+wh] feature, thus allowing the derivation to converge.

Wh-movement obeys the superiority condition, a condition governing the relative order of wh-phrases in sentences with more than one wh-phrase. This ordering constraint

has been a central issue in the syntax of languages that exhibit wh-movement. In constructions with more than one wh-word, the probe always attracts the closest wh-word and only the shortest possible move is made. Two restrictions are formalized below from Chomsky (1992) economy of derivation.

(4) Economy condition 1 ("Attract Closest")

A probe attracts and agree with the closest wh-word (goal) (Chomsky 1992)

(5) Economy condition 2 ("Shortest Move")

In deriving a representation, make the shortest possible movements (Chomsky 1992)

In many Slavic languages, the uninterpretable [+wh] feature can continue to probe for new goals even after the agree operation has been reached with the nearest goal. Thus, several instances of movement are able to occur, resulting in multiple specifiers (discussed further in Chapter 4).

What is fascinating is the sequence in which the wh-phrases appear. The wh-phrase that is nearest to C is the first to move. The second closest "tucks in" (linearly appearing after the first moved wh-phrase) beneath it. As a consequence, the wh-word attracted first will have a higher node (Spec CP), while the second wh-word tucks underneath to form the lowest specifier of CP. This is illustrated in the Bulgarian examples of Wh-questions below (taken from Rudin 1988). In each case, wh-phrases make the shortest movement possible, obeying the superiority condition.

- (6) a. Koj kogo vižda ? Bulgarian  
who whom sees  
'Who sees whom?'

b. \*Kogo      koj      vižda ?  
whom      who      sees

(Rudin:1988:473)

### **3.4 Conclusion**

This chapter reviews the motivation for the minimalist program and the two basic operation of the program. It also focuses on wh-movement within the framework of the minimalist program and the order in which wh-phrases move to their landing positions.

In the next chapter, I look at how apparent superiority violations have been addressed within the Minimalist Program, focussing on Slavic languages. I also review some analyses which account for some apparent superiority violations in a group of Slavic languages.

## **CHAPTER 4: APPARENT SUPERIORITY VIOLATIONS IN MULTIPLE WH-MOVEMENT**

### **4.1 Introduction**

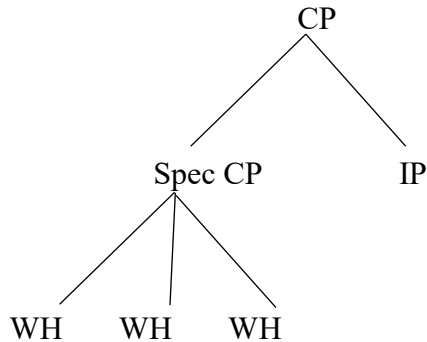
This section reviews three analyses to account for the apparent violation of superiority in primarily Slavic languages as well as Japanese and Korean: Rudin (1988), Bošković (1997) and Stepanov (1998). Each of these approaches addresses why superiority effects are attested in some languages with multiple wh-movement but seemingly absent in others. In each account, the difference in behaviour is attributed to a structural difference. Rudin (1988) accounts for the absence of superiority effects by dividing languages that move their wh-words into types: [+multiple filled Spec CP] (henceforth, [+MFS]), and [-multiple filled Spec CP], (henceforth [-MFS]), where the division is said to be based on the landing sites of the moved wh-words. Bošković (1997) attributes the differences to the trigger for movement ([+wh]/[+Foc]). Stepanov (1998) argues that not all wh-movement is triggered by the [+wh] feature in Spec CP. He notes that wh-movement in Russian is focus driven and not questioning [+wh checking], referring to this type of movement as wh-fronting.

### **4.2 Rudin (1988): Condition on Spec CP Adjunction**

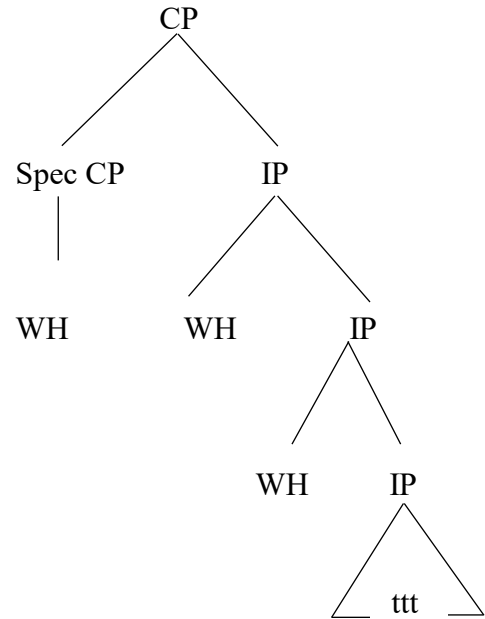
Rudin (1988) differentiates between languages that exhibit wh-movement to Spec CP and proposes a parameterized condition on Spec CP adjunction (see example 4). Rudin divides the wh-fronting languages into two types based on the landing sites of the fronted wh-phrases: [+MFS], and [-MFS]. [+MFS] languages, like Bulgarian and Romanian, permit multiple wh-phrases in Spec CP (see 1a). [-MFS] languages, like Serbo-Croatian,

Polish, and Czech, permit only one wh-phrase in Spec CP; other fronted wh-phrases are adjoined to IP (see 1b).

(1) a. +MFS



b. -MFS



Rudin establishes that [+MFS] languages have ordering constraints and are sensitive to the superiority principle (2a-b), while [-MFS] languages are not (3a-b and 4a-d).

(2) a. Koj kogo vižda?  
 who whom sees  
 'Who sees whom?'

(Bulgarian)

b. \*kogo koj vižda?

(Rudin 1988:473)

(3) a. ko koga vidi?  
 who whom sees  
 'Who sees whom?'

(Serbo Croatian)

b. koga ko vidi?

- (4) a. ko je što kome dao?  
       who has what to whom given
- b. ko je kome što dao?
- c. Što je ko kome dao

(Rudin 1988:473)

To account for the differences between [+MFS] and [-MFS] language, Rudin proposes the following parameterized condition on Spec CP adjunction, prohibiting adjunction at different levels of the grammar:

(4) Condition on Spec-CP Adjunction

\*<sub>[spec CP α Spec-CP]</sub>

(Nothing may be adjoined to Spec CP) (at level X of the grammar)

Rudin demonstrates that several characteristics distinguish the two groups. [+MFS] languages obey the superiority condition, allow multiple wh-phrase adjunctions to Spec CP at or before surface structure, permit multiple extraction, and allow for wh-island violations. [-MFS] languages, on the other hand, disallow adjunction to Spec CP. As a result, multiple extraction and wh-island violations are prohibited. This is summarized in the chart below.



(5)

	Bulgarian & Romanian	Serbo-Croatian, Polish & Czech
1. Multiple WH extraction from a clause	-	-
2. Wh-island violation	+	-
3. Clitics follows first wh-word	-	+
4. Parentheticals, adverbs, particles after first WH	-	+
5. Free nom/acc wh-word order	-	+

(Rudin 1988:478)

Following Rudin, [+MFS] languages are subject to the superiority condition while [-MFS] languages are not. In [+MFS] languages, the fronted wh-words have a strict order, with nominative always preceding accusative, whereas in [-MFS] languages, the fronted wh-words have a free word order, with nominative > accusative as well as accusative > nominative acceptable, as shown in (6) and (7).

(6) Bulgarian

a. koj kogo vižda? NOM > ACC  
who-NOM whom-ACC sees  
'Who sees whom?'

b. \*kogo koj vižda? \*ACC > NOM

c. koj kogo na kogo e pokazal? Subject DO-IO  
who whom to whom has pointed out  
'Who pointed out whom to whom?'

(Rudin 1988:474)

(7) Polish

- a. kogo komu przedstawiłeś? DO > IO  
who to whom introduced.2SG?  
'Whom did you introduce to whom?'
- b. komu kogo przedstawiłeś? IO > DO  
to whom whom introduced.2SG  
'Whom did you introduce to whom?'
- c. kto co. robił? NOM > ACC  
Who what did  
'Who did what?'
- d. co kto robił? ACC > NOM  
what who did  
'Who did what?'

(Rudin 1988:474)

As illustrated above, Bulgarian, a [+MFS] language, exhibits superiority effects while Polish, a [-MFS] language, does not.

#### 4.2.1 Multiple WH Extraction from a Clause

According to Rudin (1988), [+MWF] languages differ from [-MWF] languages in their ability to extract numerous wh-words from a sentence. She demonstrates that in CP adjunction languages like Bulgarian, all wh-phrases in a multiple question must move up to the closest interrogative Spec CP; no wh-phrase may stay in-situ or move to the specifier position of a non-interrogative clause (Rudin 1988: 450).

- (8) a. koj kŭde misliš [ če e otišŭl \_\_\_? Bulgarian  
 who where think.2SG that has gone  
 ‘Who do you think (that) went where?’
- b. \*koj misliš [ če e otišŭl \_\_\_ kŭde]?  
 who think.2SG that has gone where
- c. \*kŭde misliš [ če koj e otišŭl \_\_\_]?  
 where think.2SG that who has gone
- d. \*koj misliš [ kŭde (če) e otišŭl \_\_\_]?  
 who think.2SG where that has gone
- e. \*kŭde misliš [ koj (če) e otišŭl \_\_\_]  
 where think.2SG who that has gone

(Rudin 1988:450)

The Bulgarian example in (8a) is grammatical because both wh-phrases undergo movement into the interrogative Spec CP position while the examples in (8b-e) are ungrammatical because a wh-phrase remains in-situ. Since Serbo-Croatian is an IP adjunction language, extraction of multiple wh-phrase from a sentence to matrix Spec CP is not permitted, as in English (9c and d).

- (9) a. ko Źelite [ da vam Źta kupi \_\_\_]?  
 who want.2PL to you what buy.3SG  
 ‘Who do you want to buy you what?’
- b. Źta Źelite [ da vam ko kupi \_\_\_]?  
 what want.2PL to you who buy.3SG  
 ‘What do you want who to buy you?’
- c. \*Ko Źta Źelite [da vam kupi \_\_\_]?  
 who what want.2PL to you buy
- d. \*Źta ko Źelite [ da yam kupi \_\_\_]?  
 what who want.2PL to you buy.3SG

(Rudin 1988:453)

In summary, Rudin (1988) establishes that the Bulgarian type of MWF language has multiple CP adjunction. As a result, such languages can move multiple wh-phrase to Spec CP, while IP-adjunction languages, such as Serbo-Croatian, can only have one wh-phrase in Spec-CP while the others must be adjoined to IP.

#### 4.2.2 Wh-islands

Rudin (1988) predicts that [+MFS] languages like Bulgarian (B) will not obey wh-islands while [-MFS] language like Serbo-Croatian (SC) and Polish (P) will, because Bulgarian freely allows extraction of multiple wh-words from an embedded question to a matrix CP.

- (10) vidjah edna kniga kojato<sub>i</sub> se čudja [koj znae [koj prodava \_\_<sub>i</sub>]] (B)  
 saw-1s a book which.1SG wonder.1SG who knows who sells  
 ‘I saw a book which I wonder who knows who sells (it)’.  
 (Rudin 1988:457)

- (11) \*šta si me pitao ko može da uradi? (SC)  
 what have.2SG me asked who can to do  
 ‘What did you ask me who can do?’  
 (Rudin 1988:459)

Contrary to languages that move all wh-phrases in a multiple question to the closest interrogative Spec CP (CP-absorption), IP-adjunction languages, like Serbo-Croatian, can only move one wh-phrase into an embedded CP projection. Rudin notes that Serbo-Croatian adheres to the wh-island constraint, as in (11).

### 4.3 Bošković (1997): Wh-movement and Focus-movement

Like Rudin (1988), Bošković also asserts a structural difference between different multiple wh-fronting languages, like Bulgarian and Serbo-Croatian. However, unlike Rudin, he asserts that superiority effects can be found in both sets of languages. Bošković argues that in Rudin's [+MFS] languages, the first wh-element that moves undergoes wh-movement and is thus subject to the superiority condition; any subsequent wh-element that moves undergoes focus movement and is *not* subject to the superiority condition. In the case of Rudin's [-MFS] languages, all wh-elements undergo focus movement, hence the absence of the superiority condition *in simple clauses*.

However, Bošković notes that when the data is extended to include embedded clauses, superiority effects *can* be seen in Serbo-Croatian. This is shown in (12b), where Serbo-Croatian exhibits superiority effects in embedded clauses.

- (12) a. ko si koga tvrdio [ da je istukao] ? (SC)  
who are whom claimed that is beaten  
'Who did you claim beat whom?'

- b. \*Koga si ko tvrdio [ da je istukao] ?

(Bošković 1997:5)

Bošković points out that wh-movement in Serbo-Croatian is similar to that of French. In both languages, wh in-situ is only permitted in short matrix clauses with a null complementizer. In all other cases such as embedded clauses, long or short-distance-movement with an overt complementizer, wh-phrases must move. Both languages also exhibit superiority effects in the same contexts. Like Serbo-Croatian, French disallows

lower wh-phrases to raise above higher wh-phrases in embedded clauses. This is shown in (13b-d):

- (13) a. Jean a vu qui  
Jean has seen who  
'Who did Jean see?'
- b. \*Il a demande Jean a vu qui  
He has asked Jean has seen who  
'He asked who Jean saw?'
- c. \*Il a dit Jean a vu qui  
he has said Jean has seen who  
'Who did he say Jean saw?'
- d. \*que Jean a vu qui  
that Jean has seen who  
'Who (is it) that Jean saw?'

Based on the similarity of the two languages, Bošković concludes that wh-movement (long-distance and embedded) in Serbo-Croatian should be analyzed as cases of overt wh-movement, as in French, while short distance should not. C, the location of the wh-feature, is not present in overt syntax in the short distance matrix question in both languages, unlike Bulgarian where C is always present. Thus, in Bulgarian, the [wh]-feature must always be checked overtly. In the short distance matrix question where C is not present in Serbo-Croatian, Bošković states that wh-phrases occur in contrastively focused material positions. Fronted wh-phrases that do not undergo wh-movement undergo focus movement, adjoining to IP, under whose head [focus] feature resides (Stjepanović 1999). According to Bošković, since the [focus] feature attracting wh-elements is an Attract-All-feature, it attracts all the focus elements. The wh-feature on C,

on the other hand, is an Attract-One feature that must be checked in the most economical way and with the shortest movement possible. Bošković gives an illustration of the contrast between *wh*-movement and focus movement. He argues that, in *wh*-movement, the strong features motivating movement lie in the attracting head and not in the *wh*-word that is being moved (14), unlike focus movement where the strong features lie in the *wh*-phrase that is being moved (15).

(14) Wh-movement

C	<i>wh-phrase1</i>	<i>wh-phrase2</i>	<i>wh-phrase3</i>
+wh	+wh	+wh	+wh
strong	weak	weak	weak

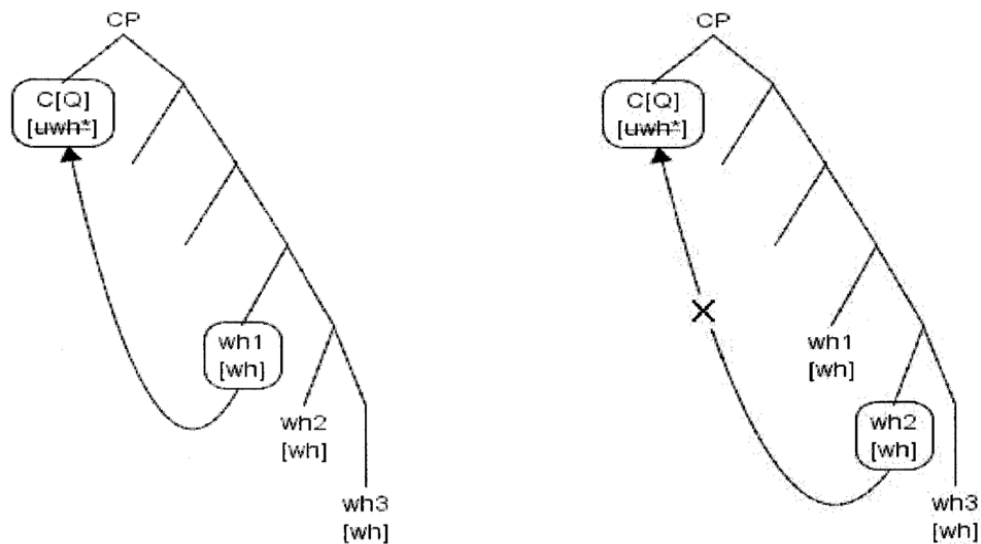
(15) Focus-movement

F	<i>wh-phrase1</i>	<i>wh-phrase2</i>	<i>wh-phrase3</i>
+focus	+focus	+focus	+focus
weak	strong	strong	strong

( Bošković 1998:26)

As illustrated above, the concrete difference between *wh*-movement and focus movement emanates from the fact that, in *wh*-movement, the strong feature is on C, which is the landing site to check the [+wh] feature on *wh*, while in focus-movement the strong features reside on the *wh*-phrases that are being moved. The diagram below shows that when the strong [*uwh*\*] feature is on C, the closest *wh*-phrase must be the highest *wh*-phrase structurally as shown in (16a). If any of the lower *wh*-phrases are moved, as shown in (16b), the derivation will result in a locality violation.

- (16) a. Wh-movement obeys locality      b. Wh-movement violates locality

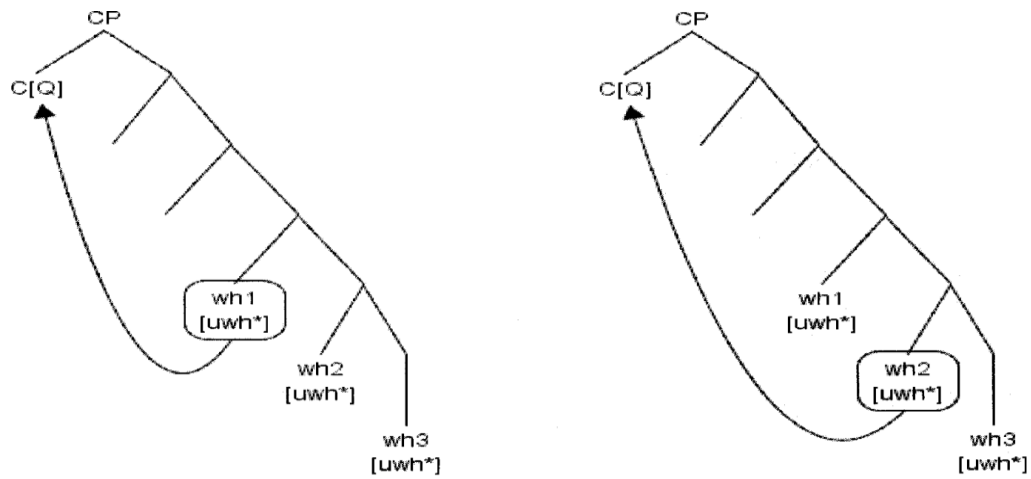


(Bashutski 2008:34)

Example (16b) is syntactically ill-formed because the shortest movement is not made to check the strong feature on C. This type of movement violates the principle of superiority. For focus movement, it does not matter which wh-phrase checks its features first, as shown in (17), because the strong features do not reside on the C head but on the element undergoing the movement. Thus, when C is merged, it becomes the closest target for all wh-phrases. This means that the wh-phrases can move in any order without violating the locality condition as illustrated in (17) where moving either *wh1* or *wh2* does not violate locality.



- (17) a. Focus movement wh1      b. Focus movement wh2



(Bashutski 2008:35)

Following the illustration above, Bošković explains that, in Bulgarian, the structurally highest wh-phrase (*wh1*) is usually due to wh-movement, while the movement of the lower wh-phrases (*wh2* or *wh3*) is focus movement. Hence, the structurally higher wh-phrase (*wh1*) exhibits superiority, as shown in (18a-b), while the lower wh-phrases (*wh2* or *wh3*) are not subject to superiority. They can freely move in any order in both local and long-distance movement, as shown in (19a-b).

- (18) Local wh-movement

a. *koj<sub>i</sub> kogoj e t<sub>i</sub> vidjal t<sub>j</sub>?* (B)  
 who whom is seen  
 'Who saw whom'?

b. \**kogoj koj<sub>i</sub> e t<sub>i</sub> vidjal t<sub>j</sub>?*

(Bošković 1998)

(19) *Wh1, wh2 and wh3 movement*

a. kto kade kogo vidjal? (B)  
who where whom saw  
'Who saw whom where?'

b. Kto kogo kade vidjal?

(Bošković 1997:3)

Serbo-Croatian, on other hand, does not exhibit superiority effects in local wh-movement because all wh-movement is focus movement. Focus movement allows the wh-phrases to move in any sequence without violating the superiority condition, as shown in (20).

(20) a. ko<sub>i</sub> je koga<sub>j</sub> t<sub>i</sub> video t<sub>j</sub>? (SC)  
who is whom seen  
'Who saw whom?'

b. Koga<sub>j</sub> je ko<sub>i</sub> t<sub>i</sub> video t<sub>j</sub>?

(Bošković 1997:3)

However, Bošković notes that long distance wh-movement in Serbo-Croatian does exhibit superiority effects. The highest wh-phrase must move to check the strong feature on C. If the lower wh-phrase is moved, the derivation will result in a locality violation.

(21) a. ko<sub>i</sub> si koga<sub>j</sub> tvrdio [da t<sub>i</sub> eistukao t<sub>j</sub>]? (SC)  
who are whom claimed that is beaten  
'Who did you claim beat whom?'

b. \*koga<sub>j</sub> si ko<sub>i</sub> tvrdio [da t<sub>i</sub> je istukao t<sub>j</sub>]?

(Bošković 1997:5)

The conclusion of this analysis is that the locus of strong features varies in Serbo-Croatian short and long-distance wh-movement. Bošković comes to the conclusion that Superiority effects will appear whenever the interrogative C has a strong [wh] feature,

which he predicts will always be the case in Bulgarian but will only occur in Serbo-Croatian long-distance and embedded wh-movement. The movement to C in Bulgarian exhibit superiority for *wh1* but this movement is freely ordered for *wh2* or *wh3* in both short and long distance wh-movement. This is unlike Serbo-Croatian where the movement of wh-phrases does not exhibit superiority in short distance wh-movement but does in long distance wh-movement.

#### **4.4 Stepanov (1998): Trigger for Movement**

Stepanov (1998) provides further support that not all wh-movement is triggered by the [+wh] feature on C. Japanese and Korean are also known to front wh-phrase for reasons other than to check the question features of the interrogative C. Stepanov states that wh-movement in Russian is focus driven and not questioning [+wh] checking, He refers to this type of movement as wh-fronting. His argument emerges from the convention that true wh-movement obligatorily exhibits superiority, as argued by Bošković (1997, 2002)

Following Bošković (1997) wh-words move to check the [+wh] features on C and this movement is subject to the Minimal Link Condition, a rule that requires only the closest element to C to move first to check the feature on C. Bošković proposes that languages that exhibit absence of superiority effects in multiple wh-fronting do not move their wh-phrases to check the [+Q] feature of C.

Stepanov shows, with the examples given below, that Russian does not exhibit superiority effects in both matrix and embedded clauses.

(22) Matrix wh-fronting

- a. kto komu što  
who.NOM who.DAT what.ACC give.PST.MASC
- b. komu kto što podaril?  
who.DAT who.NOM what.ACC give.PST.MASC
- c. što komu kto podaril?  
what.ACC who.DAT who.NOM give.PST.MASC  
'Who gave what to whom?'

(Stepanov 1998)

(23) Embedded wh-fronting

- a. mne interesno kto komu što podaril.  
i.DAT interesting who.NOM who.DAT what.ACC give.PST.MASC
- b. mne interesno komu kto što podaril  
i.DAT interesting who.DAT who.NOM what.ACC give.PST.MASC
- c. mne interesno što komu kto podaril  
i.DAT interesting what.ACC who.DAT who.NOM give.PST.MASC  
'I am curious who gave what to whom'

(Stepanov 1998)

In giving a theoretical explanation for the Russian examples from Stepanov (1998), Bošković (2008) argues that languages that exhibit multiple wh-movement with no superiority effects move the wh-phrases to a lower syntactic location other than Spec CP. Wh-movement is focus-driven in wh-movement languages that do not exhibit superiority effects (Bošković 2002). An example of such a language is Yorùbá, as shown below.

- (24) iboj t<sub>j</sub> ni taní lo t<sub>j</sub> ní ìgbàwo  
Where FOC who go P when  
'Who went where when?'

Since wh-movement in Yorùbá appears, at least superficially, to exhibit no superiority effects, as shown in (24), I propose that wh-movement in Yorùbá is focus driven. On this note, I will analyse wh-movement in Yorùbá as a type of focus movement in Chapter 5.

#### **4.5 Conclusion**

This chapter reviews previous works on wh-movement and superiority effects within the framework of the minimalist program. The literature accounts for the apparent absence of effects by differentiating between two kinds of movement: wh-movement and focus movement. Wh-movement displays superiority effects whereas focus movement does not, necessarily. In the next chapter, I apply this analysis to Yorùbá to account for the apparent lack of superiority effects in structures with multiple wh-phrases.

## CHAPTER 5: ANALYSIS OF THE APPARENT ABSENCE OF SUPERIORITY EFFECTS IN YORÙBÁ WH-MOVEMENT

### 5.1 Introduction

This chapter provides a theoretical analysis that accounts for apparent superiority violations in Yorùbá, within the framework of the minimalist program. Excluding the introductory and concluding sections, this chapter has five sections: section 5.2 focuses on the description of wh-phrases in Yorùbá. Section 5.3 and 5.4 show how wh-phrases are moved from their original position to the sentence initial position in simple sentences and in sentences with multiple wh-phrases. Section 5.5 rearticulates the main problem that this thesis works to shed light on, while Section 5.6 discusses wh-movement as initially involving focus movement. In section 5.6, I argue that the trigger for movement is to focus the wh-phrases at sentence initial position. Section 5.7 summarises my analysis while section 5.8 concludes.

### 5.2 Description of Wh-movement in Yorùbá

There are at least eight wh-question markers in Yorùbá (see (1)-(8)). These typically begin interrogative constructions. Example (5a) is a notable exception. In (5a), *ilé* 'house' appears before the question marker. However, the sentence in (5a) may be modified such that the question marker appears in the initial position, as shown in (5b).<sup>2</sup>

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<sup>2</sup> I use the gloss PRTC in the following examples, in order to remain neutral on the status of *ni* for the moment. In section 5.6, I return to my argument that *ni* denotes a focus marker in particular configurations.

(1) *ta* (who)

a. ta ni ó ri Ojo  
who PRTC RP see Ojo  
'Who saw Ojo?'

(2) *kí* (what)

kí<sub>j</sub> ni Adé mú wá t<sub>j</sub>?  
QM PRTC Adé take come  
'What did Adé bring?'

(3) *ibo* (where)<sup>3</sup>

ibo<sub>i</sub> ni Şadé n l<sub>o</sub> t<sub>i</sub>?  
QM PRTC Şadé PROG go  
'Where is Şadé going?'

(4) *èl<sub>o</sub>* (how much)

èl<sub>o</sub><sub>i</sub> ni Şadé ra Aso t<sub>i</sub>?  
QM PRTC Şadé buy cloth  
'How much did Şadé buy the cloth?'

(5) *mél<sub>o</sub>* (how many)<sup>4</sup>

a. ilé mél<sub>o</sub><sub>i</sub> ni B<sub>o</sub>l<sub>a</sub> k<sub>o</sub> t<sub>i</sub>?  
house QM PRTC B<sub>o</sub>l<sub>a</sub> build  
'How many houses did B<sub>o</sub>l<sub>a</sub> build?'

b. mél<sub>o</sub> ni ilé tí B<sub>o</sub>l<sub>a</sub> k<sub>o</sub>?  
QM. PRTC house Prtc. B<sub>o</sub>l<sub>a</sub> build  
'How many houses did B<sub>o</sub>l<sub>a</sub> build?'

(6) *báwo* (how)

báwo<sub>i</sub> ni Ajá şe kú t<sub>i</sub>?  
QM PRTC dog do die  
'How did the dog die?'

---

<sup>3</sup> Orthographic *ş* represents [ʃ].

<sup>4</sup> The particle *tí* is necessary to make (5b) grammatical. An explanation for this necessity is outside the scope of this work. The interested reader can see Sonaiya (1989).

(7) *kilódé* (why)

kilódé<sub>i</sub> tí Pájú lẹ t<sub>i</sub>?  
QM PRTC Pájú go  
'Why did Pájú go?'

(8) *ìgbà(wo)* (when)

ìgbà wo ni Kúnlé dé?  
QP QM PRTC Kúnlé arrive  
'When did Kúnlé arrive/return?'

Consistent with most analyses of question markers in Yorùbá (although contrary to Adésolá, 2005; see section 2.2), I will assume that question markers move from their base position to sentence initial position (Sonaiya 1989). The canonical word order of a declarative sentence is SVO in Yorùbá, as shown in (9). The direct object *isu* 'yam' immediately follows the verb *ra* 'buy', which in turn follows the subject *Adé*. However, when the direct object is a wh-phrase, it is usually moved to sentence initial position (10).

(9) Adé ra isu  
Adé buy yam  
'Adé bought a yam'

(10) kí ni Adé rà  
what PRTC. Adé buy  
'What did Adé buy?'

Another common element in Yorùbá wh-constructions is the presence of morpheme *ni* immediately following a moved question marker. In the examples above, this is variably glossed as PRTC. The status of *ni* – whether it is a copula, auxiliary or even a particle, and why it follows all moved wh-phrases – is debated in the literature. The morpheme *ni* has been argued by some linguists, including Yussuf (1990) and Adésolá (2005), to be a



copula verb, as the morpheme *ni* can also appear in nominal predications such as (11) below.

(11) Question: what is your profession?

Olùkó    ni    mí  
teacher   it.is   me  
'I am a teacher'

One difference between both variants of *ni* above is that the copular *ni* is usually followed by an object (as it mainly functions as a verb in such environment) but the *ni* in interrogative constructions is never followed by an object (see (1)–(8)). I defer analysis of this morpheme to section 5.3.

First, I will provide further description of wh-movement in Yorùbá, first looking at simple interrogative sentences in which only one wh-phrase moves and then looking at interrogative sentences with more than one wh-phrase.

### 5.3 Wh-movement in Yorùbá Simple Interrogative Constructions

Simple interrogative constructions have only one wh-phrase. In simple interrogative sentences, the wh-word can be moved from any position in the construction to Spec CP. It can be moved from either the subject (12), object (13), or adjunct position (14), as is shown in (12) – (14).

(12) a. ta<sub>i</sub>    ni    ó<sub>i</sub>    ra    bàtà?  
      who   PRTC   RP    buy   shoe  
      'Who bought shoes?'

b. taní ra bàtà?  
 who buy shoe  
 ‘Who bought shoes?’

(13) kíj ni Olá rà t<sub>j</sub>?  
 what PRTC Olá buy  
 ‘What did Olá buy?’

(14) igbà wo<sub>k</sub> ni Adé l<sub>o</sub> si ibo t<sub>k</sub>?  
 when PRTC Adé go PP where  
 ‘When did Adé go where?’

Movement out of subject position requires the insertion of a resumptive pronoun *ó* at the extraction site. This can be seen in (12a): the resumptive pronoun *ó* replaces the moved wh-word *ta*. In (12b), fully grammatical in at least Central Yorùbá, evidence for the absence of a resumptive pronoun can also be seen: the high tone associated with the resumptive pronoun in (12a) has been assimilated to the morpheme *ni*, which is realized as *ní*. In what follows, I will analyze the subject wh-phrase in a sentence like the one in (12b) as remaining in-situ, in [Spec TP]. Explicitly, I argue that all instances where a subject wh-phrase is present but where a resumptive subject pronoun is absent entail a structure in which the subject wh-phrase remains in-situ.

Movement is not limited to the wh-phrase; in some instances, the entire phrasal category is moved. This type of movement is referred to as pied-piping, an instance whereby the entire phrase will be moved alongside the wh-phrase. This can be seen in (15a) and (16a), where the phrases *ìwé wo* and *eran mélòó*, are preposed, respectively, to the beginning of the sentence. If only the wh-word ‘*wo*’ or ‘*mélòó*’ moved in these cases, the constructions would be ungrammatical (see 15b and 16b).

- (15) a. iwé wo<sub>i</sub> ni Táyò ka t<sub>i</sub>  
 book which PRTC Táyò read  
 ‘Which book did Táyò read?’
- b. \*wo<sub>i</sub> ni Táyò ka t<sub>i</sub> iwé  
 which PRTC Táyò read book
- (16) a. eran mélòó<sub>i</sub> ni Adé je t<sub>i</sub>  
 meat how many PRTC Adé eat  
 ‘How many meats did Adé eat?’
- b. \*mélòó<sub>i</sub> ni Adé je t<sub>i</sub> eran  
 how many PRTC Adé eat meat

Movement is also not limited to one wh-phrase. A single sentence in Yorùbá can also have two or more wh-phrases, but only one of these can be moved. I discuss this in the next section.

#### 5.4 Wh-movement in Sentences with Multiple Wh-phrases in Yorùbá

In Yorùbá, interrogative sentences can have more than one wh-phrase in the same sentence. Examples are provided below. (17) and (18) are direct questions, and (19) is an indirect question.

- (17) ta ni ó<sub>i</sub> ra kí ni  
 who PRTC RP buy what PRTC  
 ‘Who bought what?’
- (18) ta<sub>i</sub> ni ó<sub>i</sub> lẹ si ibo ní igbàwo  
 who PRTC RP go P where P when  
 ‘Who went where when?’
- (19) Adéolú bèrè lówo Olá pé taní na tani  
 Adéolú ask from Olá that who beat who  
 ‘Adéolú asked Olá who beat whom?’

Regardless of how many wh-phrases are in a sentence, at most one wh-phrase can move. Either the subject, direct object or indirect object is able to move. Other wh-phrases (if any) must remain in their original position. Movement, however, is not obligatory; all wh-phrases have the option of remaining in situ. This is illustrated by the variation in (20). In (20a), only the subject wh-phrase is fronted; evidence is from the appearance of the RP. In (20b), the resumptive pronoun is absent and the HTS attaches to the particle *ni*.

- (20) a. [ ta<sub>i</sub> ni [ ó<sub>i</sub> l<sub>o</sub> si ibo ní ìgbà wo ] ]  
 who PRTC RP go P where P when  
 ‘Who went where when?’
- b. [ taní l<sub>o</sub> si ibo ní ìgbà wo ]  
 who go P where P when  
 ‘Who went where when?’

In example (21), one wh-phrase moves: *ìgbà wo* ‘when’. The subject wh-phrase, *ta(ni)* ‘who’, remains in situ. The third wh-word, *ibo* ‘where’, also remains in its original position. In an apparent violation of superiority, the lowest wh-phrase, *ìgbàwo* ‘when’, moves above the higher wh-phrase, *ta ni* ‘who’, to the sentence initial position.

- (21) [ ìgbàwo<sub>k</sub> ni [ taní l<sub>o</sub> sí ibo t<sub>k</sub> ] ] ] ]  
 when PRTC who go P where  
 ‘Who went where when?’

So far, I have described wh-movement in simple and multiple wh-constructions. We have seen that wh-phrases are moved from their base position to sentence initial position and that they are followed by the morpheme *ni*. We have also seen that wh-phrases can be fronted from any position to sentence initial position and that resumptive pronouns

are obligatory when a wh-phrase in the subject position is moved, but absent when the subject wh-phrase remains in its original position.

### 5.5 Rearticulating the Problem

Contrary to Adésolá's (2005) base generated analysis, it is evident that there is wh-movement in (12a), repeated for easy access in (22), because there is a resumptive pronoun replacing the moved wh-word *ta*.

- (22) *ta<sub>i</sub> ni ó<sub>i</sub> ra bàtà?*  
who PRTC RP buy shoe  
'Who bought shoes?'

In a situation whereby we have multiple wh-phrases in a clause just like example (20) and (21) above, the question is, which of them will move to Spec CP to check the strong features on C? In Yorùbá, any wh-phrase in the clause can satisfy this requirement. This appears to violate Chomsky's (1995) Attract Closest Principle, which holds that a head attracts the closest constituent to Spec CP. In English, as shown in example (23), the movement of '*who*' to Spec CP is preferred since it is closer to C than any other wh-phrases in the clause and the movement of *what* is ruled out since it will travel a longer distance than the distance of *who* to C. That type of movement violates the economy rule (Attract closest principle).

- (23) a. Who do you think \_\_ bought what?  
b. \*What do you think who bought \_\_?

However, Yorùbá seems not to obey the ‘attract closest rule’, as it permits both short and long movement within a clause while the sentence remains grammatical, as shown in (24) and (25).

- (24) a. [CP ta<sub>i</sub> ni [TP o rò pé ó<sub>i</sub> rà kí ni ]]  
 who PRTC you think that RP buy what PRTC.  
 ‘who did you think bought what?’
- b. [CP kí<sub>j</sub> ni o rò pé [TP taní rà t<sub>j</sub>]]  
 what PRTC you think that who buy  
 ‘what did you think who bought?’ (bad in English)
- (25) a. [CP ta<sub>i</sub> ni [TP ó<sub>i</sub> lọ sí ibo ní ìgbàwo ]]  
 who PRTC RP go to where P when  
 ‘Who went where when?’
- b. [CP ibo<sub>j</sub> ni [TP taní lọ t<sub>j</sub> ní ìgbàwo]]]  
 where PRTC who go P when  
 ‘Who went where when?’
- c. [CP ìgbàwo<sub>k</sub> ni [TP taní lọ sí ibo t<sub>k</sub> ]]  
 when PRTC who go P where  
 ‘Who went where when?’

In (24b), the object wh-phrase is preposed above the subject *tani* wh-phrase, to the matrix [Spec CP] while in (25b) the wh-phrase *ibo* is preposed over the subject to land in Spec CP. In (25c), the adjunct *ìgbàwo* moves above another wh-phrase then over the subject before landing at Spec CP and the sentence is grammatical. The acceptability of sentences like those in (25), and others like them, suggests that Yorùbá is not sensitive to the superiority principle.

Since most languages that exhibit wh-movement are sensitive to superiority, Bošković (1997, 2002, 2008) argues that languages that move wh-phrases but are

seemingly not sensitive to superiority do not exhibit wh-movement, but focus movement. In section 5.6, I propose the movement of wh-phrases in Yorùbá to be a type of focus-movement, essentially following Bošković’s argument.

### 5.6 Focus Movement Analysis

Bošković (2008) argues that superiority effects only occur in multiple wh-fronting languages which move both wh-phrases to Spec CP, while languages that exhibit wh-movement with no superiority effects move the wh-phrases to a syntactic location lower than Spec CP. Following Bošković, wh-movement is focus driven in multiple wh-movement languages that do not exhibit superiority effects (Bošković 2002). An example of such a language is Yorùbá, except that Yorùbá permits the movement of only one wh-phrase in a sentence, as shown below.

- (26) a. *ta<sub>i</sub> ni o r̀ò pé ó<sub>i</sub> rà kíni*  
           who PRTC you think that RP buy what  
           ‘who do you think bought what?’
- b. *kí<sub>j</sub> ni o r̀ò pé taní rà t<sub>j</sub>*  
           what PRTC you think that who buy  
           ‘what did you think who bought?’ (bad in English)

The higher wh-phrase in example (26a) moves to the sentence initial position, but the gap is filled with a resumptive pronoun, *ó*. In (26b), the lower wh-phrase *kí* moves above the higher wh-phrase *ta (ni)*, and the movement does not violate superiority. Since the movement of the lower wh-phrase above the higher one exhibits no superiority effects, following Bošković (2002), I propose that wh-movement in Yorùbá is focus driven. I

adopt the prevalent position in the relevant literature that the *ni* that follows every moved wh-phrase at the sentence initial position is a focus marker. However, the *ni* that is added to *ki* and *ta* at PF when they are in situ is a particle. The particle *ni* is necessarily added because Yorùbá nouns, under which wh-phrases fall, are at least bisyllabic. Hence, it is not part of the syntax, and it is different from the focus marker *ni* that appears after the moved wh-phrases at the sentence initial position.

On this note, in the following two sections, where I extensively discuss focus movement in Yorùbá, I will start referring to *ni* as a focus marker.

### 5.6.1 Focus Movement in Yorùbá

All moved wh-phrases in Yorùbá are compulsorily marked with a focus marker *ni*. In assertive response, the element corresponding to the wh-phrase is also marked with the focus marker *ni*. Syntactically, the focus markers and phrases in Yorùbá occupy the left position in the clause.

(27) [XP] F ni [ .... ]

When the moved wh-phrase accompanied with a focus marker is a subject, the resumptive pronoun *ó* is obligatory inserted, immediately following the focus marker in both the interrogative clause and its assertive response.

(28) ta<sub>i</sub> ni ó<sub>i</sub> ra Aso  
 who FOC RP buy cloth  
 ‘Who bought cloth?’



- (29) Olú        ni        ó        ra        Aso  
 Olú        FOC    RP        buy     cloth  
 ‘Olú bought clothes’

According to Déchaine (2002), an interrogative clause with an object wh-phrase and its assertive response leaves a gap in the object position. The gap is filled with a trace.

- (30) kí<sub>j</sub>     ni        Délé    rà    t<sub>j</sub>  
 what    FOC    Délé    buy  
 ‘What did Délé buy?’

- (31) Aso<sub>j</sub>    ni        Délé    rà    t<sub>j</sub>  
 Cloth    FOC    Délé    buy  
 ‘it is cloth that Délé bought’

If *ni* is absent from the interrogative clause, it results in ungrammaticality as shown in (32a) and (33a). If it is absent from the assertive response, then it is no longer a response, but a declarative sentence, as shown in (32b) and (33b).

- (32) a. \*Ta     ra     Aso  
       Who buy cloth  
       b. Olú    ra     Aso  
       Olu buy cloth  
       ‘Olu bought a cloth’

- (33) a. \*Kí    Délé    rà  
       What Délé buy  
       b. Délé    ra     aso  
       Délé buy cloth  
       ‘Délé bought a cloth’

As shown above, *ni* marking is obligatory for all other fronted wh phrases in Yorùbá, as listed below.

- (34)
- |    |                    |             |
|----|--------------------|-------------|
| a. | ibo ni             | ‘where’     |
| b. | ìgbàwo ni          | ‘when’      |
| c. | báwo ni            | ‘how’       |
| d. | èwo ni             | ‘which one’ |
| e. | mélòó ni           | ‘how many’  |
| f. | ki ni ódé (kílólé) | ‘why’       |

The use of a focus *ni* is limited to one per clause in Yorùbá because the language is able to front only one phrase per clause. All other phrases remain in-situ and without a *ni* focus marker, except for *kí* and *ta*. *Kí* and *ta* are always accompanied by *ni* in their original position due to them being monosyllabic (this happens in PF, and is not part of the syntax), since Yorùbá nouns, under which wh-phrases fall, are obligatorily at least bisyllabic.

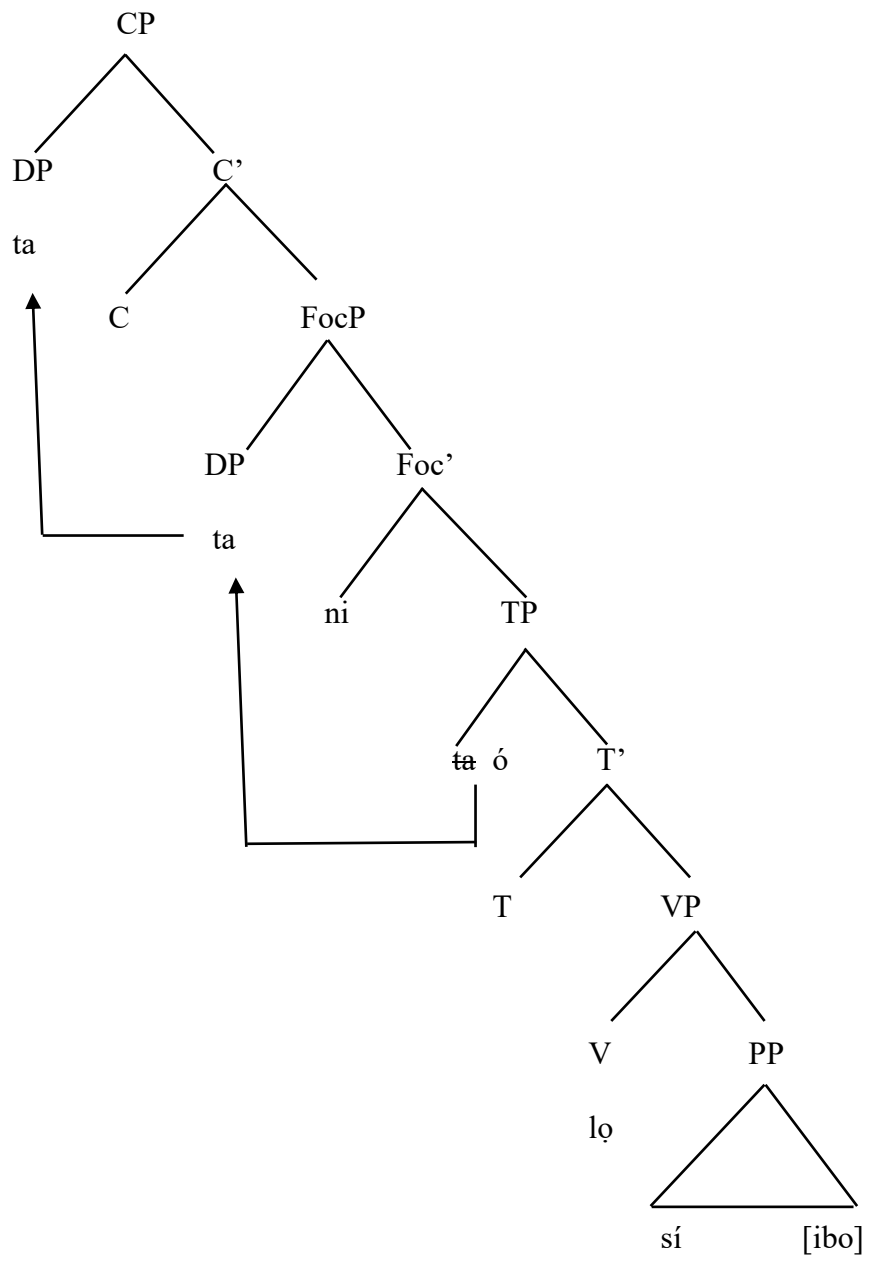
Contrary to Adésolá’s (2005) base generated analysis of Yorùbá wh-phrases, I give another approach to the placement of wh-phrases in Yorùbá, following the multiple wh-fronting approach of Bošković (1997, 1998) where wh-phrases undergo focus movement to their licensing position below CP before movement to Spec CP. I argue that the fronting of wh-words in Yorùbá is not initiated only by the interrogative features on C but also motivated by focus; thus, the trigger for movement is to check [+focus] and [+Q]. So, the wh-phrases move first to a position below C – [Spec FocP] – before moving to Spec CP. I now refer to this lower position as a *focus position*. This analysis, based on focus, is motivated, and made evident by the focus marker ‘*ni*’ that immediately follows every moved wh-phrase. This is illustrated in (35).

The examples in (35a and b) are both acceptable. Their corresponding structures are shown in (35c and d). In (35a), the focus marker *ni* is generated at the focus head, and the subject *ta* moves above it to [Spec FocP] to check its uninterpretable [+focus] feature. It

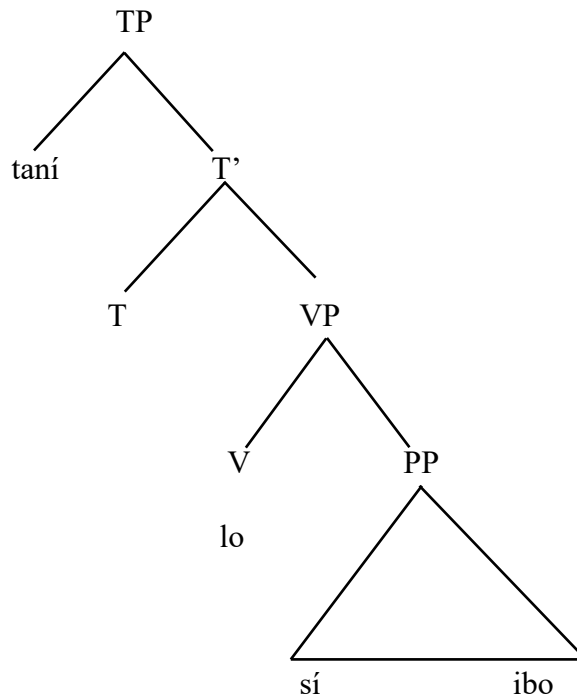
then moves to [Spec CP] to check the uninterpretable [+wh] feature on C. After movement, *ta* is replaced with a resumptive pronoun. However, in (35b), there is no movement, *ta* remains in its original position, the resumptive pronoun is absent and the HTS which needs to find a host at [Spec TP] attaches to the particle *ni* which is realized as *ní*.

- (35) a. [CP  $ta_i$  [FocP  $t_i$  *ni* [TP  $o_i$   $t_i$  *lɔ* *sí* *ibo* ]]]  
           who                                  FOC          RP          go      P      where  
           ‘Who went where?’
- b. [TP *taní* *lɔ* *sí* *ibo* ]]]  
       who go P      where  
       ‘Who went where?’

c.



d.



I have shown in this section that the trigger for wh-movement is to check the [+focus] and [+Q] feature on C. In the next section, I will show how focus movement is used as an escape hatch for avoiding superiority violations.

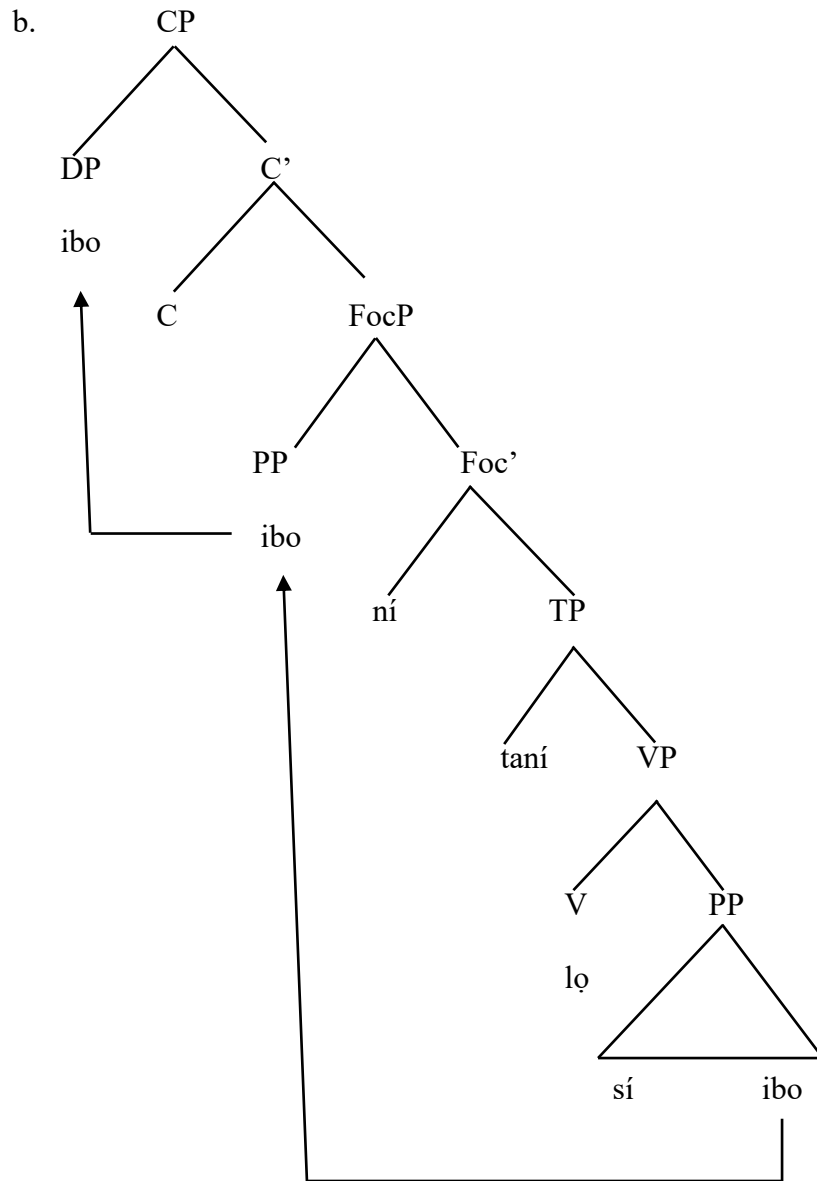
### 5.6.2 Focus Movement as an Escape Hatch for Avoiding Superiority Violations in Yorùbá

Yorùbá permits only one wh-phrase in [Spec CP] while others remain in their original position. Apparently, the lower position below C serves as an escape hatch for avoidance of superiority violations, as illustrated with the examples in (36) and (37).

The wh-movement in (36) is within a clause; thus, it is referred to as short-distance movement. The first wh-phrase, *ta(ni)*, remains in situ (the *ni* here is added to make the noun bisyllabic). The second wh-phrase, *ibo*, however, must raise to check its

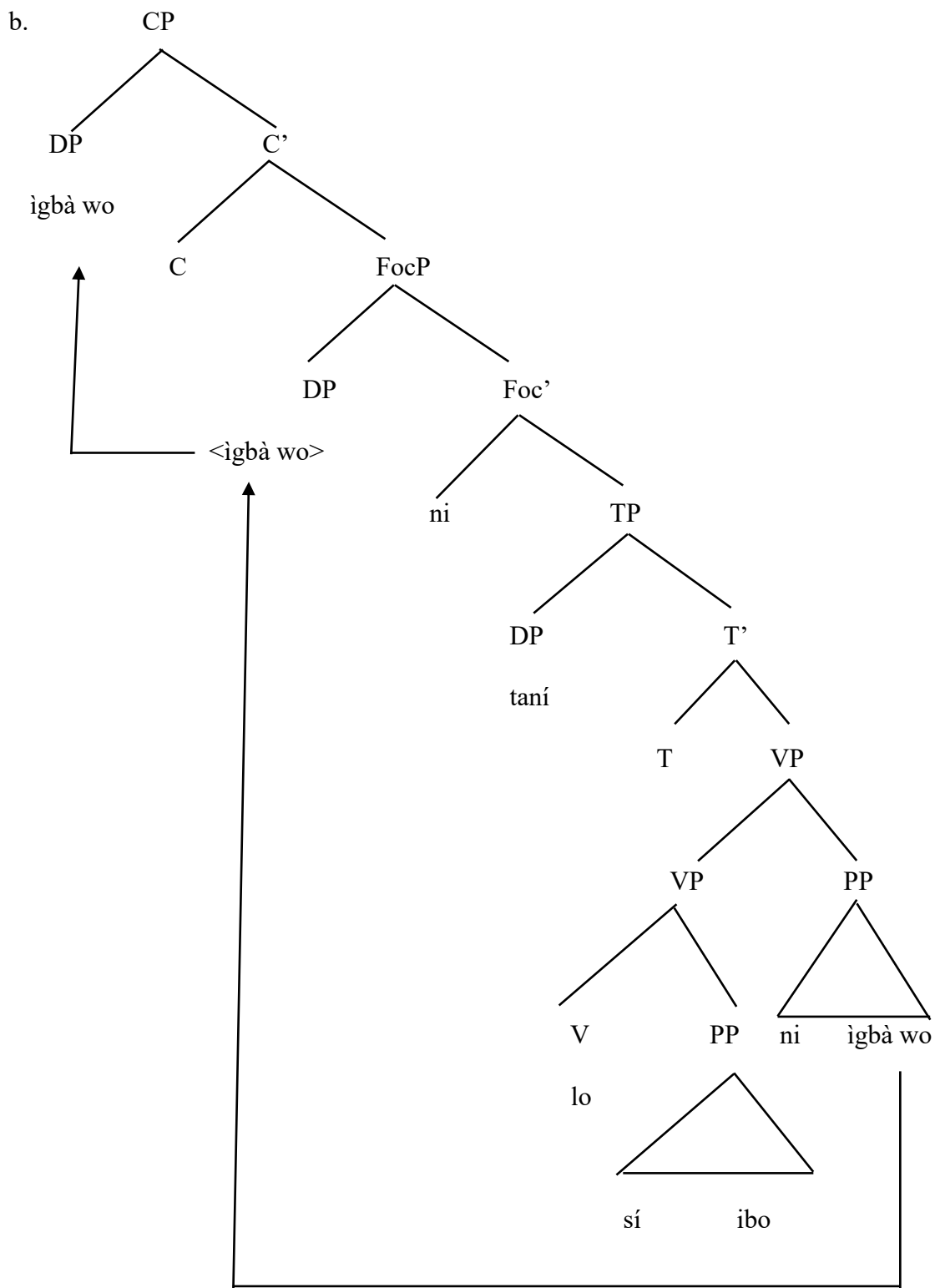
uninterpretable [+focus] feature. Since all fronted wh-phrases in Yorùbá must be focused, a focus marker is obligatorily generated at the Foc head. *Ibo* then raises to [Spec FocP] to check its [+focus]. The derivation is not yet complete because [Spec CP] still has an unchecked, uninterpretable [+wh] feature. This triggers movement of the closest wh-phrase, which is now *ibo* at [Spec FocP]. Thus, what first appears to be a lower phrase moving across a higher phrase, violating superiority, is actually a straightforward case of the Move operation adhering to economy constraints.

- (36) a. [CP *ibo*<sub>j</sub> [FocP *t<sub>j</sub>* ni [TP *taní* l<sub>o</sub> *t<sub>j</sub>*]]  
           where                  FOC          who  go  
           ‘Who went where?’



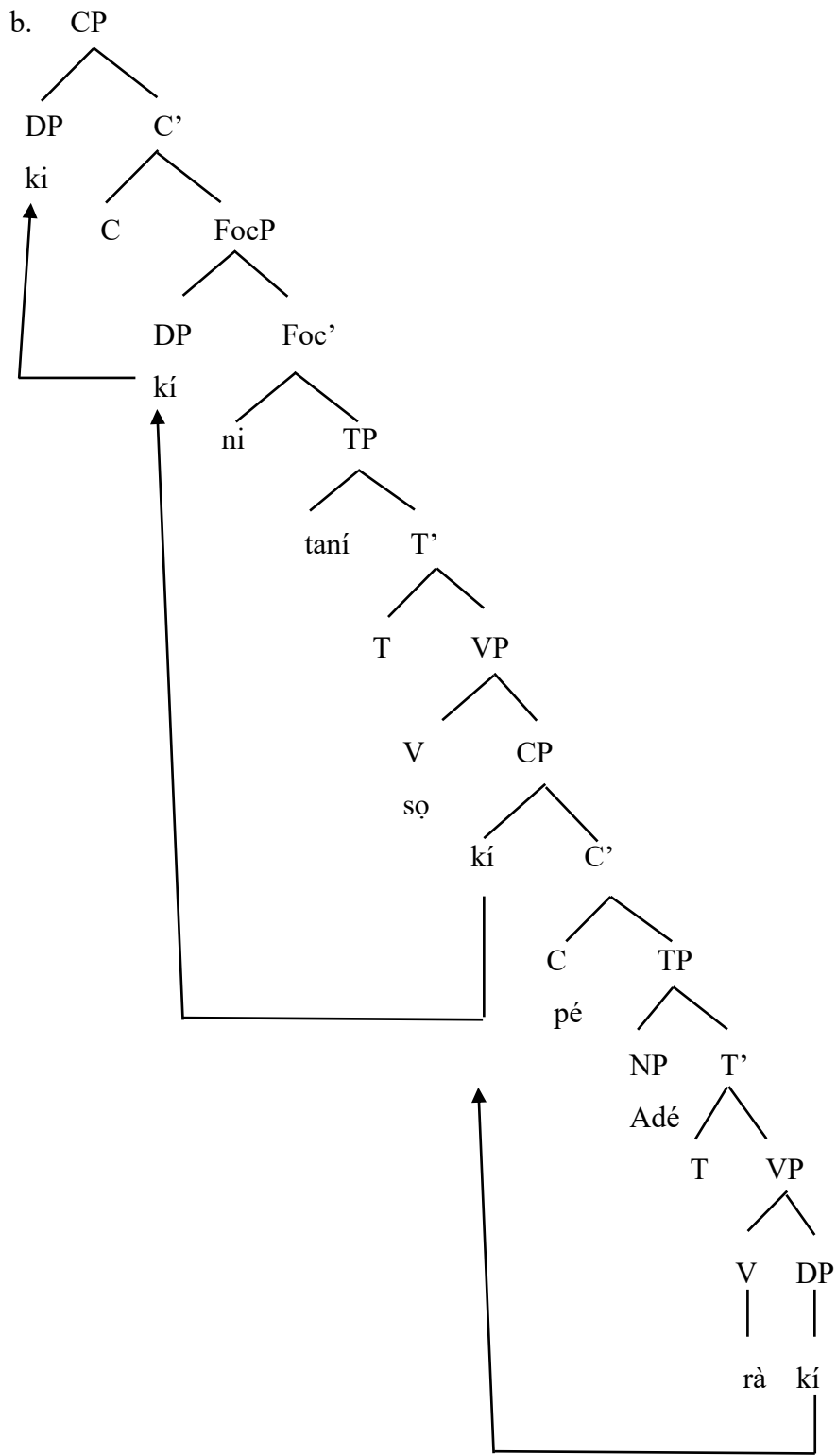
Superficially, superiority appears to be violated in the short-distance movement example above. Now, let us look at an apparent violation of superiority in another short-distance movement with three wh-phrases, in (37).

- (37) a. [CP igbàwo<sub>k</sub> [FocP t<sub>k</sub> ní [TP taní lọ sí ibo t<sub>k</sub> ]]]  
 when FOC who go P where  
 ‘Who went where when?’









Following Sabel (2000), a [focus] feature is responsible for triggering wh-movement in an embedded clause to the specifier of an intermediate [Spec CP]. The focus marker ‘*ni*’ generated at [Spec FocP] triggers the movement of the wh-phrase from the embedded clause through the intermediate position [Spec CP] to [Spec FocP]. The [+focus] feature on *ki* is checked at [Spec FocP]. After the [+focus] feature on *ki* has been checked, *ki* is closer to [Spec CP] which makes it the most eligible candidate to check the [+wh] feature on C. This explanation is schematized in the tree diagram above. [Spec FocP] is used as an escape hatch for the long-distance movement of the wh-phrase to the matrix [Spec CP] position, resulting in no violation of superiority.

Now that I have explained the ostensible absence of superiority effects with a focus analysis in short and long-distance movement and also in embedded clauses, in the next section, I will test my prediction that superiority effects should be observable in Yorùbá.

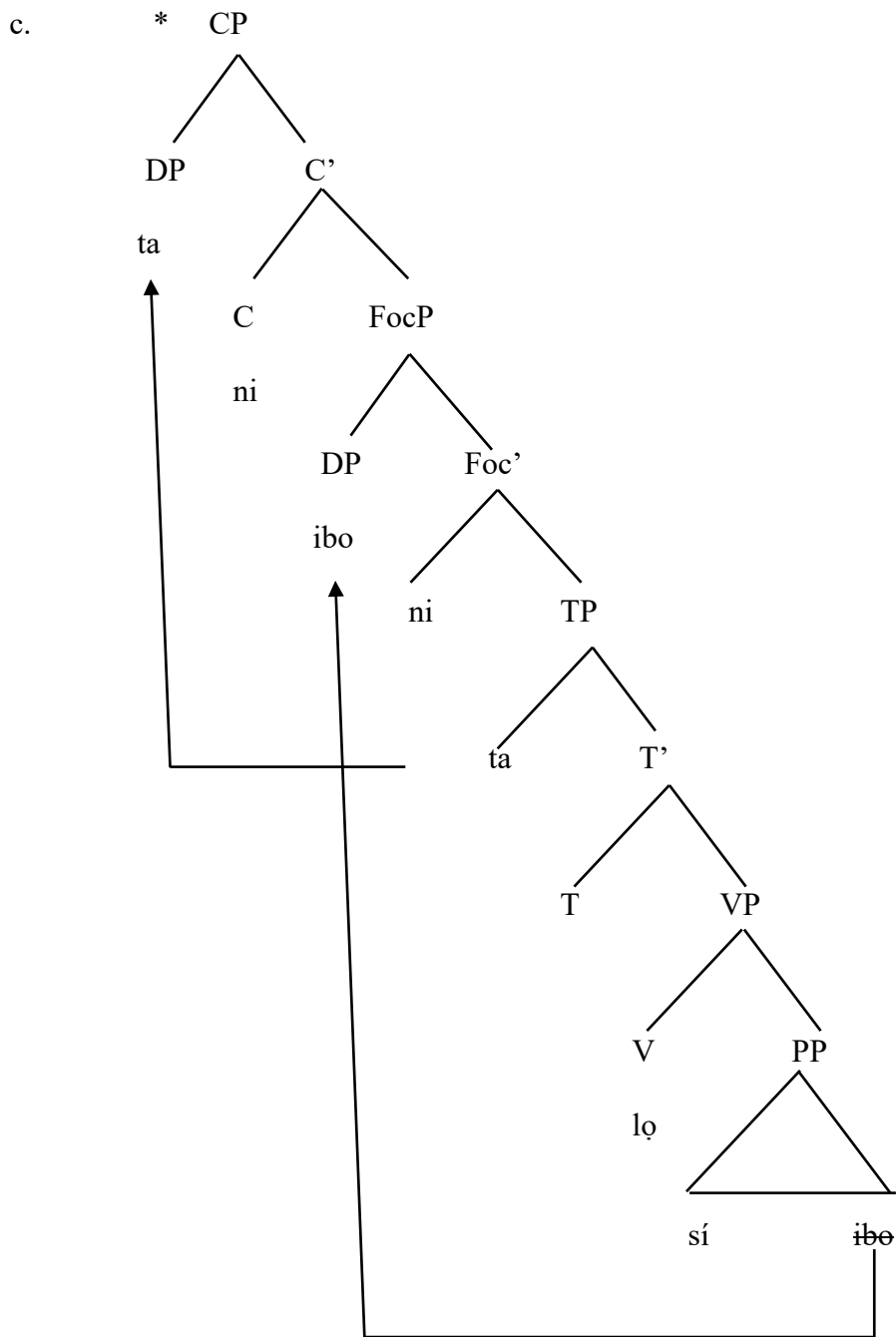
### **5.6.3 Evidence of Superiority Effects in Yorùbá**

Contrary to Adésolá’s assertion that Yorùbá does not exhibit superiority effects, superiority violations are observable in the language. And they emerge exactly where my analysis predicts that they will, as I demonstrate in this section. Adésolá argues that wh-phrases are base generated in their surface position; hence, no movement. His no-movement analysis results in the absence of observed superiority effects, but my prediction is that Yorùbá adheres to the superiority principle, since it exhibits wh-movement. Any movement approach is subject to superiority, and Yorùbá is no exception.

Example (39) shows that wh-movement in Yorùbá is indeed sensitive to the superiority effects.

In example (36), we saw that the object *ibo* moves to [Spec CP] because it is, in my analysis, the closest wh-phrase to [Spec CP]. Consider, then an ungrammatical sentence like (39a), and the movement required to derive such a sentence, indicated in (39b and c).

- (39) a. \* $ta_i$  ni  $ibo_j$   $t_i$  l $o$   $t_j$   
 Who FOC where go
- b. \* $[_{CP}$   $ta_i$  ni  $[_{FOCP}$   $ibo_j$   $[_{TP}$   $t_i$  l $o$   $t_j$ ]]  
 who FOC where go



Example (39a) is ungrammatical due to a superiority violation, demonstrating that superiority effects can be found in Yorùbá. Following the tree diagram in (39c), the only derivation which could successfully generate the ungrammatical (39a) is one

where the DP *ibo* first raises to the [Spec FocP] position. Subsequent raising of the subject wh-phrase *ta*, would violate Attract Closest, since the phrase *ibo* is closer to check the wh-feature of C. The superiority violation here results in the ungrammaticality of the sentence. Note, further, that insertion of a resumptive pronoun could not save the derivation:

(40) \* ta ni ibo ó lọ.

As seen in (36a), (37a) and (38a) repeated for easy access in (41a), (42a) and (43a), and all other examples with an in situ wh-subject above, the resumptive pronoun does not appear whenever a lower wh-phrase is preposed above the wh-subject. My analysis automatically predicts the ungrammaticality of a resumptive pronoun showing up when anything is fronted past an in situ wh-subject, as in (41b), (42b) and (43b).

(41) a. [CP *ibo<sub>j</sub>* [FocP *t<sub>j</sub>* ni [TP *taní* lọ *t<sub>j</sub>*]]  
 where FOC who go  
 ‘Who went where?’

b. \*[CP *ibo<sub>j</sub>* [FocP *t<sub>j</sub>* ni [TP *tani* ó lọ *t<sub>j</sub>*]]  
 where FOC who RP go  
 ‘Who went where?’

(42) a. [CP *ìgbàwo<sub>k</sub>* [FocP *t<sub>k</sub>* ni [TP *taní* lọ sí *ibo* *t<sub>k</sub>*]]  
 when FOC who go P where  
 ‘Who went where when?’

b. \*[CP *ìgbàwo<sub>k</sub>* [FocP *t<sub>k</sub>* ni [TP *taní* ó lọ sí *ibo* *t<sub>k</sub>*]]  
 when FOC who RP go P where  
 ‘Who went where when?’

- (43) a. [CP k<sub>i</sub>j [FocP t<sub>j</sub> ni [TP taní sọ [CP t<sub>j</sub> pé [TP Adé rà t<sub>j</sub> ]]]]]  
           what                  FOC  who  say                  that                  Adé  buy  
           ‘Who said Adé bought what?’
- b. \*[CP k<sub>i</sub>j [FocP t<sub>j</sub> ni [TP taní ó sọ [CP t<sub>j</sub> pé [TP Adé rà t<sub>j</sub> ]]]]]  
           what                  FOC  who  RP  say                  that                  Adé  buy  
           ‘Who said Adé bought what?’

Consider the derivation required to generate the ungrammatical (41b). In order for the wh-phrase *ibo* to occupy the Spec CP position (to check the [+wh] feature of C), it must have first raised to the Spec FocP position. Otherwise, the subject wh-phrase, *ta*, would be the closest eligible candidate to check the feature of C. In the case of (41b), then, the subject wh-phrase must remain in Spec TP. If insertion of the resumptive pronoun in Spec TP is understood as a last resort operation, to satisfy the PF requirement that there be something in Spec TP to host the HTS, then it follows that realization of a resumptive pronoun in this case would be blocked: the subject wh-phrase remains in the position, and can host the high tone, deriving (41a).

## 5.7 Summary of the Analysis

In this chapter, I have structurally analyzed the apparent, but non-genuine, absence of superiority effects in Yorùbá. I have provided an analysis that argues that wh-phrases are not base generated in their surface position but fronted from their base position to check a [+focus] feature at [Spec FocP] and subsequently the [+wh] feature on C at [Spec CP]. I have also confirmed my prediction, that superiority effects can be observed in Yorùbá, is accurate.

## 5.8 Conclusions

This thesis has brought to light new facts about previously studied wh-phrases cases in Yorùbá. The primary goal of this thesis is to counter the base generated approach of Adesola (2005), and seeks to account for the ostensible absence of superiority effect in Yorùbá wh-phrase constructions with a movement-based approach. Contrary to Adesola's base-generated analysis of wh-phrases, my analysis shows that Yorùbá does exhibit wh-movement. Wh-phrases are not base generated in their surface position, but are fronted. Hence, the movement is predicted to be subject to superiority. When there are two or more wh-phrases in a sentence, only one wh-phrase can move to [Spec CP] of the matrix clause. Each movement progression is in a successive-cycle. That is, when an embedded wh-phrase moves from its original position, it moves to an intermediate position at [Spec CP] before moving to [Spec FocP], finally landing at [Spec CP] of the matrix clause. The [Spec FocP] is used as an escape hatch for the long-distance movement of the wh-phrase to the [Spec CP] position, resulting in no superiority violation.



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