

**THE IGBO CLAUSE STRUCTURE AND THE CARTOGRAPHY
OF THE COMPLEMENTISER PHRASE DOMAIN**

BY

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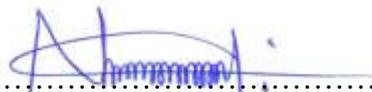
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CERTIFICATION

This is to certify that this dissertation entitled *The Ìgbò Clause Structure and the Cartography of the Complementiser Phrase Domain* is an original work of mine carried out in the Department of Igbo, African and Asian Studies, Nnamdi Azikiwe University, Awka, under the supervision of Prof. B.M. Mbah.

**Gerald Okechukwu NWEYA**

2010017002P

DEDICATION

To

My Parents

Late Chief Pius Nwafo Nweya and Mrs Nkechi Hope Nweya

And

Ụtọ m 'My love'
Ngozi Eucharika Nweya

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ABSTRACT

The study of clause structure provides information about the form and hierarchy of clausal constituents. Previous studies on the Igbo language relied heavily on the unified approach to the analysis of clause structure and clausal domains which permit one head to bear more than one feature. This approach does not provide detailed information about the content and hierarchical structure of the clausal domains. This study, therefore, analysed the structures of the Igbo verb phrase (VP), tense phrase (TP) and complementiser phrase (CP) with a view to determining the structure, hierarchical order and interaction of lexical and functional projections in the VP, TP and CP domains and make generalisations in terms of clause structure, information structure and cartography. The theoretical framework adopted for the study is the Minimalist Program. Primary data were elicited from purposively selected native speakers of the Igbo language. Instruments for primary data collection include elicitation, observation, and introspection; while secondary data were gathered from extant literary and grammar texts. Acquired data were subjected to grammaticality judgement, interlinear glossing and qualitative analysis. The study discovered that the structure of the VP domain is vP -ApplP-VP-DP-AdvP-PP. The syntax of monotransitive constructions involves one probe, the light v while that of double object constructions (DOCs) involves two probes: v and Appl. In this domain vP and ApplP are phase domains. The study also discovered that the structure of the TP domain is ApplP-NegP-AspP-TP. From the interaction of TP elements, the study observed that Appl is associated with both TP and vP domains and it is possible for T and ASP morphemes to co-occur in Igbo. With respect to the CP domain, the study discovered that the structure of the CP domain is ForceP-TopP-FocP-InterP. The three main complementisers in Igbo are *nà* ‘that’ (with strong declarative feature), *mà* ‘if/whether’ (with strong interrogative feature) and *kà* ‘that’ (with strong imperative feature). The syntax of yes/no questions involves one probe: INTER; the syntax of wh-questions involves two probes: INTER and FOC; while the syntax of focus and topic involves one probe: FOC and TOP respectively. The low tone question morpheme is for clause typing while the movement of wh-words to the clausal left periphery is for focusing and extended projection principle. The study also observed that FOC and TOP is overtly and covertly marked respectively. Based on these observations, the study assumed that the structure of the Igbo basic clause is ForceP-TopP-FocP-InterP-ApplP-NegP-AspP-TP- vP -ApplP-VP-DP-AdvP-PP. The study concludes that syntactic elements that manifest in the clausal domains including the CP are maximal projections and they provide information about the Igbo basic clause in terms of clause typing, clause structure and cartography. They also indicate that scope does not always translate to dominance and that Rizzi’s (1997) CP structure is not strictly universal.

Key Words: Igbo, Clause Structure, Cartography and Complementiser Phrase

LIST OF ABBREVIATIONS

AP	Articulatory Perceptual System/Interface
ACC/Acc	Accusative Case
Af _{3sgPr}	3 rd Person Singular Affix
AGR/Agr	Agreement
AgrOP	Agree Object Phrase
AgrP	Agree Phrase
AgrSP	Agree Subject Phrase
APPL	Applicative Morpheme/Marker
ApplP	Applicative Phrase
ASP/Asp	Aspects
Asp ^I	Intermediate projection of Aspect
AspP	Aspect Phrase
AUX	Auxiliary
AuxP	Auxiliary Phrase
C	Complementiser
C ^I	Intermediate projection of Complementiser
CFC	Core Functional Categories
C _{HL}	Computational System of Human Languages
CI	Conceptual-Intentional System/Interface
CP	Complementiser Phrase
CWQ	Content word questions
DEM	Demonstrative
DO	Direct Object
DOC	Double Object Construction
DP	Determiner Phrase
E-language	Externalised Language
EC	Earliness Condition
EF	Edge feature
EPP	Extended Projection Principle
Ex-DP	External argument
F	Feature
FI	Full Interpretation
FinP	Finite Phrase
Foc ⁰	Focus Phrase Head
Foc ^I	Intermediate projection of focus head
FocP	Focus Phrase
FUT	Future Tense/ Futurity
GB	Government and Binding Theory
GEN	Gender
GP	Generative Procedure
HAB	Habitual Marker
HT	High Tone
I-language	Internalised language
I	Inflection head
I ^I	Intermediate projection of I
IC	Inherent Complement
INFL	Inflection
Inter ⁰	Interrogative head

Inter ^l	Intermediate projection of Interrogative
InterP	Interrogative Phrase
IO	Indirect Object
IP	Inflection Phrase
KI	<i>kèdu</i> interrogatives
L	Lexicon
LA	Lexical subarray
LAF	Language Faculty
LCA	Linear Correspondence Axiom
LF	Logical Form
LI	Lexical Item
LT	Low Tone
Mod	Modals
MP	Minimalist Program
N	Numeration
NEG/Neg	Negation
NegP	Negative Phrase
NOM/Nom	Nominative Case
NP	Noun Phrase
Num	Number
OBJ	Object
OBL	Oblique case
OVS	Open Vowel Suffix
P	Preposition
PAC	Perfective-Applicative construction
PART	Participle Marker
p.c.	Personal communication
PDC	Prepositional Dative Construction
Per	Person
PERF	Perfective marker
PF	Phonological Form
PIC	Phase Impenetrability Condition
PISH	Predicate Internal Subject Hypothesis
Phon/PHON	Phonology/Phonological
PL	Plural
PLD	Primary Linguistic Data
PN	Proper Noun/Personal Name
PP	Prepositional Phrase
PPT	Principles and Parameters Theory
PRN	Pronoun/pronominal
PST	Past Tense
PQ	Polar question
rV	r+V(owel)
RP	Resumptive Pronoun
S	Sentence
SD	Structural Description
SEM/Sem	Semantic(s)
SG	Singular
SI	Standard Igbo
SO	Syntactic Object

Spec	Specifier
ST	Standard Theory
SUB	Subject
SVO	Subject Verb Object
SYN/Syn	Syntax/Syntactic
TP	Tense Phrase
T ^I	Intermediate Projection of T
AspP	Aspect Phrase
TNS	Tense
Top/TOP	Topic
TopP	Topic Phrase
TP	Tense Phrase
TRAP	Theta-Role Assignment Principle
UG	Universal Grammar
UTAH	Uniformity of theta Assignment Hypothesis
V	Verb/Lexical Verb
V ^I	Intermediate Projection of V
VP	Verb Phrase
v	Light Verb
v ^I	Intermediate Projection of v
VC	Visibility Condition
VH	Vowel Harmony
vF	v(erb)-feature
vP	Light Verb Phrase
VP	Verb Phrase
VPISH	VP-internal Subject Hypothesis
VS	Vowel Suffix
φ	Phi/formal (features)
§	Sub-section
()	Low Tone
(^ˉ)	Down-Step Tone
∅	Null
θ	Theta
&	and
1	1 st (Person)
2	2 nd (Person)
3	3 rd (Person)

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Clauses form the largest grammatical unit in linguistic analysis. The nature and structure of clauses have attracted tremendous research interest across languages. Some of these studies show that languages may vary in the ordering of morphemes and/or in the number of features expressed in the clausal domains (see Pollock, 1989, Ouhalla, 1991), Carnie, 2013). However, scholars, such as Kayne (1994), Chomsky (2005a), Boeckx (2008), Radford (2009), Haegeman (2012) and Carnie (2013) share different opinions about the nature of these variations. For instance, Boeckx (2008a:9) observes that studies in generative grammar using the comparative and Galilean method show that there is less variation at the core of Universal Grammar (UG) than previously thought. The variation appears to be restricted to lexical properties while the general or universal principles appear to be related to syntactic properties (see also Chomsky, 2001: 2 for related opinion). In the view of Carnie (2013: 27) variation is part of UG because a child who is learning a language must learn the option that is available for that language such as subject-verb-object (SVO), subject-object-verb (SOV) etc. Hence, there is need for more research on the clause structure of different languages in order to determine a clausal architecture that represents the structure of clauses cross-linguistically. For this reason, the study of clause structure and clausal domains have dominated linguistic discourse and generated pockets of debates across languages concerning the derivation of double object constructions (DOCs), prepositional dative constructions (PDCs), positioning of adverbs, ordering of inflectional elements and the structure of the articulated left periphery (see Larson, 1988, Pollock, 1989, Ouhalla, 1991, Rizzi, 1997, Cinque, 1999, Aboh & Pfau 2010, Bassong, 2014, Olaogun, 2016, Collins 2017 among others (a.o)).

Although many languages of the world have contributed to these debates, the contribution of Igbo is very little due to the scarcity of research materials. Therefore, this study is motivated by the need to study the structure of the Igbo basic clause and improve the contribution of Igbo to the cross-linguistic discourse about clause structure. Generally, a clause is fundamentally structured in three domains: the Verb Phrase (VP) domain, the Tense Phrase (TP) domain and the Complementiser Phrase (CP) Domain

(see Rizzi, 1997, Shlonsky, 2007, Radford, 2009 and Haegeman, 2012). Each domain is associated with different functional categories. Contemporary studies show that the distributions of functional categories in the clausal domains provide information about the structure of the basic clause. This idea has not been adequately implemented in the Igbo language. Therefore, this study investigates the actual content of the layers, the hierarchy of projections and their derivational procedure with a view to determining the structure of the basic clause in Igbo.

It is believed that the study of the Igbo clause structure and the cartography of the CP domain will make a significant contribution in linguistic generalisations in relation to clausal architectures discovered across languages. Employing minimalist ideas, the study provides adequate description and explanation of the structure of Igbo clausal domains and how they are derived in phases.

Igbo is a language spoken by a culturally homogeneous group of people located in the South-East zone of Nigeria. The zone is currently made up of five states which include Abia, Anambra, Ebonyi, Enugu, and Imo. The language is also spoken in parts of Delta, Cross River, Rivers, Benue and Akwa Ibom States (see Udoh, 2004). Blench (2012) classifies Igbo as a West Benue-Congo Igboid language. Igbo has a number of varieties or dialects distributed across the aforementioned states with varying degrees of intelligibility. These Igbolects have been classified by Ikekeonwu (1986) and more recently by Nwaozuzu (2008). The exact population of the Igbo speakers is unknown and there has not been any population census since after that of 2006¹. However, Emenanjo, Ndimele, Ohiri-Aniche, Ogbonna, Onwumah, Aimenwauu, Ujah, Eme and Okuma (2011) posit that Igbo is spoken as a first or second language by at least 35 million people. There are general Igbo grammar books in the language such as Emenanjo (1978, 1991, 2015), Uwalaka (1996), Ikekeonwu, Ezikeojiaku, Ubani and Ugoji (1999), Mgbemena (2006), Mbah and Mbah, (2010), among others (a.o). Over the years, Igbo linguists have developed what is currently known as the Standard Igbo often used in the formal domain. The main data presented in this study were drawn from this variety. In the sub-sections that follow, the details of the specific objectives, research problems and questions are provided to give the work a focus.

¹ Source: population.gov.ng

1.2 Statement of the Problem

Much work has been done on the structures of Ìgbo phrases and clauses. They include Nwachukwu (1976), Goldsmith (1981), Emenanjo (1978, 1987, 2010, 2015), Uwalaka (1988, 1991, 1995), Mbah (1999, 2011), Anurudu (1999, 2010), Emerenini (2001), Nwagbo (2003), Anyanwu (2007), Uchechukwu and Mbah (2010), Ikegwuonu (2011), Agbo (2013), Obiamalu (2013, 2014), Nweya (2016a) among many others. These studies rely heavily on the unified approach to the analysis of clausal domains where two or more features are associated with one head. Consequently, the studies do not provide sufficient details about the structure of Igbo clausal domains. For instance, existing works on clause structure have not sufficiently examined the structure of the VP and TP domains based on the Split projection hypotheses with a view to determining the scope, content and hierarchy of constituents. To fill this gap, this study assumes a functional head, Applicative Phrase (ApplP), within the VP and TP domains in order to demonstrate that applicative (APPL) intricately interacts with T, ASP and NEG, thus, providing detailed information about the structure of the VP and TP domains.

More so, researches on information structural categories and the syntax of the left periphery claim that there is an interaction between the discourse categories such as Focus, Topic and Interrogative within the left periphery as evident in Rizzi (1997), Aboh (2004), 2007, Bassong (2014) and Olaogun (2016). Preceding studies such as Nwachukwu (1995), Mbah (2011) and Nwankwegu (2015) have not neatly shown this interaction since they either treat one projection at a time or associate two or more features with one head in the CP domain. Hence, there is need for an in-depth investigation of constituents within the CP domain with view to determining the possible sequences, hierarchy and interaction of the categories. In order to fill gap, this study investigated how functional heads such as Topic, Focus, Interrogative and Finiteness are realised, and how they interact in Igbo, and analysing same based on the Minimalist Program. Varieties of clause structures have been proposed in the literature based on the grammars of I-languages such as Chomsky (1995, 2001, and 2005) and split projection hypotheses such as Split VP of Larson (1988), Split IP of Pollock (1989), and Split CP of Rizzi (1997), which are part of the assumptions of UG. It is worthwhile to adopt these proposals in analysing the structure of Igbo clausal domains and contribute to cross-linguistic generalisations about clause structures.

1.3 Purpose of Research

The general purpose of this study is to examine the Igbo clause in order to determine the forms and order of functional elements and show how the Igbo speakers use lexical and functional items to generate sentences or clauses with emphasis on the CP layer. Specifically, the study intends to

- i. determine the structure, hierarchical order and interaction of functional projections in the Igbo VP domain
- ii. determine the structure, hierarchical order and interaction of functional projections in the Igbo TP domain
- iii. identify the form, hierarchical order and interaction of the functional elements that manifest in the Igbo CP domain with insight from Rizzi's (1997) split CP hypothesis
- iv. make generalisations based on (i-iii) in terms of information structure, clause structure and cartography.

1.4 Research Questions

In a research of this nature, it is pertinent to design research questions that would guide and give the work a focus. Therefore, the following questions were designed to achieve this purpose:

- i. What is the structure, hierarchical order and interaction of lexical and functional projections within the VP domain?
- ii. What is the structure, hierarchical order and interaction of functional projections in the Igbo TP domain?
- iii. What is the composition and hierarchy of the functional elements that manifest in the Igbo CP domain and how do they interact?
- iv. Are there generalisations to be made based on (i-iii) in terms of clause typing, clause structure and cartography?

1.5 Scope and Delimitation of the Study

The scope of this research is to study the clause structure of the Igbo language. The study shall account for VP, TP and CP structures employing Minimalist Hypotheses such as Phase and Cartography. Hence, it would focus on the simple and complex clauses involving clausal left periphery, following the works of Chomsky (1993, 1995,

2005) and Rizzi (1997). Apart from references to other areas of Igbo grammar and Igbo dialects where necessary, this centres on Igbo clause structure.

1.6 Significance of the Study

This research is unique and useful in a number of ways being a pioneer study of the Igbo clause structure and the cartography of the complementiser phrase domain based on the Minimalist Program. This work is a major contribution to studies in Igbo syntax and the general assumptions of Universal Grammar (UG) in relation to clause structure. Hence, the study complements the effort of other researchers in Igbo syntax and Igbo studies generally, in the study, documentation and development of the language.

Researchers, translators, linguists (especially syntacticians), teachers and students will find this work beneficial as a reference material since the study discusses contemporary issues in Igbo syntax such as the implementation of the split projection hypotheses the assumption that sentences are derived in phases.

1.7 Methodology

The variety of Igbo used for this study is the standard Igbo mainly spoken in the five Southeastern states of Nigeria. Primary and secondary data were employed for the study. Primary data were collected by elicitation, observation and introspection of the researcher who is a native speaker. Data generated by introspection were subjected to grammaticality judgment. Secondary data were collected from existing Igbo grammar and literary texts. The data were analysed based on the principles and operations of MP.

1.8 Tone Marking Convention

The tone-marking convention used in this work is that developed by Green and Igwe (1963). The assumptions of the convention are stated in (1) below:

- (1) a. Leave all high-tone syllables unmarked
- b. Mark all low-tone syllables
- c. Mark all syllables with down-step tones as illustrated below

- (2) enyi 'elephant'
isi 'head'
HH (unmarked)
- (3) àlà 'land'
ùgwù respect
LL (marked)
- (4) egō 'money'
ezē 'teeth'
HS (H-unmarked and S-marked)

In (2-4) above, HTs are left unmarked while- LTs and down-steps are marked. In this way, tone marking is made less cumbersome. Nevertheless, there is a statistical evidence to the effect that high tone syllables are more pervasive in Igbo words and phrases than low tones and step tones, so a lot is saved by leaving high tones unmarked (cf. Ugochukwu, 2016).

1.9 Summary

In this introductory chapter, the general background to this study was presented to give one insight into the motivations for the study. Other items discussed include the purpose of the study, the research questions, the significance of the study, the scope and delimitations of the study as well as the methodology. It is believed that the information provided in this chapter would give the reader the background knowledge about the study in general, thereby, paving way for the understanding of the discussions in the chapters ahead.

CHAPTER TWO

LITERATURE REVIEW

2.0 Preliminaries

Many studies have been done on various syntactic phenomena across the languages of the world. However, the works reviewed here are useful because they are relevant to the present study. The study of clause structure is not new. It has led to the tradition of dividing the clause into three main domains: the VP domain, the TP domain and the CP domain. Linguists are interested in the hierarchy of constituents in these domains of the clause and their computational procedure across languages. Hence, the literature review is done in three main parts: theoretical studies, theoretical framework and empirical studies.

2.1.0 Theoretical Studies

This sub-section reviews the analysis of clause structure in Generative Grammar. It focuses on the previous clausal architectures proposed by scholars based on cross-linguistic evidence.

2.1.1 Analysis of Clause Structure in Generative Grammar

Chomsky's (1957) *Syntactic Structures* is a revolutionary work that has changed the understanding of linguistics and marked the introduction of Generative grammar. The work also revolutionised the cognitive approach to linguistic analysis now construed as modern linguistics even though that was not the intention. The intention was to construct a grammar that can be viewed as a device of some sort for producing the sentences of the language under analysis. The outcome is expected to be a theory, which can be used with no reference to a particular language. His ideas gave rise to the term 'generative grammar'. Hence, Chomsky (1957) using Phrase Structure Grammar (PSG) demonstrates how phrases and clauses can be derived using the 'Phrase Structure rule (PSR) or re-write rules'. These PS rules are used to generate the basic structure called 'kernel sentences' while transformations re-arrange the sentences in various ways to generate other kinds of structures such as negative, passive and interrogative sentences. One of such popular transformation is the affix hopping rule. In addition, Chomsky emphasised the need for grammar to be simple. Hence, he made a distinction

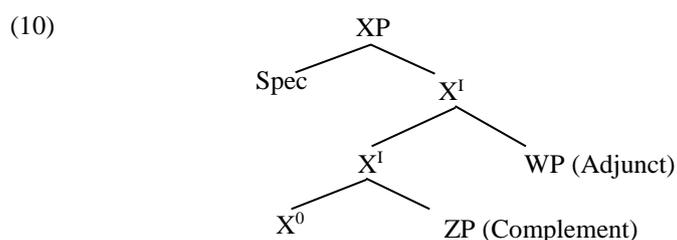
hinges on the shortcomings observed in the work. In the study, he represents the structure of the basic clause as in (8) below:

$$(8) \quad S \longrightarrow NP \text{ INFL } VP$$

Where $\text{INFL} = [\pm\text{Tense}]$, subject to the idiosyncratic properties of the adjacent lexical items. The rule represents the clause structure of languages where the subject of the sentence is obligatory such as Germanic and African languages. But having observed that due to certain parameters of UG, the subject NP could be optional in some languages², the rule was reformulated. Hence, Chomsky revised the clause structure of such languages as shown below (see Chomsky, 1981:28):

$$(9) \quad S \longrightarrow (\text{NP}) \text{ INFL } VP$$

This period witnessed the introduction of X-bar theory to make up for the shortcomings of PSR. The x-bar theory was formalised in Jackendoff (1977). It holds that phrases are headed by lexical items often identified as the lexical head. The lexical head is labelled X^0 . One of the main advantages of the theory is that it accounts for the intermediate projection which PSR failed to account for. Scholars observed that there is a projection bigger than the lexical item but smaller than the maximal projection (Radford, 2009). This constituent is identified as an intermediate projection in syntactic analysis. Hence, X-bar has three bar levels-the lexical, intermediate and maximal level. This is represented in the schema below:



(Ouhalla 1999:115, Haegeman 1994:105, Black 1999:5)

² In the literature, these ideas has come to be called null subject parameter. It accounts for all the languages that make use of covert subject in the derivation of syntactic structure (see Haegeman 1994).

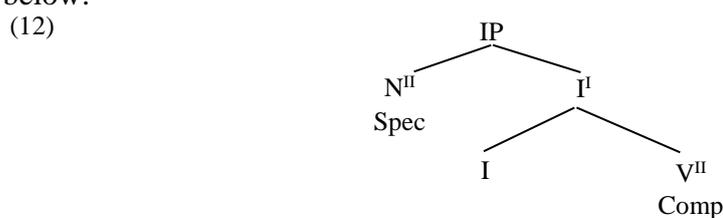
In (10), XP is the maximal projection while X^0 is the lexical head. It shows that WP (adjuncts expands X^1 to another X^1 while ZP (complements) expands X^1 into X^0 . It demonstrates the closeness of the complement to the head than the adjunct. This period witnessed the tradition of projecting clauses following the X-bar theory of phrase structure rule. The theory was successful to a great extent since it was able to capture parametric variation cross-linguistically especially in relation to word order. It also eliminated the redundancy observed in re-write rule (See Chomsky 1970).

Before 1980, linguists assume that functional categories were of no semantic importance and were therefore secondary to lexical categories in syntactic analysis. Pieces of evidence from the study of different languages however show that the practice was defective (see Jackendoff, 1977, Abney, 1987 and Kayne, 1994). For instance, the clause is represented as (11) within this period:



In (11), 'I' used to be INFL but was shortened. 'S' was discovered to lack head. Hence, it breaches X^1 principle that every phrase must have a head. For the fact that clauses are categorised as finite or non-finite marked by the inflection, it was concluded that 'I' is the head of the clause. Consequently, X^1 was extended to 'I' and is schematised in (12)

below:

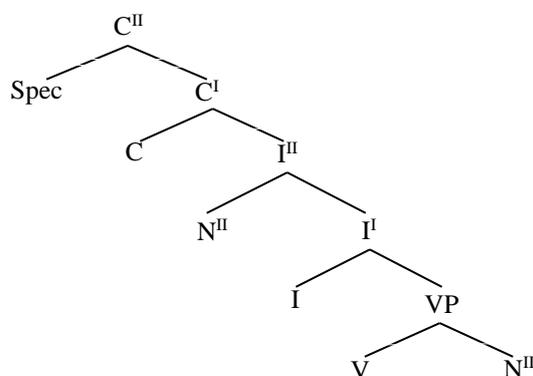


(Cook and Newson 2007:101)

The schema above shows that 'I' element is the head of the clause and that the clause is the maximal projection of inflection with the subject NP as its specifier and VP its complement. Once it was discovered that functional items can conform to X^1 convention, there was pressure to assume that all functional items, as well as lexical items, will do starting with (C)omplementiser. C (e.g. 'that' introduces embedded clauses in English). With the introduction of the C to X^1 syntax, it was proposed that IP

can function as the complement of C. The proposition was supported by the fact that only IP can follow C, indicating a restrictive position between them (see Chomsky, 1989). Following these developments, the full structure of the clause is represented thus:

(13)



Cook and Newson 2007: 104

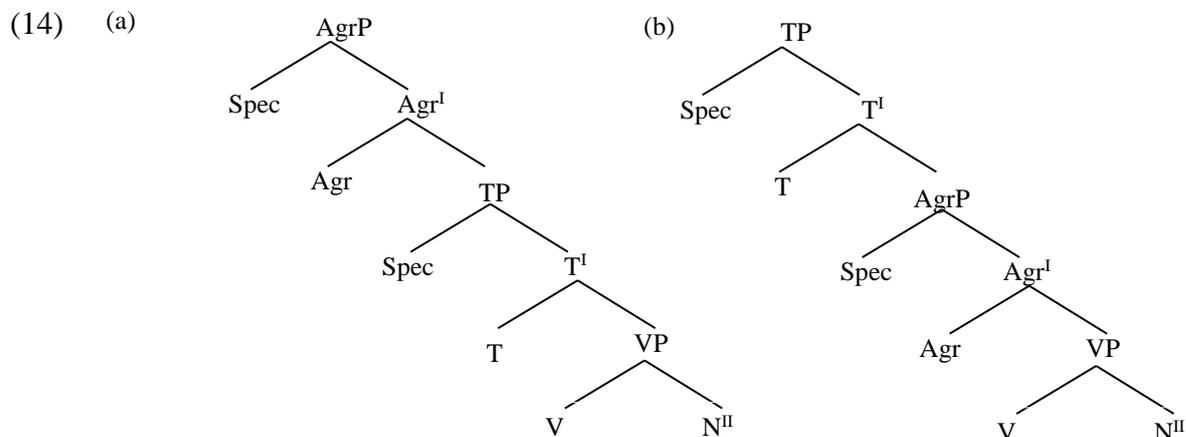
With this development, the clause is now structured into three hierarchical levels that conform to the X^I convention. The CP headed by C, the IP headed by I and the VP headed by V. The C-system introduces the force of the clause; the I-system introduces the finiteness of the clause while the VP introduces the basic proposition expressed by the clause (see also Haegeman, 1994).

A lot of proposals sprung up during this period such as that of Abney (1987) who suggested that the determiner should be allowed to project maximally since every element in the structure is allowed to project. Hence, he argues that the determiner selects the NP as its complement. The implication being that, the noun phrase is headed by a functional element D identified with the determiner while the NP is its complement. His proposal is popularly known as *DP Hypothesis*³ in the literature.

A further development that follows from X-bar theory is Pollock (1989) who argues that tense and agreement are represented by independent morphemes in languages like French and that such structures seem to be universal. Hence, the standard assumption of representing 'I', which houses more than one functional element, with a singular node is defective. Therefore, 'I' should be split into tense and agreement. This implies that the functional items should be allowed to project their own phrases. However, Pollock's research shows that agreement is below tense in French while research by

³ See Abney (1987), Cook and Newson (2007), Radford (2009) Carnie (2013) among others.

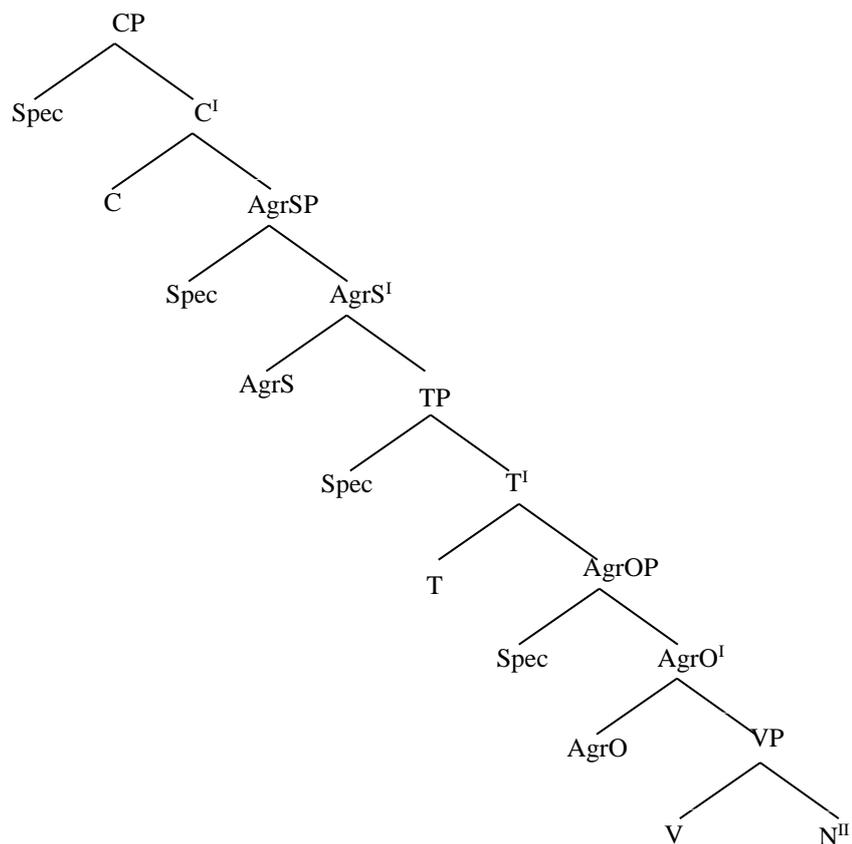
other linguists in languages like Hungarian show that agreement is above tense. This gave birth to two structures where tense is above agreement (Hungarian type languages) and that where tense is below agreement (French type languages)



(See Pollock, 1989: 397 and Cook and Newson, 2007: 139)

In (14a), agreement is above TP but in (14b), it is below TP giving rise to two structures that account for different languages. This gave rise to the question of universality. However, with the emergence of Chomsky (1995), the argument was resolved. Chomsky proposed a solution by claiming that the two parties were right. According to him, there is an agreement head above and below tense. The higher agreement is associated with the subject while the one below tense is associated with the object. This proposal captures the fact that some languages express object agreement morphologically. The proposal is represented in schema below:

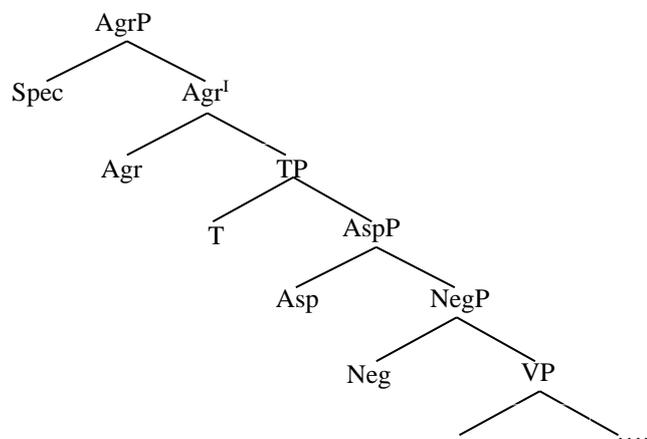
(15a)



cf. (Chomsky 2015: 159)

The structure above simply shows that there is agreement above TP which controls subject agreement (AgrSP) and another below TP which controls object agreement (AgrOP). Aside T and Agr, other elements that manifest in I node which are allowed to head their own maximal projection include NegP, AspP, AuxP, MoodP, etc (see Ouhalla 1991). The schema below represents the structure of a split IP.

(16)



(cf. Ouhalla, 1991: 85)

In this regard, Ouhalla (1991) investigates the typological variation in the distribution of these functional categories cross-linguistically using morphological and categorial features. According to him, functional categories play important role in determining language variation including variation in the surface order of substantives. For instance, he demonstrates that the order of NEG, TNS and AGR may vary from one language group to another. Consider these examples from Berber (17a), Arabic (17b), Italian (17c) and Chichewa (17d):

- (17) (a) ad-y-segh Mohand ijn teddart
Will (TNS)-3ms(AGR)-buy Mohand one house
'Mohand will buy a house'
- (b). sa-y-ashtarii Zays-un daar-an
will (TNS)-3ms(AGR)-buy-Zayd-NOM house ACC
zayd will buy a house.
- (c) Legge-va-no.
Read-imp(ASP/TNS)-3ps(AGR)
'They read'
- (d) Mtsuko u-na-gw-a
Waterpot SP(AGR)-PAST (TNS)-fall-ASP
'The waterpot fell'

The data above show that AGR appears inside TNS in (17a&b). On the other hand, it appears outside TNS in (17c&d). The distribution of TNS and AGR in the data reveals that the order of inflectional elements varies across languages. The fact that I elements may be expressed by distinct morphemes and ordered differently across languages show that they bear distinct features. Observations of this nature motivated the assumption that functional categories in the unitary IP can be allowed to project maximally in terms X-bar.

However, Chomsky (1995b: 344-366) later argued against the postulation of agreement heads on two grounds: (i) agreement is a relation rather than a category (ii) agreement features are uninterpretable, hence, they do not assign any interpretation at LF⁴.

⁴ It is assumed that NegP, AspP and TP bear interpretable features, hence, they are assigned semantic interpretation at LF

Nonetheless, X-bar analysis was also extended to the VP and CP domains. With respect to the VP domain, the puzzles created by word order variation in mono-argument and double object constructions motivated the proposal to decompose VP domain (see Larson 1988). For instance, the object DP may be displaced to Spec, *v*P in some languages but not in others. In this regard, Thrainsson (1993) observes that the object can shift in German and Icelandic leading to Object-Verb (OV) order as shown below:

- (18) a. Nemandinn las ekki bókina. (Icelandic)
 student-the read not book-the
 b. Nemandinn las **bókina_i** ekki t_i
 “The student didn’t read the book.”
- (19) a. Der Student hat nicht das Buch gelesen. (German)
 the student has not the book read
 b. Der Student hat **das Buch_i** nicht t_i gelesen.
 “The student hasn’t read the book.”

Data (18b) and (19b) are examples of object movement in Icelandic and German respectively. In the examples *bókina* and *das Buch* ‘the book’ were moved leftward from their base generated position as indicated by the trace. The data exemplifies object-verb order in the VP. In addition, the presence of DOCs and applicative constructions in some languages (see Peterson 2007) create problems for the traditional analysis of the VP domain. Consider the examples below:

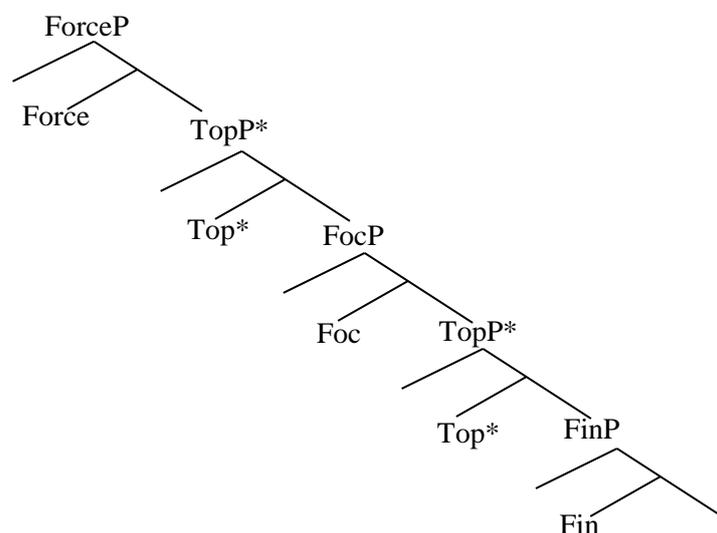
- (20) a. ni-tlaōcoya
 s1-be sad
 ‘I am sad.’
 b. ni-tē-tlaōco-lia
 s1-INDF-be sad-APPL
 ‘I am sad in regard to someone; I feel pity for someone.’ (Yasugi 2012: 9)
- (21) a. Ngi-theng-e iphepha
 1SG:SC-buy-PST 5paper
 ‘I bought a newspaper’
 b. Ngi-thenge-el-e ubaba iphepha
 1SG:SC-buy-APPL-PST 1father 5paper
 ‘I bought father a newspaper’ (Lamoureaux 2004:1)

The examples above are from Classical Nahuatl (20) and Zulu (21). In (20), an intransitive verb (20a) is transformed into a two-argument verb by adding an

applicative suffix *-lia* as shown (20b) without affecting the verb meaning. In (21b), a two-argument verb is transformed to three-argument verb as shown in (21b) by the suffixation of the applicative morpheme *-el*. In these examples the applicative morphemes increased the valency of the verb by one. Following observations of this nature, there was need to re-examine the internal structure of the VP in order to accommodate other functional heads like the light *v* and applicative.

Further researches into the internal structure of clausal domains motivated Rizzi (1997) to extend x-bar analysis to the CP domain where discourse categories such as topic, focus and interrogative are hosted. The CP domain like other domain was often identified with a single X-bar projection in the early 1980s until there was empirical evidence showing that each of the features that manifest in that domain can be allowed to project maximally. In this regard, Haegeman (2012:1) notes that reinterpreting COMP position in terms of X-bar format shows that C hosts subordinating conjunctions/complementisers and fronted auxiliaries, and the spec of C hosts SOs that have been promoted to the left periphery for discourse related-reasons such as Topic and Focus. The C-system expresses two kinds of information: discourse information (force) and Tense information embedded in the IP. The force phrase (ForceP) is a projection of the sentence type feature, indicating sentence type (declarative, interrogative, imperative etc.) while the Finite phrase (FinP) projected of the finiteness feature regulates the subject-predicate relation and anchors the utterance to the time, location and point of view of the speaker. In many languages, FinP also hosts an EPP feature, requiring it to have a specifier (see also Holmberg and Platzack, 2005: 432). In the articulated CP, TopP and FocP are sandwiched between ForceP and FinP. Rizzi (1997) argues that force, topic, focus and finiteness are functional heads belonging to the left periphery and projecting their own X^I schema as shown below:

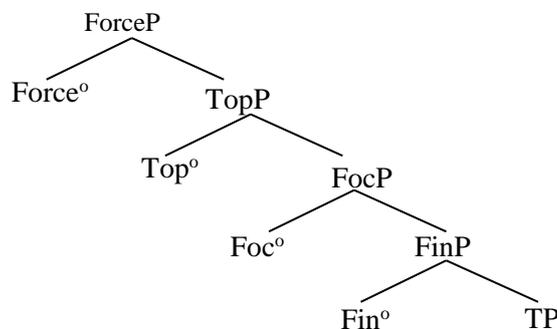
(22)



Rizzi (1997: 297)

The diagram shows that topic is recursive in Italian. Following Rizzi (1997), Holmberg and Platzack (2005) proposed a universal structure of the left periphery as outlined below:

(23)



Holmberg and Platzack (2005: 433)

Observe that Rizzi's (1997) conception of the left periphery which is based on Italian differs from that of Holmberg and Platzack (2005) because Rizzi's structure shows that TopP is recursive in Italian. Pieces of evidence from different languages have shown that the structure of the CP domain as presented above may vary across languages (see Bassong, 2014, Olaogun, 2016). Generally, the complementiser system is seen as the interface between a propositional content and a superordinate structure (a higher clause). In Igbo, this study shall examine the components of the left periphery based on the structure above to determine its universal applicability in terms of content and hierarchy. More so, adequate attention has not also been given to complementisers in Igbo to determine whether they carry finiteness feature as observed in some languages.

In summary, the analyses of clause structure discussed above show that the CP, the TP and the vP domains play a central role in the computation of a basic clause across languages. Each domain is characterised with a number of categories that help in the interpretation of a clause. Allowing all functional categories to project maximally in the X-bar tradition has contributed significantly towards the identification of syntactic categories. Considering that many of these categories exist in Igbo, it is important to examine their distribution in the three clausal domains in order to determine the structure of the Igbo basic clause. In doing this, this study aligns with the clausal architecture proposed in Chomsky (1995, 2015) where it is assumed that agreement is a feature and not a structural node. The analysis of clause structure discussed above also show that the internal structure of each domain may vary from one language group to

another in content and ordering of syntactic categories. This variation creates problem for UG as there is no consensus no how it should be interpreted. While some scholars assume that variation is part of UG, others have reduced it to the property of lexical items. This is one of the problems facing generative grammar in the analysis of clause structure. However, allowing variation to be part of UG undermines its main goal which is to show that languages of the world are similar. Therefore, it is advantageous to assume that variation is a property of lexical items in different languages.

2.1.2 Analysis of Clause Structure in relation to Information Structure

Information Structure (IS) is one of the fields of linguistic investigation that has been broadly handled in the history of linguistics. Virtually every research area-phonology, semantics, pragmatics, morpho-syntax has in one way or the other accounted for how the phenomenon is realised in the languages of the world. However, there is no unanimity among researchers with regard to finding a universal linguistic theory capable of accounting for the variation in IS strategies exhibited by languages. For this reason, it is still in debate whether IS belongs to grammar proper or to pragmatics or to any other linguistic component. On this issue, Erteschik-Shir (2007: 4) has this to say:

Within modern linguistic theories, the place of information structure in grammar is far from settled. Within the Principles and Parameters theories (GB/MP), information structure is generally relegated to the peripheries, making it hard to express its central role with respect to syntax, semantics, and intonation in a systematic way.

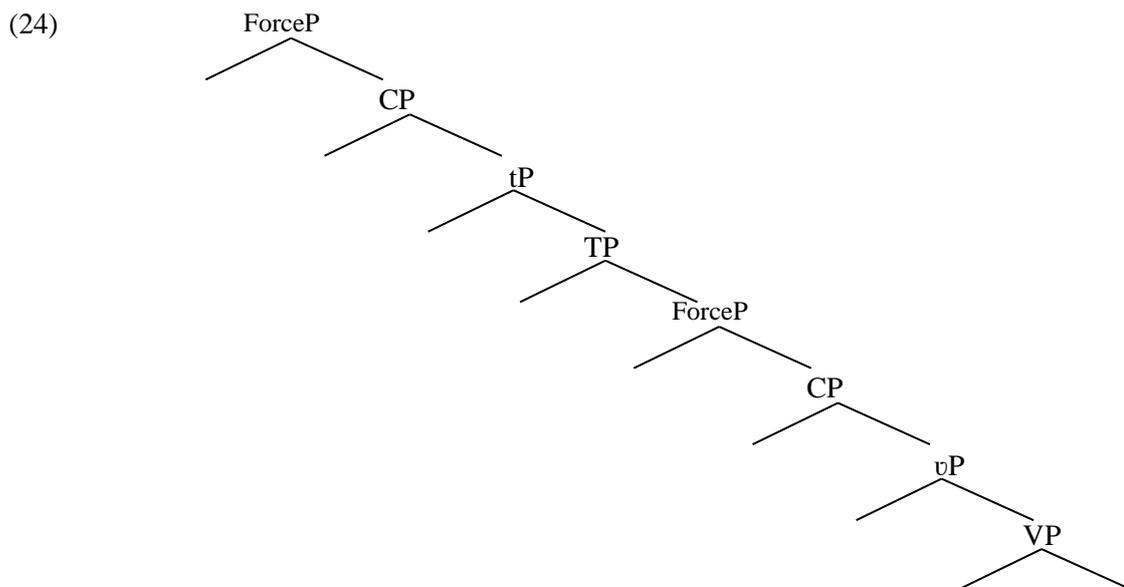
Much of the work, which make a headway incorporate other linguistic components in its analysis as pointed out above. Therefore, a purely syntactic approach to IS is difficult to conceive. However, Schwabe and Winkler (2007:5) identify two central approaches to the study of IS, meaning and form.

- i. The Formal View
- ii. The Semantic-Pragmatic View

The formal view includes (a) the syntactic or feature-based account and (b) the phonological or prosody-based account. While the semantic-pragmatic view includes (a) the one-to-one mapping account of grammatically determined meaning onto

pragmatic meaning and (b) the underspecification account. Below is a brief highlight of the views.

2.1.2.1 The formal Approach: Syntax and prosody: This approach was developed by Chomsky (1971) and Jackendoff (1972) and has been argued within the Generative Grammar. Within this view, the central theme of the feature-based approach is that the information structural notions, topic and focus, are integrated into the formal system of language. According to the standard variant of this theory, a formal F(ocus)-feature is introduced at some level of the representation and causes the F-marked phrase to move to the specifier position of a corresponding functional focus head, which is projected in the left-peripheral domain of the sentence (see Rizzi, 1997, É. Kiss, 1998). The F-feature is translated at the phonological form (PF) into prominence according to specific phonological rules and at the logical form (LF) into a semantic representation. Within this theory, information structural notions are directly and unambiguously represented in the syntactic component and translated at the two interpretive interfaces. In the last two decades, the syntactic account of IS focuses on two themes: first, the definition and exact structure of the left periphery and secondly, whether the assumed structure and recursiveness of the left periphery is universal? This forms the main idea of Rizzi's Split CP proposal. Rizzi's (1997) analysis and other syntactic account of IS identify two main area in sentential structure where structural topic and focus positions are located. These are CP area (i.e. for languages that exhibit movement of focus within the left periphery) and the VP area. The recent developments within the MP such as the introduction of the notion of phase and other proposals which claim that focus operators move to a position at the left edge of vP lend support to the current syntactic assumption that displacement/dislocation is always to the left edge of the sentence or the left edge of the predicate phrase or vP phase. One of such proposals is presented by Drubig (2007:39) and is roughly schematised below:



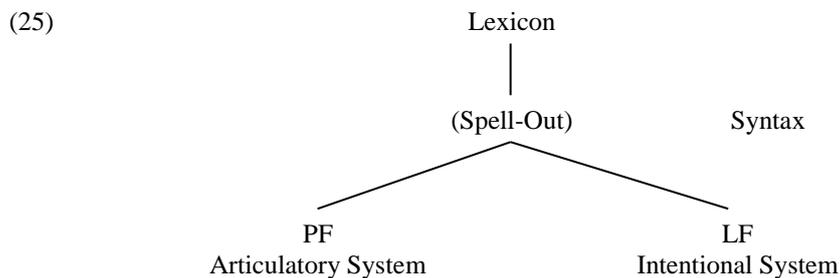
The schema above is used to argue that an ordinary main clause is biphasal with internal and external peripheries to which the Split-CP layer in Rizzi's sense applies⁵. The external periphery is above TP while the internal periphery is below TP and above vP. Schwabe and Winkler (2007), building on the suggestions of Butler (2003), argue that these functional peripheries are isomorphic. In other words, they show identical component projection at the edge of every phase with certain variations due to semantic difference between event and proposition related phases⁶. The proposal is among the evidence provided in support of the claim that topic and focus exist in both CP and vP areas. Further insight into this assumption is provided in Chapter 5 under the analysis of the structure of the CP layer.

Generally, the syntax-based approaches hinge on the hypothesis that IS notions (e.g. topic and focus) are represented as formal features in the syntactic component of the generative system. Feature-annotated syntactic structures are interpreted on the two interface levels, PF and LF that make up the interfaces for AP and CI systems as

⁵ The proposal suggests that TopP-FopP array occurs both in COMP and in INFL targeting the edge of the phase.

⁶ Drubig (2007) used the structure of polarity, modality and force/mood projections as well as their different interpretations in eventive and propositional phases as evidence to argue that a sentence could be assigned more than one force against the traditional view that that every sentence represents a particular speech act type and therefore can have one and only one force component, which is located in COMP.

represented by the T-model below (see Chomsky, 1995:168 and Schwabe and Winkler, 2007:11).



The claim presented above is called the *two interpretive interface hypothesis* and is formalised below:

(26) **Two-Interpretive Hypothesis**

The syntactic structure is interpreted at its interfaces, PF and LF.

Schwabe and Winkler (2007) note that the advantage of the two-interpretive interface hypothesis is that it is strictly modular and therefore a restrictive model of grammar. However, its disadvantage lies in the fact that it has been driven by theory-internal rather than empirical considerations. In other words, the claim that phonology interacts with meaning only via syntax and vice versa might be empirically⁷ inadequate because it was observed that information structural phenomena may pose a challenge to this hypothesis since they seem to allow for a direct interaction between the different modules. Nevertheless, since the focus of this work is to determine the structure of the Igbo clause, a syntactic account of IS would help to determine the positions of Topic, Focus and question, and subsequently, yield the hierarchy of constituents in the Igbo CP domain. In a related manner, the prosody based account proposes that some movement operations are not feature-driven and do not occur in syntax, but are rather phonologically driven and occur in the phonological component⁸. Further developing this view, the advocates argue that phonological requirements trigger movement for different information structural effects; and that a direct correspondence exists between phonology and interpretation without recourse to syntax, to mention but a few.

⁷ The reader is referred to Riemsdijk & Williams 1986, Woodbury (1987), Winkler 1997) a.o.

⁸ Some of the related works as cited by Schwabe and Winkler are Zubizarreta (1998), Szendrői (2001), (2004), Erteschik-Shir (2007).

2.1.2.2 The Semantic Pragmatic Approach: The central idea of this interpretive approach is the assignment of discourse functions to syntactic and phonological constituents. It is therefore, concerned with the mapping of the formal linguistic structure onto the semantic structure. It interprets syntactically and phonologically marked focus or topic constituents, modelling their sentence-internal and sentence-external function. Thus, they regard focus and topic as semantic phenomena, design formal methods to model focus-background and topic-comment structures. If an approach takes the linguistic structure as its starting point, it is subsumed under the cover term *semantic-based approaches*. There are sub-variants of this approach (for details, see Schwabe and Winkler, 2007). Conversely, pragmatic based approaches take communicative and functional aspects of a sentence as their starting point and model a separate information structural component. In this case, the primary concern is the elaboration of pragmatically determined IS. This study is not based on interpretive approach since it would not help to achieve the objectives of the study which is to determine the structure and hierarchy of constituents within the layers of the clause and the various interactions therein.

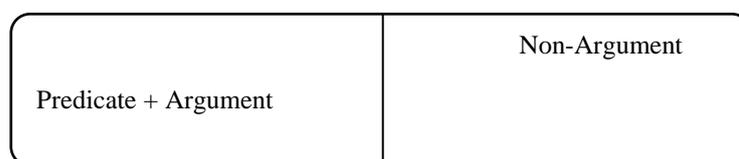
2.1.3 Alternative Approach to the Analysis of Clause Structure

Agbo (2013) explains that the clause in role and reference grammar (RRG) has two levels of representation-the syntactic and semantic representations. The syntactic representation is mapped unto the semantic representation in a clause. According to him, the semantic representation is not equivalent to the deep structure of transformational generative grammar (TGG) rather, it captures the relationship between form and meaning in the structure of the languages. In RRG approach, there is no transformation or move α between covert and overt structures. The concept of the clause structure in RRG is to represent the actual form of the clause in its linear sequence with all the morphological structures intact. It is also based on the universal grammatical categories as expressed in the languages of the world.

According to Agbo (2013), clause structure in RRG involves two basic relations. They are the relational and non-relational aspects of the clause. The relational aspect concerns the relations between a predicate and its arguments, while the non-relational

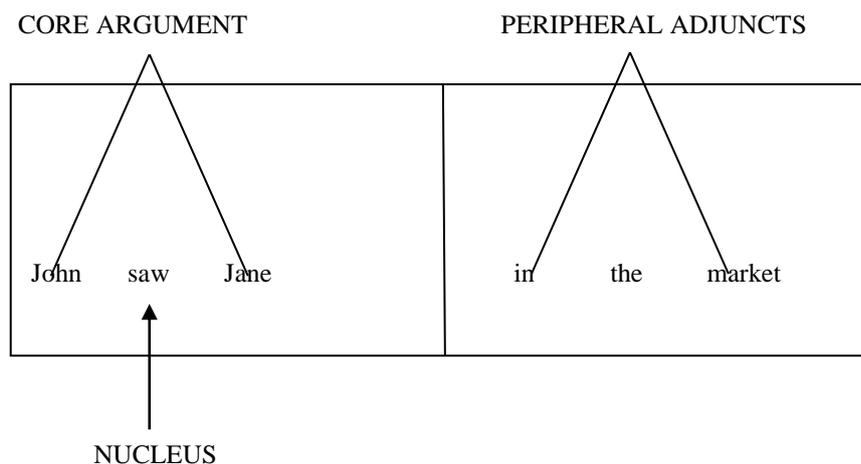
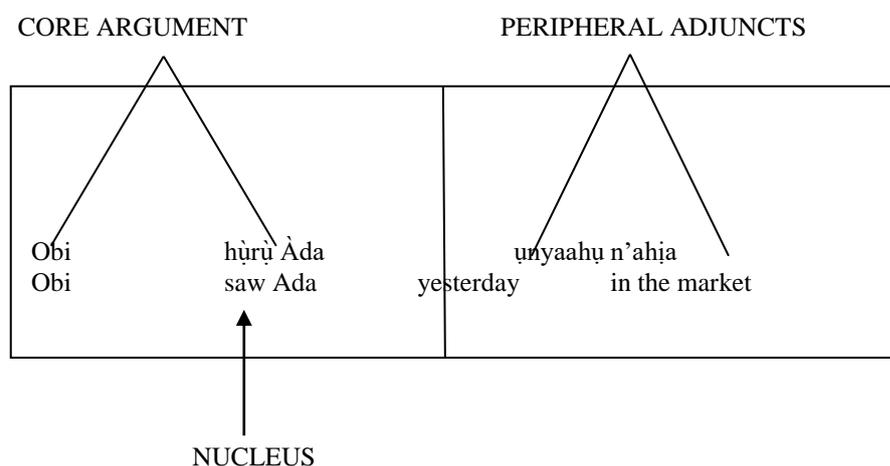
aspect concerns the organisation of phrases, clauses and sentences in a hierarchical order. In this regard, Van Valin and La Polla (1997) and Van Valin (2005) identify the primary constituents of the clause as follows: (i) the *nucleus*, which contains the predicate (usually a verb), (ii) the *core*, which contains the nucleus and the arguments of the predicate and (iii) the *periphery* which include the non-arguments of the predicate. The predicate, its argument and those elements which are not arguments of the predicate constitute the Layered Structure of the Clause (LSC). In other words, the predicate and its arguments form one layer of the clause while the nonarguments of the predicate form another layer. The difference between the two layers does not depend on linear order or precedence of the elements in the clause. This feature enables the LSC to accommodate the clause structure of those languages that have free-word order. The LSC is presented schematised

(26)



The motivation for clause Structure in RRG (Agbo 2013:44)

The schema above shows that there are two main layers of the clause viz the predicate and argument layer and the non-arguments. In the view of Van Valin (2005), these two layers are the basic underlying elements of clause structure in all human languages. The predicate and its arguments are known as the nucleus of the clause while the non-arguments are termed the periphery. There is a distinction between semantic and syntactic units in the LSC. The semantic units represent the predicate and its semantic arguments while the syntactic units represent the predicate and its syntactic arguments. In other words, the semantic units are the motivation for the syntactic units. This means that the nucleus, arguments and non-arguments are semantic units while the core and periphery are syntactic units. This distinction is shown with the diagrams below:

(27) **The parts of the LSC in English**(28) **The parts of the LSC in Igbo**

In (27), the nucleus of the clause in the English sentence contains the verb *saw* while its arguments are *John* and *Jane*. The nucleus *saw* and its arguments *John* and *Jane* make up the core of the clause. The non-arguments of the nucleus i.e. *yesterday* and *in the market* belong to the periphery.

In contrast, the nucleus of the Igbo sentence in (28) contains the verb *hụrụ* 'see' and its 'obligatorily co-occurring nominal element' *Ada*. Agbo (2013) explains that there was need to modify the nucleus of the clause for Igbo in RRG due to the nature of the Igbo verbs. In Igbo, the nucleus contains the verb and its mandatory nominal element. Both of them form part of the semantic representation of the verb. Therefore, the core of the clause comprises the verb and its nominal element, i.e., *hụrụ Ada* 'see Ada' and the argument *Obi*. This is different from the core in the English clause schematised in (27). However, the peripheral adjuncts *unyaahụ* 'yesterday' and *n'ahịa* 'in the market' have

the same structure as the English clause. In this regard, Agbo (2013) modifies the syntactic and semantic units of the Igbo clause in the RRG as shown below (See Agbo 2013:46):

(29)

SEMANTIC ELEMENT(S)	SYNTACTIC UNITS
Predicate + Nonimal Element Argument in semantic representation of predicate Non – Arguments Predicate + Arguments Predicate + Argument + Non-Argument	Nucleus Core Argument Periphery Core Clause (= Core + Periphery)

The modified version of the semantic and syntactic units of the RRG Theory (Agbo 2013:46)

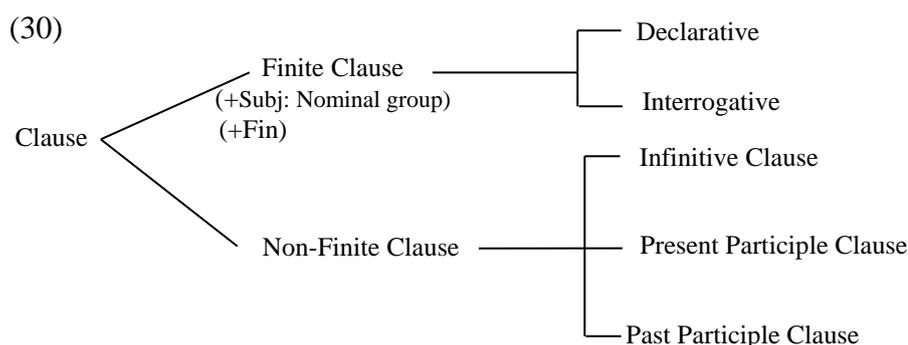
The diagram in (29) above represents a modification of the semantic and syntactic units of the RRG theory in order to account for inherent complement verbs that exist in Igbo. In Van Valin (2005: 5) the nucleus consist of only the predicate but for Igbo as shown in (28) above, the nucleus comprises the predicate and the nominal element that occurs together with the predicate.

The components of the LSC presented above are those found in all the languages. However, there are some non-universal components which require linear order to determine their position(s) in the clause. They include the ‘pre-core slot’ and the ‘post core slot where wh-phrases and other dislocated phrases such as topic and focus appear (see Agbo 2013:46-48). In analysing clausal components in the approach, a number of elements appear at the same level as shown above.

To sum up, the foregoing analyses of the clause show that the goal of RRG is to capture the dependency relationship that exists between form and meaning. Emphasis is not so much on the hierarchy of clausal constituents. Hence, this approach to the analysis of clause structure is not suitable for the purpose of determining the hierarchy of clausal constituents which is the main focus of this work.

Another approach to the analysis of clause structure is the systemic functional grammar SFG also called systemic functional linguistics (SFL) advanced by Halliday (1985), Halliday and Matthiessen (2004), (2014) and contributions by other linguists. This approach examines mainly the system and the functions of language. The original

version of SFG assumes that language has three functions technically called metafunctions (see Halliday and Matthiessen 2004, 2014, Mbah 2017). They are ideational (the function of construing human experience), interpersonal (the tenor or interactivity: the personae or interactants, social distance and relative status) textual (mode, that is the internal organisation and communicative nature of the text) functions. Therefore, it focuses what language does rather than how it does it. In this theory, a clause can be represented as (30) below (see O'Donnell 2011:4)



According O'Donnell (2011:4) the diagram above shows that, SFG models language e.g. a clause as a choice potential with choices operating a particular contexts. In other words, it allows speakers to focus on meaningful choices (e.g. passive vs active) without needing to think of the particular structure that realises it. Generally, the basic assumption is that meaning implies choice. If there is a choice in any context, then that choice is meaningful since difference in choice can bring about difference in meaning. From the foregoing, it is obvious that the interest of SFG/SFL is not in structure. Hence, there is no emphasis on the hierarchical structure of a clause or the internal structure of clausal domains. Considering the goal of this study SFG and RRG will not be suitable for the analysis of the Igbo clause structure.

2.2 Theoretical Framework

The goal of this subsection is to discuss the theory of UG chosen for the study. In this regard, this section presents the Minimalist Program (MP); a theory which sees language as an optimal design that meets the interface levels. It is the contemporary syntactic theory of UG within Generative linguistics that took the place of Government and Binding theory (GB) or Principles and Parameters theory (PPT) because it explains in a better way, what the native speakers know about their language and how this

linguistic knowledge could be represented in the mind of speakers. In the sub-sections that follow, an overview of MP is given to enable the reader to understand its workings and how it applies to natural languages.

2.2.2 The Minimalist Program

MP is a more economical approach to the analysis of grammars of I-languages advanced by Chomsky (1993, 1995, 2000, 2005, 2008, 2013 & 2015) and works by other linguists. Chomsky (2015: vii) maintains that it is a program and not a theory. According to him, “it is a seamless continuation of pursuits that trace back to the origins of generative grammar, even before the general biolinguistics program, as it is now often called, began to take shape in the 1950s.” From the outset, its leading goal is to clarify the concept “simplest grammar” and “to determine how to choose the simplest grammar for each language.” Thus, MP⁹ assumes that the basic principle (BP) of language is that each language yields an infinite array of hierarchically structured expressions, each interpreted at two interfaces, conceptual-intentional (C-I) and sensorimotor (SM)¹⁰. The two interfaces provide external conditions that the BP must satisfy (Chomsky, 1993:168, 2015: ix). MP makes use of basic computational operations to achieve its economy driven goal. Hence, Chomsky’s (2015:157) observation that it is a theory of language that takes a linguistic expression to be nothing other than a formal object that satisfies the interface conditions in the optimal way. Cook and Newson (2007) observe that the core idea behind MP is that analysis should proceed on the minimal number of assumptions and make use of the minimal number of grammatical mechanisms. Generally, in MP, it is assumed that language consists of two components: a lexicon and a computational system with their idiosyncratic properties. The lexicon specifies the items that enter into the computational system while the computational system uses these elements to generate derivations and structural descriptions (SDs) (Chomsky, 1993:186, 2015:154). Chomsky, therefore, describes syntax as a cognitive system that connects two other

⁹ Chomsky (2015:1) highlights two related questions that motivate MP: (1) what are the general conditions that the human language faculty should be expected to satisfy? and, (2) to what extent is the language faculty determined by these conditions, without special structure that lies beyond them?

¹⁰ Similar comment was made in Chomsky (2013) where he notes that each language incorporates a mechanism that determines an infinite array of hierarchically structured expressions that are transferred for interpretation to the two interfaces: the sensorimotor system SM for externalization, and the conceptual-intentional system CI for thought.

cognitive systems: the conceptual-intentional system and the articulatory-perceptual system. Since syntax is linked to these two systems, the syntactic model defines two interface levels, one for each of them: Phonological Form (PF) is the interface to the articulatory-perceptual system, and Logical Form (LF) is the interface to the conceptual-intentional system.

To derive a clause using this model of grammar, a set of lexical items with tokens are selected from the lexicon. The syntactic structure of the clause is built up by taking words out of the Lexicon one by one and *merging* them in the structure. At the same time, other syntactic operations can take place. The end result of this derivation is LF, the interface form for the conceptual-intentional (CI) system. If, during the derivation of LF, a principle of grammar is violated, the derivation is said to *crash*¹¹. The clause under consideration is then considered ungrammatical. Therefore, a derivation must converge¹² at both PF and LF¹³. At some point during the derivation of LF, *spell-out* takes place. *Spell-Out* refers to the process of deriving PF, the interface form to the articulatory-perceptual (AP) system. PF basically contains the phonological and prosodic features of the clause. Apart from LF and PF, other fundamental concepts in minimalist syntax are *economy*, the principle of *Full Interpretation*, and *features*. *Economy*¹⁴ means that operations of the syntax component (the *computational system*) must cost as little as possible. Cost is defined in terms of the number of operations that it takes to derive a certain structure, and sometimes also in the relative 'heaviness' of different operations, i.e., some operations can be more costly than others. Less economical computations are blocked even if they converge. Chomsky (1995:226) claims that operations *select* and *merge* are costless operations because they do not fall within the domain of discussion of convergence and economy¹⁵. The three economy principles were developed out of the principle of full interpretation earlier mentioned.

¹¹ See Chomsky (1993:171, 2015:172 for details of what can cause a derivation to crash).

¹² Convergence is determined by independent inspection of the interface levels.

¹³ In the Minimalist literature the terms PF and SM on one hand and LF and CI on the other hand are often used interchangeably and thus shall they be used in this work.

¹⁴ Zahedi (2007) notes that MP deploys two types of economy considerations viz-*methodological economy* (such as simplicity and parsimony) and *substantive economy* (such as shortest steps, fewer derivations, full interpretation and last resort which are least effort notions). See also Hornstein, Nunes and Grohmann (2005:8)

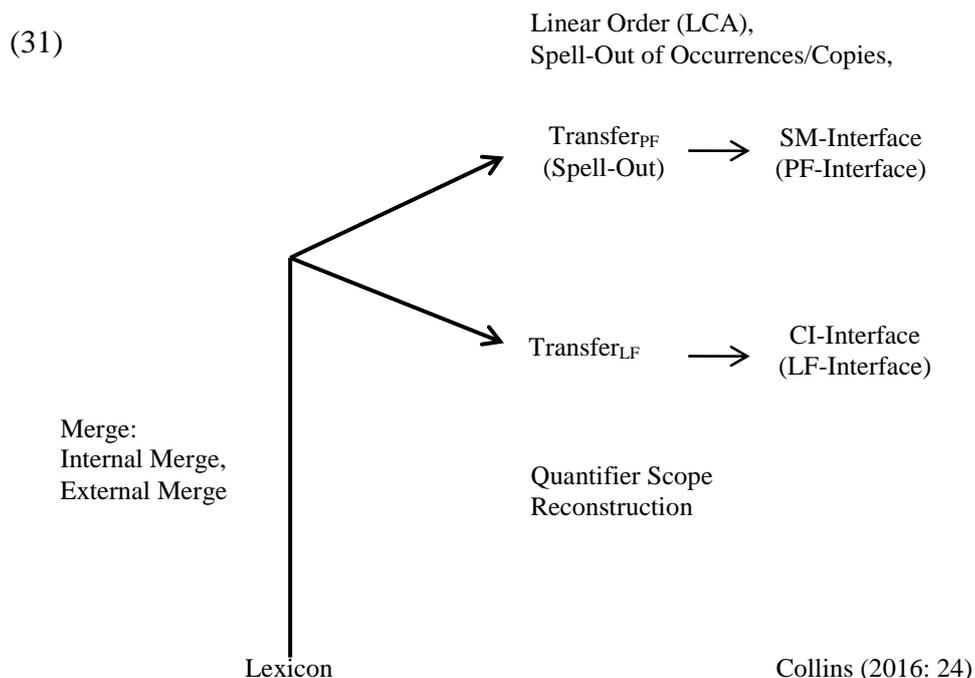
¹⁵ Also see Samek-Ladovici (2006)

Full interpretation (FI) holds that every element in a structure must be interpreted in one way or the other. Therefore, derivations should not contain more than the required number of syntactic objects. Lexical items are identified in the computational system as bundles of *features*. These features are checked at the instance of merge. The motivation for movement is to check features. Features could be semantic (interpretable features) which are valued prior to computation or formal (uninterpretable features) which are valued in the course of computation.

The discussion above shows that MP diverges radically from earlier assumptions, abandoning some of the issues once held to be central. However, in some respect, it maintains some of the core assumptions that separate GB/PPT from its predecessors, particularly the notions of universal linguistic principles. However, it reduces parameters/variation to non-substantive parts of the lexicon and general properties of lexical items (Chomsky, 2015: 155, Collins, 2016: 24). The implication is that parameter is not a part of UG in the framework discussed here unlike in PPT. All that is needed for computation is the lexicon and the computational system.

2.2.3 Architecture of the Minimalist Program

In MP, the human mind is seen as a complex computer machine that processes language. Therefore, it is a representation of the computational system of human languages (C_{HL}). The basic computational process selects lexical item tokens and builds them into a structure by successive application of merge. The derivation splits at the point of *spell-out* where the phonetically relevant materials are sent to PF and the grammatical and semantically relevant features sent to LF. The computational procedure continues to apply similar processes to build fully formed structure at the PF and LF. Chomsky (2005:9-10) captures this idea as follows: ...“the expressions generated by a language must satisfy two interface conditions: those imposed by the sensorimotor system SM and by the conceptual intentional system C-I that enters into the human intellectual capacity and the variety of speech acts.” If the PF is phonetically interpretable and the LF semantically interpretable, the derivation converges, otherwise, it crashes. This understanding yields the schema below:



The schema above demonstrates that the basic computational process takes pre-selected lexical items (LIs) with their idiosyncratic properties $\langle \text{SEM-F, SYN-F, PHON-F} \rangle$ from the lexical array (LA)¹⁶ and builds them into a structure by a succession of *merge* operations. Merge is external when LIs are new in the derivation and internal when any of the items is already in the derivation and undergo scrambling/displacement via head movement, subject movement, cyclic movement and/or remnant movement to form a syntactic object (SO). At some point during computation, the derivation splits into two where the phonetically relevant materials are transferred to SM/PF interface and the grammatical and semantically relevant features are transferred to CI/LF interface. In this model, there are two points of *Transfer*¹⁷, Transfer_{PF} and Transfer_{LF} which are assumed to be separate operations taking place at the same point. Transfer_{PF} is equivalent to *Spell-Out*. Two main things have to take place at Transfer_{PF}/spell-out: (i) ordering of terminals for appropriate interpretation following the principle of the linear correspondence axiom (LCA)¹⁸ (ii) and spelling out of occurrences/copies. The rule for spelling out copies says that only the last created occurrence is spelled-out. Another

¹⁶ A lexical array is a finite set of lexical item tokens (Collins 2016: 47).

¹⁷ *Transfer* means creating representations that can be read by the interface. This shall be discussed fully in a subsequent sub-section. *Transfer* is also associated with the notion of phase.

¹⁸ The LCA proposed in Kayne (1994) assumes that phrases are ordered similarly across languages in. S>H>C order. Every other kind of arrangement is as a result of movement. .

process that might take place at $\text{Transfer}_{\text{PF}}$ is tonal modification as it concerns languages like Igbo. At the $\text{Transfer}_{\text{LF}}$, part(s) of the occurrences are deleted to create interpretable structures (i.e. structures that have meaning). Occurrences enable one to determine the scope of quantifiers and source of moved items for the purpose of reconstruction. The computational procedure continues to apply similar processes to build fully formed structure at the PF and LF interfaces. At these points, the syntactic objects are presented for appropriate interpretation. If the PF is phonetically interpretable and the LF semantically interpretable, the derivation converges, otherwise, it crashes. In the earlier versions of the program, there are economy motivated principles proposed to minimise the cost of derivations and make derived syntactic representations as simple as possible. They include *Greed*, *Shortest move*, *Procrastinate* and *Last Resort* (see § 2.2.8). The schema shows that only the required levels are represented in the system. Hence, superfluous levels were eliminated. For instance, Phonological and Logical form of GB theory were reduced to binary interface levels PF and LF. Move α is known to operate freely in GB but in MP, it is for a reason-to value features. D-structure and S-Structure of GB were removed from computation in MP.

It is worthy to note that though MP is evolving with contribution from other linguists, the conservative linguists retain the ideas as originally conceived by Chomsky with little or no modification. For instance, Al-Mutairi's (2014: 37) architecture of MP¹⁹ mentions nothing about LCA or two points of transfer. Nevertheless, this study shall apply the theory as presented above which includes the current ideas driving the recent Minimalism.

In summary, MP minimises the numerous principles and derivations of GB to a great extent. In the study, the procedure described above forms the major derivational steps to be taken in the analysis of the Igbo clauses for its economy advantage over earlier assumptions. The sub-sections that follow discuss in detail, the various components of the Minimalist architecture presented above.

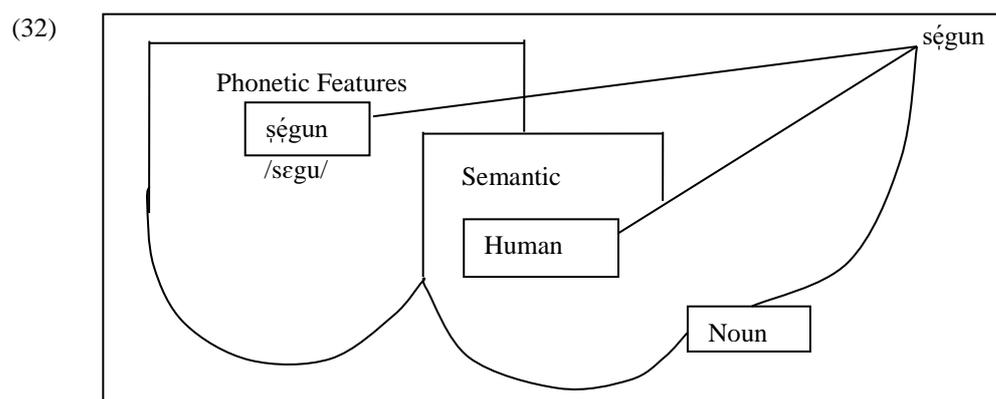
¹⁹ For other versions of the MP architecture see Cook and Newson (2007: 29), Boeckx (2008b: 44), Radford (2009:14) and Al-Mutairi (2014:37) a.o.

2.2.4 The Lexicon

The lexicon is conceived as a list of syntactic objects having idiosyncratic properties. Therefore, the lexicon (L) of any language is said to contain lexical items (LIs) and (prosodic) morphemes which enter into the computational system with their idiosyncratic properties, besides what is predictable by the principles of UG. Hence, Collins and Stabler (2016: 43) define it as “a finite set of lexical items.” It is constructed on the basis of the set of features available in UG to enable them to project fully in the computation process. UG provides a set of features F and operations C_{HL} . Features include Syntactic [SYN.], Phonological [PHON], and Semantic [SEM] features any of which could be null for some LIs. C_{HL} accesses F to generate expressions starting from a subset of the lexicon termed *numeration*²⁰. No further features may be introduced in the derivation once lexical items are numerated. The process takes the steps listed below:

- a. Select lexical items from the lexicon
- b. Map lexical items to expressions, with no recourse to F for narrow syntax

Derivation makes one at a time selection from the numeration, and the items are mapped to expressions. Derivation progresses without further access to the lexicon to avoid over generation or introducing new features. Olaogun (2016:45) notes that the features of LIs are organised on multiple levels as in the sketch below:



(Olaogun 2016: 45)

²⁰ Collins and Stabler (2016:44) formalises LI as “a triple: $LI = \langle SEM, SYN, PHON \rangle$. Where SEM and SYN are finite sets such that $SEM \subseteq SEM-F$, $SYN \subseteq SYN-F$, and $PHON \subseteq PHON-F^*$. This implies that LIs have more than one SEM (focus, topic, negation, definiteness etc.) and SYN (N, V, A, Subcategorisation) features and these are sub-sets of SEM and SYN. While PHON is an element of PHON-F since there just may be one way of realising a LI phonologically having selected strings of segment to form it. For the list of many of these features, see Collins and Stabler (2016:44)

The diagram above represents the lexicon with *Ségun* as the LI. It shows that *ségun* has PHON, SEM, SYN features expressed at different levels: the phonological feature which captures how the word is pronounced, /ʃégũ/; the semantic features which indicate the meaning of the word such as [+Human, +Male, ±Young]; and the syntactic features which indicate word category and subcategory [+N, -V,] etc. Selecting *Ségun*, implies selecting this bundle of features associated with it in the lexicon. LIs may bear morph-syntactic, specifier and complement features. It may also bear inherent or contextual features. The former could be values lexically provided by formal or semantic features that may be selected from a range of values while the latter could be acquired through agreement or merge. In summary, the lexicon serves as input to the C_{HL}.

2.2.5 The Computational System

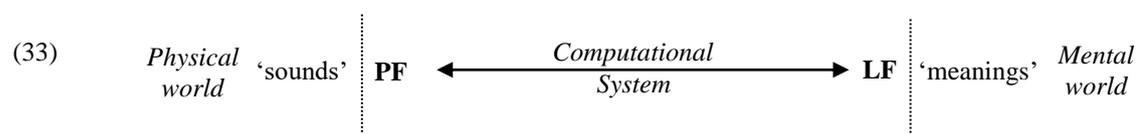
The computational system performs the function of the syntactic component as in earlier versions of generative models. However, it differs from them because it is modelled like a computer, hence the name computational system. MP assumes that the cognitive system of language consists of a computational system of the human language faculty (C_{HL}) and a lexicon (L) that specifies the elements which C_{HL} selects and integrates to form a linguistic expression, a Structural Description (SD). SDs contain a pair, (π, λ) , that satisfy the interface conditions (Chomsky, 2015: 154). The lexicon provides the information (i.e. LIs, morphemes etc.) needed by the C_{HL} without redundancy. The items are selected by the C_{HL} and projected to an X-bar structure, the sole residue of the projection principle²¹. Computation proceeds by selecting LI from the lexicon freely at any point until a set of phrase markers that form a single phrase marker is derived. Operation Spell-out may apply at any point but if the derived phrase marker is not a single phrase marker, the derivation crashes at PF since PF rules cannot apply to a set of phrase markers. However, the derivation converges if otherwise. Chomsky (2015: 233) notes ...“the computational system C_{HL} is based on two

²¹ In GB framework, the projection principle states that lexical information is syntactically represented. In other words, syntactic structure is determined by lexical properties (See Haegeman (1991:55). This follows from the fact that phrases are projected by the lexical head and thus determines the category of the phrase.

operations, Merge and Move.”²² These operations apply in the simplest form, at the root (see § 2.2.7 for a detailed discussion). With the aid of these operations, the computational system relates sound and meaning by mapping a numeration (N) selected from the lexicon to a pair (π, λ) , where π is a PF object and λ is an LF object. The pair is subject to full interpretation (FI) which requires all the features of the pair to be legible at the relevant interfaces. If π and λ satisfy FI, the derivation²³ converges, otherwise, the derivation crashes at the relevant level.

2.2.6 Phonological Form and Logical Form Interfaces

At the instance of Transfer, the semantic information is sent to LF while the phonetic information is sent to PF for full interpretation. For that reason, all numerated SOs must have been added to the structure prior to Spell-Out so that the relevant information would be sent to the appropriate interface. At LF, only a single structure can be interpreted at once. PF and LF form the contact between the grammar and other areas such as sound and meaning. They constitute the interface between language and other cognitive systems yielding the physical sound on one hand and meaning on the other hand. Therefore, they serve as the bridge linking sounds and meanings as shown in the diagram below:



Adapted from Cook and Newson (2007: 6)

The points of contact between the computational system on the one hand, and PF and LF on the other hand are the interfaces between knowledge of language and the outside world of sounds and the inside world of concepts. This is evident in the fact that language is structured by having to be expressed by sounds or letters that can be handled by the human body and concepts that can be conceived by the human mind. At the LF interface, features or SOs do not need to be linearised for interpretation, rather, dominance relation is needed. Conversely, items within the PF interface need to be

²² Al-Mutairi (2014:38) observes that there is no consensus in the literature regarding the number of indispensable operations inside C_{HL} . Aside *merge* and *move*, some authors include *select*, and *agree*.

linearised for interpretive purposes. More so, all symbols and grammatical elements in a representation must have SM and CI interpretations to be qualified as PF and LF representation in order to satisfy the ‘interface condition’ (Chomsky, 2015:25).

2.2.7 Derivational Operations of the Minimalist Program

The computational system of MP is driven by certain operations taken to be the operations forming derivations. These are operations that are minimal and economical for syntactic derivations. The operations of MP work with LIs that form the basis of structure. These are discussed below.

2.2.7.1 Select and Numeration

In the MP, it is basically assumed that operation select is the starting point of derivation²⁴ while the numeration (N) is regarded as a pre-computational operation. Chomsky (2015: 208) notes that select is an operation of the C_{HL} and a procedure that selects LI from the numeration, reducing its index by 1, and introduces it into the derivation as SO_{n+1} . While a *numeration*²⁵ is a set of pairs (LI, i), where LI is an item of the lexicon and i is its index, understood to be the number of times that LI is selected²⁶. In other words, this operation involves the initial choice of the *numeration* of lexical items needed for a particular type of construction from the lexicon. Each *numeration* consists of the set of words²⁷ to be used in a derivation and an indication of the number of times each word is to be used (see also Al-Mutairi 2014:38). Therefore, two derivations could only be compared for economy reason if they have equivalent

²³ A *derivation* is a sequence of symbolic elements S mapped from a numeration N, such that the last member of S is a pair (π, λ) and N is reduced to zero.

²⁴ Hornstein, Nunes and Grohmann (2005:69) note that a starting point is needed for a derivation in order to ensure compatibility between PF and LF and prevent unwanted economy computations.

²⁵ Chomsky also used the term Array (A) as equivalent to numeration.

²⁶ There are other proposals in the literature as to how LIs enter computation. For instance, Collins and Stabler (2016) propose that LIs are indexed with integers (as in LI_k) in the lexical array. The integers are tokens which serve to distinguish a lexical item that appears twice in a structure and serve no other purpose in computation. It allows LI to be selected twice with different tokens. With this, they suggest that there is no need for a numeration. However, we retain Chomsky’s proposal for ease of analysis.

²⁷ This operation assumes that there is a pre syntactic derivation which makes it possible for words to be fully derived and inflected with morpho-syntactic features which would be deactivated via Agree relations with a probe.

numeration or collection of LIs (Hornstein, Nunes and Grohmann (2005:69). For instance, the numeration for the derivation of (34a), is shown below in (34b)

- (34) a. Nwoke ahù nyà-rà moto āhù
 man DEM drive-past car DEM
 ‘The man drove the car’
- b. N= {Nwokē²⁸₁, ahù₂, nyà₁ rV₁, motò₁}
 man, DEM, drive PST, car,

(Nweya 2016a: 15)

Given the numeration in (34b) where N=numeration, the computational system, through operation select, gain access to the LIs and picks out elements reducing its index by 1. Successive application of select and merge exhausts the LIs in the numeration as in

- (35) N= {Nwokē₀, ahù₀, nyà₀ rà₀, ụgbọ₀}
 Man, DEM, drive PST, car,

(35) above shows that the LIs have been used up with the aid of select to yield the structure in (21a). It has to be noted that the two occurrences of the DEM ‘ahù’ are distinct SOs formed by distinct applications of select to N. Hence, they have entirely different properties at LF since they are marked (*ahù^l ahù^k*) as distinct for C_{HL}²⁹. The program further assumes that the N must be exhausted (i.e. reduced to zero) for a derivation to converge at PF and LF. The foregoing simply shows that operation select and the numeration³⁰ are significant steps in the computation system. In this study, it is assumed that affixes and tones are numerated from the lexicon prior to computation since functional categories are realised in these forms in the language. The implication

²⁸ Recall that the tonal convention adopted for this study is that of Green and Igwe (1963) where only the low and down step tones are marked while the high tones are left unmarked as discussed in (§ 1.9).

²⁹ Chomsky (2015:208) notes that this assumption violates the inclusiveness condition but it is one that seems indispensable.

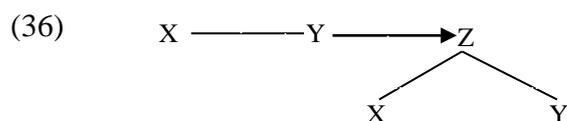
³⁰ Hornstein, Nunes and Grohmann (2005:71) identify a type of N(umeration) which they called *Crazy numeration* (see the example below). They observe that this kind of N may not to be filtered out until they get to the interface levels, PF and LF, which are responsible for filtering out non convergent derivations. This is to avoid resuscitating levels such as DS and SS.

$$N1 = \left\{ \begin{array}{lll} \text{òkè}_{43}, & \text{nà}_{20}, & \text{azù}_{2} \\ \text{‘rat’} & \text{‘and’} & \text{‘fish’} \end{array} \right\}$$

is that aspects of the word formation process are realised using syntactic operations such as select and merge.

2.2.7.2 Merge and Move

In MP, merge is the most fundamental syntactic process that takes two linguistic items (LIs) α and β , and combines them into a set $\{\alpha, \beta\}$, during computation; While moved LIs are items that have been merged again.³¹ Berwick and Chomsky (2016: 98) view merge as “...an operation embedded within C_{HL} that applies to two objects X and Y already formed, and constructs from them a new object Z”³² (cf. Chomsky, 2005: 5). It operates on pairs of LIs chosen by select and maps them from pair into a single element with a more complex structure by concatenating them in a common set. Hence, it is regarded as a structure building binary operation³³. Thus, a whole complex structure can be built. This assumption is represented in Cook and Newson (2007:346) thus



Given the numeration $\{\text{see}_1 \text{ them}_1\}$, merge takes per operational step the two SOs and turns them into a singular SO. One of the items is selected as the label and the item that dominates as schematised below



In the structure above, merge joins the two items selecting *see* as the head/label. The label or the projecting element determines the syntactic behaviour of the set. Once

³¹ Chomsky made it very clear during the *Keio Colloquium: Syntax session* held on March 8 2014 at Keio University that merge occurs in its simplest form. Hence, there is no copy operation or such concepts as re-merge as often claimed. It is simply merge.

³² According to Berwick and Chomsky, Strong Minimalist Thesis (SMT) requires that merge will be as simple as possible: it will not modify X or Y or impose any arrangement on them. Hence, yielding an unordered pair.

³³ There are so many literature on merge. However, they differ in the kinds of detail they give about the operation. For details on merge, the reader is referred to Hornstein, Nunes and Grohmann (2005), Chesi (2004), Hornstein (2009) and Chomsky (2015) among many others.

merge applies, the c-selectional properties of the item that selects is satisfied in line with the merge condition stated below:

(38) **Merge Condition**

Merge α and β if α can value a feature of β (Wurmbrand 2012: 2)

Successive application of merge builds a complex structure (i.e. phrases and clauses) in a hierarchical fashion. Merge could be internal or external depending on the sources of the merged elements (see the schema in (27 below)). Andreu and Gallego (2009:10) explain the duo as follows:

(39a) **External Merge:** Merge (α , β) when α is an outcome of a previous application of Merge (or selected from the lexicon) and β is selected from the lexicon.

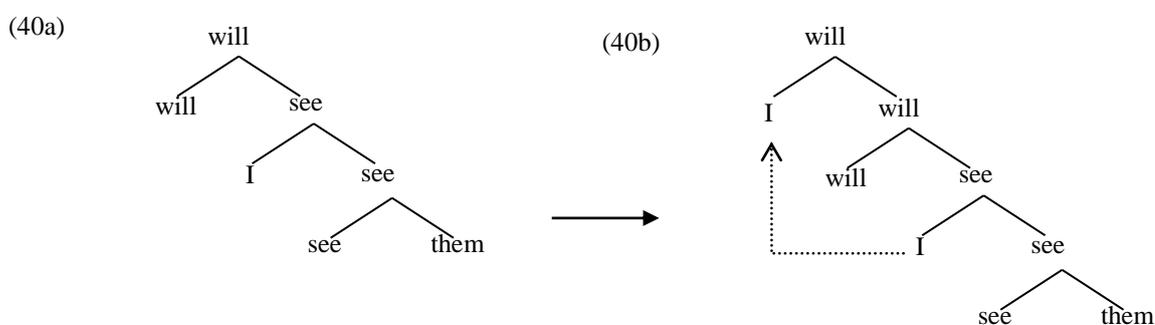
(39b) **Internal Merge:** Merge (α , β) when α is an outcome of a previous application of Merge and β is selected from the domain of α .

This implies that there is external merge when either or both of the items are selected directly from the numeration and joined together as a single structure; while internal merge takes place when an element from already built structure is joined with another element from the domain of the existing structure. In other words, merging a previously merged element. Therefore, both are instances of merge but could be distinguished based on the source of the merged element. In the literature, internal merge is often equated with movement or displacement or dislocation. It is an operation that relates linguistic elements at distant. However, both external and internal merge are regarded as the same operation irrespective of the source of the merged SO. The fact that functors are realised as affixes in Igbo means that affixes are also merged in narrow syntax. In this regard, Collins³⁴ (2016:3) notes

³⁴ One of the issues that arises from this postulation is the place of morphology in syntax. In this regard Collins (p.c.) explains that the goal of current Minimalism is to push morphology (and phonology) into syntax. In other words, all morphological processes that involve the combination of morphemes are achieved by merge, a syntactic operation.

(a) Bound morphemes (inflectional and derivational) are combined by Merge as well. Morphemes can be floating tones. (b). There is no other way to combine morphemes. (There is no Affix Hopping, no lexical word formation rules, no post-syntactic rules as in DM, no notion of “construction”) (e.g., Merge (chair, -s) = {chair, -s} (chairs)).

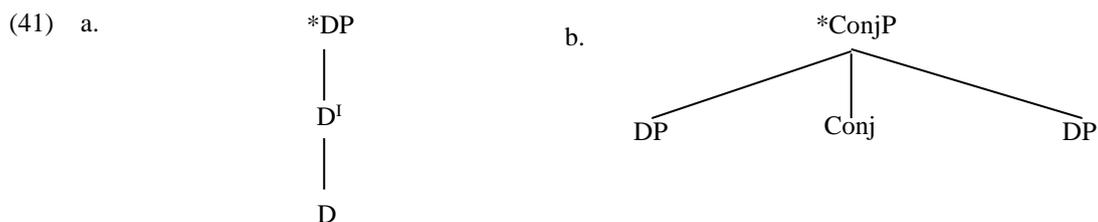
The products of merge and move differ despite the fact that they are equivalent. Merge produces a set $\{\alpha, \beta\}$ by combining α and β while move produces a *function chain* which represents the derivational history of a given element characterised by all the positions into which an element has been merged (see Chomsky, 1981:45, Boeckx, 2008a:32, Hornstein, 2009:12³⁵, Collins, 2016:3-6). Consider the schema below:



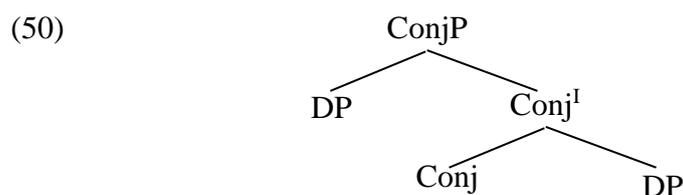
(Cook and Newson 2007: 274)

The schemas above show that (40b) is derived from (40a) through internal merge. In (40b), ‘I’ moved from the specifier of the VP headed by the V, ‘see’, to the specifier of TP headed by will. The properties of merge that minimise the process of derivation in MP are *binarity*, *endocentricity* and *word order* (see Kayne, 1994, Collins, 2016). Binary operations are either spec-head (the specifier precedes the head) or head complement merger (the head precedes the complement). In either case, branching must be two, no more no less. Hence, ternary and unary branching are prohibited as in the schemas below:

³⁵ Hornstein notes that the Extension condition preserves the structural properties of the inputs to the output, hence, prevents revision of previously computed information. Labelling is used to show that phrases are endocentric. Merge as a species of concatenation and hierarchy in language is the result of combining concatenation with endocentric labelling understood in a Bare Phrase Structure way.



(41a) and (41b) above are unary and ternary branching respectively and they violate the Extension Condition (EC) which stipulates that applications of merge can only target root syntactic objects. However, (41b) could be configured as (50) below:

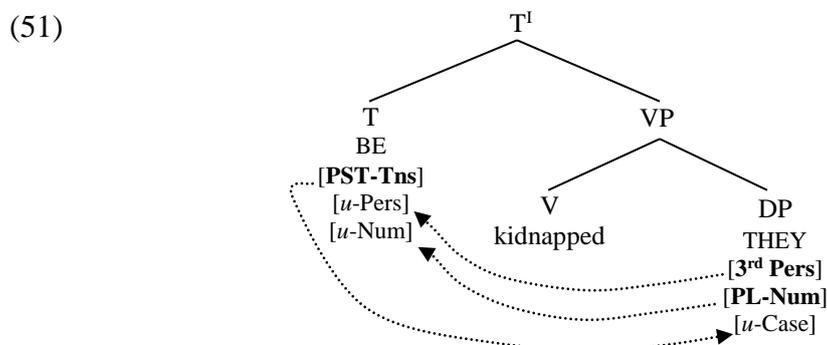


Endocentricity suggests that when merge combines two elements (e.g. X and Y) as demonstrated above, the output, which is often a phrase is free to take its syntactic category label from either X or Y such that the new SO (Phrase) could either be XP or YP respectively. Lastly, the relationship of merge with word order points to the fact that lexical items on the numeration are not combined anyhow; for a derivation to converge, certain structural building rules and principles (e.g. linearity) which are relevant for a successful merger operation must be observed. In summary, merge as a source independent operation, satisfies the selectional properties of LIs and captures the recursion property within MP.

2.2.7.3 Agree and Feature Valuation

Agree is a formal mechanism for feature valuation and deletion of others (i.e. uninterpretable features). It is an operation that establishes a relation between two distinct elements in the syntactic structure through which feature values can be exchanged. These two elements will obviously be in different locations in the structure, the higher one (which is always a head) is called the *probe*, while the lower one (which is generally a phrase) is the *goal* (Radford, 2009). This could be easily observed in languages where agreement is somewhat overt like English. For instance, in this passive construction, ‘They were kidnapped’. A probe goal relationship could be

demonstrated thus: the V *kidnapped* and the DP (PRN) *THEY*³⁶ were merged to form VP *kidnapped THEY*. The structure is further merged with the tense auxiliary *BE*³⁷ to derive the structure below:



(Radford 2009: 284)

In the structure, the T-Aux *BE* is the higher element as well as the *probe* and it searches for a suitable goal in its c-command domain and then locates the PRN as the only potential goal. Consequently, its unvalued [Pers and Num] ϕ -features are valued by the goal. Conversely, the unvalued (Case) ϕ -feature on the goal is valued by the probe. This process is called *Feature valuation*. Following these observations, Radford (2009:301) supposes that agreement is characterised as involving two feature-valuation sub-operations sketched thus:

- (52) **Agreement**
 When a probe (like T) agrees with a goal in its local domain
 (i) the unvalued (person/number) ϕ -features on the probe will be valued (i.e. assigned a value which is a copy of that on the goal)
 (ii) the unvalued case feature on the goal will be valued (i.e. assigned a value dependent on the nature of the probe e.g. nominative if the probe is a finite T).

In relation to this, MP assumes that LIs (functional heads inclusive) enter the derivation with their features already specified and the generative procedure (GP) determines

³⁶ In the literature, it is believed that noun and pronoun expressions enter the derivation with their person and number ϕ -features already valued and their case ϕ -feature unvalued. Hence, *THEY* is written in capital letter to indicate that its case feature is yet to be determined.

³⁷ Conversely, finite T auxiliaries enter derivations with valued T feature and unvalued person and number features.

whether a given expression X is licit in a given derivation by checking the features of X against the features of an appropriate head. The program also assumes that LIs bear three sets of grammatical features-head, specifier and complement features. Head feature accounts for the grammatical properties of LI that marks it as distinct from others; complement feature determines the type of complement LI would select; while specifier features determine the kind of specifier a syntactic head takes.

Based on these observations, linguists posit that crosslinguistic word order variations are consequent upon the strength of features of the functional categories and the process of feature valuation. Functors are morphological due to their inflectional nature. They can bear strong or weak features, weak features are not visible at PF, and hence, their presence does not cause a derivation to crash. In contrast, strong features are interpretable at PF. Their visibility can cause a derivation to crash because its presence violates the principle of full interpretation (FI). Therefore, they need to trigger the overt movement of the item which they enter into a checking relationship with, for valuation and elimination. Categorical and ϕ -features are +interpretable at LF and are assumed to have semantic import in the interpretation of SDs. On the other hand, specifier and complement features are weak and –interpretable. Generally, MP assumes that the computational system cross checks the features of LIs via feature checking operation in order to ensure compatibility of features borne by LIs.

There are two main checking configurations associated with Minimalism: Spec-Head and Head-Head relations. The former is based on the specifier feature of a head which attracts the feature of another syntactic object from its original theta-marked position into Spec-Head for feature checking purpose. This follows from the assumption that every type of structural case is checked in a Spec-Head configuration. For instance, the subject of a clause is said to be attracted from its VP-internal θ -position to Spec/I or T where it values the Spec-feature of I or T and consequently values the nominative case-feature of the moved subject. Hornstein, Nunes and Grohmann (2005: 116-121) point out that MP assumes a unified Spec-Head approach to case where the object is not expected to check accusative case in its base position but moves to some spec-position. Better still, the assumption follows that accusative case checking could be covert or overt object movement to the case checking position because covert movement is allowed in the minimalist syntax. Similar approach is assumed for oblique case which

is said to be checked under a spec-head configuration rather than the head-complement approach. The unified analysis suggests that DPs check their case feature in a position higher than the one where they establish a probe-goal relationship with some head often overtly. This assumption differs from the GB approach where the case and θ -positions are one and the same. For instance, if an object values its case covertly, only the case feature moves while the object itself does not move to the [Spec, VP].

Conversely, Head-Head checking configuration does not involve specifiers and complements. In this case, a lexical or functional head moves to another head position because the new position bears an unvalued feature which attracts the unvalued feature of the earlier position. This involves a type of movement called head to head movement, where a head X of a phrase XP moves from its position, into another head Y of a phrase YP in a higher position (see also Radford, 2009: 155). This kind of movement is constrained by a locality principle of UG called Head Movement Constraint (HMC) stated by Radford (2009: 157) as follows: “Head Movement is only possible between a given head and the head of its complement”. In English, V(erb) to T(ense) movement and T to C(omplementiser) movement are instances of head movement. These checking configurations account for the agreement phenomena observed in languages. Therefore, syntactic derivations depend on feature checking and valuation.

2.2.7.4 Transfer_{PF}/Spell-Out

Generally, *spell-out* is the point at which phonologically relevant materials are transferred to the SM or LF interface for appropriate interpretation. Chomsky (2005a: 16) describes it as transfer to the sound interface. At some point in the computational procedure, a derivation is split into two and transferred to the interface levels via different operations: Transfer_{PF} and Transfer_{LF}. Transfer_{PF} is equivalent to spell-out. In the recent Minimalist model, it is a distinct operation from Transfer_{LF} where grammatically relevant materials are sent. With regard to this, Hornstein, Nunes and Grohmann (2005:46) point out that the phrase markers that feed LF and PF interfaces are structurally different, though they share common derivational history; therefore, the computation must split. According to Cook and Newson (2007), it enables the derivation to be spelled out in its outward physical form. Recall that two basic things

have to take place at $\text{Transfer}_{\text{PF}}$ /spell-out: (i) ordering of terminals based on LCA for appropriate interpretation (ii) and spelling out of occurrences/copies. It is also used to distinguish between overt movements which take place before spell-out to check strong features and covert movements that take place after spell-out to check weak features. Hence, the operations that occur between Spell-Out and PF are not similar to those that operate within the Computational System on the road to LF (see Uriagereka 2012 for a biolinguistic approach to spell-out). Applications of Spell-Out is regulated by convergence and economy conditions. Cook and Newson (2007:254) identify two conditions that must be achieved before the application of Spell-Out: (a) All overt SO must have been incorporated into the structure (b) A single structure must have been built. It is also pertinent to mention that MP does not regard Spell-Out as a Surface Structure (SS) level, having reduced syntactic levels to the two basic interface levels (See Hornstein, Nunes and Grohmann, 2005:47, Cook and Newson, 2007:253³⁸).

2.2.7.5 $\text{Transfer}_{\text{LF}}$

This is a universal syntactic operation in MP that maps SOs generated by merge to the LF interface. It is a distinct operation from $\text{Transfer}_{\text{PF}}$. According to Collins and Stabler (2016:66) “ $\text{Transfer}_{\text{LF}}$ is the first operation of the semantic component, which maps the SO to a form that can be interpreted by the CI interface”. It is pertinent to mention that the information interpreted by the interfaces is computed cyclically as phases. Once structures are transferred to the interfaces, they become inaccessible to further syntactic operations. But in order to permit internal merge after Transfer, Transfer may leave an *escape hatch*. Phase Impenetrability Condition (PIC) is established in relation to transfer since the domain of a phase head becomes impenetrable to an external probe once the complete phase is transferred to the interfaces.

2.2.8 Economy Conditions of Minimalism

Generative procedures that involve movement are constrained by economy conditions such that only minimal rules and conditions are required for linguistic computation. The economy conditions discussed in the sub-sections below are *last resort*, *shortest move* and *minimal link condition* (MLC). However, it is worthy to note that *Greed* and

³⁸ Cook and Newson (2007:253) note that at the point of Spell-Out, only partially built structures are yielded and thus could not be evaluated for well-formedness except they get to the PF and LF. Therefore it is only a stage in the computation process. In contrast, SS is a level of representation at the point of where structures could be judged for well-formedness.

procrastinate have been re-interpreted in terms of last resort. Collins (2001:50) points out that linguists have realised that it is not in all cases that movement is motivated by the need to satisfy the morphological properties of the moving element and movement is not often blocked by greed. More so, with the introduction of phase, it is assumed that all movement operations must occur before spell-out (Cook and Newson 2007). Hence, greed and procrastinate are not relevant for convergence.

2.2.8.1 Last Resort

This economy principle supposes that operations apply only if the derivation would otherwise result in an ungrammatical representation at LF or PF due to lack of full interpretation. It demands that every computational operation must serve a grammatical purpose. Chomsky (2015:257) formalises last resort as follows:

- (53) **Last Resort**
 Move F raises F to target K only if F enters into a checking relation with a sublabel of K.

In this regard, SO moves only if it is attracted by a feature of another SO that needs to be checked. Therefore, displacement operations come into play to eliminate [-interpretable] feature to avoid a crash. Other instances of operations that are subject to last resort include the spelling out of resumptive elements and do-support (Collins, 2001:46). The former is applicable to Igbo-type languages while the latter is applicable to English-type languages.

2.2.8.2 Shortest Move and Minimal Link Condition

Shortest Move is an economy condition that requires all movement to be to the nearest possible position in the computation procedure. Cook and Newson (2007:247) note that the range of possible positions is determined by the properties of the moved element. Hence, a constituent must move from its source position to the next hierarchically closest position of the right hand in an upward movement direction. This is captured by the generalisation that movement to a specific kind of landing site does not skip landing sites of the same type. Generally, the principle favours shorter movement over longer ones. It currently includes decision about which constituent is to move when more than one position is available, in which case, it is canonically the closest item to the landing site. (cf. Thráinsson, 2001:142 & Crystal, 2008: 435). Shortest move is not quite

different from Minimal Link Condition (MLC henceforth). MLC requires that the links between elements in a movement chain be kept to a minimum. Chomsky (2015: 273) suggests that formulating MLC is more natural if movement is reinterpreted as ‘attraction’ or ‘Attract’ for short where an element K attracts F for the purpose of feature checking. Chomsky (2015:271) captures MLC as follows:

- (54) **Minimal Link Condition**
 ...at a given stage of a derivation, a longer link from α to K cannot be formed if there is a shorter legitimate link from β to K.

This implies that MLC does not allow long movements where shorter movements are possible. In the first instance, it seems that MLC and Shortest move are in conflict because the shorter the movement, the more movement needed to cover the distance. A plausible solution is to posit that movement chains are added to the structure as a single element in one derivational step to avoid lengthening of the derivation by MLC. In MP, it is assumed that MLC captures the Relativized Minimality (Rizzi, 1990) of GB. Hence, displacement operations triggered by Attract are subject to MLC.

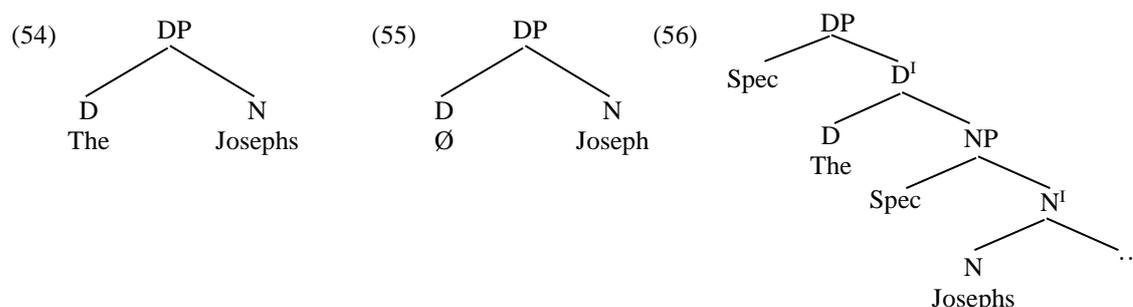
2.2.9 Key Minimalist Assumptions

This sub-sections discusses some key assumptions developed in earlier framework which were incorporated into MP probably because of their empirical significance. In other words, they were not developed alongside MP. These include the DP-hypothesis, the Predicate Internal Subject Hypothesis (PISH), the Bare Phrase Structure (BPS) and the Split projection hypotheses such as the Split-INFL, Split-VP and Split-CP hypotheses. These assumptions improved the understanding of syntactic structures and are central to the analysis of clause structure which is the primary focus of this study.

2.2.9.1 The Determiner Phrase Hypothesis

DP hypothesis originally DP-analysis follows from a proposal by Abney (1987) within the GB framework that NPs are headed by a functional element, D, identified with the determiner in a way that the structure of the noun phrase parallels that of the sentence which is headed by the INFL. Abney provided theoretical and empirical argument for the idea that a functional category DP, is the maximal category projected by the class of determiner elements and heads the noun phrase. In other words, all definite expressions

including those that do not have overt determiner have the status of DPs. DP represents the extended and the maximal projection of the lexical head, the determiner. Therefore, nominals such as *the governor* and proper name like *Joseph* share the same status as DPs. The D is lexicalised by determiners, articles, pronouns, quantifiers, and demonstratives. In some cases, the determiner may be null. For instance, proper names may not occur with overt determiners as demonstrated below:



According to Bernstein (2001), the proposal resolved the problems posed for X^I theory by the traditional characterisation of NPs and unified the treatment of noun phrases and clauses. In this regard, this study assumes that Igbo NPs are complement of DPs so as to conform to the tenets of MP and for ease of analysis. This assumption is captured in (56) where both are shown to be maximal projections. However, the study would not include analysing the internal structure of DPs. The reader is referred to Anurudu (1999), Obasi (2011), Mbah (2011) and Obiamalu (2014, 2015) for various proposals in respect to the DP analysis in Igbo.

2.2.9.2 The Predicate-Internal Subject Hypothesis

The predicate-internal subject hypothesis (PISH) also known as VP-internal subject hypothesis claims that subjects in sentences originate internally within the VP containing the relevant verb and move from there to the spec-T. There were two motivations for this hypothesis: the need to account for θ -role assignment to the external argument and the need for the subject of the sentence to occupy [Spec, IP] as suggested in Chomsky (1981), Haegeman (1994), Ouhalla (1991) a.o. Since it is impossible to assign external θ -roles under Head-complement configuration, it was suggested that all θ -roles must be assigned within the projections of the H. Hence, external arguments get their θ -roles at the Spec of vP where they are base generated. To account for the fact that subject must occupy [Spec, IP/TP], a movement process, motivated by the need to check features, was instituted to raise the subject from [Spec, vP] to [Spec, IP/TP]. The constituents value their [-interpretable] features in the process

of movement. In summary, this hypothesis was adopted in research in the mid-1980s (see Jackendoff 1977). It provides a better way to capture the fact that non expletive subjects are external arguments of verbs while the objects are the internal arguments and that θ -roles are assigned under merge operation. It is part of the key assumptions employed in this study for the analysis of Igbo clauses.

2.2.9.3 The Split Inflection Hypothesis

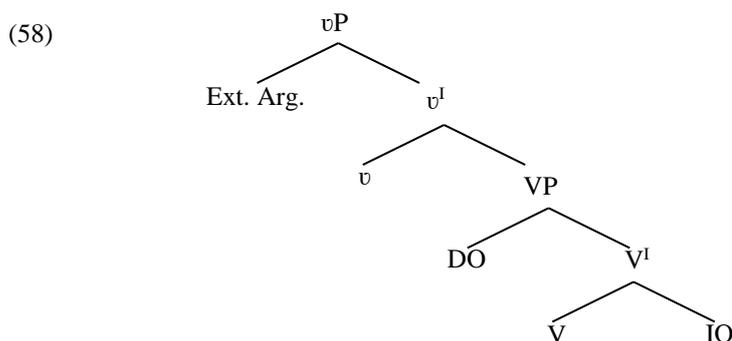
In the earlier versions of GB, prior to the development of the split INFL idea, it is assumed that elements such as Auxiliary, Negative, Modal, Agreement markers, Tense etc. occupy the INFL node. This tradition violates the Endocentricity Constraint which holds that every head projects a phrase and all phrases have heads (cf. Haegeman 1991, Hornstein, Nunes and Grohmann, 2005). In this regard, Pollock (1989) provides empirical arguments in favour of the view that INFL should not be considered as one constituent with two different sets of features ($[\pm\text{Tense}, \pm\text{Agr}]$), instead, each of the set of features is the syntactic head of a maximal projection, AgrP and IP (the latter he called TP in French language). He, therefore, argues that the INFL should be split into Tense Phrase (TP), Agreement Phrase (AgrP) and Negative Phrase NegP. A suggestion which Chomsky (1993) further extended by suggesting that Agr should be split into AgrSP and AgrOP. Extending the proposal, Felser (1999a) in Radford (2009: 339) proposes AspP while Schütze (2004) also in Radford (2009:342) proposes MoodP. Generally, the split INFL idea has been implemented in many languages of the world such as Italia (Ouhalla, 1991), Yoruba, (Ajongolo, 2005), Iyinno Abimbola, Igbo (Obiamalu 2013), etc. Thus, all the INFL elements were given autonomy to project their own phrase; a move that is compatible with the endocentricity constraint. Chomsky (1995) later did away with Agreement projections on the ground that they are not visible at PF and LF interfaces since they bear [-interpretable] feature.

2.2.9.4 The Split Verb Phrase Hypothesis

The Split VP hypothesis originated from the work of Larson (1988) which proposed a structural analysis that conflicts with the standard analysis of dative constructions. According to Larson, it is an implementation of a proposal suggested by Chomsky (1955, 1975). Using dative complementation constructions, Larson demonstrated that the verb and its indirect object make up a constituent that excludes the direct object as shown below.

- (57) a. John [_{VP} a letter [_{V'} send to Mary]]
 b. John send [_{VP} a letter [_{V'} t to Mary]]


In (55a) *a letter* is the subject while (*to*) *Mary* is the object within the inner VP. In (55b) the structure is obscured by an operation of V raising. In the literature, this has become known as Split VP or the VP shell hypothesis. In this proposal, it is assumed that external arguments originate within the outer vP shell while internal arguments originate within the inner core. This is captured in the schema below:

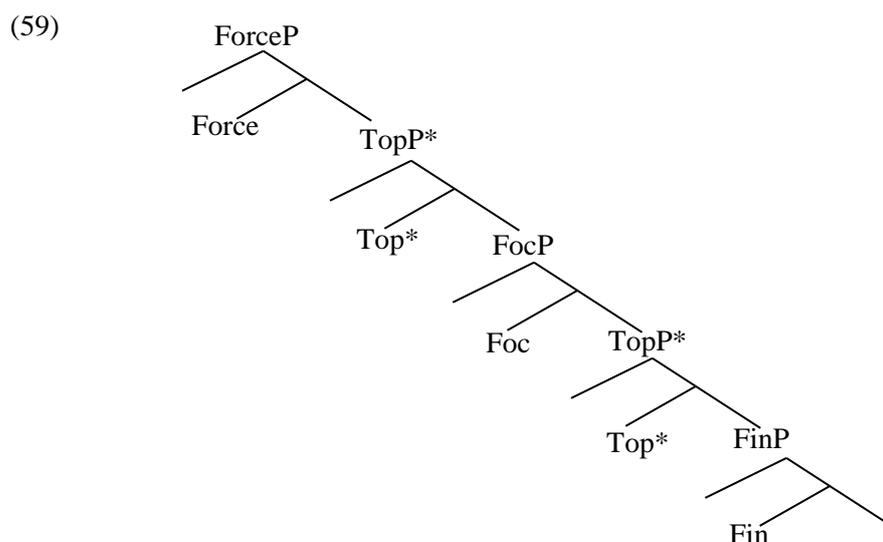


In the schema above, there are two VP shells, one headed by an empty head and the other headed by the lexical verb. The empty *v* is a place holder created following X-bar assumptions to enable the lexical *V* move to the empty position and discharge its external θ -role and satisfy VPISH (see also Hornstein, Nunes & Grohmann, 2005 Radford, 2009). Chomsky (1995) developed the idea further by suggesting that the outer shell is not projected from an empty node as suggested by Larson (1988: 382-384), but rather, from a phonetically null ‘light verb’, whose meaning depends largely on that of its complement. However, the proposal generally suggests that VPs have complex structures and should be split into two distinct projections: an outer vP shell headed by a null light verb and an inner core VP headed by the lexical verb. The emergence of Split VP analysis solved the puzzles associated with analysing double object constructions (DOC) across languages. In view of this, DOCs including applicative constructions shall be analysed using the Split-VP hypothesis.

2.2.9.5 The Split Complementiser Phrase Hypothesis

With insight from Pollock (1989), the split projection hypothesis was also extended to the C-system. This idea, championed by Rizzi (1997) and further developed in Rizzi (2001, 2003, & 2013), suggests a C(omplementiser Phrase)-system that is more

articulated in structure, where each of the elements traditionally associated with the CP-layer (within the GB-framework) becomes the head of a maximal projection. This is to accommodate the complementiser and other items that occur at the left edge of the sentence also called the *left periphery*. With regard to this, Rizzi (1997) assumes that each of the force, topic, focus, and finiteness features that appear in the left-periphery is the head of a functional projection ForceP, TopP, FocP and FinP, which projects within the C-system. Rizzi (1997: 297) presents this proposal as shown in the schema below:



In this structure, each of the elements that manifests in the left-periphery projects the C-system. The asterisks that appear on the right side of topic indicate the recursive nature of topics in Italian and are called *kleene Star* (see Crystal 2008:42). Rizzi argues that this structure could be used to account for the ordering constraints involving the elements of the C-system. Insight from this proposal has attracted scholarly research into the expanded or articulated left periphery across languages. These studies provide pieces of evidence in support of this Hypothesis (See also Haegeman, 2012.) However, not all languages' CP has the expanded CP as the one proposed by Rizzi in terms of features and their hierarchy. For instance, Abraham (1997: 39) cited in Jayeola (2016: 42) argues that there is TopP or FocP between CP and IP. Similarly, Olaogun (2016) argues that FocP dominates InterP in Ñkò-kóo. Nevertheless, this study relies on the insight from this hypothesis in studying the elements that appear in the left-periphery of Igbo clauses which is part of the main idea pursued in this study.

2.2.9.6 Linear Correspondence Axiom

Prior to the emergence of MP, crosslinguistic variations are captured by parameter switch or directionality which is used to determine the position of specifiers and complements in relation to the relevant heads of phrases. For this reason, some languages are said to be head initial and others, head final. Consider the examples below:

- (60) a. Hasan kitab-i oku-du.
 Hasan-SUBJ book-OBJ read-PAST
 ‘‘Hasan read the book.’’ (Carnie 2013: 187)
- b. Kòjò tò àmì léc zân.
 Kojo Imperf oil Det use-NR
 ‘Kojo is using the oil.’ (Aboh 2005: 155)

The sentences presented above are from Turkish (58a) and Gungbe (58b) respectively. The languages exhibit OV order in contrast to English and Igbo that exhibit VO order (see Mbah, 1999, Hornstein, Nunes & Grohmann, 2005). In a language, this word order variation may be restricted to a particular phrase or general to all the phrases. In addition, some languages exhibit mixed word order, e.g. Zarma (see Jayeola 2016). Based on these observations, generative syntacticians explain that X-bar rule such as

- (61) a. $X' \rightarrow X$ (WP)
 b. $X' \rightarrow$ (WP) X

which exhibit two options of head first and head last are universally available to human languages. A child acquiring a language set the switches to determine which version of the rules to apply at every point in time. Carnie (2013:188) represents this assumption in an X-bar parameters switch box roughly sketched below:

(62)

<i>Specifier</i>	<i>Adjunct</i>	<i>Complement</i>
$XP \rightarrow (YP) X'$	$X' \rightarrow (ZP) X'$	$X' \rightarrow (WP) X$
<i>or</i>	<i>or</i>	<i>or</i>
$XP \rightarrow X' (YP)$	$X' \rightarrow X' (ZP)$	$X' \rightarrow X (WP)$

In the box, the X-bar rules are like switches which can be set in one direction or the other. Hence, while some languages are VO (e.g. English and Igbo) others are OV (e.g. Turkish).

However, languages that exhibit mixed word order such as Chinese, Kpelle and Zarma present puzzling outcome which makes it difficult for PPT to handle. These languages present evidence which show that a particular type of phrase can be head first or head last in the same or different contexts (see Kayne, 1994, Jayeola, 2016). For this and other reasons, Kayne (1994) proposed a **Linear Correspondence Axiom** (LCA) to constrain the possible syntactic structures available to human languages. He argued for a strict linear order for phrase structure across languages i.e. Specifier-Head-Complement order. Kayne argues that languages that do not conform to this order must have employed displacement operations at some point in the development of the language before arriving at the unusual order. Therefore, S-C-H or SOV orders are permitted only if it is assumed that the complement has raised to some spec position to the left of the head since asymmetric C-command means precedence.

The initial version of the LCA which is based on X^1 theory is stated in terms of Specifier>Head>Complement order which indicates that the specifier precedes the head while the head precedes the complement. Hornstein, Nunes and Grohmann (2005) capture it as follows:

(63) **LCA (initial version)**

A lexical item α precedes a lexical item β iff α asymmetrically c-commands β

The proposal above is established based on asymmetric c-command relations in accordance with an algorithm referred to as the *Linear Correspondence Axiom*. Hornstein, Nunes and Grohmann (2005) point out that this earlier version was revised due to its inability to account for sentences with complex objects and mixed word orders. However, the revised and final version was expressed in terms of precedence relation among terminal and non-terminal nodes as shown below

(64) **LCA (Main version)**

X asymmetrically C-commands Y iff X C-commands Y and Y does not C-command X.

(Kayne 1994:4)

The version above as presented in Kayne (1994) is re-phrased in Hornstein, Nunes and Grohmann (2005:227) as follows:

- (65) A lexical item α precedes a lexical item β iff:
- (i) α asymmetrically C-commands β or
 - (ii) an XP dominating α asymmetrically C-commands β

In summary, the LCA proposal provides a better way of accounting for word orders across languages and since has been incorporated into MP to constrain the structure of phrases during computation.

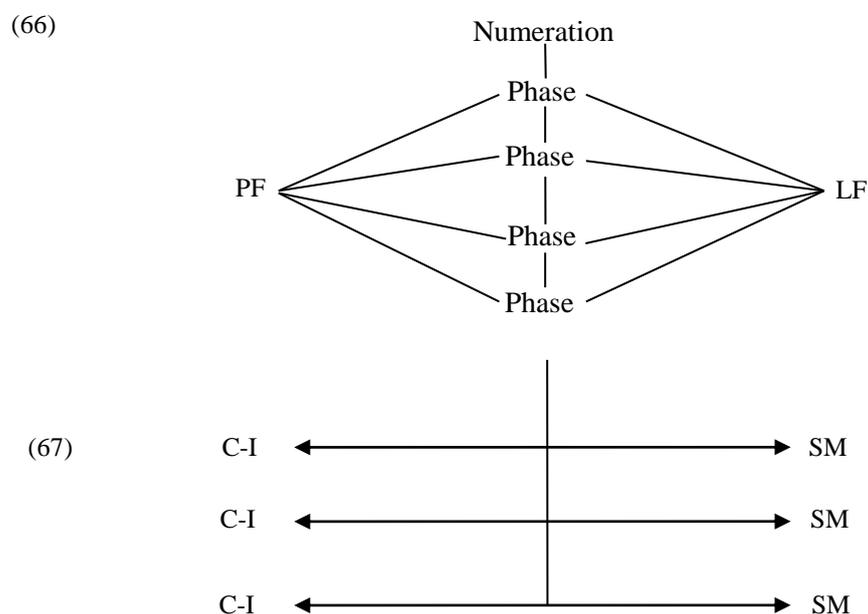
2.2.10 Phases and Structure Building

Phase theory is a set of theoretical innovations in post-2000 Minimalism. In addition to the idea that language faculty (LAF) is an optimal solution to the constraints imposed on it by the two cognitive systems (CI & AP), with which it interacts, the theory adds that this interaction takes place at very specific points during syntactic derivations, and, consequently, syntactic derivations are constructed in chunks called ‘phases’ (Citko 2014: 17). Generally, *Phase*³⁹ follows from the observation concerning locality in movement that some domains are opaque i.e. they are not transparent and thus do not allow SO to move out of them. For instance, it was observed that subjects can move out of non-finite clauses e.g. IPs, but not out of their finite counterparts often CPs. To capture this observation, Chomsky (2000, 2001) assumes that at some point in the derivation, part of the structure under construction becomes frozen and is unable to be manipulated further. The implication is that an element which was not moved at any point before then would not be moved from that point forward. These points are called *phases*. Chomsky (2001:4) captures the phenomenon as follows: “The computation maps LA [lexical array=Numeration] to <PHON, SEM> [the pair of representations interpreted phonetically and semantically] piece by piece cyclically. Call the relevant units phases”. While Hornstein, Nunes and Grohmann (2005:245) identify it as “a syntactic object whose parts (more specifically, the complement of its head) can be inspected for convergence”. Consequent upon this proposal, there was the motivation to change the basic workings of the computation system such that derivations could be spelled out in parts (such as vP or CP) instead of waiting for the entire structure to be

³⁹ Boeckx (2006: 34) relates phases to bounding nodes by noting that what counts as bounding nodes has changed over the years. It has been called barriers in Chomsky (1986) and more recently phases.

built and sent to the interface levels (PF and LF) at a singular point. Therefore, as soon as a part of the derivation is complete, it is sent to the interface levels for interpretation via operation *transfer* (see § 2.2.7). The derivation may continue to build structures upon the fixed part of the structure pending when another phase is completed and sent to the interface levels for further interpretation. This process is repeated until the full structure is derived. The implication of this assumption is that there is no singular point of spell-out. Cook and Newson (2007:302) and Citko (2014: 69) represent this computational procedure as in the schemas below:

Multiple Spell-Out



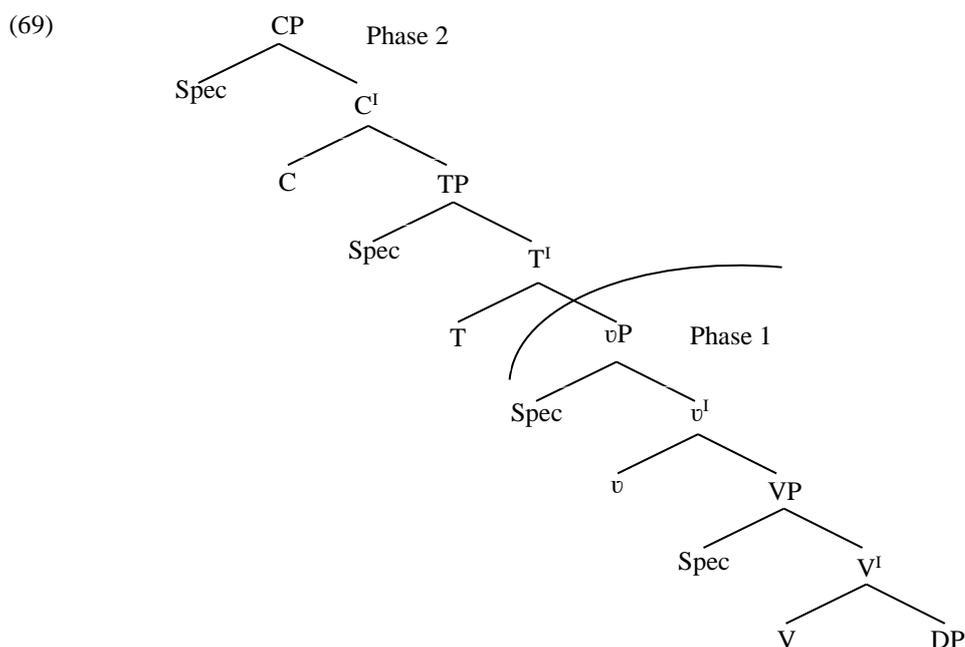
The schemas above show that there are multiple points at which structures are spelled-out for both phonetic and semantic interpretation. Cook and Newson (2007) assert that this model should be viewed as a model of competence rather than performance as it does not model how people process speech. However, it represents the fact that the Language Faculty (LAF) processes a limited amount of structures at once to reduce the burden of computation. Therefore, phases should be as small as possible to minimise memory. Therefore, structure derivation in phases is economy motivated with the goal being to minimise computational complexities involved in economy comparisons (see also Hornstein, Nunes and Grohmann, 2005:345-6). Radford (2009) explains that once all operations that apply within a given phase are completed, its domain (i.e. the complement of its head) becomes impenetrable to further syntactic operation. This

condition is referred to as the *Phase Impenetrability Condition* (PIC) and is formulated by Radford as follows:

- (68) **Phase Impenetrability Condition/PIC**
 The c command domain of a phase head is impenetrable to an external probe (i.e. a goal which is c commanded by the head of a phase is impenetrable to any probe c commanding the phase).

(Radford 2009:380)

For instance, once a complete CP phase is formed, the complement of the phase head C which is TP is transferred to the phonological and semantic component to be judged convergent. As a result, TP is no longer visible in the syntax; therefore, neither TP nor any of its constituent would serve as a goal to any C-commanding probe. In the words of Hornstein, Nunes and Grohmann (2005:248), the computational system does not “back track” to re-evaluate previous convergent derivations under new scenarios. Phases are shown in the diagram below where Phase 1 is the vP and Phase 2 the CP.



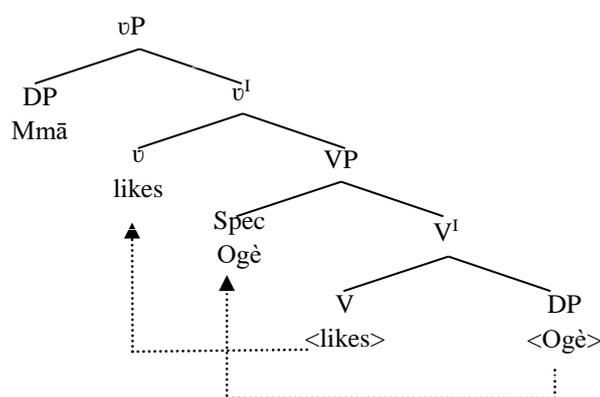
To properly demonstrate this, consider the derivation of the sentence below:

- (70) Uchè believes that Mmā likes Oge

The V *likes* merges with the DP *Oge* to form V-bar *likes Oge*; since θ -role is assigned under merge, the V, *likes*, assigns the θ -role patient to the DP, *Oge*. The DP, *Oge*, moves to spec, VP to enter into checking relationship for <CASE> valuation forming a

VP. The resulting VP is merged with a causative light v to form v^I . The light verb values the ACC case of the DP *Ogè* and its vF triggers the movement of the lexical verb *likes* from its original position in V to v . To satisfy the edge feature (EF) feature on v , the DP *Mmā* is externally merged with the v^I to form vP resulting in the structure below:

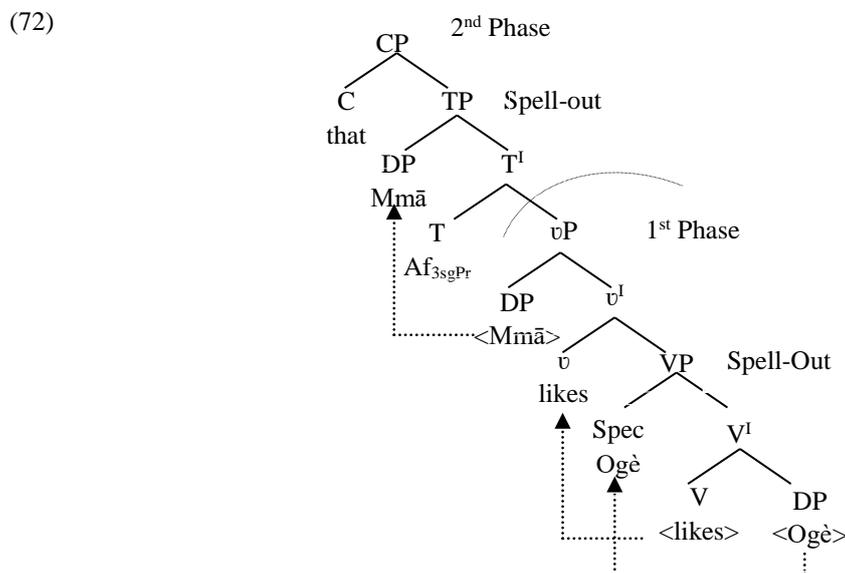
(71)



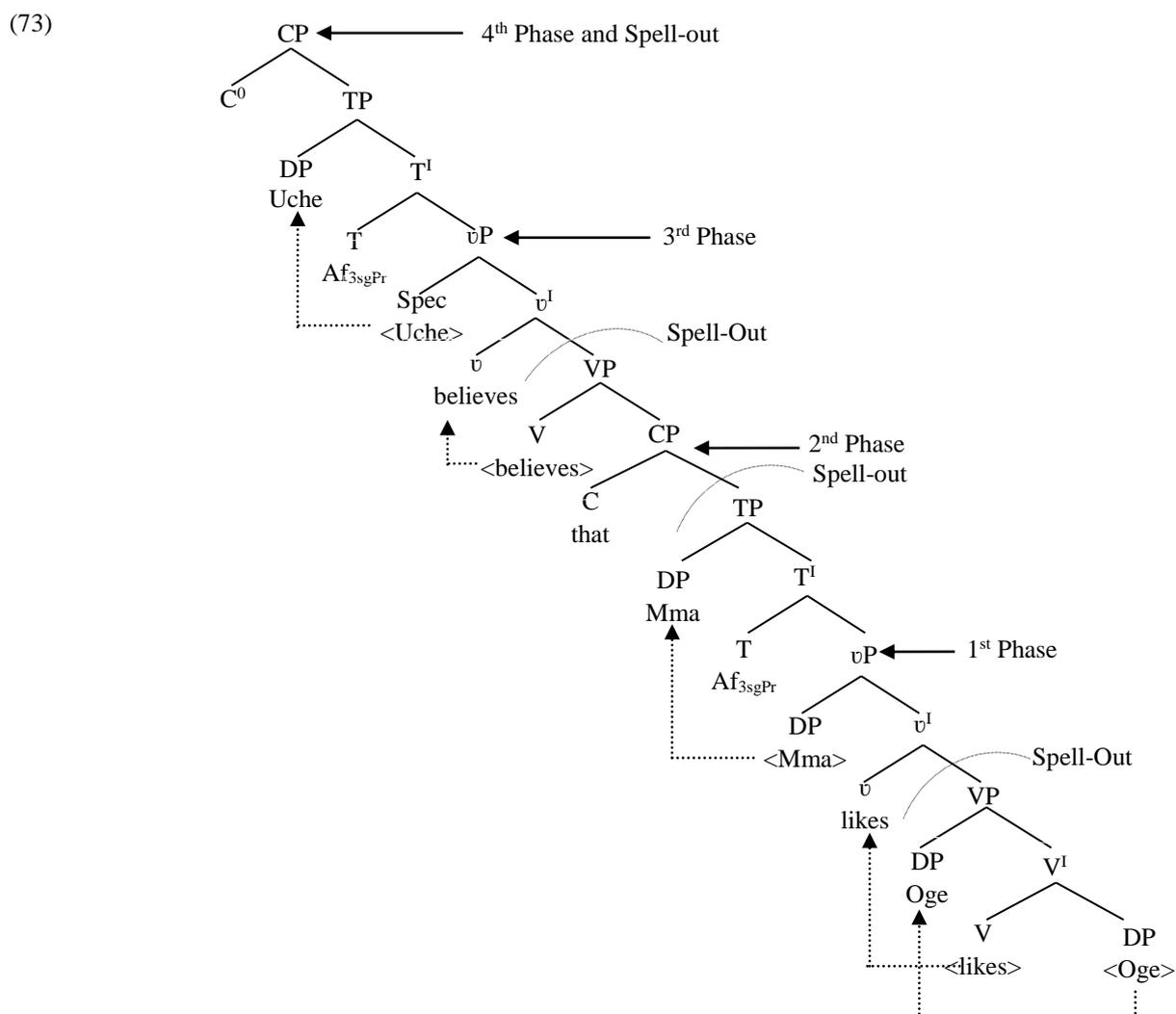
Having formed a vP with (thematic external argument) which is the head of a phase with its complement VP, the VP constituent undergoes transfer to the PF and LF interfaces and cease to be accessible to further syntactic operations. This implies that the lower copies of moved items will receive a null spell-out in the PF component while uninterpretable features which have been deleted are removed from the structure before it is sent to LF component. Consequently, only the DP *Oge* is given an overt phonetic spell-out by PF. The left edge of the phase is not spelled-out and remains [-interpreted] to allow long distance movement until the next phase is complete. Thus, an element moved to the spec-head of a phase would continue to move. This is called *Escape hatch*⁴⁰ (See Cook and Newson, 2007:307). The operation continues with the movement of the DP *Mmā* entering into a checking relationship with the head of TP to value its ϕ and EPP features after which it moves to satisfy EPP forming a TP. Computation proceeds with the complementiser *that* externally merged with the TP to form CP. CP being propositional in nature, its complement, TP, is transferred to the interface for appropriate interpretation. This point is the second phase at which spell-

⁴⁰ Cook and Newson (2007:307) point out that it is not everything in a phase that is spelled out to permit long distance movement. Specifically, the left edge of the phase remains uninterpreted until the next phase is complete. Thus, an element moved to the specifier of the phase will be able to continue to move.

out happens in the computational procedure of this structure. This is shown in the structure below:



Computation continues by the merging of the V *believes* with the resulting CP to form VP. V assigns theta role to its complement CP and while CP satisfies the C-selection requirements of V before moving to head v to value its unvalued case feature. The derived v^I is merged with the external argument *Uche* to form vP. At this point, the complement of the derived vP phase is transferred to the interface for appropriate interpretation where it is frozen following PIC demonstrating the 3rd phase or point of spell out in the derivation. This structure is then merged with the T head which enters a checking relationship with the DP in spec vP for the purpose of feature valuation and deletion. After which the DP moves to spec TP to satisfy the EPP feature of T forming a TP. The TP is then merged with a null C satisfying the C-selection requirement of C forming CP. At the fourth phase, the entire structure is transferred to the interface for appropriate interpretation as shown in the tree below (see Hornstein, Nunes and Grohmann, 2005, Cook and Newson, 2007 and Citko, 2014).



The structure above is a demonstration of how structures are derived in phases. Each phase is a vP or CP, small and propositional in nature. The discussion above shows that the basic operations that apply at phase level are *transfer* and (external or internal) *merge*. If internal merge precedes transfer, movement is overt; otherwise, it is covert. If movement is covert, transfer has already spelled out the lower copy; if overt, the choice is delayed to the next phase. Once a phase is transferred, it should be mapped to the interface and forgotten. Later operations cannot have access to it as stipulated by PIC (see Chomsky, 2005:13-17). The assumption that structures are derived in phases for economy purposes has helped to reduce computation complexities. This study would demonstrate that the complex structures that exist in Igbo could be accounted for using the phase approach and thus provide the most optimal and economic way of analysing such structures. It would also show that phases in Igbo cannot be limited to CP and vP since there are categories that bear the features of phases as discussed in this section.

2.2.11 Minimalism and the Cartography of Syntactic Structures

Cartography is an analysis of the internal constituents of syntactic structures and their interaction with various grammatical principles and processes. It is a research program within the Principles and Parameter framework of syntactic theory triggered by the explosion of functional heads identified and implied in syntactic analysis. It emerged in a series of colloquia held in Italy in the late 90s and became popular following Cinque (2002), Belletti (2004) Aboh (2004), Rizzi (2004), Cinque and Rizzi (2008). According to Cinque and Rizzi (2008:42), cartography is neither an approach nor a hypothesis, but a research on the structural maps for natural language syntax. In their words, “it is an attempt to draw maps as precise and detailed as possible of syntactic configurations”. It is a broad research project in the study of functional (or grammatical) categories, their content, number and order.

The main view guiding cartography is that syntactic structures are uniform, locally simple and both necessary and sufficient to structurally represent the grammatical or functional information relevant for semantic/pragmatic interpretation. It started with the full-fledged extension of X-bar theory to functional elements of the clause and other configurations and the observation that these elements could be subjected to hierarchical structure with a lexical projection embedded within a functional structure. Recall that the study of functional projections was already the tradition in the 1980s, with scholars exploring different domain of the clause such as the nominal domain (e.g. Brame, 1982, Abney, 1987), the inflectional layer (Stowell, 1981, Chomsky, 1986, Pollock, 1989, Ouhalla, 1991) and the verbal layer (Larson, 1988, Hale & Keyser, 1993; Chomsky, 1995; Kratzer, 1996) to mention but a few. Therefore, cartography spans a wide range of layers-the VP, TP and CP layers.

These developments were carried on to functional heads with semantic/pragmatic content. The cartographic enterprise became significant as it re-emphasised the role of features as the ultimate building blocks of structural representations. This is demonstrated in Cinque’s (1999) study of adverbs and functional categories. Cinque (2004:693) argues that despite their general optionality, adverbs “should not be seen as accessory appendices to clause structure (as the traditional notion of “adjunct” would suggest), but rather as an integral part of it.” Adjunction, he reasoned, is virtually incompatible with three salient properties of adverbial syntax.

Generally, cartographic studies have been able to unify the largely independent works in formal syntax viz. Split IP, VP, DP, CP, TP and information structure, by drawing these research areas closer to one another. It contributes to interface issues or the relation of narrow syntactic computation to meaning and use. This impact has triggered a lot of research project extending its ideas to the nominal domain, the structure of PPs and Adjectives. These works show that the number of functional projections have increased exponentially such that there is a proliferation of functional categories in the various layers as evident in the works mentioned above and in some recent studies such as Aboh and Pfau (2010), Bassong (2014), Olaogun (2016), Doherty (2016) and Collins (2017). These works centre on the tenets of the cartographic enterprise stated below:

(74) **Tenet of the Cartographic Approach**

One Feature One Head: Each morpho-syntactic feature corresponds to an independent syntactic head with a specific slot in the functional hierarchy.

(Cinque & Rizzi 2008:43)

The cartographic enterprise has come with a lot of features following the decomposition of the minimal domains assumed in MP. Cinque (1999) proposes 400 features for representing syntactic structures. The map drawn by cartography suggests a rethink of the traditional division of the clauses into VP, TP and CP domains. However, scholars suggest a division of labour between cartography and minimalism. While Minimalism focuses on mechanisms of computation (Merge and Search) and the role of uninterpretable features, the cartographic enterprise is primarily concerned with the inventory of interpretable features. Hence, under this view, minimalism needs an abbreviated structure, the C-T-v-V system, while cartography explores the full representation.

However, the enterprise is not without problems. For instance, there is the problem of selection. Minimalism inherits from previous approaches the view that selection is carried out under sisterhood. Thus, C selects T and V selects C. How is selection satisfied in e.g., an indirect question, for instance, if the head bearing the interrogative feature is Foc or Inter (cf. Rizzi (2001) and thus not a sister to V? Or take the familiar problem of how subjunctive features on an inflectional head can be selected by a higher predicate, given the number of intervening heads between V and the relevant mood head.

In summary, MP has made tremendous progress when compared with GB. With its economy motivated principles, it has been able to reduce linguistic apparatus to the minimum. However, it is not without challenges because it has not been able to provide answers to all the questions as it concerns the behaviour of languages and language acquisition. It has some advantages over previous approaches as it relates to the analysis of clause structure. For instance, it captures better the idea that the clause is organised in three domains with the elements that manifest in each domain projecting maximally and it also assumes that the clause is computed in small chunks called phases. More so, merge is used to capture word order variation across languages, hence, it enhances the understanding of UG.

2.3 Empirical Studies

A lot of studies have been done on different aspects of the Igbo clause viz VP, TP and CP domains. Some of the authors did a descriptive analysis such as Emenanjo (1978, 2015) and Mgbemena (2006). Some other works were based on earlier models of Transformational Generative Grammar such as Standard Theory (ST), Revised Extended Standard Theory (REST) and Government and binding Theory (GB). This include Uwalaka (1991, 1995), Mmadike (2010), Mbah (2011) Onuora (2014), Ugochukwu (2016). Some works are also based on other theoretical models (which are Case Grammar and Role and Reference Grammar) such as Uwalaka (1988), Agbo (2013). Some others are couched within the Minimalist tenets such as Anyanwu (2007) and Obiamalu (2013, 2014, 2015) and Nwankwegu (2015). However, in this subsection, the study reviews some of these works based on the layer of the clause they relate to by highlighting their objectives, theoretical approach, findings and their relationship with the present study.

2.3.1 Empirical Review on the Igbo Verb Phrase Domain

The VP domain represents the argument and event domain. It provides answers to the way arguments are mapped onto syntactic structures. The hypothesis that the subject of the sentence is generated within the VP and the fact that it is the lowest layer of the clause has attracted a lot of research interest. Some of the issues discussed in the works range from the structure of double object constructions (DOCs), SVCs and how case is assigned to NPs in these constructions. Some of these works are discussed below.

Uwalaka (1995) studies X^0 movement and Ìgbò complex predicates in the framework of GB to determine the structure and derivation of complex predicates in Ìgbò causative and applicative constructions using the modified version of Baker's (1988) theory of incorporation. For applicative constructions, she posits that prepositional incorporation (PI) is obligatory in the language and involves the incorporation of a prepositional affix into the verb. Hence, they do not have serialising counterpart. According to her, affixes have the syntactic properties of free morphemes including the capacity to assign and receive thematic roles. She concludes that prepositional function is rendered in the language using lexical prepositions, prepositional suffixes, SVCs and Igbo canonical applicative verbs. Uwalaka (1995: 168) also claims that some Igbo verbs such as *zi* 'show' and *nye* 'give' do not take overt applicative suffix. She, therefore, posits a null prepositional suffix for such constructions as shown below:

- (75) a. Ezè nyèrè Àdha egho
 Ezè give-rV past Adha money
 'Ezè gave Adha money'
- b. Ezè zìrì Adha ụzò
 Ezè show-rV past Adha money
 'Ezè showed Adha the way' (sic) (Uwalaka 1995:168)

She suggests that this and other applicative construction have similar structure. Nevertheless, the predicates above are simple ditransitives⁴¹ verbs that can take overt applicative suffix to increase the valency of the verb. Consider the examples below:

- (76) a. Ezè nyè-è-rè m̀ Àda egho
 Ezè give-APPL-PST 1SG Ada money
 'Ezè gave Adha money for me'
- b. Ezè zì-i-rì m̀ Àda ụzò
 Ezè show-APPL-PST 1SG Ada money
 'Ezè showed Adha the way for me'

In (76) above, it is observable that the presence of the applicative suffix does not render the sentences ungrammatical. Rather, it increased the number of the VP internal

⁴¹ Anurudu (2010:162) identifies these group of verbs as zero extension ditransitives for the fact that they require no extensional morpheme to make them capable of subcategorizing double objects. Moreover, they are syntactically and semantically the same.

arguments by one. The implication is that there are no Ìgbò “canonical” applicative verbs, but simple ditransitives since most of the verbs can still take overt applicative thereby increasing their valency. In the present study, attention is given to applicative constructions because they form one of the interesting clause types in Ìgbò. More so, Uwalaka made use of GB approach. This study presents a minimalist account of applicative constructions using such principles as select, merge and the Split VP hypothesis. Employing these principles, this study shows that applicative is a functional category associated with the VP and TP domains.

Emerenini (2001) examines the internal structure of the Igbo VP using GB and MP frameworks. His analysis of applicative constructions does not differ significantly from that of Uwalaka (1995) in that he also adopts the verb incorporation approach, however, he does not posit dative movement as in Uwalaka. He employs the X-bar theory showing the derivational path of the Igbo VP (especially double object constructions) from D-structure to S-structure as well as theta role and case assignment. He also accounts for the structure of Igbo VP using Split-VP, Split-INFL and VP-Internal Subject Hypothesis, though he failed to account for Applicative constructions using the Split VP hypothesis. This study deviates from his approach by further employing phase theory and Agreeless projections in the analysis of applicatives

Agbo’s (2004) study of DOCs in Igbo is not quite different from Emerenini’s (2001) study discussed above. Similarly, he aligns with Uwalaka (1991), Emerenini (2001) and Mbah (1999) in claiming that it is the medial –rV that marks the applicative while the final one marks the past. He summarises the properties of DOCs into two:

- (i) the indirect object precedes the direct objects
- (ii) the rV-(Ben) is normally present in DOCs.

These are exemplified in (81) below

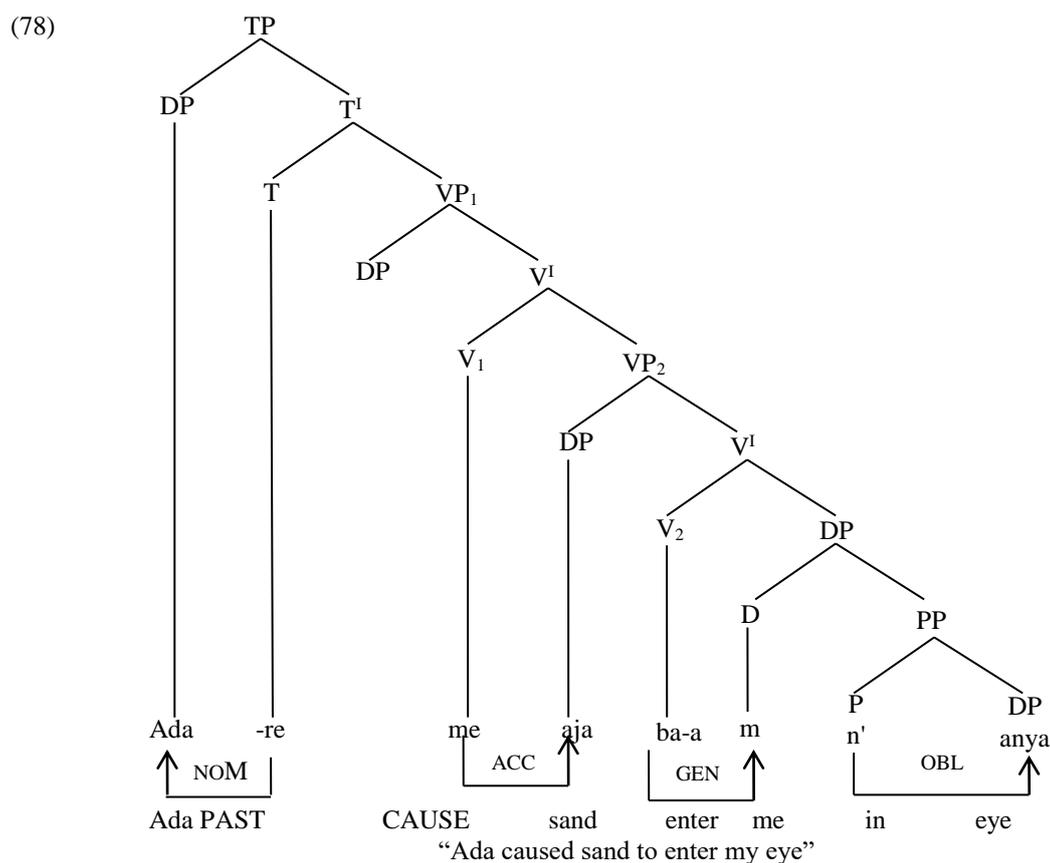
- (77)
- | | | | | |
|--|----|--------------------------------|------|---------|
| | a. | Uchè gbù-ù-rù | m̀ | òkukò |
| | | Uche kill-rv Ben rVPast | me | chicken |
| | | ‘Uche killed a chicken for me’ | | |
| | | | | |
| | b. | Obi gba-ra | agu | egbe |
| | | Obi shoot-rVBen-rVpast | lion | gun |
| | | ‘Obi shot the lion with a gun’ | | |
- (Agbo 2004: 38)

(i) above is true for (77a&b) because the IO *m* '1SG' precedes the DO *òkukò* 'chicken'. In contrast, (ii) is true for (77a) but not for (77b) since only one -rV suffix is morphologically present in the construction. Semantically, the sentence does not render a BEN meaning. His examples show that imperative and perfective constructions that express applicative meaning were not considered in his analysis. A close examination of applicative constructions (ACs) in other types of constructions shows that it is the final -rV that marks applicative while the medial one marks the past. This issue is discussed further in Chapter four. Other issues discussed in the work are case assignment and incorporation theory of Baker (1988) which is used to show the derivation of ACs from D-structure to S-structure

Similarly, Mmadike (2010) analyses applicative constructions in Igbò within the GB framework. His major aim is to show that the -rV applicative is a prepositional category contrary to some opinion. His analyses differ from those of Uwalaka (1995) in that he refutes Uwalaka's Dative-Shift analysis of the applicative structure on the grounds that the structure is base generated following Nwachukwu (1987:13) and Baker (1988:370). To prove that the '-rV' applicative is a prepositional category, Mmadike (2010:21) tests its properties with those of a typical preposition that heads a PP. These properties include (a) function as the head of a phrase (b) assignment of θ -role to its complement (c) government and assignment of case and (d) pied-piping of its object as a Wh-phrase. He observes that the rV-applicative preposition satisfies the first three and failed the fourth one because its object could not be pied-piped as a wh-phrase due to its morphological status. Nevertheless, he concludes that it is not excluded from the prepositional category because it is minimally distant from the prototype. Mmadike (p.23-24) also adopts the term 'Applicative' since it is neutral as to either the benefactive and malefactive interpretation. In this regard, this study adopts the neutral term 'Applicative' but aligns with Emenanjo (2010) who posits that applicative only expresses a prepositional notion contra Mmadike (2010). However, this study analyses applicative constructions using the V-movement approach and other Minimalist principles. It examines how the applicative suffix interacts with other functional categories such as T and Asp.

Amaechi (2013) examines case checking and the properties of Igbo SVCs within the Minimalist framework. She argues that Igbo SVCs do not pose any problem for the

theory of case checking. The DO of the first verb in a serial construction gets its original accusative Case, while the object of the second verb gets a genitive Case as checked by the Open Vowel Suffix on the verb. She uses the schema below to show the directionality of case checking in Igbo SVCs (see Amaechi 2013:163).



Contra Welmers (1973) and Bamgbose (1974), she opines that it is not all SVCs that share a single subject. Her study provides more information on Igbo SVCs. However, SVCs fall outside the scope of this study considering that they do not have significant implication for the structure of the VP domain.

Onoura (2014) similarly revisits verb serialisation and consecutivisation in Igbo within the Revised Extended Standard Theory (REST) with a view to determining the semantic types, establish the syntactic structures and find the differences between serialisation and consecutivisation in Igbo against the backdrop of earlier studies. Her work is very significant in that it complements existing ideas by logically explaining and classifying serialisation and consecutivisation. According to her, verb serialisation involves two or more verbs occurring in series without an overt connective morpheme

between the verbs but with an intervening variable between the first two verbs (V1 and V2), and V1 and V2 cannot form verb-verb (V-V) compound in the language. This is exemplified below:

- (79) a. Ngozi siri **edè** rie.
 Ngozi cook-rV(PAST) cocoyam eat-OVS
 ‘Ngozi cooked cocoyam and ate (it)’.
- b. Àda zùrù **akpu** sie sụọ loo.
 Ada buy-rV(PAST) fufu cook-OVS pound-OVS swallow-OVS
 ‘Ada bought fufu cooked it, pounded it and ate’.
- (Onuora 2014: 90)

The examples above are instances of verb serialisation. In (79), the bolded element is an intervening variable between V1 and V2 both cannot form a V-V compound in the sentences. In contrast, V1 and V2 can form a V-V compound in verb consecutivisation and there can be no intervening variable between V1 and V2 as in the examples below (see Onuora, 2014).

- (80) a. Nnụnụ ahù fèrè pùọ.
 bird that fly-rV(PAST) leave-OVS
 ‘That bird flew and left/that bird flew away’
- b. Àda jèrè bàta tie mkpū.
 Ada walk-rV(PAST) enter-toward shout-OVS shout
 ‘Ada walked in and shouted’

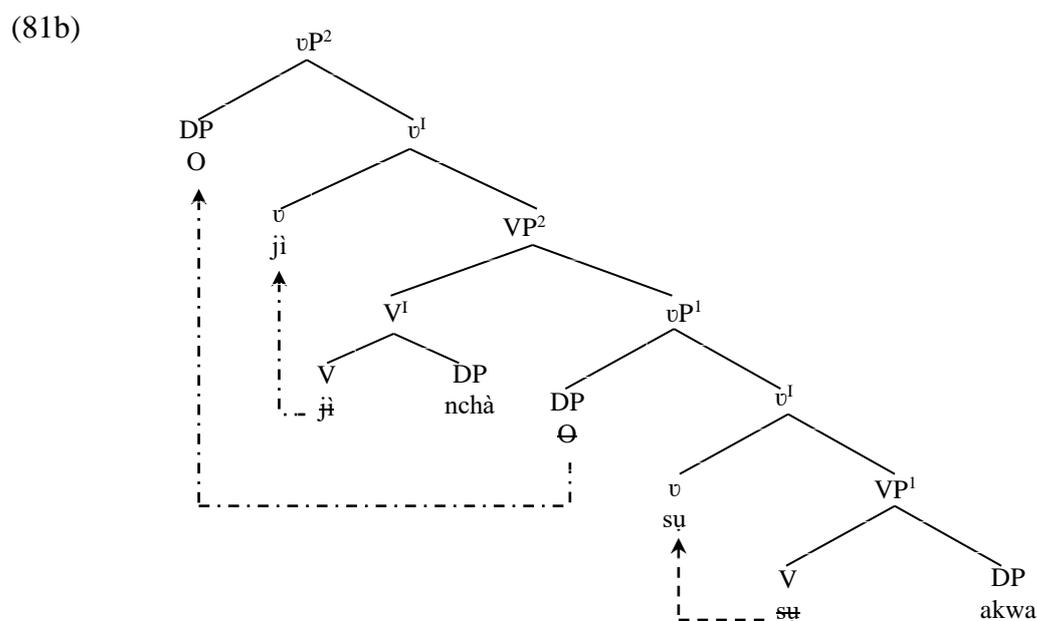
The data above show that there is no intervening variable between V1 and V2. V1 and V2 *fe* ‘fly’ and *pù* ‘leave’ can form a compound as in *fepù* ‘fly away’. In (80b), the V1 *je* ‘walk’ and *bata* ‘enter-toward’ can form a compound as in *jebata* ‘walk enter’. Aside these two properties, verb serialisation and consecutivisation share other properties in common such as obligatory subject sharing (except in resultative serial/consecutive constructions), negative marking on V1, occurring of events within the same or different temporal frame marking and distribution of the auxiliary marker.

Onuora (2014) identifies nine semantic types of verb serialisation in Igbo which are instrumental, accompaniment/comitative, directional, manner, purpose, comparative,

resultative, benefactive and simultaneous verb serialisation. She also identifies five types of verb consecutivisation and these include comitative, directional, resultative, benefactive and simultaneous consecutivisation. This implies that there is no instrumental, accompaniment, manner, purpose and comparative consecutivisation. The examined verb sequence in these constructions shows that verb sequence constructions occur in a natural order of events in the language. Her findings differ from those of Dechaine (1993) and Stewart (1998) who claim that the verb benefactive and resultative verb serialisation do not exist in Igbo. She concludes that verb serialisation is derived from both conjoined and embedded structures while consecutivisation is derived from conjoined structures only.

Nweya (2016a) re-examines SVCs within the MP framework. He demonstrated that SVCs can be analysed within the Split VP approach. In this regard, each verb in the series is licensed to project its own vP structure. The advantage of this approach is that it allows θ -roles to be assigned at the point of merge and case feature valued as appropriate, i.e. via long distance checking. Consider (81a) schematised as (81b) below:

- (81a) Àmaka jì ñcha à-sù akwā
 Amaka use soap PART-wash cloth
 ‘Amaka is washing with soap’



In the schema above, the verbs *jì* ‘use’ and *sù* ‘wash’ assign θ -role to the DPs *ncha* ‘soap’ and *akwa* ‘cloth’ respectively. This study shall not delve into the analysis of

SVCs to avoid repetition but adopt Onuora's classification and Nweya's (2016a) analysis of SVC where the need arises.

Ugochukwu (2016) investigates the interface of syntax and semantics in Igbo ergative structures using the Standard Theory model of TGG and Theta theory of Universal Grammar. She identifies some ergative verbs such as simple verbs- *ku* (beat), *kpù* (sink) and compound verbs- *gbàji* (break), *dọka* (tear). She groups Igbo ergative verbs into two: those that manifest ergativity through the inversion of the positions of their subject and objects (Argument inversion) and those that achieve ergativity through transformation (inter-clausal ergativity). The former involves the inversion or exchange of positions of the internal and external arguments with no morphological transformation as in the example below:

- | | | | | |
|------|----|---------------------------------------|---------------------------|----------------------|
| (82) | a. | Nchara
Rust | gbà-rà
attack-rV(past) | gbamgbam
the zinc |
| | | ‘Rust attacked the zinc’ | | |
| | b. | Gbamgbam
Zinc | gbà-rà
attack-rV(past) | nchara
rust |
| | | ‘The zinc is attacked by rust’ | | |
| (83) | a. | Ụtù
Weevil | gbà-rà
attack-rV(past) | ọkà
maize |
| | | ‘Weevil attacked maize’ | | |
| | b. | Ọkà
Maize | gbà-rà
attack-rV(past) | ùtù
weevil |
| | | ‘Maize is/was attacked by the weevil’ | | |
- (Ugochukwu 2016:76-77)

According to Ugochukwu, there are two elements in the data above, the theme and the goal. The action of the themes (i.e. grammatical subjects) affected the goals. However, the logical objects in (81a&82a) remain the logical object in (81b&82b) despite the inversion. Similar, examples were also cited in Uwalaka (1988) as instance of subject-object switch. On the other hand, Inter-clausal ergativity involves two simple verbs or a complex verb (i.e. verbroot + suffix) in which there is no intervening element (e.g. affixes) between the verb components as shown below

- | | | | | | |
|------|----|-----------------------------|------------------------------|-------------------|-----------|
| (84) | a. | X
X | gbanwè-rè
change-rV(past) | àgwà
character | yā
1Sg |
| | | ‘X changed his character’86 | | | |

- b. Àgwà yā nwè-rè (Nsukka dialect)
 Character his change-rV(past)
 'His character changed'

Ugochukwu (2016:76-77)

Using the examples above, Ugochukwu argues that the verb *ghanwe* 'change' is a compound verb made of two simple verbs that incorporate two events: V1 and V2, which can be decomposed into two roots *gba* and *nwe*, as to recover the simple sentences as shown in the ergative structures in (83b). The ergative structures were derived by deleting V1 and the external argument via transformation. Therefore, at the deep structure (87a) is an ergative construction where V1, *gba* assigns its internal θ -role to *àgwà* 'habit' but the V2 does not because *àgwà* is not its direct object. From analysis like this, she concludes that the argument and thematic structure are the areas of interface of syntax and semantics in the Igbo ergative structure. Although MP handles ergative structures in a different way, it falls outside the scope of this study. However, ergative structures are used as one of the arguments in support of Split VP analysis of DOCs.

Anurudu (2010) accounts for complement shift in Ìgbò as a follow up to Uwalaka (1988)⁴². Using the MP, he re-analyses Uwalaka's subject/object switch phenomenon and discovers that contrary to Uwalaka's observation, the objects are neither thematic objects nor arguments of the verbs, rather, they are parts of the lexical requirements of the verbs that constitute V-N complexes often called Inherent complements (IC). Consider (85&86) below:

- (85a) Ada wèrè iwe (85b) Iwe wèrè Ada
 Ada be-(past) anger be-(past) Ada
 'Ada was angry' 'Ada was angry'

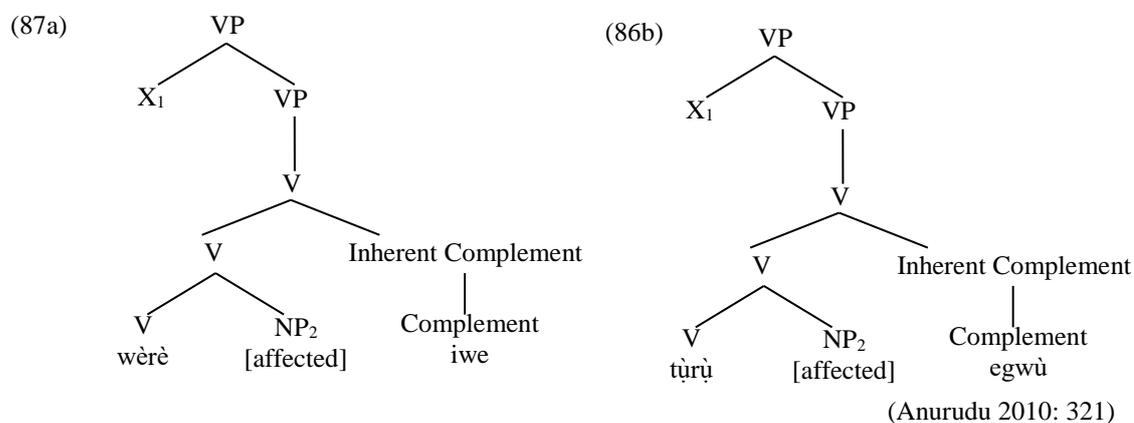
- (86a) Ada tùrù egwu (86b) Egwu tùrù Ada
 Ada be-(past) fear fear be-(past) Ada
 'Ada was afraid' 'Ada was afraid'

(Anurudu 2010:129-130)

The examples above show that the subject and the IC swapped positions. In this regard, Anurudu posits that this is possible because there is no specific cause of the experience

⁴² Uwalaka (1988) observes that the inherent complements of the Igbo verbs exchange positions with the subject of the sentence as is the case with argument inversion as presented by Ugochukwu (2016).

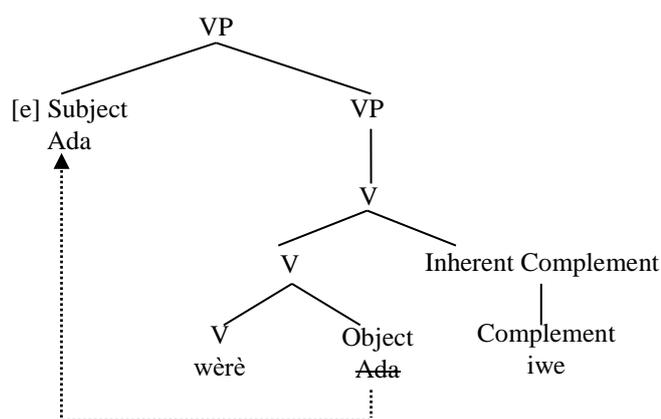
suffered by the subject. Hence, the real subject position is unfilled. In other words, it is not a case of swapping between a subject and object, rather, between a head, V and its IC; since the two elements are VP internal elements. This could be schematised as follows:



In the schema above, one can observe the positions of the VP internal arguments and the unfilled positions of the external arguments. The implication is that it is actually the OB or IC that shifts or moves to occupy the empty position in the absence of a specified volitional agent. Therefore, shifting is within the VP rather than the simple clause. According to Anurudu (2010:133-9), the evidence in support of these claims is that when there is a specified agent, it is not possible for this kind of shift to occur. He argues that all the verbs that permit complement shift are experience verbs that assign the semantic role of Experiencer to their thematic complement. The semantic features of the Experiencer include [-intent], [-cause], [-controller]⁴³, [+affected], [+animate] (Anurudu 1999: 136). Either of the complements can shift to occupy the empty subject position as demonstrated on the schema below:

⁴³ Anurudu (2010: 136) notes that these first three features translate to Uwalaka's deep semantic cases. He then proposed the last one to capture all the features.

(88)



He concludes that this kind of shift is motivated by principles such as the semantic feature of non-volition and the need to satisfy EPP. In general, he identified two kinds of shift: modifier-shifting and complement shifting. Both operate within the domain of the phrase. In analysing this kind of structure, this study employs the VP shell analysis since it better accounts for VP structures like the one above.

2.3.2 Empirical Review on the Igbo Tense Phrase Domain

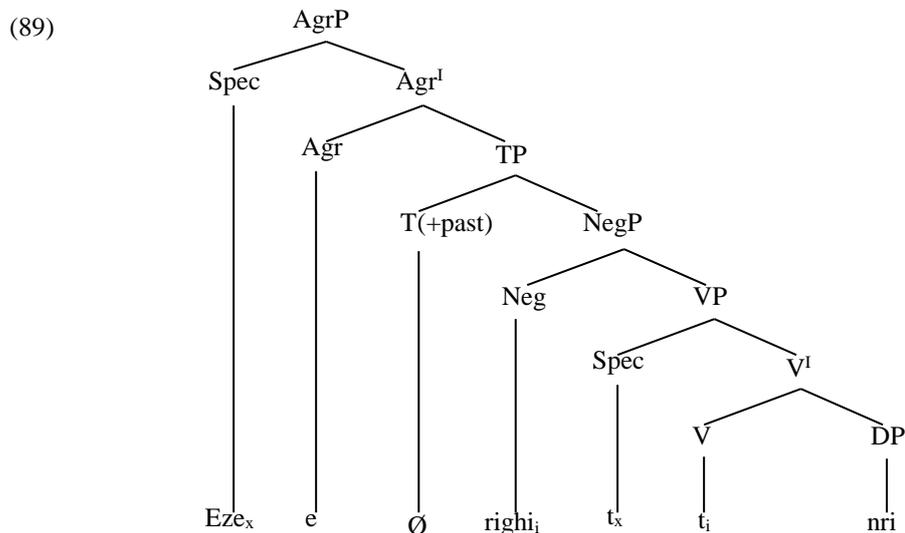
This is the layer that expresses grammatical tense, aspect and mood. In the literature, this layer has been discovered to exhibit parametric variation across languages. This is evident in the works of Pollock (1989), Rizzi (1990), Ouhalla (1991) and Mbah (1999). TP layer is connected with other categories such as modal auxiliaries, *to*-infinitive aspect etc. and has attracted the attention of scholars some of which are briefly discussed below.

Mbah (1999) studies the Igbo IP using X-Bar theory (a sub-theory of GB). The study aimed to describe the properties of IP, analyse its distinct components with their characteristics, determine its relations within the components and then relate its structure to the module provided by UG. In his view, the components of IP include Tone, Tense, Modal, AGR (e.g. Number, Gender) and Negative. He rightly points out that most concord elements of I are not expressed overtly in Igbo. While Tone, PST, NEG and Modal are overt; Agr-S, Agr-O and Present Tense are covert. He also argue for Tone to be treated as a generative node in the language since lexical items generated at the base are prone to change depending on the tone pattern of the dominating node. In other words, Tone Phrase (TnP) generates all the changes in tone. Although, it is agreed that Tn performs grammatical functions in Igbo, it is not interpretable in itself. It is also problematic to posit that a singular TnP determines all the tonal changes in a construction. Following Chomsky (1995), Radford (2009) and Obiamalu (2013), this

study assumes that Tn is a feature of other functional categories such as InterP, T and NEG but not a structural node on its own.

Ikegwonu (2010, 2011) has examined the structure of IP to determine its elements, their tone patterns and their realisations in Igbo using the GB approach. Adopting the unitary IP, she posits that T, ASP, MOD, NEG, AGR and Tone are projected within the IP and accounts for all sentences with or without overt auxiliaries. She notes that, NUM, PERS, GEN are not realised inflectionally. She also identifies how T and Asp are marked in the language and the role of Tone in generating convergent Igbo sentences. Her study is based on the unitary IP where all the INFL elements are lumped in a single head. However, IP has been split in Chomsky (1982) and later in Pollock (1989) such that all the elements can now project their own head. This is based on evidence from a number of languages (see Ouhalla 1991) which show that these categories are marked independently. Lumping these functors in one head creates analytical problems since it makes it difficult to determine the hierarchy of constituents.

Obiamalu (2013, 2014, 2015) investigates functional categories in Igbò from the Minimalist perspective. The studies seek to analyse the morphosyntactic realisations of the Igbo functional categories: tense, aspect, negation and determiner, with a view to determining their categorial features and how they relate to the substantive categories. He demonstrates that functors in Igbo are realised as affixes and are associated with the verb. In doing this, he posits four different projections in the Igbo clause structure: AgrP, TP, AspP and NegP. Employing the V movement analysis, he argues that the morphemes marking these functional categories are verbal affixes and so the inflected verb has to move to the relevant functional heads to check off the features associated with them. This analysis is schematised below:



(Obiamalu 2013: 139)

The schema above shows the movement of the verb from head V to the head Neg via head to head movement. As it moves, it checks the feature of the functional heads. Movement terminates at NEG because T is a barrier to movement. He concludes that negation interacts with agreement, tense and aspect in very intricate ways and that tone plays an important role in the morpho-syntactic Spell-Out of negation in Igbo. In addition, he debunks the claim that *e*-verbal prefix is not part of the negative marker. Rather, it is a morphological expression of the suppressed tense morpheme that surfaces in NEG and PERF constructions. He assumes that the *e*-prefix is a default agreement marker that surfaces in these construction. Hence, the need to posit AgrP. The *e*-prefix would be revisited in this work since it involves NEG and PERF construction. However, this study would not posit AgrP as in Obiamalu since MP recognises Agreement as a feature and not a structural node. Chomsky (1995: 344-366) argues against Agr heads on conceptual grounds. First, he posits that agreement is a relation and not a category and secondly, that agreement features are [-interpretable]. Therefore, any head that carries only Agreement features would receive no interpretation at LF causing the derivation to crash.

In relation to the agreement relations above, Nweze and Obiamalu (2016) also examine optional agreement patterns in Igbo. They argue that though studies show that Igbo verbs do not inflect to mark agreement with their arguments, there is language evidence as manifest in the optional agreement patterns exhibited by the language. Such agreement is shown by Igbo verbs which take clitics and some extensional suffixes to agree with their arguments. Hence, they classify optional agreement markers into two: clitics and extensional suffixes as shown below:

- (90) a. Nwoke nà nwaànyị̀ à nà-èzu ohi
 Man and woman DEM DUR-steal stealing
 “This man and woman are thieves”
- b. Nwoke nà nwaànyị̀ à nà-èzu-cha ohi
 Man and woman DEM DUR-steal-CL stealing
 “This man and this woman are thieves”
- (91) a. Ànyị̀/Ụnụ̀ /Okeke nà Okafò bù (gà) ndi ìbèribè
 1P/2P/Okeke and Okafor be (AGR) people foolishness
 “We/You/Okeke and Okafor are fools”
- b. Ànyị̀/Ụnụ̀ /Okeke nà Okafò bù ndi ìbèribè (gà)
 1P/2P/Okeke and Okafor be people foolishness (AGR)
 “We/You/Okeke and Okafor are fools”
- (92) a. Àfò bù ahà ahịa ndị Ìgbò
 Afo be name market people Igbo
 ‘Afo is the name of an Igbo market day’
- b. Àfò , Èke, Nkwo na Oriè bù -(sị̀) ahà ahịa ndị Ìgbò
 Afo, Eke, Nkwo and Oriè be-(AGR) name market people Igbo
 “Afo, Eke, Nkwo and Oriè are names of market days in Igbo”

In (90b) and (91b) *cha* and *ga* are clitic agreement markers. They do not occur in (90a) and (91a) but the sentences are rendered grammatical. For this reason, the authors regard them as optional agreement markers. On the other hand, the extensional suffix, *si*, performs similar function as shown in (92) above. However, the difference between clitics and the extensional morpheme in the language is that the former is mobile in the sentence and can attach to other categories aside the verb while the latter can be attached only to the verb. The foregoing shows that these elements mark plural and thus show number agreement⁴⁴. Since the study is entirely descriptive, it does not provide any information about the structure of the Igbo clause or the TP layer in particular.

Nweya (2013) examines inflectional elements in Imilike Igbo. The study aims to identify the physical forms of the inflectional elements and how they interact in the dialect. He observes that inflectional affixes in the dialect differ in forms from those of SI. One of the main findings of the study is that the negative suppletive of the past

⁴⁴ See also Nwokeiwu and Ilechukwu (2013), Nweya (2016b) for plural strategies and devices in Igbo.

marker co-occur with the negative marker in negative constructions contra SI where the past tense morpheme is often replaced with the negative morpheme. Consider the examples below:

- (93) a. He jè-rò ọ̀rọ̀
 3PL go-Past work
 ‘They went to work’
- b. He e-jē-dā-gā ọ̀rọ̀
 3pl Pref-go-Past-Neg work
 ‘They did not go to work’

Nweya (2013: 14)

Nweya argues that *də* in (93b) is the negative suppletive of the PST morpheme in (96a) while *gə* is the NEG marker. Although, the work is entirely descriptive it does give some information about the hierarchy of constituents within the TP layer. It is helpful in accounting for the order and behaviour of inflectional elements in SI. Therefore, dialectal studies of this sort are referred to in the course of the data analysis.

Maduagwu and Obiamalu (2016) also investigated agreement, tense, aspect and negation in Ogbahụ dialect of Igbo. They identify the markers of these functors in the dialect to show that some of them differ phonologically from the standard variety. For instance, past tense and negative markers are marked by the suffixes *-IV* and *-họ* respectively as shown in the examples below (see Maduagwu and Obiamalu, 2016:159,162):

- (94) a. Òbi gbù – lù agū .
 Obi kill – IV (pst) lion
 ‘Obi killed a lion’
- b. Òbi e-gbū-họ agū .
 Obi Agr-kill-Neg lion
 ‘Obi did not kill a lion’.

(94a) shows that the suffix, *-IV*, is used to mark the past in the dialect while *-họ* is used to mark negation as in (94b). These differ from the suffixes, *-rV* and *-ghị*, which are used to mark the past and negative respectively in SI. The study further establishes the existence of both tense and aspect in the language. But like other descriptive studies, it is silent about the hierarchy of these functors within the dialect.

Emenanjo (2015)⁴⁵ re-asserts that the categories, tense and aspect, are both marked in Igbo by tonal morphemes, auxiliaries and inflectional affixes (especially suffixes). However, it is aspect rather than tense that is expressed in Igbò. According to him, it is better to analyse tense in Igbo using the two-way demarcation of past/non past since only past is obviously marked in the language. However, he did not provide any clause structure information about the two categories. Nevertheless, many scholars (see Uwalaka, 1997, Mbah 1999, Mgbemena, 2006, Obiamalu, 2014 a.o) uphold the view that both tense and aspect exist in the language. But there are divergent views about their hierarchical properties. There are two views on this issue; (i) those who argue that TP dominates AspP (e.g. Obiamalu 2014) and (ii) and those who argue that TP and AspP compete for the same position (Uwalaka 2003, Nweya 2016a). One of the missing links is that it is difficult to encounter constructions where T and Asp morphemes co-occur in the language to enable one determine the ordering of the affixes. It is observed that the order of affixes is used to determine the hierarchy of categories in the Igbo clause (cf. Obiamalu 2013, 2015 Nweya 2016a). This is one of the key issues discussed in the Chapter five of this study.

2.3.3 Empirical Review on the Igbo Complementiser Phrase Domain

This is the topmost layer in the clausal architecture cross-linguistically. In the literature, CP is assumed to be the layer that houses scope-discourse categories. Therefore, the works reviewed here are those associated with discourse categories and information structure such as interrogatives, topic and focus.

Ikekeonwu (1987) revisited the interrogatives in Igbo and identifies three types of question, namely, the definitive-answer questions (DAQ – the yes-no or polar questions), the nominal-answer questions (NAQ –content/information questions), and the tag questions (TQ). She identifies three basic procedures available to language for expressing their polar questions. These include: (a) *Word-order re-organisation*-This

⁴⁵ Emenanjo noted that his (2015) work is not quite a revision of the (1978) work (though that was the original intention) because a lot has happened in Igbo linguistics since then. Therefore, the work differs tremendously from the 1978 work due to the presence of contemporary approaches paraded by contemporary linguists.

involves the inversion of the position of the subject and verb (e.g. English and French type languages) as in the examples below:

- | | | | |
|------|------------------|------|-----------------|
| (95) | English | (96) | French |
| | a. He was there. | | a. Il est bleu |
| | b. Was he there? | | b. Est il bleu? |

Example (95b) and (96b) above, are instances where there is an inversion of the positions of the subject and the verb. In contrast, (97) through (99) represent the scenario where there is an *insertion of a question marker or segment*. This may be a single LI, a phrase, or particle as shown below:

- | | | | |
|------|-------------------------|------|---------------------------|
| (97) | French: | (98) | Miya: |
| | Est-que il est bleu? | | a. t gaa mara-za |
| | Is it that it is blue?' | | <u>He will find her</u> ' |
| | | | b. t ga mara-za wa? |
| | | | Will he find her?' |
-
- | | |
|------|--------------------|
| (99) | Yoruba: |
| | a. O ri Toyé |
| | You saw Toyé' |
| | Se O ri Toyé? |
| | Did you see Toyé?' |

The third strategy is *the use of suprasegmental features of intonation or tone* as in (100 & 101) below:

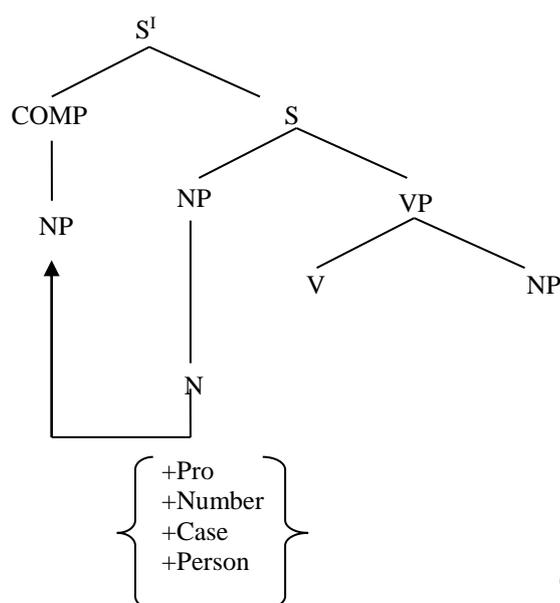
- | | | |
|-------|---|---------|
| (100) | a. He went to the party (lowering tune) | |
| | b. He went to the party? (rising tune) | English |
-
- | | | |
|-------|----------------------------|------|
| (101) | a. Ó gàrà ahĩa' | |
| | 'He went to the market' | |
| | b. Ò gàrà ahĩa? | |
| | 'Did he go to the market?' | Igbo |

Ikekeonwu (1987) observes that two of the processes mentioned above are involved in the production of the DAQ in Igbo, namely, the insertion of the pronoun in apposition to the NPI and the use of the obligatory low tone on this pronoun. On the status of the pronominal elements (PEs) that intervene between the subject NP and the VP,

Ikekeonwu argues that they are not actually in apposition to the subject NP nor are they actually pronouns; although, they may have functioned as pronouns, diachronically, but they are synchronically to be regarded as question markers. She analyses the PEs as part of the subject NPs in cases where the subject NPs are coordinated and the PEs plural. The shortcoming of Ikekeonwu's analysis is that it does not give a unified account of the occurrence of the resumptive PE, both structurally and functionally, a step that would be taken systematically in this study.

Nwachukwu's (1988) account of yes-no question transformation proposes an empty operator in Igbo interrogative COMP. This, he posits, triggers the movement of the subject NP to COMP; the moved NP leaves a pronominal copy of itself with which it shares all its features at the extraction site. He formalises the Igbo yes-no question derivation as shown below:

(102)



(Nwachukwu 1988)

Nwachukwu (1988) also claims that the low tone on the PE in yes-no question derivation is not directly associated with the left-dislocation of the subject NP. Unfortunately, he fails to account for its source. Note also that here, Nwachukwu jettisons the Q-morpheme idea for an empty operator, to which he does not associate the characteristic low.

Ndimele (1991), with insight drawn from Echie, observes that many of the findings made of Igbo yes-no question are true of Echie. However, he shows and accounts for a number of peculiar features of the language with regard to yes-no (polar) question. As a

(1997), it would be worthwhile for this study to adopt the Split CP approach in the analysis of interrogative clauses.

Mbah (2011) also investigated syntactic NP movement in Ìgbò clauses such as Tensed Clause NP Movement, Question Formation Movement and Sentential Complement NP Movement using the GB framework. He accounts for these movement processes using various principles and constraints of GB such as Projection Principle, Bounding Principle, Structure Preservation Constraint, Tensed S Condition and A over A Principle. According to him, Tensed Clause NP movement involves clauses as well as verbs of raising such as *dì (ka)* ‘seem/appear’, *nwe ike* ‘be able’, *tosiri/kwesiri* ‘fit’ (p.170). These SOs do not subcategorise subjects at the D structure via lexical insertion. But in order to satisfy EPP⁴⁶, the subject position of the S is occupied via movement operation as in

- (104) a. NP *dìka mmiri ga-ezo*⁴⁷ (104) b. *Mmiri_i dì ka ϕ _i ga-ezo*
 NP seem water will rain Water be like it will pour
 ‘It appears that it will rain’. ‘Rain is likely to fall’
 (Mbah 2011: 170)

(104a) represents the empty D structure position which was filled in (104b) via the movement of the embedded subject *mmiri* ‘water’. The movement leaves a co-indexed resumptive pronoun ϕ as a trace. However, the nature of the sentence demands that this subject must be an appropriate one. Hence, AGR serves as a filter to ensure that the wrong subject does not occupy the position. More so, Mbah discusses CWQ and wh-movement in Ìgbò. He posits that wh-heads have two syntactic forms: the basic form and the clefted form⁴⁸. The basic form shows up when the wh-elements occupy their D structure position while the clefted form surfaces when it is preposed to C as exemplified below:

- (105a) *Unu chọọ onye- whom*
 You want ebee- where
gịni- what
- (105b) *Onye*
 Ebee
Gịni ka unu chọọ t

⁴⁶ EPP requires that every sentence must have a subject. According to Haegeman (1994:68), it is a general grammatical property of all sentences rather than individual lexical items.

⁴⁷ The tones were intentionally ignored in these examples because the author left the tones unmarked.

⁴⁸ Uwalaka (1991) also share similar view. See also Chomsky (1995b), Radford (2009:338-339).

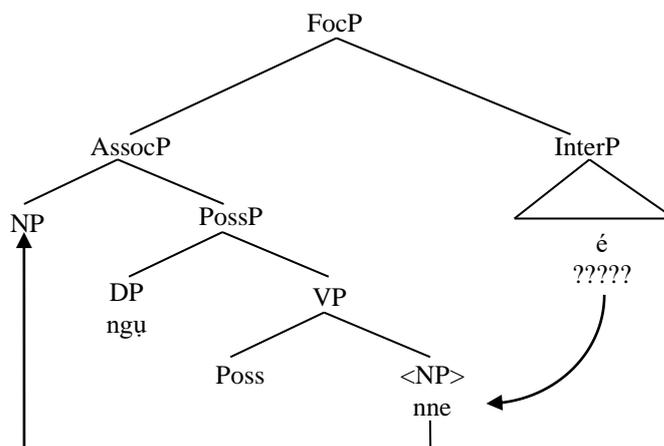
mgbe ole- when	Mgbe-ole
etu ole- how	Etu-ole
nke ole- which	Nke-ole

(105a) and (105b) have the same semantic import. However, the movement of the wh-element in (105b) to the clause initial position is for emphasis. According to him, wh-words in Ìgbò function as free relatives, hence, they share the universal characteristics of wh-relative, that-relative and wh-question; they occupy the same syntactic position, are subject to subjacency, involve relations and exhibit unbounded movement. In addition, he notes that wh-word is not always overt in Ìgbò because tone can supervene on syntactic structure (p.190). Mbah's observations demonstrate the complex nature of the Ìgbò wh-elements. It is obvious that most of the analysis of the Igbo wh-word and other elements that occupy the left periphery of clauses are based on the unitary CP. With insights from Rizzi (1997) this study deviates from these studies to analyse wh-constructions.

Nwala and Nwankwegu (2013) compare the features of wh-questions in Izhii, Ezaa and Standard Igbo. They distinguish seven basic types of wh-questions across the three varieties. They include *gini/gunu* (what-question), *onye'* (who-question), *àwè'* (where-question), *teke' ole/nìteke' ole/kèdu' m̀gbe'* (when-question), *ke gunu/nke ishi gunu/maka gini* (why-question), *ke onye/nke onye* (whose-question) and *àgha' /kèdu' etu* (how-question). According to them, *àgha' /kèdu' etu* (how-question) occurs in different shapes and expressing different kinds of meaning that seek information about, quantity of count objects, process, appearance and frequency. They identify a kind of interrogative construction which they called pseudo wh-question.' It behaves like a wh-question without a wh-element as shown in this data from Izhii and Ezaa:

- (106) a. Nne' ngu/ghu' e' ?
 Mother 2SG-POSS INTER
 "What about your mother?/How about your mother?/Where is your mother?"

(107)



Nwala and Nwankwegu (2013)

In their opinion, the construction is used to seek information about virtually anything for which in other languages, wh-question is needed. In other words, they are interpreted as wh-question in all contexts. Nwala and Nwankwegu, therefore, hypothesise that the *é* wh-marker seen at the end of the interrogative construction is a residue of a deleted structure to which they have no apt explanation yet. Therefore, they choose to call the construction a pseudo wh-question —because at the underlying level, it behaves like a wh-question but on the surface, it has no feature of a wh-question. Since this structure is restricted to a particular dialect, it would not form part of the main discourse in this study.

Nwankwegu (2015) investigates the microparametric syntax of interrogatives in North Eastern Group of Dialects; specifically, Izhii, Ezaa, Mgbo, Ehugbo, Uburu and Nkalaha. He compares the interrogative features of this group with those of SI with a view to characterising the grammars of interrogatives in the six dialects of the Igbo language, in terms of their structure, derivation and typology and to derive the range of parametric possibilities and constraints distinguishing them from the standard variety. His major findings are highlighted below:

Typologically, he classifies Wh-interrogatives into three viz-direct wh-interrogatives (DWHI), indirect wh-interrogatives (IDWHI) and *kedu* wh-interrogatives (KWHI). In discussing DWHI, he further classifies them into three based on syntactic properties. They are Wh-Arguments, Wh-adjuncts and Wh-predicates. Wh-arguments are wh-elements used to query the predicate arguments (usually the DPs) in a sentence – subject, object and indirect objects as presented below:

- (108) a. Nkịta tà-rà Nweke (Standard Igbo)
[Dog bite-Pst Nweke]
'A dog bit Nweke'
- b. *Gini* tà-rà Nweke
[What bite-PST Nweke]
'What bit Nweke?'
- c. Nkịta tà-rà *ònye*?
[Dog bite-PST who]
Who did a dog bite? (Nwankwegu 2015: 99)

The wh-questions in (108b) and (108c) are used to seek information about the subject and the object DPs respectively. While the data below involve the indirect object.

- (109) a. Èmeka gò-ò-rò nnà ya motò
[Emeka buy-PAST-BEN father 3sg-poss motor]
Emeka bought his father a car
- b. Èmeka gò-ò-rò nnà ya *gini*?
[Emeka buy-PAST-BEN father 3sg-poss motor]
What did Emeka buy for his father?

In this case, the question in (109b) is used to seek information about the indirect object as shown in (109a). In his analysis, Nwankwegu argues that wh-words including the wh-subjects can be displaced to the left periphery (Contra Ndimele 1991). However, C⁰ may be null for wh-subjects in that there is no overt complementiser as in other cases of wh-argument movement. This is exemplified in the data below:

- (110) [CP *Gini* C \emptyset [TP t_j ta-ra Nweke]]
[[CP What [TP t_j bite-PST Nweke]]
'What bit Nweke?' (Nwankwegu 2015:100)

He also used data from NEGD to support his claim that wh-subjects move in Igbo at either PF or LF for the purpose of feature checking or clause typing depending on the purpose for which it is assumed to be necessary. This study takes a similar line of argument. For the wh-adjuncts and predicate, see Nwankwegu (2015:104-111).

Nwankwegu also identifies multiple wh-interrogatives in Igbo, i.e. those simple interrogative clauses that can have one to three arguments (with an adjunct) depending on the nature of its main verb. Below are some examples

- (111) a. Eze go-o-ro Ada motò n'Enugu ùnyaahù
 [Eze buy-PST Ada car PREP-Enugu yesterday]
 'Eze bought Ada a car at Enugu yesterday'
- b. Gìnì ka Onye go-o-ro onye n'èbee ubochì ole?
 [What COMP who buy-PST what PREP-where day which]
 *Who did who buy what for where which day?
 (Nwankwegu 2015:112)

In the (112b) above, the arguments are substituted with wh-word in the interrogative construction such that the interrogative sentences have more than one wh-element equal to the number of arguments in the sentence. Based on constructions like this, Nwankwegu discovers that Igbo violates the superiority condition (SC)⁴⁹ which constrains the movement of wh-phrases in multiple wh-interrogative constructions. SC holds that in a multiple wh-construction like (115) below, the wh-object cannot cross over its structurally superior wh-subject.

- (112) Ònyei ka Gìnì tà-rà ti?
 [whoi COMP what bite-PST ti]
 *Who did what bite?
 (Nwankwegu 2015:101)

Example (112) above shows that *onye* 'who' moved from the sentence final position crossing *Gìnì* 'what' to the CP violating SC and yet converged contrary to English and other Indo-European languages.

On Indirect wh-interrogative or embedded questions, he argues that these are similar to relative clauses. He identifies the similarities and differences between the two using the examples below:

- (113) a. Ọ gà-rà ahja n'ùtùtù
 [3sg go-PST market PREP morning]
 'S/he went to the market in the morning'
- b. Ànyì mà-rà ebe ọ gà-rà n'ùtùtù (Relative)
 [1pl know-PST [CP place [IP 3sg went-PST PREP morning]]]
 'We know where he went in the morning'

⁴⁹ This is contrary to the findings of Uwalaka (1991) that Wh-words in Igbo obey superiority condition (SC).

- c. Ànyi jù-rù (ya) ebe ọ ga-ra n' ụtụtụ
 [1pl ask-PST (him) [CP place [IP 3sg went-PST PREP morning]]]
 'We asked (him) where he went in the morning' (Embedded wh-Q)
- d. Ànyi jù -rù (ya) ògbè ọ ga-ra ahia
 [1pl ask-PST (him) [CP time [IP 3sg went-PST market]]]
 'We asked (him) when he went to the market' (Embedded wh-Q)
 (Nwankwegu 2015:117)

In the examples above, *ebe* in (113b) and (113c) and *ògbè* in (113d) are wh-elements heading the embedded clauses respectively. He noted that the same wh-elements are used for both wh-interrogative embedding and wh-relative in Igbo unlike in English language where they are different. Therefore, they are suppletives in the language as summarised on the table below:

Wh-Words/Phrases and their Wh-Relative Alternates in Standard Igbo

(114)		Wh words	Wh-relative
	a	Onye (who)	onye (person)
	b	Gini (what)	ihe (thing)
	c	Ebee (where)	ebe (place)
	d	ògbè ole (when)	ògbè (time)
	e	etu olē (how)	etu (manner)
	f	Ole (how many)	ole (quantity)

(see Nwankwegu 2015:117)

He argues that since the wh-elements all occur in the initial positions of the embedded CP clauses when compared with the basic clause as in the examples above, it suggests that movement is obligatory in both wh-interrogative and wh-relative constructions. The arguments are quite clear and convincing. Therefore, they would form part of the background information in the analysis of the CP domain in this study.

On *kèdu-wh-interrogative* questions (KWIC), he notes that all the wh-question possibilities in Igbo are available to KWIC. Hence, he classifies them into *kèdu-argument*, *kèdu-adjunct* and *kèdu-predicate* (see Nwankwegu 121-124). He postulates that *kèdu* differs from other types of wh-elements in direct wh-interrogative (DWI), in that it has a fixed position in a matrix clause and does not seem to be amenable to the kind of syntactic processes undergone by the others. Secondly, the option of leaving a

wh-element in-situ is not possible in KWIC, except in a multiple wh-interrogative construction and thirdly, there is no overt complementiser intervention between the wh-element attracted to *kedu* and the root TP-clause. He, therefore, agrees with preceding studies that *kèdu* is base generated. However, he aligns with Uwalaka's (1991) claim that though *kedu* itself does not move, its presence triggers the movement of other relevant elements. He, therefore, argues that *kèdu* is an empty semantic element that serves only to give wh-interrogative force to the sentence. In other words, it is not a wh-proform because it does not substitute for any item in the base form.

On the Yes-No question, he agrees with previous studies (e.g. Ikekeonwu 1987, Emenanjo 1978, Ndimele 1991 and Mbah 2011) that the insertion of a pronoun that is in apposition to the subject DP and an obligatory LT on the pronoun are the two mechanisms for achieving PQ in Igbo. He discusses in details other properties of direct and indirect PQ in SI, compares them with those of the NEGD; and points out few areas of variation. Significant among these properties is the presence of a focus marker in *Emphatic Yes-No interrogatives* as shown in the examples below:

(115) Ọ kwa Okoro bù nna gi?
 [FOC EMPH Okoro be father 2sg-POSS-DET]
 Is it the case that Okoro is your father?

(116) Ọò nna gi bù Okoro?
 [FOC father 2sg-POSS-DET be Okoro]
 'Is your father Okoro?'

He argues that the Ọ or Ọò observed in the data above results from the fusion of the cleft materials, i.e. the subject – pleonastic 'ọ' (it) and the copula 'bù' (be), through segmental deletion and assimilation. The full syntactic form is *Ọ bu* 'it is'. This phenomenon is also applicable to the dialects he studied.

He also highlights the controversy surrounding the status of the pronominal element such as whether it is empty (e.g. Uwalaka 1991) or not (e.g. Mbah 2011). His take on this is that the pronominal element emerged as a resumptive pronoun as result of displacement of the RefDP but has grammaticalised as an interrogative marker that enters the derivation as TBU for the LT (see also Uwalaka 1991, Nweya 2016a). That is the reason for the mismatch of some data presented by Nwankwegu (2015:129). In this account, it is plausible to claim that the Q-particle is externally merged in the derivation

and not a product of displacement or left dislocation. As it concerns indirect yes-no interrogative, which are PQ embedded in a matrix clause, he observes that it is always headed by a complementiser *mà* ‘whether/if’ as exemplified below

- (117) a. Ò jù-rù ma ì gbu-ru agwọ?
 [3sg ask-IND COMP 2sg kill-PST snake]
 ‘Did s/he ask whether you killed a snake?’
- b. Ò chò-rò ì-ma mà Uche ò gbù-rù agwọ
 [3sg want-IND INF-know COMP Uche 2sg kill-PST snake]
 ‘S/he wants to know whether Uche killed a snake’.

In the examples above, Aux-NP inversion is not applicable as in the English language. More so, both the matrix and embedded clauses are clause typed as interrogative. One of the high points of Nwankwegu’s study is the study of the internal structure of the wh-phrases. He classifies wh-phrases in Igbo into two based on structure and syntactic behaviour. They are summarised on the table below (See Nwankwegu 2015:141-143):

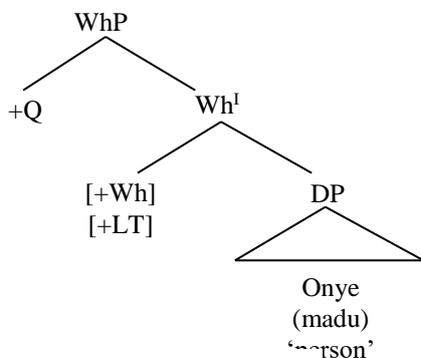
(118)					
Basic Wh-Phrases in Igbo			Non-Basic Wh-Phrases		
Wh-Phrase	Gloss	Category	Wh-Phrase	Gloss	Category
Onye	who	Argument	Mgbè ole/òlee mgbe	When	Adjunct
gini	what	Argument	Maka gini/n’ihi gini	Why	Adjunct
Ebee	where	adjunct	Ugboro ole	How many times	Adjunct
-	How	adjunct	etu olē /òlee etu/	How	Adjunct
			ego olè	How much	Adjunct

According to Nwankwegu, the basic wh-phrases are capable of making complete argument or adjunct sense without any overt or assumed sister constituent. On the other hand, the non-basic wh-elements are a combination of two or more morphological elements, hence, they cannot make complete adjunct/adverbial meaning without their sister constituents. In addition they behave inconsistently with respect to in-situness and movement. According to him, this behaviour is as a result of their varying internal make up. Following Haegeman (1991) and Di Sciullo (2003), he analyses the internal structure of the basic and non-basic wh-phrases using X-bar analysis as in the diagrams below:

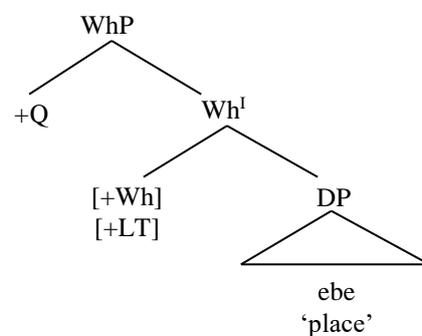
Internal Structure of Igbo Basic and Non-basic wh-phrases

Basic wh-Phrase

(119a) **Ònye** ‘who’

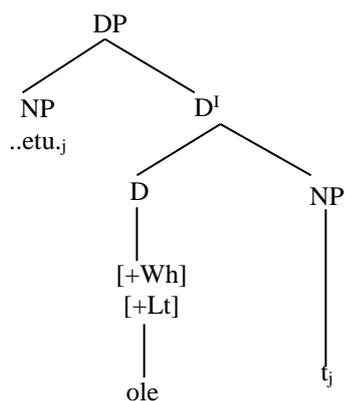


(119b) **Èbee** ‘where’

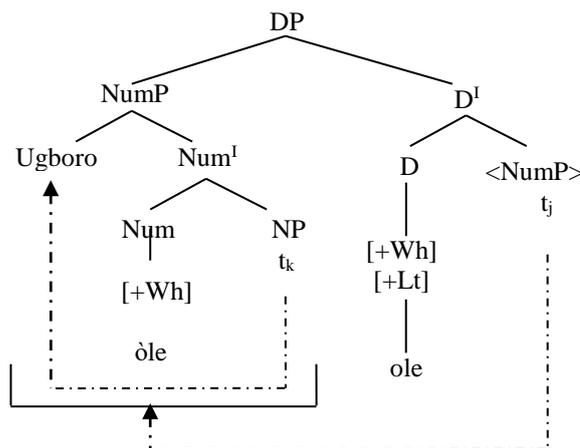


Non-Basic wh-Phrase

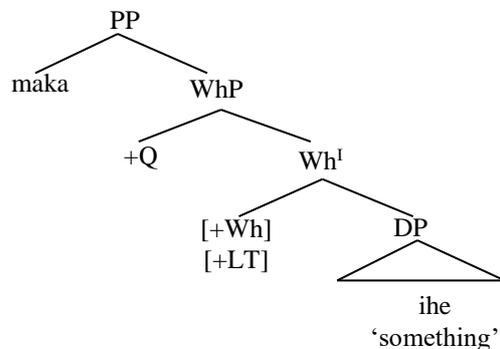
(120a) **Ìgbè òle** ‘which time’



(120b) **Ugboro òle** ‘how many’



(120c) **Màkà gini** ‘because of what’/ ‘why’



(Nwankwegu 2016: 146,148)

Using the diagrams above, he argues that the basic wh-phrases on one hand have similar internal make up, lexical variations notwithstanding, while the non-basic wh-phrases, on the other hand, have the same internal make up different from the basic ones as the diagrams show. These differences influence their behaviour in overt syntax. For instance, non-basic wh-phrases, display varying behaviour with respect to whether they occur in-situ or in a fronted position; in a direct or indirect question. For instance, 'm̀gbè ole' drops 'ole' when fronting in an embedded question, but not so when fronting in a direct question. He, therefore, concludes that each wh-phrase in Igbo possesses varying degree of wh-ness, factored by the level/point on the primary wh-tree in which the wh-element is merged. Therefore, he assumes that if a wh-feature is merged to an undominated head-node of a maximal projection, the wh-phrase exudes higher degree of wh-ness; whereas if merged on a lower (dominated) head or merged as a complement to a non-wh-head element, the wh-phrase exhibits less degree of wh-ness. This also determines whether the entire wh-phrase moves as a whole or in part, in an embedded construction or KWIC. Drawing from cross-dialectal evidence, he provides a diachronic explanation for the oddity of *gìnī* 'what' whose initial tone differs from those of other basic wh-phrases contra Goldsmith (1981), Nwachukwu (1990) and Uwalaka (1991)⁵⁰.

He also argues that Igbo is a wh-movement language and not both wh-movement and wh-in-situ as has been claimed in the literature. Wh-movement is triggered by the necessity for the basic wh-phrase to be merged with –interpretable Q, which must enter into pairing relation with a Q-feature on the C⁰ for checking and deletion. In addition to Q-checking, a wh-element moved to the domain of C disambiguates/specifies the Q in C as a [+wh], based on the proposal that the abstract Q in C is underspecified as to whether it is [+wh] or [+yes-no]. Movement in KWIC is for satisfaction of the focus feature of *kèdu*, since *kèdu*, itself, has satisfied the checking requirement of Q. In indirect wh-question, he supposes that no Q is merged on C⁰, since an embedded wh-question is a reference to question, not a question in itself. Therefore, movement is triggered by the interrogative feature of the matrix predicate.

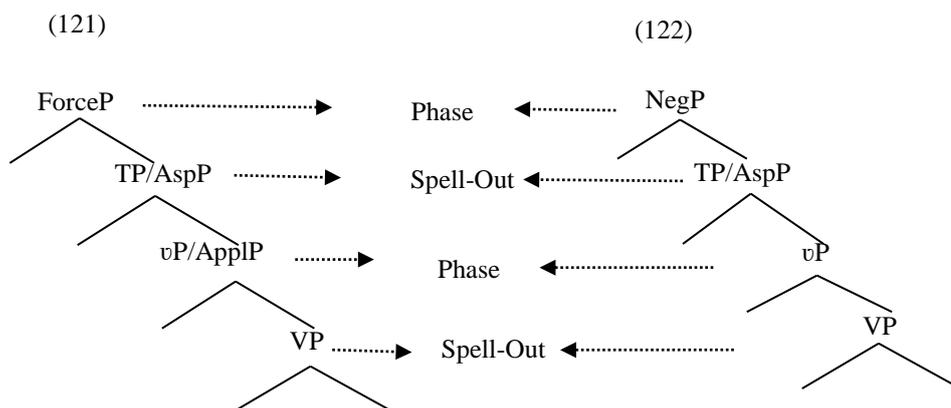
⁵⁰ According to him, variants of *gìnī* in some of the dialects studied actually bear an initial LT which suggests that they have a common origin. He logically concludes that *gìnī* in SI started with initial LT as *ngini/ngunu* in other dialects after which the HT syllable gets elided by a process of syncope.

From the foregoing, he claims that Igbo is a partial/optional *wh*-in-situ language in which a *wh*-element may also remain in-situ in a non-echo *wh*-question as in “Goodluck Jonathan was the president of *which country?*”; In this case, there has been a prior satisfaction of the Q-checking requirement by another operation: yes-no Q-movement. Thus, the *wh*-element remaining in-situ is harmless because, in the first instance, it bears no Q. The [+*wh*] feature it bears is equally harmless, since by virtue of being fully specified in the lexicon, it is, interpretable. The *wh*-element found in the position of the queried entity, gets interpreted as interrogative pragmatically. Therefore, following Bobaljik and Wurmbrand’s (2014) proposal of Declarative Syntax Question (DSQ) in English, he concludes based on pragmatic interpretation that *wh*-in-situ configurations in Igbo are instances of

- a *wh*-expression occurring in declarative predicate in-situ; and is called ‘Declarative predicate in-situ question’ (DPIQ)
- a *wh*-expression occurring in yes-no interrogative predicate in-situ; and is called ‘interrogative predicate in-situ question’ (IPIQ).

Nwankwegu’s study is a significant one having compared the features of SI and NEGD based on the interrogative constructions. Nevertheless, the study is largely based on the unitary CP where INTER and FOC are associated with C₀. This study shall go further to show that these elements bear different features, therefore, can project maximally. It would also determine how focused and non-focused *wh*-elements in Igbo interact in terms of information structure and cartography using phase derivation theory of MP.

Nweya (2016a) investigates aspects of the Igbo basic clause including the CP layer. He identifies some of the constituents of the CP layer such as Question and Focus. However, like preceding studies, he treats one projection at a time. He also does not study other components of the CP domain such as Topic and Finiteness. Hence, it does not determine the hierarchy and interaction of constituents that occur within the CP domain in the language, whether left dislocated or base generated. Nweya schematises the structure of Igbo clause as shown below:



The diagrams above represent the structures of the basic clause arrived at by Nweya (2016a). (124) represents affirmative and interrogative constructions while (125) represents negative constructions. (124) does not show the internal constituents of the CP layer. The present study shall go beyond these structures to identify all the possible constituents of the left periphery and their syntactic relations in terms of information structure, clause structure and cartography.

Osuagwu (2017) studies the left periphery of Igbo using Ngwa-Igbo with a view to identifying and characterising the various types of elements that typically occur in the left periphery of Igbo and to provide an articulated array of syntactic projections in the C-system. The study identified complementisers, focus, wh-constituent and topic as the categories that manifest in the C-system. Focus in most cases is overtly realised by specific morpheme, *ka* that encode such information, while topic is not overtly realised by any specific morpheme. This is demonstrated in the data below:

- (123) a. Àda òzùlà Emeka akwùkwọ.
 Ada PRE-buy.PERF Emeka book
 ‘Ada bought Emeka a book’
- b. **Akwukwo;** **ka** Ada n-zu-la Emeka <**akwukwo**>
 book FOC Ada PRE-buy PERF Emeka <book>
 ‘Ada bought Emeka A BOOK’

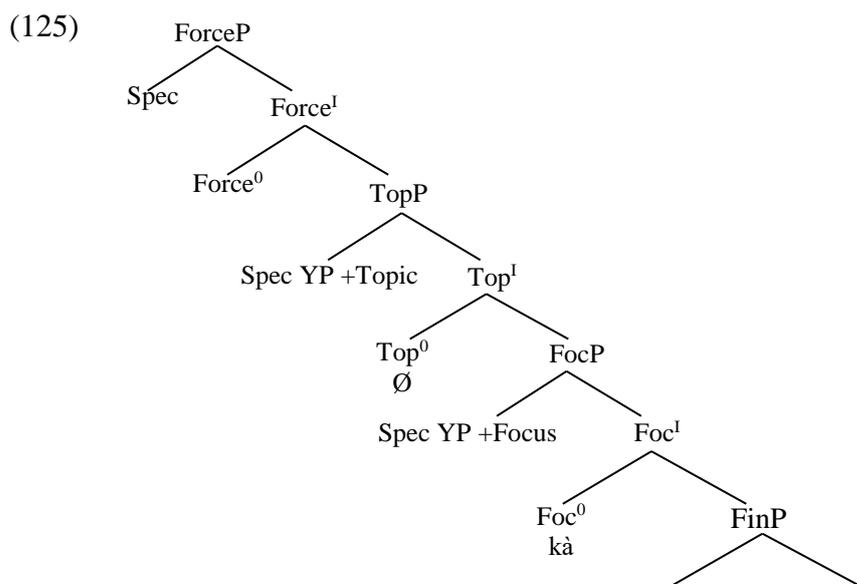
In the data above, the presence of the focus marker (FM) *ka* in (b), triggers *Akwùkwọ* ‘book’ marked with [+F] to move to Spec FocP as a last resort operation. According to Osuagwu (2017), movement is obligatory in Ngwa-Igbo since the focus requirement must be satisfied in overt syntax. Her study shows that focused constituents are not left in-situ as obtainable in SI and other dialects like Nnewi (see Nzewi 2017).

The study argues that wh-phrases and focus phrases in Igbo seek for the same position since they require the presence of the Focus Marker *kà*. Multiple foci are not available and simultaneous focusing is only available in Igbo, when it involves adjunct. The work also reveals that multiple wh-questions are possible in Igbo but it is not possible to prepose more than one wh-phrase in a clause (see also Nwankwegu 2015 for a similar opinion).

Osuagwu (2017) also identifies two types of topics. They are equative/additive topic and contrastive topic. In this regard, she observes similar to Nwachukwu (1995) that topic is not overtly marked in Igbo as shown in the example below:

- (124) *Agwọ ahụ,* Ada mgbùrù ya
 Snake [DEM] Ada kill-PST it
 “As for the specific snake Ada killed it” (Osuagwu 2017:141)

In this example above, the DP *agwọ ahụ* ‘the snake’ is displaced to the CP area leaving a pronominal copy (*ya* ‘it’) at the extraction site. Based on similar data, she argues that topic differs from focus in that preposed topics often leave an overt copy at the extraction site while moved focus constituents leave a null copy. A focused constituent can be a DP, PP, VP and WhP while topics involve mostly DPs. Based on the distribution of these elements, she presents the schema below as the structure of Igbo CP domain



(Osuagwu, 2017:144)

The schema above represents the structure of the Igbo C-system as observed in Ngwa dialect. The study is a significant milestone in the syntax of the Igbo CP domain. However, some issues in the CP domain were not addressed in the work such as the features of the complementisers in dialect in terms clause typing in especially in interrogative constructions. This is important because it helps to determine whether there is agreement between CP and TP in terms of finiteness as observed in English type languages. The study did not also determine whether focused and wh-phrases occur in the VP area as observed in many dialects of Igbo. These issues were addressed in this study because they are important for the purpose of determining the structure of the CP domain across languages. Nevertheless, this study is also interested in the other domains of the clause since the primary objectives is to determine the structure of the Igbo basic clause.

2.4 Summary

The first two sub-section of this chapter presented the theoretical studies and framework used in the study. Specifically, it traced the analysis of clause structure from the introduction of generative grammar to its current model which is Minimalism as well as alternative approaches to the analysis of clause structure. It also discussed the architecture, components and basic assumptions of MP and the cartography enterprise on which this study is based. The last sub-section, previous studies related to the present work were reviewed by identifying the goals of the studies, major findings and relationship with the present study. From the reviewed works, this study identified some existing gaps to show that this study is still necessary despite the available studies. For instance, in the VP domain, the study will examine how case is valued in DOCs including ACs. In the TP domain, the study will show that it is possible for T and ASP to co-occur in Igbo. It will also show that APPL can be associated with the TP domain. In the CP domain, the study shall show that the elements in the domain interact and can project independently based on the split projection hypotheses. Generally, this chapter has prepared grounds for the analysis in chapters three, four and five.

CHAPTER THREE

THE STRUCTURE OF THE IGBO VERB PHRASE DOMAIN

3.0 Preamble

This chapter discusses the VP domain of the clause. It examines the derivational path of the domain using the cartographic approach and the phase derivation theory in order to arrive at a structure that captures all the significant elements in the domain. This domain represents argument and event structure. Studies show that it provides answers to the way arguments are mapped onto syntactic structures. Therefore, it is a very important layer in the analysis of clauses. The verb is the most important element in this domain because it heads this domain and determines the argument structure. Verbs are at the centre of Igbo studies because of their morpho-syntactic behaviour. For the various classification of Igbo verbs see Uwalaka (1988), Mbah (1999), Agbo (2013) and Emenanjo (2015). The main interest of this chapter is to examine the structure of the vP layer. Hence, it focuses on the argument structure, rather than morphological forms of the verb. In this regard, the VP structure can be classified as simple or complex depending on the number of arguments associated with it. In the sub-sections below, this chapter discusses, in detail, the structure of the simple and complex VPs based on the cartographic split VP analysis.

3.1 Monotransitive Constructions in Igbo

Monotransitive constructions are those constructions where the verb is associated with an external and an internal argument. The internal argument may be an object or a complement. Monotransitive verbs can be subjected to the VP shell analysis, which identifies two parts of the VP layer: the outer shell headed by the light *v* and the inner core headed by the lexical verb. The lexical verb functions as the complement of the null light verb *v* and assigns theta role to the OBJ at the point of merge following θ -criterion.⁵¹ The light *v* is assumed to have a strong [vF] which triggers it to attract the head of the lexical V to adjoin to it. In addition, it has a strong edge feature [EF] which enables it to attract the external DP argument to the Spec, vP subject to PIC⁵². It also

⁵¹ This is done based on the Predicate-Internal Theta-Marking Hypothesis which states that an argument is theta marked via merger with a predicate (see Radford, 2009:248)

⁵² Phase impenetrability Condition (see 35 in § 2.2.10)

values the accusative case of the object. At the completion of the vP phase, its complement VP is transferred to the interface levels. In the last two decades, the nature of the simple vP has been discussed in works such as Uwalaka (1996), Mbah (1999), Emengini (2001), Osagie (2006), Agbo (2010), Uchekukwu (2010) and Obiamalu (2014), based on different approaches. This study intends to complement this body of knowledge by re-analysing the VP layer in the light of phase theory of MP and show how features are valued in such constructions. With regard to this, the Simple VP structure is taken in this study to be verbs with only two arguments, an internal and external argument; and project only a V head, whether simple, compound or complex⁵³. Consider the examples below:

- (126) a. Ùde gwò-rò ọgwù.
U. prepare-PST charm
'Ude prepared a charm'
- b. Ifee zà-rà ụlọ
I. sweep-PST⁵⁴ house
'Ifee swept the house'
- c. Uchè nà-à-gu akwụkwọ.
U. AUX-PART-read book
'Uche is reading a book'
- d. Ha gbù-rù oke
3PL kill-PST rat
'They killed a rat'
- e. Ngozi tufu-rù akwụkwọ
N. throw-PST book
'Ngozi threw away the book' (Mbah 1999:142)
- f. Ndị⁵⁵ ahū gbù-rù agwō.
PersonPL DEM kill-PST snake
'Those people killed a snake' (Nweya 2016b: 45)

⁵³ V heads in Igbo can be simple, compound or complex. According to Mbah (1999), simple verb forms are without affixes e.g. *bya* 'come' *nọ* 'be'; compound verbs contains at least two simple verbs that are independent e.g. *gbaba* 'run into', *kobà* 'take into; while complex verbs are comprises free verbs with at least an affix, e.g. *bata* 'enter', *gote* 'buy forth'. These are examples V heads in Igbo. The assumption is that they exist as such in the lexicon and are thus numerated prior to computation.

⁵⁴ The morpheme by morpheme glosses were based on Leipzig glossing rules and abbreviations.

⁵⁵ Note that the word *ndị* 'persons' is pronominal in this context. It also bears the feature plural. For the syntactico-semantic features of *Ndị* in Igbo, see Nweya (2016b).

The structures in (126a-f) above contain monotransitive verbs with an internal and an external arguments. For instance, (126a), *Ude* ‘personal name’ is the external argument while *ogwù* ‘charm’ is the internal argument. In some instances, monotransitive constructions may have adjuncts which are optional constituents as shown in (127) below:

- (127) a. O mèt-rèt òfuma n’ùle
 3SG do-PAST well P-exam
 ‘S/he did well in the exam’
- b. Ha nà e-re anù òfuma n’ahja ugbu ā
 3PL FUT PART-sell meat well P-market now DEM
 ‘They sell meat affordably in the market now’
- c. Ànyị jèt-rèt ozī n’Òshà
 1PL go-PST message P-Òsha
 ‘We went to deliver a message at Osha’

Observe the presence of adjuncts in (127) above. Data (127a) and (127b) have PP and AdvP as adjuncts respectively. In (127b), the manner adverbial *òfuma* ‘well’ follows the DP object *anù* ‘meat’ but precedes the PP adjunct *n’ahja* ‘in the market’; while the temporal adverbial *ugbu* ‘now’ follows the PP ‘*n’ahja*’. Data (127b) also shows that whenever temporal and manner adverbs co-occur in a construction with a PP adjunct, the manner adverb may precede the temporal adverb with the PP adjunct intervening between the two. However, it is difficult to determine if temporal adverbs like *gboo* ‘early’ and *ugbu* ‘now’ always follow PPs as these examples show:

- (128) a. Ha nọ n’ahja ugbu a
 3PL be P-market now DEM
 ‘They are in the market now’
- b. Ha nọ ugbu a n’ahja.
 3PL be now DEM P-market
 ‘They are now in the market’

In (128a), the temporal adverbial, *ùgbu* ‘now’, follows the PP place adverbial in (128a); conversely, the PP follows the time adverbial in (128b) and the sentences converged. Therefore, there seem to be a symmetric c-command relationship between time AdvP and PP place adverbial in Igbo probably because they are both adjuncts. Nevertheless, they do not bring about significant difference in the word order.

To show how monotransitive constructions are derived using (126a) above, computation begins with the *numeration* of LIs⁵⁶ as follows:

$$(129) \quad N = \{ \dot{U}de_1, v_1, gw\phi_1, rV\text{-PST}_1, \phi gw\dot{u} \}$$

The numeration above which is an unordered set⁵⁷ shows that LIs enter derivation with their idiosyncratic properties, (SYN, PHON, SEM); afterwards, the combinatorial operation *merge* takes a pair LIs from the numeration and joins them to derive a new structure reducing the index by (1) as follows: *gwφ* ‘mix’ is merged with *φgwù* ‘charm’ to derive VP at the point of which θ -role THEME is assigned to the DP *φgwù* ‘charm’ following the Theta-role Assignment Principle TRAP stated below:

- (130a) **Theta-role Assignment Principle (TRAP)**
 θ -role can only be assigned under a merge operation
 (Hornstein, Nunes and Grohmann 2005:54)

V^I is not projected because the verb is monotransitive. The partially formed structure is merged with an abstract/null causative light verb to form v^I . The light *v* is assumed to have a strong $[vF]$ ⁵⁸ which enables it to trigger the lexical verb to adjoin to it. Therefore, *gwφ* ‘mix’ moves from its position in head V to adjoin to the null light verb via head to head movement⁵⁹ to value the V-feature of the light verb. In this position, the light verb serves as a transitive probe and searches for an unvalued case feature in its c-command domain⁶⁰ and this is satisfied by the active DP⁶¹ at the object position of V. Since Igbo does not permit the object to move out of the VP overtly, the object covertly⁶² moves to the specifier of vP ⁶³ to value its case feature in a spec-head relationship as stated in (130) below:

⁵⁶ It is worthy to note that bound morphemes (both inflectional and derivational) are combined by merge in this theory.

⁵⁷ Although the numeration is an unordered set the computational system sees the target structure ahead to determine what should be merged first.

⁵⁸ This is based on the fact that the meaning of the light verb is dependent on the meaning of its complement which is the core V or lexical V (Hornstein Nunes and Grohman 2005).

⁵⁹ Recall that movement equals internal merge in the Minimalist parlance.

⁶⁰ According to Radford (2009), Probe-Goal relation must be local in order to minimise search.

⁶¹ An element is active if it still has unchecked features. The DP is active because its case feature is yet to be valued.

⁶² In phase analysis, the original pre or post spell-out distinction between overt and covert movement respectively was dropped. Rather, covert movement is associated with feature movement (e.g.) case

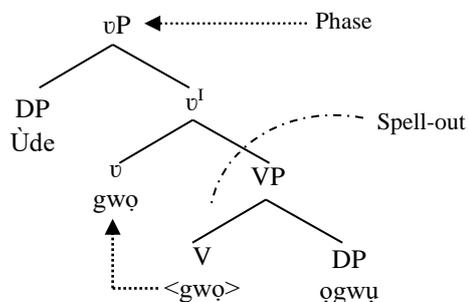
(130b)

Accusative Case Valuation

An unvalued case feature on a goal is valued as accusative via agreement with a transitive probe
(Radford 2009:304).

Thus, the light *v* values the case feature of the object. At this stage in the derivation, the strong EPP feature on the light verb requires its spec to be filled. As a result, the DP subject *Ude* ‘PN’ is selected from the numeration and merged to the already formed structure to form *vP*. The DP receives the θ -role [AGENT] from the head *v* as stipulated by TRAP. At this stage, the unvalued number and case features of the OBJ have been valued and the unvalued ones deleted (though they remain visible at PF⁶⁴). In this way, merge yields the structure below with arrows showing internal merge and the point of transfer.

(131)



Having derived a propositional *vP* phase, operations $\text{Transfer}_{\text{PF}}$ and $\text{Transfer}_{\text{LF}}$ which are two separate operations apply simultaneously to the c-command domain of the phase⁶⁵ splitting the derivation into two where phonetically relevant materials are sent to PF interface and the grammatical and semantically relevant features are transferred to LF interface. From this point forward, the complement of the *vP* phase becomes frozen in place and inaccessible to further syntactic computation following PIC repeated here as (132)

while overt movement is associated with EPP. Both happen before transfer (see Cook and Newson 2007: 306)

⁶³ Note that MP allows phrases to have multiple specifiers if there is need for more than one item to occupy that position (see Kayne, 1994: 22, 135 fn 18). Such position also hosts moved objects in languages that permit object movement.

⁶⁴ [-interpretable] Fs are transferred together with the domain of the phase to ensure that the structure transferred to PF contains both [\pm interpretable] F while the structures transferred to LF contains only [+interpretable features].

⁶⁵ This also means the VP complement of the phase head as indicated in the Structure.

(132) **Phase Impenetrability Condition/PIC⁶⁶**

The c-command domain of a phase head is impenetrable to an external probe (i.e. a goal which is c-commanded by the head of a phase is impenetrable to any probe c commanding the phase).

(Radford 2009:380)

In other words, *ogwu* ‘charm’ is spelt-out overtly at the PF interface. The derivation converges because the representation meets the interface conditions (e.g. linear order, scope, propositional status etc.).

Recall that some monotransitive constructions may have AdvP and PP adjuncts as shown in (126h) and (133a) below.

- (133a) Ha bọ-rọ anụ ā ọfuma n’ahịa.
 3PL splay-PST meat DEM well P-market
 ‘They properly splayed the meat in the market’

To demonstrate how these kind of structures are derived, computation begins with the *numeration* of LIs as follows:

- (133b) $N = \{ Ha_1, v_1, bọ_{-1}, rV\text{-PST}_1, anụ_1, a_1, ọfuma_1, na_1, ahịa_1 \}$

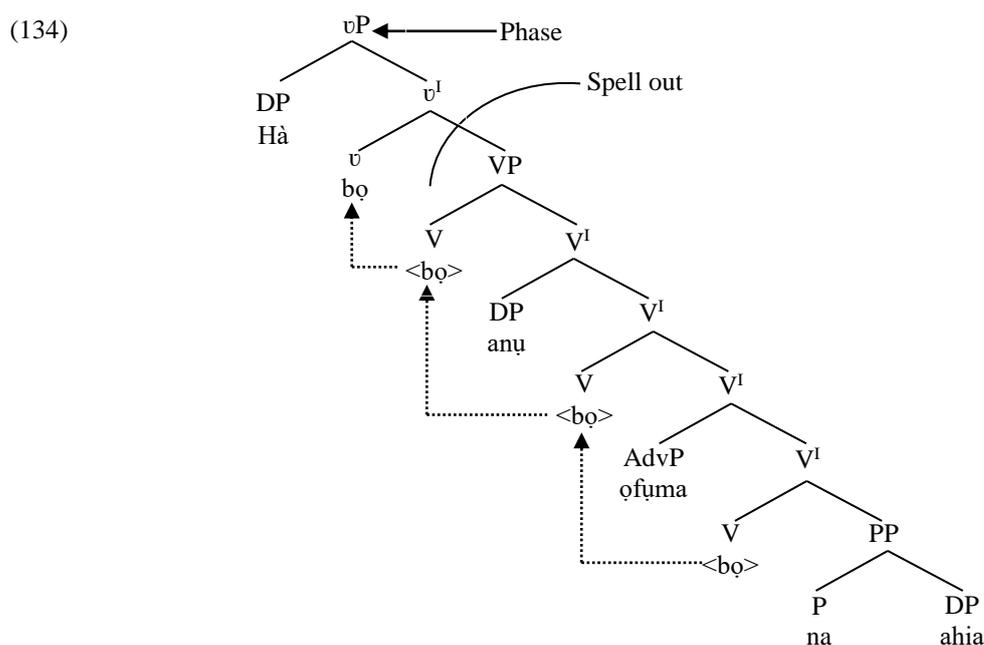
Similarly, operation merge takes a pair of LIs from the numeration and merges them to derive a new structure reducing the index by (1) as follows: *na* ‘at’ is merged with *ahịa* ‘market’ to derive PP at the point of which θ -role [LOCATION] is assigned to the DP *ahịa* ‘market’ in line with TRAP. For the unvalued case feature of the DP to be valued, it covertly moves to Spec PP, i.e. the checking domain where it enters into an agree relationship with P, after which its case is valued as OBL⁶⁷. Igbo does not have adpositions as found in some languages (e.g. Zarma, see Jayeola 2016), therefore, the PP complement cannot move overtly to value its case feature. The derivation proceeds

⁶⁶ See also Hornstein, Nunes and Grohmann (2005: 346) who state PIC as follows: “In a phase with head H, the domain of H is not accessible to operations outside, only H and its edge are accessible to such operations.

⁶⁷ In languages like Igbo where the object does not need to move, this process is abstract and seems to be redundant. The justification for this domain is to harmonise case domains in across phrases. Hence, the term long distance checking is also used.

with the merging of the derived PP *n'ahja* 'at the market' with the lexical V *bọ* 'cut' to yield V^I . V^I is then merged with adverb *ọfuma* 'well' to form another V^I ; the derived V^I is internally merged with V *bọ* 'cut' to form another V^I . At this point, the internal argument, *anu* 'meat' is merged in the structure yielding another V^I . The derivation continues as V^I is internally merged again with the lexical V *bọ* 'cut' to yield VP after which the lexical verb assigns θ -role to the object DP *anu* 'meat'. The multiple V^I is projected to introduce the AdvP and the PP adjuncts in the structure. The partially formed structure is merged with an abstract/null causative light verb to form v^I . The strong [vF] on the light *v* triggers the lexical verb to adjoin to it. The light verb probes for an unvalued case feature in its c-command domain and this is realised by the active DP *anu* 'meat' which moves covertly to the specifier of vP to value its case feature in a spec-head relationship.

It is worthy to note that agreement between transitive verbs and their objects in Ìgbò is abstract in the sense that it is not morphologically marked. At this stage in the derivation, the strong EPP feature on the light verb requires the spec vP to be filled. Hence, the DP subject *Ha* '3SG' is selected from the numeration and merged to the already formed structure to form vP . The DP receives the θ -role [AGENT] by the head *v* as stipulated by TRAP. All the unvalued features of the DPs have been valued and the unvalued ones deleted. Thus, merge yields the structure below.



At this point, the c-command domain of the phase is transferred to the interfaces for appropriate interpretation where they become inaccessible to further syntactic computation following PIC. In other words, *anụ ofuma n'ahia* would be spelt-out overtly at the PF interface. The derivation converges because the structure satisfies the interface conditions. The derivation proceeds with the merging of the T (-rV), the movement of the V from *v* to T and the movement of the external argument DP from the Spec vP to Spec TP to value its case feature. In this way, the fully formed structure is derived. The GP discussed above shows how V-movement applies to monotransitive structures involving AdvP and PP adjuncts.

3.2 Double Object Structures in Ìgbò

In the previous sub-section, the study examined the structure and the GP of monotransitive structures based on phase and the cartographic VP shell among other assumptions. This sub-section examines Double Object Constructions (henceforth DOCs). DOCs are known to have ditransitive verbs which are verbs that licence two objects: a DO (theme) and an IO (goal). In Ìgbò, DOCs are grouped into two based on the nature of the predicate: (i) those with zero extension and (ii) those having extensional applicative morphemes. Since the emergence of generative grammar, DOCs create some puzzles in syntactic analysis due to their behaviour cross-linguistically. In this regard, the VP-shell analysis of Larson (1988) emerged in an effort to solve the puzzle created by DOCs. In addition, Jayeola (2016) proposed a movement approach to the analysis of DOCs in Zarma (a Nilo-Saharan language, spoken in Niger Republic) where the order of DO and IO is mixed in that they can precede or follow each other depending on the sentence-type. In Igbo, the nature of DOCs have attracted the attention of many scholars such as Uwalaka (1995), Mbah (1999), Emerenini (2001), Agbo (2004), Osagie (2006), Anurudu (2010) among many others. The present study differs from these in its approach to the analysis of DOCs in that it employs the cartographic split VP and phase analysis. The discussion here begins with simple DOCs.

3.2.1 Simple Double Object Constructions

Simple double object constructions (SDOCs) are those constructions that involve verbs that require two DPs in their object positions without any overt verbal morphology in order to satisfy their categorial requirements. Following previous studies such as

Uwalaka (1995) and Anurudu (2010), one quick observation about Igbo SDOCs is that the IO precedes the DO as shown in the data below:

- (135) a. Àmàrà tù-rù Uchè òkwutē.
 A. throw-PST U. stone
 ‘Amaka threw Uche a stone’
- b. Chinekè za-ra Ugo ekpere.
 C. answer-PST- U. prayer
 ‘God has done me good’.
- c. Èmeka nyè-rè Mma egō
 E. give-PST M. money
 ‘Emeka gave Mma some money’
- d. Ndi ichiè mè-rè Obi Ezè
 PersonPL elder make-PST O. king
 ‘The elders made Obi a king’
 (Anurudu 2010:162)
- e. O gbà-rà Àmàrà mmiri
 3SG kick-PST A. water
 ‘S/he splashed water on Amara’

In (135) above, one can observe that the verbs are subcategorised as V___DP DP. The examples also show that the IO (GOAL) comes before the DO (THEME). For instance, in (135e), *m* is the IO [GOAL] and precedes *ukwu* ‘leg’ the DO [THEME]. In other words, all the examples above have the same linear order.

There are three lines of debate on the derivation of DOCs especially as it concerns the English language. They are: (a) DOCs are derived from prepositional dative constructions (PDCs); (b) DOCs and PDCs are derived differently and (c) PDCs are derived from DOCs. In this regard, it is difficult to rely on any of these arguments since not one of them is universal. As it concerns Igbo, it is quite difficult to arrive at an equivalent PDCs of DOCs as obtainable in English. In English, for instance, the following constructions are possible.

- (136) a. Kim gave a pen **to** me **PDC**
 b. Kim gave me a pen. **DOC**

The difference between the two structures is that (136a) has V-DP- PP structure with the theme object (DO) preceding the goal object i.e. (IO); while (136b) has V-DP-DP

structure with the goal object (IO) preceding the theme object i.e. (DO) and there is no overt P. In the era of ST, it is believed that (138b) is derived from (138a) by a transformational rule called dative movement. However, it was observed that only (138a) kind of structure is possible in Igbo. Observe an attempt to derive PDC equivalents of some of the examples in (137) above.

- (137) a Àmara t̀̀-̀̀r̀̀ Uchè okwut̀̀
 A. throw-PST U. stone
 ‘Amara threw Uche a stone’
- b *Àmara t̀̀-̀̀r̀̀ okwute Uchè
 A. throw-PST stone U.
 ‘Amara threw a stone at Uche’ (intended meaning)
- c ?*Àmara t̀̀-̀̀r̀̀ okwute màkà Uchè
 A. throw-PST stone because U.
 ‘Amara threw a stone at Uche’ (intended meaning)
- d. Èmekà nyè-r̀̀ Mma eg̀̀.
 E. give-PST M. money
 ‘Emeka gave Mma some money’
- e. *Emeka nyè-r̀̀ eg̀̀ Mm̀̀
 E. give-PST money M.
 ‘Emeka gave Mma some money’
- f. ?*Emeka nyè-r̀̀ eg̀̀ màkà Mm̀̀
 E. give-PST money because M.
 ‘Emeka gave Mma some money’ (Intended Meaning)

The data in (137b) and (137c) show that DO cannot precede the IO in Igbo while (137e) and (137f) simply show that it is difficult to recover DOCs from PDCs because the sentences do not render the same meaning as in (137a) and (137d). In this regard, this study posits [V IO DO] order as the canonical order of DOCs in Igbo. Nevertheless, it has also been observed (see Anurudu, 2010) that the DO may precede the IO if the IO is pronominalised as shown in the data below:

- (138) a. Èmekà nyè-r̀̀ Mma eg̀̀
 E. give-PST M. money
 ‘Emeka gave Mma some money’

- b. Èmekà nyè-rè ya Mma <ego>
 E. give-PST 3SG(money) M money
 ‘Emeka gave it to Mma’
- c. *Èmekà nyè-rè Mma ya
 E. give-PST M. 3SG
 ‘Emeka gave it to Mma’ (Intended meaning)

Observe in the data above, that *ego* ‘money’ is the DO while Mma is the IO. On pronominalising the DO in (138b), it moves to occur before the IO. The sentence fails to converge in (138c) because the IO remained in its base position. Anurudu (2010) identifies this phenomenon as ‘pronominal theme goal shift. According to him, the pronominalised DO must precede the lexical IO in order to have case assigned by the verb.

On the other hand, if the IO is pronominalised, it remains in its base position as shown below:

- (139) a. Èmekà nyè-rè m egō
 E. give-PST 1SG. money
 ‘Emeka gave me some money’
- b. Èmekà nyè-rè anyị ego
 E. give-PST 1PL money
 ‘Emeka gave us some money’
- c. Èmekà nyè-rè ya/ha egō
 E. give-PST 3SG/3PL money
 ‘Emeka gave him/her/them some money’

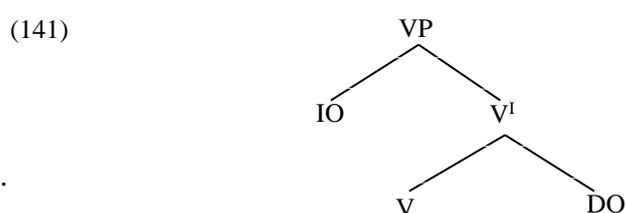
In (139b&c) above, the pronominalised goal did not move. However, on pronominalising both the DO and the IO, both remained in their base position as in the examples below:

- (140) a. Èmekà nyè-rè Mma egō
 E. give-PST M. money
 ‘Emeka gave Mma some money’
- b. Èmekà nyè-rè ì/anyị ya
 E. give-PST 1SG/1PL it
 ‘Emeka gave it to me/us.’
- c. Èmekà nyè-rè ?yà/hà ya.
 E. give-PST 3SG/3PL it
 ‘Emeka gave him/her/them some money’

Based on these observations, one can deduce that the pronominal theme (DO) or goal (IO) in DOCs is always closer to the verb. However, if both are pronominalised, the V-

IO-DO order is retained. The implication is that if the IO is the only pronominal object in a DOC, it must move to a higher position (i.e. Spec, ApplP) to value its case feature. But this movement is blocked if the DO is pronominalised as well.

The behaviour of the objects in Igbo DOCs lend support to the observations of Larson (1988), Speas (1990) and Harley (2002) that in DOCs, the goal argument of the IO object asymmetrically c-commands the theme argument or DO. Under this assumption, the IO is generated in [Spec, VP]⁶⁸ while the DO is generated as the complement of V as shown in the schema below:



In the schema above, the IO occupy Spec, VP while DO occupy the complement position of the head V. Before proceeding to the generative procedure, it is important to examine how case is valued in DOCs.

3.2.2 Case Valuation in Double Object Constructions

Hornstein, Nunes and Grohmann (2005) demonstrate how case is assigned in GB, the weaknesses therein and the various revision within MP. One of the revisions is the unification of the case domain. In GB framework, NOM case is assigned under government in a Spec-head relationship while ACC and OBL cases are assigned in a head-complement relationship. But this assumption was revised in MP such that case is valued uniformly in a Spec-head relationship (like the NOM case), via operation Agree. In this regard, NOM case is valued by T head in Spec-TP under spec-head agreement while ACC case is valued by the light *v* also in Spec-head agreement. In this way, all case features are valued the same way. The implication is that the object may move overtly (in OV languages) or covertly (in VO) to the specifier of the vP for case valuation. This is based on the assumption that a category may have multiple specifiers to host displaced objects. Therefore, the verb may remain in-situ in VO languages and value its case via long distance checking. The above assumptions easily account for

⁶⁸ This is different from Spec, vP where the external argument is generated.

monotransitive constructions. But in DOCs or ditransitive constructions, its application becomes quite complicated especially in a theory where structures are built in phases. With the introduction of phase, which requires multiple spell-out, there is need to ensure that the case feature of DPs are valued before transfer to prevent the derivation from crashing at the interfaces. Therefore, covert movement for the purpose of case valuation must take place before spell-out. For this reason, the traditional pre-Spell-Out and post-Spell-Out distinction between overt and covert movement respectively is dropped. Rather, covert movement is regarded as a feature movement (see Cook and Newson, 2007: 306). Nevertheless, there are complications arising from this assumption. The question that often arises in this issue is which head values the case feature of the IO in DOCs. There are several proposals towards solving this problem.

The first one is the feature inheritance approach (Chomsky 2005 and 2006). According to Chomsky non phasal heads enter the derivation carrying only [+interpretable] features and then inherit their [-interpretable] features from the phase head immediately above them. In other words, V would inherit [-interpretable] features from *v* while T would inherit its [-interpretable] feature from C. In that case, both *v* and V can assign accusative case to IO and DO respectively. Consider the DOC below:

(142) [_{VP} she [_v Ø] [_{VP} me [_v give] them]]

Assumed that in the structure above, V agrees with and assigns accusative case to the DO pronoun *them*, whereas *v* agrees with and assigns accusative case to the IO pronoun *me*. Raising the verb *give* to adjoin to the light verb will yield the structure shown in a simplified form below:

(143) [_{VP} she [_v give+Ø] [_{VP} me [_v give] them]]

Complication arises when the lexical verb *give* moves from V to *v*, In this regard, Radford (2009:408) observes that the verb *give* would end up with two conflicting sets of agreement features: via agreement with *them*, the ‘verb’ *give* would be marked as third person plural, but then when it raises to adjoin to *v* it would also acquire the first person singular agreement features which *v* is assigned via agreement with *me*. This means that the verb *give* has two conflicting agreement specifications (i.e. 3PL and

1SG), which would cause the derivation to crash. Therefore, the implementation of the feature inheritance proposal is problematic in DOCs and even in passives in English.

The second proposal is the *Inherent Case Assignment* under which a predicate can assign specific case to a (pro)nominal internal argument which has a specific θ -role (so that inherent case assignment involves thematically based case-marking). After v has probed and valued its person and number features on the IO *me*, it cannot probe further to value the case feature of the DO *them* because it has become inactive having valued all its features with no matching features of the DO. So, it is assigned inherent accusative case as a function of its θ -role as the THEME argument of the verb *give*. The main weakness of this proposal is that it does not conform to the unified spec-head agreement approach of the MP.

The third proposal is to introduce a functional head ApplP in DOCs that would licence the presence of the additional object by decomposing the lower VP shell. The main argument in support of this claim is the existence of ACs where the APPL morpheme licence the presence of additional objects.

In other words, IOs are treated as applicative objects in recognition of the fact they are θ -marked as GOAL which is often associated with such objects. Nevertheless, the implementation of this proposals varies depending on the properties of DPs. In some languages, one or both of the DP objects may be displaced (i.e. Object shift) (see Collins and Thráinsson, 1993, Jayeola, 2016); while in others they remain in-situ. For the details of the various analysis, see Collins (1997, 2017), Citko (2014). But below is a rough sketch of the proposal.

(144) VP Shells = v P-AppIP-VP

In (144) above, DOCs are analysed as VP shells where the shells are v P, AppIP and VP. v takes an AppIP complement while AppIP takes a VP complement. This is in order because in DOCs, IO c-commands DO object. In this regard, *the light v values the case feature of the IO; the applicative head introduces the IO and also values the case feature of the DO while V head or the lexical verb assigns θ -role to the DO* (see also Collis 1997, 2017). The advantage of this proposal over the previous two is that it

allows for NOM and ACC case features to be valued uniformly in a spec-head relationship via agree. Therefore, this proposal supersedes the previous two.

3.2.3 Derivation of Simple Double Object Constructions

Having described the structures of the simple DOCs and the process of case valuation, it is important to describe the generative procedure. Exemplifying with (137c), repeated below as (145)

- (145) Èmekà nyè-rè Mmā egō.
 E. give-PST M. money
 ‘Emeka gave Mma some money’

The derivation begins with the numeration of lexical items as in (146)

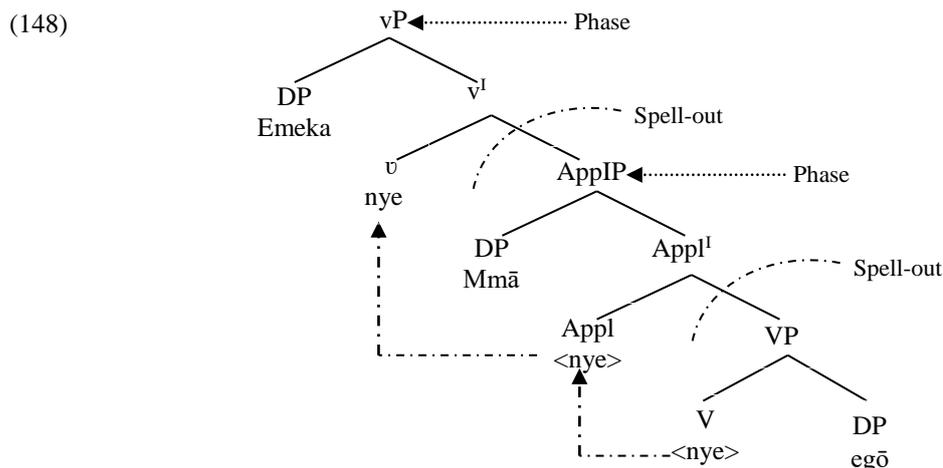
- (146) $N = \{Èmekà_1, nye_1, T(-rV-PST)_1, v_1, Mmā_1, Appl, egō, \}$

From the numeration above, merge successively selects a pair of LIs to build a structure in this manner: *nye* ‘give’ is merged with *ego* ‘money’ to which it immediately assigns the θ -theta role theme yielding a VP *nye egō* ‘give money’. The VP is then merged with a null Appl head to form Appl^I. Appl^I is further merged with *Mma* yielding ApplP. ApplP probes its c-command domain for matching a goal which is satisfied by the DP *ego* which also moves covertly to the spec, ApplP for its case feature to be valued as ACC. It is pertinent to note that these operations i.e. case valuation, agreement, A-movement and feature deletion all apply simultaneously based on the general condition stated below:

(147) **Simultaneity Condition**

All syntactic operations involving a given probe P apply simultaneously
 (Radford 2009: 290)

The derivation continues with the merging of the light v with the derived structure forming a v^I . The light v probes downwards its c-command domain for a matching goal. This is satisfied by the DP *Mma* occupying Spec-AppIP. Hence, the case and ϕ -features of the probe and goal are valued and deleted though they remain visible at PF. The strong vFs of the light v triggers the lexical verb to adjoin to it so as to value its head features. To satisfy the EPP feature of the light v , Emeka is externally merged in Spec- vP yielding the structure below:



At the end of the derivation, the complement of the vP phase which is $ApplP$ is transferred to the PF and LF interfaces for appropriate interpretation. Hence, the DO and the IO are spelt-out overtly and therefore, are no longer accessible for further syntactic computation as required by PIC. However, the phase head and its Spec are accessible for further merge and agree operations. In the structure above, the case feature of the IO object is valued by the light v while that of the DO is valued by $Appl$. As the arrow shows, the verb moves via a successive cyclic movement from V to $Appl$ and from $Appl$ to v respecting MLC.

3.2.4 Complex Double Object/Applicative Constructions

Applicative constructions (ACs) are means through which some languages structure clauses which allow the coding of a thematically peripheral argument or adjunct as a core object argument. Such constructions are marked by overt verbal morphology (Peterson 2007:1). In applicative constructions, the oblique object turns to become the core object of the verb with the absence of any pre or post position with overt concomitant verbal morphology. In transitive cases, they make verb more transitive by extending the number of objects to two/three or rearrangement of argument structure instead of increasing the number. Cross-linguistic researches have provided evidence to support the existence of this phenomenon in some languages of the world; for Bukusu (a Bantu language spoken in Kenya) and Hakha Lai (spoken in Western Burma) see Peterson (2007); for Chaga (a Bantu language) see Pyllkanen (2008); for Chichewa see Rill (2011), for Tepehua see Yasugi (2012); for Massai, see Lamoureaux (2004), for Sesotho and Kinyarwanda see Hoffman (1991), for Bantik see Utsumi (2012). These

studies show that languages vary in the manner applicative constructions are derived in terms of morphemic realisations, syntactic structure and semantic functions. In Igbo, ACs have attracted the attention of scholars such as Nwachukwu (1976), Emenanjo (1978), Onukawa (1994), Uwalaka (1995b), Mbah (1999, 2014), Emerenini (2001) and Mmadike (2010). They all share the view that the morpheme has similar structure with -rV past and that it is a prepositional category except for Emenanjo who is of the view that it only expresses a prepositional notion. However, this study contributes to the discourse by re-examining the distribution of APPL in the light of the assumptions of MP.

3.2.4.1 Morphemic Realisation and Distribution of Applicative in Ìgbò

An applicative morpheme is a morphosyntactic element carried on the verb, which functions to promote semantic arguments not otherwise required by the lexical verb, to a core argument object status (Lamoureaux, 2004:1). In the view of Pyllkanen (2008:12), it is an element that takes a predicate of events as its argument and introduces an individual that is thematically related to the event described by the verb. Generally, applicative morpheme/affix licences the presence of additional verb internal argument called the applicative object which becomes a core object of the verb. In Ìgbò, it is generally accepted that APPL is marked by the -rV applicative suffix whose 'r' is constant and the V represents any vowel that harmonises with the vowel of the root. The suffix is attached to the verb and it licences the presence of an additional object. With regard to this, seemingly intransitive⁶⁹ verbs become transitive with the presence of the applicative object; monotransitive verbs become ditransitive while ditransitive verbs become tri-transitive as in the examples below:

- (149) a. Ùkwà dà-rà
Breadfruit fall-PST
'Breadfruit fell'
- b. Ùkwa da-a-ra ya
Breadfruit fall-PST-APPL him/her
'Breadfruit fell for him/her' (Emengini, 2001:97)
- (150) a. Uchè sì-rì ofe
Uche cook-PST soup
'Uche cooked soup'

⁶⁹ This study is aware of the debate on the transitivity of Igbo verbs. This example is taken to be intransitive based on surface analysis.

- b. Uchè sì-ì-**rì** ànyị ofe
 Uche cook-PST-APPL 1SG soup
 ‘Uche cooked soup for us’
- (151) a. Ngozi nyè-rè Ebùka egō
 Ngozi give-PST Ebuka money
 ‘Ngozi gave Ebuka money’
- b. Ngozi nyè-è-**rè** yà Ebùka egō
 Ngozi give-PST-APPL 3SG Ebuka money
 ‘Ngozi gave Ebuka money for him’

Data (149) through (151) show that the bolded applicative morpheme increased the valency of each of the verb by one. Assumed that (149a) is an intransitive structure, it becomes transitive in (149b), (150a) is a mono-transitive structure that becomes ditransitive in (150b) while (151a) is a ditransitive structure that becomes tri-transitive in (151b) due to the presence of the applicative morpheme. The additional objects stand as the applicative object. The APPL morpheme can co-occur with the perfective marker as in (152a-b) or with the past marker as in (152c-e) as exemplified below:

- (152) a. Odò è-gbù-o-**rā**-la m ewu⁷⁰
 O. PRE-kill-VS-AppI-PERF 1SG goat
 ‘Odo has killed a goat for me’
- b. O gba-a-la-**ra** ha egwu.
 3SG dance-PST-PERF-APPL 3PL dance
 ‘S/he has danced for them’
- c. Ngozi zùta-à-**rà** ya akwa
 N. buy-PST-APPL 3SG cloth
 ‘Ngozi bought some clothes for him/her.’
- d. Òkee sì-ì-**rì** Ngozi ofē
 Okee cook-PST-APPL Ngozi soup
 ‘Okee cooked soup for Ngozi.’
- e. Òbi gbù-ù-**rù** m ewū
 Obi kill-PST-APPL 1SG goat
 ‘Obi killed a goat for me.’

In (152a), the *-rV* applicative is realised as *-ra* and it precedes the PERF marker but follows it in (152b). In (152c-e) the *-rV* applicative also follows the PST marker.

⁷⁰ This example is taken from Mbah (1999:174) but the inter-linear glossing is mine.

Nevertheless, there are two contentious issues among scholars concerning ACs in Igbo: (a) the categorial status of the applicative morpheme and (b) the position of the morpheme in relation to the verbroot especially when it co-occurs with the past tense morpheme. With regard to the former, there are two schools of thought. Those who argue that the -rV applicative morpheme is an extensional suffix that only expresses a prepositional notion (e.g. Emenanjo 1978, 2010, 2015). The other school of thought recognises the -rV applicative morpheme as a prepositional category (e.g. Uwalaka, 1995, Emerenini, 2001, Mbah, 1999, 2010, Uchechukwu and Mbah, 2010 and Mmadike, 2010). This study returns to this issue later in this sub-section.

The second issue in debate is the position of the suffix when it occurs in sequence with another -rV usually the past tense (PST) morpheme. There are also two schools of thought on this issue. The first school of thought recognises the medial -rV as the PST morpheme and the final one as the APPL morpheme (see Onukawa 1994). In contrast, the other school of thought recognises the final -rV as PST morpheme and medial one as the APPL morpheme. Notable in this group are Nwachukwu (1984), Uwalaka (1995), Mbah (1999, 2010), Emengini (2001) Mmadike (2010) and Mbah and Mbah (2014). The surface position of this affix is important in determining the hierarchy of constituents and the cartography of the vP domain.

Beginning with the view that in a sequence two -rVs, the final -rV marks tense while the medial one marks APPL, it is worthwhile to examine the APPL morpheme in different kinds of construction to see how it interacts with other inflectional elements. Consider the examples below:

(153) a. sìe nrī
 cook food
 ‘cook food’

 b. sìe-re Mmā nrī
 cook-APPL M. nrī
 ‘cook food for Mma’

(154) a. Ò gà è-si nrī?
 3SG FUT PART-cook food
 ‘Would s/he cook (food) for Mma’

 b. Ò gà è-si-ri Mmā nrī?
 3SG FUT PART-cook-APPL M. food
 ‘Would s/he cook (food) for Mma’

vowel suffix (OVS⁷²) (henceforth vowel suffix (VS)) intervening between the verb and other affixes. This study posits that VS in this context marks the PST⁷³. Now, consider the interaction of APPL, PERF, PST and NEG in the following constructions.

- (157) a. Odò è-gbù-o-rā-la m ewu
 O. PRE-kill-PST-APPL-PERF 1SG goat.
 ‘Odo has killed a goat for me’
- b. Odò e-gbu-bè-ghì-rì m ewu
 O. PRE-kill-PST-NEG-APPL 1SG goat
 ‘Odo has not killed a goat for me’
- (158) a. O je-cha-a-rā-la ya ozī
 3PL go-COMPL-PST-APPL-PERF 3SG errand
 ‘He/She would have finished the errand for him’
- b. Ò je-cha-be⁷⁴-ghì-rì ya ozī
 3PL go-COMPL-PST.PERF-NEG-APPL 3SG errand
 ‘He/She would not have finished the errand for him’
- (159) a. Madùekwē à-tà-a-lā-rā ya ahụhụ.
 M. PRE-suffer-PST-PERF-APPL 3SG suffering
 ‘Madùekwe has suffered for him’
 (Ubesie 1979: 77)
- b. Madùekwē a-tā-bē-ghī-rī ya ahụhụ.
 M. PRE-suffer-PST.PERF-NEG-APPL 3SG suffering
 ‘Madùekwe has suffered for him’
- (160) a. O gba-ā-lā-rā ha egwu
 3SG dance-PST-PERF-APPL 3PL dance
 ‘S/he has danced for them’

⁷² The suffixes recognised as OVS in Igbo are -e/-a and o/ọ. Green and Igwe (1963) in Uwalaka (1997) explain that this suffix is so called because it is always drawn from the set of non-close vowel. It harmonises with the vowel of the preceding syllable usually the verbroot. It occurs in imperative, conditional, perfective and serial verb constructions (see also Emenanjo 2015). This study observes that the label open vowel is misleading for the fact that only ‘a’ is an open vowel in the real sense of it. ‘e’ and ‘o’ are half close while ‘ọ’ is half open. Secondly, the term does not indicate the actual feature of the preceding vowel inherited by the suffix. Thirdly, it does not also indicate the phonological process that yields the suffix (e.g. glide formation or lengthening). Therefore, this study adopts the neutral term vowel suffix (VS) for ease of analysis and clarity.

⁷³ This is further discussed in chapter four.

⁷⁴ This study posits that *be* jointly marks the PST and PERF (see the Chapter four of the details of the analysis)

- b. O gba-bè-ghì-rì hà egwu
 3SG dance-PST.PERF-NEG-APPL 3PL dance
 ‘S/he has not danced for them’

Data (157) through (160) are PACs and their NEG counterparts. Observe that (157a, 158a, 159a) and (160a) are affirmatives while (157b, 158b, 159b) and (160b) are negatives. One notable observation is that the bolded APPL morpheme appears in its full –rV form in both PERF affirmatives and negatives despite the fact that it precedes the PERF morpheme in (157a & 158a) but follows it in (159a & 160a). Observe also that the NEG morpheme in (157b, 158b, 159b) and (160b) did not replace the APPL morpheme but the PERF morpheme since the APPL is present in all the NEG sentences. The implication of this for PACs is that the base order of PERF and APPL morpheme is PERF-APPL (la-ra) and not vice versa (ra-la) as shown in (160) repeated here as (161)

- (161) O gba-ā-lā-rā ha egwu.
 3SG dance-PST-PERF-APPL 3PL dance
 ‘S/he has danced for them’

It is an indication that the distribution of APPL in PACs is akin to its behaviour in IMP, FUT, PROG constructions presented in (153) through (155) above where the APPL morpheme always comes final. Considering that the APPL morpheme occurs final in all the constructions discussed so far, it is plausible to further argue that it occurs verb final even in a sequence of two –rVs as is the case in past constructions as shown in the data below:

- (162) a. Uchè sì-ì-rì ànyì ofe
 Uche cook-PST-APPL 1SG soup
 ‘Uche cooked soup for us’
- b. Uchè e-sì-ghì-rì⁷⁵ ànyì ofe
 Uche PRE-cook-NEG-APPL 1PL soup
 ‘Uche did not cook soup for us’

⁷⁵ Note that in simple NEG constructions, the NEG marker also replaces the PST morpheme (see also Nwagbo, 2003). For instance:

- a. O jè-rè ahĩa b. O je-ghĩ ahĩa
 3SG go-PST market 3SG go-NEG market
 ‘S/he went to the market’ ‘He did not go to the market’

- (163) a. \emptyset gbà-a-ra ànyị egwū
 3SG dance-PST-APPL 1PL dance
 ‘S/he danced for us’
- b. \emptyset gba-ghī-ri anyị egwū
 3SG dance-NEG-APPL 1PL dance
 ‘S/he did not dance for us’

Data (162) and (163) above are PST constructions in Igbo. (162a) and (163a) are affirmatives while (162b) and (163b) are their negative counterparts. Observe that the NEG morpheme replaced the medial ‘-rV’ (whose consonant has been deleted by a process of syncope) in (162b) and (163b). Considering that in normal PST constructions, the NEG morpheme often replaces the PST tense morpheme, it is logical to argue that the medial -rV is replaced by the NEG morpheme while the final -rV marks APPL. This assertion is strongly supported by the fact that the -rV applicative comes final in all other types of constructions discussed above.

In general, *this study proposes that overt APPL morpheme in Igbo has strong T(ense) features which enables it to co-occur with other inflectional categories in the TP layer.* The interactions of APPL, PERF, PST and NEG morphemes as discussed above strongly show that in a sequence of -rV past and -rV APPL the medial -rV marks T while the final -rV marks APPL contrary to Uwalaka (1995), Emerenini (2001), Mbah (1999, 2010), Uchechukwu and Mbah (2010) and Mmadike (2010).

3.2.4.2 Derivation of Complex DOCs/Applicative Constructions

Having determined the position of the applicative morpheme, it is worthwhile to demonstrate how they are derived based on the principles and assumptions of MP. In doing this, the study shows that the generative procedure of the simple DOCs discussed earlier is different from that of ACs also regarded here as complex DOCs⁷⁶.

To begin with, FUT-APPL, PROG-APPL, IMP-APPL constructions involving auxiliaries and the simple DOCs already discussed show that APPL can be associated with the VP domain, while PST-APPL, PERF-APPL and NEG-APPL constructions

⁷⁶ A similar observation has also been made in other languages. (See see also Pylkkanen, 2008, Peterson, 2007)

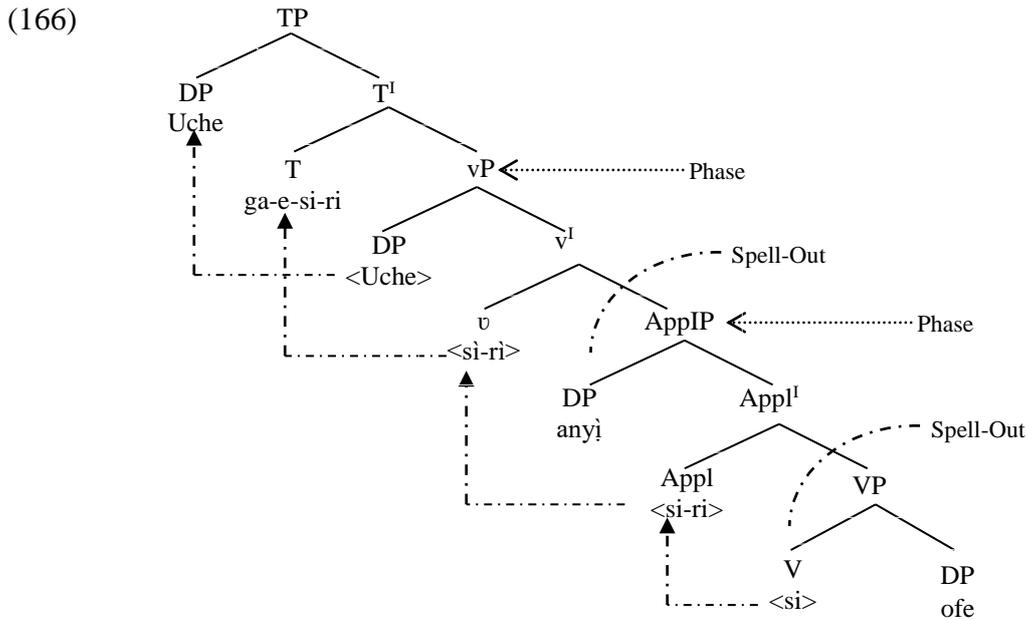
show that it can also be associated with the TP domain. For instance, examine the future construction below:

- (164) a. Uchè gà-èsi-ri ànyì ofe
 Uche FUT-cook-APPL 1PL soup
 ‘Uche will cook soup for us’

In this example, there is less interaction between APPL and T. Hence, the vP -ApplP-VP analysis of simple DOCs can easily account for this structure and others like it, such as PROG-APPL and IMP-APPL constructions. In these constructions, there is minimal interaction between vP and TP domains. For the sake of illustration, the numeration of this structure is given below:

- (165) $N = \{Uchè_1, si_1, ga (FUT)_1, e-Part, v_1, anyi_1, rv-App1_1, ofe_1, \}$

With the numeration above, computation begins with merging of the DO *ofe* ‘soup’ with the lexical verb *si* ‘cook’ to yield VP. At this point, the θ -role [THEME] is assigned to the DP. VP is merged with the $-rV$ to yield Appl¹; this is followed by the merging of the AO *anyì* ‘1PL’ deriving ApplP. The Appl head probes its c-command domain for a matching goal, this is satisfied by the DO *ofe* ‘soup’. Hence, it values its case-feature as ACC via Agree long distance checking. With merging of the IO at the specifier of ApplP, the Applicative phase is transferred to the interfaces for appropriate interpretation marking the first phase because the structure is propositional. The derivation continues with the merging of the light v to form v^1 . The light v has unvalued features, so it probes its c-command domain to find a matching goal to value these features, and this is satisfied by *anyì* ‘us’ at the Spec, ApplP. Thereafter, the lexical V moves to head v to value its head features. To satisfy the EPP i.e. the strong D feature of v , the external argument is merged with v^1 to form vP yielding the second phase domain. The details of the TP layer are left out for discussion in this sub-section. The resulting structure is presented below with arrows showing movement and phase domains.



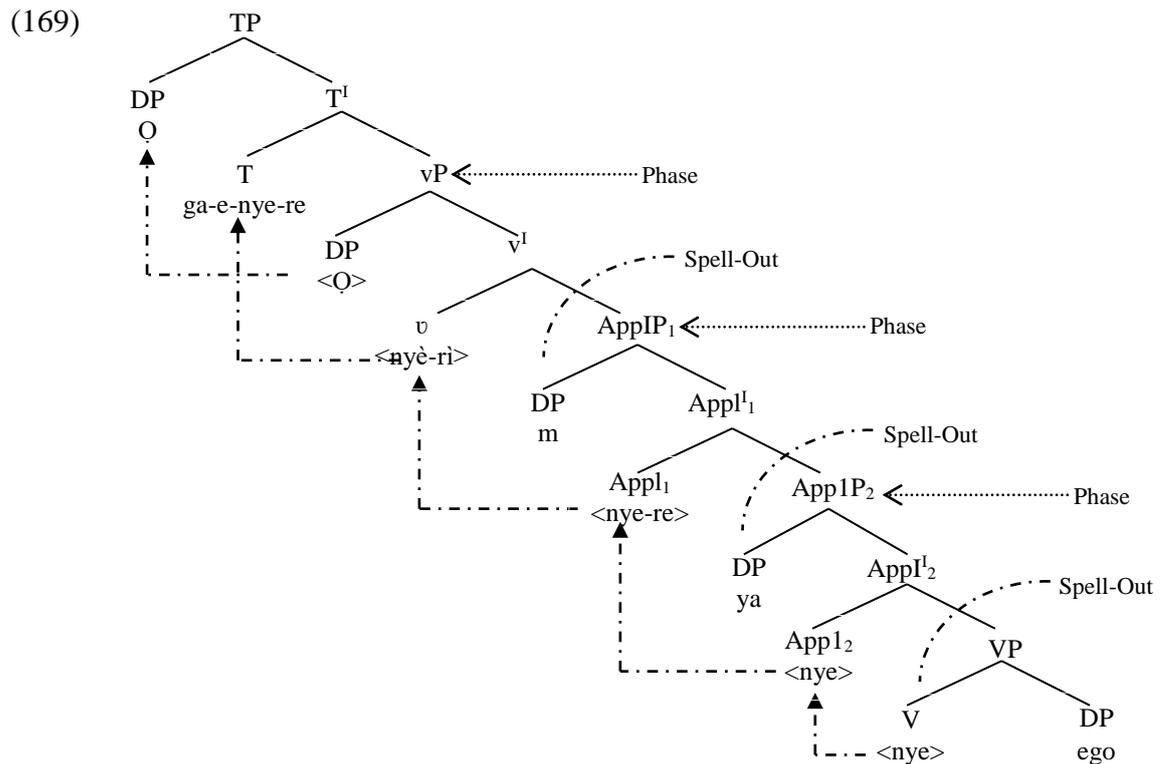
In the instance of a triple object as in:

- (167) O gà-ènye-re m̄ ya egō
 3SG FUT-PART-give-APPL 1SG 3SG money
 ‘S/he will give him money for me’

If the numeration for (167) is (168) below:

- (168) N= {O₁, ga (FUT)₁, e-PART, rv-AppI₁, v₁, nye₁ m₁, ya₁, ego₁}

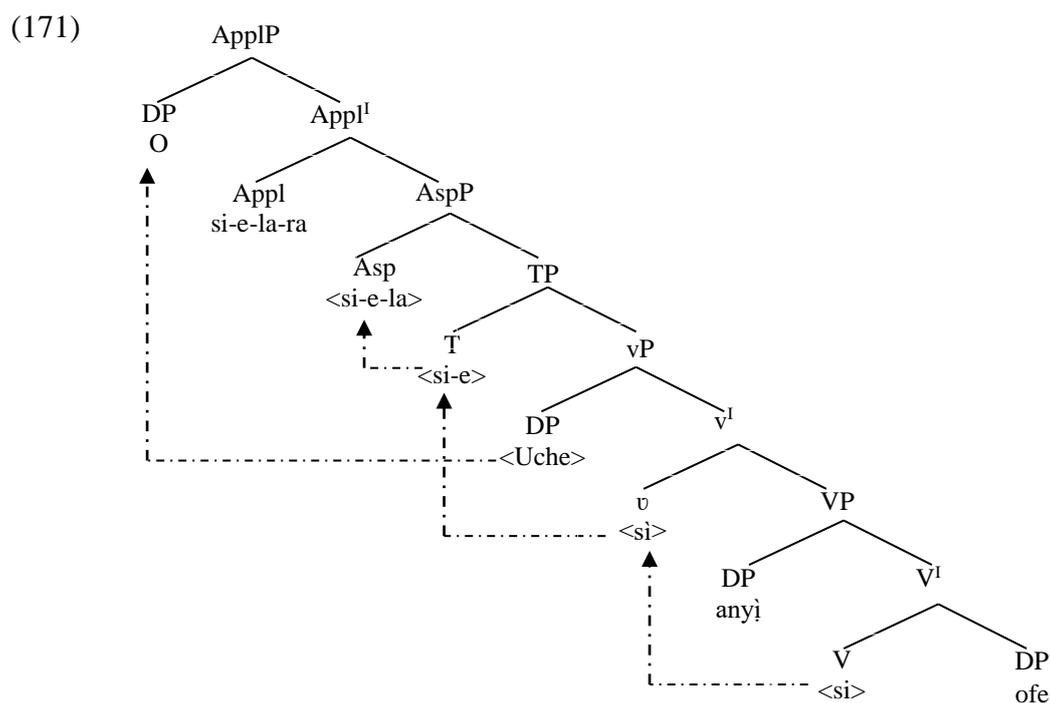
Successive application of select and merge will yield the structure below:



The structure above, is AC with three objects. There are three phases: vP , $ApplP_1$ and $ApplP_2$. The V *nye* ‘give’ assigns θ -role to *ego* ‘money’; $ApplP_2$ introduces the AO *ya* ‘him/her’ and values the case feature of the DP *ego* ‘money’; the $ApplP_1$ introduces the IO *m* ‘me’ and values the case feature of the AO, *ya* ‘him/her’; while the light vP introduces the external argument and values the case feature of the IO *m* ‘me’. The lexical verb values the head features of the relevant heads via head to head movement without violating the head movement constraint and MLC. The structure adequately takes care of instances where APPL is the only morpheme suffixed to the verb. But going by the verb movement approach used for the study, it is more difficult to account for the instances where APPL morpheme is affixed to the verb with tense and aspect morphemes without proposing a functional $ApplP$ in the TP domain. Consider the two sentences below:

- (170) a. O s̀i-̀i-r̀i ̀anỳi ofe
 3SG cook-PST-APPL 1PL soup
 ‘S/he cooked soup for us’
- b. O si-ē-lā-rā anỳi ofē
 3SG Cook-PST-PERF-APPL 1PL soup
 ‘S/he has cooked soup for us’.

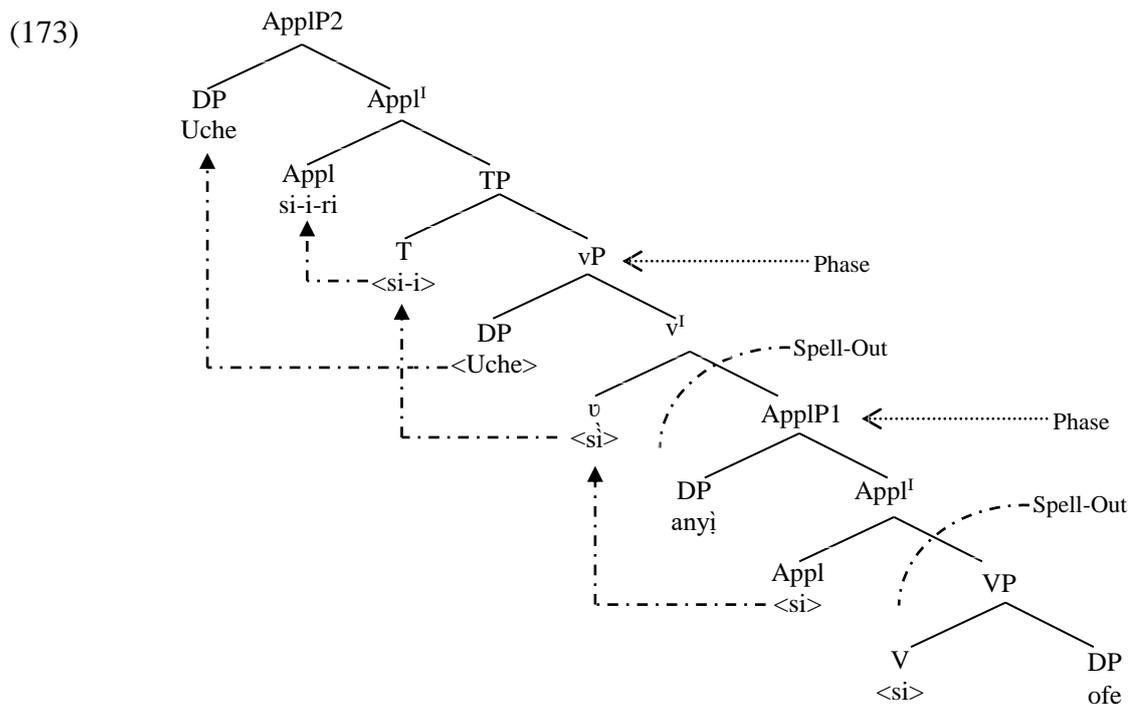
In (170a), the APPL morpheme co-occurs with T morpheme while in (170b) it co-occurs with both T and ASP morphemes. Now, consider the structure of (170b) presented as (171) below:



In this structure, the verb *si* ‘cook’ is first merged with *ofe* ‘soup’ cook to form V^I . The derived V^I is then merged with *anyi* to form VP. The arrows show that *si* ‘cook’ moved from V to v, from v to T where the T-morpheme is merged, from T to Asp where the Asp morpheme is merged and from Asp to APPL where the Appl morpheme is merged. Now, if it is assumed that V assigns θ -role to *ofe* while the light v values the case feature of the DP *anyi* ‘us’, the DP *ofe* ‘soup’ would not have its case features valued because it is not in the same Minimal Domain with Appl head which introduced the APPL morpheme in the TP domain. So, the derivation would crash after transfer. In order to circumvent this problem, this study proposes that the functional applicative head exists both in the vP and the TP domains. In the clauses where there is minimal interaction between the APPL and other inflectional elements as shown in (166) and (169), the functional ApplP introduces both the applicative morpheme and its object. This can be called *Low Applicatives*. Conversely, where there is high level of interaction between APPL and other inflectional elements, the functional APPL head occurring higher in the TP domain introduces the applicative morpheme while the one in the vP domain introduces the object. This can be referred to as *High Applicatives*. In other words, there may be multiple APPL heads in ACs to cater for the applicative morpheme and the additional internal arguments. For more illustration, consider the numeration of (170a) above presented below:

$$(172) \quad N = \{Uche_1, rV\text{-APPL}_2, rV\text{-PST}_1, v_1, si_1, anyi_1, ya_1, ofe_1, \}$$

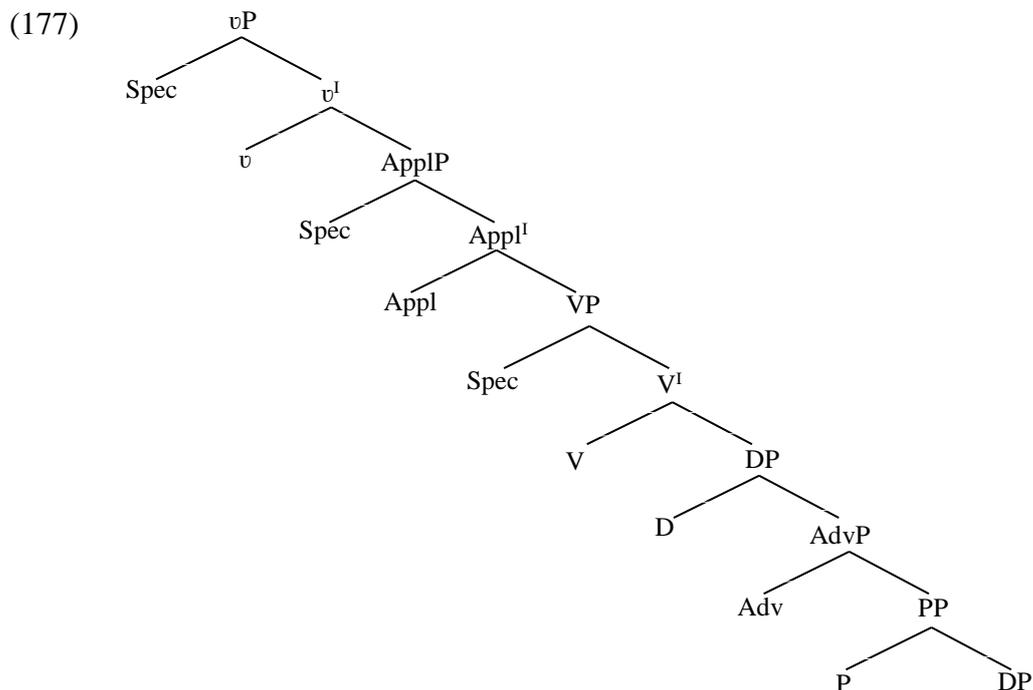
Successive application of select and merge yields the structure below with arrows showing movement operations and phase domains.



In this structure, the lexical V, *si* 'cook' assigns θ -role to the DP *ofe* 'soup' which is the DO. ApplP₁ introduces the AO, *anyi* 'us' and values the case feature of DO while the vP introduces the external argument and values the case feature of the AO, *anyi* 'us'. The higher ApplP₂ introduces the applicative morpheme and licences the presence of AO. The structure reveals that there is need for a functional ApplP in the TP and VP domains.

So far, the study has examined the structure of monotransitive constructions and DOCs. It classifies DOCs into two: Simple DOCs and Complex DOCs. The simple DOCs do not require an overt verbal morphology to licence the presence of additional internal argument. In contrast, complex DOCs which are mainly ACs requires the presence an overt verbal morphology to licence the presence of the additional object. Based on these analyses, the schema below represents the structure of the vP domain

The Cartographic Structure of the Igbo vP Domain



3.4 Summary

This chapter has examined the structure of single, double and triple argument structures of verbs in Igbo. It systematically demonstrated how the Split VP hypothesis applies to these kinds of structures in Igbo. In the analysis of the simple and complex DOCs, the study proposed a functional ApplP to cater for the additional objects. Using empirical data, the study showed that in PST-APPL constructions, the medial -rV marks PST while the final one marks APPL. It categorised Igbo ACs into two based on the level of interaction between the applicative morpheme and other inflectional elements: the high applicatives and low applicatives. In high applicatives, there is a high level of interaction between the applicative morpheme and other inflectional elements such as T, ASP and NEG, while in low applicatives, this interaction is minimal in that APPL is the only morpheme suffixed to the verb. Finally, the structure of the VP domain was outlined as vP-AppIP-VP-AdvP-PP-AdvP.

CHAPTER FOUR

THE STRUCTURE OF THE IGBO TENSE PHRASE DOMAIN

4.0 Preamble

The TP domain expresses grammatical tense, aspect and mood. In the literature, it has been discovered to exhibit parametric variation across languages in the sense that they are marked in different ways across languages. This is evident in the works of Pollock (1989), Rizzi (1990), Ouhalla (1991) & Mbah (1999) among many others. The TP domain is also connected with other categories such as modal auxiliaries and to-infinitive. Tense, according to Comrie (1985: 9), is a grammaticalised expression of location in time (see also Zimmerman, 2009, Taiwo and Angitso, 2013). It is often seen as a point on a time line such that there is an arrow showing the physical flow of time. Points on the line are used to indicate the past present and future with reference to the time of utterance. On the other hand, aspect is the expression of ‘how’ of an event. It expresses whether an event is ongoing or completed. Following works suggesting that projections could be split, TP has also been split into some independent categories such as Tense, Aspect, Mood and Auxiliaries. These categories according to Chomsky (1995:355) bear interpretable features and are realised as functional heads. In this chapter, this study examines in details the interaction of T, ASP, APPL and NEG with a view to determining their hierarchical order. The hierarchy and morphemic realisation of these functors have been in debate among scholars over the years. In the sub-sections that follow, this study makes its own contribution to this debate based on the principles of Minimalism, Cartography and phase. The approach allows morphemes to be numerated, hence affixes are merged in narrow syntax. The discussion begins with a brief on how these categories are marked.

4.1 Tense

Tense indicates the *when* of events. It is used to mark the temporal proximity of an event to the time of speech (Taiwo and Angitso, 2013). It has been established, in Igbò, that tense and aspect are marked by inflectional affixes and auxiliaries (see Uwalaka, 1997, Uba-mgbemena, 2006, Obiamalu, 2015 and Emenanjo, 2015). In the language, the present tense is often unmarked (Uwalaka, 1997). However, it may be expressed by other means such as the use of the -rV stative present (Nwachukwu 1984) as shown in the examples below:

- (178) a. Ìfeē nò n'ụlò
I. be in house
'Ifee is at home'
- b. Ànyị kpù òkpu ojii
1PL wear cap black
'We are wearing a black cap'
- c. Mmachī mà-rà mmā
M. be-STAT beauty
'Mmachi is beautiful'

The past is marked with the '-rV' suffix as in

- (179) a. Obinnà bià-rà taā
O. come-PST today
'Obinna came today'
- b. Èberè bà-rà skuulù n'afọ à
E. enter-PST school P-year DEM
'Ebere entered school this year'
- c. Ha zà-rà ụlò
3PL sweep-PST house
'They swept the house'
- d. Chidị kwù-rù okwu
C. talk-PST talk
'Chidi spoke'

While the future is marked with *gà* auxiliary⁷⁷. Consider the examples below:

- (180) a. Obi **gà** è-je ọrụ.
O. FUT PART-work work
'Obi will work'
- b. Èberè **gà** a-bà skuulù n'afọ ā.
E. FUT PART-ba school P-year DEM
'Ebere will enter school this year'
- c. Ha **gà** a-zà ụlò
3PL FUT PART-sweep house
'They will sweep the house'

⁷⁷ There are arguments over the existence of tense in Igbo. For instance, Emenanjo (2015) maintains that it is aspect rather than tense that exists in Igbo. Scholars also differ on how tense and aspect are marked in Igbo. However, what is presented here aligns with the view of Uwalaka (1997), Uba-Mgbemena (2006) and Obiamalu (2015) who argue that tense and aspect exist in Igbo.

- d. Chìdì **gà** e-kwù okwu
 Chidi FUT PART-talk talk
 ‘Chidi will talk’

In the data above, (178a-b) indicate present tense where the time of utterance is equal to event time. The verbs in (178a-b) do not have any affix or auxiliary attached to them indicating tense, except for the stative present verb in (178c). But semantically, they express present tense meaning because event time is simultaneous with utterance time. In (179a-c), the verbs *bia* ‘come’, *bà* enter, *za* ‘sweep’ and *kwu* ‘speak’ have the LT ‘-rV’ suffix expressing past attached to them to mark the past. The LT is an essential feature of the past tense morpheme because at the point of merge, the verbroot copies the tone of the suffix no matter its inherent tone. The *r* of the suffix is constant while its *V* copies the vowel features of the verbroot, a process identified as vowel copying⁷⁸. In expressing the past, it is believed that event has taken place at some point prior to the speech time. In (180), the auxiliary verb, *gà*⁷⁹, marks the future. In this case, event is anticipated to take place at some point ‘later’ from the moment of speech. From the foregoing, one can observe that the three types of tenses are marked differently. The present is mostly unmarked, the past is marked by an -rV suffix, while the future is marked by the auxiliary verb, *gà*. The present and the past constructions are more similar in structure when compared with the future tense construction. Recall that one of the assumptions in this study is that affixes are merged in narrow syntax (see Collins 2016)⁸⁰. However, all movements are leftward. MP does not permit rightward movement, hence, lowering movements like affix-hopping are ruled out.

The data presented above show that the T categories are affixal in nature, hence, the verb has to move to their position to value its morpho-syntactic features. Note that with the introduction of phase, covert movement must take place before transfer since all features must be valued before spell-out (see Cook and Newson 2007 and chapter two

⁷⁸ Linguists distinguish between vowel harmony (VH) and vowel copying (VC). In the case of VC, the vowel of the affix is exactly the same as the vowel of the root as common with Igbo PST morpheme e.g *si* (cook); *si-ri* (cooked). In contrast, VH the vowel of the affix shares some features of the root vowel like [\pm ATR] as in *ma* ‘know’; *i-ma* ‘to know’.

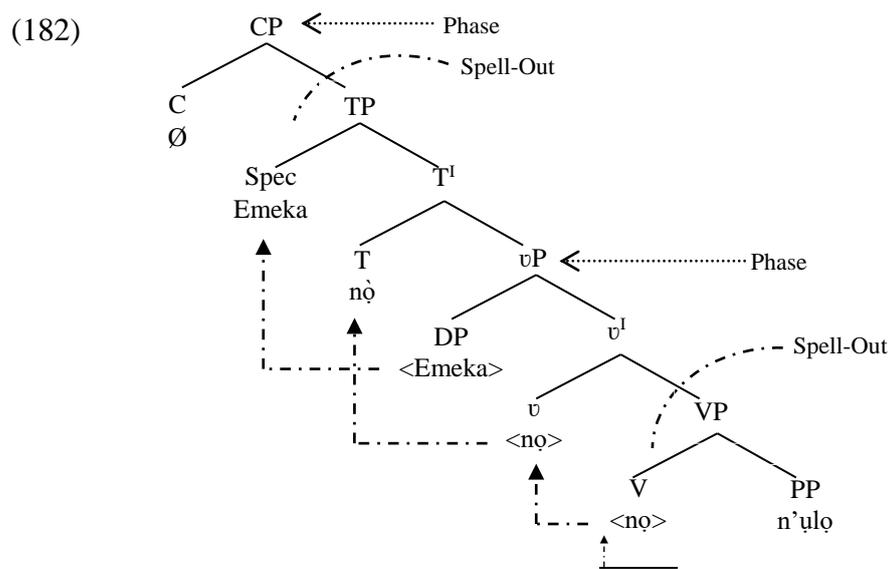
⁷⁹ Although *ga* is used to express future tense, it is more aspectual due to the presence of the participial marker.

⁸⁰ In this regard, Chris Collins (personal communication) asserts that one of the goals of current minimalism is to push morphology and phonology into syntax such that prosodic (morphemes)

of this work). Returning to the analysis, take the numeration of the present tense construction in (178a) to be (181) below:

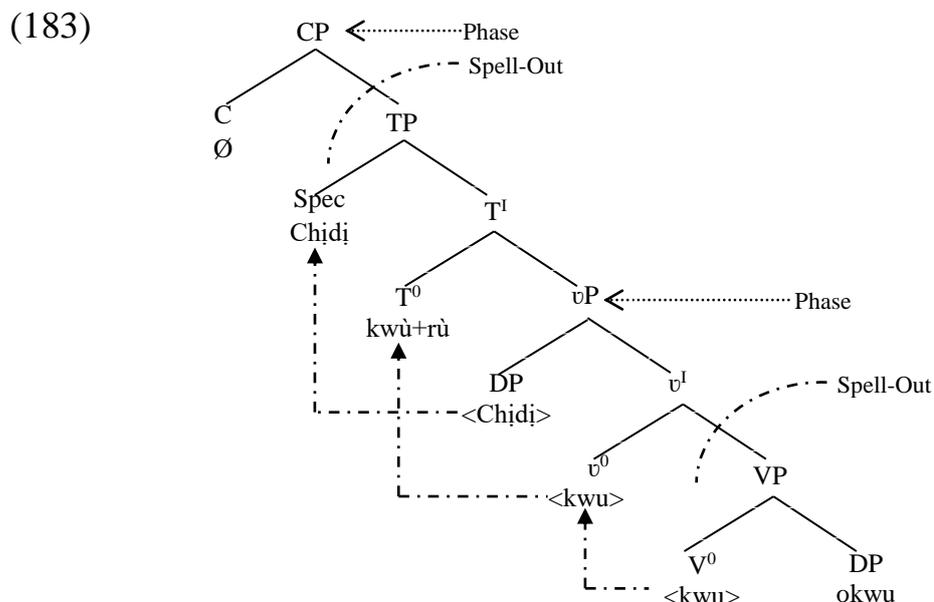
(181) $N = \{Ifee_1, n\phi, T\text{-present}_1, v_1, na_1 \text{ ul}\phi_1\}$

Then computation begins by merging the lexical V $n\phi$ ‘be’ (is) with the PP $n'ul\phi$ ‘in the house’ to form the VP $n\phi n'ul\phi$ ‘in the house’. The derived VP is merged with a null light v to form v^I . The lexical verb $n\phi$ ‘be’ moves to head v to value it vFs and to head T to value its T-features via head to head movement. Movement respects MLC. The DP $Ifee$ ‘personal name’, which is externally merged to Spec v (to satisfy the EPP feature of v) also moves from spec v to Spec T where it values its case feature on T via agreement. TP is then merged with a null C^0 which marks the force of the clause. At this point, the entire structure is transferred to the interfaces for appropriate interpretation. These postulations are schematised below:



To derive the structures with $-rV$ past as in (179d), the verb, kwu ‘talk’ is merged with the DP $okwu$ ‘talk’ to form VP. The VP is merged with a null performative light verb to form v^I . The light verb having strong vFs attracts the lexical verb to its position where it enters into a probe-goal relationship with the DP object in its c-command domain and subsequently values its ACC case. At this point $Chidi$ ‘PN’ is selected from the numeration and merged with v^I to form vP satisfying the EPP feature of v . The domain of vP is then transferred to the interfaces for convergence to satisfy PIC. The computation system continues to build the remaining structure as follows: vP is merged with the LT $-rV$ tense marker to form T^I . The head T probes for an appropriate goal in

its c-command domain. The DP *Chidi* ‘PN’ satisfies this requirement. Therefore, it internally merges with T^I to form TP. Both items check and value their [+interpretable] features while the [-interpretable] ones are deleted while the verb moves from v to T to value its T-feature. The derived structure is merged with a null C for the purpose of transfer yielding the structure below:



In the case of future tense as in (180a), the verb *je* ‘come’ is merged with the DP *oru* ‘work’ to form VP. VP is merged with the light performative verb (v) to form v^I . The vF on the light verb attracts the lexical verb *je* ‘go’ to adjoin to it. Thus, it searches for a matching goal in its c-command domain to value its [+interpretable] feature. This is realised by the DP *oru* ‘work’. The DP *Obi* ‘PN’ is merged with v^I to form vP satisfying the EPP feature of the light v . The DP also receive external θ -role role from v . Following PIC, the domain of the phase is sent to the interfaces for appropriate interpretation. The derivation proceeds with the merging of the FUT tense maker, the *ga* auxiliary to vP to form T^I . T being a probe searches for the closest goal in its c-command domain and the DP *Obi* ‘PN’ satisfies this requirement. Hence, they value their ϕ -features and delete the unvalued ones. *Obi* is then merged with T^I to form TP satisfying the EPP requirement of T. TP is then merged with a null C to form CP and the entire structure is transferred to the interfaces for appropriate interpretation as shown in the schema below:

- c. Òfunnà à-gba-ju-chē-ē-lā ìte mmiri
 O PRE-fetch-full-all-PST-PERF pot water
 ‘Ofunna has filled all the water pots’
- d. Chìdì è-je-ē-lā ahjā
 C. PRE-go-PST-PERF market
 ‘Chìdì have gone to the market’

Data (185) above express the perfective aspect. The examples show that PERF in Ìgbò is marked by the affix, *-la*, which is suffixed to the verbroot. Observe the presence of the *e*-prefix in data (185c&d). It occurs when the subject is not a monosegment pronoun as in (185a&b). In perfective constructions, the T-morpheme (i.e. VS) may intervene between the verbroot and the PERF marker (see 185a,c&d). Obiamalu (2015) submits that the VS is an empty morpheme in perfective constructions. Obiamalu (2015:81-82) presents three pieces of evidence in support of this position: First, the VS does not occur in perfective constructions where the verbroot has CVV syllable structure as in

- (186) Ọ bja-la
 3SG come-PERF
 ‘He has come’

Secondly, VS does not occur where the verbroot is a complex one⁸¹ (a verb with more than one root) as shown below:

- (187) a. Ike e-gbū-dà-la nkwụ ahụ
 Ike PRE-cut-fall-PERF palm tree DEM
 ‘Ike has cut down the palm tree’
- b. Ọ zụ-ta-la ụgbọ àlà ọhụrū
 3Sg buy-Ext.Suff-PERF vehicle land new
 ‘S/he has bought a new car’

Lastly, in dialects where the perfective is marked by the suffix *-go* and other phonologically related variants: *-gwo*, *-wo*, *-gwe*, the VS does not occur as in Ònìchà dialect as shown below (see Obiamalu, 2015: 82):

- (188) a. O gbū-gō ekē
 3S kill-PERF python
 ‘S/he has killed a python’

⁸¹ It is not clear whether this also include verbs with extensional suffix because data (203b) is not a complex verb based on the definition of a complex verb.

- b. O gō-gō ụnò n'Ọ̀nìchà
 3S buy-PERF house P Onicha
 S/he has bought a house at Onicha'

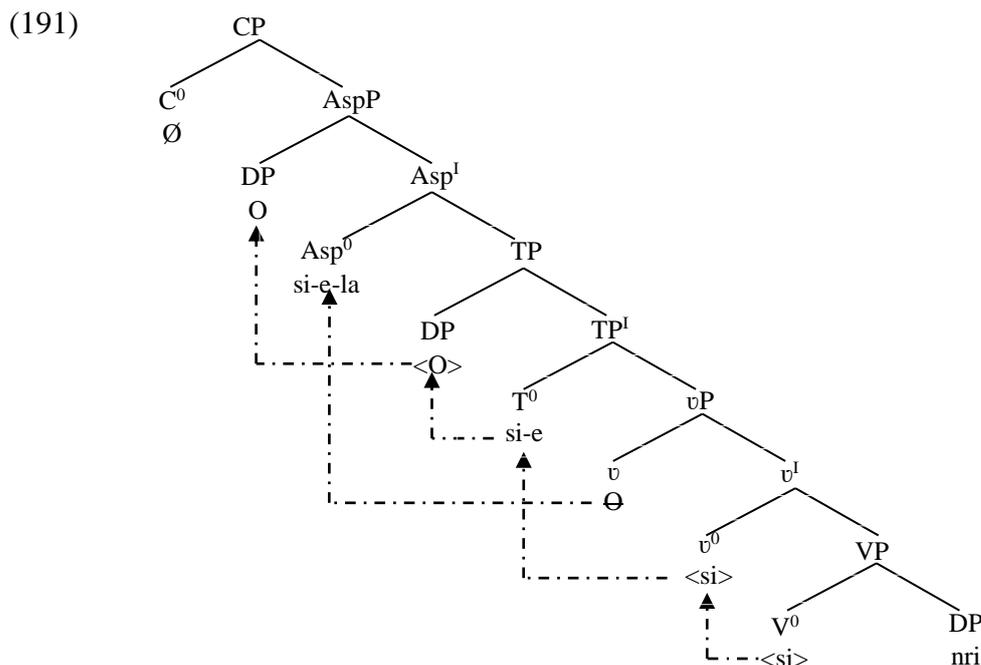
Although, the last point is tenable, there are issues arising from the first two. Firstly, it is natural for the VS not to occur with verbs in CVV structure because Igbo verbs do not have CVVV form. Attaching the VS to a verbroot with CVV structure violates the syllable structure principle of the language. Therefore, it is natural for the VS not to attach to verbs in CVV form. Besides, one can also argue that '*bia*' has C^JV and not CVV since V₁ is often palatalised especially when it is infinitivised as in *ibia* 'to come'. With regard to the second point, there are counter examples which show that complex verbs may take VS as shown below.

- (189) a. Ike e-gbū-dà-la nkwụ ahụ
 Ike PRE-cut-fall-PERF palm tree that
 'Ike has cut down the palm tree'
- b. Ike e-gbū-dà-**a-la** nkwụ ahụ
 Ike PRE-cut-fall-PST-PERF palm tree that
 'Ike has cut down the palm tree'
- c. Ọ̀funna à-gba-ju-chē-ē-**lā** ìte mmiri
 O PRE-fetch-full-all-PST-PERF pot water
 'Ofunna has filled all the water pots'

When data (189a-b) were presented to speakers for grammaticality judgement, they preferred sentence (189b) to (189a). Besides, (189c) also contains a complex verbroot and yet, it co-occurs with the VS. Therefore, these reasons are not sufficient to argue for the emptiness of the suffix in PERF constructions. The study also does not support the fact that the VS jointly marks PERF with the suffix *-la*. Rather, it is the remnant of the past tense morpheme based on the fact that it has the same distribution with the medial *-rV* that marks the past in PST APPL constructions. This issue is discussed further in the next sub-section. Now, to determine the structure of perfective constructions using the sentence in (185b), the numeration is rendered as (190) below:

- (190) N= {O₁, si₁, VS-PST₁, PERF *-la*, v₁, nri₁}

From the numeration above, computation begins by selecting LIs from the numeration above and merging them to yield the structure below with arrows showing movement, phases and spell-out domains.



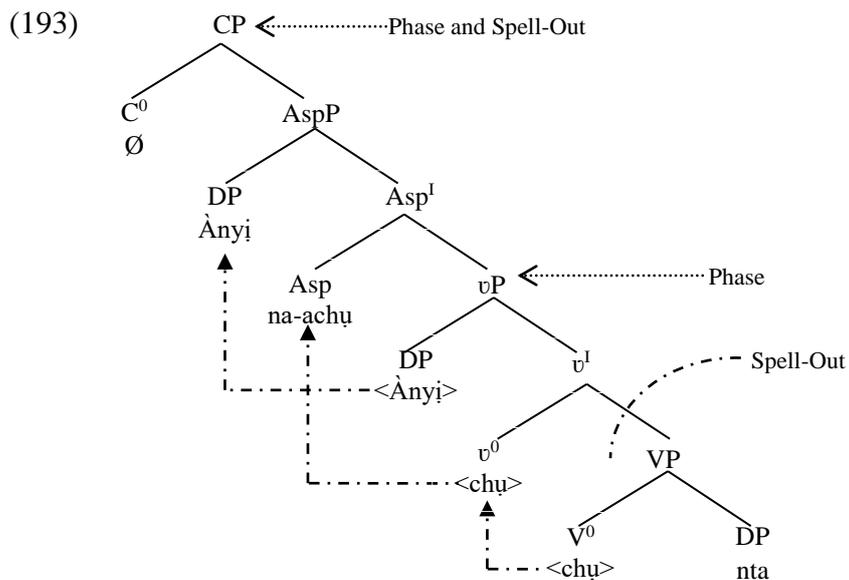
The schema above shows how the perfective construction is derived. The T-morpheme is merged in the structure before the PERF morpheme indicating that ASP dominates T.

In furtherance, the imperfective aspect (also durative aspect see Emenanjo, 1985, Obiamalu, 2015), is marked by the auxiliary verb ‘*na*’ at least in the SI. It is categorised into two: the progressive aspect and the habitual aspect. According to Obiamalu (2015: 82) the imperfective aspect expresses an on-going action at a particular point in time which may be in the present or past or a habit which has been going on over a period of time. The former is regarded as progressive aspect while the latter is regarded as habitual aspect. Studies show that both progressive and habitual are similarly marked in the language. It is context that determines the one intended. Consider the examples below:

- (192) a. Ànyị **nà** à-chụ ntā.
 1PL IMPERF PART-hunt hunting
 ‘We are hunting.’ (PROG)
 ‘We hunt/We are hunters.’ (HAB)
- b. Chịdị **nà** a-kù azù.
 C. IMPERF PART-fish fish
 ‘Chidi is fishing.’ (PROG)
 ‘Chidi fishes/Chidi is a fisherman (HAB)

- c. Oge **nà** à-gu akwukwo.
 O. IMPERF PART-read book
 ‘Oge is reading.’ (PROG)
 ‘Oge reads/Oge is a student’ (HAB)
- d. O **nà** è-je ahĩa
 3SG IMPERF PART-go market
 ‘S/he is going to the market.’ (PROG)
 ‘S/he goes to market.’ (HAB)

The data above show that a LT auxiliary verb *nà* marks the imperfective in the language. It often takes the participial form of the verb as a complement. One observation about anticipatory tense and aspectual constructions such as the future tense and imperfective aspect involving the auxiliaries is that they do not permit high level of interaction of inflectional affixes in the TP domain. Hence, they have the same the same GP, the diagram below represents the structure of a durative aspect construction.



Observe in the structure that AUX and the partial marker are based generated on Asp^0 . The order of merge is discussed in the next sub-section on negation.

4.3 Negation

Negation is a process or construction in grammatical and semantic analysis which typically expresses the contradiction of some or all of a sentence's meaning (Crystal, 2008:323). It is a universal property of language since every language has a way of denying an affirmative statement (see also Zanuttini, 2001:511, Miestamo, 2007:553, Cyffer, Ebermann & Ziegelmeyer, 2009). Although negation is expressed by all languages, studies have shown a range of crosslinguistic variation. For instance, languages that express negation morphologically may employ free and bound morphemes as in English (e.g. *un-*, *im-* *non*, *never*, *neither* (c.f. Klima, 1964), only free morphemes as in Yoruba⁸² (e.g. *Kò/ò*, *kì*, *máà* and *kó* (c.f. Ajonglo ,2005:45), or bound morphemes as in Igbò specifically, suffixes which are often attached to verbs (e.g. *-ghị*, *-la/le* (see Mbah, 1999, Nwagbo, 2003, Ikegwuonu, 2011, Nweya, 2013, Obiamalu, 2014, Emenanjo, 2015). Note that lexical or affixal forms are language sensitive because an affix in one language may be a free morpheme in another language. Ndimele (2009) identifies different strategies employed in Igbo to mark negation. These are (a) negative inflectional affixes (b) inherently negative auxiliary verbs (c) tonal alternation (d) contrastive focus. However, he points out that the main strategy for expressing negation in Igbo is through the use of negative inflectional affixes (mainly suffixes) which are attached to the root of lexical or auxiliary verbs (Ndimele, 2009: 122). Hence, the primary negation strategy in the SI is the addition of the negative suffix *-ghị* to the base/root of verbs (lexical or auxiliary). He notes that this strategy has the widest distribution when compared to other strategies employed in the language. Below are affirmative constructions and their negative counterparts in Igbo:

- (194) a. *jè-e* *ụkā*.
 IMP-go church
 'Go to church.'
- b. *E-jē-lē* *ụkā*.
 PRE-go-NEG church
 'Do not go to church.'

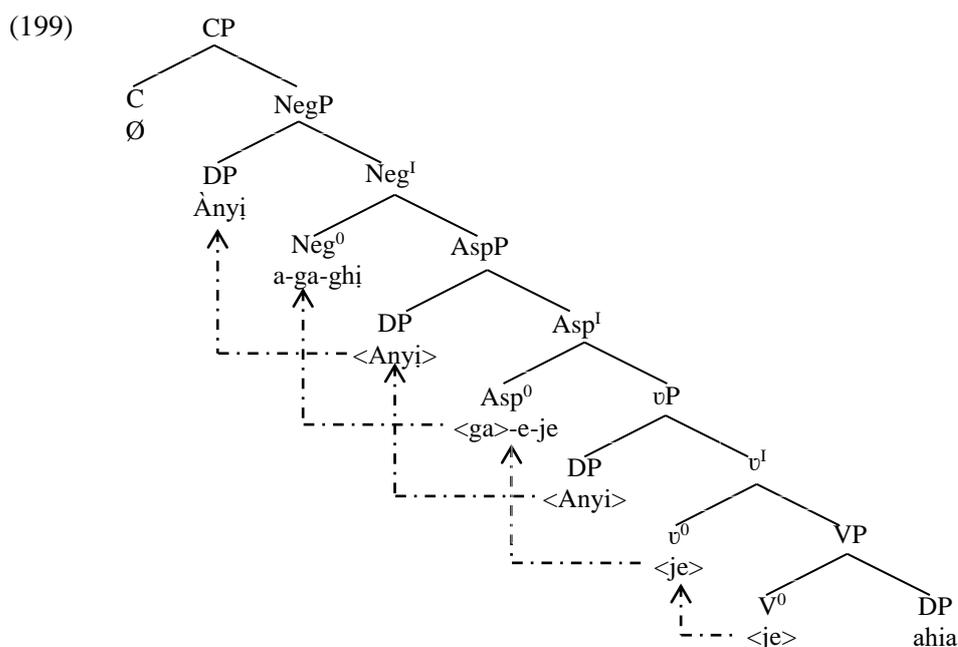
⁸² See Bode (2000) for issues on the structure of Yoruba clauses and other studies mentioned in this work.

- (195) a. Ànyị gā e-je ahịā.
1PL FUT PART-go market
'We shall go to market.'
- b. Ànyị a-gā-ghị e-je ahịā.
1PL PRE-FUT-NEG. PART-go market
'We shall not go to market.'
- (196) a. Ha gbà-rà bọ̀lù.
3PL kick-PST. ball
'They played football today.'
- b. Ha a-gbā-ghị bọ̀lù.
3PL PRE-play-NEG. ball
'They did not play football today.'
- (197) a. O si-è-la nri ụtụtù.
3SG cook-PST-PERF food morning
'He/She has cooked breakfast.'
- b. Ò si-bè-ghị nri ụtụtù.
3SG cook-PST.PERF-NEG. food morning
'He/She has not cooked breakfast.'
- (198) a. O bụ eziokwu.
3SG be truth
'It is true.'
- b. Ò bụ-ghị eziokwu.
3SG be-NEG truth
'It is not true.'

The data above show that negative markers in Ìgbò are affixes *e...le/a...la* (194b) and *a-...-ghị* (195b and 196b). The monosegment pronoun bears the tone in the absence of the *e*-prefix in (197b and 198b). The negators are often attached to the lexical or auxiliary verb. As usual, the vowels of the suffixes are controlled by the vowel of the verbroot. *-ghị* is the main negator while *-le/la* is employed in imperative constructions only (see 194b and 197b). Following Chomsky (1986)⁸³, Ouhalla (1991), Mbah (1999) and Obiamalu (2015), this study posits that NEG in Ìgbò has the status of a functional head, interacting with other functional heads T and Asp in X⁰ movement and feature

⁸³ Following Chomsky's (1986) argument that functional elements have the same phrasal properties as lexical elements, it was proposed (eg. Pollock 1989, Ouhalla 1991) that NEG markers be viewed as elements heading an independent syntactic category since its semantic property contribute an instance of negation to the clause. The proposal provides a better way of accounting for negative elements cross-linguistically.

checking relationship. This is based on the fact that NEG markers share the properties of other functional categories such as expressing grammatical meaning and forming a closed class. The discussion so far shows that core functional categories (CFCs) are realised as affixes (T, ASP, NEG) and are attached to the verb. From the data presented above, this study proposes the structure below for negative constructions involving an auxiliary verb using (194b)

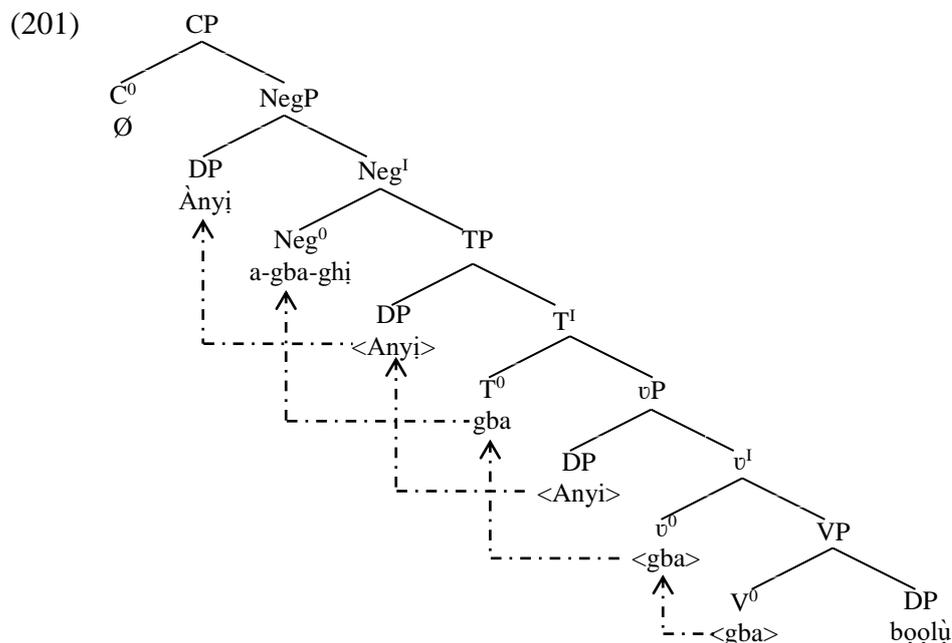


The structure shows that AUX which marks aspect is generated in head Asp^0 from where it moves to head NEG to value its unvalued feature. One of the issues that arises in this sub-section is how to treat the ‘e-/a-’ prefix that surfaces in imperfective constructions or other constructions that involve the auxiliary as in (195)⁸⁴, especially in a theory where affixes are merged in narrow syntax. This study posits that the prefix is an aspectual particle and combines with the auxiliaries, *ga* and *na*, to mark FUT and PROG aspect respectively. This is akin to what obtains in English where ‘have’ and ‘ing’ combine to mark PERF. Therefore, both enter derivation at the same point (Asp^0) in this sequence:

- (200) a. merge(e, je) = [eje],
 b. merge(ga, eje)=[ga eje]. (*eje* satisfies the c-selection requirement of *ga*)

⁸⁴ See the element glossed as PART(inciple).

However, the situation is different in (196b) which does not involve the auxiliary. The verb has to move to as far as Neg^0 to value its NEG feature and merge with the NEG morphemes: the HT prefix and *-ghi* suffix as shown in the structure below (see also 196b):



In the schema above, the main verb moves from V to v, from v to T and then from T to NEG in the process of which it values the feature of each head. The affix that marks each functor merges with the verb as the verb moves cyclically. It captures the assumption that affixes are merged in narrow syntax. The diagram also shows that NEG occur higher above T in Igbo. In other words, NEG dominates T even though T scopes over NEG. It points to the fact that scope does not always translate to dominance.

4.4 Interaction of Applicative, Tense Aspect and Negation

Having discussed APPL, T, ASP and NEG independently, it is pertinent to determine how these functors are ordered in the TP domain of the clause. This can only be achieved by studying how they interact with one another in the language. The discussion begins with some of the issues therein such as the status of the *e*-prefix and VS in Igbo.

Obiamalu (2013, 2014, 2015) following Dechaine (1993) argues that the *e*-prefix that surfaces in NEG and PERF constructions (see 194b through 196b) is an AGR marker because it occurs only with 2SG and 3SG pronouns in NEG and PERF constructions. According to him, the default AGR marker is a morphological expression of the

suppressed tense morpheme and bears the prosodic (high tone) NEG marker. Hence, the *e*-prefix performs three functions: (i) it marks agreement, (ii) gives support to the stranded T (iii) and bears the prosodic NEG marker. This study does not strictly follow that line of argument. In other words, it does not recognise AGR as a structural node on theoretical and empirical grounds. Firstly, Minimalism recognises AGR as a relation rather than a category. Therefore, it should be viewed as a feature and not a structural node (see Chomsky, 1995b:344-366 and Radford, 2009: 338-339). Secondly, AGR features are uninterpretable. Elements that carry [-interpretable] features are not given semantic interpretation at LF. Consequently, it is plausible to associate the *e*-prefix that bears the NEG floating high tone in NEG constructions with NEGP. This proposal is tenable if the *e*-prefix is compared with the resumptive pronouns that surfaces in interrogative constructions to bear the LT Q-morpheme just as a TBU. This study believes that the *e*-prefix has the same status and distribution as these pronouns. These are pronouns that have lost their original grammatical status as agreement markers and serve as TBUs in the relevant construction. Therefore, they do not have the same distribution as the regular pronouns in the language even though they have similar morphological structure. Consider the examples below:

- (202) a. Ûche è-si-e-lā nri
 U. PRE-cook-PST-PERF food
 Uche has prepared the food’.
- b. Uche è/ò-si-e-la nri?
 U. INTER-cook-PST-PERF food
 ‘Has Uche cooked the food?’
- c. Uche e-si-bē-ghī nri
 U. PRE-cook-PST-NEG food
 ‘Uche has not cooked food’
- (203) a. O si-e-lā nri
 3SG cook-PST-PERF food
 S/he has prepared the food’.
- b. Ò si-e-la nri?
 INTER.3SG cook-PST-PERF food
 ‘Has S/he cooked the food?’
- c. Ò si-bē-ghī nri
 3SG cook-PST.PERF-NEG food
 ‘S/he has not cooked food’

Data (202) and (203) show that the *e*-prefix has the same distribution as the Q-morpheme. In (202b), there is a referential DP as the subject of the clause, hence, the prefix/pronominal element surfaces to bear the tones. In (203), they disappear due to the fact that the monosegment pronouns can perform this function having similar morphological structure as the *e*-prefix. In this regard, the study concludes that the *e*-prefix has lost its original grammatical status as agreement marker. It surfaces in PERF and NEG constructions to bear floating grammatical tones associated with the relevant heads. In fact, it forms a pseudo circumfix with the PERF or NEG marker in the relevant constructions. Hence, they enter the derivation at the same point.

In respect to the VS, this study provides pieces of evidence which show that -rV suffixes and ASP markers do co-occur in perfective constructions. For the sake of exemplification, consider the following constructs:

- (204) a. Naanị ihe na-echu ya na ndị be
 only thing PROG-PART-deny 3SG CONJ PersonPL household
 ya ụra bù igbā-rū ọso ahụ ha
 3SG-POSS sleep be INF-run-reach run DEM 3PL
màlitè-rè-là n'isi.
 begin-PST-PERF P-end
 'The only thing that borders him and his family is to run the heavenly
 race they have already started' (Ofomata 2009: 9)
- b. Kèdụ ihe ānyị gà-ème anụ anyị zùtà-rà-là?⁸⁵
 What thing 1PL FUT-PART-do meat 1PL buy-PST PERF
 'What do we do to the meat we have bought?'
- c. Onye nwụ-rụ anwụ bụ onye nke ya **gà-rà-là**
 who die-PST dead be who POSS 3SG go-PST PERF
 'A dead person is the one whose own has ended'
 (Ofomata 2009: 139)
- d. Ego ha nwètè-rè-là jù-rù ha anya.
 money 3PL get-PST-PERF full-PST 3PL eyes
 'They were overwhelmed with the money they have got'

Data (204a-d) are instances where T (-ra) and ASP (-la) morphemes co-occur in Igbo. The first observation about the data is that they all contain more than one clause. Example (204a) is made up of three clauses while the others are made up of two clauses. The bolded elements are the (-rV) PST marker and the (-la) ASP marker.

⁸⁵ This structure is also possible in Onicha Igbo as in *Gịnị ka anyị ga-eme anụ anyị zùta-go-ro?*. What shall we do to the meat we have bought? In this case, the ASP precedes T.

Observe that the *e*-prefix does not feature in these constructions despite the fact that the subjects of the clauses that contain them are not monosegment pronouns. In data (204a-c), the verbs bearing the T and ASP markers are contained in the lower clause while in data (205d), the verb occurs in the upper clause. Note that data (204b) is an interrogative clause. This situation is not restricted to the -rV T affix since the -rV stative or non-past also co-occurs with the ASP morpheme as shown below:

- (205) a. Ha a-ka-**rā-lā** ya nà klaasị.
 3PL PRE-be-STAT-PERF 3SG P class
 ‘They are ahead of him in the class’
- b. Òfunnà à-ma-**rā-lā** be Uẏmā hà.
 O. PRE-know-STAT-PERF house U 3PL
 ‘Ofunna has known Uzoma’s family house.’
- c. Onye chi yā chefù-rù à-bu-**rū-lā** onye
 who God 3SG forget-PST PRE-be-STAT-PERF who
 fu-ru efù
 lose-PST lose
 ‘Any person whose God has forgotten has become a lost person’.

Data (205) above show that the ‘-rV’ stative marker and the ‘-lā’ perfective marker co-occur in Igbo. Also observe the presence of the *e*-prefix which surfaces because the subjects in (205) are not monosegment. It is an indication that it is associated with the perfective.

The fact that T and Asp morphemes co-occur in Igbo is an indication that the VS that precedes the Asp morpheme in perfective constructions is a suppletive of the PST morpheme and not a place holder. One other data which also support this line of argument is the one below from Ofomata (2009).

- (206) Òfunnà kèlè-rè ha mà⁸⁶ jakwa-**ā** ha ike
 O. greet-PST 3PL CONJ shower-PST 3PL strength
 n’ọrụ ha **rù-rù-là**
 P-work 3PL work-PST-PERF
 ‘Ofunna greeted them and praised them for the work they have done’

⁸⁶ The presence of the co-ordinator shows that this is not an instance of SVCs. SVCs are not known to have overt connectives between all the verbs in series and the verbs in series cannot form a V-V compound (see Onuora 2014:90, Emenanjo 2015:540).

Aside the fact that the verb *ru-ru-la* ‘has done’ in the lowest clause contains both T and ASP affix, the medial clause which has the verb *jakwa-a* ‘shower’ shows that the bolded VS has the same tense value as the main clause. The main reason for this postulation is that the first two clauses are coordinated structures and as such share the same tense value. Observe the presence of the coordinator *ma* ‘and’ which co-joins the clauses. They may be separated as shown below.

- (207) a. Òfunnà kèlè-rè ha.
 O. greet-PST 3PL
 ‘Ofunna greeted them.
- b. Òfunnà **jà-kwà-rà** hà ike n’ọrụ ha rù-rù-là
 O. shower-ENCL-PST 3PL strength P-work 3PL work-PST-PERF
 Ofunna praised them for the work they have done’

The fact that T and ASP morphemes co-occur in Igbo as well as the fact that the VS of the medial verb in (206) has the same T value as that of the initial clause is an indication that the VS is the remnant of the partially deleted T affix in perfective constructions. The absence of the VS may make the derivation to crash. This observation has implication for Igbo SVCs where it is generally believed that only V_1 is marked for T. The suspicion is that the VS that surfaces on V_2 , V_3 etc. is the remnant of the partially deleted T affix. This is subject to further investigation. Nevertheless, this study draws the following quick conclusion: Firstly, that T and ASP affixes co-occur in Igbo; secondly, that the *e*-prefix bears a feature associated with the perfective and negative in the relevant constructions hence it forms a pseudo circumfix with PERF and NEG suffixes; and thirdly, that VS is the remnant of the PST affix in perfective constructions. Therefore, VS enters derivation as the head of TP. It gets merged with the verb at T^0 .

Having determined the status of the *e*-prefix and VS, the study proceeds to examine the interaction and order of APPL, T, ASP and NEG. Cinque (1999:52) observes that the order of functional affixes can be used to determine or motivate the ordering of functional heads. Therefore, this study relies heavily on the suffixes associated with each of the functors to achieve this purpose in Igbo. Examine the following sentences where they interact.

- (208) a. O s̀i-r̀i ofe.
3SG cook-PST soup
‘S/he cooked (soup).’
- b. Ò si-gh̀i ofe.
3SG cook-NEG soup
‘S/he did not cook (soup)’
- c. O s̀i-i-r̀i ànỳi ofe.
3SG cook-PST-APPL 1PL soup
‘S/he cooked soup for us’
- d. Ò si-gh̀i-r̀i anỳi ofē.
3SG cook-NEG-APPL 1PL soup
‘S/he did not cook soup for us’
- e. O si-ē-la ofē
3SG Cook-PST-PERF soup
‘S/he has cooked soup.’
- f. O si-b̀e-gh̀i ofē
3SG Cook-PST.PERF-NEG soup
‘S/he has not cooked soup’.
- g. O si-ē-la-ra anỳi ofe
3SG Cook-PST-PERF-APPL 1PL soup
‘S/he has cooked soup for us’.
- h. Ò si-b̀e-gh̀i-r̀i anỳi ofe
3SG Cook-PST.PERF-NEG-APPL 1PL soup
‘S/he has not cooked soup for us’.

Data (208a) is a PST affirmative construction and (208b), its negative counterpart. (208b) shows that the negative morpheme replaces the PST morpheme in the PST negative construction. This is not in debate. Data (208c) is a PST APPL construction while (208d) is its negative counterpart. Recall that this study has established, in chapter three, that the medial $-rV$ marks the PST while the final one marks APPL. Building on this information, it means that in the negative PST APPL construction, the NEG marker, $-gh̀i$, replaces the medial ‘i’ ($-rV$) as shown in (208d). This is consistent with the first observation on PST NEG construction. Data (208e) and (208f) are PERF affirmative and the negative counterpart. Recall that VS in perfective constructions marks the past. Therefore, in (208e), VS ‘e’ marks the PST while the $-la$ marks PERF. Consequent upon this, it is plausible to also argue that be in (208f), which is often identified as the NEG suppletive of the PERF marker, is actually the fused NEG

- (210) a. Àda yà è-si nnī (Anticipative/Future)
 A. FUT PART-cook food
 ‘Ada will cook the food’
- b. Àda a-ya-họ e-si nnī
 A. PRE-FUT-NEG PART-cook food
 ‘Ada will not cook the food’
- c. Àda yà è-si-li m̄ nni
 A. FUT PART-cook-APPL 1SG food
 ‘Ada will cook the food for me’
- d. Àda a-ya-họ e-si-li m̄ nni
 A. PRE-FUT-NEG PART-cook-APPL 1SG food
 ‘Ada will not cook the food for me.’

Data (210) above are FUT constructions. Data (210c&d) show that *-li* marks APPL since they license the presence of the APPL object, *m* (1SG). The NEG morpheme is attached to the AUX, *ya*. As is the case in IMP, the APPL morpheme occurs verb final. Consider also the perfective constructions below:

- (211) a. Àda e-si-ē-nā-lū m̄ nni (Perfective)
 A. PRE-cook-PST-PERF-APPL 1SG food
 ‘Ada has cooked the food for me’
- b. Àda e-si-bè-hò-lù m̄ nni
 A. PRE-cook-PST.PERF-NEG-APPL 1SG food
 ‘Ada has not cooked the food for me’
- c. Àda a-ta-a-na-lụ m afụfụ
 A. PRE-suffer-PST-PERF-APPL 1SG suffering
 ‘Ada has suffered for me’
- d. Àda a-ta-bè-hò-lù m afụfụ
 A. PRE-suffer-PST.PERF-NEG-APPL 1SG suffering
 ‘Ada has not suffered for me’

The data above also show that the APPL morpheme *-lụ* comes final in both PERF affirmative (211a&c) and NEG (211b&d). Observe the presence of the VS *e* and *a* marking PST in (211a&c) respectively. Observe also that the NEG morpheme, *họ*, replaces the PERF morpheme in (211b&d). Given the semantics of the particle, *be*, this study posits that it is the joint NEG suppletive of both the T and PERF morpheme. From the foregoing, it is observable that the APPL morpheme comes final and it may

be realised as *-li/-lu*. This shows that it may be influenced by VH⁸⁸. Now, consider the PST constructions below:

- (212) a. Àda sì-lù nni.
 A. cook-PST food
 ‘Ada cooked some food’
- b. Àda e-sī-hō nni
 A. PRE-cook-NEG food
 ‘Ada cooked some food’
- c. Àda si-ì-lù m nni
 A. cook-PST-APPL 1SG food
 ‘Ada cooked some food for me.’
- d. Àda e-si-họ-lù m nni
 A. PRE-cook-NEG-APPL 1SG food
 ‘Ada cooked some food for me.’

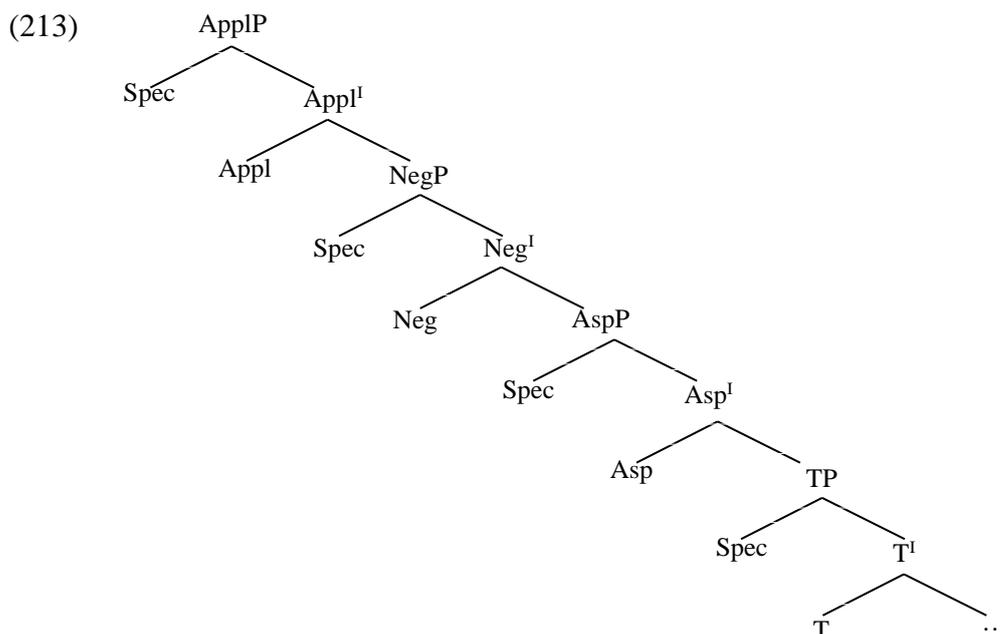
In these past constructions, (212a&b) are affirmative and NEG past constructions respectively. In (212b), the NEG morpheme replaces the T-morpheme, *-lu*. The implication is that any morpheme replaced in the PST APPL construction is the T-morpheme. Applying this principle to data (212d) which is a NEG PST APPL construction, it shows that the VS which is replaced by the NEG morpheme marks the past while *-lu* marks APPL. The fact that *-lu* also marks APPL in IMP, FUT and PERF constructions in Nnewi-Igbo show that T and APPL morphemes underlyingly have similar morphological structure (i.e. LV⁸⁹). In addition, since the APPL morpheme comes final in other constructions, it is logical to regard the verb final *-lu* as APPL.

Based on the foregoing, the observed order of functors is V-T-ASP-NEG-APPL while the hierarchical order is APPL-NEG-ASP-T-V. This is based on the fact that the outermost functor is the highest in hierarchy while the innermost one is the lowest. The verb moves to value the feature of each category in successive cyclic manner from T to ASP, from ASP to NEG and from NEG to APPL at the point of which the affixes are merged. Thus yielding the structure below:

⁸⁸ Data show that VH in Nnewi dialect is not quite strong as perceived in Northern Igbo Group of Dialects.

⁸⁹ In this case, L is constant while V represents any harmonising vowel. However, VH is not strong in the dialect as in the Northern Group of Dialects.

The Cartographic Structure of the TP Domain



4.5 Summary

In this chapter, the study examined the structure of the TP domain by re-examining the distribution of T, ASP, APPL and NEG morphemes as well as how they interact. In doing this, it revisited some of the issues in debate such as the status of the *e*-prefix and VS. It argued that the *e*-prefix bears the prosodic feature associated with PERF and NEG in the relevant constructions and forms a pseudo circumfix with the PERF and NEG morphemes. Using empirical data, the study demonstrated that the *e*-prefix has the same distribution as the resumptive element that surfaces in interrogative constructions. Therefore, just like that element, it has lost its original agreement features but rather surfaces to bear the prosodic feature of other functional categories such as perfective and negative. In this chapter, evidence was provided to show that T and ASP affixes co-occur in Igbo. In this regard, the study posits that the VS that surfaces in perfective constructions, is the remnant of the partially deleted tense affix. Dialectal data from Nnewi and Onicha Igbo examined in this chapter were used to support the order of functors proposed in this study. From the interaction of T, ASP, NEG and APPL, the study concludes that the structure of the TP domain is APPL-NEG-ASP-T as shown in (213). The next chapter discusses the CP domain and the issues therein.

CHAPTER FIVE
THE STRUCTURE AND CARTOGRAPHY OF THE COMPLEMENTISER
PHRASE DOMAIN

5.0 Preamble

The CP domain is the left edge as well as the topmost layer of the clause across languages. Traditionally, the domain is associated with one slot in the structural representation labelled ‘COMP’ for complementisers, until it was discovered that it is possible to associate each feature with one head on conceptual and empirical grounds. Reinterpreting COMP in terms of X-bar across languages shows that the head C hosts subordinating complementisers and fronted auxiliaries, while its specifier hosts SOs that have been promoted to the left periphery for discourse related reasons. Generally, the CP domain houses the information that depends on both structure and context for interpretation. The nature and number of constituents that manifest in the left periphery have attracted tremendous research interest among linguists following Rizzi’s (1997) proposal which suggests that the CP layer can be split into a number of separate hierarchically organised functional projections such as Force Phrase (FP), Topic Phrase (TopP), Focus Phrase (FocP) and Finiteness Phrase (FinP). Apart from Rizzi (1997), a number of studies have advanced empirical evidence in support of this view in various languages; e.g. *Gungbe* (Aboh, 2004, 2007, Aboh and Pfau 2010), *English* (Haegeman, 2012), *Basa’a* (Bassong, 2014), *Ibibio*, (Doherty, 2016) Romance languages (Erteschik-Shir, 2007) to mention but a few. The contribution of Igbo with regard to this proposal is not yet sufficient. Therefore, this section provides further contribution of Igbo to the ongoing debate in the syntax of the CP domain and its relationship with information structure. In generative syntax, studies in the cartography of clause structure predict strong formal linguistic universals among the ordering of functional projections within the left periphery. According to Doherty (2016), this ordering is assumed to be as a result of a predetermined hierarchy that is defined by UG, manifesting an innate biological capacity for language in humans. Languages vary in terms of the richness or the number of constituents/functional projections that manifest in the left periphery. In this regard, this chapter discusses phenomena such as argument focus, wh-movement, Q-markers and complementisers and how these elements interact so as to determine the content and order of functors in the Igbo CP domain. In this way,

it seeks to determine the universality of Rizzi's (1997) UG-ordering of the left periphery.

5.1 The Force-Finiteness System

Force-Finiteness (FF) system is the largest system within the left periphery. It hosts mainly complementisers. It operates in the high force where mood is marked and the lower finiteness where tense is marked. According to Rizzi (1997), it is the interface between a propositional content (expressed by the IP) and the superordinate structure (a higher clause). If it is directed to force, it determines the mood of the clause such as whether a sentence is a question, a comparative, exclamative etc. This is also termed clausal typing (Cheng 1991) or force specification (Chomsky 1995). If it is directed to finiteness, it serves to determine the tense of the IP. One piece of evidence in support of this view is the agree relationship between C and I. For instances, in English, *that* c-selects a tensed verb while *for* c-selects an infinitival verb. In this way, it is assumed that C is specified for tense which matches that of the c-selected IP. In this regard, this study examines the syntax and semantics of Igbo complementisers in the force-finiteness system with a view to determining their roles and c-selection properties.

5.1.1 Complementisers in Igbo

Traditionally, complementisers are functors used to introduce different types of clauses. It is assumed to be a universal category. For this reason, it is believed that every sentence is headed by a complementiser which determines the force of the clause. As in various languages of the world, complementisers exist in Igbo and they perform different functions in the language. Uwalaka (1997) identifies four complementisers in the language. They are *ka*, *ma*, *na* and *si*. These complementisers introduce different types of embedded clauses in Igbo. Most of them introduce more than one type of clause. For that reason, Uwalaka (1997: 8) observes that 'since the same complementiser can be associated with more than one clause type, it is inaccurate to claim that complementisers determine the force of the clause in Igbo'. Perhaps, it is one of the reasons it has attracted very little interest. This study argues for three main complementisers in the language which are *na* 'that' *ka* 'that/as' and '*ma*'; while the fourth one *si* is a dialectal variant though Uwalaka (1997) identifies it as an all-purpose complementiser. According to her, Igbo permits a sequence of complementisers. In

which case, the COMPs like *na*, *ma* and *kà*, could be combined with *si* as in the examples below:

- (214) Ogu jù-rù sì mà chi ọ bọọ-la.
 Obi asked-past whether day it dawn perf
 ‘Obi asked if it was dawn (already) (Uwalaka 1997)

In the example above, Uwalaka identifies *si* and *mà* as sequence of complementisers. In this regard, this study identifies, *sì* as a verb that is used to introduce a direct speech as often done in expressions like *Jesus told them saying....* For this reason, it usually occurs in the environment of the verbs of saying such as *ju* ‘ask’, *gwa/kwu* ‘say’ and always follows the verb in the matrix clause as in SVCs. Uwalaka (1997) argues against these postulations. Nevertheless, this study will not discuss *si* as one of the COMPs in Igbo since it is not common in SI. The sub-section that follows discusses the distributions of the complementisers *nà* ‘that’, *mà* ‘if, whether’ and *kà* ‘if’ and their functions in the language.

5.1.2 *Na* Complementiser

The item, *na*, perform different functions in the language. Aside its complementiser function, it functions as a verb, preposition, conjunction and auxiliary verb as exemplified below:

- (215) a. Ndi Ohi **nà**-rà ya akpa **nà** Nsuka.
 Person.PL thief snatch-PST 1SG bag P Nsukka
 ‘Thieves snatched his/her bag at Nsukka’
- b. Obi **na** Ada **na**-ariọ ego.
 O. CONJ A. AUX(PROG)-PART-beg money
 ‘Obi and Ada are begging for money’

In (215a) above, the bolded *na* functions as a verb and a preposition respectively. In (215b) it functions as a conjunction and auxiliary verb respectively. Nevertheless, it functions as a complementiser in Igbo as in the examples below:

- (216) a. O kwù-rù **nà** ya gà à-bia.
 3SG say-PST COMP 3SG FUT PART-come.
 ‘S/he said that s/he will come’

- b. Èmeká gwà-rà yà nà ha nò n'ụlò
E. tell-PST 3SG COMP 3PL be P-house
'Emeka told him/her that they are at home'
- c. Mmā a-mā-ghī nà m bià-rà.
M. PRE-know-NEG COMP 1SG come-PST
'Mma did not know that I came.'
- d. Obi mà nà Uchè nà à-nụ mmanyā.
O. know COMP U. PROG PART-drink wine
'Obi knows that Uche drinks'
- e. Mmā nù-rù nà ọ la-ā-la.
M. hear-PST C 3SG go-PST-PERF
'Mma heard that s/he has gone'
- e. Ị nù-rù nà ọ gà à-bịa echi.
2SG hear-PST COMP 3SG FUT PART-come tomorrow
'You heard that s/he will come tomorrow.'
- (217) a. Ị mà nà Azụkà nà-èzu ohī?
2SG know COMP A. PROG-steal thief
'Do you know that Azuka is a thief?'
- b. Ị sị nà gịni mè-rè?
3SG say-PST COMP what do-PST
'What did you say happened?'
- c. Ị sị nà Ị gà-rà èbee?
2SG say-PST COMP 2SG go-PST where
'Where did you say you went to?'
- (218) a. Ọgọọ gwà-rà yà na ya sì-e nri.
Ọ tell-PST 3SG COMP 3SG cook-IMP food
'Ọgọọ told him/her that s/he should cook'
- b. Ọgọọ gwà-rà yà na ọ ga e-sì nri.
Ọ tell-PST 3SG COMP 3SG FUT PART-cook food
'Ọgọọ told him/her that s/he will cook'
- (219) a. *Obi jụ-rụ na ọ nà à-nụ mmanyā?
O. ask-PST COMP 3SG PROG PART-drink wine
'Obi asked if s/he drinks' (intended meaning)
- b. *O jù-rù nà ọ ga-abịa?
3SG ask-PST COMP 3SG INF-come
'S/he asked if s/he will come' (Intended meaning)

- c. *Ī sị nà ebee ka I je-re
 2SG say COMP where FOC 2SG jere
 ‘Where did you say that you went to?’

Data (216) contain matrix and finite embedded declarative clauses. The finite embedded declarative clauses are introduced by the COMP, *na* ‘that’. Data (217) represent embedded interrogative clauses. Observe that ‘*na*’ introduces a yes/no question in (217a) and wh-questions in (217b-c). In (218), *na* introduces imperative clauses. However, the sentences in (219a-c) crashed because of the presence of the verb, *ju* ‘ask’, which does not collocate with *nà*. This may be attributed to the fact that (219a-b) have interrogative force due to the presence of *ju* ‘ask’ in (219a) and the Q(uestion)-morpheme in (219b). (219c) shows that *nà* hardly introduces focused wh-questions. In all, one can deduce that *nà* introduces more declarative clauses than interrogative and imperative clauses. This is evident in the ungrammaticality of (219). Therefore, it is assumed that it has strong declarative force or feature.

5.1.3 *Mà* Complementiser

Like *na* ‘that’, *ma* ‘if/whether’ also performs other functions in the language such as conjunctive and verbal functions. When it is performing conjunctive function, it is often used in pair (see Uba-Mgbemena 2006: 45). Consider the examples below:

- (220) a. *Mà* *nwokē* *mà* *nwaānyì*.
 CONJ man CONJ woman
 ‘Both men and women’
- b. *O* *rùtè-rè* *mà* *ò* *hụ-ghī* *ha*.
 3SG arrive-PST CONJ 3SG see-NEG 3PL
 ‘S/he arrived but s/he did not see them’
- c. *Ha* *mà* *yà* *ọfụmā*.
 3PL know 3SG well
 ‘They know him/her very well’

In these examples, *ma* functions as a coordinating conjunction in (220a-b) and as a verb in (220c). In (220a-b), it joins two constituents of equal grammatical status although it is used correlatively in (220a). However, it is the main verb in (220c). Nevertheless, it functions as a complementiser as shown in the sentences below.

- (221) a. Ò na a-jù (gì) mà ì ga-a-la ụka?
3SG PROG PERF-ask 2SG COMP 2SG go-PST-PERF church
'S/he is asking if you have been to church?'
- b. Ònye mà mà ò gà à-bia ahịa taā?
Who know COMP 3SG FUT PART market today
'Who knows if he would come to market today?'
- c. Òbi jù-rù yà mà ò nà à-nụ mmanyā.
O. ask-PST 3SG COMP 3SG PROG PART-drink wine
'Obi asked if s/he drinks?'
- d. Ò jù-rù yà mà ò gà à-bia echī.
3SG ask-PST 3SG COMP 3SG FUT come tomorrow
'S/he asked if s/he would come the next day.'
- e. Ada gà ènwe anụrị mà ya gafè-e n'ùle.
A. FUT PART-have joy COMP 3SG pass-FUT P-exam.
Ada will be happy if she passes the exam.' (Uwalaka 1997: 7)
- f. Ada gà è-je ahịa mà chi bọō
A. FUT PART-go market COMP day dawn
'Ada will go to the market if day dawns. (Uwalaka 1997: 7)
- g. *Ò nùrù mà Uche kpò-rò n'ekwentị.
3SG hear-PST COMP U. call-PST P-handset
'S/he heard that Uche called on phone' (intended meaning)
- h. *Ò gwà-rà mà gị bịa akwụkwọ.
O. say-PST COMP 2SG come book
'S/he told you to come to school.' (intended meaning)
- i. *Ha jù-rù (m) ma ebe m jè-rè
3PL ask-PST 1SG COMP what O. wear-PST
'They asked where I went to?' (intended meaning)
- j. *Ì sị mà Ì gà-rà èbee?
2SG say-PST COMP 2SG go-PST where
'Where did you say you went to?' (intended meaning)

In the examples above *mà* 'if/whether' introduces interrogative clauses in (221a-d) and conditional clauses in (221e-f). The ungrammatical sentences in (221g-j) show that *mà* hardly introduces declarative (221g), imperative clauses (221h) and embedded wh-questions (221i-j). Nevertheless, it was observed that it has strong interrogative force based on the fact that it introduces embedded questions with overt LT Q-morpheme as shown in (221a-d) and also collocates with the verb *jù* 'ask'.

5.1.4 *Kà* Complementiser

The item *kà* perform multiple functions in Igbo language. It performs the function of a verb and a conjunction just like *nà* and *mà*. However, it also functions as a focus marker. As a verb, it is typical of copula verbs often associated with comparative construction. In focus constructions it immediately follows focalised constituents as the examples below show.

- (222) a. *kà* *nwokē* *kà* *nwaānyị*
 CONJ man CONJ woman
 ‘Both men and women’
- b. *Òbi* *kà* *Uchè* *ogologo*
 O. be U. tallness
 ‘Obi is taller than Uche’
- c. *Mmā* *kà* *Òmìmì* *oji*
 M. be O. dark
 ‘Mma is darker than Omimi’
- d. *Moto* *kà* *Osii* *zùtà-rà*
 car FOC O. buy-PST
 ‘Osii bought A CAR’
- e. *N’anya* *kà* *okwute* *tù-rù* *ya*
 P-eye FOC stone through-PST SG
 ‘The stone hit him/her IN THE EYE’

In the data above, (222a) is a coordinated structure where *kà* is the coordinator, (222b-c) are comparative constructions where *kà* functions as a copula while (222d-e) are focus constructions where *kà* marks focus. The focalised constituents, a DP and PP, were focused in (222d) and (222e) respectively. That notwithstanding, it also functions as a complementiser in the following sentences.

- (223) a. *Ọ* *sị* *kà* *Èmeka* *si-e* *nrī.*
 3SG say-PST COMPE. cook-IMP food
 ‘S/he said that Emeka should cook’
- b. *Ànyị* *chọ-rọ* *kà* *ị* *bịa* *echī.*
 1PL want-PST COMP 2SG come tomorrow
 ‘We want you to come tomorrow.’
- c. *Ọ* *nà* *à-gba* *mbọ* *kà* *ọ* *guọ* *akwụkwọ.*
 3SG PROG PART-work hard COMP 3SG read book
 ‘He is working hard to be educated’

- e. \dot{I} mà **kà** ọ̀ gà à-bia echī?
 2SG know COMP 3SG FUT PART-come tomorrow
 'Do you know if s/he would come the next day?'
- f. \dot{I} jù-rù yà **kà** ọ̀ gà à-bia echī?
 2SG ask-PST 3SG COMP 3SG FUT PART-come tomorrow
 'S/he asked if him/her if he/she would come the next day'
- g. *Mmā nù-rù **kà** ọ̀ la-ā-la.
 M. hear-PST COMP 3SG go-PST-PERF
 'Mma heard that s/he has gone' (Intended meaning)
- h. *O kwù-rù **kà** ya gà à-bia.
 3SG say-PST COMP 3SG FUT PART-come.
 'S/he said that s/he would come' (Intended meaning)

The data above show that *ka* also functions as a complementiser in Igbo. In (223a), *kà* introduces an imperative clause. In (223b-c), it introduces subjunctive or irrealis clause; while in (223d-e), it introduces interrogative clauses. It hardly introduces declarative clauses as shown in (223g-h). (221) through (223) show that *ka* and *ma* can both introduce embedded interrogative clauses with overt LT Q-morpheme. However, *mà* cannot introduce imperative and subjunctive clauses as *kà*. In this regard, one can posit that *kà* has strong imperative/subjunctive feature. The foregoing affirm Uwalaka's (1997) postulation that Igbo complementisers can be associated with more than one clause type and therefore, cannot be classified based on the type of clause they introduce. More so, the COMPs do not exhibit any form of agreement between the CP and TP in terms of finiteness as in English. Nevertheless, this study observes that the COMPs have the capacity to introduce a particular type of clause more than the others. For instance, *nà* introduces more of declarative clauses than interrogative clauses. Consider, (217) where it introduces interrogative clauses, only the matrix clause is typed as interrogative while the embedded clauses have to inherit this feature. In this sense, one can say that *nà* has strong declarative feature. Compare this with *mà* in (221a-b) where both the matrix and embedded clauses have overt LT interrogative markers; and *kà* which is the only COMP that can introduce subjunctive clauses. It is, therefore, plausible to posit that *mà* has strong interrogative feature while *kà* has strong subjunctive feature. Through this way, Igbo COMPs are sub-categorised based on feature strength.

5.2 The Topic-Focus System

The topic-focus system is seen as another function performed by the C-system independent of the force-finiteness system. According to Rizzi (1997), this domain is contained within the force-finiteness system and it contains XPs (i.e. maximal projections or phrases) which are pragmatically highlighted (see also Doherty, 2016). They can be interrogative, focalised and topicalised items. Studies in the syntax of the left periphery present divergent views on how the elements of the topic-focus system are realised across languages (see § 2.3.4). In the sub-sections that follow, these elements were extensively discussed as it concerns the language under study.

5.2 The Syntax of Interrogatives

Interrogative constructions are those constructions or sentences that are used to express questions so as to elicit answers in a day to day speech. It marks one of the force expressed by sentences across languages. Its structure and derivation have attracted research interest across languages. However, there are basically two types of interrogative constructions cross-linguistically. They are *Content Word Questions (CWQ)* or *wh-questions/interrogatives* and *Yes-no or Polar Questions/interrogatives (PQ)*⁹⁰. Their typology is based on the nature of the answer elicited from such questions (see Haegeman, 1994:36; Hornstein, Nunes and Grohmann, 2005:261). The nature and behaviour of Igbo interrogatives have attracted the attention of scholars such as Goldsmith (1981), Uwalaka (1991), Obiamalu (2007), Mbah (2011) and Nwankwegu (2015). The authors differ in their approaches and analysis of the syntactic structure of interrogatives in the language. However, the main issue addressed here is how yes/no and wh-questions can be analysed based on the Split CP proposal in order to add to the contribution of Igbo in relation to the crosslinguistic debate about the structure of the CP. Yes/no questions are classified into two-direct and indirect yes/no question.

⁹⁰ There are other types of questions such as Tag questions and non-discourse initiating questions. The study does not dwell on these since they do not provide significant information about left peripheral syntax.

5.2.1.1 Direct Yes/No Interrogatives

Yes/no interrogatives usually require a yes or no answer in addition to a statement. Its nature and behaviour have attracted tremendous research interest. Extant works identify two processes that are involved in the derivation of yes/no questions in Igbo: the insertion of a pronominal element and the use of obligatory low tone. Consider the examples below:

- (224) a. O ri-ē-la nrī
 3SG eat-PST-PERF food
 ‘S/he has eaten.’
- b. Ò rì-ē-la nrī?
 INTER+3SG eat-PST-PERF food
 ‘Has s/he eaten?’
- (225) a. I gbù-rù ewù.
 2SG kill-PST goat
 ‘You killed a goat’
- b. Ì gbù-rù ewu?
 2SG+INTER kill-PST goat
 ‘Did you kill a goat?’
- (226) a. Okeke sì-rì ofē
 O. cook-PST soup
 ‘Okeke cooked soup’
- b. Okeke ò sì-rì ofe?
 O. INTER cook-PST soup
 ‘Did Okeke cook soup?’
- (227) a. Eberè ràhù-rù ụra
 E. sleep-PST sleep
 ‘Ebere slept’
- b. Eberè à-ràhù-rù ụra
 E. INTER-sleep-PST sleep
 ‘Did Ebere sleep?’

The data above is representative of yes-no questions in Igbo. Data (224a, 225a, 226a) and (227a) are affirmatives while the (224b, 225b, 226b) and (227b) are their interrogative counterparts. The main difference between (224a) and (224b) is that the subject in (224b) bears HT while that of (224a) bears LT. Hence, the assumption that LT marks interrogative in Igbo. In (226b) and (227b), one can also observe the

presence of a LT pronominal element or prefix which surfaces after the referential DP has been moved to the left periphery (see also Uwalaka, 1991, Mbah, 2011, and Nwankwegu, 2015). In (224b) and 225b) above, the resumptive pronoun does not surface because of the presence of the monosegment pronouns which bear the LT Q-morpheme. This points to the importance of the LT in the derivation of yes-no questions in Igbo. However, the status of the LT resumptive element has been in debate among researchers. For instance, Uwalaka (1991) argues that the element is a Q-morpheme. In contrast, Mbah (2011) is of the view that the morpheme stands in apposition to the dislocated subject DP and agrees with it in number and person. This study observes that the two parties are correct in a way. The reason is that the agreement features of the element has been lost over time, hence, it hardly manifests the features of the dislocated subject. Therefore, it simply surfaces to bear the LT Q-morpheme. Consider these examples from Nwankwegu (2015:129) in (228a) which can also be realised as (228b)

- (228) a. Gi nà ya unu ga-abya echi?
 2SG CONJ 3SG 2PL AUX-FUT-come tomorrow
 ‘Would you and he come tomorrow?’
- b. Gi nà ya à-ga-a-bya echi?
 2SG CONJ 3SG INTER-AUX-FUT-come tomorrow
 ‘Will you and he come tomorrow?’

In (228a), the question morpheme surfaces as *unu* ‘2PL’ and agrees with the co-joined subjects. Conversely, it surfaces as a prefix that does not reflect the features of the co-joined subjects in (228b). The two sentences were adjudged grammatical by speakers. In fact, speakers prefer (228b) to (228a) for economy reasons. It was observed that the morpheme is realised in various ways and is influenced by VH as shown in the data below:

- (229) a. Ha è-sì-rì nri?
 3PL INTER-cook-PST food
 ‘Did they cook food?’
- b. Anyị à-gà-e-rì-kwa nri taa?
 1PL INTER-FUT-PART-eat-EMPH food today
 ‘Are we going to eat (food) today?’

In the examples above, one can observe the presence of LT Q-morpheme, *è-/à*⁹¹, in the interrogative structures. It supports the claim that the morpheme is not realised only as *o/ò* in the language. The agree proposal also raises some questions about the LT Q-morpheme. Does it mean that *unu* ‘you’ in (228a) bear the LT question marker or is it the case that the question particle is null? To avert complication of this nature, this study aligns with Uwalaka’s (1991) postulation that the particle surfaces just to bear the floating interrogative LT. It may be a resumptive pronoun or a prefix.

5.2.1.2 Indirect Yes-No Interrogative

Indirect yes-no interrogatives are embedded interrogative sentences. They play significant role in determining the structure of the CP domain across languages. They are often embedded in a matrix clause as these examples show:

- (230) a. *Ì chò-rò ì-mā mà ò sì-rì asī.*
 2SG want-PST INF-know COMP INTER+3SG lie-PST lie
 ‘Do you want to know if s/he lied.’
- b. *Ò jù-rù yà mà Udo ò nù-ru mmanyā.*
 3SG ask-PST 3SG COMP U. INTER drink-PST wine
 ‘S/he asked if Udo was drunk.’
- c. *Gàa mà-ra mà ò bàta-la.*
 Go-IMP know-IND COMP 2SG return-PERF
 Go and find out whether he/she is back.
- d. *Ònye mà mà ò gà à-bja ahja taā.*
 Who know COMP 3SG FUT PART market today
 ‘Who knows if he would come to market today?’
- e. *Ì mà nà Azuka nà-èzu ohī.*
 2SG know COMP A. PROG-steal thief
 ‘Do you know that Azuka is a thief?’

⁹¹ Recall that it has been argued earlier that the *e*-prefix has the same distribution as the Q-morpheme. The fact that the *e*-prefix can bear the Q-morpheme has a lot of implication for the analysis here. It means that the verb will enter derivation bearing Q-feature that needs to be valued for the structure to converge. Hence, it has to move to as far as Inter to value this feature by merging with the prefix. This proposal finds support in the fact that the discourse category such as imperative is realisable as a verbal affix (see also Nweya, 2016a for a related proposal).

The examples above show that embedded yes-no questions are often introduced by the complementiser *mà* ‘whether/if’; although, this is also possible with *nà* as shown in (230e). It lends support to the earlier observation that *mà* ‘whether/if’ has a strong Q-feature, [+Q]. Nwankwegu (2015:137) rightly observes that the structure of the simple interrogative is not altered by embedding. This is evident in the fact the embedded clauses have overt LT Q-morpheme except for (230e) where only the matrix clause has overt Q-morpheme. In this case, the embedded clause has to inherit this feature for the sentence to converge. The fact that indirect yes/no questions involve both the question particle and a declarative COMP shows that these elements express two distinct positions in the C-system.

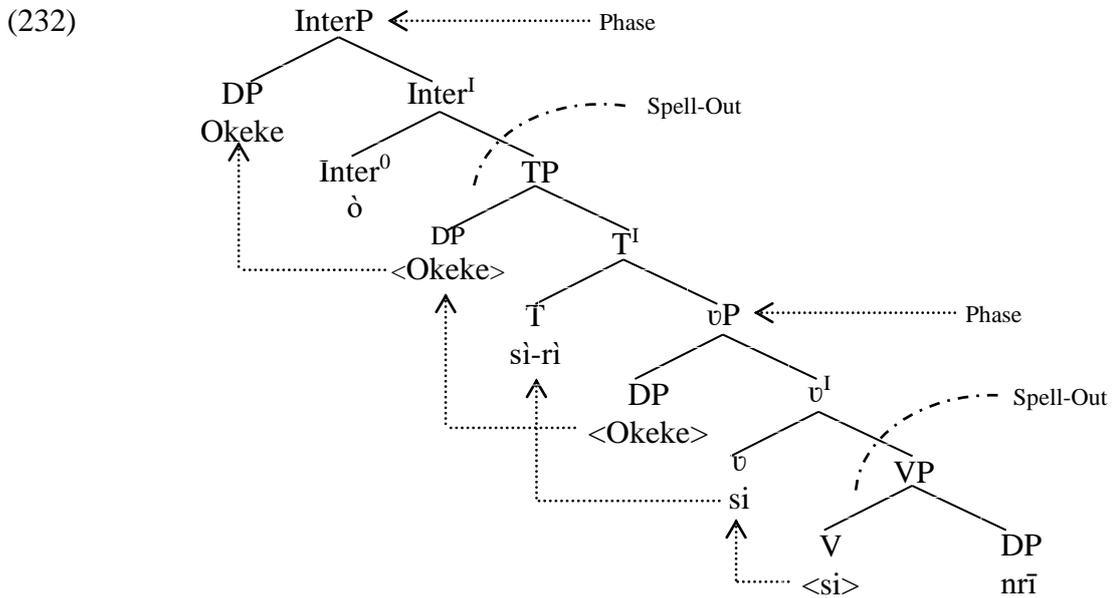
5.2.1.3 Derivation of Yes/No Interrogatives

To demonstrate how a direct yes/no question is derived consider (226b) repeated here as (231) below:

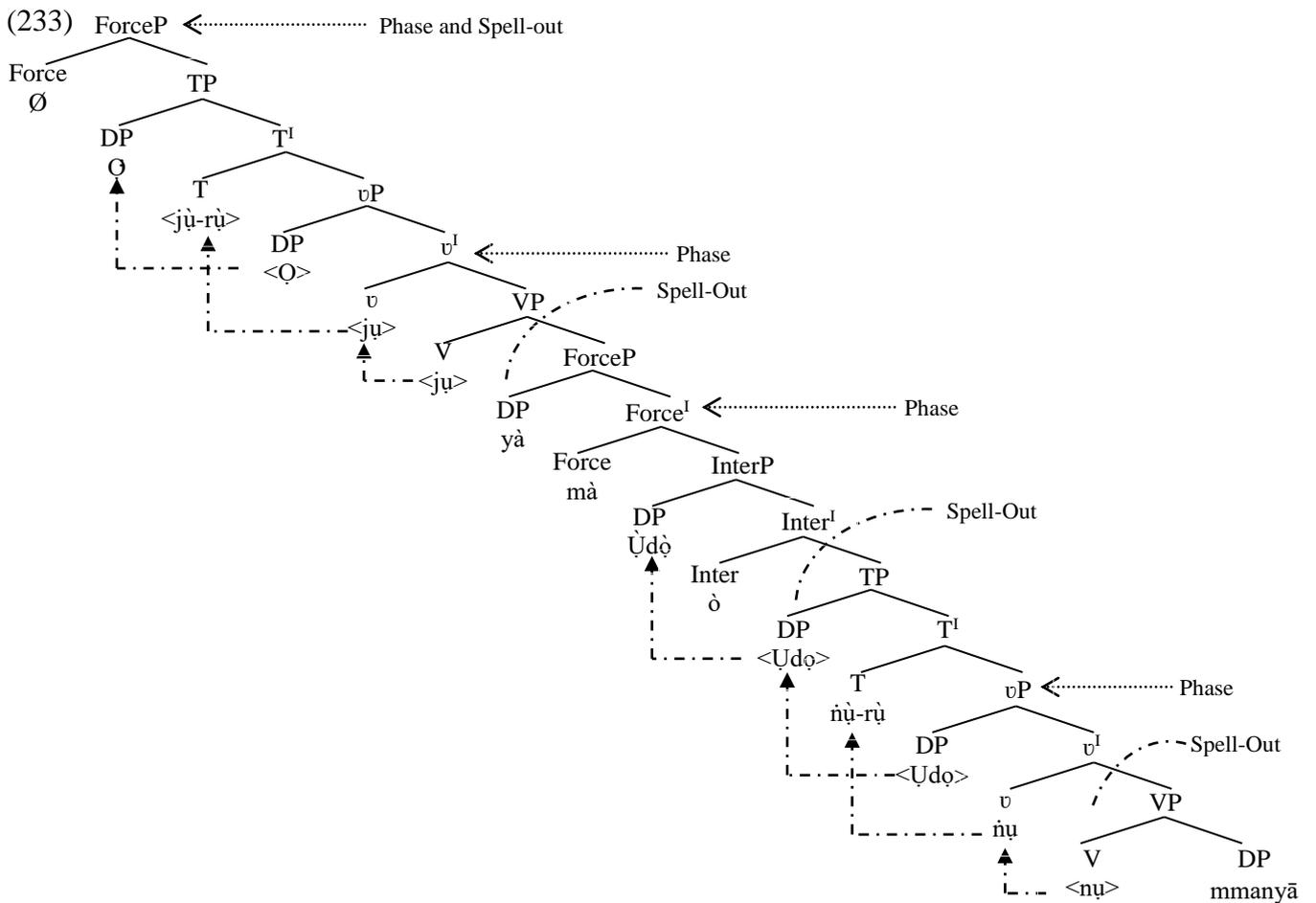
- (231) Okeke ò sì-rì ofe?
 O. INTER cook-PST soup
 ‘Did Okeke cook soup?’

Operations select and merge apply to the structure as follows: *si* ‘cook’ is merged with the DP, *ofe* ‘soup’ to form VP. Since θ -role is assigned under merge, it assigns the θ -role, THEME, to the DP, *nri* ‘food’. The VP is merged with a null light performative verb to form v^I . The light *v* values ϕ -features of the DP, *nri* ‘food’ in a spec head relation. The strong vF of the light *v* attracts the lexical *v* to adjoin to it. Given that light *v* has EPP feature which requires its spec to be filled and the LA is yet to be exhausted, *Okeke* is selected and merged with v^I to form vP . Following PIC, the domain of vP is sent to PF and LF interfaces for appropriate interpretation. Computation proceeds with merging of T with vP to form T^I . The V moves further to T to value its T-features. T probes for the closest goal in its c-command domain to value its unvalued Fs. *Okeke* satisfies this requirement because its ϕ -Fs are yet to be valued. It values them on T via Agree. The EPP feature on T attracts the Ex-DP to occupy its spec forming a TP. TP is not a phase, so, computation continues with the merging of TP with LT Q-morpheme to

form $Inter^I$. To satisfy the EPP feature of $Inter^0$, the DP *Okeke* is internally merged with $Inter^I$ yielding $InterP$ as shown below:



Similarly, indirect yes-no question can be generated using (230b) as shown below:



The schema in (233) above represents the structure of an indirect yes-no question. It shows that there are four points of spell-out. In the first phase, the light *v*, being the probe enters into a checking relationship with the object DP *mmanya* ‘wine’ and they both value their [+interpretable] features. In the second phase the head T (marked by the LT -rV suffix) probes its c-command domain for a matching goal and the subject pronoun, *o* ‘s/he’ satisfies this requirement so they both value their [+interpretable] features and delete the [-interpretable] ones. It is at this point that the complementiser and the interrogative LT are introduced in the derivation. Observe that the complementiser which is represented as ForceP dominates InterP. The subject merges with Inter¹ to form InterP satisfying the EPP feature of Inter. In the third phase, another V is externally merged in the derivation which takes ForceP as its complement. The lexical V moves from V to *v* and from *v* to T to values its head features on the relevant heads. In the fourth phase, a null C is merged with the TP and the entire structure is transferred to the interfaces for appropriate interpretation.

5.2.2.0 The Syntax of Content Word Question or Wh-Interrogatives

Wh-interrogatives like yes/no question have attracted tremendous number of research interest cross-linguistically due to the peculiar nature of its behaviour in languages. Unlike yes-no question, it requires only a statement as an answer and is often marked by the presence of a wh-word/phrase. The following wh-words have been identified in Ìgbò: *onye* ‘who’; *gini* ‘what’; *olee* ‘what/which’; *ebee* ‘where’ (see also Goldsmith 1981, Uwalaka 1991, Ndimele 1991, Mbah 2011, Nwankwegu 2015 and Nweya 2016a). However, scholars have differently characterised these words/phrase. For instance, Uwalaka (1991) and Mbah (2011) notes that wh-words have suppletives (Uwalaka 1991) or cognates (Mbah 2011) and they are listed below:

(234)	<i>onye</i> - <i>onye</i>	‘who’
	<i>gini</i> - <i>ihe</i>	‘what’
	<i>ebee</i> - <i>ebe</i>	‘where’
	<i>ole</i> - <i>how</i>	‘many’
	<i>ole</i> - <i>nke</i>	‘which’
	<i>ole</i> - <i>mgbe</i>	‘when’
	<i>ole</i> - <i>etu</i>	‘how’

While Nwankwegu classified them as basic and non-basic based on structure and syntactic behaviour as shown in (235) below:

(235)	Basic Wh-Phrases in Igbo			Non-Basic Wh-Phrases		
	Wh-Phrase	Gloss	Category	Wh-Phrase	Gloss	Category
	Onye	who	Argument	Mgbè ole/òlee mgbè	When	Adjunct
	gịni	what	Argument	Maka gịni/n'ihì gịni	Why	Adjunct
	Èbee	where	adjunct	Ugboro ole	How many times	Adjunct
				etu olē /òlee etu/	How	Adjunct
				ego olè	How much	Adjunct

The basic wh-phrases are capable of making complete argument and adjunct sense without any overt or assumed sister constituent while the non-basic wh-elements are made up of a combination of two or more lexical or functional/morphological elements and they all express adjunct/adverbial meaning. This study shall not dwell on this characterisation which has been properly highlighted in (§s 2.3) and the reader can also see the relevant references. The following sub-sections discuss the direct and indirect wh-questions.

5.2.2.1 Direct Wh- interrogatives

Direct wh-questions may be used to query any part of the sentence such as the subject, the object or the predicate (see Nwankwegu 2015).

- (236) a. Akpì gbà-rà Òmimi.
 scorpion bite-PST O.
 'A scorpion stung Omimi'
- b. Akpì (ò) gbà-rà Onye?
 scorpion INTER bite-PST who
 'Who did a scorpion sting?'
- c. Ònye kà Akpì gbà-rà?
 Who FOC scorpion bite-PST
 'Who did a scorpion sting?'
- d. Gịni gbà-rà Ònye
 What bite-PST who
 'What bite who?'
- (237) a. Àda jè-rè ahịa.
 A. go-PST market
 'Ada went to the market'

- b. Àda ò jè-rè èbeē?
 A INTER go-PST where]
 ‘Where did Ada go to?’
- c. Èbee kà Ada jè-rè?
 Where FOC Okeke go-PST
 ‘Where did Ada go to?’
- d. Ònye jèrè èbeē.
 Who go-PST where
 Who went to where?

In the data presented above, (236a) and (237a) are declarative sentences while (236b-d) and (237b-d) are their interrogative counterparts. In (236b-c) and (237b-c), the objects were questioned using different strategies: the in-situ strategy in (236b) and (237b) and the ex-situ strategy in (236c) and (237c). However, in (236d) and (237d) both the internal and external arguments were queried, a scenario identified by Nwankwegu (2015) as multiple wh-question. Despite the differences in the structures, they are all direct wh-interrogatives in that only one clause is involved. Apart from questioning the subject and direct object DPs, indirect objects and adjuncts can also be queried as shown below:

- (238) a. Ebùka nyè-rè Uche ego.
 E. give-PST U. money
 ‘Ebuka gave uche some money’
- b. Ebùka (ò/è) nyè-rè ònye egō?
 E. INTER give-PST who money
 ‘To whom did Ebuka give money?’
- c. Ònye kà Ebuka nyè-rè egō?
 what FOC E. give-PST money
 ‘To whom did Ebuka give money?’
- (239) a. O tì-rì mkpu ùgbòrò atọ tupu ò ku-bie
 3SG beat-PST shout time three before 3SG breath-cut]
 ‘S/he shouted three times before s/he breathed his last.
- b. O ti-ri mkpu ugboro ole tupu o ku-bie?
 3SG beat-PST shout time how-many before 3SG breath-cut
 How many times did he shout before breathing his last?

- c. Ugboro ole ka o ti-ri mkpu tupu o ku-bie?
 time how-many COMP 3sg beat-PST shout before 3SG breath-cut
 How many times did he shout before breathing his last?
 (Nwankwegu 2015:106)

(238a) and (239a) above are the underlying declarative sentences while the (238b-c) and 239b-c) are the wh-interrogative counterparts. In (238b) and (239b), the wh-words remain in-situ. Conversely, they were displaced to the left-periphery in (238c) and (239c). Two critical issues that arise in wh-interrogatives is the status of *kà* and the LT Q-morpheme. There are pockets of debate on whether *kà* is a complementiser in wh-interrogatives or a focus marker. On the other hand, there is also a debate on how wh-interrogatives are clause typed.

As it concerns clause typing in direct wh-questions in Igbo, the LT Q-morpheme co-occurs with the wh-elements in in-situ wh-questions though it disappears after the displacement of the wh-element to the left periphery of the clause. In this regard, Igbo linguists do not quite agree on whether the LT is the sole clause typing element in interrogative constructions. Consider these examples from Uwalaka (1991) and Nwankwegu (2015).

- (240) a. Nkịta tà-rà onye?
 Dog bite-PST who
 ‘Who did a dog bite? (Nwankwegu, 2015:99)
- b. Eze ò nọ n’ ebeē
 Eze he be in where/place
 ‘Where is Eze’ (Uwalaka, 1991:192)

Observe the presence of the Q-morpheme in (240b) but not in (240a). The data show that the tonal Q-morpheme may be elided for economy and competence of the native speakers. However, it is obligatory when the external argument is a monosegment pronoun. Consider the examples below:

- (241) a. Ị hụ-rù ònye?
 INTER+2SG see-PST who
 ‘Who did you see?’
- b. Ònye kà ị hụ-rù?
 who FOC 2SG see-PST
 ‘Who did you see?’

- c. Ike ò hù-rù ònye?
2SG INTER see-PST who
'Who did Ike see?'
- d. Ònye kà Ike hù-rù
2SG FOC see-PST who
'Who did Ike see?'
- (242) a. Ò zù-rù gịnị?
INTER+3SG steal-PST goat
'What did he/she steal?'
- b. Gịnị kà o zù-rù?
what that 3SG steal-PST
'What did he/she steal?'
- c. Àda ò zù-rù gịnị?
3SG INTER steal-PST goat
'What did Ada steal?'
- d. Gịnị kà Ada zù-rù?
what FOC A. steal-PST
'What did Ada steal?'
- (243) a. Ò jè-rè èbeē?
INTER+3SG go-PST where
'Where did s/he go to?'
- b. Èbee kà o jè-rè?
Where FOC 3SG go-PST
'Where did s/he go to?'
- c. Àda ò jè-rè èbeē?
Ada Q go-PST where
'Where did Ada go to?'
- d. Èbee kà Àda jè-rè?
Where FOC Okeke go-PST
'Where did Ada go to?'

The data above are direct wh-questions involving three wh-items: *ònye* 'who', *gịnị* 'what' *èbee* 'where'. Examples (241a), (242a) and (243a) represent scenarios where the monosegment pronoun which is the subject DP bears the LT Q-morpheme. Data (241b), (242b) and (243b) are instances where the subjects are displaced to the left periphery. The data show that the Q-morpheme disappears while LT *kà* surfaced. Data

(241c), (242c) and (243c) represent scenarios where the subjects are referential DPs with the LT Q-morpheme intervening between the subject and the verb. Recall that the tonal Q-morpheme may be elided as in (240a). Lastly, the wh-phrases are fronted in (241d), (242d) and (243d) while the focus marker, *kà*, surfaces. From the data, one can easily observe a mismatch between the in-situ and ex-situ wh-questions. The Q-morpheme disappears once the wh-word is displaced to the left periphery making it difficult to account for it in such constructions especially in relation to clause typing. Therefore, it is pertinent to discuss clause typing and the status of *kà* in focused wh-questions. The study returns to this issue in (§ 6.2.2.3).

5.2.2.2 Indirect Wh-Interrogatives

There are also instances of indirect wh-constructions in Igbo. This is the scenario where the wh-clause is embedded as a relative clause. Uwalaka (1991) and Nwankwegu (2015) demonstrate the relationship between relative construction and embedded wh-questions. According to them, the suppletives of the wh-elements that surfaces in embedded wh-constructions are similar to the ones used in relative constructions, hence, the claim that they are morphologically similar. However, Nwankwegu argues that the shape of these elements differ in the two constructions. Now, consider the examples of indirect wh-interrogatives below:

- (244) a. Odò tì-rì m̀m̀onwụ n'Òbà
 O. wear-PST masquerade P.Oba
 Odo wore a masquerade in Ọba
- b. Ha mà ebe Odò tì-rì m̀m̀onwụ
 3PL know place O wear-PST masquerade
 'They know where Odo wore the masquerade.'
- c. Ha jù-rù (m) ebe Odò tì-rì m̀m̀onwụ.
 3PL ask-PST 1SG where O. wear-PST masquerade
 'They asked (me) where Odo wore the masquerade.'
- d. Ha mà ihe Odo tì-rì n'Òbà
 3PL know thing O wear-PST P-Ọba
 'They know what Odo wore in Ọba.'
- e. Ha jù-rù (m) ihe Odo tì-rì n'Òbà.
 3PL ask-PST 1SG what O. wear-PST P-Ọba
 'They asked what Odo wore in Ọba.'

From the data above, it is evident that *ebe* in (244b) and *ihe* in (244d) are wh-items in embedded wh-relatives while *ebe* (244c) and *ihe* (244e) are wh-items in embedded wh-interrogatives. They are similar in shape or structure as Uwalaka and Nwankwegu observed. They all occur sentence initial in the embedded CP when compared with (244a). Nevertheless, wh-items may occur in-situ in embedded wh-questions as shown below:

- (245) Ì sì nà Ì gà-rà èbeē?
 2SG say-PST COMP 2SG go-PST where
 ‘Where did you say you went to?’

In (245), the wh-element *ebee* ‘where’ occurs in-situ. It differs from (244) because COMP is present in (245) but not in (244). Generally, (244) through (245) show that direct and indirect wh-questions are similar in terms of the feature [\pm wh-movement]. In other words, wh-items may remain in-situ or be preposed in direct and indirect wh-questions depending on the categorial feature of the matrix verb (see § 5.2.2.3 for further discussion). Nevertheless, they differ in terms of the shape of wh-elements as Nwankwegu (2015) rightly observed. The structure of wh-elements in embedded wh-question change after displacement to take the form of the relevant wh-relative while it remains unchanged in direct wh-questions (see Nwankwegu 2015: 118). Nwankwegu notes that embedded wh-adjunct phrases (e.g. wh-frequency/rate/price phrase) are exception to this rule in that the phrase containing the wh-element must be pied-piped to the CP. Consider these examples from Nwankwegu (2015: 119).

- (246) a. Ì nà-ère otu mba ji ego olē ?
 2SG PROG-sell one tuber yam money how.many
 How much are you selling a tuber of yam?
- b. Ego ole kà i nà-ère otù mba ji?
 money how.many COMP 2SG PROG-sell one tuber yam
 How much are you selling a tuber of yam?
- c. Gwa m ego ole Ì nà-ère otu mba ji
 tell 1sg money how.many 2SG PROG-sell one tuber yam
 Tell me how much you are selling a tuber of yam

The same holds true for wh-quantity and frequency with the sequence (NP + ole):.

- d. Ò nyè-rè mmadu òle oru?
 3SG give-PST human how.many work
 How many persons/people did he give job/did he employ?

- e. Gwa m mmadu òle o nyè-rè orụ?
 tell 1SG human how.many 3SG give-PST work
 Tell me how many persons/people he gave jobs.

This study aligns with Nwankwegu (2015) who argues that the reason the *wh*-items are unchanged after displacement in the data above is that their internal structure differ from that of others in the language. The phrases are the outcome of merge [nominal, *ole*]. Hence, they have the structure of a DP with an underlying form ‘Noun + number’ as in *ulo ato* ‘three houses’ where the number component is questioned with *Ole* which bears the *wh*-meaning of the phrases. Hence, the *wh*-element which behaves like the determiner cannot move independent of its complement in keeping with the Complex DP Constraint which requires the entire DP to move or nothing moves at all. This accounts for the ungrammaticality of (247) below.

- (247) *Gwa m òle o nyè-rè orụ mmadu?
 tell 1SG how-many 3SG give-PST work person
 Tell me how many persons s/he gave jobs (intended meaning)

The ungrammatical sentence shows that the *wh*-element *òle* ‘how many’ moved without its component *mmadu* ‘person’ and thus, violates the complex DP constraint. Now, how are *wh*-interrogatives clause typed?

5.2.2.3 Clausal Typing Hypothesis and Wh-Interrogatives

Clausal typing hypothesis (CTH henceforth) is a proposal used to argue that clauses must bear information that encodes sentence types. According to Cheng (1991:14), CTH...“states that all clauses must be typed at S-structure”. This means that a clause must be identified with one of the standard “sentence types”, e.g. interrogative, declarative, quotative, presumptive, etc. She argues that languages employ either question particles or syntactic *wh*-movement to type a clause as a *wh*-question. The basic assumption is that the principle of economy of derivation predicts that (a) no language has the option of alternating between the two methods of clausal typing and thus, there are no languages with optional movement and (b) movement of one *wh*-word is sufficient to type a clause as a *wh*-question. The implication is that languages that have question particle can type a clause as a *wh*-question with a question particle.

But in languages that lack the question particle, a wh-word needs to undergo a wh-movement to type a clause including a wh-question. The typing particles are generated in C^0 . This assumption is summarised in these words.

Clausal Typing Hypothesis

Every clause needs to be typed. In the case of typing a wh-question, either a wh-particle in C^0 is used or else fronting of a wh-word to the Spec of C^0 is used, thereby typing a clause through C^0 by Spec-head agreement.

Cheng (1991:30)

When Cheng's proposal is presented side by side with the Igbo data, it seems to be the case that Igbo is an optional wh-movement language at least at the superficial level. The data presented so far show that the Q-morpheme manifests in both yes/no and wh-questions contrary to Cheng's observation (see also Simpson 2000 for a related proposal).

Another significant proposal with regard to the syntax of interrogative is Chomsky (1995) which assumes movement for feature checking. In this case, the C-system contains an abstract Q-affix with a strong Q feature that needs to be checked, since this feature is strong in English, wh-words have to raise to check it before transfer. The proposal predicts that in-situ languages like Chinese has weak Q-feature in interrogative constructions. One of the weaknesses of this proposal is that even in English where it is assumed that Q is strong, there are instances where wh-phrases are left in-situ as shown below (see Bobaljik and Wurmbrand (2014:3)

(248) And now, for \$5,000, London is the capital of **which country**?

In (248), the wh-phrase remains in-situ. Therefore, the proposal, fails to adequately account for why languages exhibit both options.

Aboh and Pfau (2010) improve on Cheng's (1991) proposal, based on the cartographic approach, by arguing that wh-phrases do not participate in clause typing even in wh-movement languages (e.g., French, English). In other words, wh-movement does not result from the CTH, as suggested in Cheng (1991), but from the structural make-up of the wh-phrase which makes it a potential attractee for various probes (including Inter).

According to Aboh and Pfau, *wh*-phrases do not express interrogative force, rather they contribute to the interpretation of the content of a question. The locus of the feature [interrogative], determines the syntax of both *yes/no* and *wh*-questions because it has scope over the proposition, which in some cases is attracted into its specifier. Hence, they argue that in many languages, the focus head binds the *wh*-operator to which it sets a value as new information. Assuming a direct match between the clausal periphery C and the nominal periphery D (Szabolcsi 1994), they propose that moved *wh*-phrases embed the feature [FOC] or [Q] located in a corresponding projection within the D system (Aboh, 2004b). The absence of these projections inside DP forces *in situ* sequences. These are interpreted as questions due to the interrogative force of *Inter*, which takes scope over the focus head that binds them in *in-situ wh*-phrase. This proposal seems to capture better what is happening in Igbo interrogatives. Hence, this study argues, in line with Aboh and Pfau (2010), that the LT Q-morpheme clause types both *yes/no* and *wh*-questions in Igbo as shown below:

- (249) a. Okee ò hù-rù gị?
 O. INTER see-PST 2SG
 ‘Did Okey see you?’ (yes/no question)
- b. Okee ò hù-rù ònye?
 O INTER see-PST who
 ‘Who did Okey see?’ (in-situ *wh*-question with RefDP)
- c. Ò hù-rù ònye?
 INTER+3SG see-PST who
 ‘Who did you see?’ (in-situ *wh*-question with monosegment DP)
- d. Ònye kà Òkee hù-rù?
 who FOC O. see-PST
 ‘Who did Okey see?’ (Focused *wh*-question)
- e. Ò bu Ònye kà Òkee hù-rù?
 INTER+3SG be who FOC O. see-PST
 ‘Who is it that Okey saw?’ (cleft-focused *wh*-question)

Observe the presence of the clause typing element (CTE) i.e. LT in both direct *yes/no* (249a) and *wh*-questions (249c-d) above. The fact that it occurs in both type of questions shows that *wh*-words have got nothing to do with clause typing as Aboh and Pfau (2010) observe. Recall that the Q-morpheme may be elided in (249a-b) kind of

clauses but it is obligatory in (249c) type of clauses. Based on these observations, this study posits that Igbo yes/no and wh-questions have one CTE: the LT Q-morpheme (245a&b). The monosegment pronoun may perform this function as shown in (245c). There are two plausible reasons why the Q-morpheme does not surface in focused wh-questions in Igbo: Firstly, focused wh-interrogatives are remnants of interrogative cleft constructions where the matrix clause is already typed as interrogative as in (249e); Secondly, they are underlyingly in-situ wh-questions already typed as interrogative prior to movement as in (249c). Therefore, for economy reasons, the Q-morpheme does not surface. However, the particle occurs clause initial in the C-system where it heads the InterP. This proposal falls in line with Rizzi's (1997) cartographic approach and Aboh and Pfau's (2010) clause typing proposal. Aboh and Pfau present cross-linguistic evidence which shows that CTEs may occur clause initial (Igbo and Oro Nao⁹² type languages) or final (N̄jò-kóo, Gungbe, Nweh⁹³, Lele⁹⁴ type languages) in direct yes/no and wh-questions. They may be prosodic or morphological in form.

On the trigger of wh-movement, Aboh and Pfau (2010) argue that wh-questions and focused constituents are mutually exclusive, hence, they hardly co-occur. Contra Cheng (1991), they explain that wh-questions occur in interrogative constructions for interpretive reasons which is just one of the required two operations in wh-interrogatives, the second being clause typing. According to them, clause typing and interpretation of wh-phrase are properties of distinct heads: Inter and Foc. Wh-phrases aids the identification of the target about which new information is sought while inter clause types the sentence. Using French as a point of reference, they opine that movement of wh-elements is determined by the internal structure of wh-words in different languages.

In this regard, Nwankwegu (2015) investigates the anatomy of wh-words in Igbo considering its 'chameleonic behaviour' with respect to movement and in-situness in root and embedded clauses. According to him, the basic wh-words, *onye* 'who', *gini*

⁹² Oro Nao is a dialect of Wariç, a Chapakuran language spoken in Brazil by approximately 1,800 people living on the Pacaas Novos River along the Bolivian border (see Aboh and Pfau 2010:113)

⁹³ Nweh is an SVO Grassfield Bantu language spoken in South Western region of Cameroon by a population of about 85,000 people (see Nkemnji 1995:3)

⁹⁴ Lele is a Chadic SVO language (Cope 1993:73, Aboh and Pfau 2010: 103)

‘what’ and *ebee* ‘where’ are projections of [+WH, +Q] which serve as their launching force to the fronted position while non-basic ones, *mgbè olē* ‘when’, *etu olē* ‘how’, *ego olē* ‘how much’, *ùgbòrò òle* ‘how many’, *màkà gịnị* ‘because of what’, *n’ihi gịnị* ‘for what reason’, are DPs/PPs with wh-internal components. In other words, they are not wh-heads but has the feature [+WH +Q] like the basic ones. The visibility of the [WH] feature is determined by how high or low it is merged within the phrase. In the basic wh-words, wh-head dominates other nodes in the phrase, but in the non-basic wh-words, the wh-head is dominated by other nodes. Therefore, [WH] is more visible in the former than in the latter. Note that prior to Nwankwegu (2015), not much has been done with respect to the triggers of wh-movement or in-situhood in Igbo. The only existing suggestion is the stylistic option as suggested in Uwalaka (1991). In this regard, Nwankwegu adopts a modified version of Chomsky’s (1995) movement for feature checking with insight from Cheng and Rooryck (2000), and Zavitnevich-Beaulac (2005); and argues that the illocutionary force is determined by the kind of abstract affix in C^0 which is Q for interrogative clauses. During computation, the Q-affix in C^0 triggers certain reactions at LF and overt syntax. In this proposal, it is the morphological features of wh-phrases that trigger movement (Chomsky 1995:197). The Q-morpheme in Igbo is strong and underspecified with regards to [+WH-Q] or [yes/no-Q]. So, for an interrogative construction to converge, the Q-feature in C^0 must be specified. Hence, the abstract Q-operator internally merges with either a wh-phrase (in wh-questions) or with D^0 of the subject DP (in yes/no questions) in the morphological computational space so as to satisfy this requirement. However, it is also based on the unitary CP since C^0 is associated with both clause typing and [FOC]. However, the internal structure of wh-phrases as proposed is a milestone in the syntax of Igbo interrogatives because it has helped to determine how wh-phrase move in embedded clause or merge with *kedu* in *kedu*-interrogatives. However, this study deviates from his proposal by adopting the cartographic approach which suggests one feature to one head where the function of clause typing and focusing are separated from each other. The advantage of this approach is that it enables the study determine the hierarchy of features or constituents in the CP domain.

Generally, Igbo does not seem to fall neatly into any of the cross-linguistic subcategorisation of interrogatives in terms of clause typing and wh-movement. For instance, Bobaljik and Wurmbrand (2014) argues that the phenomenon of ‘optional’

(non-echo) *wh-in-situ* in wh-movement languages do not exist from the syntactic perspective, rather, what appears to be wh-in-situ in these languages may carry interrogative force as a speech act, but from a syntactic perspective is a declarative clause. Hence, his proposal below

Declarative Syntax Question (DSQ)/wh-in-situ generalisation:

If a language has wh-movement (to Spec, CP), then wh-movement is obligatory in indirect questions. Equivalently: If a wh-movement language allows ‘optional’ wh-in-situ, the in-situ construction is blocked in selected questions.

In contrast to Cheng and Rooryck (2000), Bobaljik and Wurmbrand (2014) argue that what is often called *optional* wh-in-situ questions as in English and French are DSQs that involve no interrogative C or Q-operator and often pragmatically interpreted as a question. On the other hand, those identified as *true* wh-in-situ questions involve an interrogative C_{WH} and thus are syntactically typed as Qs (Cheng 1991). This C_{WH} allows (true) *wh-in-situ* questions to be selected by a higher predicate, forming indirect questions. These assumptions are based on the fact that DSQs cannot occur as indirect questions in optional wh-in-situ languages. They argue that if a wh-phrase occurs in the complement of an interrogative-selecting predicate, wh-movement is obligatory in the embedded clause and unmoved variants are sharply ungrammatical or parsed as direct quotes. The assumption is exemplified below:

- (250) a. You’re reading **what**?
 b. And the defendant claimed that he was standing **where**?

(Bobaljik and Wurmbrand 2014:4)

According to them, these are instances of optional (non-echo) wh-in-situ associated with wh-movement languages which may bear interrogative force as speech act but syntactically, they are declarative clauses with wh-expressions in focus. In this regard, Nwankwegu (2015:200), argues that this accounts for the Igbo sentences below:

- (251) a. Emeka gà-ra ebee?
 [Emeka go-PST where]
 ‘Where did Emeka go?’
 b. Emeka ò ga-ra ebee?
 Emeka 3SG go-PST where]
 ‘Where did Emeka go?’

In this regard, (251a) is an instance of DSQ that derives its interrogative reading as a speech act with *wh*-expression in focus while (251b) is an instance DSQ occurring in an already typed yes/no question interrogative clause also with *wh*-phrase in focus. In contrast, this study assumes that there is a null Q-operator in (251a). This is based on the fact that the Q-operator surfaces when the RefDP is replaced with a monosegment pronoun or expressed using an interrogative cleft focus construction as shown below:

- (252) a. Emeka gà-rà èbeē?
 E. go-PST where
 ‘Where did Emeka go?’
- b. Ò gà-ra ebee?
 INTER+3SG go-PST where]
 ‘Where did s/he go to?’
- c. Ì sì nà Emeka gà-rà èbeē
 INTER+2SG say COMPE. go-PST where
 ‘Where did you say that Emeka went to?’

From the foregoing, one can deduce that Igbo has some properties of both optional and true *wh*-in-situ languages. This is because it has Q-operator in *wh*-in-situ constructions associated with true *wh*-in-situ languages (like Chinese and Japanese) as well as *wh*-movement often associated with optional *wh*-in-situ languages (English and French). The *wh*-in-situ constructions may be [+echo] (see 252c) while the focused one is [-echo] as Nwankwegu rightly observes. Nevertheless, the DSQ proposal captures the syntax of *wh*-in-situ questions in Igbo.

In summary, this study adopts Nwankwegu’s (2015) second proposal on DSQ as the only characterisation of Igbo *wh*-in-situ questions. This is stated below:

(253)

wh-in-situ configurations in Igbo are instances of a *wh*-expression occurring in yes-no interrogative predicate in-situ’. (IPIQ).

(Nwankwegu 2015: 201)

In other words, only one possibility exists for expressing *wh*-in-situ in Igbo: the IPIQ mechanism. Igbo *wh*-questions are typed as interrogative by the LT Q-operator while the *wh*-phrase aids the interpretation of the content of the question. The presence of

FOC and ECHO in the C-system triggers the wh-phrase to be dislocated. The status of the focus marker *kà* is discussed in (§ 5.3.1).

5.2.2.4 Derivation of wh-Questions

Having resolved the issue of clause typing and wh-movement in wh-questions, it is now time to determine how merge and the computational system is employed to derive such structures. Recall that wh-in-situ structures are instances of a wh-expression occurring in yes-no interrogative predicate in-situ. Hence, it is clause typed by the prosodic Q-morpheme. Consider the sentences below:

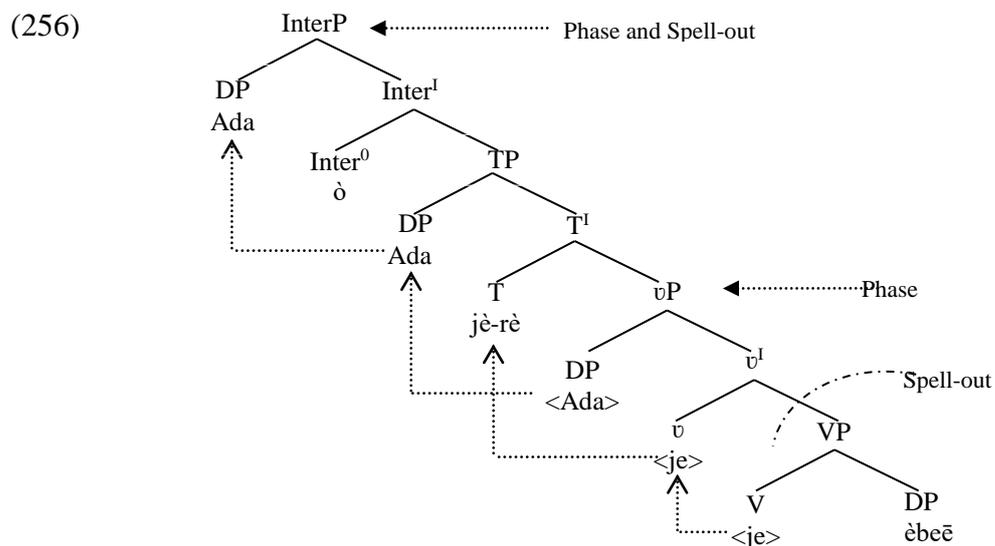
- (254) a. Ò jè-rè èbeē?
 3SG go-PST where
 ‘Where did he/she go to?’
- b. Èbee kà o jè-rè?
 Where FOC 3SG go-PST
 ‘Where did he/she go to?’
- c. Àda ò jè-rè èbeē?
 A. Q go-PST where
 ‘Where did Ada go to?’
- d. Èbee kà Àda jè-rè?
 Where FOC A. go-PST
 ‘Where did Ada go to?’

The numeration of (254a) is stated as

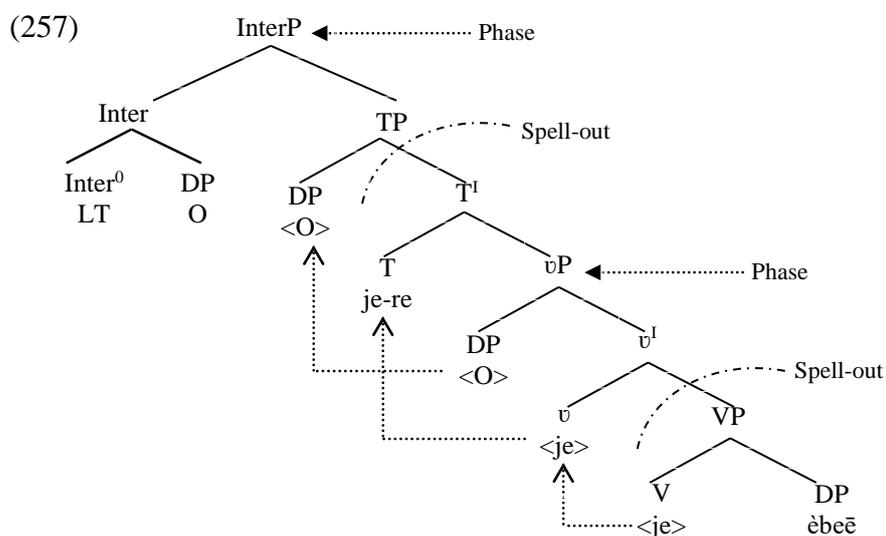
- (255) $N = \{LT-Q_1, Ada_1, rV-PST_1, v_1, V je_1 ebee_1\}$

Merge takes the pre-selected items from the numeration and merge them as follows: the verb *je* ‘go’ is merged with the wh-word *ebee* ‘where’ to form the VP *je èbeē* ‘go where’ satisfying the c-selection requirement of V. The resulting VP is merged with light *v* to form v^I satisfying the c-selection requirement of *v*. The strong vF of *v* attracts the lexical V to adjoin to it. The DP *Ada*, ‘PN’ is merged with vP and it satisfies the EPP feature of *v*. The phase domain is transferred to the interfaces, PF and LF, for appropriate interpretation. Computation proceeds with the merging of T with vP satisfying the c-selection requirement of T. T probes its c-command domain for a matching goal so as to value its [+interpretable] features. The SUB DP, *Ada* ‘PN’, having unvalued ϕ -features, satisfies this requirement and is attracted to spec TP. At

this point, the TP is merged with INTER to form Inter^I satisfying the c-selection requirement of INTER. INTER probes its c-command domain for a matching goal to value its Q-feature and EPP. These requirements were met by *èbeē* ‘where’ and *Ada* respectively. The interrogative feature of the wh-word is licenced in-situ since its FOC feature is not activated while INTER has echoic reading. This is schematised below:



The diagram above illustrates the discussion so far about wh-in-situ constructions. The clause is typed as question by the LT which heads InterP and which also values the echo-feature of the wh-word via long distance checking. The arrows show displacement operations, phases and multiple spell-out at various points in the derivational path. If the SUB DP is a monosegment pronoun, the resulting structure is (257)



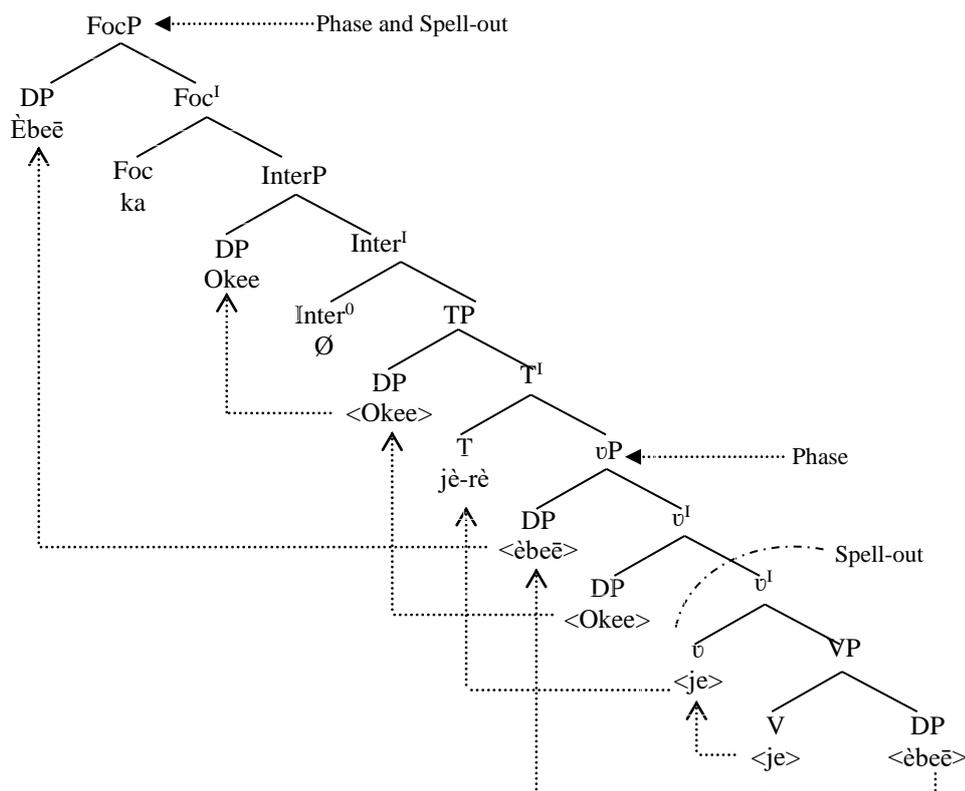
In this case, the monosegment DP adjoins to the head of Inter which is the LT and bears prosodic Q-morpheme. An alternative is to suggest that the LT percolates downwards to the monosegment pronoun. The schema represents the IPIQ mechanism of deriving wh-in-situ questions in Igbo.

However, if there is a need to focus the wh-word, the situation becomes different. It involves the Foc head *kà* and the displacement of the wh-phrase to the left periphery. Recall that the sole CTE in yes/no and wh-questions is the LT Q-morpheme which may be null in some interrogative constructions e.g. focused wh-constructions. Consider the sentence below:

- (258) a. Àda ò jè-rè èbeē?
 Ada Q go-PST where
 ‘Where did Ada go to?’
- b. Èbee kà Àda jè-rè?
 Where FOC A. go-PST
 ‘Where did Ada go to?’

Comparing data (258a) and (258b), it is plausible to argue that the SUB DP has been displaced to the left periphery in (258a) prior to the movement of the wh-phrase in (258b) at least superficially. This movement process requires that the Q-morpheme be given a null spell-out for the derivation to converge. Movement is triggered by the presence of the [FOC] feature borne by the FM *kà* which probes its command domain and finds the wh-phrase as satisfying this requirement after which the wh-word moves to satisfy the EPP requirement of focus. This is demonstrated in the tree below:

(259)



The diagram shows that wh-word moved to spec vP before moving to spec FocP. This movement is for two reasons: (i) to respect MLC or shortest move and (ii) to provide an *escape hatch* for the wh-word so that it would not be frozen in the first phase. Therefore, it ‘moves’ to satisfy the EPP feature of *v* and occupy spec vP where it will remain visible for further merging/movement.

So far, only the derivational account of direct wh-questions has been given. Therefore, it is necessary to also determine what happens in embedded wh-questions. Consider the following constructions.

- (260) a. Ha j̣u-ṛu (m) ebe Odo ti-ri ṃṃɔ̣nẉu.
 3PL ask-PST 1SG where O. wear-PST masquerade
 ‘They asked where Odo wore the masquerade.’
- b. Ha j̣u-ṛu (m) ihe Odo ti-ri n’Ọba.
 3PL ask-PST 1SG what O. wear-PST P-Ọba
 ‘They asked what Odo wore at Ọba.’
- c. Ì mà ebe o bi?
 INTER+2SG know where 3SG live
 ‘Do you know where s/he lives?’

- d. Ì mà onye ọ bù?
 INTER+2SG know-PRE who 3SG be
 ‘Do you know who s/he is?’
- e. Ì sì nà o mè-rè gị?
 2SG say COMP 3SG do-PST what
 ‘What did you say that he did?’
- f. Ì sì na ọọ gị kà o mè-rè?
 2SG say COMP 3SG+be what FOC 3SG do-PST
 ‘What did you say it is that he did?’
- g. Ì sì na gị me-re?
 2SG say COMP what do-PST
 ‘What did you say happened?’
- h. Ì sì na onye bịa-ra?
 2SG say COMP who come-PST
 ‘Who did you say came?’
- i. Ì sì nà I jè-rè ebee?
 2SG say COMP 2SG go-PST where
 ‘Where did you say you went to?’
- j. Ì sì nà I na-achọ onye?
 2SG say COMP 2SG PROG-PART-find who
 ‘Who did you say you are looking for?’
- k. ?*Ì sì o mè-rè gị?
 2SG say 3SG do-PST what
 ‘What did you say that he did?’

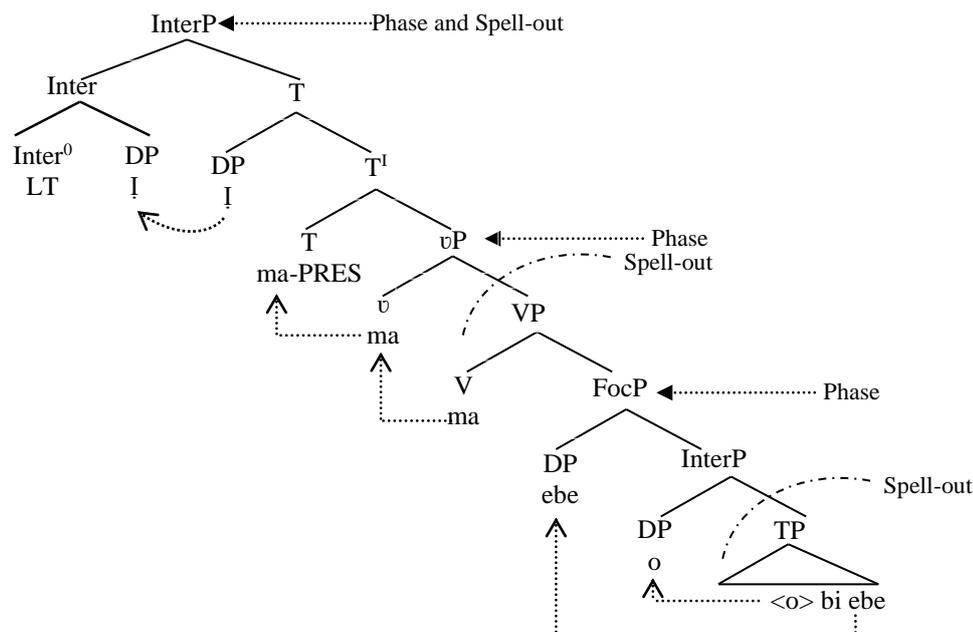
These examples represent different patterns of embedded wh-questions in Igbo. The data show that it is the categorial requirements of the matrix verbs that determine the structure of the embedded CP such as [\pm WH-movement, \pm COMP]. For instance, in (260a&b), the verb *ju* ‘ask’ has an intrinsic question reading and may not require the obligatory presence of a Q-operator in the matrix clause for the purpose of clause typing. Naturally, it c-selects an embedded clause with the features [+WH-movement, -Q-operator, -COMP].

Now, compare (260a&b) with (260c&d) containing the matrix verb *mà* ‘know’. Observe that the latter require an overt Q-particle to induce interrogative force. But like *ju* ‘ask’, in (260a&b), they c-select a CP without COMP and movement of wh-word is

obligatory. In other words, the matrix verbs require an embedded CP with the features [+WH-movement, + Q-operator, -COMP].

In contrast, data (260e-j) contain the matrix verb *si* ‘say’ and they c-select an embedded CP with the features [-WH-movement, +Q-operator, +COMP]. However, wh-movement is possible only by cleft focusing as shown in (260f). Observe that all wh-words are licenced in-situ except when the subject of the embedded clause is questioned as in (260g) and (260h). In contrast to (260a-d), (260d-j) has echoic reading due to the semantics of the verb *si* ‘say’ which tends to re-echo what has been said earlier. According to Nwankwegu (p.c), the matrix clauses of the embedded clauses are already typed as questions, hence, movement of the embedded wh-word is out-ruled. But complication arises when this is applied to (260c) and (260d) where Q-particle is present and yet the wh-word is displaced. It clearly shows that the movement of wh-word in Igbo is not for clause typing. Therefore, this study dissociates wh-movement from clause typing and rather attributes wh-movement in embedded wh-questions to the categorial requirement of the matrix verb. In other words, movement is induced in order to satisfy the c-selection requirement of the matrix verb. It also points to the fact that *kà* is a focus operator and induces focus in direct wh-question. Hence, once it is numerated, the corresponding wh-phrase must be marked [+F]. The discussion so far has a lot of implication for direct wh-questions. It seems that (260a-d) patterns with ex-situ wh-questions [-echo] while (260e-j) patterns with in-situ wh-questions [\pm echo]. The fact that the Q-operator occurs outside the embedded clause justifies the proposal of null Q-operator in direct ex-situ or focused wh-questions. Based on the foregoing, the schema below represents the structure of the indirect wh-question.

(261)



In the schema, it is assumed that there is a null FOC and INTER operators dominating the embedded clause. This assumption stems from the fact that there is evidence in the language that both the embedded and the matrix clause can be clause typed by the LT Q-morpheme.

5.3 On *Kèdu* Interrogatives

Kèdu interrogatives (KI henceforth) are one of the strategies employed in Igbo to achieve content word questions (CWQ). In this regard, *kèdu* is merged with any of the wh-suppletives to render a CWQ. Its behaviour in the language has attracted the interest of many scholars such as Goldsmith (1981), Uwalaka (1991), Mbah (2006, 2011) and Nwankwegu (2015). KI can be used to question both arguments and adjuncts. *Kèdu* has the capacity to merge with the suppletives of the basic and non-basic wh-phrases. However, it hardly occurs on its own due to its indeterminate nature. Nwankwegu (2015) rightly observes that all the wh-question possibilities in Igbo are achievable with KIs. Consider the following examples:

- (262) a. Èbee gbà-rà ọkụ ùnyaahù?
 where burn-PST fire yesterday
 ‘Where did fire burn yesterday?’

- b. Kèdụ ebe <ebee> gba-ra ọkụ ùnyaahụ?
 which place where burn-PST fire yesterday
 ‘Where did fire burn yesterday?’
- (263) a. Ònye bìà-rà?
 who come-PST
 ‘Who came?’
- b. Kèdụ onye <onye> bìà-ra?
 which person who come-PST
 ‘Who came?’
- (264) a. Ị jè-rè èbee?
 2SG go-PST where
 ‘Where did you go to?’
- b. Kèdụ ebe ị jè-rè <ebee>?
 which place 2SG go-PST where
 ‘Where did you go to?’
- (265) a. ị nà è-me gịni?
 2SG PROG PART-do what
 ‘What are you doing?’
- b. Kèdụ ihe ị nà è-me <gịni>?
 which thing 2SG PROG PART-do what
 ‘What are you doing?’
- (266) a. Ike ọ nwụ-rụ? mgbe ole?
 I. INTER die-PST When
 ‘When did Ike die?’
- b. Kèdụ ̀mgbè Ike nwụ-rụ <mgbe ole>
 What time I. die-PST
 ‘When did Ike die?’
- c. Kedu/Kedukwanu/keekwanu (ka ị me-re <etu ole>)?
 how/ COMP 2SG do-PST how
 How do you do?

Data (262) through (266) are instances of in-situ wh-questions with their KI counterparts in Igbo. In (262a & 263a), the external arguments were queried with *ebee* ‘where’ and *onye* ‘who’ respectively; while (262b & 263b) are the KI counterparts where the suppletives of the wh-words were attracted to the CP domain. Similarly, in (264a & 265a), the internal arguments were queried with *èbee* ‘where’ and *gịni* ‘what’ respectively; while (264b & 265b) represent their KI counterparts where the wh suppletives *ebe* ‘place’ and *ihe* ‘thing’ were attracted to *kedu* in the CP domain. In

(266a), the wh-phrase, *mgbe ole* ‘when’ queries the adjunct while its suppletive, *mgbe* merges with *kedu* to derive the KI counterpart in (266b). Data (266c) is common in informal conversations. In this case, only *kedu* may be spelt out for competence and economy. Generally, the data show that KIs are derivable from in-situ wh-constructions. Another notable observation is that when the external argument or the subject is queried with *kedu*, as in (262b & 263b), the tone of the verb changes from low to high. This may be attributed to the fact that there is nothing intervening between *kedu* and the verb as in (264b, 265b & 266). In other words, adjacency is a factor in the tonal modification.

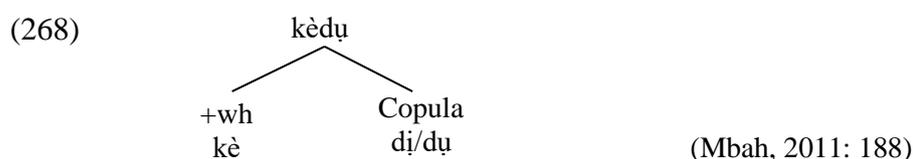
Aside merging with wh-suppletives or the DP component of Wh-phrases, it was observed that *kedu* also attracts other DPs as shown below:

- (267) a. Kèdù ego m̄ (nyè-rè gi <égō>)?
 where money 1SG give-PST 2SG money
 ‘Where is the money I gave/lent you?’
- b. kèdù mmā e jì <mma> è-si nrī?
 where knife 3IMP take knife PART-cook food
 ‘Where is the kitchen knife?’
- c. kèdù ukwù m̄ gà e-ji <ukwù> je ebe ahù?
 Which leg 1SG PROG PART-take leg go place DEM
 ‘Which leg will I use to visit there’ (literal meaning)
- d. Kèdù Ñkèchi?
 Where N.
 ‘Where is Nkechi?’
- e. Kedu akwukwọ ahù?
 Where book DEM
 ‘Where is the/that book?’

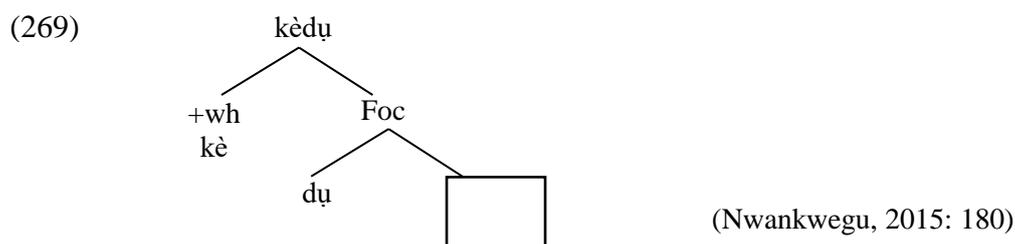
These examples show that it is not only wh suppletives that are attracted by *Kedu* in KIs. Other DPs are also potential attractees. Data (267a-c) show that DPs *ego* ‘money’, *mmà* ‘knife’ and *ukwù* ‘leg’ moved from their positions in the vP to the CP. Observe also that (267b&c) are SVCs while (267d&e) are the radically shortened forms of KI that are not easily re-constructible without paraphrasing. However, they can be regarded as elliptical structures where the only available DP in the construct is attracted

for the derivation to converge. The DPs are believed to bear focus feature which makes them attractable to *kedu*.

The nature of *kedu* itself is quite interesting considering that it has been analysed in various ways. Mbah (1989) as cited in Mbah (2011) analyses *kedu* as having the features [+wh +copular] as shown below:



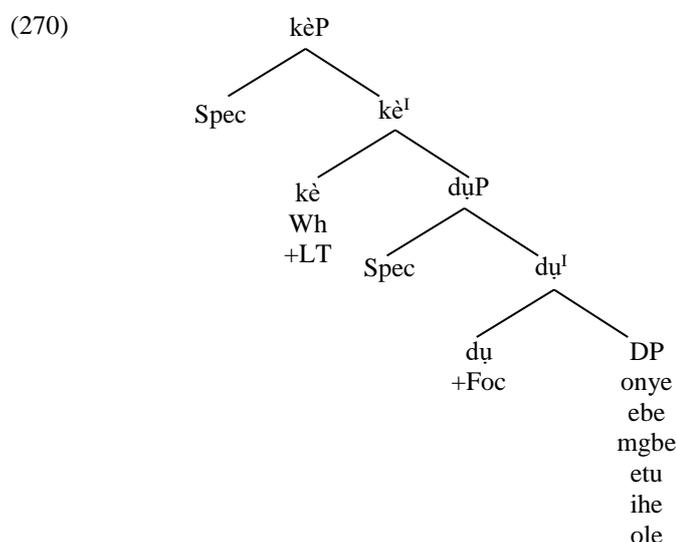
According to Mbah, *kedu* is a basic Igbo free relative having other relative clauses (i.e. *onye* ‘person’, *ebe* ‘place’, *nke* (particulariser), *mgbe* ‘time’ etc.) as its suppletives. These features enable it to merge with the wh-relatives just as the copular verb does in cleft constructions. On the other hand, Nwankwegu (2015) characterises *kedu* as having the features [+wh, +Foc, +Q]. He schematises it as shown below:



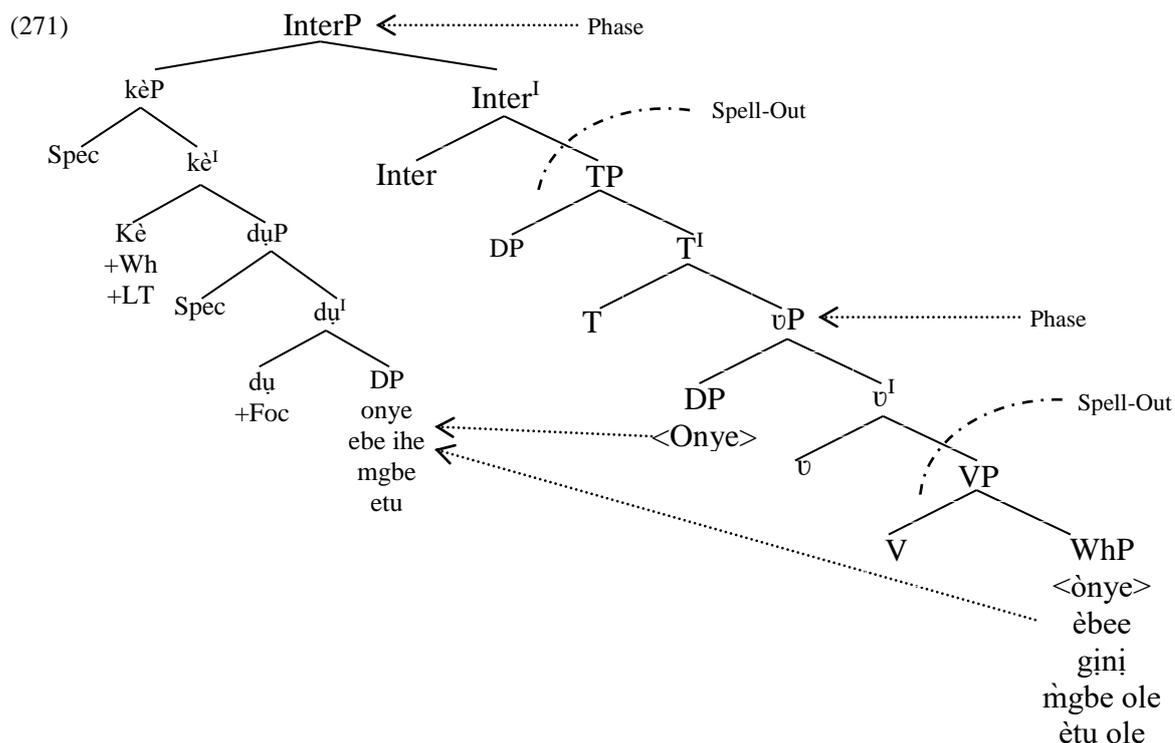
Observe the position of the [wh] and [Foc] features in the schema. The box represents the complement position and the landing site of the DPs. Nwankwegu (2015) explains that during computation, *kedu* is selected with a corresponding focus marked wh-phrase for the targeted argument or adjunct. The strong F-feature of *kedu* attracts the internal constituent of the targeted wh-phrase to its complement position instead of its spec since the spec is already filled. In this way, the c-selection requirement of *kèdu* is satisfied. Although, the two postulations are based on the unitary CP, (265) has an advantage over (264) in that it is represented in terms of X-bar and the F-feature of *kèdu* is captured in the diagram. In all, the data presented above lend support to the observations that the elements that merge with *kèdu* are the DP components of the wh-phrases since *kèdu* on its own has an [+interpretable] wh-feature. However, (267) show that the DPs do not always originate from wh-phrases.

More so, data (262) through (266) support Nwankwegu's characterisation of *kèdu* as having only functional value and as a result of which it does not substitute for any argument or adjunct like other wh-phrases. Hence, it is not a wh-proform but only has a wh-feature. Now, it is important to determine how KIs can be expressed in terms of the split CP proposal.

From the data presented and insight from the studies discussed above, it is deducible that *kedu* has two heads fused together: *kè* and *dù*; where *kè* expresses [Wh] while *dù* expresses [Foc]. Based on the split CP proposal, this study posits that each head projects maximally as schematised below:

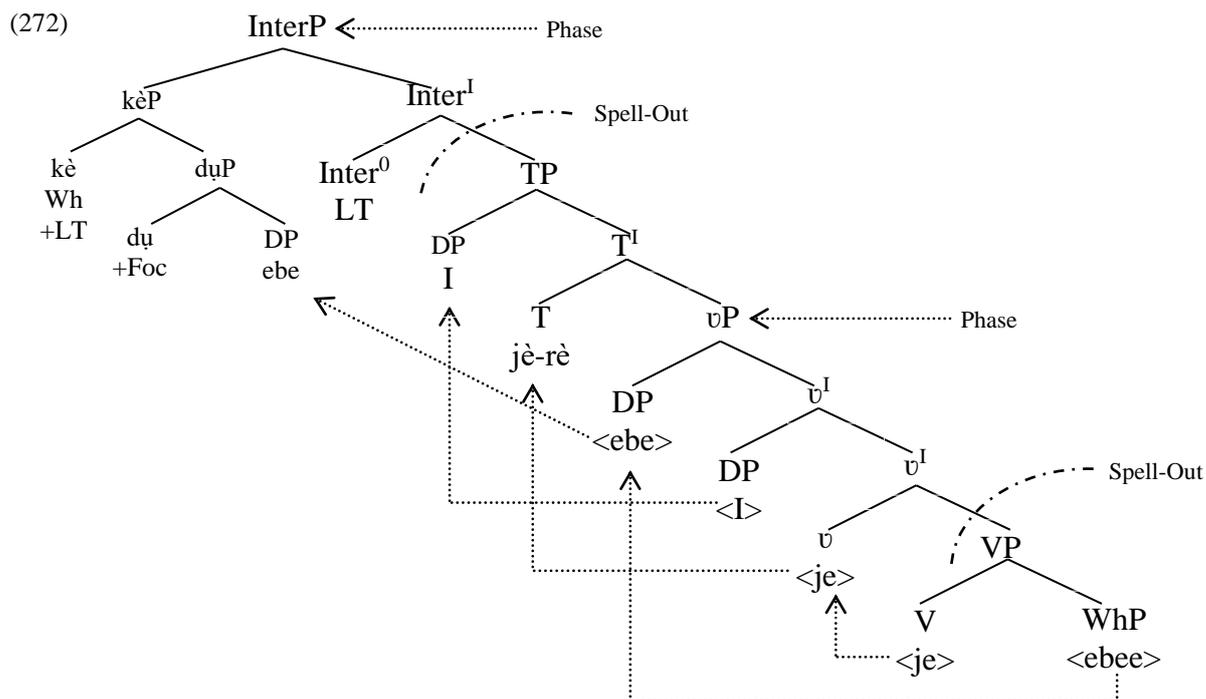


In this proposed structure *kè* and *dù* are re-interpreted in terms of X-bar and in line with LCA which suggests S>H>C order in phrases. In the structure, both *kè* and *dù* lack EPP, hence, an item cannot move overtly to occupy their spec positions. The [+Foc] feature of *dù* triggers a DP marked with [+Foc] to internally merge in its complement position and satisfies its c-selection requirement. The *kèdu* structure above is then merged at Spec, InterP to yield the structure below.



The schema above captures the discussion so far. The *duP* with F-feature probes for a matching goal in its c-command domain. The DP component of the WhP satisfies this requirement. Hence, they both value the unvalued features. Thus, the c-selection requirement of the *duP* is satisfied. Nwankwegu (2015) rightly observes that this movement is not a kind of remnant movement since no copy is left behind. The remnant is deleted from the structure to save the derivation from crashing.⁹⁵ However, this study identifies this kind of movement as *satellite movement*. Note that the DP or the wh-suppletive may originate from spec, *vP* if the external argument is queried. In other words, it is the queried item that determines the source of the moved item. These assumptions are further demonstrated below:

⁹⁵ Nwankwegu (2015) identifies this type of movement, as **Wh-DP-launching**, a kind of movement analogous to satellite launching, where the rocket (launching vehicle) moves into the space carrying the satellite. In this case, the WhP acts as the *launching vehicle*, and the DP element as the satellite. There are stages. Along the line, the first stage of the rocket breaks and falls off, and the second and smaller one ignites. The second stage is the Foc-Operator, which takes the satellite to the exact position where it is needed, then falls off too, allowing the satellite to assume its orbit height and position by itself. Since, the DP does not originate solely from WhPs and considering its satellite-like movement, this movement could be identified as a *satellite movement*.



In the structure above, the verb *je* is merged with *ebee* ‘where’ to form VP satisfying the c-selection requirement of V. *v* is merged with VP to form v^I satisfying the c-selection requirement of *v*. The vFs of *v* triggers the lexical V, *je* ‘go’ to adjoin to it. The derived v^I is merged with a DP to derive another v^I . This is to create an escape hatch for the long distance movement of the wh-suppletive. At this stage, the DP *ebe* ‘place’ is internally merged with v^I to form vP, satisfying the EPP feature of *v*. The structure being a phase, its complement is transferred to the interfaces for interpretation. In furtherance, the LT $-rV$ suffix is merged with the vP to form T^I . The verb moves again from *v* to T to value its T-feature where it is internally merged with the T-affix. T^I is then merged with the SUB DP to form TP satisfying the EPP feature of T. The derived structure is merged with Inter to form $Inter^I$. At this point the *kedu* structure is computed by merging *du* with *ebe* ‘place’ to form the *duP*, satisfying the c-selection requirement of *du*. Spec, *duP* is not projected since it lacks EPP. Rather the structure is merged with *kè* to derive *kèP* whose spec is not also projected for lack of EPP. The structure is now merged with $Inter^I$ yielding $InterP$. It is assumed the LT of Inter percolates unto the *kèdu*-phrase for clause typing the structure as interrogative. At this point, the entire structure is transferred to the interfaces for interpretation. The

foregoing exemplifies how KIs are derived based on the cartographic Split CP with each head bearing one feature.

5.4 Focus

In the previous sub-section, the study discussed interrogatives which are one of the items in the topic-focus system. One of the significant proposal from the analysis is the need to separate the function of clause typing from that of focusing in Igbo interrogatives. In this sub-section, this study demonstrates that the proposal is tenable by showing the relationship between focused wh-phrases and other focalised elements in Igbo. The term focus has been defined from various perspectives but generally, it refers to that part of the sentence assumed to be the new information introduced in the discourse which is given more prominence than the others. Aboh, Hartman and Zimmerman (2007:1) define it as “that part of the clause that provides the most relevant or most salient information in a given discourse situation”. They distinguish it from the non-focused which is the part of the clause that contains the presupposed and/or given information, where givenness implies having been mentioned in the preceding discourse. Constructions that contain focused elements are regarded as focus constructions. In Ìgbò language, certain constituents of the clause may be focused for emphasis. The goal of this sub-section is to highlight how focus is marked and how focused elements are displaced within the clause. The study shall not go in-depth to describe the various strategies employed to demonstrate syntactic and information focus in Igbo. It shall dwell more on the relationship between focused wh-phrases and other focused elements and its implication for information structure. There are few works on focusing as it concerns Igbo such as Nwachukwu (1995), Agbo (2013b), Nwankwegu (2015), Nweya (2016a) and Nzewi (2018). The main issue in debate is the marker of focus and the strategies used to focus a constituent. Cross-linguistically, various constituents can be focused in languages ranging from the subject and object DPs, PPs, and VPs/predicates. These are done using different strategies (see Aboh, Hartman, and Zimmerman, 2007:1). In the sub-sections that follow, the study examines how these constituents are focused in Igbo and the issues therein.

5.4.1 Focus Marking Strategies and Focus Marker in Igbo

Cross-linguistic studies of African language families such as Kwa, Bantu, and Chadic have identified two main strategies of marking focus; they are *ex-situ* and *in-situ*

strategies (see Aboh, Hartman and Zimmerman (2007:5). Ex-situ strategy also known as focus fronting involves displacing the focus constituent to the CP domain while in-situ strategies allow the focused constituent to remain in its base position. This is often determined by presenting a question and answer pairs. Consider the data below:

- (273) a. Ònye kà ì nà à-chọ?
 who FOC 2SG PROG PART-find
 ‘Who are you looking for?’
- b. Èbùbè kà m nà à-chọ
 E. FOC 1SG PROG PART-find
 ‘I am looking for EBUBE’
- c. M nà àchọ Ebube.
 1SG PROG PART-find E.
 ‘I am looking for EBUBE’ .

The data above represent a typical question and answer pair in Igbo. (273a) is a question, while (273b-c) are responses to the question. In (273b), the focused DP is displaced to the left periphery (ex-situ focus) while in (273c), it remains in its base position (in-situ focus). In other words, Igbo permits the two focus strategies. In this regard, Aboh, Hartman and Zimmerman (2007:6) note that the existence of two structural focus strategies often give rise to two questions: Firstly, are there semantic/pragmatic differences between the two focus strategies? And if so, what are they? Secondly, do the ex-situ versus in-situ strategies comply with the new information versus contrastive focus dichotomy as proposed for certain intonation languages (e.g. É Kiss 1998, Drubig 2001)? Some studies have provided varieties of answers to these questions. This study does not intend to deeply pursue these questions. Nevertheless, it is interested in how to identify focused constituents representing salient information in focus constructions, the marker of focus and how such constructions are derived. It is also interested in how focus constructions helps to determine the order or hierarchy of clausal constituents in the various domains especially the CP domain.

In this regard, it is important to note that focus marking in Igbo has been in the debate among scholars. This may be attributed to the fact that the item that functions as focus marker in the language also performs other functions. Agbo (2013b) based on Role and Reference Grammar (RRG) discussed how focus could be coded morphologically in Igbo. Consider the two examples below:

- (274) a. É kùz-ì-rì hà ákwúkwo.
 FOC teach-PST-APPL 3PL book
 ‘They were taught/They were educated.’
- b. Àdá è-kúzí-gó-ro⁹⁶ há ákwúkwo.
 Ada FOC-teach-PERF-APPL 3PL book
 ‘Ada has taught them/Ada has educated them.’ *Interlinear glossing mine*
 (Agbo 2013)

In Agbo’s view, the *e*-prefix is a focus marker used to focus the subject of the sentence because it brings to focus, the particular agent in the clause by explicitly specifying it as shown in (274b). Considering the arguments that have been put forward in the chapter four of this work, this study does not support this view. He also pointed out a number of other morphological focus markers including *kà*. According to him, *ka* is employed only when the object is focused. Other scholars who hold similar opinion are Nweya (2016a) and Nzewi (2018).

Nwachukwu (1995) argues that Igbo does not make use of any morphological marking for the two discourse functions focus and topic; rather, the strategy adopted in Igbo is syntactic. The syntactic strategy, according to him, can be in the form of movement or base-generation. Consider the sentences below:

- (275) [Moto ahu], ka Ogu chọrọ [e]_I
 Car DEM that Ogu wants
 ‘It is that car that Ogu wants’

Nwachukwu (1995) explains that the sentence above is an instance of object focus through topicalisation. According to him, object focus is always marked by a properly governed empty category as trace of the moved constituent and a resumptive pronoun is never found in that position. He recognises the particle *kà* as a complementiser because there is no morphological encoding of focus.

In this regard, Nwankwegu (2015) also argues from synchronic perspective that FOC is marked in Igbo by the remnants of the cleft particle which have grammaticalised over time. Consider the sentence below:

⁹⁶ The APPL marker was not captured in Agbo’s (2013) data. Its absence rendered the sentence ungrammatical.

- (276) a. \dot{O} ewu ka Uche gbù -ru t_i?
 Q it-expl be goat COMP Uche kill-PST t_i
 ‘Was it a goat that Uche killed?’
- b. \dot{O} gìni ka Uche gbù-ru t_i?
 Q it-expl be what COMP Uche kill-PST t_i]
 ‘What was it that Uche killed?’
- c. \dot{O} ewu ka Uche gbù-ru t_i?
 Q it-expl be goat COMP Uche kill-PST t_i]
 Was it a goat that Uche killed?’

Based on data from NGD, he posits that the reduced cleft elements are now FOC markers. This study observes that the cleft elements are yet to lose their grammatical status. They only seem to be lost in rapid speech which is common among native speakers. Therefore, the full form *O bu* ‘it is’ is still recoverable in spoken Igbo, and it has the capacity to host other functional categories such as NEG and INTER as shown below:

- (277) a. \dot{O} bù- \dot{o} ewu ka Uche gbù -rù?
 INTER+3SG be-NEG goati FOC U. kill-PST
 ‘Was it not a goat that Uche killed?’
- b. \dot{O} bù/ \dot{o} ewu ka Uche gbù-rù?
 INTER+3SG be goat FOC Uche kill-PST
 Was it a goat that Uche killed?’
- c. \dot{O} bù/ \dot{o} gìni?
 3SG+INTER be what
 ‘What is that?’

(277a) above is a clefted negative yes-no question where the cleft element bears the NEG morpheme while (277b-c) are cleft-focus interrogative sentences where the cleft element bears the LT Q-morpheme. Therefore, the argument that the copular verb or its reduced cleft particle marks focus in Igbo is not tenable.

However, it is possible to argue that *kà* marks syntactic focus in Igbo. One of its main characteristics is that it hosts internally merged elements within the left periphery such as objects, predicates, PPs and focused wh-phrases. Systematically, it does not occur when the subject DP is fronted just like when the subject is questioned with a wh-word. It differs from *kà* that functions as a complementiser, which introduces externally

merged embedded clauses. In an effort to resolve this issue, Nwankwegu (2015) posits that *ka* has no semantic contribution in terms of question in its occurrence in C^0 . Rather, it only serves to maintain the linear relation and provide a link between CP and TP. This assumption violates the inclusiveness condition. The confusion associated with the status of *kà* could be resolved if its distribution in the syntactic structure is properly examined. Just like *nà* performs different functions in Igbo (see 215-219), *kà* also performs different functions. Consider (222) repeated here as (278) for ease of reference:

- (278) a. *kà* *nwokē* *kà* *nwaānyị*
 CONJ man CONJ woman
 ‘Both men and women’
- b. *Obi* *kà* *Uchè* *ogologo*
 O. be U. tallness
 ‘Obi is taller than Uche’
- c. *Mmā* *kà* *Òmìmì* *oji*
 M. be O. dark
 ‘Mma is darker than Omimi’
- d. **Moto** *kà* *Osii* *zùtà-rà* <moto>
 car FOC O. buy-PST
 ‘Osii bought A CAR’
- e. **N’anya** *kà* *okwute* *tù-rù* *ya* <n’anya>
 P-eye FOC stone through-PST SG
 ‘The stone hit him/her IN THE EYE’
- f. **Gịnị** *kà* *ị* *nà* *è-si* <gịnị>
 what FOC 2SG PROG PART-cook
 ‘What are you cooking?’

In the data above, (278a) is a coordinated structure where *kà* is the coordinator, (278b-c) are comparative constructions where *kà* functions as a copula while (278d-e) are focus constructions where *kà* marks focus. The focalised constituents, DP, PP and wh-Phrase are focused in (278d), (278e) and (278f) respectively. Observe that the elements that precede *kà* in (278d-f) are internally merged or moved from the lower clause to the CP domain. Compare these structures with (279) below where *kà* functions as a complementiser.

- (279) a. Ọ sị kà Èmeka si-e nri.
 3SG say-PST COMPE. cook-IMP food
 ‘S/he said that Emeka should cook the food’
- b. Ànyị chò-rò kà ị bịa echi.
 1PL want-PST COMP 2SG come tomorrow
 ‘We want you to come tomorrow.’
- c. Ọ nà à-gba mbò kà ọ guṛ akwụkwọ.
 3SG PROG PART-work hard COMP 3SG read book
 ‘He is working hard to be educated.’
- d. Ya bụ kà gini mezie?
 3SG be COMP what happen
 ‘So, what happens?’
- e. Ì sị kà ònye bịa?
 2SG say COMP who come
 ‘Who did you say should come?’

Comparing (278d-f) with (279), one will observe that all the elements preceding *kà* in (279) are not traceable to the lower clause. Therefore, they are outputs of external merge. More so, observe that *kà* precedes a wh-word in (279d-e). It points to the fact that when *kà* precedes a wh-word, it is very likely to be a COMP but when it follows a wh-word, it is very likely to be a focus marker. Therefore, the position of COMP and that of the focus marker are not the same. Based on this logic, this study posits that *kà* in (278d-f) marks focus while those in (279) are complementisers. Having discussed the distribution of *kà*, the study proceeds to discuss the types of focus in Igbo.

5.4.2 Subject DP Focusing

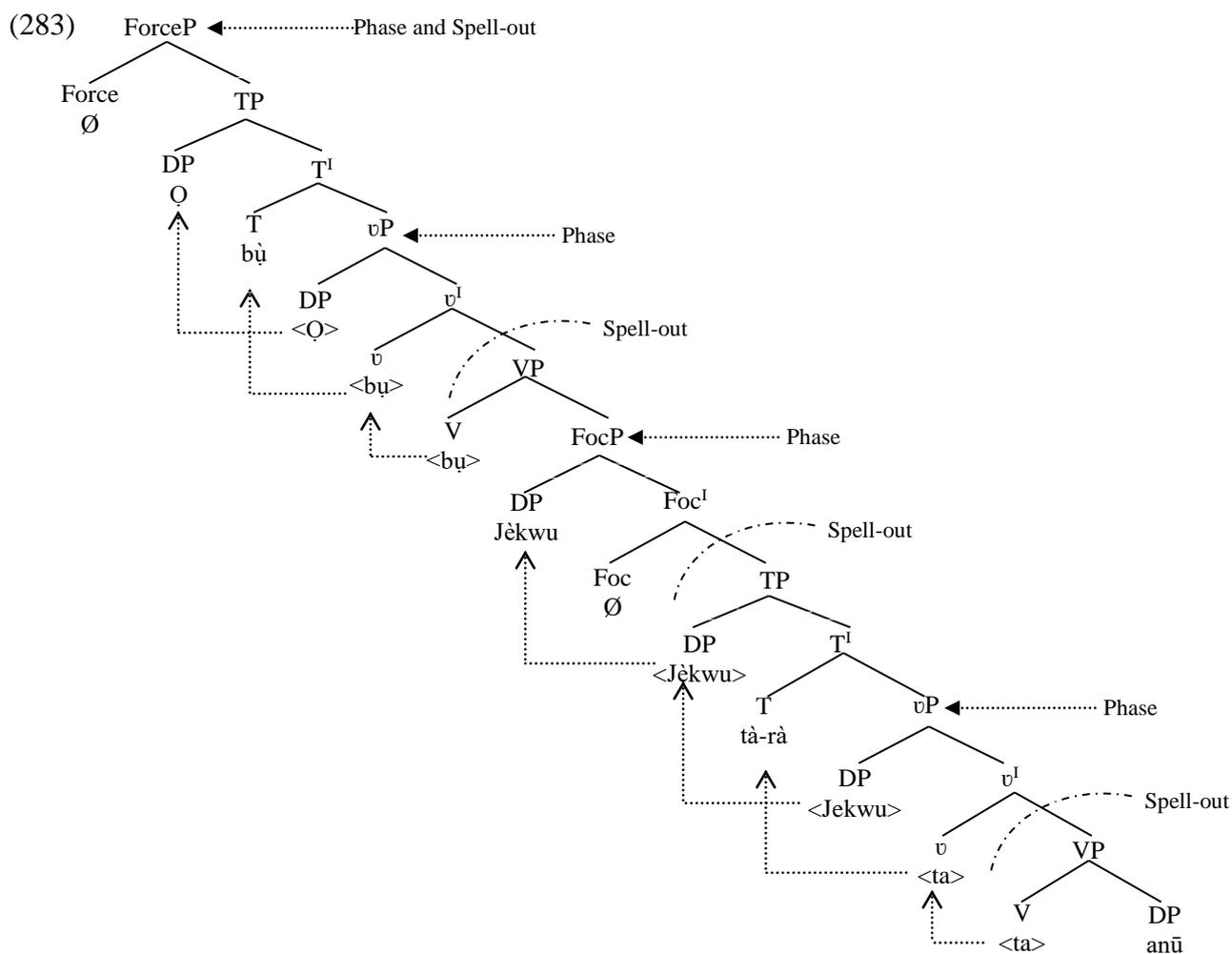
Nweya (2016a:73) observes that focusing the subject DP involves placing communicative prominence on the subject of a clause. This may be achieved by moving it to occupy spec FocP in the CP domain. In this regard, Olaogun (2016) points out that clause structure and information evidence are often put forward in support of focused subjects across languages. This kind of syntactic operation is possible in Ìgbò as could be observed in the following examples:

- (280) a. Onye tà-rà anū ahù
 who eat-PST meat DEM
 ‘Who ate the meat?’

- b. **Jekwu** tà-rà anū ahù
 J chew-PST meat DEM
 ‘JEKWU ate the meat’
- (281) a. Onye na a-kù?
 who PROG PART-knock
 ‘What is knocking?’
- b. Ọ̀ọ̀ Èbùbè (na a-kù?)
 3SG+be E. PROG PART-knock
 ‘It is EBUBE knocking’
- (282) a. Gị̀nị̀ wù-fù-rù ebe ā?
 what pour-away-PST place DEM
 ‘What was poured away here?’
- b. Ọ̀ọ̀ **mmiri** (wu-fu-ru ebe a?)
 3SG+be WATER pour-away-PST place DEM
 ‘It is WATER.’

The data above represent question and answer pairs in Igbo. The answers show that the interrogative clauses are followed by the answers which have the new information sought in the questions. The question and answer pairs allow one to track the new information in the discourse. A close look at the sets of data shows that the focused constituents in the data are *Jekwu*, *Ebube* (personal names) and *mmiri* ‘water’. Although, there is no evidence of overt movement of the subject DP to the left periphery in the examples due to the absence of the focus particle, *kà*, the cleft sentences show that the subjects were actually displaced as in (281b) and (282b). The speaker who posed the question in (280a) does not have information about who ate the meat so he questioned the subject DP. The response in (280b) supplies this information as *Jekwu*, which happens to be the salient information in the discourse. In other words, the discourse participants know that someone ate meat but not who until the information was supplied in (280b). Therefore, *Jekwu* conveys the most salient information in the discourse which is the same as the information not shared by all the discourse participants. In terms of clause structure, it was earlier mentioned that ex-situ focus constructions in Igbo including focused wh-questions are remnants of cleft sentences as they can all be presented in the cleft form where FocP functions as the complement of a TP. Cleft constructions involve two clauses: a peripheral clause that contains the expletive subject, a copula and a main clause linked to it by a CP. The split

CP contains the focused constituents which have been dislocated from the lower clause. Contra Nwankwegu (2015) and Nweya (2016a), this study argues that neither the reduced cleft form *o bụ* ‘it is’ nor the copula *bu* ‘be’ can function as focus marker in Igbo since the copula and the expletive subject host other functional categories. In this regard, the study deduces that the focus marker is null in deriving the subject DP focusing. Recall that it has been mentioned in (§ 5.4.1) that focused constituents and FM enter derivation via internal merge and external merge respectively. According to Olaogun (2016:160), this is a condition which a potential focus constituent must fulfil in many African languages. The reason is that the focus constituent must have valued its ϕ -features and have it deleted appropriately prior to movement. This requirement is subsumed under what is called focus constituent condition which holds that *all the ϕ -features of a potential focus constituent must be valued within the TP*. Given the foregoing, the structure of a sentence containing the focused subject DP is schematised below:



The schema shows that the subject DP enter an Agree relationship with T in the lower clause where it valued its ϕ -features before moving to Spec TP to satisfy the EPP feature of T. From there it moved further to Spec FocP to value EPP feature of focus. The structure is spelt out in phases. The implication of this proposal is that the movement of the subject DP in focus constructions is obligatory in Igbo.

5.4.3 Object DP and PP Focusing

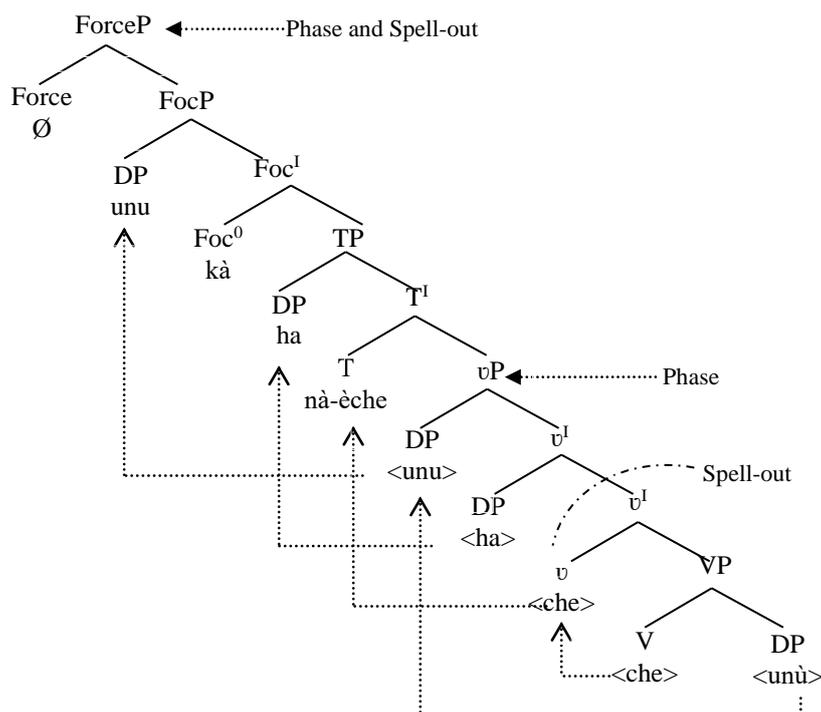
In a similar manner, the object DP and PP can also be focused. When this happens, the salient information may remain in-situ or displaced to the left periphery of the clause where it occupies the spec-FocP. Consider the following examples.

- (284) a. Onye kà ha nà è-che?
Who FOC 3PL PROG PART-wait
'Who are they waiting for?'
- b. Ha nà è-che unù.
3PL PROG PART-wait 2PL
'They are waiting for YOU'
- c. Unù kà ha nà-èche.
2PL FOC 3PL PROG-wait
'They are waiting for YOU'
- (285) a. Gịnị kà ha sì-rì?
3SG FOC 3PL cook-PST
'What did the cook?'
- b. Ha sì-rì fiòfiòò.
3PL cook-PST beans
'We cooked BEANS.'
- c. Fiòfiòò kà ha sì-rì.
beans FOC 3PL cook-PST
'We cooked BEANS.'
- (286) a. Èbeē kà ọ wù-fù-rù mmiri ahụ?
Ebere FOC 3SG pour-away-PST water DEM
'Where did s/he pour the water?'
- b. Ọ wù-fù-rù ya n'iro.
3SG pour-away-PST 3SG P-outside
'S/he threw it OUTSIDE'

- c. **N'iro** kà ọ wù-fù-rù ya.
 P-compound FOC 3SG pour-away-Past 3SG
 'S/he threw it OUTSIDE'
- (287) a. Ebee ka ì nò?
 where FOC 3SG be
 'Where are you?'
- b. A-nọ m **n'ime ụlọ.**
 PRE-be 1SG P-inside house
 'I am in the ROOM'
- c. **N'ime ụlọ** kà m nọ.
 P-inside house FOC 1SG be
 'I am in the ROOM'

The data above were presented in a question and answer pair. They show that *unu* 'you' (284), *fiofiọ* 'beans' (285), *n'iro* 'outside' (286) and *n'ime ụlọ* 'inside' (287) are all focused constituents. They were questioned in (284a), (285a), (286a) and (287a) respectively while in (284b-c), (285b-c), (286b-c) and (287b-c), they are supplied as the salient information in the discourse i.e. information not presupposed in the discourse. Observe that they appear in-situ in (284b), (285b), (286b) & (287b) respectively. In contrast, they were dislocated to the CP domain in (284c), (285c), (286c) and (287c) where the LT FM appears consistently. The situation here differs from what is observed when the subject DP is focused. The focused constituents were internally merged while the FM was externally merged in the derivation as shown in the schema below.

(288)



that matters is the landing site of focus in the clause structure. The other type of focus is verb focus whose characterisation is more complex than the ones presented above

5.4.4 Verb Focus

In Igbo, the verb can also be focused as in other languages. Studies show that there are different strategies employed in languages to focus the verb. The most popular amongst them is focusing a nominalised verb. In this regard, Nzewi (2018) studies focusing strategies in Nnewi Igbo. She argues that what is often identified as bound cognate noun (BCN) is actually the focused verb. Focusing the nominalised verb is a common phenomenon in African languages. Consider the following question and answer pairs.

(290) a. Gịnị kà o mè-rè isi ya ahụ?
 What FOC 3SG do-PST hair 3SG DEM
 ‘What did s/he do to her hair?’

b. Ọ kpù-rù yà à-kpụ
 3SG cut-PST 3SG N-cut
 ‘She CUT it

c. Ọ-kpụkpụ kà ọ kpù-rù ya
 N-cut FOC 3SG cut-PST it
 ‘She CUT it’.

(291) a. Gịnị kà Ị mè-rè àbàda ahụ?
 What FOC 2SG do-past cloth DEM
 ‘What did you do to the cloth?’

b. A-kwà-rà m̀ ya à-kwa
 PRE-sew-PST 1SG 3SG sewing
 ‘I SEWED it’

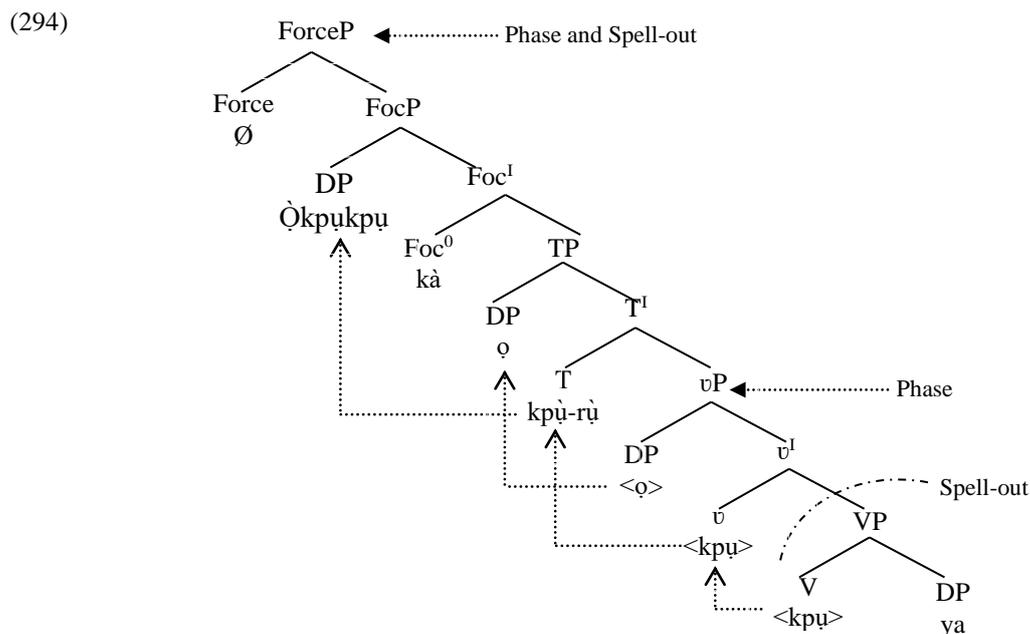
c. Ọ-kwụkwa kà m kwà-rà ya?
 N-sew FOC 3SG sew-PST it
 ‘She SEWED it’.

(292) a. Gịnị mè-rè ugbo ā?
 What happen-PST vehicle DEM
 ‘What happened to this vehicle?’

b. O mebi-ri è-mebi
 3SG damage-PST N-damage
 It is DAMAGED/FAULTY.’

- c. **Mmebi** kà ọ mebi-rì
 N-damage FOC 3SG damage-PST
 ‘It is DAMAGED/FAULTY’
- (293) a. Kèdụ ihe mè-rè efere ā?
 What thing happen-PST plate DEM
 ‘What happened to this plate?’
- b. Ọ kụwà-rà à-kụwa
 3SG break-PST N-break
 ‘It BROKE’
- c. **N-kụwa** kà ọ kụwà-rà
 N-break FOC 3SG break-PST
 ‘It BROKE’

The data above manifest two ways of focusing the verb. The scenario where the focused verb is displaced to the vP periphery as shown in (290b, 291b, 292b and 293b), and that where they are displaced to the clausal periphery as in (290c, 291c, 292c and 293c). The data also show that Igbo belongs to the languages that employ a nominalised reduplicated verbal gerund to achieve verb focusing since all the focused verbs are nominalised. In the literature, there are two types of gerund in Igbo: simple and complex gerund. Formation of the simple gerund may be full or partial. The full reduplication involves prefixing a harmonising *o/ọ* and reduplicating the verb root as in *òkpukpu* ‘barbing’ in (290c); while the partial one involves the same process but with partial reduplication as in *òkwukwa* ‘sewing’ in (291c). In contrast, complex gerund is controlled by the principle of homorganicity which involves only the process of prefixation where *n-/m-* is prefixed to a complex verbroot as in *m-mebi* ‘spoiling’ (292c) and *nkụwa* ‘breaking’ (293c). The left peripheral verb focusing has similar computational process as DP focusing except that the moved copy of the verb is overtly spelt out as schematised below:



The schema above shows that the focused VP is nominalised via reduplication. It is for this reason that Ilori (2010) argues that it is only a DP that can be focused across languages. The schema shows that the verb moved from its position in the vP domain to the spec of FocP triggered by the presence of the FM which probes its c-command domain for a matching goal with the feature, [+F].

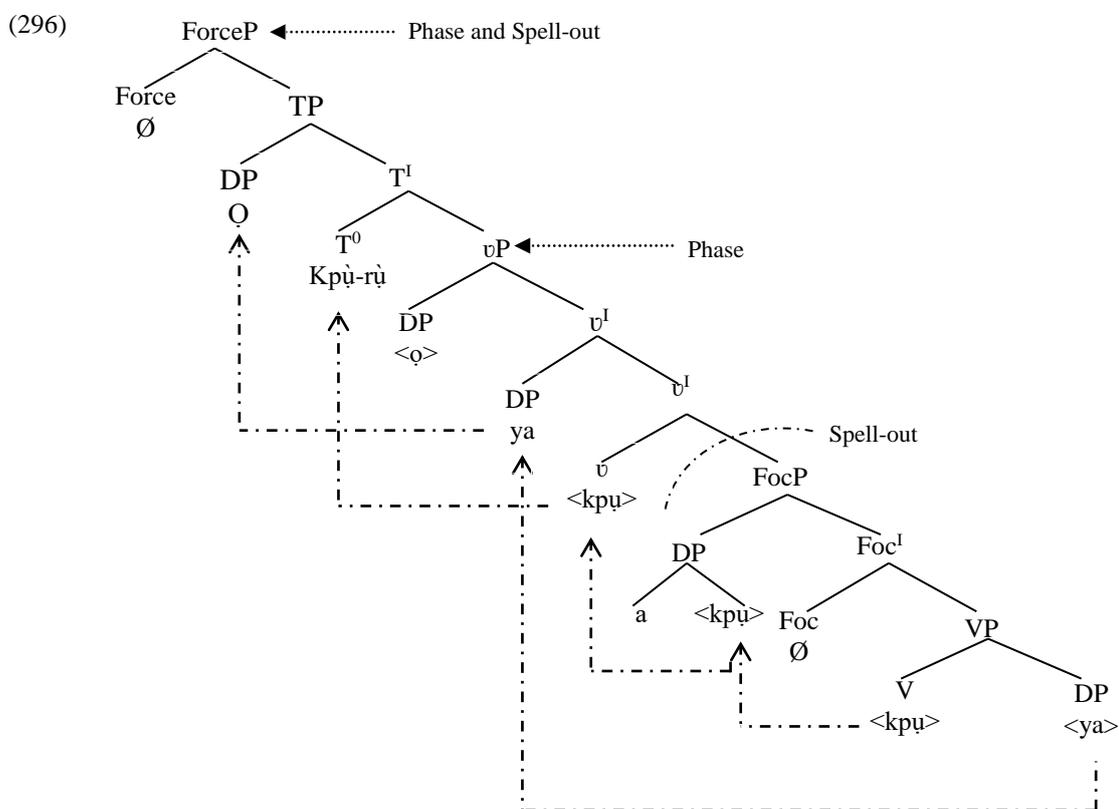
Concerning the vP peripheral focused verbs in (290b, 291b, 292b and 293b), Nzewi (2018) proposes that these elements are copies of the verb which are focused at the periphery of the inner VP for the fact that it is difficult to have the verb occur in its specifier. The proposal is demonstrated below:

Assumed that the numeration for (286b) to be (291) below:

(295) $N = \{ \text{Foc}_1, \text{T rV}_1, \text{O 3SG-Nom}_1, \text{kpu}_1, \text{aNOM}_1 \}$

Operation select picks a pair of LIs from the numeration and merges them as follows: the verb *kpu* ‘cut’ is merged with *ya* ‘it’ to form VP *kpu ya* ‘cut it’ satisfying the c-selection requirement of V. At this point, the focus operator is merged with VP to form Foc^I satisfying the c-selection requirement of Foc. Focus probes its command domain for a goal with [+F], the verb, *kpu* ‘cut’ satisfies this requirement and so moves to occupy Spec FocP where it is merged with the nominaliser *a-*. The derived FocP is merged with the null light *v* to form v^I satisfying the c-selection requirement of *v*. *v*

probes for a matching goal in its c-command domain and *ya* ‘it’ meets this requirement, hence, it is internally merged at spec *v*P where they both value their [+interpretable] features via agree. ρ is then merged with the derived v^I to form *v*P satisfying the EPP feature of *v*. At this point, the partially formed structure is transferred to the interfaces. Computation continues with the merging of T with *v*P to form T^I satisfying the c-selection requirement of T. The verb moves from *v* to T to value its T-features while the DP ρ is merged internally with T^I to form TP satisfying the EPP feature of T. TP is then merged with a null C which determines the force of the clause. At this point, the remaining part of the structure is transferred to the interfaces for appropriate interpretation yielding the structure below:



The diagram above represents how in-situ verb focus constructions are derived in Igbo. It shows that the FocP is sandwiched between the outer *v*P and inner VP where the focus operator attracts the focused to its spec. In general, the foregoing strongly shows that the proposal that there is a FocP in the *v*P and CP domains is tenable. Based on the distribution of *kà* in the language, the study argues that there is a morphological focus marking Igbo. Items that occupy the spec of *kà* are always marked for focus and are internally merged in that position. The analyses also show that focus may be null as in

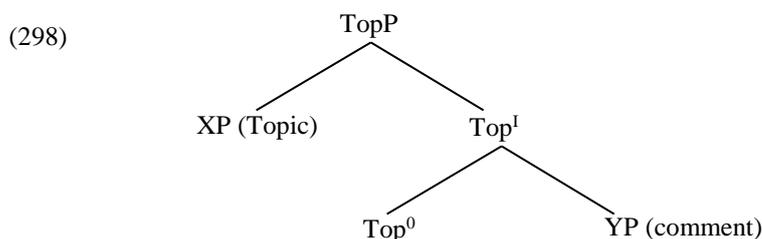
the in-situ focusing as well as the subject DP focusing. Its absence does not significantly undermine focus interpretation as the question and answer pairs show. The next sub-section discusses the remaining item in the topic focus system

5.5 Topic Phrase in Igbo

The next item in the topic-focus system is topic. Linguists have attested to its existence in many languages such as Chinese (Badan and Gobbo 2010), Ñjò kóo (Olaogun 2016), Italian (Rizzi 1997, 2001, 2004), Hungarian (see Liptak 2010), Gungbe (Aboh 2004a, 2004b) and English (Radford 2009). Rizzi (1997: 285) defines it as a preposed element characteristically set off from the rest of the clause by ‘comma intonation’ and normally expressing old information, somehow available and salient in previous discourse. It is assumed to be a universal category like Inter and Foc. Characterising topic in Italian, Rizzi (1997) observes that the movement of the topicalised item often leave a resumptive clitic within the IP as shown in these examples.

- (297). a. Il tuo libro, lo ho comprato
Your book, I bought’
- b. *Il tuo libro, ho comprato t
‘Your book, I bought’

The examples above are instances of topic constructions in Italian. Data (297a) converged due to the presence of the resumptive clitic. But in (297b), the sentence crashed as result of its absence. Therefore, the resumptive clitic is a necessary requirement for topic constructions to converge in this language. This is an indication that the behaviour of topics varies cross-linguistically with respect the targets of topic and morphological marking. Empirical evidence from a number of languages shows that topicalised constituents occupy mainly the left periphery position of clauses. According to Rizzi (1997), topic-comment articulation can also be expressed in X-bar analysis as other constituents shown below:



In the diagram above, a topicalised constituent occupies the spec TopP, the topic head occupies the Top⁰ while complement position is filled by the comment. Empirical evidence from African languages like Gungbe (see Aboh 2004c) and Basáá (Bassong 2014) show that topics can be marked morphologically in languages. In this subsection, this study examines how topic is expressed in Igbo with insight from Rizzi's cartographic analysis. It seeks to answer the following questions: (a) Is topic expressed in Igbo? If yes, (b) what is its position in the articulated CP? (c) Is it morphologically marked in the language? To begin with, consider the following question and answer pair.

- (299) a. Gịnị kà Jèkwu gò-tè-rè?
 What FOC Jekwu buy-forth-PST
 'What did Jekwu buy?'
 b. O go-tè-rè akpụkpọ ụkwū
 3SG buy-forth-PST skin leg
 'S/he bought a pair of shoes.'

If TOP and FOC are assumed to be old information and new information respectively it means that the sentence in (299b) has a topic-comment articulation in the sense that the pronoun *o* 'he/she' which refers to *Jekwu* in the preceding question is an old information being that it is given in the previous expression while the remaining expression being the comment harbours the new information, *akpụkpọ ụkwū* 'shoe', which is the same as the focused constituent. Though it occurs IP internal, it shows that TopP is higher up in the tree than FocP. However, topics can be fronted in the language as shown in the set of data below:

- (300) a. **Akwụkwọ** à, Ị ga-ghị emetū **ya** aka.
 book DEM 2SG FUT-NEG touch 3SG/it hand
 'As for the book, I will not touch it'
 b. Èkène dili Chukwu nà **Moto ahù**, Madụ zùta-à-rà m̄ **ya.**
 praise be God COMP vehicle DEM M. buy-PST-APPL 1SG 3SG
 'Thank God for THAT CAR, somebody bought it for me'
 c. **Osii, Ị** nà à-jụ m̄?
 O. 2SG+INTER PROG PART-ask 1SG
 'Osy, are you asking me?'

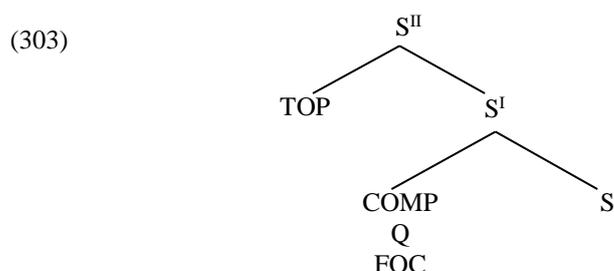
- d. **Ego ahù,** M chètù-rù **yà** n'ulò
 money DEM 1SG forget-PST 3SG P-house
 'The money, I forgot it at home'
- (301) a. **Ndi ebe unù, hà** sì-rì ike na mmadu
 Peron-PL, place 2PL 3PL be-STAT strength P person
 'Your people, they are quite strong.'
- b. **Mòtò ahu,** Ogu chò-rò **ya.**
 Car DEM, O. want-PRES 3SG-ACC
 'The car, Ogu wants it'
- c. **Nwaanyị ahu,** ha na e-kwu maka **ya**
 woman DEM, 3PL PROG PART-talking about 3SG
 'The woman, they are talking about her.'

(Nwachukwu 1995:182)

Data (300) and (301) are typical of topic constructions where the topicalised constituent is separated from the rest of the sentence with a comma. It is assumed that these constituents occupy a position in Spec TopP. In (300a), for instance, the topicalised constituent, *Akwukwọ ā* 'this book', is followed by an imperative sentence. It is assumed to have moved from the vP domain to Spec TopP in the CP domain leaving a resumptive copy, *ya* 'it'. Similar observation is made about (300b-c) where *moto ahu* 'the car', *osii* 'PN' and *ego ahu* 'the money' are all topicalised constituents dislocated to the CP area from the vP domain leaving a resumptive pronoun. Data (301) exhibit similar behaviour as indicated by the bolded elements. According to Nwachukwu (1995), topics are associated with (i) a pause, (punctuated as comma) between the topic and its comment, (ii) a resumptive pronoun as a possible trace, (iii) they could be subject (300c) and (301a) or objects (300a-b and d) and (301b-c); and (iv) they are not morphologically marked in Igbo. The observation of this study is in line with this characterisation. Nevertheless, the study is somewhat based on the unitary CP since it associates TOP, FOC and INTER with COMP even though he noted that in yes/no questions, TOP precedes FOC. Consider the sentences below:

- (302a) **Lagos nà e-wù è-wù, nna gi** ò hụ-na ya?
 Lagos PROG PART-reign N-reign father 2POSS 3SG+INTER see-PERF 3SG
 Lagos that is so much talked about, has your father seen it?
- (302b) **Ada gi,** Nsuka ò kpọrọ-la ya?
 A. 2SGPOSS Nsuka INTER+3SG take-PERF 3SG
 'Has the University of Nigeria Nsuka offered admission to your daughter?'

Observe in (302) that the bolded expressions are topicalised constituents separated with a comma from the rest of the sentence while the italicised pronouns in the sentence final positions are the pronominal copies left behind as a result of movement. Using (302b), for instance, Nwachukwu (1995) explains that *Ada gi* ‘your daughter’ which is a TOP element precedes *Nsuka* ‘Nsuka’ which is FOC constituent. He schematises this observation as follows:



The diagram shows that although TOP precedes FOC, they occur in different clauses as captured in Extended Standard Theory of TGG. It also shows that COMP, Q/INTER and FOC are associated with one head even though they bear different features. The study returns to this issue in (§ 5.6) which concerns the interaction of FOC, TOP, Q and COMP. The split CP hypothesis adopted in this study supposes that Topics should project its own head as shown in (298). Therefore, in the analysis below, it is assumed that Topics projects maximally as TopP.

At this point, it is necessary to demonstrate how topic constructions are derived.

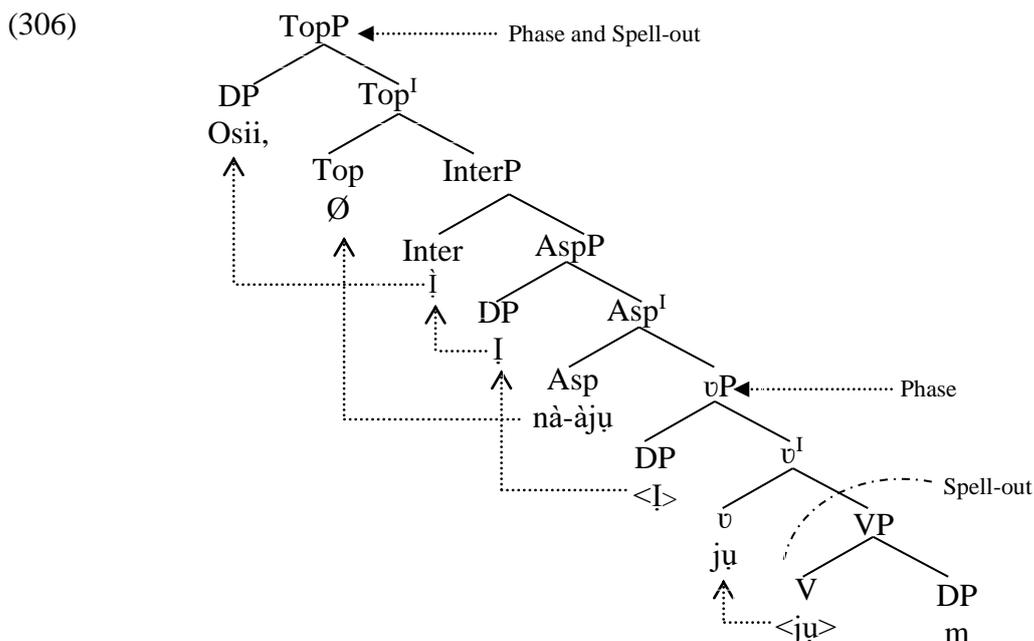
Consider (300c) repeated here as (304)

- (304) **Osii, Ì** nà à-jù ñ̄?
 O. 2SG+INTER PROG PART-ask 1SG
 ‘Osy, are you asking me?’

The numeration of (300) is presented as (305) below

- (305) N={Osii₁, TOP, LT-INTER, I-2SG₁, na₁, a₁ jù₁, m₁}

Successive application of select and merge will yield the structure below:



The diagram above illustrates the derivation of a topic construction. Ignoring the details, it shows that TOP dominates INTER marked by the LT. The topicalised element, having the feature [+TOP] is triggered by the topic operator, so, it moves from Spec AspP to Spec InterP and from Spec InterP to Spec TopP. The arrows are phase domains and points of spell-out. So far, this study has identified and discussed the main elements that occur in the CP domain of the Igbo clause. These are COMP, INTER, FOC and TOP. Based on the discussions, the next sub-section discusses how these elements interact with a view to determine their hierarchy in the clause structure.

5.6 Interaction of Complementiser, Interrogative, Focus and Topic

One of the significant methods employed to determine the hierarchy of clausal constituents is to demonstrate how they interact in the language. Sometimes, the task may be difficult due to the fact that there is hardly any clause where all these elements overtly manifest at the same time. This is true of Igbo in that in the discussion so far, there is hardly a clause where all the elements are present. In (§ 6.1.1), the study identifies *na* ‘that’, *ka* ‘that’ and *ma* ‘if/whether’ as COMPs as well as Force markers. They dominate other items in the CP domain whenever, they co-occur in the clause. Consider the examples below:

(307a.) Ò jùrù (yà) mà ò gà à-bja ahja?
 3SG ask-PST 3SG COMP 3SG FUT PART-come market
 ‘S/he asked if s/he would come to market?’

b. Ì na-ekwu kà gini me-e?
 INTER+2SG PROG-PART-talk COMP what happen-VS
 ‘Are you saying that what will happen?’

c. Èkène dili Chukwu nà Motò ahù, Mmadù zùta-à-rà m̀ ya.
 praise be God COMP vehicle DEM person buy-PST-APPL 1SG 3SG
 ‘Thank God that somebody bought THE CAR for me’

In (307a), the COMP *mà* ‘if/whether’ dominates INTER in the embedded clause. Observe that the embedded clause is clause typed as interrogative by the LT Q-morpheme. In (307b), *kà* ‘if/whether’ dominates a focused wh-question. While in (307c), *nà* ‘that’ dominates the topicalised constituent, *moto ahù* ‘the car’. The implication of these observations is that COMP occupies the topmost position in the CP domain.

Recall that in the discussion concerning wh-questions and focus, it was observed that wh-words/phrases and other focused constituents have the same distribution in the CP domain. In other words, they compete for the same position. This is based on the fact that whenever an item is queried in a wh-construction, the argument or adjunct representing the answer to that query surfaces in the position of the wh-question. Consider the following sentences.

(308) a. Ònye kà Akpì gbà-rà?
 Who FOC scorpion bite-PST
 ‘Who did a scorpion sting?’

b. Òmìmi ka Akpì gbà-rà.
 O. FOC scorpion bite-PST
 ‘A scorpion stung OMIMI.’

(309) a. Gini gbà-rà Òmìmi
 what bite-PST O
 ‘what bite Omimi’

b. Akpì gbà-rà Òmìmi.
 scorpion bite-PST O.
 ‘A SCORPION stung Omimi.’

Data (308) and (309) are wh-question and answer pairs. Observe that *onye* ‘who’ in (308a) and *Gini* ‘what’ in (309a) share the same position with *Òmimi* ‘PN’ and *Akpì* ‘scorpion’ respectively. For this reason, Nkemnji (1995) identifies wh-words as scope markers that serve to delimit the constituent that is questioned.

As it concerns, FOC and INTER in Igbo. It is quite hard to determine which dominates the other. This study characterises in-situ wh-questions as instances of a wh-expression occurring in yes-no interrogative predicate in-situ’ (IPIQ). The implication is that focused wh-questions are underlyingly the in-situ counterparts which have been clause typed prior to movement. Consider (310) below:

- (310) a. Àda ò jè-rè èbeē?
 Ada INTER go-PST where
 ‘Where did Ada go to?’
- b. Èbee kà Àda jè-rè?
 Where FOC A. go-PST
 ‘Where did Ada go to?’

In (310a), the Q-morpheme is present which is typical of yes/no questions. In (310b), the Q-morpheme disappears after the wh-word has been displaced to the left periphery. This shows that INTER and FOC hardly co-occur in ex-situ focused wh-constructions. Nevertheless, this study posits that the two positions are different based on the fact that the position of INTER in (310a) is not the same as the position of FOC in (310b). INTER occurs between *Ada* and the verb, *jè-rè* ‘went’ while FOC occurs between the wh-word, *èbeē* ‘where’ and *Ada*.

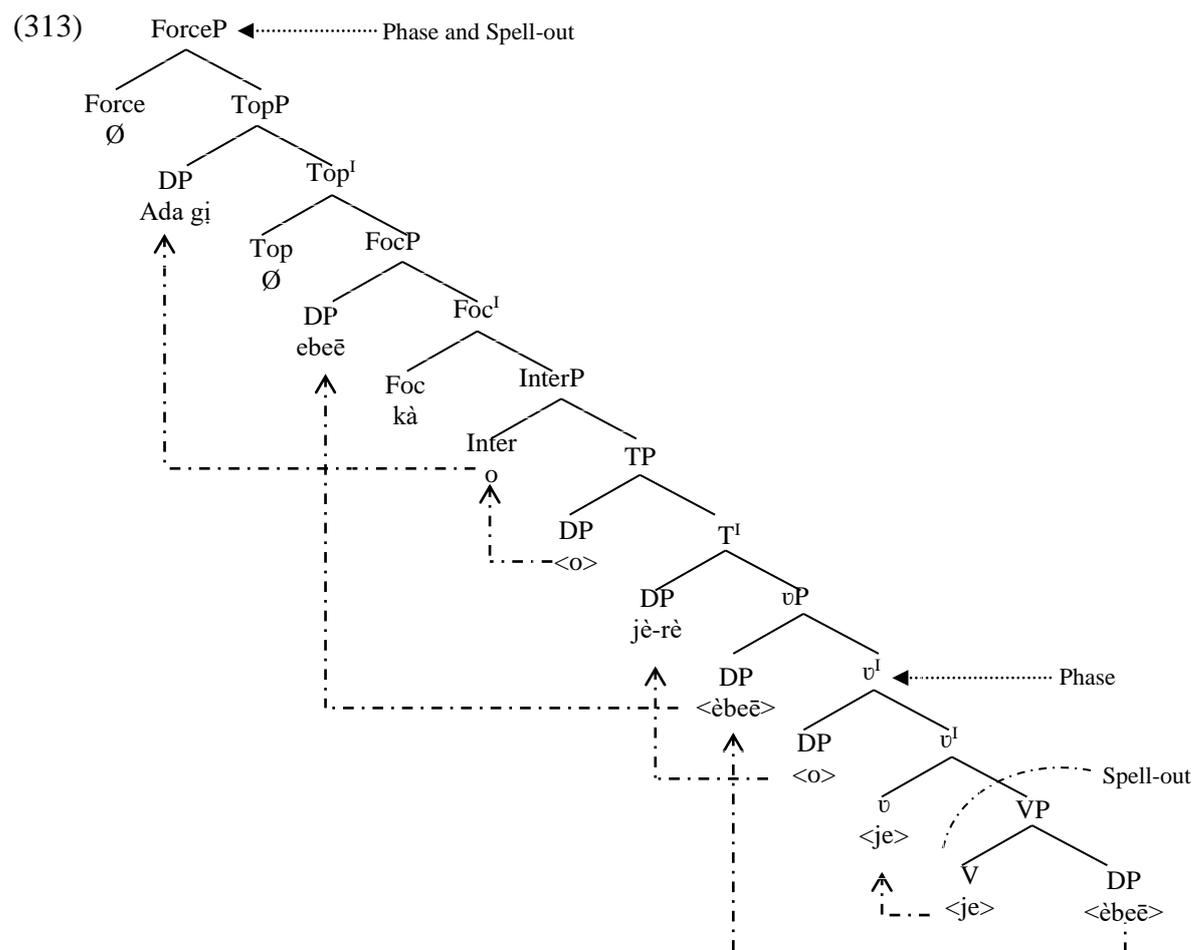
The implication is that FOC occurs higher in the clause than INTER. Therefore, FOC dominates INTER. More so, if it is assumed that *Ada* is a focused constituent in (310a) following Nwachukwu (1995), it also means that FOC dominates INTER. Consider (302b) repeated here as (311) for ease of reference.

- (311) **Ada gi,** Nsuka ò kpọrọ-la ya?
 A. 2SGPOSS Nsuka 3SG+INTER take-PERF 3SG
 ‘Has the University of Nigeria Nsuka offered admission to your daughter?’

Nwachukwu (1995) argues that *Nsuka* in (311) is a focused constituent occurring after TOP but sharing the same position as INTER and COMP as schematised in (303). Based on the cartographic approach, these elements bear different features and each should be attributed to one head. In this regard, this study posits that in (311), TOP precedes FOC while FOC precedes INTER although TOP and FOC are not morphologically marked in that sentence. Consider the sentence

- (312) **Ada** **gī**, èbeē kà o jè-rẹ?
 A. 2SGPOSS where FOC 3SG go-PST
 ‘Your daughter, where has she gone to?’

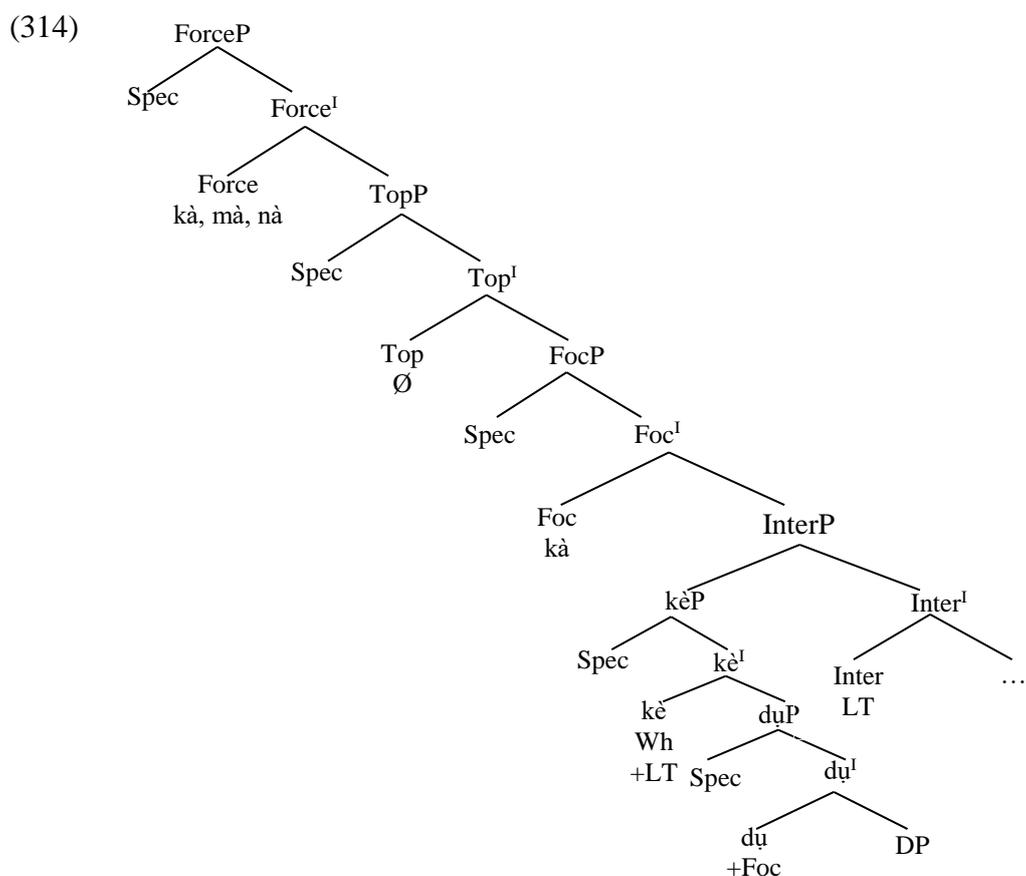
(312) above also shows that TOP dominates FOC while FOC dominates INTER. However, INTER is null just as earlier observed that INTER is not overt in focused wh-questions. These observations are illustrated in (313) below:



In the schema above, INTER is null. The presence of the focus marker triggers the wh-word, *èbeē* ‘where’ marked with the feature [+F] to move from VP to vP to escape

transfer and respect MLC, and then from Spec vP to Spec FocP to values it's [+F] with *kà* via agree. The null topic head also triggers the GenP, *Ada gi* 'your daughter' to move from Spec TP to Spec TopP to value its [+Topic] feature with the null head. At this point, the entire structure is transferred to the interface for appropriate interpretation. Based on these analyses and taking into KIs into consideration, this study observes that the cartographic structure of the CP domain is ForceP-TopP-FocP-InterP and is presented in (314)

The Cartographic Structure of the CP Domain



5.7 Summary

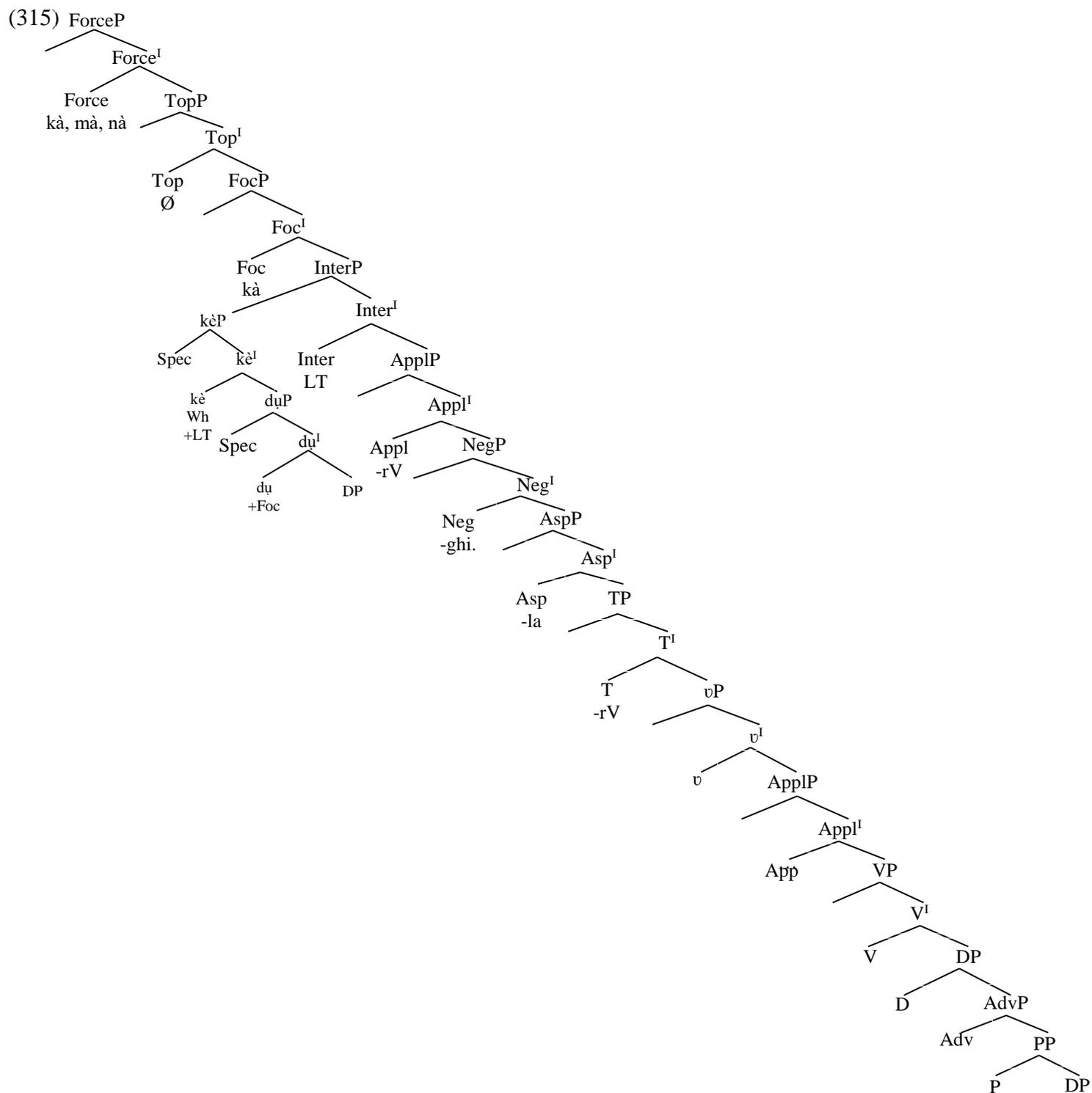
This chapter examines the elements that manifest in the Igbo CP domain such as COMP, INTER, FOC and TOP and the way they interact with a view to determining their forms and hierarchy. The study identified three main complementisers in the language, these are *nà* 'that' *mà* 'if/whether' and *kà* 'that'. Although Igbo COMPs may not be strictly associated with a particular type of clause, this study observed each of the COMPs introduce a particular clause type more than the others. Based on this, the study postulates a feature strength approach (Chomsky, 1993) which suggests that *nà*

has strong declarative force since it cannot introduce an embedded clause with overt Q-morpheme; *mà* ‘if/whether’ has strong interrogative force because it introduces embedded clauses with overt Q-morpheme; while *kà* has strong imperative and subjunctive feature since it is the only COMP capable of introducing subjunctive and imperative clauses. The syntax of yes/no questions involves one probe: INTER; the syntax of wh-questions involves two probes: INTER and FOC; while the syntax of focus and topic involves one probe: FOC and TOP respectively. These probes trigger displacement operations. With regard to clause typing, the study observes that it is the LT Q-morpheme that clause types Igbo yes/no and wh-questions since it is present in yes-no question and in-situ wh-question. The tonal morpheme may be borne by a prefix, a pronominal particle or the monosegment pronoun. It may also be covert especially in focused and embedded wh-questions. Therefore the movement of wh-words to clausal left periphery is for focusing and EPP. *Kedu interrogatives* were re-interpreted in terms of X-bar based on the Split CP proposal. The analysis suggests that *kè* and *du* has [+wh] and [+Foc] features respectively and project their own phrases, *kèP* and *duP* which occupy the spec of InterP. Igbo exhibits two strategies of focusing, clause peripheral focusing and vP peripheral focusing. The subject and the verb cannot be focused at the vP periphery but the verb can be focused at the periphery of the inner VP. The focus marker is overt in clause peripheral focusing but covert in vP peripheral focusing. The study also observes that TOP is not morphologically marked in Igbo as observed by Nwachukwu (1995). Based on the interaction of the elements discussed above, the study postulates that the cartographic structure of the Igbo CP domain is FORCE-TOP-FOC-INTER.

5.8 Unification of the Verb Phrase, Tense Phrase and Complementiser Phrase Domains

Having discussed the three domains of the clause by identifying the elements that manifest in each, it is pertinent to unify them in order to propose a cartographic structure of the Igbo basic clause which shows all the possible projections and their hierarchies. In this regard, the study presents the schema below as the structure the basic Igbo clause.

The Cartographic Structure of the Igbo Basic Clause



The schema above represents the cartographic structure of the Igbo basic clause. It shows all the possible constituents in the various domains and the morphological markers. Note that all the constituents hardly manifest in one single clause.

CHAPTER SIX

SUMMARY OF FINDINGS, CONCLUSION AND SUGGESTION FOR FURTHER STUDIES

6.0 Preamble

The primary goal of this research work is to contribute to the study of the Igbo clause structure especially the structure and cartography of the CP domain. The study began with a background information and the motivation for the study as well as what it intends to achieve. In chapter two, the theoretical studies, and framework in which the study was executed was reviewed alongside empirical studies related to the study to give the research a theoretical background. The three layers of the clause (VP, TP and CP) were discussed in chapters three, four and five respectively. Analysis of data involved presentation of well-formed and ill formed clauses, comparing and analysing them based on the principles and operations of the MP. The study, assuming split projection analysis and V-movement, examined the various projections within each domain and demonstrated how the relevant constructions are derived in phases based on the principles and operations of MP.

6.1 Summary of Research Findings

This study shows that, like other languages, the Igbo clause is fundamentally structured in three domains: the VP domain, the TP domain and the CP domain. These domains differ in content and function. Adopting the Minimalist Program, Cartography and Phase theory the study investigated their structure and distribution. Below are the findings of the study.

On the VP Domain: The study observed that the cartographic structure of the VP domain is vP -ApplP-VP-DP-AdvP-PP. This structure is arrived at by examining the structures of monotransitive constructions and double object constructions using the Split VP approach. With regard to the syntax of monotransitive constructions, only one probe, the light v is involved. With regard to the syntax of DOCs, two probes are involved: v and Appl. The study classified DOCs into two: simple DOCs which do not require overt verbal morphology and Complex DOCs or Applicative constructions which require overt verbal morphology marked by $-rV$ suffix. The study proposed multiple functional ApplPs to solve the problems associated with case valuation in DOCs. In this regard, the lexical verb assigns θ -role to the direct object, Appl

introduces the indirect object and values the case feature of the DO while the light *v* introduces the external argument and values the case feature of the IO. Based on the level of interaction between Appl and the elements of the TP domain, the study classified applicatives construction into high and low applicatives. In this domain, *vP* and Appl are phase domains.

On the TP Domain: The study discovered, based on the interaction of elements that manifest in this domain, that the cartographic structure of this layer is ApplP-NegP-AspP-TP. It showed that Appl is also an element associated with the domain and it is possible for T and Asp to co-occur in Igbo. Hence, it identified VS especially in PERF constructions as the remnant of the past tense marker affected by the process of syncope. In this way, the study accounted for VS and -rV applicatives in the relevant constructions. The study provided evidence to show that the NEG marker is replacive in PST and PERF constructions. Hence, the *-be* suffix that surfaces in NEG PERF constructions is a combined negative suppletive of PST and PERF markers. In this way, it uniformly accounted for APPL and NEG in the relevant constructions. The study identified the *e*-prefix that surfaces in PERF and NEG constructions as TBUs bearing the features associated with NEG and PERF in the relevant constructions having lost their agreement features over time. In this regard, this study identifies the pairs *a/e...ghi* and *a/e...la* as pseudo circumfixes as they enter the derivation at the same point.

On the CP domain: Based on the way elements in this domain interact, the study discovered that the cartographic structure of the CP domain is ForceP-TopP-FocP-InterP. With regard to ForceP, three main complementisers were identified and classified based on their feature strength. They are *nà* ‘that’ (with strong declarative feature), *mà* ‘if/whether’ (with strong interrogative feature) and *kà* ‘that’ (with strong imperative and subjunctive feature). With regard to INTER, the syntax of yes/no questions involves one probe: INTER; the syntax of wh-questions involves two probes: INTER and FOC; while the syntax of focus and topic involves one probe: FOC and TOP respectively. These probes trigger displacement operations. With regard to clause typing, the study maintained that it is the LT Q-morpheme that clause types Igbo yes/no and wh-questions. The LT is overt in direct and indirect yes-no questions and in-situ wh-questions but covert in focused wh-questions. The study also observed that the Q-morpheme has lost its agreement features and only bears the tonal Q-morpheme. Therefore, the movement of wh-words to clausal left periphery is for focusing and EPP.

As it concerns, *Kedu interrogatives*, the study discovered that it is possible to re-interpret *kedu* in terms of X-bar based on the Split CP proposal. In this regard, the study proposes that *kè* and *du* has [+wh] and [+Foc] features respectively, project their own phrases, *kèP* and *duP*, and occupy the spec of InterP. With regard to focus, Igbo exhibits two strategies of focusing, clause peripheral focusing and *vP* peripheral focusing. The subject and the verb cannot be focused at the *vP* periphery although the verb can be focused at the periphery of the inner VP. The focus marker is overt in clause peripheral focusing but covert in *vP* peripheral focusing. The study also discovered that TOP is not morphologically marked in Igbo as observed by Nwachukwu (1995). Finally, the study demonstrated that Force, Topic, Focus and Interrogative interact in intricate ways. This interaction provides information about their hierarchy and the structure of the Igbo CP domain.

6.2 Conclusion

This study has analysed the structure of the Igbo basic clause. It was able to determine the hierarchical order of lexical and functional projections in the VP, TP and CP domains based on the Minimalist Program. In this way, the study has contributed significantly to the ongoing debate about the structure of these domains across languages. The analyses show that although the specific domains of the Igbo basic clause share some features with those of other languages, some of the features are peculiar to Igbo. Employing Rizzi's (1997) cartographic split CP proposal, this study has demonstrated that the elements that manifest in the Igbo CP domain bear different features and occupy different head positions. However, the structure of the CP domain observed in this study varies from that of Rizzi (1997). In Rizzi's proposal, InterP dominates FocP but in Igbo, FocP dominates InterP despite the fact the Inter scopes over Foc. Based on this and other similar observations, this study suggests that scopal strength does not always translate to dominance. From the analyses of the three domains, the study determined the cartographic structure of the Igbo basic clause.

6.3 Suggestion for Further Studies

Some aspects of information structure or packaging were not investigated in this study. For instance, the study did not determine whether ex-situ focused wh-questions always elicit ex-situ focused answers. Some studies have shown that in some languages, focused wh-questions often elicit a corresponding ex-situ focused answer while in-situ wh-questions often elicit in-situ focused answers.

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