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# THE EVOLUTION OF MODERN LINGUISTIC TOOLS AND THE SCIENTIFIC STUDY OF AFRICAN LANGUAGES: AN EXAMINATION OF THE DP HYPOTHESIS IN IBIBIO AND ENGLISH

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## **Abstract**

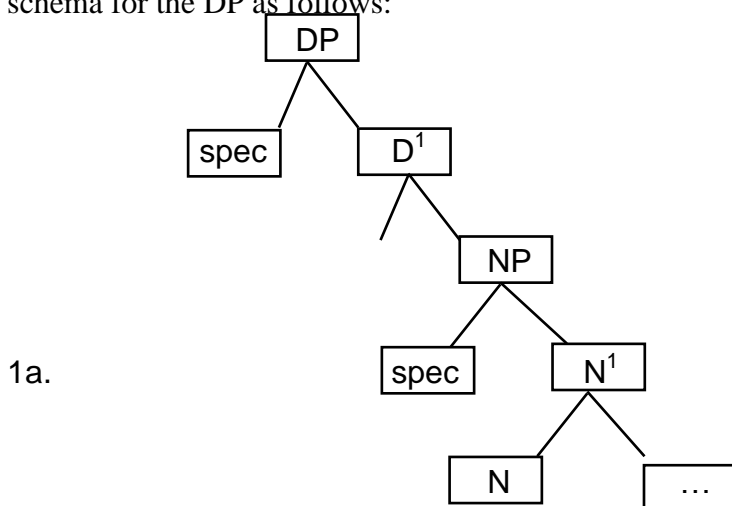
*The standard assumption is that Noun Phrases (NPs) pre or post-modified by determiners are bound by such determiners and therefore are Determiner Phrases (DPs) with NP complements. This is termed DP Hypothesis and is a universal principle. This study is premised on Chomsky's Minimalist Program and X-bar syntax which are built on the primacy of the head to propose that Ibibio, a Lower Cross language of the New Benue Congo language family, differs from English, an Indo-European language, in the operation of DP Hypothesis. The findings show that although DP is identifiable in the Ibibio language it does not have a strong binding capacity on the DPs. The work adopts Nina Hyams and Teun Hoekstrals (1986) findings on DPs to posit that DPs in Ibibio and English are finite or non-finite. Whereas in finite DPs, NPs are bound by determiners which head DPs to check and merge the features of NP1 in non-finite DPs the determiner fails to do so and consequently does not go into agreement relationship in terms of number and person with the assumed complement NP. English and Ibibio have parametric variations in their actualization of DPs. DPs which are finite in English are non-finite in Ibibio and vice versa. These differences are so acute that they may be implicated in second language learning.*

**Keywords:** Determiners, Finiteness, Noun Phrases, Determiner Phrase, Minimalist program, Parametric variations.

### **Theoretical Orientation**

Determiners generally specify references, whether definite or indefinite, to nouns. They have different class distributions. Articles (a, an, some, the), possessives (my, your, his, her), demonstratives (this, that, those), interrogatives (what, whose, which), indefinites (some, every, all, few, a few, little, a little) and numerals (one, two, three, 1<sup>st</sup>, 2<sup>nd</sup>) exemplify different classes of determiners. Following the DP Hypothesis, D (determiner) is said to precede the NP and heads its projection. From the foregoing generalization, a noun or nominal modified by a determiner is a complement to the determiner. Ouhalla (2004) explains that the arguments which result in support of the DP hypothesis are forked. Both popular positions complement each other significantly in their findings. Thus, while the first group relies to a large extent on the distributional as well as grammatical properties of determiners, the second group draws upon the traditional similarity existing between noun phrase and sentences in relation to their structural properties and the grammatical relations between their constituents.

A more convincing argument in support of the DP Hypothesis is the fact that a basic X-bar principle stipulates that the head is the obligatory element that binds its complement. In the DP Hypothesis, determiners are head because they bind the NP since they check the agreement and number features of the NPs. Therefore, the proponents of the DP Hypothesis hold that determiners are not part of the NPs as contained in earlier literature. Abney (1987) proposes a schema for the DP as follows:



The tree in (1a) has the DP dominating the D1 which in turn dominates the D and the NP with the D serving as the sister node of the NP. This shows

that the D is the head of the DP and the NP is its complement. Hyams and Hoekstra (in Radford et al, 1999) in their research, compare DPs to INFLS and argue that there are striking similarities between the role INFL and NPs play in sentences. The tense specification of INFLs, which include AGR, specifies the time that predication takes place. This is also evident in DPs. The definite specifications of the Element in a DP serve to mark definiteness. Therefore, the definiteness common in tense INFL and DPs manifests finiteness. As a result of this “nominal which contain an overt determiner are finite whereas those which lack an overt determiner... are non-finite”. Therefore, DPs like INFLs are finite or non-finite. ADP is finite if the determiner preceding the NP checks the features of the NP and merges it, but non-finite if it is devoid of such features. Ibibio and English display this parameter.

### **Projection Principle (PP)**

Projection Principle states what is true of the D-Structure with respect to the properties must also be true with other syntactic levels. Syntactic representations are projected from the lexicon in that they uniformly observe the lexical properties of the items they contain (Radford, 2004). This has to do with subcategorisation and the assignment of the role. This implies that the idiosyncratic features of the lexical item that enables it to subcategorise for another item must be the same at both the D-Structure and S-Structure. What this means is that a verb which should subcategorise for an NP complement at the D-Structure, must maintain the uniformity by taking and NP as the complement at the S-Structure and not otherwise, although at the S-Structure, the NP might not be phonetically realized.

Taiyo (1999) warns that Projection Principle does not suggest that deep structure (D-Structure), surface structure (S-Structure) and Logical Form (LF) are identical. To simplify it, Projection Principle holds that the position which the role of the theme is assigned to which is now occupied by a trace after a movement, must be left open even though the NP is moved, so as to satisfy the subcategorisation property of the verb at all levels of representation (from the lexicon via the D-Structure to the S-Structure). The following example instantiates the principle:

- 1a. John solved the problem
- b. (The problem)<sub>j</sub> was solved t<sub>j</sub>
- c. (The problem) was solved

In the examples given in 1, (1c) is excluded by Projection Principle because the subcategorisation property of the verb ‘solved’ which is transitive (in that it

must subcategorise for an NP) is not observed. The 1b is not excluded as the transitive verb, 'solved' has an NP as the object as con-indexed with the trace of the moved NP. It is as a result of this inter-relatedness between the Projection Principle and the concept of trace that Ouhalla (1994) avers that Projection Principle gives evidence of trace in a subcategorised position. The result of the Projection Principle is made visible in trace theory, a theory that holds that every moved element must leave its copy in the position where it was moved. The trace after the verb has a grammatical implication. This satisfies the well-formedness condition expressed in the Projection Principle.

### **Endocentricity and Syntactic Projection**

Lamidi (2000) posits that there are certain items which pre-modify or post-modify heads of grammatical categories. These are non-head elements. For instance, a noun as the head of an NP may be pre-modified by determiners, numerals, adjectives and so on. There are a fixed set of words which pre- or post-modify a particular head. For instance a noun cannot be pre-modified directly by an adverb and also Adjective heads do not allow pre-modification by nouns. This is determined by the lexical properties of the head of a phrase. Endocentricity is therefore a situation in which satellites (pre- or post-modifiers) converge on the head. The head and the satellites must agree on specific terms. The implication of endocentricity is that every phrase has a head which determines its name.

### **Ibibio Orthography**

Ekah (2008) submits that the orthography of a language is principally the system of spelling made up of symbols consisting of glyphs and diacritics adopted in writing. The Ibibio spelling system maintains a degree of consistency. By consistency, it denotes that Ibibio words are spelt the way they are pronounced. Ashby (2011) calls this phenomenon 'phonemic spelling' and explains that it is a situation whereby there is a spelling-to-sound rule. Ibibio words such as *Ēno* (gift), *Abasi* (God), *Ima* (love), *ndo* (marriage), *ekom* (greetings) and many others point to the one-to-one correspondence that exists between the Ibibio sounds and its spelling system. This study adopts the simplified orthography of Ibibio which pools a number of characters from the IPA as well as selects some letters from the Roman alphabet. These characters are used in the analysis of the Ibibio DPs.

### **The Ibibio Language Family**

Genetically, Ibibio belongs to the Central Lower Cross subgroup of the Delta group of the New Benue-Congo family branch. The New Benue-Congo family, in turn, belongs to the Niger-Congo subfamily which constitutes part of the larger Niger-Kordofanian language family. The Niger Congo family is considered the largest family of languages in Africa (Greenberg quoted in Urua, 2007).

### **DP in English**

Examples of determiners in English are articles: a, an, the; possessives: my, our, your, his, her, their, demonstratives: this, that, these, those, interrogatives: what, which, where; indefinites: each, both, few, little, a little; and numerals: one, two, three, four and so on. Examples of DP in English are:

- 1a,     some handsome men
- b,     those books
- c,     this boy
- d,     my friend

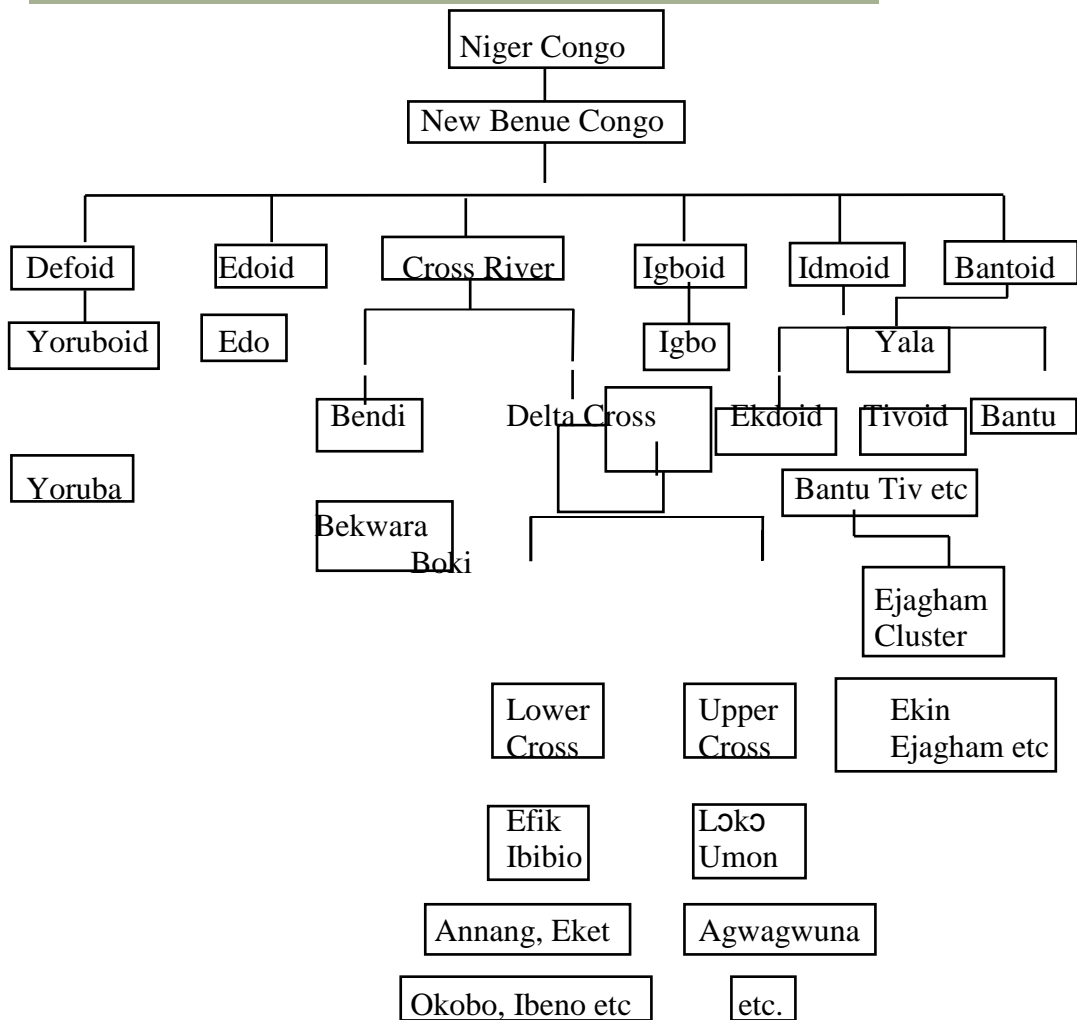
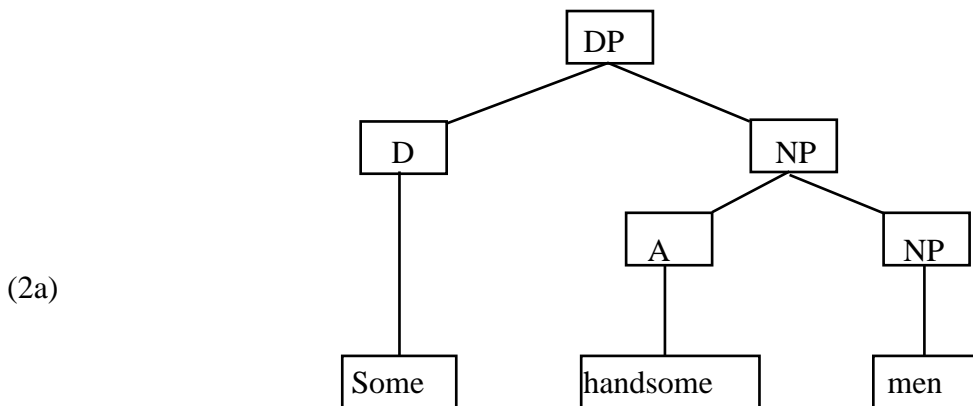
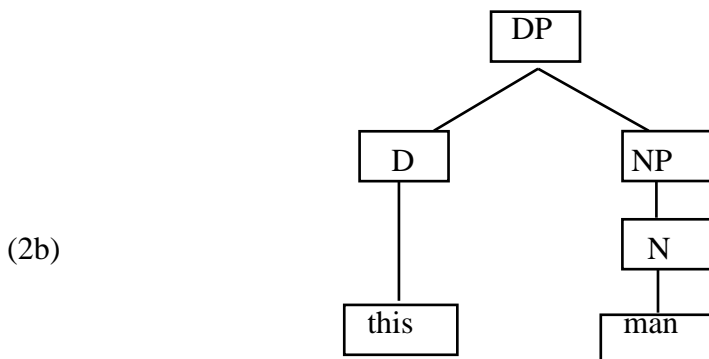


Fig. 1: The Niger Congo Language Group. Source: Asibong, (2002:115)

The DPs can be analysed on the tree diagrams as follows:



The tree diagram in 2a exemplifies the structure of a DP. The Det (erminer) some is the head of the DP. The D appears pre-nominally and has the NP handsome men occurring as its complement. There is some sort of rich agreement feature in terms of number between a determiner some and its complement NP handsome men. The form of the head NP men is in plural to agree with the D head some which is also in plural. However, if the D changes to a singular form ‘a’, the head of the NP must also change, possibly to ‘man’ to agree with the D.



It is obvious that as the feature of the determiner changes from the plural from some in (2a) to the singular form this in (1b), the form of the Head of the NP changes from men to man in order to agree with the singular determiner which is the head of the DP with NP serving as its complement.

### **Determiners in Ibibio**

Essien (1990) refers to determiners in Ibibio as noun modifiers, and subclassifies them into deictic elements: *èma*, *ódó* or *ókó*; quantifiers: *ùwák*, *ùsùk*, *èfid* and numerals: *itiòn*, *dùòp*, *etá*, and so on. This study agrees with Essien (1990) that the Ibibio determiner system and indeed the modifier system in general uses the discourse factor in the understanding of reference. When the speaker and hearer share common background knowledge of the referent, the head noun could be deleted, enabling the determiner or modifier to act as a surrogate noun. Here are examples of DPs in the Ibibio language glossed and translated into English.

- (a)      ùfán mi  
          friend my  
          ‘myfriend’
  
- (b)      ùsAk ufok  
          some house  
          ‘some houses’
  
- (c)      ùbòk ibá  
          hand two  
          ‘two hands’
  
- (d)      eti ówó ódò  
          good person that  
          ‘that good person’
  
- (e)      ùfòk ódò  
          house that  
          ‘that house’
  
- (f)      ówò ódò  
          person that  
          ‘that person’
  
- (g)      eka nnyin  
          mother our  
          ‘our mother’



The DPs can be analysed on the tree diagrams that follow:

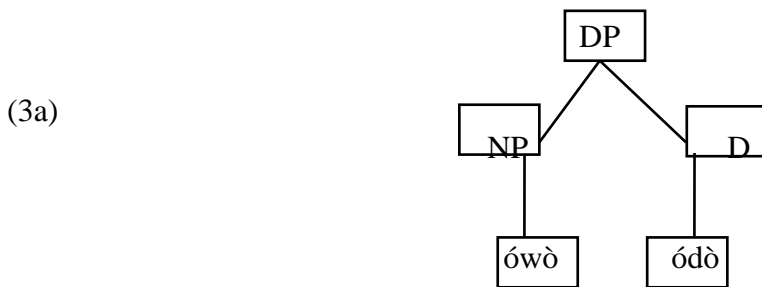
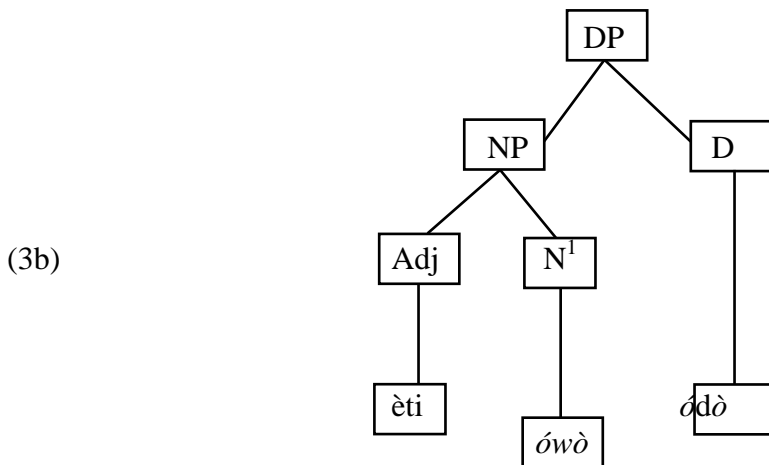


Diagram 3a presents a DP in Ibibio headed by a demonstrative ‘Odo’ ‘that’ preceding the NP ‘owo’ ‘person’. This generates the DP ‘owo Odo’ ‘that person’. In the analysis, the D ‘Odo’ which is the head of the DP precedes the NP *ówò*.



The structure of the DP in (3b) is expanded as it includes an adjective *eti* ‘good’. Ibibio sets parameter in this structure because the NP ‘*eti ówò*’ ‘good person’ precedes the determiner head *ódò* ‘that’.

Determiners in Ibibio mark by number just like in English. Indefinite determiners such as *ùwák*: ‘many’, *ùsùk* ‘few’, *ùkéèd* ‘every’, *èfid* ‘all’, play similar role in both languages. However, the difference lies in the fact that in Ibibio, indefinite quantifiers subcategorise plural count nouns and mass nouns alike and check the features of the head of the NP in terms of number. This differs from English where every, for instance, can only subcategorise an NP with a singular count noun as the head. We can have

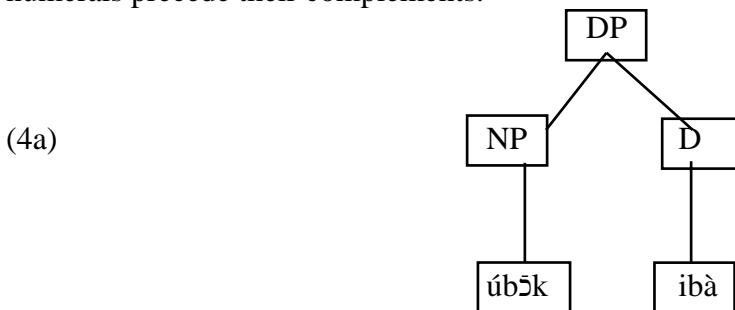
ùkéèd ibáàn.

Q(every) women P1

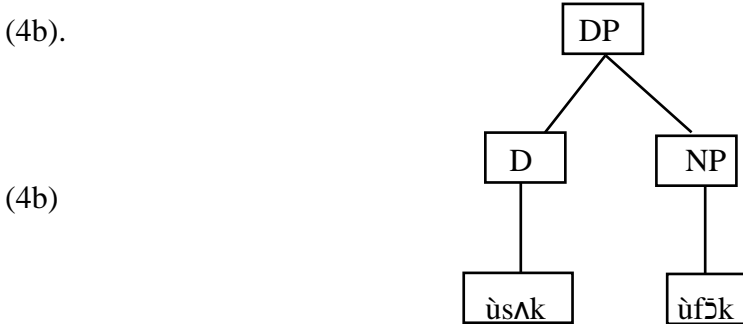
This is acceptable in Ibibio. On the contrary, we cannot have \*Every women (but every woman)

Another instance of variation is in the positions of numerals, demonstratives and possessives in a DP. These determiners come after the NP in Ibibio, whereas in English they precede the NPs which are their complements. Therefore, we can say that Ibibio varies in terms of these sets of determiners from English. While this structure of DP is head first in English, it is parameterized in Ibibio as head last. Some English determiners which mandatorily select singular count nouns, and never plural count or mass nouns differ in their usage in Ibibio. For instance *ùkéèd* ‘every’ can be used with as a noun such as *mmᵛᵛ* ‘water’. Therefore, we can have *ùkéèd mmᵛᵛ*. However, we cannot have \*every water in English. Ibibio sets parameters in the area of articles such as a, an and the. Ibibio uses the numeral *kiét* ‘one’ as the equivalent of ‘a’ or ‘an’, while *ódò* expresses ‘that’, and *ókò* ‘yonder’. The last two are demonstratives and can be used to express definiteness similar to that expressed in English. When *kiét*, *ódò* or *ókò* is used in a DP, it is usually preceded by the NP complement.

In addition, cardinal numerals are often preceded by NP, while ordinals, on the contrary, precede their complements. This differs from English where all numerals precede their complements.



In 4a, the DP *ùbᵛkibà* ‘two hands’ has the NP *ùbᵛk* ‘hand’, preceding the D *iba*



In (4b), the D ùsΛk ‘some’ precedes the NP ùf5k ‘house’. Note that the plural quantifier ùsΛk does not change the form of the NP to plural in Ibibio unlike what may obtain in English. The implication is that the NP is not bound by the determiner, In this structure of DP, with a quantifier as the D ùsΛk, the NP is always preceded by the head. This is evident in *ùkéèdówò* ‘everybody’, *èfid ówò*, ‘all the people’ where the quantitative determiners *ùkéèd* and *èfid* precede the NPs.

**Conclusion**

The study examined the existence of DP Hypothesis as a universal phenomenon in human languages. The hypothesis was examined in two languages: English and Ibibio which are worlds apart in the sense that they belong to different language families. The work adopted Hyams and Hoekstra’s (1986) findings on DPs and has confirmed that DPs in Ibibio and English are finite or non-finite. Our finding reveals that whereas in finite DPs, NPs are bound by determiners which head DPs to check and merge the features of NP, inn non-finite DPs, the determiner fails to do so and consequently does not go into agreement relationship in terms of number and person with the assumed complement NP. English and Ibibio have parametric variations in their actualization of DPs. DPs which are finite in English are non-finite in Ibibio and vice versa. These differences are so acute that they are implicated in second language learning.

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