Parametric Variations: A Study of Wh-Movement Parameter in Igbo and English Syntax

Christiana Ngozi Ikegwuonu
Department of Linguistics, Igbo
Chukwuemeka Odumegwu Ojukwu University, Uli, Igbariam Campus, Nigeria

Abstract

This study sets out to examine the wh-movement parameter in Igbo and English syntax with the intension to identify the wh-words the two languages employ in expressing wh-questions as well as finding out the differences and similarities that exist in their mode of movement in the syntactic structures. The Igbo language belongs to the West-Benue Congo language family, spoken predominantly in the Southeastern part of Nigeria. The principles and parameters model is the theoretical framework for the study. The study reveals that Igbo allows wh- in-situ questions in the language but English does not. While Igbo permits both the syntactic wh-movement and LF movement, English permits only overt visible obligatory syntactic movement of the wh-words into the [SPEC, CP] position. Both languages share in common leftward movement of wh-words into the [SPEC, CP] position. Igbo has both leftward and right movement of the wh-words while English has only leftward movement in the syntactic structures. The wh-words of the two languages leave traces behind after movement but Igbo has instances of resumptive pronoun traces phenomena in the language. Tone is also a question trigger in Igbo. Binarity principle does not uphold in Igbo because the language shares the properties of having two values of wh-movement, that is, [+ wh] and [- wh] in the syntactic structures while English shares only value, that is [+wh]. This study attempts to tone mark all the syllables and this implies that high, low and downstep tones are marked.

Keywords: Principles, Parameters, Movement, Wh-words, Binarity.

Introduction

In the principles and parameters (P&P) approach to the linguistic study, emphasis has moved from the previous models of rule systems to the system of principles. The main interest here is that the universal principles

should be tested against the possible parameters of variations from the natural languages. So, the universal properties of human languages reflect the operation of a set of universal grammatical principles and grammatical variations among languages which are referred to as parameters. Principles are general operational rules that govern the entire languages of the world (such as structure dependency principle, movement principle, projection principle and so on). Parameter is a term in universal grammar used for the designation of the types of variations which a principle of a grammar exhibits from one language to another. Principle is language general whereas parameter is language specific. Therefore, no human language is fixed, uniform or unvarying. This is why Akmajian, Demers, Fermer and Harnish (2001:259) claim that all languages show internal variations. There are three major parameters in which language can differ in their grammatical structures. They include: null-subject or pro-drop parameter, wh-movement parameter and head parameter. Radford (1997) claims that these parameters are binary in all human languages of the world, so that every language selects solely one value either [±] for each of them. The wh-movement parameter which is the focus of this paper is one of the parameters of universal grammar. It is a movement which involves wh-words in the syntactic structures of the natural languages. In this parameter, items can be moved from one place to another within a syntactic structure. The items that can be moved may be either a lexical item or a phrase. In the movement parameter, each language chooses what is to be moved, the pattern of movement and what to be left behind at the extraction site as a trace after movement.

Background of the study

In the recent study of syntax, establishing the parameters of the universal grammar (UG) has been the centre of grammatical analysis. According to Ndimele (1992:70), universal grammar "lays down basic principles and each language is free to select the parameters along which those principles are realized". Various scholars have contributed toward the realization of the above goal. Chomsky`s generative grammar witnessed three different models of grammar. The first was the Finite State Grammar (FSG). The FSG has some weaknesses which include not accounting for constructions that show discontinuous and nested dependencies. It cannot account for the ability of a native speaker of a language to produce and understand certain new utterances. Its rules cannot account for ungrammatical sentences and so on. These and other weaknesses led to the introduction of the Phrase Structure Grammar (PSG).

PSG is a form of rewrite grammar which provides the mechanism for splitting up a given sentential structure into its constituents and show how they are related to one another. It makes use of a set of rewrite rules which handle

one category or constituent at a time. It has its structural parsing for grammatical correctness as S → NP VP. Like the FSG, PSG has its own weaknesses which include not accounting for ambiguous sentences and cannot be used to show that two or more sentences can be structurally related and so on. As a result of these and other weaknesses, Chomsky proposed another model of grammar known as Transformational Generative Grammar (TGG).

In TGG, there exit two levels of syntactic analysis: the surface structure and the deep structure. The surface structure is concerned with the area of grammar where the spoken form of language is provided. It concerns all the phonological specifications used in the actual speech. The deep structure gives a language its meaning from the native speaker's point of communicative competence but does not contain elements such as is seen in the surface structure. It is the area of grammar where all the affix reorganization or morphophonemic rules are applied. In the movement transformation, some elements are either moved, added, substituted, deleted or inserted within the constructions. Traces are left behind at the extraction sites to indicate that items were moved from those positions. Since the advent of TGG, several models of it have emerged. They include the Standard Theory (ST), which was reformed to Extended Standard Theory (EST). This was followed by the emergence of Reversed Extended Standard Theory (REST), which was a reformed version of EST. At the stage of REST, all the meanings were to be determined at the S-structure. However, in order to constrain the excessive power of the REST, Move alpha was introduced as a constraining element.

After these models of grammar and other versions of transformational grammar and their adjustments, the next important turning point in the development Chomsky's syntactic theory, which marked a radical departure from the previous models of rule systems to the system of principles, is the emergence of the principles and parameters study to the of syntax. The main concern here is that the universal principles should be tested against possible parameters of variations from the natural languages. Since the advent of the universal grammar, approaches to the study of syntax have been very modular. This novel understanding therefore, has opened up a novel idea of analysis of the modules of grammar. Some modules are thought to operate universally while others are applied specifically to individual languages. Since then, efforts became directed to those parameters, which capture these aspects of a language. For instance, universal grammar makes certain demands on word order in all languages, but the principles of word order allow languages a bit of leeway (Ndimele, 1992:2), hence, there are differences, that is, parameters and those parameters operate with certain principles in different languages. While principles are generalized operational rules in all natural languages,

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parameters refer to the nuances of language universals. They are variants of the universal language principles.

Theoretical framework

This study adopts the principles and parameters theory (PPT) as the theoretical framework. This theory was postulated by Chomsky in (1981). Within this framework, a parameterized view of languages is accounted for. The theory maintains that the grammar of human language(s) combines not solely a set of collection of inborn universal principles that account for those features of grammar that are common to the entire languages, but also a collection of parameters that account for those features of grammar that differ among languages. In this theory, those features of sentence structures that are uniform among languages are attributed to the principles of UG, whereas those features of structures that vary among languages are specified in terms of a set of parameters. The major hypothesis of the PPT is that the entire structural differences among languages can be attributed in terms of a collection of parameters, each of which is binary; hence, two values are possible.

In this theory, there are two operational terms namely: principles and parameters. Principles describe potentially universal attributes of natural languages or properties of grammatical operations. Principle according to Mbah (2011:204) refers to those properties of natural languages that are common to man. The principles of universal grammar include: structure dependency principle, projection principle, binding principle, headedness principle, binarity principle, movement principle and so on. Parameter is a term in universal grammar used for designation of the kinds of differences which a principle of grammar exhibits in various languages. Radford (2004:350) refers to parameter as "a dimension of grammatical variations between languages or different varieties of the same". Parameters are generally based on principles. Jahanguard (2010:518) claims that "they are in form of a set of options which individual languages draw on and which define the variations possible between languages". The major difference between principles and parameters is that while principle considers all languages in general, parameter only considers some of the languages at the same time. Language variation is characterized as different setting of parameters provided by universal grammar. Therefore, in considering how principles are observed by language(s) in the form of parameters, only languages that behave alike along a certain parametric variations are said to behave uniformly and generalizations are made along such linguistic behaviour. However, other languages that do not observe such characteristics are not seen as exceptions to the rule, rather, they are regarded as not relevant to the parameter under consideration. So, languages are grouped according to their unique linguistic characteristics.

Movement principle

This principle requires that a natural language has the capacity to move elements from one place to another in a syntactic structure. This implies that each language chooses what moves, the pattern of movement and what it leaves behind at the extraction site after movement. Radford (1997:265) posits that movement is "an operation by which a word or a phrase is moved from its position in a syntactic structure to another". It is conceived that once movement principle is employed in the syntactic structures, it affects a lot of other reactions in those syntactic structures. In linguistics, movement is extensively meaning conserving. It is parameterized differently by different languages. When an element moves from its extraction site into a landing site, the evidence of movement is indicated by a trace. Both the extraction and the landing sites must have similar categorical properties. The similarity of the categorical properties is licensed by AGR (Agreement) features as it is illustrated in (Mbah 1989; Chomsky 1992 and Mbah 2006). Trace is coindexed with the antecedent. Trask (1993:280) claims that trace is "a putative empty category left behind in a particular location by the movement of some elements out of that position". Note therefore that using traces permits a tree to recall the original stages of derivation, and traces can be seen as a formalization of certain features of the original previous derivation constraints.

Movement parameter

The movement parameter involves move alpha. This implies that any element could be moved from one place to another in a syntactic construction. According to Radford (1997:18) "wh-parameter is that which determines whether wh-expressions can be fronted, that is, moved to the front of the overall interrogative structure containing them or not". Wh-movement is a mechanism of syntax that helps to express a question. Trask (1993: 303) posits that "wh-movement is a phenomenon by which a wh-item appears in sentence-initial or clause-initial position rather than in logical position of non-wh-item of the same category". Note that the element that can be moved across a syntactic unit should be either a lexical item or a phrase. When the item is moved, it leaves behind a trace following the empty category principle, which is stated in Radford (1988:55) that "any moved constituent X leaves behind at its extraction site an identical empty $[X_n$ e]. This empty category is known as a trace, and a trace constituent is said to be the antecedent of the trace. This is why, when any category moves to another position, the source position and the landing site are coindexed. Therefore the general movement rule is "move something somewhere or move a wh-phrase into COMP" (Riemsdijk and Williams 1986:92).

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A wh-word in pre-sentence position must have moved from some position internally within the sentence into its present position. This claim is evidenced in Radford's (1988:466) statement that "… clause-initial wh-phrase, cannot originate inside S… wh-phrase, cannot originate in their superficial position as the leftmost constituent of S-bar, but rather must originate inside S". Chomsky (1977) propounds the rule of wh-interpretation as yielding the following LF representation: Given an S of the form:

1. [C – [wh-N] –[wh] [s … t…]

    From the above data, *t* is the trace of wh-N, rewrite it as

2. [C for which X, X and N] [S … [X] …]

    The above illustration indicates that wh-movement is into COMP, and that COMP is outside the S. Furthermore, Chomsky's (1986b) gives the rule involving wh-movement as:
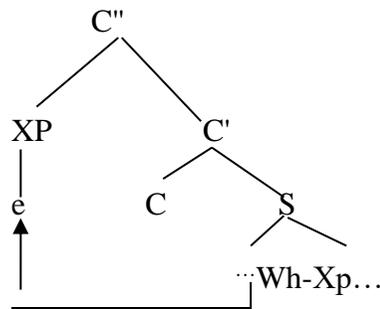
3. S' → C" = [… [c' C I"]]

From the above illustration in (2), Chomsky accounts for the derivation of the following sentence from its D-structure:

4a. [[e] [C [John [see who]]]

b. Who$_i$ did [John [see t$_i$]]

The diagram involving the movement of the wh-word is thus:

Fig 1.

(Radford (1988:504)

In the above configuration, XP is the base-generated empty specifier node for the complementizer projection [C" = CP], and Wh-XP is the wh-word generated internally within the minimal S. From the above diagram, we can observe that XP (ie specifier of complementizer projection) into which the proposed wh-word moves is also outside the minimal S, represented by Chomsky as I" or IP.

Identifying the Wh-question words and their structures in Igbo and English

In wh-movement, the most typical of such constructions is the interrogative content word questions. The questions are so called because the

question forms begin with wh-letters in English. Even those that do not have such a spelling, for as long as they show similar behaviour, they are also called wh-constructions. The name is also used for languages that do not have wh-forms because they use similar formats to derive this sentence type. The wh-words in Igbo and English can be analyzed as the interrogative substitutes for nominals in the languages which function as temporal, locative, identity, manner, degree, frequency, reason and activity. In wh-questions, NP subject, NP object, PP, time, location, manner, reason and other adverbials can be questioned. Radford (1988:463) postulates that ''in a wh-question, the speaker queries some entities in other to obtain information about the identification of some entities in the sentence''.

The Igbo language do not specifically have question words beginning with wh as in English language but the language has question words which are equivalent of the English wh-words which it employs in asking wh-questions. Green and Igwe (1963:39) asserts that question words in Igbo "are small classes distinguished by the fact that they can either constitute the link utterance by themselves or can initiate one without the low tone subject pronoun that characterizes the question form of the verb". The Igbo question words can function like nouns in being the subject object of the sentence or object of the preposition or complement. All the question words in Igbo have initial basic low tone. Below are the Igbo equivalents of the English wh-words:

Table I

Igbo wh-words

Igbo Wh-equivalents	Gloss	Meaning/function	What the wh-phrase query
Ònyé	Who	Person-singular – animate	This is used to query singular nominal human subject.
Èbéē	Where	Place/locative	This is used to query adverb of place. It indicates locative meaning.
G□nī	What	Thing – inanimate	This is used to query non-human subject or object NP.
Òlé	how many	Amount/frequency	This is used to query adverb of frequency/quantity.
Òléē	Where/which	Place/amount	This is used to query adverb of place. It is also used to query adverb of quantity
Òléē m̀gbè	When	Time/temporal	It is used to query adverb of time.
Ùgbòrò òlé	How many times	Frequency/degree	It is used to query adverb of manner. It queries the adverb of reason
Màkà g□nī	Why/for what reason	Rational	It queries the adverb of reason.

The English wh-words include:

i.who   (iv) when   (vii) whom
ii.what   (v)   which   (viii) whose
iii.where   (vi) why   (ix)   how

From the above English wh-words, it is observed that *how* does not have wh-form but it is treated as a wh-word because it exhibits the same syntactic behaviour and function as the interrogative words beginning with wh.

Unlike English, Igbo has some question words which can be used in isolation to ask questions without co-occurrence with any word when the speaker wants to elicit some responses of action(s) while some cannot be used to ask questions in isolation. The following question words can be used to ask questions in isolation:

i.   ònyé? 'who'   ii. èbéē? 'where' iii. gị́nī? 'what' iv. òlé? 'how many'
v. kedụ? 'how'

The following cannot be used to ask questions in isolation:

i.   òléē? 'which/where' ii. étú ōlē? 'how' iii..m̀gbé ōlē? 'when'

Note that the basic meaning of these question words however may change depending on the contextual occurrences. It is observed that some Igbo wh-words constitute two morphemes contrary to those of English which have only single morphemes.

Unlike Igbo, English wh-words can occur as complementizers where they function to generate relative clauses. The common wh-complementizers in English include: who, whom, which and whose. Consider the following examples:

5. a.   The woman **who** killed the goat.
   b.   The hunter **whom** we saw yesterday.
   c.   The book **which** we read.
   d.   The girl **whose** parents died

The Igbo equivalents of wh-words cannot function as complementisers, rather, they can function as full NPs in constructions.

Consider these examples:

6.   a. Ùnù hụ̀rụ̀   **ònyé**?
           2PL   see-rvpst who?
            They saw who?
        b. Hà mèrè   **gị́nī**?
            3PL do-rvpst whaṭ?
            They did what?
        c. **Ònyé**   pụ̀rụ̀?

Who   go-rvpst?
Who left out?

The above examples support the view of Goldsmith (1981) which argues that the Igbo equivalents of wh-phrases do not function as complementisers, rather they function as full NPs.

The characteristics of the wh structures in Igbo and English
The characteristics of the Igbo wh-words

The characteristics of the Igbo question words include:

i.   It does not have wh-words beginning with wh in, rather, it has their equivalents, that is, [-wh].
ii.   The question morphemes can function as noun phrases, that is, [+NP].
iii.   The Igbo equivalent wh-words do not function as complementisers, that is,   [- complementiser].
iv.It does not have relative pronouns, that is, [-relative pronoun].
v.The question words can be one or more than one morphemes

The characteristics of the English wh-words

The characteristics of the English wh-words include:

i.   It has wh-words with wh-features, that is, [+wh].
ii.   The question morphemes can function as noun phrases, that is, [+NP].
iii.   It has wh-words which can occur as complementiser, that is,   [+ complementiser].
iv.   It has relative pronouns, that is, [+relative pronoun].
v.   The question words exist as single morphemes.

Wh-words which can remain in-situ

Obviously in the natural languages, there are wh-words which can remain in-situ either in the subject or object position. A wh-in-situ is a S-structure, that has not visibly moved into COMP but instead remained in the position where the wh-word enters into the derivation of the question, whether by substitution or adjunction. Wh in-situ languages allow categories to be queried in their base-generated positions without necessarily involving any movement into the [SPEC, CP] position. Ndimele (1999) calls those that can be base-generated in the subject position, subject in-situ while those that are base-generated in the object position (predicate in-situ). Note that multiple questions are outside the scope of this study. The wh-in-situ questions we are going to discuss include:
(a) Wh-words functioning as subject in-situ position in Igbo and English.
   (b) Wh-words functioning as object in-situ position in Igbo and English.

Wh-words functioning as subjects in-situ position in Igbo and English

It is interesting to note that the English wh-words are not base-generated overtly in the syntactic structures, rather they undergo visible overt syntactic movement into the [SPEC, CP] position. Any attempt to generate wh-phrase in English at the base in the syntactic structures renders the construction ungrammatical unless the interrogative construction is conceived in its echoic sense. English has a rule which states that at the S-structure, a wh-word must be moved to the [SPEC, CP] to be queried. Therefore, wh-movement is obligatory in English. This is because only categories in the [SPEC, CP] position can be queried.

In Igbo, the basic property of wh- words is that they can be base-generated at the subject or object position without any visible syntactic movement into the [SPEC, CP] position. This implies that the Igbo wh-words can remain in-situ in subject position in the syntactic structures. The Igbo wh-words which can be base-generated at the subject or object position include: ònyé (who), gínī (what), èbéē (where), òlé (how many), étú ólē (how), ógē ōlē (when), ùgbòrò òlé (how many times).

Since English language does not allow wh-words to remain in-situ in the subject position without overt syntactic movement, we are going to give examples in Igbo where the wh-words have remained in-situ in the subject positions:

7. **Ònyé** kpòrò   gí?
     Who call-rvpst $2sg_1$?
     Who called you?
Example is shown thus:
Fig. 2.
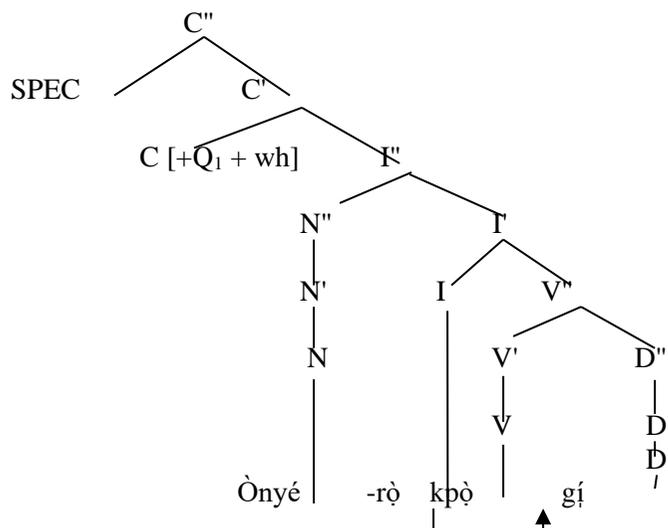
b. **Gị́nị̄** mèrè gị́ n'ányá? ———————
    What do-rvpst 2sg prep-eye?
    What happened to your eye?
c. **Òléē** ákwụ́kwọ́ áhụ̀?
    Where book Dem?
    Where is that book?
d. **Òlé** fòọ̀rò̀ ànyị́?
    How many remain-rvpst 1pl
    How many remained for us?

In the above data, Igbo wh-words ònyé (who), gị́nị̄ (what), òléē (where), and òlé (how many) function as the subjects in the sentenćeś. In this case, they function as full NPs with [+wh] features. They are base-generated in the subject position. The pronominal elements in the above sentences have retained their inherent tones as there is no evidence of overt visible syntactic movement.

Wh-words functioning as object in-situ position in Igbo and English

The Igbo wh-words can function as the objects of the sentences where they are base-generated in the predicate position. In this case, they remain in-situ in the object position.

8. Igbo Ì̇ bụ̀ **ònyé**?
                            2SG be who?
                            Who are you?

9. English You are **who**?
10. Igbo Ùnù rìrì ˙**gị́nị̄**?
          2PL eat-rvpst what?
                            What did you eat?

11. English You ate **what**?
12. Igbo Ò dòwèrè ákwụ́kwọ́ áhụ̀ **èbéē**?
        3SG keep-rvpst book Dem where?
        Where did he keep that book?
13. English You kept that book **where**?
14. Igbo Nàịjíríà nwèèrè ònwé yā **ṁgbé ólē**?
          Nigeria get-ovs-rvpst self 3pl when?
          When did Nigeria get her independence?
15. English Nigeria got her independence when?

In Igbo data above, the wh-words have remained in-situ in the object positions. The data clearly indicate that the SPEC position is empty. This implies that the wh-words do not undergo any overt syntactic movement; instead, they remained in-situ in their positions where they enter into

derivation of the questions. Note that the tones of the pronominal subjects in Igbo are consistently low and these low tones indicate questions.

In English data, examples (9) and (11) indicate echo questions whereas (13) and (15) indicate quiz questions. There is indication that English language does not permit wh-words to remain in-situ in the object position. There must be obligatorily syntactic movement of wh into the SPEC. In as much as the constructions contain wh-words, but that does not indicate typical wh-questions in English because there is no overt wh-movement into the SPEC

Furthermore, in the Igbo language, there is another kind of base generated object in-situ question that exist in the language where the wh-words in the object position can co-occur with the resumptive pronominal elements such as *o/ọ/ha* to indicate question. This type of construction does not exist in English. Consider the following examples:

16. a. [C" Òbí$_i$ [I"**ò**$_i$ gbùrù   **ònyé**?]]]
Obi   3sg kill-rvpst who?
Who did Obi kill?

b. [C"Àdá nà   Ézè, [I" **hà** kwùrù   **gínị̄**?]]]
Ada Conj Eze, 3pl said-rvpst what?
What did Ada and Eze say?

In the above data, we observed that the wh-words have remained in-situ in the object positions while the resumptive pronouns remained in the subjet positions simultaneously. The pronominal elements o/ọ/ha occurs preverbally where the subject of the sentence is a full-fledged NP. It is the pronominal elements which appear pre-verbally, that is, in the IP internal subject positions that bear the question tone. This implies that the questions are licensed by the pronominal elements which bear the low tone; otherwise, no movement of the wh-words is involved. Nwachukwu (1990) and Uwalaka (1991) affirm that it is this subject pronoun that gives the relevant sentences question interpretations, hence, the wh-words do not need to vacate their base positions to move to COMP. The wh-features and the features associated with them always move in their in-suit positions together. It is also observed that the NP subjects agree in number with the resumptive pronouns.

Evidence of syntactic movement of the wh-words in Igbo and English

The syntactic movement of the wh-words is attested in Igbo and English constructions but there exist some parametric variations, as regard to the direction of movement. It can be argued that while English language depends on its structures for syntactic movement, the Igbo language has the combination of both syntactic wh-movement and LF movement. English language is characterized as having only syntactic wh-movement The Igbo language manifests the values of [+wh] and [-wh] movement while English manifests only one value of [+wh] movement. Unlike English, in Igbo

language, the wh-words which are base-generated in the object position can be optionally moved to the left-most of the sentence-initial position. This is demonstrated in the example es below:

17.   a. [C" [C+wh] [I" Ị gwàrà   **ònyé**?]
                           2SG tell-rvpst who
                   Who did you tell?
        b. [C" **Ònyé**ᵢ [C kà [I"   í   gwàrà tᵢ?]

            Who   foc   2sg tell-rvpst.
           Who did you tell?

18.   a. [C" [C+wh] [I" Ò   kwùrù   **gínị**?]
               3sg say-rvpst what?
               What did he say?
        b. [C" **Gínị**ᵢ [C kà [I" ó   kwùrù tᵢ?]
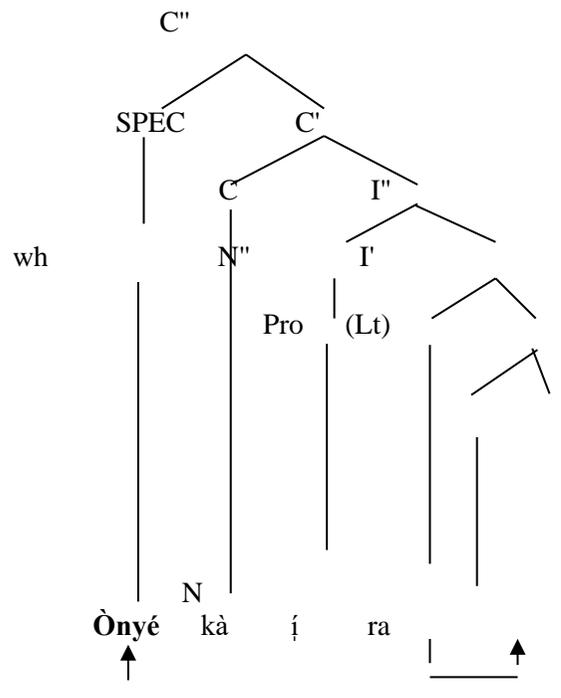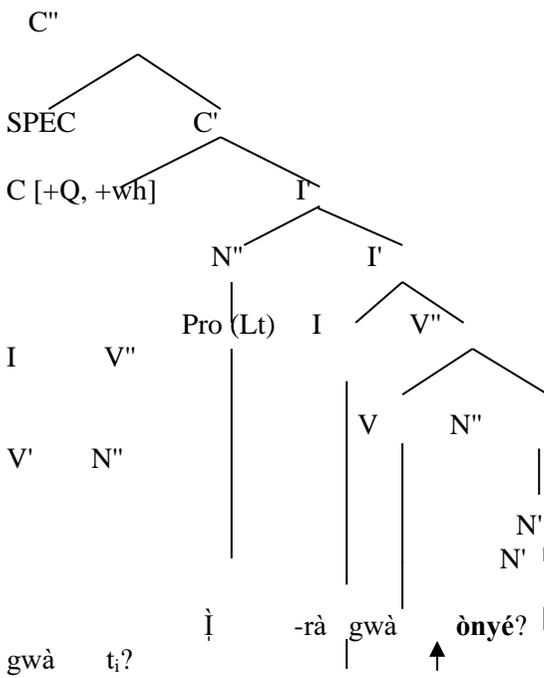
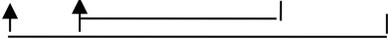   What foc   3sg   say-rvpst what?
        What did he say?

(17a) is represented in fig (3) while (b) is represented in fig (4) respectively.
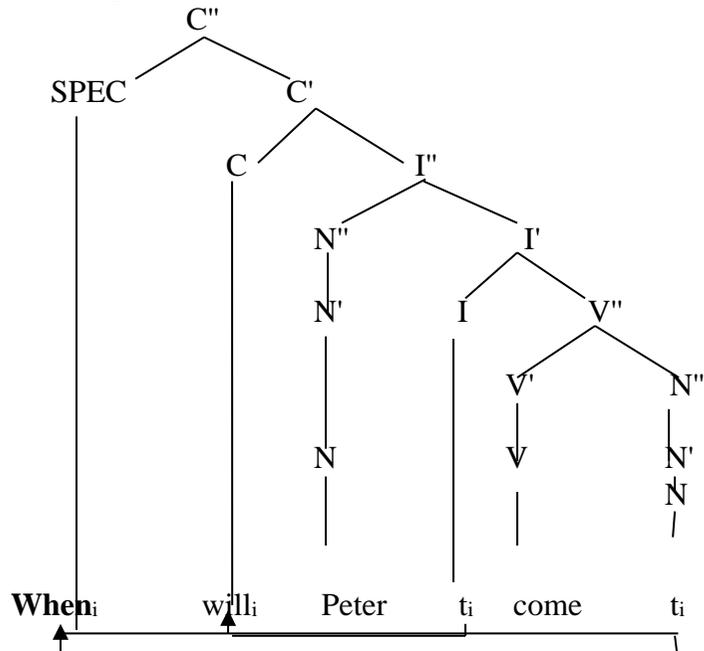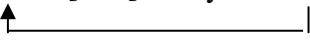
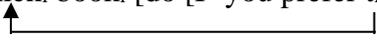Fig 3.   Fig 4.

19.   a.   Peter will come when?
        b.   When will Peter come?
        c.   **When$_i$** [will$_i$ [I'' Peter   t$_i$ come t$_{i?}$]]

(19a) is represented thus: Fig 5.

20.   a.   They meet where?
        b.   Where did they meet?
        c.   Where$_i$ [did [I'' they meet t$_{i?}$]]

21.   a.   You prefer which book?
        b.   Which book do you prefer?
        c.   Which$_i$ book$_i$ [do [I'' you prefer t$_{i?}$]]

In data (17a – 18a) of Igbo, the wh-words remained in-situ position. The pronominal subjects are consistently on low tones because of the interrogative wh-words. The data illustrate the fact that the SPEC position is empty. In data (17b) and (18b), it is observed that they differ in their structures at the S-structure, but they have the same semantic interpretations. The data illustrate that the wh-words have moved out of their underlying position to their focus positions at the sentence initial positions, followed by the overt focus marker *kà*, which occupies the C head position and it is consistently on a low tone. In examples (17b) and (18b), the wh-words bear [+wh] feature at

the initial position followed by [+foc] marker at C position. The moved wh-words left behind their traces at their extraction sites. In that position they moved to, there is nothing to bind them in the sense of a subject or an object. Indeed, COMP is not governed by a case assigner and therefore not bound by visible argument. The S' boundary protects COMP from government by anything outside the clause and because COMP c-commands everything and is not c-commanded by anything in the clause, it is not governed by anything inside the cl.

In English data, there exist visible overt syntactic movement of the wh-words into the [SPEC, CP] position where they are theta-marked. The movement is obligatory. This is because only categories in the [SPEC, CP] position can be questioned in English. This conforms to the English rule which states that at the S-structure, a wh-word must be moved into [SPEC, CP] position to be questioned. Like the Igbo, the movements of the wh-words to the sentence-initial positions left their traces at the original extraction sites. By the notations, we show that the wh-words actually moved outside the sentences marked by our brackets, that is, outside the IP. The raised wh-words bind their traces at the original extraction sites. The minimal clauses, from which the wh-words are extracted, are known as their scope.

In English, the sentences in (19a, 20a and 21a) are the bases and the wh-words are seen as the objects of the verbs respectively and those in (19b, 20b and 21b) are the D-structures. The items are repeated there for convenience while the paths of movements are noted in (19c, 20c and 21c) sentences. In (19a), the wh-word involves an additional instance of movement apart from the movement of the wh-word. There is also the movement of an auxiliary *will* which appears in two positions. The auxiliary occupies a position immediately preceding the verb in (19a) sentence, and we assume that this is the base position. However, in (19b), the auxiliary is separated from the verb by the subject as indicated in example (19c). We assume that the auxiliary undergoes movement. Its base position is after the subject as in example (19a). So, both the auxiliary and the wh-words are pronounced in the derived position before the subject. In examples (20c) and (21c), there is insertion of *did* and *do* respectively because of the purpose of emphasis and also to make the wh-words not to be stranded. We observed that in English wh-questions, there are two constituents that must be moved, the wh-word and the auxiliary. Like other transformations, wh-movement cannot eliminate any part of the previously formed structures. The position initially occupied by the wh-word is therefore not lost, rather, it remains as a trace (an empty category) indicating that the moved element corresponds to the complement of the verb as shown in the above examples.

From data (17-21) of both Igbo and English, it is observed that the wh-questions involved overt syntactic wh-movement in the two languages. The

movement involves left-word movement in both languages. However, there exist some differences in the movement of the wh-words in the syntactic structures of the two languages. It can be said that Igbo permits wh in-situ question whereas English does not permit wh in-situ questions. Igbo allows a combination of both syntactic and LF movement whereas English obligatorily involves only visible movement of the wh-word and an INFL (where there is an INFL). These two elements get moved into a position outside INFL. Furthermore, in Igbo, the wh-movement applies in appropriate context to NP with or without underlying wh. This movement is triggered by a focus marker *kà* in the specifier of C' for Igbo

Furthermore, unlike English wh-words, the Igbo wh-words can occur with the non-wh counterparts, that is [-wh] words in the syntactic structures such as ónyé (person), 'íhé' (thing), 'ébé' (where), 'étú (how), 'm̀gbè' (when/time), 'ógè' (when/time) and 'ǹkè' (which). Consider these examples:

22. a. Ónyé i̩ gwàrà bù **ònyé**?
Person 2sg tell-rvpst be who?
The person you told is who?
b. **Ònyé** bù ónyé i̩ gwàrà t$_i$?
Person be who 2sg tell-rvpst?
Who is the person you told?

23. a. Íhé í kwùrù bù **gi̩nī**?
Thing 2sg say-rvpst be what?
The thing you said is what?
b. **Gi̩nī** bù íhé ì kwùrù t$_i$?
What be thing 2sg say-rvpst?
What is the thing you said?

In the above examples, the wh-words and non-wh counterparts co-occur in the sentences and in this case they are co-relatives, strictly bound by co-occurrence restrictions. Consequently, the underlying forms of the above data are illustrated below:

24. a. e$_i$ ì gwàrà ónyé bù **ònyé**?
e$_i$ 2sg tell-rvpst person be who
The person you told is who?
b. e$_i$ ì kwùrù íhé bù **gi̩nī**?
e$_i$ 2sg say-rvpst thing be what
The thing you said is what?

Furthermore, the above non-wh (-wh) words, apart from co-occurring with wh-words, they can co-occur with *kèdú́* as in:
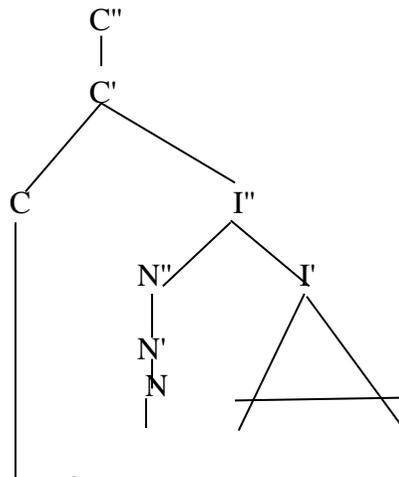
25..

Kèdú —
$\begin{cases} \text{íhé (what)} \\ \text{ébé (where/place)} \\ \text{ónyé (who/person)} \\ \text{étú (how)} \\ \text{ṁgbè (when)} \\ \text{ógè (time)} \\ \text{ǹkè (which)} \\ \text{òlé (how many)} \end{cases}$

The interaction of *kèdụ* and the [-wh] structures or non-wh words to give wh-readings are demonstrated below:

26.   a.   **Kèdú** íhé   Òbí kwùrù?
                      Kedụ thing Obi say-rvpst?
                      What did Obi say?

Sentence (26a) is represented below:

Fig 6.

      Kèdú   íhé₁   Òbí kwùrù?

b.   **Kèdú** ébé   há   chọ̀rọ̀?
       Kedụ place 3pl   want-rvpst?
       Where did they want?

c.   **Kèdú** ónyé   há   chọ̀rọ̀?
       Kedụ   person 3pl   want-rvpst?
        Which person did they want?

Kèdụ́ has its specific in-situ position in Igbo constructions, that is, at the sentence-initial position. It is unique among wh-words in the sense that it does not undergo any kind of movement. The *kedụ* question in Igbo is of the structure: *kedụ* +NP. *Kedụ* is a full question in itself. *Kèdụ́* + NP complement can take any of the following forms:

27.   **Kèdụ́** + NP
                 Íbè? (Where is Ibe?)
                 Yá? (Where is him/her/it?)
                 ńkị́tā? (Where is the dog?)

Furthermore, *kèdụ́* can appear in a sentence without a verb and takes the noun phrases as its natural complements as in:

28.   a.   **Kèdụ́** áhà gị́?
                    What name 2sg
                    What is your name?

             b.   **Kèdụ́** áhà ńné gị̄?
                    What name mother 2sg
                    What is your mother's name?

             c.   Kèdụ́ égó áhụ̀?
                    Where money Dem
                    Where is that money?

In the above data, it is observed that there is neither overt verb nor concord agreement in the sentences; yet, the sentences are correct and acceptable in Igbo.

Testing the binarity principle in the Igbo and English wh-movement parameter

Radford's (1997:18) claims that "this parameter is binary in nature in all natural languages of the world, in the sense that it allows for only two possibilities - viz a language does or does not allow wh-movement (that is, the movement of the wh-expressions to the front of the sentence)". Ndimele (2003), admits that some languages exhibit certain characteristics that tend more towards one of the binary values of a particular parameter. He further states that it appears that a normal child first acquires the dominant value of a parameter in a given language (whether plus or minus) and then over-generalizes. The deviant cases, that is, those structures that do not follow the regular more predominant values of a given phenomenon are now gradually learned as the child continues to be exposed to the linguistic data (Ndimele, 2003:855).

We are going to examine some data in Igbo and English wh-movement structures to find out whether Radford's claim upholds in languages. Consider the following examples:

29. Igbo: a.   Íké ò gbùrù ònyé?
                    Ike 3sg kill-rv pst who?
                    Who did Ike kill?

             b.   Ònyé$_i$ kà Íké gbùrù t$_i$?
                    Who foc Ike kill-rv pst?
                    Who did He/She kill?

30. English: a.   The students came when?
              b.   When$_i$ did the students come t$_i$?
31. Igbo: a.   Hà gàrà   èbéē?
                    3pl go-rvpst where?
                    Where did they go?
              b.   Èbéē$_i$ kà há gàrà t$_i$?
                    Where foc 3pl go-rvpst?
                    Where did they go?
32. English: a.   The teachers saw who?
              b.   Who$_i$ did the teachers see t$_i$?
33. Igbo: a.   Ò nyèrè   há ùwé ólē?
                    3sg give-rvpst 3pl cloth how many?
                    How many clothes did he give them?
              b.   Ùwé   ólē$_i$ kà ò nyèrè   há t$_i$?
                    Clothes how many foc 3sg give-rvpst 3pl?
                    How many clothes did he/she give them?
34. English: a.   He was eating what?
              b.   What$_i$ was he eating t$_i$?

        Data (29), (31) and (33) of the Igbo language demonstrate that Radford's use of the term ''binary'' seems not to be true as far as Igbo wh-interrogative words are concerned. In (a) sentences of (29), (31) and (33), the wh- words have remained in-situ at the object position while in (b) sentences, the question words are moved to SPEC, CP position by focusing with the introduction of the overt focus marker *kà*, yet; both (a) and(b) sentences have the same semantic interpretations. The above data also indicate that in Igbo both syntactic wh movement and LF movement are attested. The two positions are acceptable in the language. Therefore, Igbo language shares the property of having two the values of wh-movement that is, $\pm$ wh-movement ([+] and [-] wh-movement). In the Igbo language low tone is a question trigger. The pronoun subject carries this low tone. It is inserted just in the case where the subject of the sentence is a full-fledged noun as in (29a) above. It is this pronoun that gives the relevant sentence a question interpretation, hence, the wh-word does not need to vacate its base position to move to COMP (Nwachukwu 1990), Uwalaka 1991). In Igbo language, it is assumed that in cases that do not have wh-movement, the question word undergoes movement of the wh at LF.

        The English language allows only one value, that is, [+wh] which involves is overt syntactic wh-movement into the SPEC as shown in (b) sentences of (30), (32) and (34) above. These indicate that English wh-movement conforms to Radford's claim because binarity values upholds in the language. Only one value manifests in the language, that is, overt obligatory syntactic movement of the wh-word into the SPEC, CP position. Note that in

both languages, the multiple wh-question words violate the principle of binarity. However, multiple wh-questions are outside the scope of this study.

Conclusion

This study has examined the wh-movement parameter in Igbo and English. The findings reveal that both languages show evidence of wh-movement in the syntactic structures. Both have wh-words which can be used for expressing wh-expressions. The wh-words in both Languages share the same leftward movement to the specifier position. But rightward movement is only possible in Igbo language. The constituents of wh in English have apparent wh-configuration but those of Igbo have the semantic equivalents of the English wh. Some Igbo wh-words have overt wh-readings (examples, ònyé (who), gị́nị́ (what), èbéē (where) and so on while some do not have overt wh-readings, examples include ónyé (person), ébé (place), íhé (thing) and so on. These are called non-wh-question elements. The Igbo wh-words can co-occur with them in the syntactic structures to express wh-questions. A major syntactic difference is that Igbo permits wh-in-situ type of questions where English does not. The Igbo in-situ type of questions can be base generated in the subject or object position in the syntactic structures. The Igbo language permits both wh-syntactic and Lf movement while English language permits only overt visible obligatory syntactic wh- movement into the [SPEC, CP] position. Furthermore, Igbo language allows an in-situ type of question where the resumptive pronoun appears in the subject position and the wh-words appear at the object position simultaneously in the syntactic structures without any movement. As regards to binarity value, Radford's claim does not uphold in Igbo language because the language has two values, that is, [+wh] and [-wh] movement. The English language has only one value, that is, [+wh] movement into the SPEC, CP position.

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