

Cartography and the Left Periphery of the Clause in Igbo

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ABSTRACT: Languages display certain constructions which typically involve peripheral positions in the clause. In this regard, the Igbo language provides a number of interesting evidences with respect to both empirical and theoretical issues. This paper examined the left periphery of the clause and it is carried out within the cartographic approach to syntactic structures, with special focus on the left periphery. Findings of this paper reveal that in addition to the declarative complementizer *nà*, ‘that’ that are realized at the left periphery of the clause, the Igbo left periphery of the clause also involves focus, *wh*-constituent and topic. The left peripheral categories such as focus, *wh*- phrases are in most cases overtly realized by specific morphemes *kà* that encode such information, while topic is not overtly realized by any specific morpheme. This paper also establishes that no adjunction theory is adequate to handle the different constituents hosted at the left periphery of the clause in Igbo or the C-system. This is because the adjunction analysis does not neatly capture the behavior of *wh*-phrases and does not give a uniform account of *wh*-elements in the language. Finally, this paper establishes a unified analysis of the left periphery in the Igbo clause.

KEYWORD: Cartography, Left Periphery, Igbo Clause.

Introduction

The Left periphery of the clause is an analysis which proposes that there should be more than one projection at the left edge of the clause known as the complementizer system. In the early days of transformational grammar, languages like English were said to move their *wh*-phrases into COMP. But Chomsky (1986) claimed that it moves into Spec, CP. It has been observed that before Chomsky (1986), Reinhart (1981), Bayer (1984) had discussed multiple positions in the space above IP or the C-space. Although the proposals as to the existence of more than one head at the left periphery of the clause date back to the 1980s, Rizzi (1997) was the first to propose an adequate articulation of the C-structure.

Recent research on the nature of structural configurations has shown that the complementizer system is to be conceived of as a structural zone consisting of distinct functional heads and their projections, much as the IP system and the DP system (Rizzi 1997, 2000, 2004). Rizzi (1997) postulates a fixed component, involving the heads specifying Force and Finiteness, and an accessory component involving the heads of Topic and Focus, which are activated when needed. This means that Topic and Focus are activated when they are accommodated in the left periphery of the clause. Rizzi (1997) motivated the split of C system by the fact that more than one constituent can be moved to C, and that, multiple fronted constituents of different types show hierarchical order relative to each other. This gives rise to the hierarchical order of the C-system. Rizzi (1997) notes that the role of the C-system is the expression of Force distinguishing various clause types:

declarative, interrogative, exclamative, relative, comparative (different types of adverbial clauses, etc.) and Finiteness which is the specification distinguishing between finite and non-finite clauses. Rizzi postulates that Force and Finiteness as two distinct head closing off the complementizer system upward and downward, respectively and perhaps coalescing into a single head in simple cases. Force and Finiteness positions are apparent when the Topic/Focus field is activated. Four kinds of element that occur in the left periphery of the clause have been identified. They are interrogative and relative pronoun, topics and focalized elements, etc. This paper, we show that this analysis remains tenable for linguistic analysis as data from Igbo left periphery of the clause affirm.

Basically, this paper provides a unified account of the elements that are found at the left periphery of the clause in Igbo highlighting their similarities and differences in terms of how they are generated and the different types of syntactic operations in their derivation.

This paper is organized as follows: section 1 is the introduction while section 2 discusses the objectives of the paper. Section 3 is the significance of the study and section 4 is an overview of cartography. In section 5 we discuss the various elements that occur at the left periphery of the clause in Igbo. Section 6 discusses adjunction and the left periphery of the clause in Igbo. In section 7, we discuss the cartography and the left periphery of the clause in Igbo. Section 8 is the summary and conclusion.

Objectives

The objective of this paper is to:

- a. Identify various types of elements typically occurring in the left periphery of the clause in Igbo.
- b. Identify the interactions between the elements that occur at the left periphery of the clause in Igbo.
- c. Provide an articulated array of syntactic projections that constitute the complementizer system.
- d. Provide a unified analysis of the left periphery in the Igbo clause.

Significance of the Study

This paper provides insight to the study of the left periphery of the clause using cartographic approach. It is also useful for cross-linguistic and comparative syntax purposes. For instance, it helps to ascertain whether the Igbo case of left periphery is similar to what obtains in related languages.

Overview of Cartography

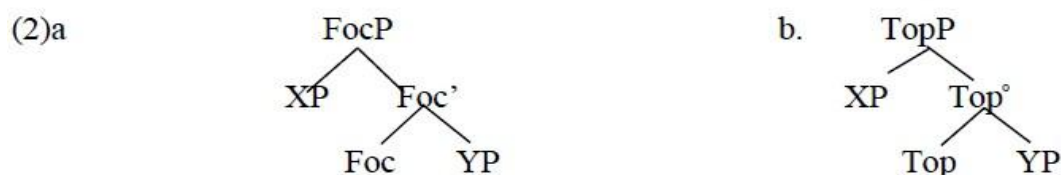
Cartography in syntactic analysis is described by Rizzi (2004a:223), as ‘the attempt to draw maps of syntactic configuration as precise and detailed as possible.’ (see also Cinque and Rizzi 2008, Bassong 2014). This is to say that cartography is interested in the study of functional/grammatical categories, and in their numbering, ordering and content. Although cartography emerged and gained its name in the late 1990’s, it is only in the early 2000’s that this research framework became widely known in publications, including Cinque (2002), Aboh (2004), Belletti (2004), Rizzi (2004a-b), Baassong 2014 Osuagwu 2017, etc. However, it is important to note that by the 1980’s, the study of functional projections was already the order of the day with the exploration of the nominal layer (Brame 1982; Hellan 1986; Abney 1987), the inflectional layer (Stowell 1981; Safir 1982; Chomsky 1986; Pollock 1989) and the verbal layer (Larson 1988; Hale & Keyser 1993; Chomsky 1995; Kratzer 1996) to name only a few (Bassong 2014). It is important to note that cartography touches a wide range of layers, such as the discourse layer, called the complementizer space or the clausal left periphery, which is the domain dedicated to scope- discourse properties like focus, topic, wh-questions, the thematic layer which is the verbal layer dedicated to the fulfilment of thematic relations between the verb/predicate and its arguments (internal and external), and the inflectional layer which is dedicated to

functional relations such as agreement, case, aspect, negation, etc. and finally, What the aforementioned references share, in addition to many others, is that the functional material can project syntactic structures in conformity with the X-bar schema.

This is to say that since the early 1990's, the inventory of functional projections has considerably increased exponentially in such way that each layer of phrasal and clausal configuration is assumed to have a richly articulate functional zone (Cinque 1994, 2010; Matthewson 1998; Aboh 2002; Bruge 2002; Giusti 2002; Scott 2002; Coene & D'hulst 2003a; 2003b; Nicolis 2008; Svenonius 2008; Biloa 2013, etc.), the prepositional area (Asbury et al. 2008; Cinque & Rizzi 2010) and the verbal frame (Larson 1988; Hale & Keyser 1993; Chomsky 1995, Kratzer 1996; Ramchand 2008, etc.), to the discourse-oriented spine (Rizzi 1997; 2001; 2004a-b; 2013; Beninca 2001, 2006; Beninca & Poletto 2004; Bocci 2004; Beninca & Munaro 2010; Cruschina 2006; Frascarelli & Hinterhölzl 2007; Biloa 2013, Bassong 2014), via the inflectional layer (Pollock 1989; Belletti 1990; Chomsky 1991; Cinque 1999, 2006; Shlonsky 1997, 2000; Cardinaletti 2004; Aboh & Nauze 2008, Biloa 2013) among others. It is interesting to note that all the authors whose works fall within the cartographic framework revolve around the following tenet defined in (1) below;

(1) One Feature One Head (Cinque & Rizzi 2008:2).

This means that each morpho-syntactic feature corresponds to an independent syntactic head with a specific slot in the functional hierarchy. Following cartography approach, and in line with binary branching hypothesis and Linear Correspondence Axiom Kayne's (1994), syntactic configurations of discourse-related properties such as topic, focus, etc., conform to the X-bar schema such that each discourse-related functional head projects its own maximal projection; the specifier and head of which may be overt or/and covert simultaneously in a local Spec-Head relation (Rizzi 2004a:223, Aboh 2004, Bassong 2014 Osuagwu 2017). as in the following schemas in (2). In (2), functional heads may be overt or covert. As (2) indicates, morpho-syntactic features such as topic, focus, and the like, each projects a syntactic head with a specific slot in the clause and with a specific semantic content.



In (38) above, the specifier position can be occupied by focalized, topicalized constituents, while the respective functional head may be overtly or covertly realized, depending on the language internal make-up. This only arises when a given material is activated in the discourse (see Rizzi 2001:1). In terms of Rizzi (1997) and subsequent works, a constituent endowed with a focus, topic or evidential feature must end up in a local Spec-Head relation with the functional Foc^0 Top^0 head respectively. By so doing, Rizzi establishes a parallel between the well-known Wh and Neg Criteria (Rizzi 1990; Haegeman 1995) and shows that topicalized and focalized constituents also move to the left periphery for the satisfaction of focus and topic criteria or for feature-checking in line with Chomsky's (1995) terminology.

Elements that Occur at the Left periphery of the Clause in Igbo

Like most languages, the elements found at left periphery of the clause in Igbo are interrogative, relative markers, topics and focalized elements.

Interrogative Elements

Interrogative elements are elements which can be used in asking questions. Ndimele (2001) notes that most of them look very much like relative pronouns. Examples of interrogative elements in Igbo are *gini* ‘what’ *onye* ‘who’ *olee* ‘where’, *eebe*, etc. These are exemplified in the following sentences.

- (3) **Gini** mbù ahà gi?
What PRE-be name you
‘What is your name?’
- (4) **Onye** ka Eze hùrù n’ụlò?
Who foc Eze see-PST PREP-house
‘Who is in the house?’
- (5) **Gini** kà Ezè nzùtara?
What foc Eze PRE-buy-PST
What did Eze buy?’
- (6) **Onye** kà Ezè nhùrù?
Who Foc Eze PRE-see-PST
‘Who did Eze see?’

Relative Elements

Relative elements are those elements which introduce embedded sentences that function as single adjectives, in the sense that they modify nouns (Ndimele 2001). Examples of relative markers in Igbo are *onye* ‘who’, *nkè* ‘that’ ‘whose’ ‘which’, *olee* ‘where’, *èbe*, ‘where’ etc.

These are exemplified in the sentences (7) – (8)

- (7) Nwoke **onye** nbịara èbe à mbu nnà m.
man who PRE-come-PST place this PRE-be father my
‘The man who came here is my father.’
- (8) Akwukwo **nkè** Ezè nzùrù òdì mmā
book which Eze PRE-buy-PST be beautiful
‘The book which Eze bought is beautiful’
- (9) Ụwe **nkè** Ada ìnyèrè m nìmarà mma
cloth which Ada PRE-give-PST me beautify beauty
‘The cloth that Ada gave me is beautiful.’

Focus Construction

Focus, according to Watters (2000), is the most important or salient information in the sentence, and usually is the information that the speaker believes, or assumes the hearer does not share with him. It is concerned with new information, rather than old, presupposed or given information (Ndimele 2003; Radford 2004).

Examples of Focus Constructions in Igbo are:

- (10) Ezè kà Ada nzùlà akwùkwò
Eze foc Ada PRE-buy-BENEF book
'Ada bought EZE a book.'
- (11) N'abali kà Ezè nbjara.
PREP-night Foc Eze PRE-come-PST
'Eze came in the NIGHTt.'
- (12) Uyiaku ka Ezè ngara ahia –
yesterday foc Eze PRE-go-PST market
'Eze went to the market YESTERDAY'

In Igbo, the left peripheral categories such as focus, wh- phrases are in most cases overtly realized by specific morphemes *kà* that encode such information, while topic is not overtly realized by any specific morpheme. We argued that the presence of the focus markers in focus and wh- phrases and the structural positioning and ordering in which constituents endowed with such related interpretations occur, provide evidence in support of the cartographic framework.

Topics

Topicalization is a movement process in which some communicative prominence is placed on a particular constituent of a sentence over and above the surrounding constituents within the same sentence (Ndimele 1992). Topics typically represent old information (i.e., information which has already been mentioned in the discourse, and hence it is assumed to be known to the hearer) (Radford 2004). Examples of topicalization in Igbo are:

- (13) Eze_i o_i ònyèrè ònye akwùkwò.
Eze he give-PST who book
'Who did Eze give the book?'

In Igbo, like some other languages like Gungbe, Italian, topic constructions always involve TP- internal resumptive element that is identified by the topics. In this respect, topicalization contrasts with focus/wh constructions in that the focus and wh constructions do not involve a resumptive element strategy.

Despite the syntactic differences of the above constructions, they are all merged at the left periphery of the clause in the language. Hence, there is the need for a unified account of the different types of the constructions that occur at the left periphery of the clause in Igbo.

Adjunction and the Left Periphery of the Clause in Igbo

The Igbo empirical data, like other languages, Baasa (Bassong 2014) Gungbe (Aboh 2004), Italian (Rizzi 1997, 2001, 2004), Hungarian (Puskas 1996) raise conceptual and empirical problems to the unitary analysis of the CP. Some authors have argued that the C-domain is conceived of as an area which deals with elements that participate in clause typing. Starting from Chomsky (1986), it has also been argued that functional categories such as lexical complementizer, known as subordinating conjunctions occupy C the head of CP, the specifier position of which hosts preposed wh-phrases in English-like languages. Following this line of argument, the Igbo sentences in (14a-b) can be given the structures in (14c-d) respectively.

We argue that the declarative lexical complementizer *na* ‘that’ and its interrogative counterpart *ma/si* ‘if/whether’ occupy C the head of CP.

- (14a) Ezè òchère *nà* Ada òzùrù àkpà
Eze PRE.think-PST that Ada buy-PST bag
‘Eze thought that Ada bought a bag’.
- (b) Ezè amaghi *mà* Ada òzùrù àkpà
Eze PRE-do-NEG if/whether Ada PRE-buy-PST bag
‘Eze did not know that Ada bought a bag’
- (c) ...[CP [C *nà* [TP Ada [T rV [vP [V zù [DP àkpà]]]]]
That Ada PST buy bag
...That Ada bought a bag.
- (d) ... [CP [C *mà* [TP Ada [T rV [vP [v zù [DP àkpà]]]]
if Ada PST buy bag
... If Ada bought a bag.

We show in examples (14a-d) that the complementizers *nà* ‘that’ and *mà* ‘if/whether’ occupy the head of the CP.

In the same way, the preposed question words in sentences like (15a-b) can be derived as in (15c-d) respectively where the preposed wh-phrase *gị nị* ‘what’ occupies the specifier position of CP (movement is indicated by angled brackets < > (Starke 2001).

- (15a) *Gị nị* kà Ada òzùrù?
What Ada PRE-buy-PST
What did Ada buy?
- (b) *Gị nị* kà Ada m̀bìàrà?
Why Ada PRE-come-PST
Why did Ada come?
- (c) [CP *Gị nị* [C [kà [TP Ada [T rV [VP [v zù [gị nị]]]
What Ada PST buy
- (d) [CP *Gị nị* [C [kà [TP Ada [TrV [VP [v bìa]]]
Why did Ada PST come

Using the X-bar theory (Chomsky 1970, Jackendoff 1977) and the Linear Correspondence Axiom (LCA) (Kayne 1994), we show that every phrase in Igbo is a projection of a head word (i.e. lexical or functional) such that in Igbo, the specifier precedes the head (at least underlyingly) and it is followed by its complement. In this respect, the sentences in (14 c-d) above indicate that C the head of CP can be occupied by lexical complementizers, while Spec-CP can be occupied by preposed wh-phrases (15c-d). The head C is preceded by its complement TP. These structures are in line with minimalist approach to clause structure according to which is confined to the sole CP>TP>VP/vP configuration (Bassong 2014).

So, if the structures in (14c-d) and (15c-d) representations neatly accommodate the Igbo data in a way that they are to predict the clause structure of this language, we show that the sentences in (16a-c) would in no doubt falsify the predictions. These structures show that the lexical complementizers *na* ‘that’ and *mà* ‘if/whether’ co-occur with preposed wh-elements.

(16a) Eze òjùrù Ada mà ònye kà ọ hùrù

Eze PRE-ask-PST Ada if/whether who ?? 1-3SG see-PST
'Eze asked Ada who she saw'.

(b) Emeka ọ sǐrĩ nà gĩnĩ kà Ada m̀m̀r̀e
Emeka_i 3SG_i say-PST that what ?? Ada PRE-do-PST
Emeka asked that what did Ada do.

(c) *Emeka ọ sǐrĩ gĩnĩ nà kà Ada m̀m̀r̀e
Emeka_i 3SG_i say-PST what that ?? Ada PRE-do-PST

We observe from example (16a) that *nà* 'that' precedes the wh-element *gĩ nĩ* 'what' while in (16b), the lexical complementizer *ma* 'if/whether' precedes the wh-phrase *onye*.

Sentences (92a) show that lexical complementizers *ma* 'if/whether' and *nà* that can co-occur with preposed wh-elements. Although, we noted that the complementizers are compatible with wh- phrases in Igbo, the co-occurrence is highly constrained. We observe that the wh-phrases cannot precede lexical complementizers, hence the ungrammatical of sentence (16c). Following Bassong (2014), the ungrammaticality of (16c) is caused by the classical Doubly Filled Comp Filter, a condition which rules out simultaneous spell out of a complementizer in C.

In accounting for these left clausal elements, we can ask ourselves this question- if the X-bar template be used to account for the Igbo sentences in (16a-b) on theoretical grounds? In order to account for the sentences in (16a-b) using the X-bar theory, the first approach is to propose an adjunction approach. Firstly, we can propose a situation whereby preposed or moved wh-phrases are adjoined to the TP by adjunction, as, demonstrated in sentence (17a).

(17a) ...[CP [C *nà* [TP *gĩnĩ* [?? ka [TP Ada [T-re [VP [v me<gini>]]
That what ?? Ada PST do<what>

The second approach is to propose that wh-phrases are rather adjoined to the CP projection by also right adjunction (93b).

(b) ...[CP [C mà [CP ònye [?? ka[TP 3SG [T- rv [VP [v hu <onye>]]]
If who ?? he PST see <who>

It is interesting to note that these approaches do not nicely account for these sentences. This is because we cannot give a different analysis for the same wh-phrases in the Igbo language. This is to say that if the wh-phrases *gini* 'what' and *ò nye* 'who' occupy Spec-CP by substitution in the structures in (14a-b), it cannot be argued that in (17a) the wh-phrase *gĩ nĩ* 'what' is attached to TP. This type of analysis cannot be upheld because it does not neatly capture the behavior of wh-phrases and does not give a uniform account of wh-elements in the language. The second approach, which states that wh-phrases occupy the complementizer domain by right adjunction as illustrated in (17b) is completely ruled out under Kayne's (1994) antisymmetry approach and the right adjunction is not allowed in Igbo (see similar analysis Bassong 2014). This is because a phrase must contain only one head, just as a complement must contain only a head (see also Cinque 1996, Basong 2014). In other words, right adjunction of the CP which, hosts the wh-phrase *ò nye* 'who' or *gini* 'what' to the highest CP headed by the interrogative complementizer *mà* 'if/whether' or *nà* 'that' is not allowed.

We argue that it is not only that adjunction approach is not able to account for the structures in (17a-b), but that it does not provide a uniform account of the distribution of wh phrases in Igbo. It does not agree with the analysis provided in (14c-d) and (16a-d).

We argue that, that a lexical complementizer can co-occur with a preposed wh-phrase, focalized or topicalized phrases as shown in (18a-d), shows that an adjunction approach cannot provide an adequate analysis for the Igbo data.

- (18a) Eze òṣĩĩ **nà** **gĩĩ** **kà** Ada mèrè
 Eze PRE-say-PST that what Foc Ada mere
 What did Eze say that Ada did?
- (b) Emeka òjũrũ **ma** ònye ka Ngozi bũ
 Emeka PRE-ask-PST if who Foc 3SG is
 ‘Emeka asked who is Ngozi?’
- (c) Ada òṣĩĩ **nà** **akwũkwò** **kà** Obi zùrũ.
 Ada PRE-say-PST that book Foc Obi buy.PST
 ‘Ada said that Obi bought A BOOK’
- (d) Emeka òjũrũ **ma** **Eze_i** **gà** **ahia**
 Emeka PRE-ask-PST if Eze 3SG go-PST market

We observe from example (18a) that **nà** ‘that’ precedes the wh-element **gĩ** **nĩ** ‘what’ while in (18b), the lexical complementizer **ma** ‘if/whether’ precedes the wh-phrase **ònye** ‘who’. In (18c) **nà** ‘that’ precedes the focused element **akwũkwò** ‘book’ but in (18d) the lexical complementizer **ma** ‘if/whether’ precedes the topicalised element **Eze**.

Interestingly, any adjunction approach is not also adequate in accounting for sentences like (19a-b) whereby a lexical complementizers is allowed and simultaneously followed by focalized or wh- phrase and topicalized elements.

- (19a) Nna ya o kwũrũ **nà** **Eze_i**, **ònye** **kà** **ò_i** **nà** –achò ‘
 Father his ask-PST that Eze who Foc 3SG do-PST PRE-do
 ‘As for Eze did his father say who he is looking for’
- (b) Nne ya òkwũrũ **nà** **Ada_i**, **akwũkwò** **kà** **ò_i** biara izũ
 Mother her PRE-ask-PST that Ada, book Foc 3SG come.PSt INF-buy
 ‘As for Ada her mother said that she wants to buy the book

In (19a), the **nà** is a declarative complementizer, **Eze** is the topicalised element while **ònye** ‘who’ is the wh-element. In sentence (19b), the **nà** is a declarative complementizer, **Ada** is the topicalised element while **akwũkwò** ‘book’ is the focused element. That the sentences in (19a-b) are grammatical shows that using an adjunction approach to account for the Igbo data is inadequate. We argue that X-bar, adjunction and strict minimalist approach cannot adequately account for cases like (19) whereby lexical complementizers **nà** ‘that’, is followed by topicalised element **Eze** and wh-constituents **ònye** ‘who’ (19a) and in example (19b) lexical complementizers **nà** that, is followed by topicalised **Ada** and, focalized elements **akwũkwò** ‘book’.

Assuming that the elements that occur before the canonical subject **o**, ‘s/he’ are attached to TP, the sentences (19a-b) would not show the positions of the focus marker **ka**. The same condition applies to other sentences. Sentences (18a & c) analyzed under the adjunction approach, repeated as (20a-b), would be given a structure such as (20c-d) which does not specify the positions of the focus morphemes **kà**.

- (20a) Ezè òsìrì nà gini kà Ada òmèrè <gini>
 Eze PRE-say-PST that what Foc Ada PRE-doPST
 Eze wonders that what Ada did.

- b Àda òsìrì nà akwukwò kà Òbi òzùrù <akwukwò>
 Ada PRE-say-PST that book Foc Obi PRE-buy-PST
 ‘Ada said that Obi bought A BOOK’

- c.. ... [CP[C nà[CP gini ??kà [TP Ada òmèrè <gini>]]]
 That what Ada PRE-do-PST

- d ... [CP [C nà[TP akwukwò ??ka[TP Òbi òzùrù <akwukwò>]]]
 That book Obi PRE-buy-PST

Examples (20c-d) seems not to account for the true position of the focus marker *ka* and also the structures involve right adjunction of the *wh*-phrase to the highest CP projection (20c) and focus phrase to the highest TP projection (20d). This analysis is not allowed under LCA. Even, if, we admit that adjunction approach is the best analysis for the sentences in (20), and if we follow Bassong (2014) to adopt that phrasal adjunction involves addition of a maximal projection to a pre-existing maximal projection which is a projection of only one head category, we observe that this approach is not able to show where the functional morpheme *ka* which encodes the focus information hosted in the pre-subject positions. Therefore, we conclude that all the sentences in (14-20) cannot be accounted for in Igbo using the adjunction approach and this approach also poses a theoretical challenge as the cross-linguistic data in (21-23).

Igbo

- (21) Ngozi_i o_j kwùrù si nà Eze_i, akwukwò kà o_i zùrù. <akwukwò>
 Ngozi 3SG say-PST say that Eze book Foc 3SG buy.PST
 ‘As for Ngozi she said what is Eze doing.’

Basaa

- (22) Mɛ m- bat-bá lé tɔ́ɔ́ báúdí b5-k, makebla mó-n mallet a- ŋ- tí
 I PRS-ask-RFM that if 2students 2-TOP 6-percents 6-FOC 1Teacher 1SM-PST-give
 Lit: ‘*I wonder that if as for the students, the teacher gave them the PRESENTS too.’
 (Bassong 2014:36)

Gungbe

- (23) Kòfí yà gankpa mɛ wɛ kpònon lé sù-I do.
 Kofi TOP prison in FOC policeman NUM shut-PERF-3SG LOC
 ... ‘As for Kofi, the policeman put him in prison.’
 (Aboh 2004: 299)

The sentences in (21-23) provide crosslinguistic evidence which shows that the adjunction approach is unable to account for the exact position of the fronted constituents occurring before the subject of the sentence in Igbo, Basaa, and Gungbe. In Igbo, in addition to the lexical complementizer *nà* ‘that’, we have two other fronted elements, namely the topicalized subject of the embedded clause *Eze* ‘Eze’ and the focalized direct object *akwukwo* ‘book’ and the focus marker *ka* which occurs before the resumptive pronoun *o* ‘s/he’ of the sentence. In the same way, the Gungbe and the Basaa data also pose a challenge for the adjunction analysis. For instance, the adjunction approach could not account for the structural positions of the

topicalized *Kofi* ‘Kofi’, topic marker *ya*, focalized element *gankpa me* ‘in prison’ and the focus marker *we* in Gungbe as well as the positions of the topicalized *baúdí* ‘students’ and focalized element *makebla* ‘presents’ as well as the topic and focus markers *bók* and *mò-n* in Basaa. Using an adjunction approach to account for the sentences in (21-23), we would have the following derivation in (24-26) respectively (unspecified positions are indicated by question marks).

- 24 ...CP[C *nà* [TP Eze_i[TP *akwukwo* ??*kà*[TP *o_i* *zìrù*
that Eze book Foc 3SG buy.PST
- 25 ...[CP [C *lè* [CP[C *toó* [TP *baúdí* ?? *bò-k* [TP *makebla* ?? *mò-n* [TP *mallet a- n- ti...*]]
That if 2.students TOP 6-presents 6-FOC 1 teacher 1 SM-PRS.give.
- 26 ...[TP *Kofi* ??*yà* [TP *gànkpa me* ??*wè* [TP *kpònnon lé sú-i*
Kofi TOP prison in FOC policeman NUM shut-PERF-3SG LOC

The structures in (24-26) reveal that topicalized and focalized constituents are attached to TP. This cannot be accepted because the position of the functional morpheme following focalized constituents in Igbo cannot be accounted for (24), like-wise the topicalized and focalized morphemes in Basaa and Gungbe in (25 and 26). The derivation (24) in Igbo reveals that the left periphery of the clause can be projected by two different heads. So we follow Bassong (2014) to note that the derivation in (24) violates two basic tenets of X-bar defended in Kayne’s (1994) LCA, which states that there cannot be more than one head per phrase and that no head can be a complement to another head (Kayne 1994:8, Bassong 2014:37). In this regard, (24) cannot be admitted given that the highest C hosting the declarative complementizer *na* ‘that’ selects as a direct complement as TP *Eze* which in turn selects as a direct complement of another head category hosting the phrase *akwukwo* ‘book’ in the lower TP.

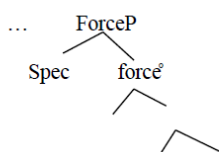
Cartography and the Left Periphery of the Clause in Igbo

A complementizer in Igbo is a lexical category which includes words that can be used to form the head of embedded clause. It is the syntactic head of a clause. Examples of complementizer in Igbo includes *na* ‘that’, *ma* ‘if’, etc. as illustrated in sentences (27a-b).

- (27a) *Ezè òsĩĩ* *nà* *Ada gà-àbĩa*
Eze PRE.say.PST that Ada will-come
‘Eze said that Ada will come.’
- (b) *Ngozi òjùrù* *mà* *Ibè gà-àbĩa*.
Ngozi PRE.ask.PST if Ibe will-come
‘Ngozi asked if Eze will come.’

Using the cartographic and minimalist framework, we propose that complementizer *nà* ‘that’ and *mà* ‘if’ are hosted in force which is the head of Force Projection (ForceP). Sentence (27c) is represented in structure (28).

- (c)...[ForceP [force *nà* [TP *Ada gà-àbĩa*]]]
that Ada will-come
This represented in the following tree diagram.
(28)



Force TP

nà Ada gà-àbìa

The structure shows in (27c) that the *bìa* ‘come’ which is the head of the VP is merged with the T head *gà-* ‘will’ to form *gà-àbìa* ‘will come’. Then *gà-àbìa* is merged with the DP which occupies the specifier position of the TP to form the TP *Àda gà-àbìa*. The TP is then merged with *nà* ‘that’ which is the head of the ForceP to form the embedded clause *nà Àda gà-àbìa* ‘that Ada will come’.

Using the cartography framework, we show that left periphery of the clause in Igbo can be projected into different heads which poses a problem to the adjunction theory. This means that the Igbo data provide support to the cartographic framework by showing that the left periphery of the clause can be projected into different projections.

In embedded clauses, the topic, focus and any moved wh-element occur to the right of the complementizer *nà* in a presubject position (29).

- (29a) Eze *nsiri* *nà* agwọ ahụ, Obi mgburū ya
Eze say-PST that snake [dem] Obi kill-PST it
Eze said that as for the snake, Obi killed it.
- (b) Èmekà *nsiri* *nà* akwukwọ kà Ada *nzurū*
Emeka PRE-say-PST that Ada book foc Ada buy-PST
‘Emeka said that Ada, she bought a book.’
- (c) Èmekà_i o_i *siri* *nà* gini kà Àda, *zurū*
Emeka 3sg PRE-say-PST that what foc Ada buy-PST
‘Emeka said that Ada, she bought a book.’
- (d) Èmekà *nsiri* *nà* Àda_i, akwukwọ kà o_i *zurū*
Emeka PRE-say-PST that Ada book foc 3sg buy-PST
‘Emeka said that as for Ada, she bought a book.’
- (e) Èmekà_i o_i *siri* *nà* Àda_i, gini kà o_i *zurū*
Emeka 3sg PRE-say-PST that what foc Ada buy-PST
‘Emeka said that as for Ada, what did she buy.’
- (f) * Èmekà *nsiri* *nà* akwukwọ kà Àda_i, o_i *zurū*
Emeka PRE-say-PST that book foc Ada 3sg buy-PST
- (g) * Èmekà_x o_x *siri* *nà* gini kà Àda_i, o_i *zurū*
Emeka 3sg PRE-say-PST that what foc Ada 3sg buy-PST

We can neatly account for the clausal left peripheral elements in sentences (29) under cartography as shown in structures (30a-c).

30a . . . [Force P [Forcē [TopP agwọ ahụ [Top° ø [TP Obi [T- rv [VP [v mgbu [DP ya]]]]]]]
Snake dem Obi pst kill

b ... [Force P [Force° [FocP akwukwò[Foc° ka [TP [T- rv [VP [v òzù [DP <akwukwò>]]]]]]]

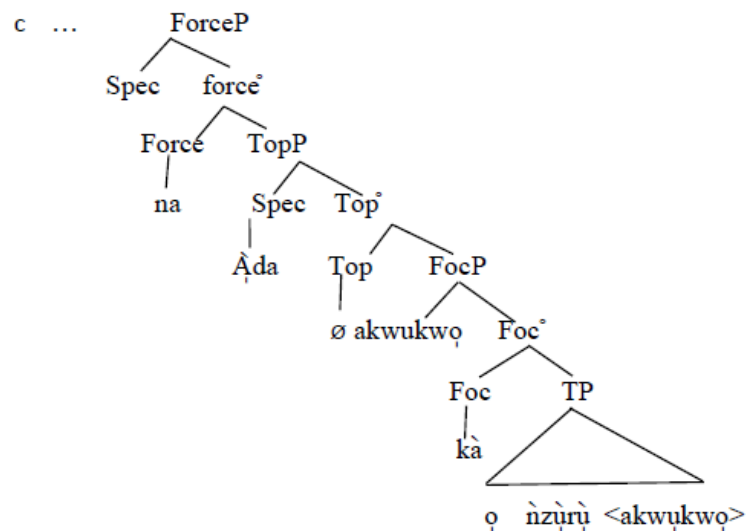
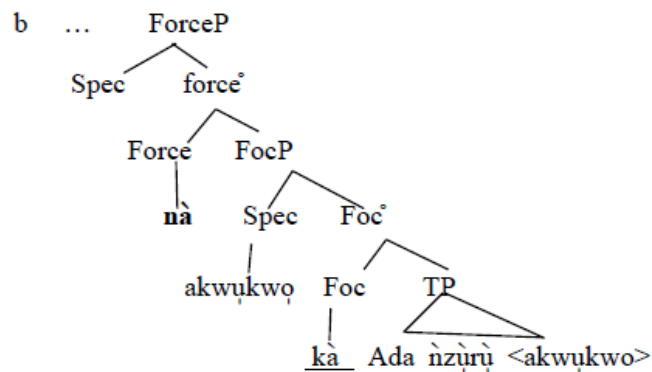
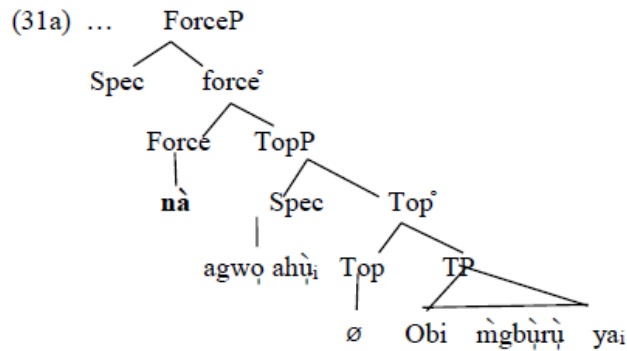
Book foc pst buy

c ...[Force P [Force° [TopP Àda[Top°∅[FocPakwukwò[Foc° ka [TP o[T- rv [VP [v òzù [DP

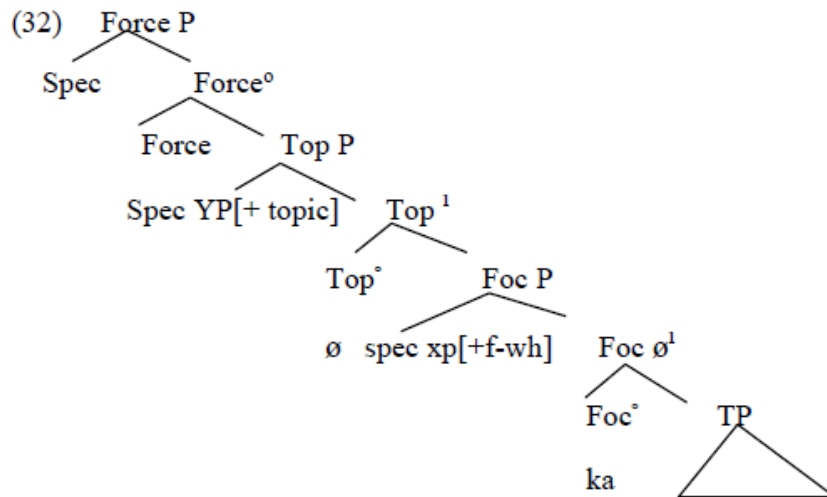
Ada book foc 3sg buy

<akwukwò>]]]]]]]

Structures in (30a-c) can be represented in tree diagram in (31a-c) respectively



Sentences (29f-g) suggest that precedence requirement on topic, focus and wh-elements that the topic position is higher than the focus position. Osuagwu and Anyanwu (2020) observe that focused and wh-phrases target a focus projection (FocP) that projects within the C-system. In the same, way the topic preposed to a distinct in Igbo (see Rizzi 1997, 2001; Aboh 2004, 2007 and Bassong 2014 for similar proposal). The topic occurs in the specifier position of a topic projection TopP that dominates the focus projection FocP. The fact that topic, focus and wh-phrases target distinct positions in the left periphery of the clause also follows (see examples 30-31). The null marker that is associated with Top⁰ encodes feature [+ topic] and the marker *kà* associated with Foc⁰ encodes feature [+ focus + wh]. These heads project in the left periphery as components of the left periphery of the clause. Following Aboh (2004), and Rizzi (2001), we assume that the topic-focus system is triggered in a structure only when the clause contains a constituent that needs to check its topic, focus or wh feature. In this regard, the Igbo left periphery can be attributed to the partial representation in (32).



Therefore, we conclude that all the sentences in (29) can be accounted for in Igbo using the cartographic approach and this approach also does not pose a theoretical challenge as the cross- linguistic data in (97 -99) repeated (33-35) are adequately analyzed as shown in structure (36-38).

Igbo

- (33) Ngozi_i o_j kwùrù si nà Eze_i, akwukwọ kà o_i zùrù. <akwukwo>
 Ngozi 3SG say-PST say that Eze book Foc 3SG buy.PST
 ‘As for Ngozi she said what is Eze doing.’

Basaà

- (34) Mε m- bat-bá tóó baúdú b5-k, makebla mó-n mallet a- η- tí
 I PRS-ask-RFM if 2students 2-TOP 6-presents 6-FOC 1Teacher 1SM-PST-give
 Lit: ‘*I wonder that if as for the students, the teacher gave them the PRESENTS too.’
 (Bassong 2014:36)

Gungbe

- (35) Kòfì yà gankpa mε wε kpònɔn lɛ́ sú-I do.
 Kofi TOP prison in FOC policeman NUM shut-PERF-3SG LOC
 ...'As for Kofi, the policeman put him in prison.'
 (Aboh 2004: 299)

- 36...[Force P[Force nà[TopP Eze[Top°ø[FocP akwùkwò[Foc°kà[TP o; zùrù[DP<akwùkwò>]]]]]]
 that Eze book Foc 3SG buy.PST

- 37...[ForceP[Force tɔɔ[TopP ɓáúú [Top ɓɔ-k[FocP makebla [Foc° mɔ-n [TP mallet a-n- ti]]]]]]

- if 2.students TOP 6-presents 6- FOC 1teacher 1SM-PRS.give

- 38 ...[ForceP [Force°ø[TopP Kofi [Top°yà [FocP gankpà mε [Foc wε[TP kpònɔn lɛ́ sú-I]]]]]
 Kofi TOP prison in FOC policeman NUM shut-
 PERF-3SG LOC

From the data above, we show that the structures in (36-38) provide cross-linguistic evidence which shows that the cartographic approach is able to account for the exact position of the fronted constituents occurring before the subject of the sentence in Igbo, Basaà, and Gungbe (33-35) respectively. The complementizers *nà* 'that' and *tɔɔ* 'if' in Igbo and Basaà respectively are hosted at the Forceo. The topic elements *Eze*, *ɓáúú* 'students' and *Kofi* in Igbo, Basaà and Gungbe occur in the specifier position of a topic projection *TopP* respectively. The *TopP* in these languages dominates the focus projection *FocP*. The focus elements *akwùkwò*, 'book', *makebla* 'present' and *gankpà mε* 'in prison' occur at the *FocP* respectively. The *FocPs* in turn dominate the tense projection *TPs* in the languages. The null marker in Igbo, *yà* in Gungbe and *ɓɔ-k* in Basaà are associated with *Topo* that encodes feature [+topic] and the Igbo marker *kà*, the Basaà marker *mɔ-n* and the Gungbe marker *wε* are associated with *Foco* that encodes feature [+focus].

Summary and Conclusion

So far, we have examined the left periphery of the clause also known as the complementizer system (C-system). The study is carried out within the cartographic approach to syntactic structures, with special focus on left periphery and is inspired by previous works in the literature such as (Rizzi 1997; 2000; 2001; 2004a-b; 2013a, b), Pukas (1996, 2000), Grewendorf (2002), Aboh (2004a, 2007, 2010), Belletti (2004a-b 2009), Beninca & Poletto (2004), Jayaseelan (2008), Torrence (2012), Biloa (2013), Bansong (2014) etc.

This paper established that in addition to the declarative complementizer *nà*, 'that' and interrogative complementizer *ma* 'if/whether' etc. that are realized at the left periphery of the clause, the Igbo left periphery of the clause also involves focus, wh-constituent and topic. We have established that the left peripheral categories such as focus, wh- phrases are in most cases overtly realized by specific morphemes *kà* that encode such information, while topic is not overtly realized by any specific morpheme.

We argued that the presence of the focus markers in focus and wh-phrases and the structural positioning and ordering in which constituents endowed with such related interpretations occur, provide evidence in support of the cartographic framework. Based on the works carried in the literature, and with reference to the Igbo data, we provided evidence which did justice to the cartographic frameworks, by defending the idea that left peripheral categories such as, focus, topic, wh- elements are part of the numeration, i.e. the lexical array which Chomsky (1995), claims that it is made up of lexical items necessary for the building of syntactic blocks. We followed the line of analysis which allows the elements found at left peripheral area to participate in the building of syntactic blocks as other formal grammatical primitives such as tense, aspect, negation.

We proposed various approaches to handle the elements that occur at the left periphery of the clause in Igbo. We have shown that the left periphery of the clause in Igbo can host more than one constituent and that no

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adjunction theory is adequate to handle the different constituents hosted at the left periphery of the clause in Igbo or the C-system. This is because the adjunction analysis does not neatly capture the behaviour of wh-phrases and does not give a uniform account of wh- elements in the language. We also observed that the adjunction approach failed in cases whereby a complementizer is followed by focalized or wh-phrase and topicalized elements. We also proposed that focus, wh and topic fronting in Igbo language is triggered by UG requirements, namely the Focus-Criterion Wh-Criterion and Topic-Criterion (Brody 1990, Rizzi 1997, 2001, and Chomsky 1995, Aboh 2004, Bassong 2014).

We conclude by saying that the Igbo data used in this work have clearly provided further support to the idea that the unitary CP-template of the left periphery of the clause structure as proposed by many authors cannot be rely upon to account for the left periphery of the clause in Igbo but the cartographic approach.

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