

# Polar Questions in ɲgɛmbà (Grassfields Bantu): A Cartographic Approach

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The paper studies polar questions in ɲgɛmbà, a Grassfields Bantu language that is spoken in parts of the West region of Cameroon. I show that polar questions are obtained in this language through clause-final question particles (*á*, *ná*) that are associated with peculiar tonemic specifications which, when absent, give sentences a declarative reading. I draw on Rizzi's (1997, 2004, 2006) Cartographic Approach and follow Aboh (2004c, 2016) to propose that these question markers and associated information structure markers have syntactic properties and, as such, can trigger snowballing movement and heavy pied-piping (Nkemnji 1995) or generalised pied-piping (Aboh 2016). When associated with focus, segmental and tonemic changes occur on the last constituent of the clause. This process is followed by heavy pied-piping of the whole proposition to Spec-InterP to license the interrogative features the head 'Inter' embeds. The only difference with Gungbe and Fongbe, for example, is that focus constructions in ɲgɛmbà are best interpreted as clefts (*ex-situ*) and pseudo-clefts (*in-situ*). In such cases foci surface in the specifier position of a RelP to establish a pronoun-antecedent agreement relationship between the moved foci and the head of the RelP. The paper offers evidence in support of the analysis of segmental changes as having syntactic properties. It also provides novel evidence of tonal reflexes of A-bar movement (Aboh 2016, Korsah & Murphy 2016) and probably could help give Information Structure in African languages in general and in Bantu languages in particular a novel approach in which phonology has a key role to play.

**KEYWORDS:** snowballing movement, generalised pied-piping, syntax-phonology interface.

## 1. Introduction

The study of syntactic phenomena within the Cartographic framework has sparked wide interest from linguists around the world and has provided interesting insights in linguistic theorising and the understanding of how languages work. Starting, as far as I know, with the publication of Rizzi's (1997) paper, it has been used to map out domains of structural representations such as the CP (Rizzi 1997, 2004, 2007; Aboh 2004a; Cinque and Rizzi 2010; Biloa 2013, 2015) and the DP (Aboh 2004b, Fossi (2015)). As Rizzi (1997) remarks, splitting the CP was influenced by Pollock's (1989) split-IP hypothesis that proposes that

the IP domain be split into projections including AgrP, AspP and NegP that, depending on the cases, license verb movement in languages such as English and French. Fominyam & Šimík (2017) further point out that predecessors of the Cartographic enterprise include Laka (1990), Brody (1990, 1995) and Tsimpli (1995). From the perspective of the CP, various linguistic phenomena have been attributed to the domain which is generally referred to as the left edge of the clause, the left periphery or the pre-IP position. Most of these are discourse-related facts such as topicalisation, focalisation and evidentiality; and speech modality markers such as interrogatives. Rizzi (1997: 281) argues that

the complementiser layer typically heads free functional morphemes, and hosts topics and various operator-like elements such as interrogative and relative pronouns, focalized elements, etc.

As far as interrogatives are concerned, the types of questions that are generally studied in relation to the CP are *wh*-questions and related types (Rizzi 2004; Bassong 2010, 2014; Biloa 2013; Kengne 2015). It was not long ago that polar questions were given such a twist. Aboh (2004c, 2016), for example, proposes an analysis of this type of questions in which they are accounted for by two syntactic operations, namely snowballing movement and generalised pied-piping,<sup>1</sup> as the sequence in (1) shows. (1a) is from Gungbe, and (1b) from Fongbe. As Aboh (2016: 151) remarks, “the particle is a floating low tone (i.e. a supra-segmental element) in Gungbe, but a full segment in Fongbe”. He also points out that the focus particle appears with low tone in, for example, declarative contexts (*wè*). In polar questions, there is an additional low tone on the focus marker as (1a) shows. The second or additional low tone marks the clause as interrogative. As such, there is double low tone on *wè* (*wè̀*). One is selected from the numeration (on the focus marker) and the other one is the result of polar questioning. The focus particle *wè* – which marks the clause as a whole – clusters close-finally together with the question markers (here, a floating low tone in Gungbe, but a full segment in Fongbe). These constructions are felicitous in a context where a speaker being exasperated by the cries of the child asks whether s/he has not yet eaten as planned.

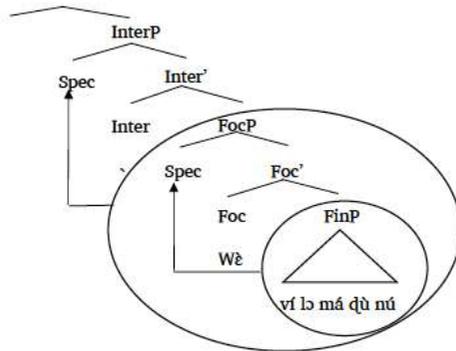
- (1) a. *Ví l̃ má q̃ù nú wè̀?*  
child DET NEG eat thing FOC.INTER  
‘Has the child not eaten (yet)?’
- b. *Ví ò q̃ù nú ǎ wè̀ à?*  
child DET eat thing NEG FOC INTER  
‘Is it not the case that the child has eaten (as expected)?’

In accounting for the distribution of these discourse markers in relation to the expression of negation in Gbe, Aboh (2016) argues that the Gungbe example in (1a) results from snowballing movement of the proposition (represented here by FinP) into [spec FocP], forming the sequence *ví ló má òù nú wè!* [child DET NEG eat thing FOC] ‘the child has not eaten’ in (2).

- (2) *Ví ló má òù nú wè...!*  
 child DET NEG eat thing FOC  
 ‘The child has not eaten (yet)...’

In the context of a yes/no question like (1a), he continues, the sequence in (2) further pied-pipes to [spec InterP], whose head ‘Inter’ is expressed by the floating low tone ‘’, thus generating the final *wè* represented in (3)<sup>2</sup> below (the floating low tone heads InterP). The Tree diagram extends to the Fongbe example in (1b) in which case *à* realises ‘Inter’.

- (3)



All in all, the proposed analysis (Aboh 2016) suggests that tonemes and segments can be functional heads comparable to Topic and Focus heads in Gungbe and Fongbe and as such trigger syntactic movements under Cartographic assumptions. In the same paper, Aboh extends the previous analysis to French yes/no questions as shown in (4) below. His argument is rooted in the fact that, just like in the Gungbe and Fongbe cases presented above, French yes/no questions may be pronounced with a final rising contour (4a). (4b) involves complex inversion (Kayne & Pollock 2001), while (4c) includes the ‘question marker’ *est-ce que* [is-DEM] in clause initial position (Munaro & Pollock 2005). As Aboh (2016) remarks, all the sentences in (4) have this in common that they

have the final rising contour manifested in (4a) on *venu* ‘come’.

- (4) a. *Pierre est venu?*  
 Peter is come  
 ‘Has Peter come?’  
 b. *Pierre a-t-il mangé?*  
 Peter has.3SG eaten  
 ‘Has Peter come?’  
 c. *Est-ce que Pierre a mangé?*  
 is-DEM COMP Peter has eaten  
 ‘Has Peter come?’

In this paper, I extend the preceding analysis to the type of  $\text{\textcircled{I}}\text{g\textcircled{a}mb\grave{a}}$  questions illustrated in (5).

- (5) a. *Mé nà pfé zhuntsɔ á?*  
 b. *Mé nà pfé zhuntsɔ nɔ?*  
 c. *Mé nà pfé zhuntsɔ bé lá?*  
 child DEM eat food Q  
 lit. ‘This child has eaten food?’  
 ‘Has this child eaten food?’

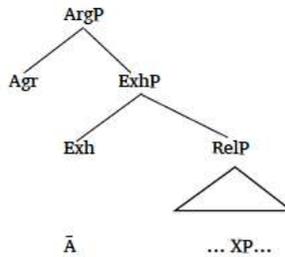
I argue that just like in the sentences presented in (1-4) above, polar questions in  $\text{\textcircled{I}}\text{g\textcircled{a}mb\grave{a}}$  result from snowballing movement, in some cases (negation and focus), and generalised pied-piping in the sense that they are manifested by the final question particles *á*, *nɔ*, *bé-lá*, some segmental alternations ( $\text{\textcircled{a}}$  into  $\text{\textcircled{e}}$ ) and tonemic specifications (high tone), depending on the context, that embed syntactic features similar to other formal features manifested by the syntax under Cartographic assumptions. When focus is expressed as shown in (6), I show that the same syntactic processes take place, with the sole difference that unlike in the Gungbe and Fongbe examples in (1), the focus particle  $\bar{a}$  in (6) appears left-adjacent to the constituent in focus and that ex-situ focus in the language triggers clausal-final  $\bar{a}$ -insertion. The particle to the left of the Q-marker in (6) could be analysed as a clausal determiner akin to the ones observed in Akan and Ga (Renans 2016, Korsah 2017) in cases of clefted constructions. Until evidence for this is provided, I gloss it PART<sup>3</sup> ‘particle’.

- (6)  $\bar{A}$  pà mà ne Zhan kà pe  $\bar{a}$  nɔ?  
 FOC bag POSS REL John P2 take PART Q  
 ‘Is it my bag that John took?’

I give focus constructions in  $\text{\textcircled{I}}\text{g\textcircled{a}mb\grave{a}}$  cleft-like (ex-situ) and pseudo-cleft (in-situ) interpretations in which cases foci have the semantic

import of exhaustivity. Here, the particle  $\bar{a}$  helps identify the entity in focus as the element for which the predicate holds true from the set of alternatives triggered by focalisation (see Kiss 1998). I further give the language a uniformitarian analysis in which case  $\bar{a}$ -foci behave exactly like particle-foci in other particle-type languages in that it has EPP features. As such, unlike Gungbe, Basa'a, Tuki and Duala, for example, where these features trigger overt movement of the constituent in focus to the right of the focus marker, they could be checked by movement at Logical Form (LF) or copy movement with PF deletion in ɪgɛmbà. I further propose that the tree diagram in (7) below accommodates  $\bar{a}$ -focus constructions in the language. The focused XP surfaces in Spec-RelP to establish a pronoun-antecedent agreement relationship between the moved foci and the relative pronoun.

(7)



The rest of the paper is organised as follows. Section 1 sets the stage by providing related information about the language. It lays emphasis on how other types of questions (*wh*, echo and alternative) are obtained in the language. Section 2 introduces the reader to some of the tenets of the Cartographic program. Section 3 addresses the core issue the paper sets out to analyse, namely that tonemes and segments can be functional heads that trigger syntactic rearrangement operations in the forms of snowballing movement and generalised pied-piping. Section 4 extends the analysis to focalisation in the language. Section 5 concludes the paper and draws potential implications.

## *2. Setting the stage: background on ɪgɛmbà.*

ɪgɛmbà is a Grassfields Bantu tone language spoken in the West region of Cameroon (also known as the Bamiléké area). Its speakers are located in some of the villages of the Haut-Plateaux and the Menoua Divisions including Bamendjou, Baméka, Bansa and Balessing (<eth-

nologue.com/17/language/azo/>). Ethnologue further points out that it is a sub-variety of South Ghomálá'. As far as I am aware, comprehensive accounts of the grammar of the language are rare. From a Generative grammar perspective, see works by Fossi (1997, 2006, 2015).

### 2.1. Basic word order.

Just like many other Bantu languages, ʔgêmbà is an SVO language with a rich verbal morphology as shown in (8) below. The data of this paper come from my native competence; some sentences were however submitted to another speaker for double-check. (8a) is an intransitive unergative sentence; (8b) an intransitive unaccusative sentence and (8c) a transitive sentence. In double-object constructions, the direct object precedes the indirect object as shown in (8d). Adjuncts, in root clauses, typically appear post-verbally as in (8e). From (8), we can see that the word order is constantly SV and SVO. Any other word order manifestation could well be a case of leftward movement or adjunction. Recall that Kayne's (1994) Antisymmetry of Syntax and Linear Correspondence Axiom (LCA) forbid rightward movement or adjunction and proposes that the SVO word order applies cross-linguistically and that any other word order manifestation is a case of leftward movement or adjunction (see Biloa 2015). As for tone, ʔgêmbà has five tones: falling (à), rising (á), mid (ā), fall-rising (ǎ), and rise-falling (â).<sup>4</sup>

- (8) a. *Tadjò wwuḥ.*  
Tadjò fall.PST  
'Tadjò fell'.
- b. *Mèsàkú lè sṣu'.*  
student P3 come  
'A student had come'.
- c. *Mèsàkú ne kà pe pà má.*  
student DEM P3 take bag POSS  
'That student took my bag'.
- d. *Tadjò kèè há pà mà mbə Fotso.*  
Tadjò P1 give bag POSS PREP Fotso  
'Tadjò gave my bag to Fotso'.
- e. *I kà sṣu' zhó.*  
3SG P2 come yesterday  
'S/he came yesterday'.

### 2.2. Verbal morphology

ʔgêmbà marks TMA by the use of particles as in many African languages. The particles *kèè*, *kà* and *lè*, for example, signal the earlier-today past, the yesterday/recent past and the remote past respectively; *pü* the immediate future tense and *fà* and *hò* the distant future. *Nà'* is the mark-

er of the perfective aspect and *ssih/hò*, the progressive. *Ròh*, *fìh* mark certainty and possibility respectively. The TMA markers above, which are not exhaustive, can be classified as in (9)<sup>5</sup> below

(9)

a. TENSE	MARKERS
Past tenses	
P1 earlier today	<i>kèè</i>
P2 yesterday or earlier	<i>kà</i>
P3 remote past	<i>là</i>
Future tenses	
F1 immediate future <i>pì</i>	
F2 distant future	<i>hò/fà</i>
b. Aspect	
Perfective	<i>nà'</i>
Progressive	<i>ssih/hò</i>
c. Mood	
Certainty	<i>ròh</i>
Possibility/doubt	<i>fìh</i>

These markers appear in a rigid order in constructions where the three (TMA) are manifested. They can also appear individually in a pre-verbal position. Iḡgâmbà features no overt subject marker as in other Grassfields Bantu languages (Awing, for example – see Fominyam & Šimík 2017). Tense can also be inferred contextually (in narratives).

There are two negation strategies in the language: plain negation and discontinuous negation. As Fominyam & Šimík (2017) remark for Awing, there is no clearly discernible semantic difference between these two strategies. This may extend to Iḡgâmbà. The plain negation, illustrated in (10a), involves the prefix *kà*. The discontinuous negation is illustrated in (10b). It involves two negation markers: the prefix *cò/kà* (glossed NEG1), located in the same templatic position as *kà*, and the morpheme *bà* (glossed NEG2), located in surface clause-final position. *Cò* is associated with a future reading (10b) and *kà* with present and past readings (10c). These strategies are also attested in Awing and other Bantu languages (Devos & van der Auwera 2013, whose glossing convention I follow).

- (10) a. *I kà sù'.*  
 3SG NEG come  
 'S/he did not come'.  
 b. *I cò sù' bà.*  
 3SG NEG1 come NEG2  
 'S/he will not come'.  
 d. *I kà sù' bà.*  
 3SG NEG1 come NEG2  
 'S/he did not come'.

### 2.3. Questioning in Ìḡḡmbà

Ìḡḡmbà makes use of a variety of strategies for questioning. The following types of questions are discussed below: *wh*-questions,<sup>6</sup> polar questions, echo-questions and alternate questions. *Wh*-elements can be classified in the language into arguments, referential and non-referential adjuncts as exemplified in (11). One of each type is used in the questions in (12). In (12a), a direct object is questioned. (12b) and (12c) are examples of referential and non-referential adjunct questioning respectively.

- (11) a. argument:                    *wɔ́* ‘who’; *kɔ́* ‘what’  
 b. referential adjuncts: *síh* ‘when’, *dí’-kɔ́* ‘time’, *hó* ‘where’  
 c. non-referential:            *ḡḡà-kɔ́* ‘how’, *nnòh-kɔ́* ‘why’
- (12) a. *Wóp kà pe kɔ́?*  
           3PL P2 take what  
           ‘What did they take?’  
 b. *Pù hó sù’ dí’-kɔ́?*  
           2PL F2 come at what time?  
           ‘At what time will you come?’  
 c. *Ò pe pà mà nnóh-kɔ́?*  
           2SG take bag POSS why  
           ‘Why do you take my bag?’

As the constructions in (12) above show, *wh*-elements may appear in-situ in the language. When they are fronted, the focus particle *ā* becomes obligatory as shown in (13) below. (13a) and (13b) are both ungrammatical without *ā*. This leads to the conclusion that Ìḡḡmbà is both a *wh*-in-situ and ex-situ language. In in-situ contexts, we may argue that the *wh*-criterion (Rizzi 2004, 2006) is satisfied by movement at LF, as proposed in other *wh*-in-situ languages such as Mandarin Chinese (Cheng 1991), Basa’a (Bassong 2010), Mèdúmbà (Gambarage & Keupdjio 2014), Duala (Kengne 2015) and Cameroonian English (Fongang 2016). Evidence for such a proposal needs to be presented. This falls outside the scope of the present paper and could well be an interesting topic for future research.

- (13) a. *\*(Ā) kà e wóp kà pe \*(ā)?*  
           FOC what REL/COMP 3PL P2 take PART  
           lit. ‘It is what that they took?’  
           ‘What did they take?’  
 b. *\*(Ā) dí’-kɔ́ e pù hó sù’ \*(ā)?*  
           FOC at what time REL/COMP 2PL F2 come PART  
           lit. ‘It is at what time that you will come?’  
           ‘At what time will you come?’

I also think the constructions in (13) should be analysed as clefts for pragmatic and syntactic reasons. Pragmatically, they trigger exhaustive reading in the sense that the *wh*-elements, *kò* ‘what’ and *dì’-kò* ‘when’ respectively, are identified as the maximal sets for which the predicate holds true in the spirit of Kiss (1987). Syntactically, *wh*-fronting with  $\bar{a}$  splits the constructions into two: the matrix or main clause  $\bar{a}$  *kò* [FOC what] ‘it is what’ in (13a) and the remnant *wóp kà pe* [3PL P2 take] ‘they took’ is introduced by the relative pronoun/complementiser *e* ‘that’ which serves as the subordinator. I will return to this when discussing focalisation in Section 5 of the paper.

Another interesting observation in relation to (13) in the obligatory presence of the particle  $\bar{a}$ , which I believe is best analysed as a clausal determiner of the kind identified in Akan and Ga (Renans 2016, Korsah 2017) in cleft constructions. As such, when it attaches to the VP, it marks the event as definite. This is so because in (13a), the event of taking is interpreted as the unique action the speaker undertook. This knowledge is shared by the two speakers who know that the event ‘taking’ is possible probably because the ‘taker’ has the right to take from the hearer in the context of the conversation or because the hearer’s bag is big enough to suggest that an action (here taking) has taken place. Besides, just like in Akan, such determiners associated with VPs appear in relative clauses, because-clauses and if-clauses (see Renans 2016). Recall that *ex-situ* constructions in the language are clefts and as such feature a relative clause. Also recall that Renans (2016) has identified such determiners in cleft constructions. We will return to this in future research.

Non-referential adjuncts resist fronting even when associated with the focus particle  $\bar{a}$  as the limited grammaticality of (14) below shows.

- (14) ? $\bar{A}$  *nnóh-kò e                    ɔ    pe    pà    mà    \*( $\bar{a}$ )?*  
 FOC why        REL-COMP 2SG take bag    POSS PART?  
 lit. ‘It is why that you take my bag?’  
 ‘Why do you take my bag?’

Embedded questions are introduced by the ask-verb *hɔncà* followed by the complementiser *mbà-ye* or *mbe’* ‘if’ as illustrated in (15).

- (15) *I    ssih    hɔncà    mbà-ye/mbe’    pà    pì    su’    \*( $\bar{a}$ ).*  
 3SG PROG ask        COMP                    2PL F1    come PART  
 ‘S/he is asking if you will come’.

Echo-questions are formed by inserting the particle *ŋgà* in clause-initial position and the question marker *á* or *nà-lá* or *bé-lá* in clause-final

position as in (16). (16b) and (16c) are the echo-questions that derive from (16a). The basic difference between (16b) and (16c) is that (16c) is licit in a context where a speaker insists on having a cleat-cut answer from her/his interlocutors. *Á* is used in a context where the speaker expects someone to come and is just asking the question to confirm their presence.

- (16) a. *Pù pí sù'.*  
2PL F1 come  
'You will come'.  
b. *Ŋgè pù pí sù' á?*  
ECHO<sup>7</sup> 2PL F1 come Q  
'You will come?'  
c. *Ŋgè pù pí sù' nà-lá?*  
ECHO 2PL F1 come Q  
'You will come?'

Alternative questions<sup>8</sup> are formed by using the coordinator *ke* 'or' as the construction in (17) shows.

- (17) *Wóp kè pé pà mà ke màtáp mà?*  
3PL P2 take bag POSS or shoes POSS  
'They took my bag or my shoes?'

In this section, I have provided background information on *Ŋgêmbà*. The importance of the section stems from the fact that the issues discussed therein are essential for the proper understanding of the core proposal I make in this paper. The next section gives an account of the theoretical foundation that guides the proposal I make in Sections 4 and 5.

### 3. *The Cartographic enterprise*

Research within the Cartographic landscape builds on Chomsky's (1986) view that the left periphery, the position structurally higher than the subject, consists of only a functional projection. Rizzi (1997) uses data from Italian and English to show that unlike the unitary approach to the CP adopted in much work before him, the left periphery is 'populated' by an array of strictly ordered functional projections each corresponding to formal features that trigger movement from within the clause to satisfy criterial requirements. This notion of feature-driven movement is reminiscent to the Minimalist assumption generally referred to as the checking theory wherein there is no free movement or adjunction in the syntax (Last Resort). Every syntactic reordering operation must be motivated by the desire of a probe to find

an appropriate goal with which it has matching features. As such, within the Cartographic approach, Rizzi (1997) and subsequent works (Rizzi 2004, Aboh 2004, Belletti 2004 etc.) propose that the CP be split into functional projections including ForceP, TopP, FocP and FinP. ForceP and FinP delimitate the left periphery upward and downward. TopP and FocP are sandwiched between ForceP and FinP. ForceP types the sentence as declarative, question, relative etc., following Cheng's (1991) discussion of clause-typing. FinP encodes the agreement and tense relations between TP and CP. In other words, it determines finiteness. Each of these projections are headed by a constituent that, depending on the language, could be overtly or covertly spelled-out. The features therein trigger movement of corresponding constituents to their specifier positions. Following this idea of movement in the sense of feature-driven, Cartography generally assumes a one-to-one mapping between designated functional projections and their interpretations at LF (Cinque & Rizzi 2010). As such, focal interpretation, for example, is related, depending of the language to syntactic positioning [Spec-FocP], morphological marking (overt particles like in many African languages) and intonational marking (in languages where focus may be manifested by a change in the supra-segmental features of the sentence (English and Hungarian, for example). Within Cartographic assumptions, all these strategies for focus marking are manifested in the syntax as formal features that may trigger syntactic operations and lead to specific interpretations. A topic interpretation, for example, is associated with a topic-criterion (see Rizzi's 2006 discussion of criterial heads) that can be manifested syntactically, morphologically or prosodically in the narrow syntax. This topic criterion triggers syntactic rearrangement operations for topic feature checking (satisfaction of the topic criterion) and for the interpretation of the moved element as topic. In the literature, the assumed position for the topicalised constituent is [Spec-TopP]. The Topic head, in Rizzi's (2006) terms says 'interpret my specifier as the topic and my complement (XP) as the comment'. The same thing applies to foci and interrogatives that, in Cartographic terms, are associated with a focus criterion and an interrogative criterion. The Foc head suggests that the specifier and the complement should be respectively interpreted as focus and as presupposition. Aboh (2010) argues extensively that these features are part of the numeration, just like other formal features such as tense and aspect.

To sum up, the proposal made in this paper draws heavily from the assumptions of the Cartographic enterprise. As mentioned in the first section of the paper, Aboh (2016) argues that clause-final tonemes in yes/no questions in Gungbe and Fongbe should be analysed as functional heads similar to the Foc-head and Top-head exemplified above in

that they are manifested in the syntax as formal features that trigger two types of syntactic operations, namely snowballing movement and generalised pied-piping. I adopt the same approach to ʎgâmbà polar questions in this paper. I do this in the next section.

#### 4. Tonemes and segments as functional heads in ʎgâmbà.

This section gives an account of how polar questions are formed in ʎgâmbà and proposes that tonemes and segments that are generally associated with these types of questions be analysed as functional heads. The sentences in (19) are all examples of yes/no questions in the language depending on context. They all derive from the input declarative sentence in (18). As (18) and (19) below show, there is no surface word order difference between the input declarative sentence and the questions as observed in languages such as English and French that are manifested in (20). (20a) is from English and (20b) from French. The strategy adopted by English for yes/no questions is generally referred to as subject-auxiliary inversion or T-to-C movement, where the head I of IP undergoes head-to-head movement to the head C of CP. In other cases, do-support is required and the same process of subject-auxiliary inversion/T-to-C movement applies (Radford 2009). Kayne & Pollock (2001) refer to the syntactic operation manifested by the French example in (20b) as a case of complex inversion (although this is not the only interpretation attested in the literature). The absence of the final question markers in (19) will give them a declarative reading akin to that of the input sentence in (18). These sentences contrast with the echo-questions in (16b-c) which are formed by inserting the particle *ɲgɔ̀* in clause-initial position and the question marker *á* or *nà-lá* or *bé-lá* in clause-final position.

- (18) *Mé nà pfé zhuntsɔ.*  
 child DEM eat food  
 ‘This child has eaten food’.
- (19) a. *Mé nà pfé zhuntsɔ á?*  
 b. *Mé nà pfé zhuntsɔ ná?*  
 c. *Mé nà pfé zhuntsɔ bé-lá?*  
 child DEM eat food Q  
 lit. ‘This child has eaten food?’  
 ‘Has this child eaten food?’
- (20) a. Has John taken his bag?  
 b. *Jean a-t-il pris son sac?*  
 John has-3SG take POSS bag  
 ‘Has John taken his bag?’

The constructions I am interested in are the ones exemplified in (19). They all surface with the final question particles *á*, *ná* and *bé-lá*. *Á* is licit in a context where the speaker assumes the child has eaten and is just asking the question to confirm such a fact. While *nà* appears in neutral contexts, *bé-lá* manifests strong insistence in a context where, for example, a speaker has already uttered (19b) and yet did not receive an answer. He uses the *bé-lá*-form to insist. Although these particles seem to trigger different semantic interpretations, it can rightfully be said that they have the same syntax. As such, just like focus markers, for example, that all project a FocP whether informative or identificational, these particles, by virtue of signalling polar questioning, all project an InterP. Also, these particles are comparable<sup>10</sup> with what Aboh (2016) refers to as a floating low tone (i.e. a supra-segmental element) in Gungbe, as shown by the full segment of Fongbe in (1a-b) above, repeated here under (21a-b). Recall that the floating low tone associates with the focus marker *wè* to give *wè*.

- (21) a. *Ví l̃ má d̃ù nú wè?*  
 child DET NEG eat thing FOC.INTER  
 ‘Has the child not eaten (yet)?’
- b. *Ví ò d̃ù nú ǎ wè à?*  
 child DET eat thing NEG FOC INTER  
 ‘Is it not the case that the child has eaten (as expected)?’

Both the segmental question marker *à* of Fongbe and its equivalents in ɪgɔ̀mbà, namely *á*, *nà* and *bé-lá*, share the same surface syntax.

In focus constructions where there is need to mark the clause as a whole, these markers can occur clause finally with the focus particle *lè*.<sup>11</sup> This is shown in (22). (22a) is a declarative sentence in which *lè* is used to focus the whole event. It has a re-affirmative or insistence presupposition, as you can read from the brackets.

Example (19c) appears to be the result of a number of changes. First, it has to be said that negative sentences such as (22a) cannot be questioned without discontinuous negation. In other words, NEG2 that, following Aboh (2016), relates to the left periphery, must be projected in *lè*-focus interrogative constructions. This would semantically be expected, if we assume, as we will see below, that NEG2 has some evidential meaning. Evidentiality and insistence are not mutually exclusive. The change that triggers our attention appears to be segmental. Recall that the form *bé-là* in interrogative constructions marks the idea of insistence (see (19) and related comments). The same applies to *lè*-focus marking (22a). The derivation for (19c) could be said to go as follows. In discontinuous negative constructions, *bà* (NEG2) appears clause-finally

and triggers the reading we identified above (something evidential in the left periphery). When such constructions are polar-questioned,  $\partial$  of NEG2  $b\grave{a}$  changes into  $b\acute{e}$  with the low-high tonemic specification as shown in (22c). If we stop at this level, we could argue that segmental and tonemic changes mark polar questions in  $\text{Ŋg\^{\text{e}}mb\grave{a}}$ . Given that the derivation concerns (19c), let us continue. In discontinuous negative  $l\grave{e}$ -focus constructions, we have the resulting sentence in (22d). If that sentence is further polar-questioned, we will have the resulting sentence in (19c), repeated here under (22e) with its correct reading. Here, two segmental changes occur, namely  $\partial$  of  $b\grave{a}$  and  $e$  of  $le$  into  $\epsilon$  of  $b\acute{e}$  and  $a$  of  $la$  respectively. The most plausible reason for this, at least for now, is that these changes are a result of the desire to ease pronunciation. Other related rules in phonology include gliding, vowel deletion and vowel/consonant epenthesis (to avoid hiatus) and assimilation. Tonemic changes also take place. The first affects  $\epsilon$ , and the second touches  $a$  as you can see below. It should be made clear that all the sentences in (22) are possible in  $\text{Ŋg\^{\text{e}}mb\grave{a}}$  in the various contexts I mentioned in the proposed analysis.

- (22) a. *F\grave{o}g\grave{a}n k\grave{a} mpf\acute{e} l\grave{e}*.  
 Fongang NEG eat FOC  
 ‘Fongang did not eat (as I have been telling you)’.
- b. *M\acute{e} n\grave{a} k\grave{a} pf\acute{e} zh\grave{u}nts\grave{o} b\grave{a}?*  
 child DEM NEG eat food NEG2.FOC  
 ‘It is the case that this child has not eaten (yet)?’
- c. *M\acute{e} n\grave{a} k\grave{a} pf\acute{e} zh\grave{u}nts\grave{o} b\acute{e}?*  
 child DEM NEG eat food NEG2.FOC.INTER  
 ‘Is it not the case that the child has eaten (as planned)?’
- d. *M\acute{e} n\grave{a} k\grave{a} pf\acute{e} zh\grave{u}nts\grave{o} b\grave{a} l\grave{e}...!*  
 child DEM NEG eat food NEG2 FOC  
 ‘This child has not eaten (yet, as I see from the way s/he behaves)’.
- e. *M\acute{e} n\grave{a} pf\acute{e} zh\grave{u}nts\grave{o} b\acute{e}-l\acute{a}?*  
 child DEM eat food NEG2.FOC.INTER  
 ‘Has this child eaten (as I have been asking you based on his behaviour)?’

This clearly shows that certain types of polar questions, as we describe above, can be obtained following segmental and tonemic changes/specifications.

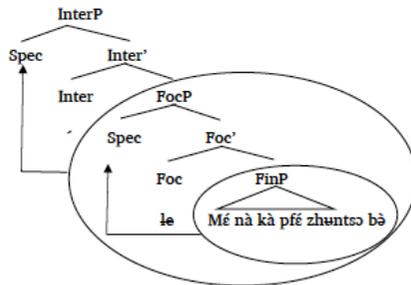
I propose in line with Aboh (2016) that in accounting for these information structure markers in relation to the expression of negation in  $\text{Ŋg\^{\text{e}}mb\grave{a}}$ , (22d), for example, results from snowballing movement of the proposition into [Spec FocP], forming the sequence *M\acute{e} n\grave{a} k\grave{a} pf\acute{e} zh\grave{u}nts\grave{o} b\grave{a} l\grave{e}* [child DEM NEG eat food NEG2 FOC] ‘the child has not eaten’ in (23a). Such a sentence will be felicitous in a context where the

speaker is exasperated by a repetitive question of an interlocutor about why the child is crying. This also holds for Gbe, as the same context is identified by Aboh (2016).

- (23) a. *Mé nà kà pfé zhuntsɔ̀ b̀̀ lè...*  
 child DEM NEG eat food NEG2 FOC  
 ‘This child has not eaten (yet)’.
- b. *Mé nà kà pfé zhuntsɔ̀ b̀̀?*  
 child DEM NEG eat food NEG2.FOC  
 ‘Has this child not eaten (yet)?’

A different alternative would be to suggest that in the context of a yes/no question like (23b), given the existing assumption in the literature that every question is inherently focus, *lè* in (23a) transfers its focus features to NEG2 that, as we said above is related to the CP in that it encodes negative evidentiality. This idea of negation being associated to focus in the left periphery is not new in the literature on Grassfields Bantu languages (see Nyomy 2019 for examples from Awing). With this in mind, the focus particle *lè* is not needed in its full form in the derivation of the clause. This is manifested by the segmental alternation on NEG2 *b̀̀* where *ɔ̀* becomes *ɛ̀* in (23b). (23b) further pied-pipes to [Spec InterP], whose head is expressed by the floating high tone ‘’ thus generating *b̀̀* in (22b) and represented in (24).

(24)



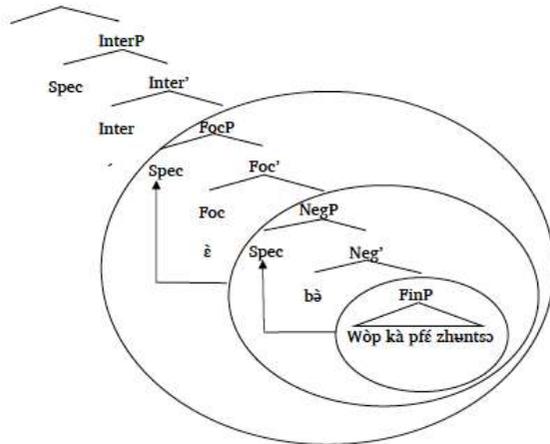
Recall that Aboh’s (2010) analysis of clausal-final negation in Fongbe as belonging to the complementiser system and encoding (negative) evidentiality extends to discontinuous negative constructions in Ịgâmbà, where NEG2 *b̀̀* appears clause-finally. As such, it should be analysed on a par with left-peripheral markers (e.g. focus, inter) which, we saw above, occur to the right edge when they mark the proposition as a whole (see Aboh 2016). Following this, the complementiser system

involves a negative phrase that projects below the focus phrase. Neg<sup>0</sup> attracts the proposition in its specifier thus forming the discontinuous negative construction in (25a). This can be further marked for focus, as in (25b), and further questioned as in (25c). The tree diagram in (26) represents the derivation of (25c).

- (25) a. *Wòp kà pfé zhuntsɔ̀ bà.*  
 3PL NEG1 eat food NEG2  
 ‘It is not the case that they have eaten’.
- b. *Wòp kà pfé zhuntsɔ̀ bà le.*  
 3PL NEG1 eat food NEG2 FOC  
 ‘It is not the case that they have eaten (yet)’.
- c. *Wòp kà pfé zhuntsɔ̀ bɛ́?*  
 3PL NEG1 eat food NEG2.FOC.INTER  
 ‘It is not the case that they have eaten (as planned)?’

As (26) shows, high tone marks the interrogative nature of the clause and as such falls under the head Inter of InterP. ə of NEG2 *bà* undergoes the phonological process that allows it to receive the focus features of *le*. This is manifested in the segmental alternation on NEG2 *bà* where ə becomes ε. High tone marks interrogativeness and as such, the tonemic specification on *ɛ̀* changes to *ɛ́*. Following this, tonemes can be analysed as functional heads and following Cartographic assumptions, can trigger syntactic rearrangement operations. I follow Aboh (2016) in referring to these as snowballing movement and generalised pied-piping.

(26)



It appears that not only tones can mark interrogative constructions

in the language as we saw with the sentences in (19) above. The other constructions in (19) have a lot in common with the Fongbe constructions we presented in (1b) and repeated in (21b) above. Just like Fongbe à that Aboh (2016) analyses as the manifestation of the head Inter of InterP, á, and nǎ in (19) are manifestations of Inter. They correspond (in terms of syntax) to the tonemic specifications we identified with bɛ in (22) and (25) above and as such trigger generalised pied-piping of the whole proposition to their specifier to mark the whole construction interrogative or to check the interrogative features InterP embeds. With these facts in mind, tonemes and segments can head functional projections and trigger the internal merging operations we identified from the onset.

##### *5. The feature focus and generalised pied-piping in Ɔgɛmbà.*

In this section, I extend the analysis proposed above to standard<sup>12</sup> focus constructions in the language. I start the section with an account of how left peripheral foci are expressed in the language. This will be followed by the analysis of such focus constructions when they are associated with polar questions. In the first case, I show that just like many Cameroonian languages, Ɔgɛmbà is a particle-type language when it comes to the expression of IS-facts. It features topic and focus markers that have a quasi-similar surface syntax to that observed in other Grassfields Bantu languages such as Awing (see Fominyam 2012, 2015, Fominyam & Šimík 2017).

Topicalisation is achieved through the particle à that appears right-adjacent to the topic element just like Gungbe yà (Aboh 2004) and Basa'a bɛ-k (Bassong 2010, 2014). Foci, on the contrary, have a syntax different from topics in the language. The focus particle ā appears left-adjacent to the element in focus, unlike is the case with topicalisation. This syntactic position is different to that observed in Gungbe, Basa'a, Tuki and Duala, for example, where focus particles appear right-adjacent to foci and are analysed as manifestations of the Foc-head. I assume that left peripheral foci in Ɔgɛmbà should be given a cleft-like analysis in which case they have a morpho-syntax similar to that of Awing and Cameroon Pidgin English (see Fongang 2019). In these languages, focalisation has the following characteristics: (i) they are cleft constructions with two clauses: a matrix clause and a subordinate clause introduced by relativisers/complementisers that could have overt or null spell-out; (ii) such focus constructions have a semantics akin to that of English cleft constructions<sup>13</sup> in that they necessarily trigger an exhaustive focus reading, where the process of

focalisation helps to identify an entity (the focus) as the maximal option within an alternative set for which the predicate holds true (see Kiss 1998 and Velleman *et al.* 2012). Given these facts, it seems plausible to adopt the analysis proposed by Fominyam & Šimík (2017) for Awing where the focalised constituent is part of the complement of the clause.

But, the ɲgɔ̀mbà data seem to suggest a different line of analysis. I argue that in left peripheral  $\bar{a}$ -focus constructions,  $\bar{a}$  heads an ExhP projection that has EPP features. Unlike in other particle-type languages such as Gungbe and Basa'a, these features are checked at LF and as such there is no overt movement operation to [Spec-ExhP] and foci land in a position right-adjacent to the focus particle for two reasons. It could do so to 'type the clause'<sup>14</sup> as cleft and to establish a pronoun-antecedent relationship between the moved foci and the null/overt relative pronoun that splits the clause into two. As such, either the focused XP lands in Spec-RelP or Spec-CleftP (The label cleftP is adopted from Biloa 2015) The most plausible analysis, in my opinion, will be to assume that foci land in Spec-RelP to allow local Spec-head agreement between the focus element and the relative pronoun. This is reminiscent of English relative clauses or cleft constructions where there is an agreement relation between the relative pronoun and its antecedent as shown in (27)

- (27) a. *The boy who is in the garden is my brother.*  
b. *The table which you carried was bought a year ago.*

It is generally argued that in (27a), the DP 'the boy' cannot agree with the relative pronoun 'which' because 'which' co-occurs with [-human] and never with [+human] entities. In ɲgɔ̀mbà, it could be said that focus constituents appear in Spec-RelP to allow local agreement to take place and give rise to a phonological process that makes it possible to have the different alternations in (28). This phonological process could well be related to a constraint on hiatus. It appears that languages of the world resort to different strategies to avoid hiatus. Some do vowel deletion; others prefer gliding or epenthesis. What is interesting here is that hiatus is a phonological process that is local in the sense of two items being close to each other. This idea of locality could well be compared to the syntactic notion of c-command (foci must directly c-command relativisers/complementisers).

The interesting fact here seems to be that the standard relativiser appears to be *e*. The language resorts to consonant epenthesis (*ne* for singular foci and *me* for plural foci) to avoid violating the hiatus constraint. In other words, when foci end with a consonant, *e* is correct (see 28b). When they end with a vowel, *m*-epenthesis takes place with plural foci

and *e* changes to *me* to ease reading. Singular foci that end with a vowel give rise to *n*-epenthesis, and *e* becomes *ne*. These operations appear to be local (Spec-head) and, as such, foci need to surface in the specifier position of the RelP projection.

- (28) a. *Ā mǎnsə me I lə zhu ā.*  
 FOC cloth-PL REL 3SG P3 buy PART  
 'It is clothes that he had bought'.  
 b. *Ā Fongang e fəndə ā.*  
 FOC Fongang REL house PART  
 'It is Fongang that is in the house'.  
 c. *Ā səkú ne I lə rò ā.*  
 FOC school REL 3SG P3 go PART  
 'It is to school that he had gone'.

*Səkú* 'school' in (28c) cannot be followed by *me* or *e* that are allowed in (28a) and (28b) respectively (see reasons provided above).

Left peripheral movement can be said to be motivated by the Exhaustiveness Criterion, following Durreleman & Shlonsky (2015). Consider the focus constructions in (30) below that exemplify left-peripheral foci in the language. In (30a), a subject DP is under focus. (30b) and (30c) are instances of object focus and adjunct focus respectively (The proposed analysis extends to other types of constituent focus (VP-focus, for example). They all derive from the input sentence in (29).

- (29) *Zhan kə pe pà mǎ zho.*  
 John P2 take bag POSS yesterday  
 'John took my bag yesterday'.
- (30) a. *Ā Zhan e kə pé pà mǎ zho ā.*  
 FOC John REL P2 take bag POSS yesterday PART  
 'It is John who took my bag yesterday'.  
 b. *Ā pà mǎ ne Zhan kə pe ā.*  
 FOC bag POSS REL John P2 take PART  
 'It is my bag that John took yesterday'.  
 c. *Ā zho ne Zhan kə pe pà mǎ ā.*  
 FOC yesterday REL John P2 take bag POSS PART  
 'It is yesterday that John took my bag'.

As (30a-c) shows, the process of focalisation has triggered overt movement of the constituents in focus to a position above IP. Such a syntactic operation, under Minimalist assumptions and later on under Cartographic assumptions, must not be free. (30) also shows that the language instantiates an overt focus marker.

Following the uniformitarian<sup>15</sup> analysis of particle-type languages,

it can be argued that the focus particle heads the FocP and has EPP features that, in Aboh's (2006, 2010) terms, are responsible for the fact that in particle-type languages, the moved foci appears in the specifier position of the FocP. (30b-c) all feature relativisers that split the constructions into two. This is reminiscent of the so-called cleft constructions identified in English and French, for example (see Kiss 1987). In the literature, English clefts constructions are generally identified syntactically and pragmatically. Syntactically, they feature a matrix clause and a subordinate clause introduced by a relativiser that, depending on the language and contexts, may be overt or covert. The matrix clause is peculiar in that it features a pronominal expletive element in sentence initial position and a copula of the be-type (see Aboh 2006). This is exemplified in (31) below. (31a) is from French, and (31b) from English.

- (31) a. *C'est au marché que je suis allé hier.*  
 EXP COP PREP market REL 1SG AUX go yesterday  
 'It is to the market that I went yesterday'.
- b. *It is John who took my pen.*  
 EXP COP John REL took POSS pen.

Data show that ɲgâmbà shares these properties although with slight differences. Recall that multifunctionality and grammaticalisation are some of the many peculiarities of languages (see Gùldeman 2002, for some examples from African languages). This seems to hold for ɲgâmbà, where  $\bar{a}$  can be used as a third person pronoun, a copula and a focus particle as the sentences in (32) below show. The use of  $\bar{a}$  as a third person singular pronoun is a property of one of the dialects of the language, the one spoken in Bamendjou.

- (32) a.  $\bar{A}$  *lâ sù'.*  
 3SG P3 come  
 'S/he/it had come'.
- b. *Zhan  $\bar{a}$  kapinda.*  
 John COP carpenter  
 'John is (only) a carpenter'.
- c.  $\bar{A}$  *pâ mâ ne Zhan kà pe  $\bar{a}$ .*  
 FOC bag POSS REL John P2 take PART  
 'It is my bag that John took'.

The fact that  $\bar{a}$  is multifunctional and can be used as a pronominal element, a copula and a focus particle lead us to conclude that in  $\bar{a}$ -focus constructions, these features are syncretised and all manifest the three parts of the matrix clause of cleft constructions of the English and French types. The only difference will be that the tense properties peculiar to English and

French have faded away in the process of grammaticalisation into focus particle. As such, the Iḡǎmbà examples in (30) do have the surface properties of clefts identified in some Romance and Germanic languages.

The second property of cleft constructions identified in the literature is pragmatic and semantic. As Aboh (2006) remarks, Kiss (1987) argues that English clefts encode exhaustive or identificational focus which

represents a subset of the set of contextually or situationally given elements for which the predicate phrase can potentially hold; it is identified as the exhaustive subset of this set for which the predicate phrase actually holds. (Kiss 1987: 1, in Aboh 2006: 30)

This view is also shared by Velleman *et al.* (2012) (see Fominyam & Šimík 2017). These facts do hold for Iḡǎmbà. Consider the constructions in (34) below. They derive from the input sentence in (33). They cannot be felicitous answers to a question that requires new information (New Information focus is morpho-syntactically unmarked in the language). They can only be felicitous in contrastive or corrective contexts in which case the process of focalisation helps identify what is correct and exhausts it. In other words, no further option is possible after *ā*-focus, as the impossibility of adding the segment *mbí-ho nss-ó* [and dress-POSS] ‘and your dress too’ in (35) below shows. This test has been run for exhaustive identification in Horvath (2010) for Hungarian and in Fominyam & Šimík (2017) for Awing. Besides, as Horvath (2010) shows, focus sensitive particles *even* and *also* cannot be licit in such contexts. This holds for Iḡǎmbà as well, as manifested in (36a-b). The focus sensitive particle *only*, that is restrictive in nature, is felicitous in the contexts where *even/also* are not as shown in (36c).

- (33) *Pù zho pà mà ke mətàp mà?*  
 2PL see bag POSS or shoe POSS  
 lit. ‘You saw my bag or my shoe?’  
 ‘What did you see, my bag or my shoe?’
- (34) a. *Ā pà mó ne pək zho ā.*  
 FOC bag POSS REL 1PL see PART  
 ‘It is your bag that we saw (and not the other; and not your bag; and nothing else)’.
- b. *Pək zho ā pà m.*  
 1PL see FOC bag POSS  
 ‘What we saw was your bag’.
- (35) a. *#Ā pà mò ne pək zho ā mbí-ho nss-óh.*  
 FOC bag POSS REL 1PL see PART and dress-POSS  
 lit. ‘It is your bag that we saw and your dress too’.
- b. *#Pək zho ā pà mò mbí-ho nss-óh.*  
 1PL see FOC bag POSS and dress-POSS  
 lit. ‘What we saw was your bag and your dress too’.
- (36) a. *#Ā mbà pà mó ne pək zho ā.*

- FOC also/even bag POSS REL 1PL see PART  
 lit. 'It is also/even your bag that he saw'.
- b. #Pàk zho ā mbà pà m̀.  
 1PL see FOC also/even bag POSS.  
 'What we saw was also your bag'.
- c. Ā nda' pà m̀ ne p̀k zho ā.  
 FOC only bag POSS REL 1PL see PART  
 'It is only your bag that we saw'.

The previous examples show that  $\bar{a}$ -focus constructions have a semantics akin to that observed in English clefts.  $\bar{A}$ -focus triggers corrective, contrastive and identificational focus. In all the three cases, there is an exhaustive import in the sense that by correcting, contrasting or identifying, the speaker who utters the sequence containing  $\bar{a}$  exhausts the choices the alternative set proposes. As such, it selects the maximal option for which the predicate holds true and gives it an exhaustive reading. This can be seen from the impossibility of adding an option when  $\bar{a}$ -focus has taken place as we saw in (35), and the incompatibility of  $\bar{a}$ -focus constructions with additive *also* and *even* (36a-b). Recall that new information focus is morpho-syntactically unmarked in the language, as shown in (37). (37a) is the question, and (37b), the answer that contains the focus.

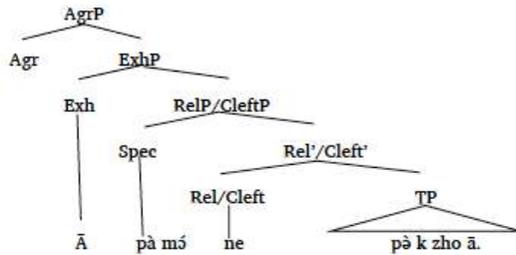
- (37) a. ́ zho ẁ?  
 2SG see WH  
 'Who did you see?'
- b. M̀ zho Tadjò.  
 1SG see Tadjò  
 'I saw Tadjò'.

Given the preceding facts, I propose that  $\bar{a}$ -focus constructions be given a cleft-like interpretation when ex-situ and a pseudo-cleft-like interpretation when they appear in-situ.

The question that remains unanswered is where foci land in in-situ and ex-situ contexts? First, the facts presented above lead us to assume that  $\bar{a}$  is not a focus marker, but an exhaustive marker, if we follow Horvath (2010). It follows that it heads an ExhP projection. But where do we locate foci in relation to the ExhP, given that they appear right-adjacent to the exhaustive marker. In languages such as Gungbe, Basa'a, Tuki and Duala, it can easily be said that focused XPs surface in [Spec-ExhP] by virtue of being left-adjacent to the 'focus marker'. Recall that Aboh (2006) argues that in particle-type languages focus projections have EPP features that require the foci to move to their specifier positions. I will adopt the same view, following the principal of uniformity, as it seems to be clear that ɲgãmbà is a particle-type language in relation to IS packaging.

The only difference would be that the EPP features in Iḡgâmbà foci are checked by movement at LF. I provided some evidence above to show that the focus element appears in the Spec of RelP to allow a local Spec-head phonological process to take place. In in-situ contexts, the focus constituent seats in the specifier position of a CleftP to type the construction as a pseudo-cleft. This is schematised in (38) below that is from (34a).

(38)



Getting back to the core issue this section of the paper analysis, namely the feature focus and generalised pied-piping in Iḡgâmbà, consider the constructions in (39) where both focalisation and interrogation have taken place. (39a) is declarative and features the surface clause-final *lè* that, as we saw above, carries some insistence interpretation. It appears with a low tone that, from a first look does not seem to add anything to the interpretation of the sentence. In (39b), the whole construction has been questioned, and the only markers at the surface level appear to be the change in segment (*e* to *ɛ*) and the tonal specification on the clause final particle *lè* (low to low-high).

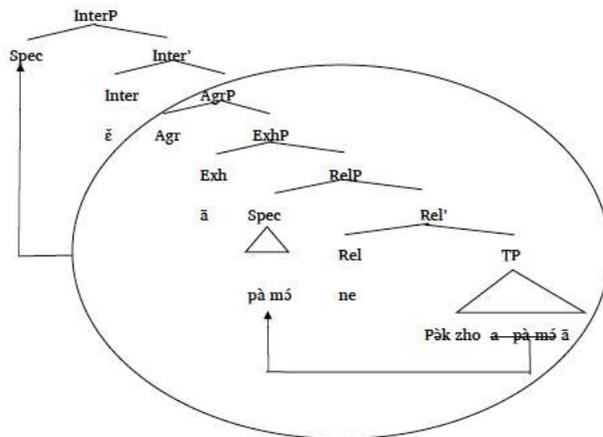
- (39) a. *Ā*    *pà*    *mós*    *ne*    *pàk*    *zho*    *lè*.  
 FOC bag POSS REL 1PL see PART  
 'It is the case that it is your bag that we saw'.
- b. *Ā*    *pà*    *mós*    *ne*    *pàk*    *zho*    *lě*.  
 FOC bag POSS REL 1PL see PART  
 'Is it the case that it is your bag that we saw?'

First, focus is morpho-syntactically marked by the particle *ā* that can move or remain *in situ*, as we have argued above (cleft and pseudo-cleft). The interaction between the two is manifested in the fact that polar questioning triggers changes in both the segmental and tonemic specifications of the clause-final element *lè*. We take these changes to mark interrogativity. With this in mind, it sounds plausible to argue that both the segmental changes above and the additional high tone mark

the clause as interrogative and, as such, head InterP, just like is the case in Fongbe and Gungbe. When these changes do not occur, (39a) is necessarily interpreted as a declarative sentence.

Following the analysis proposed by Aboh (2016) in relation to the translation of Fongbe’s segment into Gungbe’s tone, it is plausible to argue in the same line that the changes above correspond to intonation in bare yes/no questions as we discussed above. Under Cartographic assumptions, both the segment  $\epsilon$  and the high tone it features will head an InterP that has EPP features and interrogative features. Just like in the case of focus movement, the head Inter of InterP triggers generalised piped-piping of the whole proposition containing FocP into Spec-InterP. This is so because it is the whole proposition (the FocP included) that is marked interrogative. Likewise, movement of the foci to the left periphery licenses the exhaustive features under ExhP. This is schematised in (40), which is the representation of (39b). First, the focus constituent and the Exhaustive particle move from inside the clause to the left periphery where they are sandwiched between AgrP and TP. The focused phrase lands in Spec-RelP for the reasons I stated above. Once the Exhaustive features (Durrleman & Shlonsky 2015) in ExhP are checked, they are valued and the focus constituent is frozen in place following Rizzi’s (2007) discussion of criterial freezing. As such, the second movement operation for interrogative marking cannot affect the syntactic position of the foci. The whole structure then undergoes generalised pied-piping and lands in Spec-InterP to license the interrogative features embedded in InterP under Cartographic assumptions and in the spirit of Aboh (2016).

(40)



(6) above, repeated here under (41) has a lot in common with the

Fongbe example in (1b) and the ɲgɛmbà examples we analysed in (19). As (41) shows, left peripheral focus has taken place as one can see from the cleft-like reading. The major difference between (39) and (41) that both manifest ex-situ focus lies in their interpretations. While (41) can be uttered in a neutral context, (39) is only licit in a context where a speaker has consistently been saying that X took his/her bag. Another speaker then asks the question to confirm if indeed it is the case that X took the bag.

- (41) *Ā pà mà ne Zhan kà pe ā nà?*  
 FOC bag POSS REL John P2 take PART Q  
 'Is it my bag that John took?'

At the syntactic level, (41) features an instance of the particle *ā* that, as I said above, could well be a clausal determiner of the type identified in cleft constructions in Ga. It scopes over the event of taking and makes it definite. Partial evidence for this comes from the fact that VP-*ā* constructions are not licit without any contextual indication of the action of 'taking'. In fact, the speakers involved in the conversation all have it in mind that an action 'taking', has taken place, probably because the bag is no more where it was. *Ā* then marks the action of taking as definite given that no other action has taken place, unless it is related to taking (stealing, for example). One could add the segment 'he did not burn it' after *ā* in (41) as shown in (42a). (42b) is not licit without *ā*.

- (42) a. *Ā pà mà ne Zhan kà pe ā, i kà.cə tòð.*  
 FOC bag POSS REL John P2 take PART 3SG NEG.P2 burn  
 'Is it my bag that John took, he did not burn it'.  
 b. *Ā pà mà ne Zhan kà pe \*(ā), i kà.cə tòð.*  
 FOC bag POSS REL John P2 take PART 3SG NEG.P2 burn  
 'Is it my bag that John took, he did not burn it'.

Besides, just like in Akan and Ga (see Renans 2016 and Korsah 2017), these particles can appear in if-clauses and because clauses and have peculiar semantic interpretations. This is shown in (43).

- (43) *Apà kee hɔncə mbəyé pɛ sɛ' ā.*  
 daddy PST ask if 2PLU come PRT  
 'Daddy asked if you will come'.

Given that this falls outside the scope of the paper, we will not go deep into this. The intention here was merely to show that this particle has something in common with what has been analysed in Ga and Akan

as a clausal determiner. Providing further evidence for this can be an interesting topic for future research. What we can say for now is that if  $\bar{a}$  is indeed a clausal determiner, then it will surely induce generalised pied-piping to the specifier of the phrase that  $\bar{a}$  heads. The whole event will move there to be marked definite and check the definite features that projection will embed (see Aboh 2004a on this).

Coming back to the topic under discussion, (41) also features the clause-final question particle  $n\grave{a}$  that also appears in non-standard focus contexts as we saw in (19). The analysis adopted for (19) also applies to (41). As such, once ex-situ focus has taken place, the whole construction  $\bar{A} \text{ p\grave{a} m\grave{a} ne Zhan k\grave{a} pe \bar{a}$  [FOC bag POSS REL John P2 take PART] ‘it is my bag that John took’ undergoes heavy pied-piping to Spec-InterP which head is realised by  $n\grave{a}$  to be marked interrogative. This yields  $\bar{A} \text{ p\grave{a} m\grave{a} ne Zhan k\grave{a} pe \bar{a} n\grave{a}$  [FOC bag POSS REL John P2 take PART Q] ‘is it my bag that John took?’ in (41).

The proposed analysis extends to VP-focus, with the sole different that VP-ex-situ focus involves verb doubling. The non-finite copy of the verb moves to spec-RelP which is a nominalising position (probably the reason why the verb must take a non-finite form). The other copy of the verb stays in-situ. Once VP-focus takes place, the whole construction is pied-piped to Spec-InterP as we saw above. Even if we assume Aboh & Dyakonova’s (2009) parallel chain analysis for VP-focus with verb doubling or Müller’s (2016) predicate doubling by phonological copying, the same will still hold.

## 6. Conclusion

The paper argued for the analysis of tonemes and segments as functional heads in  $\text{Ŋg\grave{a}mb\grave{a}}$ , following Aboh (2016). I showed that the  $\text{Ŋg\grave{a}mb\grave{a}}$  data fully accommodate the analysis proposed by Aboh (2016), with the sole difference that left peripheral foci in the language are best analysed as cleft for syntactic and pragmatic reasons. As such, tonemes and segments have syntactic properties that trigger generalised pied-piping and snowballing movement in polar questions. When associated with focus, generalised pied-piping of the whole clause takes place to license the interrogative features under InterP, following Cartographic assumptions. Overall, the paper gives novel evidence in support of the analysis of tonemes as belonging to the syntactic component (Aboh 2016 and Korsah & Murphy 2016 amongst others) and probably paves a way for the study of IS facts in this direction. Some assumptions, from the paper, can also be made in relation to phonological marking of IS and its

interaction with speech modality markers such as interrogatives. These findings also stress the existence of grammatical interfaces, viz. syntax-phonology interface.

### *Abbreviations*

Following standard practice, ‘\*’ and ‘#’ are used for cases for which we assume that the sentence was unacceptable due to ungrammaticality, or semantic/pragmatic reasons, respectively. ‘?’ is used for marginal acceptability. \*(X) means ‘ungrammatical without X’ and (\*X) means ‘ungrammatical with X’.

1/2/3 = 1<sup>st</sup>/2<sup>nd</sup>/3<sup>rd</sup> person; AUX = Auxiliary; COMP = complementizer; COP = copula; DEM = demonstrative; DET = determiner; DP = Determiner Phrase; ECHO = Echo question marker; EPP = Extended Projection Principle; EXP = Expletive; F1 = future tense 1 (later today); F2 = future tense 2 (tomorrow or later); FOC = focus marker; INTER = Interrogative marker (polar question marker); IS = Information Structure; LF = Logical Form; MOD = mood; NEG = negation (plain negation); NEG1 = negation 1 (discontinuous negation); NEG2 = negation 2 (discontinuous negation); P1 = past tense 1 (earlier today); P2 = past tense 2 (yesterday or earlier); P3 = remote past; PART = Particle; PF = Phonological Form; PL = plural; PFV = perfective; POSS = possessive; PREP = preposition; PROG = progressive; Q = question marker; REL = relativiser; SG = singular; TMA = Tense, Mood, Aspect; TOP = topic marker; TP = Tense Phrase; WH = *wh*-question word.

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### *Notes*

<sup>1</sup> The idea of generalised pied-piping is modelled on Nkemnji’s (1995) heavy pied-piping in Nweh, a Grassfields Bantu language spoken predominantly in Lebialem, Cameroon. Following one of the reviewers’ comments, it should be made clear that these movements are two distinct operations. The idea of snowballing movement is modelled on snowballing. It refers to a situation where part of an utterance undergoes movement and becomes larger by virtue of picking up other syntactic elements on its way up. Generalised pied-piping on the other hand involves movement of a whole proposition to the specifier position of a syntactic projection, here InterP.

<sup>2</sup> As one of the anonymous reviewers rightly points out, only necessary projections are represented on the tree diagram. It is important to point out that there are topic projections interspersed between the FocP and InterP here. These have been left out intentionally. Also, they observe that it is not clear from (3) that snowballing movement and heavy-pied piping are distinct operations. The idea here is that the whole FocP undergoes movement to Spec-InterP. This is the idea behind ‘generalised pied-piping’ or what Nkernji (1995) refers to as ‘heavy pied-piping’. In (3), FinP first moves to take the focus head *wɛ* (snowballing movement). The whole chunk then undergoes generalised pied-piping to Spec-InterP where the second low tone attaches to the first one and yields *wɛ*. We would want to assume this because it is not part of the sentence that is questioned, but the whole construction, the FocP included, that is marked interrogative.

<sup>3</sup> An anonymous reviewer points out that it does not really help to gloss *ā* as ‘PART’. Although I agree with him/her on this, I have to say that, at this stage, I do not have enough evidence to provide a more specific gloss. In Section 5 of the paper, I make some observations that point to the direction that this particle could well be a clausal determiner. Given that this does not directly influence the analysis I propose here, I will leave it the way it is for now.

<sup>4</sup> A reviewer wonders why I argue that ɲgɛmbà has five tones, but yet, some syllables in (6) are unmarked for tone. Syllables are marked for tone only when need arises, based on how they are pronounced. Other rules of tone marking may be in play here, but I do not look into that in this paper. The idea behind tone and interrogativity is that some syllables are taken from the numeration unmarked for tone or marked with different tonal specifications. They receive tone or undergo tonal changes later on because of polar questioning.

<sup>5</sup> An anonymous reviewer points out that instead of providing the list in (9), I should give the cartographic structure that characterises the items in the list. I do not really think the cartography of the IP-domain is relevant to the discussion at hand. I would agree with the reviewer if the matter were about the structural spine of the CP. Besides, even if this was directly relevant to the discussion at hand, giving the structure of the IP here could constitute the topic for a whole paper, given how rich the domain is in the language.

<sup>6</sup> An anonymous reviewer wonders why the questions in (12) are not marked by a (floating) low tone here, since tone would be expected on the last constituent of the question, which is the *wh*-phrase. It appears however that *wh*-questions are not marked by tonemic specifications. They are either pragmatically or syntactically (movement) manifested.

<sup>7</sup> This stands for echo question. In fact, the big difference between echo questions and polar questions is that the former must feature the element which I gloss ECHO since it marks the difference between echo questions and polar questions.

<sup>8</sup> An interesting comment was made by one reviewer in relation to the connection between alternative questions and polar questions. They argue that *ā*-marking (polar question marking) would be expected in alternative questions based on this connection. This made it possible to test the tonemic specifications on the possessive (*mā*) in declarative constructions and in interrogatives (17 above). It appears, however, that they are different. In declarative sentences, *mā* appears with mid tone. In the context of the alternative question in (17), the mid-tone changes to low tone, just as expected under the reviewer’s remark. Recall that we have argued so far that tonemic specifications can mark sentences as interrogative in ɲgɛmbà. This would be expected under existing analyses, as the reviewer rightly points out.

<sup>9</sup> This corresponds to English echo-questions, which are associated with some segmental specifications.

<sup>10</sup> The idea of comparison here is not related to their form or nature, but rather to

what they signal. With this in mind, a floating low tone can be compared to a segment, provided they signal similar constructions in possibly different languages.

<sup>11</sup> An anonymous reviewer wonders what the difference between  $\bar{a}$ -focus and  $l\bar{e}$ -focus could be. While  $\bar{a}$ -focus is used in standard focus constructions (see note 14),  $l\bar{e}$ -focus marks broad focus and has a re-affirmative/insistence presupposition. One might also think of it as emphatic marker that serves to emphasise whole events. It originates within the left periphery and ends up to the right of the clause as a result of snowballing movement (part of the utterance that is not focus-marked moves and becomes larger by picking up focus) of the proposition to the specifier position of the FocP  $l\bar{e}$  heads.

<sup>12</sup> The term ‘standard’ here refers to the general understanding of focus constructions as being associated with presuppositions that can infer informational and identificational readings. We basically will be interested in constituent focus (DP-focus, VP-focus etc.).

<sup>13</sup> Kiss (1987) argues extensively that English cleft constructions are associated with corrective, contrastive and exhaustive readings.

<sup>14</sup> This should not be taken on a par with clause typing in the sense of Cheng (1991) that is generally assumed to be the equivalent of force (see Rizzi 1997).

<sup>15</sup> The term ‘uniformitarian’ is adopted from Aboh (2006), who claims that it is modelled from Chomsky’s (1995) Uniformity Principle.

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