

THE SYNTACTIC COMPUTATION OF INTERROGATIVE WORDS IN EUROPEAN AND BANTU LANGUAGES

**Yvon-Pierre Ndonga Ibara, Jean-Jacques Angoundou,
Robson Perrin Mberi Ngakala**

Université Marien N’Gouabi
yvon.ndongo-ibara@umng.cg
angoundoujeanjacques@gmail.com
robsonngakala@gmail.com

Abstract: *This study deals with the syntactic interpretation of wh-expressions driving data from English, Embosi, French and Lali. It transpires from discussion that feature strength and optionality that stand as two stepping stones in the literature accounting for the distribution of wh-expression are not adequate enough to explain the computation of wh-words cross linguistically. This paper succeeds to demonstrate that Embosi language violates the condition prohibiting a language to instantiate both fronting wh-words and wh-words remain in situ in interrogative sentences. Feature Activation Principle has been advocated to cope with different choices natural languages can have, that is, either front wh-word, allow wh-words to remain in situ or make use of both positions based on the idiosyncratic properties encoded in different interrogative words.*

Keywords: *Bantu languages, European languages, Wh- words, description*

Résumé : *Cette étude traite de l'interprétation syntaxique des pronoms interrogatifs (Wh) des langues anglais, embosi, français et lali. La force et le caractère optionnel qui sont considérés comme deux arguments essentiels dans la littérature au sujet de la distribution de l'expression-wh ne sont pas suffisants pour expliquer la construction des phrases interrogatives des langues. Cet article a réussi à démontrer que la langue Embosi viole la condition interdisant à une langue d'instantier à la fois le mouvement et le non mouvement des mots interrogatifs dans des phrases interrogatives. Le Principe d'Activation des Traits a été postulé pour rendre compte des choix multiples que les langues peuvent opérer en fonction des propriétés idiosyncratiques encodées dans différents mots interrogatifs.*

Mots clés: *langues bantu, langues européennes, mots interrogatifs, description*

Introduction

Wh-computation is amongst issues that distinguish languages. The present analysis aims to point out universals and idiosyncrasies regarding wh-expression cross-linguistically. Within minimalism framework, the PF- LF mapping is governed by feature checking (N. A. Chomsky 1995, 2000, A. Radford 2004, 2009) and feature strength (N.A. Chomsky 1993). Two questions immediately crop out: (1) what is the LF position of the WH-words? (2) Are Wh interrogative properties so strong in all languages that it triggers the Spec-ForceP movement at PF? If there are some distortions, how can we account for such issues linguistically? Accordingly, this paper includes three sections, the first section deals with the description of Wh-words in European languages, in the second part, we are concerned with the African Wh-words and the last section provides a contrastive analysis.

1- Wh-syntax

This sections presents the syntactic computation of wh-expressions in four languages namely English, French; Embosi and Laali. In the words of Ultan (1978, p. 228-229)

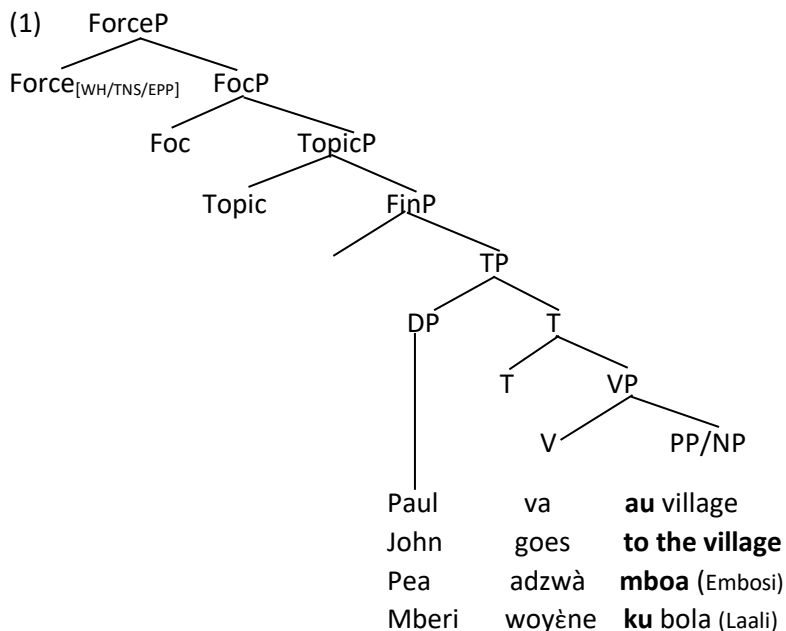
Interrogative words are characteristic of all languages, That is, all languages have interrogative substitutes for nouns and a number of adverb-like words or phrases expressive of locative, temporal, enumerative, manner, purpose and other functions.

A wh-expressions appears where its referent appears in an affirmative sentence. Moravcsik (2006:216) claims “*In their underlying representation, question words occur in their post verbal complement position.*” In this respect, the interrogative words thanks to their Q feature, can be anteposed or remain in situ. M.Veenstra writes (1998, p.11): “*A constituent always travels from its position of lexical insertion low in the tree, to its Logical Form (LF) position higher up*”. This movement is sensitive to languages. Within generative framework, this issue concerns **Wh-Parameter**.

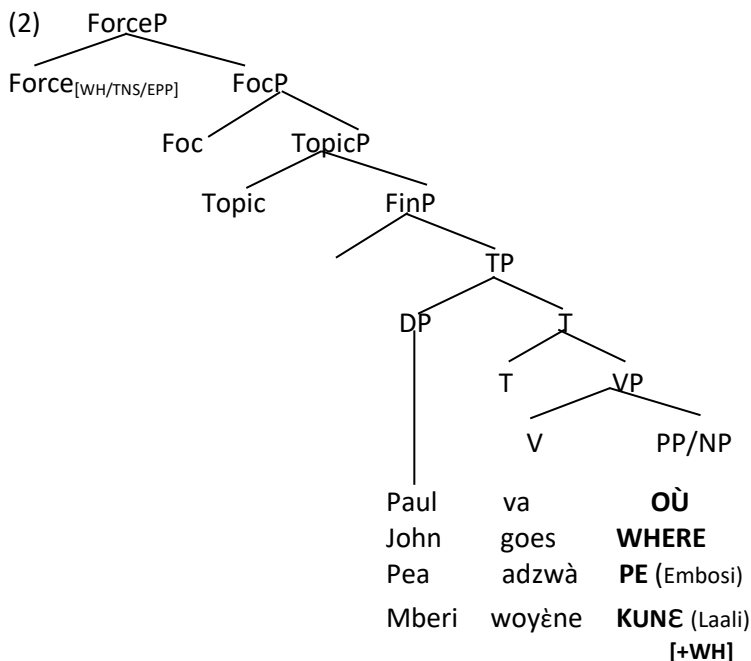
Thus, another parameter of variation between languages is the Wh-Parameter– a parameter which determines whether wh-expressions are fronted (i.e. moved to the front of the overall interrogative structure containing them) or not. Significantly, this parameter again appears to be one which is binary in nature, in that it allows for only two possibilities – viz.

a language either does or doesn't allow wh-movement (i.e. movement of wh-expressions to the front of the sentence). Many other possibilities for wh-movement just don't seem to occur.

Then, languages have two choices based on Feature strength. If a feature is strong, **Attract Closest Principle** applies; if a feature is weak, **Attract Closest Principle** does not apply. The architecture of a sentence in generative framework, based the cartography enterprise in syntactic structures, is composed of a Force Phrase, Focus Phrase, Topic Phrase, Finite Phrase and Tense Phrase for European languages. In addition to these functional heads, we are going to add Agreement Phrase for Bantu languages thanks to Split IP Hypothesis (Y. Pollock 1989). For the sake of economy of representation, we omit AgrSP in the following tree diagram.



In the example (1), we have a general overview French, English, Embosi and Laali. All the constituents post verbal are located in the positions where the Wh-expressions will appear as illustrated in the forthcoming examples.



At this level, languages will differ due to their Q operator features consistent with WH-parameter. The question that immediately crops out concerns whether the Wh-expression will remain in situ or move to the front of the sentence; this is what the concern of the upcoming section.

2- *Wh-word syntax: Case study*

This section is concerned with the syntactic computation of interrogation constructions driving data from French; English, Embosi, and Laali languages.

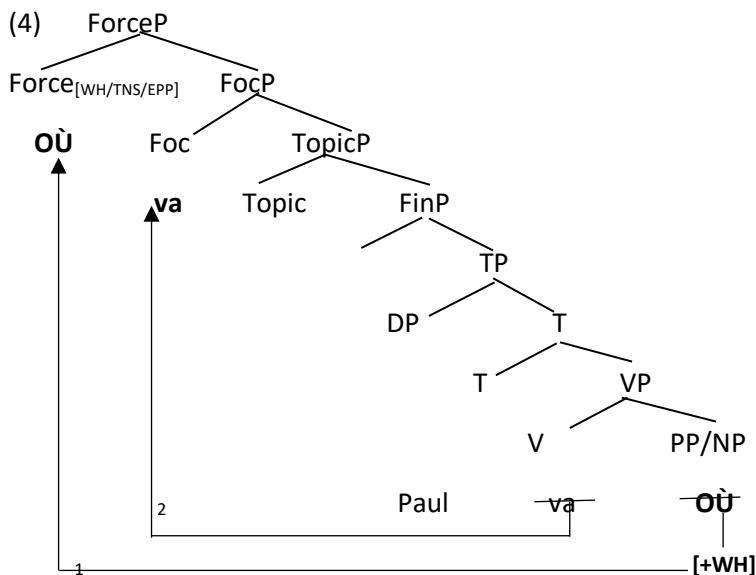
2.1 *French*

The syntactic computation of interrogation in French instantiates a case of strong Q words forcing the latter to travel to the higher position. Under this condition, the movement of the Q is coupled with the movement of the main verb. In fact, thanks to the proponents of the cartography of syntactic structure in generative grammar (L. Rizzi 2013, 2015, G. Cinque 2006, 2015, G. Cinque and L. Rizzi 2010), the functional phrase CP (amongst many) is

divided into different phrase to meet information system. This leads to the postulation of Topic Phrase, Focus Phrase, Finite Phrase, and Force Phrase. Consider the following examples in French.

- (3) a- Paul va au travail ‘Paul goes to work’
 Paul goes to work
 b- Pascal va OÙ? ‘Where does Pascal go’
 Pascal goes WHERE ?
 c- Où va Pascal ? ‘Where does Pascal Go?’
 WHERE goes Pascal
 d- Paul mange du pain ‘Paul eats some bread’
 Pascal eats some bread
 e- Paul mange **QUOI?** ‘What does Paul eat?’
 Pascal eats WHAT
 f- QUE mange Paul? ‘What does Paul eat?’
 WHAT eats Paul?

It comes out from the above examples that two operations characterize French interrogative sentence going from PF to LF in addition to some morphological change. The two operations concern movement while the morphological change is about a morphosyntactic issue related to case. In fact, further to the substitution of the post verbal constituent by an interrogative expression, whence the interrogative expression is anteposed, it also triggers the movement of the verb from the head of VP to Spec-FocP. This is best illustrated in the following tree diagram.



From the above phrase marker, the two move operations are substantiated by two arrows illustrating the root positions from where constituents derive and their respective landing sites. Moreover, in the examples (3e) and (3f), there is an instance of case determinism because the form of the interrogative word depends on case filter. That is to say, the choice between ‘**QUOI**’ and ‘**QUE**’ is sensitive to the position either as post verbal, hence selecting ‘**QUOI**’ or preverbal, selecting ‘**QUE**’.

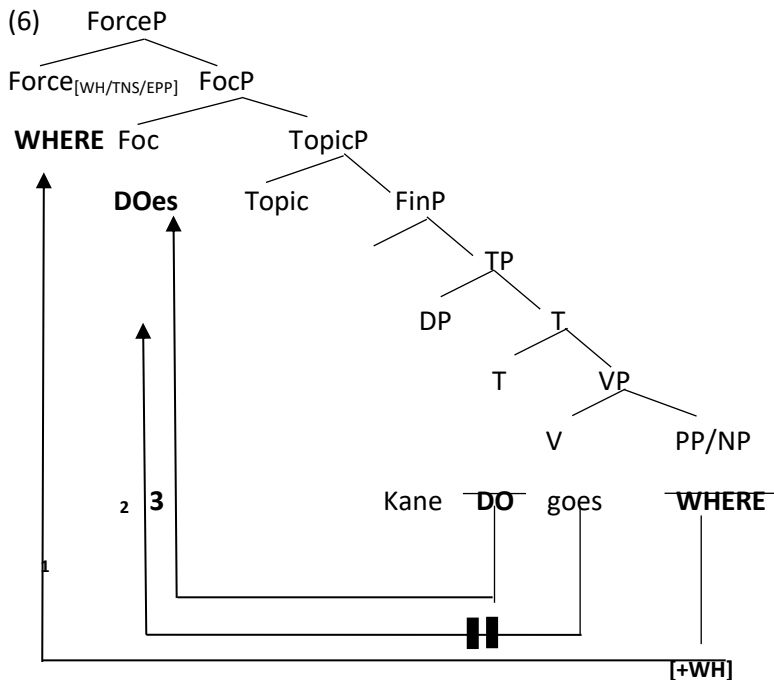
2.2 English

English is also a case of language with strong Q as illustrated in the examples that follow.

- (5) a- Kane eats peanuts.
 b- Kane goes **WHAT**?
 c- **WHAT** does Kane eat?
 d- Churchill is in England.
 e- Churchill is **WHERE**?
 f- **WHERE** is Churchill?

It results from the examples in (5) that in English, Wh-movement is sensitive to the main verb category, i.e., if the main verb is an auxiliary, Wh-movement implies the Aux-movement. Yet, if the main verb is an ordinary, the latter

does not move as shown in the tree diagram below where the verb ‘go’ movement to Spec-FocP is blocked. In this respect, English resorts to another operation termed Do support, hereafter illustrated by ‘3’ in the P-marker. Since the Aux-movement in English looks like the French Wh-movement, we select a Wh-movement triggering Do support condition as follows.



2.3 Embosi

The following examples illustrate the interrogative construction process in a Bantu language called Embosi. Consider:

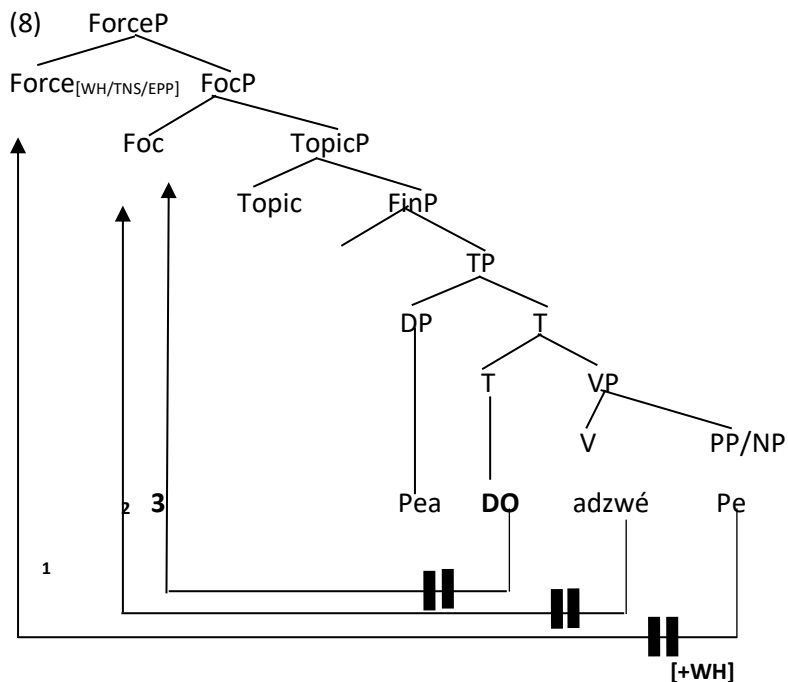
(7)

a- O-βyémhá oti oti ‘You walk slowly’
 You-walk little little

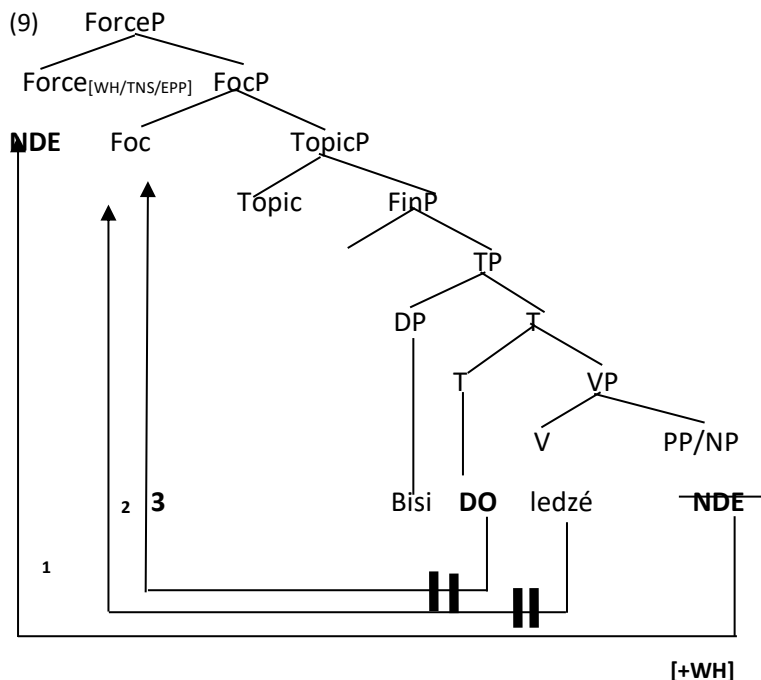
b- O-βyémhá **mbí** ‘You walk HOW’
 You-walk **HOW**

c- mbi Indeed	O-βyemba You-walk	‘You must walk’
d- mbi HOW	O-βyemba? You-walk	‘You walk’
e- le-dza We-eat	swé Fish	‘We eat fish’
f- le-dza We-eat	nde? WHAT	‘We eat WHAT’
g- Nde WHAT	le-dza? We-eat	‘What do we eat?’
h- a-dzwe s/he went	mboa village	‘S/he went to the village’
i- Pea Pea	a-dzwe s/he went	pè WHERE ‘Where did Pea go?’
*j- pe WHERE	a-dzwe s/he went	‘Where did he go?’
k- pé THERE	a-dzwe s/he went	otéené la iβó meet with problem ‘S/he faced trouble there’

Embosi illustrates a case of bi-feature Q operator. This means that a Q operator in Embosi has two features, namely +Q and -Q. So, +Q are subject to movement as illustrated in (7g), whilst -Q operator remains in situ as in (7b) and (7i). The tree diagram in (8) shows that either Wh-movement, main verb movement, or Do support is not attested in Embosi, hence the three principles are blocked as shows bar lines. This is the case of -Q operator.



In the phrase representation that follows, we can observe +Q operator illustrating a movement from the base form to the surface structure. Consider:



As one can observe, amongst the three principles corroborating Wh-movement requirements, only one of them is maintained, Q movement; no other property is coupled with.

2.4 laali

Laali is another Bantu language spoken in Congo. The way Wh-constructions are processed in this language is highlighted in the forthcoming examples:

(10)

a- <i>Wo-yeen-e</i>	<i>boke</i>	<i>boke</i>	'You-walk slowly'
You-walk	little	little	

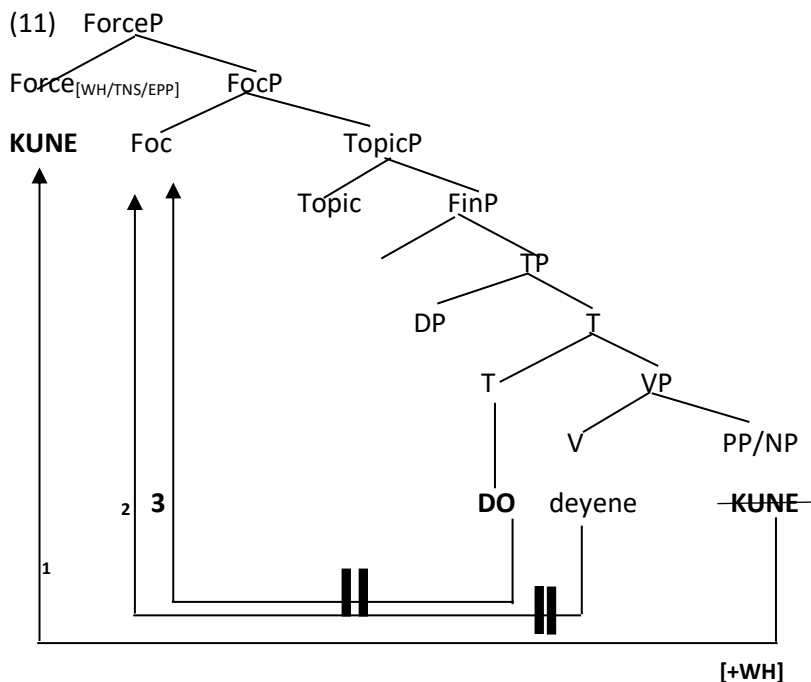
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(10)

a- <i>Wo-yeen-e</i>	<i>boke</i>	<i>boke</i>	'You-walk slowly'
You-walk	little	Little	

- b- *Wo-yeen-e* **bune** ‘How do you-walk’
 You-walk HOW
- c- **bune** *Wo-yeen-e* ‘How do you-walk’
 How You-walk
- d- *De-yeen-e* *ku* *ekolo* ‘We go to school’
 We-go to school
- e- *De-yeen-e* **kune** ‘Where do we go?’
 We-go WHERE
- f- **Kune** *de-yeen-e* ‘Where do we go?’
 WHERE We-go
- g- *Bo-lya* *nsu* ‘They eat fish’
 They-eat fish
- h- *Bo-lya* **ema** ‘What do you eat?’
 They-eat WHAT
- i- **Ema** *bo-lya* ‘What do you eat?’
 WHAT They-eat

The examples from Laali demonstrate the Q operator has only one property +Q, hence triggering its movement to the top of the sentence. Yet, as Embosi, the movement of the interrogative expression does not give rise to another principle.



3- Contrastive analysis

This section discusses the computation of the interrogative construction amongst the four languages presented above. The debate hereafter is about Wh-movement which theoretically concerns Wh-parameter.

In fact, there is an abundant literature on the syntactic analysis of Wh-expression cross-linguistically. One of the tenants resort to the feature strength arguments. As things stand, B. Lassadi (Op. cit., p.71)

One way of accounting for optional wh-movement is in terms of the strength of a given feature. When +wh is strong, it is uninterpretable at the interface levels, PF and LF, and therefore must be erased before the derivation reaches these interfaces. A failure to delete this strong feature will lead to an ungrammatical derivation at the interfaces that crashes. As far as feature checking and feature strength are concerned, the status of the -wh feature has been discussed in the literature as a major criterion according to which.

Linguists classify wh-movement in different languages and even within one language. As Denham (2000) remarks, strength of wh features has never been well motivated as a major criterion to decide on the status of wh-movement in a given language.

Based on strength feature the four languages herein discussed can be classified into two groups, notably languages with strong WH feature (French, English, Laali, and Embosi) and languages with weak WH feature (Embosi).

In fact, this typology misses some important insight since French and English or Laali and Embosi do show some discrepancies. N. Hornstein et al. (2004, p.36)

Simply translating Pollock's approach, we may say that features of the inflectional system of English and French are the same, only differing in terms of strength: finite Infl in French has a strong V-feature, whereas finite Infl in English has a weak V-feature. Verb movement in French must then proceed overtly to check the strong V-feature of Infl and make it phonetically inert; on the other hand, since the V-feature of Infl in English need not checked overtly, verb movement will take place covertly in compliance with Procrastinate. Hence, main verbs will surface as preceding VP-adverbs in French.

Hornstein's proposal accounts for the distinction between French and English regarding wh-computation. Similarly, what distinguishes Laali and Embosi is the in situ position of WH- expression which is not attested in Laali language.

Yet, another tenant debating this issue rejects the postulation of feature strength and feature checking as a key to analysing Wh-expression (K.E. Denham 1997, B. Lassadi 2003). Denham thinks that syntactic distribution of wh-words does not depend on feature strength, but rather on checking WH-feature. K.E. Denham (1997, p.74) asserts that "*I have shown that this fronting is neither the result of topicalization or focus, but that the raising is motivated by the need to check off a wh-feature in C.*"

The questions following K.E. Denham's proposal can be 'Is it obligatory for a word with Fq feature to undertake a movement?' What motivates the movement? What happens if a word with Fq feature does not move upwards but remains in situ? Finally, can a language instantiate $\pm Fq$ for wh-words?

In this connection, K.E. Denham (1997, *ibid*) affirms that "*We have seen in this section that Babine-Witsuwit'en exhibits optional wh-movement. Wh-phrases may either remain in situ or front to clause-initial position.*" In fact,

it appears that once in a clause there is a word carrying Fq under the c-command of C, the wh-feature of C will attract that word.

Yet, concerning the $\pm$ Fq features for wh-words, B. Lassadi (op. cit., p.70)

It is not possible to consider that, within a language, wh-movement has available both options of fronting the wh-phrase or leave it in-situ. The hypothesis that both options are available, especially in similar syntactic environments, will contradict the minimalist principle on the economy of derivation that only the most economical option could reach the interfaces and be considered as grammatical.

This issue is similar to one debated in the previous Chomskyan generative grammar regarding binding conditions A, B, and C which are summarised as follows:

Binding theory

Principle A

An anaphor must be bound in its governing category.

The term anaphor covers reflexives and reciprocals.

Principle B

A pronoun must be free in its governing category.

Principle C

An R-expression must be free everywhere

(L. Haegeman, 1991, p.240)

These principles can be represented in the following chart.

(12)

Types		Overt NPs
+Anaphor,	- Pronominal	Anaphors
-Anaphor,	+ Pronominal	Pronouns
- Anaphor,	- Pronominal	R-expressions
+Anaphor,	+Pronominal	/

(Chomsky, 1982, p.78, Haegeman, 1991, p.346)

It comes from this chart that an overt NP cannot be + Anaphor (Principle A) and +Pronominal (Principle B). In Y.P. Ndongo Ibara (2007) shows that there are languages which substantiate overt NPs with the features + Anaphor and + Pronominal, which are empty according to N. Chomsky (1982) and L. Haegeman (1991). Ndongo Ibara (Op. cit; p.70) asserts that:

In such a language, to maintain a syntactically oriented approach to anaphors and pronominals is to admit that some of the binding well known

principles fall into cross linguistic parametric issues. As a matter of fact, Embosi shows that reflexives share both anaphors and pronominals features.

Similarly, Embosi Wh-construction violates WH strength principle as it instantiates both “fronting WH-phrase” and “leaving Wh-phrase in situ”. In this condition, we postulate **Feature Activation Principle**, henceforth (FAP) which reads as:

Wh-words have $\pm$ features like male gamete X and Y.

L1: A language Wh-expression can activate X,

L2: A language Wh-expression can active Y;

L3: A language can activate both X and Y.

The activation of either X or Y is quite similar to the feature strength principle which governs Wh-computation in the abundant previous literature. L1 represents languages which can allow Wh-movement (e.g. English, French), L2 represents languages which do not permit Wh-movement (e.g. Chinese) and L3 is about languages which attest both Wh-movement and Wh-in situ (e.g. Embosi).

In fact; it is not because a word has Fq feature that obligatorily C will attract it. The attraction of the wh-expression is not solely attributed to the INTERROGATIVE property of the word, but also to the language idiosyncrasy. Under this condition, not all wh-words can have the same syntactic computation. Some could undergo movement, while other could not undergo movement, but remain in situ.

Conclusion

Syntactic aspects are not always compatible to language families. Yet, they are rather sensitive to language idiosyncrasies. The syntactic computation of wh-word shows that French and English although both European languages, but they do not construct interrogative sentences in the same way. This story can also be told about Embosi and Laali, both Bantu languages spoken in the Republic of Congo.

In fact, the syntactic computation of wh-words which has been subject to either Feature Strength for Q operator (Chomsky 1995, Radford 2009) revisited by the tenants of the cartography of syntactic enterprise (Cinque and Rizzi 2010) or to optionality of the choice to either move or remain in situ (Denham 1997, 2000; Lassadi 2003) has received a new insight.

Based on Embosi language data herein developed, it transpires that either feature strength or optionality cannot alone provide a syntactic description of

wh-expression to natural languages. They fall within parametric variations principles. We postulated Feature Activation Principle which says that the differences noted among languages is a question of both interrogative feature and language idiosyncrasy regarding wh-expression derivation.

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