Thesis

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A COMPARATIVE STUDY OF MOVEMENT RULES IN ENGLISH AND IGBO SYNTAX

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SCHOOL OF POSTGRADUATE STUDIES
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Certification

I certify that the thesis

COMPARATIVE STUDY OF MOVEMENT RULES IN ENGLISH AND IGBO SYNTAX

Submitted in the school of postgraduate studies, University of Lagos

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PhD

is a record of original research carried out by

CHARLES UZODIMMA OGBULOGO

in the Department of ENGLISH

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ABSTRACT

In spite of the exciting promise of the Government and Binding (GB) theory (i.e Universal Grammar - UG) in its attempt to reduce transformational rules just to the Move Alpha, very little has been done to test its application to other languages apart from those spoken in Europe. Very little has also been done to compare aspects of the Move Alpha construct across European and African Languages. The result is that many of the propositions purporting to be universal are constant sources of controversy.

This study is an attempt to compare the two variants of the Move Alpha - NP and WH Movements in English and Igbo within the Principles and Parameters framework of the GB theory. Two methodological biases are presupposed: it is only by investigating a system thoroughly that definite understanding of it is reached; evidence from comparative analyses of a few languages can actually provide substantial justification for linguistic Universals.

The study which is predominantly library-based upholds all the eight hypotheses regarding Movement processes. Thus the Move Alpha, with all its allied principles, is observed to apply to the two languages with the priviso that Movement may be at the level of syntax or within the Logical form.

The shortfall in the range of structures deriving from syntactic Movement and the violation of the absolute null-trace convention in Igbo, together with the peculiarities of the language in respect of syntactic constraints, reinforce the parametric view of the principles of UG.

CERTIFICATION

I certify that **Mr. Charles U. OGBULOGO** completed this dissertation under my supervision.

Prof. Abiodun Adetugbo
Supervisor

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TABLE OF CONTENTS

CHAPTER 1

GENERAL INTRODUCTION

1.0 Background and Problematics

Linguistic practices have witnessed rapid changes in recent times with the bulk of the input coming from most of the well-studied languages like English. Apart from the persistent speed of American linguistics, there has been a sort of resurgence of interest in real linguistic analysis in Europe, giving rise to the formation of a movement called GLOW (Generative Linguists of the Old World), with Noam Chomsky himself as the main motivator - (See Nwachukwu, 1989). The immediate result of these changes is that new theories which purport to be universal are emerging.

In the spirit of the current trends in grammatical analysis, there is a new interest in setting parameters of Universal Grammar (UG), the aim of which is to provide a framework for analysing the kind of inter-linguistic variations existing among languages, and to highlight the operations of syntactic processes which may or may not be universal.

Incidentally, the inputs of data from African languages to the formulation of these new theories are minimal. As an instance of the lack of consideration for the peculiarities of African languages to the formulation of these current linguistic theories, Nwachukwu (1989) observes that such

monumental works in linguistics as Van Riemsdijk and Williams (1986), Cook (1988) and Radford (1988) could only incorporate data from Kru, a language spoken in Ivory Coast. This language has been described within the Government and Binding (GB) framework by a Dutch linguist, Hilda Koopman (cf Koopman 1983). Again, most of Chomsky's proposals on Universal Grammar (UG) do not incorporate African linguistic phenomenon (cf Ndimele (1991a, 1992).

A number of reasons may have hindered the inclusion of inputs from African languages in the construction of universal theories of language. There may be the fear that comprehensive analyses of these languages may not be available, since there are not many African linguists working on their languages. There is also the problem of continuous shortfall of the number of African linguists who have access to academic programmes abroad because of the global economic crises. More Africans will be needed as informants if, not as the lead linguists.

However, in spite of the differences in the levels of the development of European and African languages, the parameters of Universal Grammar can only be set with comprehensive analyses of parameterised variations of core grammars. Indeed, Chomsky's claims to UG imply that certain aspects of the rule of language must have been applied across the board.

Based on the problems militating against the incorporation of African linguistic data in the formulation of authentic theories of language, there is the need for African linguists to embark on a rigorous analysis of their languages, using the current theories. Such a practice will even be more rewarding if the analyses are carried out on a comparative basis with the well studied European languages. After all, parameter setting is the main focus of comparative syntax.

Within a comparative framework, the quality of inference to be drawn from the properties of UG depends on the attested characteristics of individual languages. A careful analysis of the properties of particular languages will expose the universal properties of all languages. The analysis of the peculiar properties of a particular language aggregate into the cross-linguistic variations of core grammars. Indeed the specific parameterised variations account for the multiplicity of world languages - (cf Chomsky 1981c). Whatever properties available to all languages form the nucleus of UG.

A major development in the UG proposals is the attempt to reduce the range of possible rules of language to the minimum. This desire accords with the central goal of linguistic theory: the theory must be broad enough to account for the diversity of human language, and narrow enough to distil off irrelevant hypotheses about specific languages - (cf Roeper 1982). In the spirit of this reductionist tendency, Transformational Grammatical (TG) analysis, especially the

Government and Binding (GB) framework has attempted to cut down the numerous transformational rules to just the Move Alpha. There is the assumption that the Move Alpha is a universal principle bound by the same conditions across languages.

Studies that have applied such a proposal using English include Chomsky (1973, 1977a, 1980a and b, 1981c, 1982a, 1986, 1988 and 1991), Lightfoot (1977), Dresher and Horstein (1979), Righter and Beukeman (1985), Ajeigbe (1986, 1988), Cook (1988), Radford (1988), etc. Some of the works that have applied aspects of the Move Alpha construct to the analysis of Igbo include Goldsmith (1981), Manfredi, (1987), Nwachukwu (1987a, b, c, 1988, 1989), Uwalaka (1988), Añunobi (1989) and Ndimele (1991a and b, 1992). There are also some works in other African languages that have applied the Move Alpha construct. They include Awoyale (1985, 1990), Saah (1986), Junaidu (1986, 1989), Teke (1986, 1989), Yusuf (1989, 1990), Omoruyi (1989).

Incidentally, most of these works which have appeared in journals and chapters of books have concentrated on individual sub-theories, whereas the entire GB framework is perceived to be modular. Again, most of the works are not entirely comparative. More importantly, some of the works have questioned the authenticity of some of the provisions of UG. Saah (1986), for instance, states categorically that:

(1) ... there is no rule of WH movement in Akan, and that the questions which have their WH-phrases/words in clause initial positions are the result of focus marking in the language.

cf Saah (1986:1)

Similarly, Yusuf (1989) further argues that:

(2) ... economic and elegant as the Government and Binding theory that gave rise to the Move Alpha Construct appears to be, some facts of sentence derivation in Yoruba and possibly other languages pose a big challenge to the theory...

cf Yusuf (1989:56)

In defence of the GB theory, and the universality of movement principles, Awoyale, (1990) working on the same language with Yusuf, maintains that a Movement hypothesis for such processes as focus, extra-position, subject raising, verb raising, Middles among others, has a much stronger chance at explanatory adequacy than any other counter proposals.

There are still areas of controversy in the Igbo analysis. For instance, Uwalaka (1988) and Nwachukwu (1989) hold different views on the movement processes involving Igbo clefts. Nwachukwu disagrees with Uwalaka that Igbo clefts involve multiple movements.

There is also disagreement among linguists on the status of resumptive pronouns which are perceived to derive from movements in Igbo and other African languages. Goldsmith (1976, 1981), Pulleyblank (1986) and Manfredi (1987) analyse resumptive pronouns as instances of cliticisation. However,

Nwachukwu (1987a; 1988a, 1989), like Awoyale (1990) considers such pronouns as traces.

The spate of internal controversies among linguists working on the same languages tends to suggest that information on the operation of the movement processes in African languages, and particularly Igbo, is scarcely definite. Therefore, the "identified" instances of deviations from the offerings of UG are not perhaps, suggesting a disproof of the entire GB theory. And at the current rate of development, the overall benefits of the GB theory may not be easily realised in Igbo, and many other African languages. The implications therefore, is that there is the need for research on the application of the GB theory to different languages, including Igbo.

1.1 Objectives of the Present Study

The operations of NP and WH-movements which are considered to be the major variants of the Move Alpha form the scope of this work. There is the presentation of the structures of the NP and WH configurations in the English and Igbo. There is also a careful analysis of all the structures deriving from NP and WH movements. Such structures as passives, raising, extra-position, ergatives, middles and polar questions which are deemed to derive from NP movement are carefully studied to bring out those that actually relate to the two languages and those that are specific. Similarly,

such structures as WH-questions, relatives, clefts, pseudoclefts and topicalisation, all of which are perceived to be based on WH-movement are examined. The aim is also to identify which of them are actually derived from WH-movement in the two languages.

The study also aims at identifying the similarities and differences in the process of landing of the constituents involved in these movements together with the characteristics of the Empty categories which occur as residues of the moved elements. There is an added task of capturing the Binding conditions which inhere in these Empty categories.

The work further addresses the issue of what constitute Bounding nodes for English and Igbo and the type of syntactic constraints which apply to both of them and those that are language specific. Based on a thorough consideration of the issues so far raised, the linguistic implications of the differences and similarities between the movement processes in English and Igbo are expected to emerge. There is, for instance, an assessment of the extent to which the Move Alpha construct can be taken to be the main transformational phenomenon in English and Igbo, and indeed other languages, and thus testing the Move Alpha as an aspect of UG.

The insights gained from the work, will be a major input of Igbo, and possibly many other Nigerian languages into the main-stream of linguistic theories. Such an input, it is hoped, will go a long way towards the formulation of authentic

universal theories of language. Such theories will offer more psychologically satisfying explanation of human behaviour in language, and thus, account for language learnability. This means that the work will be a way of reaching for explanatory adequacy in African linguistic theory. It is at the level of explanatory adequacy that we account for the ability to learn different languages. An underlying assumption is that the framework for all languages is the same, but the internal structures (including Movement procedures) may differ for different languages. The differences constitute the parameters of specific core grammars.

With adequate inter-linguistic explications, the total programmes of Nigerian and African language departments will be more relevant to the needs of the changing society. Such experiments as the computerisation of linguistic data will be easier with knowledge gained from actual investigations of different languages of the world.

1.2 Hypotheses

In line with the objectives of this work, the following hypotheses are used as reference points:

(1) The Move Alpha applies to English and Igbo.

(2) There are structures deriving from NP Movement in the two languages.

(3) There are also structures deriving from WH Movement in the two languages.

(4) Both NP and WH Movements in the two languages leave traces.

(5) These traces are subject to the Binding conditions.

(6) The Bounding nodes for English and Igbo are identical.

(7) Both Igbo and English will be subject to sub-jacency.

(8) Each of the two languages will present distinct structures of the Movement processes.

1.3 Theoretical Framework: The Government and Binding Theory

A parameterised view of language is, perhaps, best explained within the Government and Binding framework - cf Chomsky (1981c) and Hyams (1986). This is because the GB theory views grammatical development as an interactive process where different languages are usually compared. Again, the crux of this research is Movement which relates to the X-bar theory, a major sub-part of the GB theory. Many of the Movement processes are accounted for by the different inter-related sub-components of grammar in the GB tradition.

It is also within the GB theory that INFL (Inflectional Element) is introduced to replace to replace the AUX. The INFL is more accommodating, because, apart from containing such traditional elements as Tense, Aspect and Mood, it introduces AGR(eement), an element that enables it to assign Case to the subject of the clause. The Case of the subject of

the clause is crucial in tracing the locus of Movement and the incidence of identity of reference (cf Ajeigbe, 1988).

In addition, the postulation of the Move Alpha (within GB), as the only transformational rule appears more economical and elegant. The GB theory also establishes the relationship between the extraction and landing sites via the Binding theory, and thus provides a much more psychologically satisfying explanation of linguistic processes.

There is also, within the GB framework, the interaction of semantic interpretation with both the D-structure and the S-structure as against the Standard Theory where the semantic component has access only to the D-structure. This expanded range of interaction appears more convincing because of the connection between traces and their antecedents.

Through the Bounding theory, the GB framework establishes constraints on Movements. Such constraints were not entertained in the Standard theory. And without such constraints, Alpha would move anywhere, even across a number of barrier nodes.

Having established the rationale for the use of the Government and Binding theory as the framework of analysis in this study, it is pertinent to explain further the entire GB theory. Where necessary, the theory will be discussed in its historical perspective.

The Government and Binding theory developed from the Revised Extended Standard Theory. Interestingly, all further

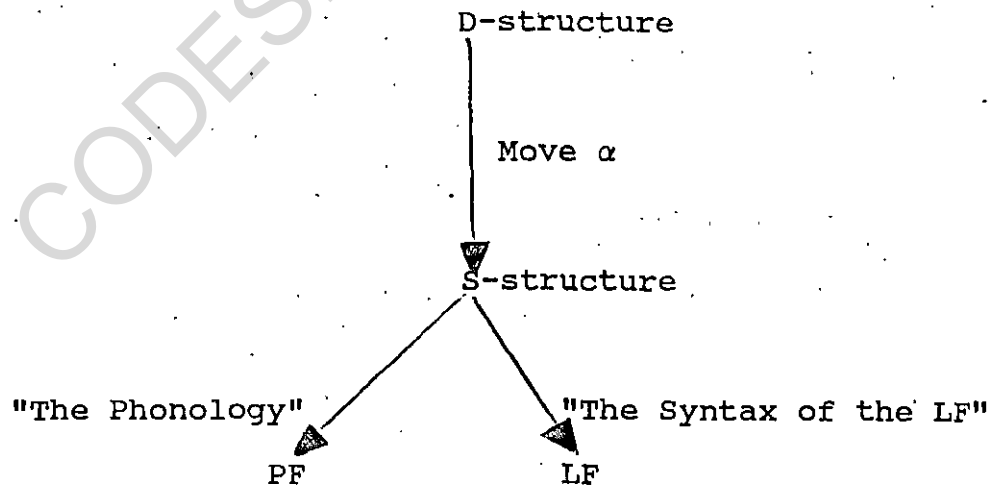
developments in Transformational Generative Grammar till date have appeared as a modification of the Aspects model popularly referred to as the Standard Theory. The earliest modification was the inclusion of the X-bar theory of phrase structure rules into the model and the understanding that apart from the D-structure, certain features of the S-structure are relevant for semantic interpretation. This is the Extended Standard Theory. Another major improvement was the introduction of the Trace Theory of movement rules into the standard model. It became pertinent at this stage to enrich the S-structure to equip it to preserve properties of the D-structure. Thus, rules of thematic structure can be applied to S-structure configurations. This stage of the development of the model is referred to as the Revised Extended Standard Theory. All meanings are potentially established at the S-structure. This is what Van Riemsdijk and Williams (1986) explain as making all semantic interpretation upon the S-structure profoundly enriched with traces.

To contain the problem of risking principles relevant to the explanatory power of grammar, further modifications were made on the standard model. The most outstanding of all these modification is the GB theory which rather than emphasise rules, focuses on principles. The GB theory propounded by Chomsky (1981c and 1982a), while retaining most of the ingredients of Chomsky an linguistics, makes an important adjustment in terminology. The S-structure is the result of

the application of the Move Alpha rule. Thus, while surface structures are the product of different Phonological Form (PF) rules - filter rules, contraction rules, stylistic rules and phonological rules, S-structures are basically derived by movement.

GB theory has a modular view of grammar. This means that the theory comprises several interacting sub-components, each of which is distinct. Grammar, in this sense, defines sub-systems of rules which present representations at different linguistic levels. Within the grammatical rules, four levels of linguistic representation are available. These are the D-structure, S-structure, Phonetic Form (PF) and Logical Form (LF). For a sentence to be grammatical, it has to be well-formed at all the levels of representation.

In line with Chomsky (1982a), Hyam (1986), Van Riemsdijk and Williams (1986), GB Grammar is organised as shown below:



cf Hyams (1986:10)

D-structures derive from re-writing the rules of the base component (i.e. categorical or phrase structure component). S-structures are generated by the different instances of movement. Alpha may vary from language to language. The mapping from S-structure to the PF forms the phonological component. However, in addition to phonological rules, what obtains at the phonological component includes affix hopping, cliticisation, deletion and various stylistic rules. The LF is concerned with such rules that determine the scope of quantifiers (cf May, 1977), and those that assign antecedents to anaphors. LF represents all aspects of meaning determined by sentence grammar.

Within the GB grammatical model, the S-structure feeds into two separate components which are autonomous. The operations of the LF are not available to the phonological component and thus do not have any phonological representation.

As already noted, linguistic representations must be well-formed at all levels. There are a number of interacting sub-systems, which determine this well-formedness. They include:

i) X-bar theory;

ii) Theta-theory;

iii) Case-theory;

iv) Binding theory;

v) Bounding theory;

vi) Control theory; and

vii) Government theory.

i) X-bar Theory

Chomsky's (1970) article "Remarks on Nominalisation provided a formal introduction to the X-bar convention. The theory accounts for word order in languages and determines D-structure configurations. The X-bar theory is an alternative to traditional accounts of phrase structure and lexical categories. As an alternative to the traditional phrase structure grammar, the theory argues for more categories to be recognised rather than just the lexical and the phrasal configurations. Within the X-bar convention, intermediate structures larger than lexical categories, but smaller than full phrases have a place in linguistic calculations. Thus in the expression:

(3) Nwaanyi oma ahu
Woman good that
(That good woman)

(4) Those very swift birds

The structure nwaanyi oma (good woman), very swift and very swift birds are recognised by a system of X-bars, each of which identifies a level of phrasal expansion. Within the system, X/ X_0 = (X without bars) is the category itself; X (X single bar) is the phrasal category containing X, X is the phrasal category containing X. The configurations X and X are referred to as projections of X.

One of the outstanding principles of the X-bar schema is that each phrasal expansion should contain a "head" with the same feature specifications. Thus, N (NP) is headed by N. This phenomenon is the "endocentric condition" (cf Stowell 1981). The next crucial principle is that each head "projects" into a maximal expansion, admitting very many satellites.

As a way of addressing the issue of the exact number of available syntactic categories, X-bar theory postulates the following set of categorical features.

(5) (+ N) substantive (+V) predicative with the following expansions:

(6) (+ N, + V) = A
(+ N, - V) = N
(- N, + V) = V
(- N, - V) = P

The scheme permits cross categorical reference. For instance, verbs and prepositions which can occur with an NP complement in English are designated as (-N). The system recognises four principal phrase types - Adjective phrase, Noun phrase, Verb phrase and Prepositional phrase in contrast to Adverbial, Determiner and Complementiser phrases.

Interestingly, the scheme applies in a similar way in English and Igbo. In both languages there is a head-first orientation for the VP.

There is also the expansion of S into S, suggesting that sentences contain a subject position. This is popularly referred to as the Extended Projection principle cf Chomsky (1981c). It can be more comprehensively stated as:

(7) S → Comp S

S → NP INFL VP

Following Chomsky (1980) and Stowell (1981), INFL is taken to be the head of S (i.e. S = COMP). Movement can change the structure of sentences.

To capture the totality of categorical rules, and to reduce redundancy, there is the projection principle within the overall X-theory. The projection principle ensures that representations at all syntactic levels (i.e. D-structure, S-structure and LF) are projected from the lexicon. Phrasal projections (bar projections) are the phrasal expansions of word-level categories; a single bar projects into a small X-bar phrase, and a double-bar projects into a "larger" X double bar phrase. All full phrases are maximal projections; they form levels above which the properties of the lexical entries for the heads do not exert influence - cf Horrocks (1987), Radford (1988). This is in line with the provision of the Extended Projection Principle.

ii) The Theta Theory

The theta theory appears as a reformulation of earlier works by Gruber (1965) and Fillmore (1968). The justification for attempting to incorporate thematic structures into the theory of grammar is that, apart from providing details about categorical, sub-categorisation and selectional properties of lexical items, rules of grammar should provide information about lexical entries - cf Chomsky (1981c, 1986a), Sells (1985) and Horrocks (1987).

In its reformulated form, theta theory seeks to determine the circumstances under which an NP can be the argument of a verb. The lexicon specifies inherent properties of lexical items, highlighting in particular, the sub-categorisation frames and theta-marking properties of lexical items which occur as the heads of constituents. Based on the theta criterion, theta-marking properties are specifications of theta roles (such as agent, theme, goal, etc) which lexical items assign to given structural positions.

Arguments receive theta θ-roles. Arguments are basically nominal positions. Any position that has access to θ-role assignment is referred to as an (A)rgument position, while a position which is structurally inaccessible to θ-role assignments is an A-position (i.e. non-argument position). Non-arguments are such expletive elements as it and there. However, verbs in passive and raising structures may prevent their nominal subjects (i.e. their SPEC-I positions) from being accessible to θ-role assignment.

Arguments can be internal or external. Internal arguments are assigned to objects by the verbs in the sentences, while external arguments are assigned to the subjects of sentence, by INFL. Though the concept of thematic functions is definite, it appears that the set of associated θ-role varies from language to language (cf Ndimele 1992).

Following the works of Gruber (1965, 1990), Ndimele (1992) presents the following list of possible θ-roles from which different languages can draw:-

i) **Agent** - The instigator of some action

ii) **Theme** - The entity that has undergone the effect of some action (PATIENT) or that experiences some psychological state (EXPERIENCER).

iii) **Location** - The place in which something is situated (i.e. the resting place of an entity).

iv) **Source** - The point of origin of an entity.

v) **Goal** - The final destination of a theme or the location towards which something moves.

vi) **Path** - The point or route through which something moves.

Thematic relations have been noted to play crucial roles in syntax. Fillmore (1968) and Radford (1988) have pointed out that only constituents of the sentence which bear identical functions can be conjoined. Again, the assignment of theta roles is not random. If different constituents will

bear more than one θ-role in the same sentence, the order of their assignment must be specified. Furthermore, our grammar must specify a strategy for preventing a given NP from bearing more than one θ-role to the same θ-role assigner or for a given θ-role assigner to assign a given θ-role to more than one argument. This added task to grammar builds up to the θ-criterion:

(8) Each argument bears one and only one θ-role and each θ-role is assigned to one and only one argument:

cf Chomsky (1981c:36)

Chomsky (1981a) further explains that the θ-criterion applies at all levels to ensure that heads and their arguments are in suitable configurations, even though θ-roles are assigned at the D-structure.

Within the projection principle, sub-categorisation and θ-marking interact, leading to the understanding that

(9) ...the theta-marking properties of each lexical item must be represented categorically at each syntactic level at LF, S-structure and D-structure.

cf Chomsky (1982a:8)

And that with formal revisions of the projection principles to produce the Extended Projection Principle, there is the provision that all clauses must contain subject NP's as well as INFL.

Interestingly, the interaction of sub-categorisation and the θ-marking processes has relevance to the basic effects of the trace theory of movement - i.e. that a moved NP leaves behind a coindexed trace.

iii) Case Theory

Case theory relates to the assignment of Case to overt nominal elements that are in Case-marked positions. The theory ensures that whether case is morphologically realised or not, every overt nominal element receives abstract Case by virtue of its position in the sentence. This is provided for by the Case Filter (cf Chomsky 1980a) which states that any sentence containing an overt NP (i.e. an NP with a phonetic content) is ill-formed if the NP is not Case-marked. An NP is deemed to receive Case, just as if it were governed by a Case-marking category. The Case assigning categories (a subset of the governors) are V, P and the head of INFL, (AGR). The head of INFL, (AGR) assigns the nominative case to the NP it governs; V assigns accusative Case; while P assigns oblique Case.

The justification for incorporating Case theory within the UG is that since lexical NP's and pronouns cannot occupy the subject position of infinitives, such overt NP's must have Case even though they are not morphologically realised. This, indeed is the abstract Case. What determines the possession of Case is the phonological content of the constituents. The

subject of an infinite clause has an Empty category (which is not phonetically realised), and as such, it is not accessible to Case assignment.

Chomsky (1982a), Sells (1985) and Horrocks (1987) have argued that it is under a government relationship that Case is assigned since the choice of the Case for a given NP is determined by its governor. Invariably, therefore, ungoverned positions are not Case-marked. Case is also assigned under "strict adjacency" condition. That means that nothing intervenes between a Case assigner and its Case assignee.

An offshoot of the Case filter relevant to this work is that an NP can only be moved into a Case-marked position. There is also the provision within the θ-criterion that NP movement may only be from a θ-position to a non-θ position. These points are further illustrated in Chapter Three.

iv) Binding Theory

Binding theory is another principle which regulates the distribution of NP's at S-structure. Within the provisions of the Binding theory, unlike what obtains in the Case Filter, there is no distinction between lexical and non lexical NP's. While regulating the distribution of NP's, Binding theory further determines the conditions under which co-indexing and co-reference inhere.

The theory classified NP's with the realisations of two-valued features (±a) and (±p). The first stipulates anaphoric

characteristics, and the second, pronominal properties. Within this binary patterning, three classes of NP's are identified. They are anaphors pronouns and referring expressions (names and variables). Anaphors include NP trace, PRO, reflexives and reciprocals (e.g. myself, himself, themselves, each other and one another, Onwe m (myself), Onwe ha (themselves, each other, one another). Igbo does not distinguish between reflexives and anaphors.

The set of pronouns include lexical (non-anaphoric) pronouns (e.g.) M/(I) O/Ọ (he, she, it) gị/you, `anyị(we) unu(you-plural), ha(they/them) etc) and the empty categories pro and PRO. Referring expressions include names (like John, Okoro) and definite and indefinite descriptions (the boys, some boys (nwoke/man) nwoke a(this boy).

The two-valued features for overt NP's equally apply to pattern the different empty categories in the following specifications:-

i)	NP-trace (non-variable)	(+a - p)
ii)	pro	(-a + p)
iii)	WH-trace (variable)	(-a - p)
iv)	PRO	(+a + p)

The categories NP trace, WH trace and pro have identical distributional characteristics as their overt counterparts, anaphors, R-expressions and pronominal respectively. PRO exists on its own. The Ec pro does not exist in every

language; it is a feature of pro-drop languages like Italian or Spanish where the verb indicates person and number inflection.

Binding theory, in establishing the range of NP's, states some Binding conditions:-

(10) (A) An anaphor (+a - p) is bound in its governing category

(B) A pronoun (-a + p) is free in its governing category.

(C) An R-expression (-a, - p) is free everywhere.

The notion of being "bound" is defined in the following configurations:-

(11) (i) α is bound by ß if α and ß are coindexed

(ii) ß C-commands α, and ß is in an argument (A) position.

An A-position is that position within which an argument occurs at the D-structure as subject, object, indirect object. Following Langacker (1969) and Safir (1982), the notion of C-command is defined as follows:-

(12) α C-commands ß if the first maximal projection dominating α also dominates ß, and α does not contain ß.

Governing categories are taken to be NP or S. The category PRO is defined as a pronominal anaphor. Therefore, it shares the properties of the Binding condition A and B. It may be bound or may be free. The behaviour of NP's within the Binding condition will be illustrated in Chapter Five.

The Binding theory has been variously criticised. One of the criticisms, according to Higginbotham (1983) is that the orthodox Binding Theory cannot account for cases of "split antecedents" (i.e. a situation where a variable or a pronoun refers to more than one argument). This situation is demonstrated in the following sentences:

(13) Ben told Adline that they should play.

(14) Ada gwàrà Obi nà ha gà-ala.
(Ada told Obi that they should go).

In both (13) and (14), there is no principled way for the Binding theory to express the interpretation of Ben and Adline as they, or Ada and Obi as ha. However, cases of split antecedents as well as instances of multiple or circular dependence can be handled with indexation. This is essentially so since indexation covers not only identity of reference, but also inclusion of reference - (cf Ndimele 1992).

There is the problem associated with the notion of C-command as a necessary condition for binding. One of the most frequently cited examples of structures that violate the C-commanding requirement for binding is the "donkey-sentence" as in:

(15) Every man who owns a donkey$_2$ beats it$_2$.

- cf Hornstein (1987).

The constituent, a donkey obligatorily binds the pronoun it, even though there is no C-commanding relationship between a donkey and it.

Lasnik and Uriagereka (1988) further argue that the Binding theory should incorporate not only syntactic but also semantic information. As an extension, Ndimele (1991a) argues that either the Binding theory is reformulated to cater for syntactic, semantic and pragmatic details, or the entire range of anaphors be expanded to accommodate not only reflexives, reciprocals and NP traces, but also WH-traces, personal pronouns, appositive NPs, Pro, resumptive pronouns and even PRO. However, this expanded range will invite additional binding conditions, a situation that is not very central to the focus of this work.

v) Bounding Theory

This theory imposes restrictions on illicit movement of constituents within the Move Alpha construct. It sets limits on the domain of Movement by the application of subjacency. The subjacency condition prevents any movement across more than one bounding node, where bounding nodes are S, S^{I} and NP. The main idea behind the Bounding theory is that each application of the Move Alpha rule should not be over too long a distance; rather Movement should be in a series of shorter hops, making the domains of rule application closer to each other. To ensure non-violation of subjacency, Chomsky (1981c) argues that Movement should be successive and cyclic through COMP (i.e. COMP-to-COMP Movement). Further details on the application of Movement and the subjacency condition will feature in Chapter Six.

vi) Control Theory

Control theory seeks to fix antecedents for the abstract EC, PRO. It indicates the relationship of referential dependence between PRO (the assumed subject of an infinitive clause) and another constituent whereby the features of the assumed subject are determined by the independent constituent. The overt subject is the controller, while the unexpressed but assumed subject is the controlled. Control can be either functional or anaphoric. In functional control (also referred to as syntactic control), the grammatical features of the controller and the controlled are identical. Anaphoric control (also referred to as semantic control) requires just an identity of reference between the controller and the controlled (cf Ndimele 1992). PRO may be controlled by a subject or object NP in the matrix clause, depending on the properties of the matrix verb. Consider the following sentences:

(16) $\underline{\text{John}}_1$ wants [$\underline{\text{PRO}}_1$ to work].

(17) $\underline{\text{Jane}}_1$ persuaded $\underline{\text{Peter}}_2$ [$\underline{\text{PRO}}_2$ to work].

In (16), PRO is controlled by the subject NP John, while in (17), PRO is controlled by the object NP Peter.

vii) Government Theory

The theory of government is central to the overall GB framework. It unifies the different sub-systems of UG. Indeed, sub-categorisation, Case marking and the Empty category principle are satisfied within the Government theory.

The theory expresses the relationship between a head and the elements occurring within the maximal projection of that head. Following Aoun and Sportiche, (1981), Government is formally defined in the following terms:

(18) α governs Y in the structure [ß...Y...α...Y] where

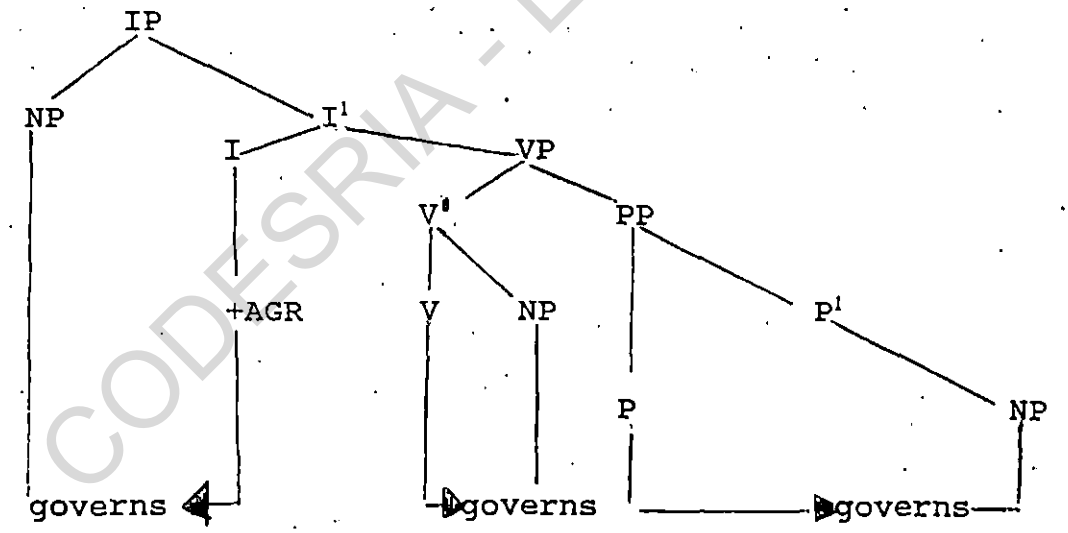
i) α : X^{o}

ii) where ϕ is a maximal projection, ϕ dominates Y iff ϕ dominates α.

P.3

The major idea behind the definition is that a head (V, N, P, A, AGR) governs every other element within its maximal projection, but does not govern those other elements within another maximal projection. In the following scheme, AGR (i.e. Tense in INFL) governs the subject NP; the verb governs the object NP, and the preposition governs its object.

(19)



In practical terms, the following linguistic phenomena derive from the government relationship in (19).

(a) Sub-categorisation (the verb sub-categories for its object)

(b) Theta role assignment (= the same verb which sub-categories for its object assigns it an internal theta role, and assigns an external theta role to the subject.

(c) Case assignment (= AGR in the INFL assigns Nominative Case to (NP, I$\bar{p}$), the verb assigns Accusative Case to (NP, v$\bar{p}$), and the preposition assigns oblique Case to (NP, PP).

(d) (- Tense) INFL cannot govern the SPEC$^{I'}$-position.

(e) Any category outside a minimal IP is not within the domain of government; thus, CP is not available for government.

- cf Ndimele (1992:38).

In Chomsky (1986b), the notion of Government is extended to cover the Empty Category principle. There is the contention that traces must be properly governed. Following this contention, the subject (NP,) is deemed to be outside the domain of any lexical head (hence its being governed by AGR) whereas other A-positions are governed by lexical heads. Thus, the ECP is formulated since Government by INFL alone is not enough to license the occurrence of empty categories. The implication is that INFL is not a proper governor (cf Sells, 1985).

In line with Chomsky's (1986a) modifications, proper government is defined as follows:

α properly governs ß iff α θ-governs,
Case-marks and antecedent-governs ß

- cf Chomsky (1986a:17).

It does appear that government deals essentially with Case-marking, while proper government relates to such properties of the Binding theory antecedent relations. Proper government applies at the LF.

The government and Binding theory, from the on-going discussion, appears to have presented a radically different view of linguistic phenomena. It has drastically reduced the expressive power of the transformational component of grammar with the postulation of relatively autonomous modules, each of which has simple and parameterised principles. The modules interact to determine syntactic well-formedness. The X-bar theory is concerned with the position of the head in relation to other constituents in the same structure; the Case theory specifies NP positions in the sentence. Control and Binding theories predict the form of relationship holding between elements in the sentence structure. Theta theory states the different roles assigned to different NP's in the sentence, while Bounding theory introduces checks on the operations of the Move Alpha. The theory of Government brings to focus the syntactic relationships holding between different elements in a syntactic configuration and thus specifies sub-categorisation, Case assignment and Binding. This means that the different independent modules work together to ensure syntactic and semantic well-formedness of sentences.

1.4 Methodological Framework

This work which is predominantly library based is mainly analytical. Books, journals and articles in English and Igbo constitute the main sources. The data are however, supported by researcher's introspection. Where there is doubt, native speakers of Igbo, especially those teaching in the University of Lagos and used as informants. Practising linguists in different Nigerian universities are also consulted to make their inputs to the study. Library collections in the universities of Nigeria, Nsukka, Benin, Port Harcourt, Ibadan, Abia, and Lagos have been consulted.

The data collected are subjected to grammaticality judgements (cf Hyams, 1986) to cross-check the range of acceptability and to remove from the data-base any deficient information. Deficiency can enter the data-base as a result of memory limitations or attention.

The standard Igbo, which has emerged after a series of efforts and seminars under the auspices of the Society for the Promotion of Igbo Language and Culture, is used in this study. This is the variety of Igbo that has been most widely studied.

1.5 Overview of the Different Sections of the Work

The work is divided into seven chapters. Chapter 1 is a general introduction. It presents the background and problematics of the study and identifies the objectives to be achieved. The hypotheses, the theoretical and methodological framework are also contained in this chapter.

Chapter 2 is a review of available literature on Movement rules in English and Igbo. From the review, it is discovered that the Move Alpha construct comfortably bifurcates into two sub-parts - NP and WH-movements, both of which are constrained semantically by the Empty Category principle and syntactically by subjacency. However, the chapter indicates that there is far more attention on English than Igbo. Therefore, a great deal about the movement processes in Igbo will still need to be investigated.

In Chapter 3, NP Movement in the two languages is presented. It begins with a characterisation of NP structures in the two languages. Structures like passives, raising, extra-position, middles and polar questions which are deemed to derive from NP movement are critically examined. The aim is to discover the extent to which these structures apply to the two languages.

The next Chapter focuses on WH movement in English and Igbo. There is the presentation of WH structures in the languages together with the direction and focus of WH-Movement. Structures which are analysed as deriving from WH-Movement are WH-questions, relatives, Clefts, pseudoclefts and topicalisation. Their operations in the two languages are comparatively analysed.

Chapter 5 presents Empty categories as the outcomes of the two Movement types in English and Igbo. Such empty categories as NP & WH trace, together with items like, PRO, pro

are analysed in the two languages. In Chapter 6, the major syntactic constraints on Movement in the two languages are presented.

The last Chapter concludes the study, highlighting the major discoveries of the work. Specifically, the section indicates the similarities and differences in the movement processes of the two languages. From the findings, some of the linguistic and psychological implications of Movements as replacements to the numerous rules of the earlier versions of the TG theory are presented.

CHAPTER 2

LITERATURE REVIEW

2.0 Introduction

Chapter One presents Movements as replacements to the numerous transformational rules of the earlier versions of T.G.G. The Move Alpha Construct which bifurcates into NP and WH movements, is equally perceived to be the major uniting factor between the D-structure and the S-structure in a number of languages, including English. There are a number of issues left unresolved regarding the entire movement processes in relation to English and Igbo. This chapter, therefore, sets out to start a process of investigation for the entire work, with a review of some of the current analyses of the Movement phenomenon in English and Igbo. There is an assessment of different views about the full range of items that get moved and the general outcome of movements. The Chapter also highlights a number of syntactic and semantic constraints on Movement. The observations made in relation to areas that require clarification and further illustration form the focus of the subsequent chapters.

2.1 An Overview of Movements

Movement phenomenon is not entirely new in the theory of syntax. There was, for instance, Chomsky's Current Issues in Linguistic Theory (1964), which set out to establish a general

theory of conditions on transformations. These conditions were intended to constrain the range of movement of linguistic variables. There was also Ross' (1967) "Constraints on Variables in Syntax" which dealt essentially with WH-fronting. Both Chomsky's and Ross' analyses will be analysed further as this chapter progresses.

Akmajian and Heny (1975) contend that most of the well-known transformations in English, perhaps, have the effect of moving constituents from one part of a tree to another. They give the Passive, Question, Negative placement, Dative movement transformations and Affix hopping as instances of movements.

However, with the possible exception of the Question rule, most of the movement processes identified by Akmajian and Heny seem to concentrate on simple clause constituents. As a result, the analysis does not seem to give a comprehensive picture of all the movement processes in English. Again, while they identify a number of transformations that derive from movement, there is little information on the origin and the final locations of the moved constituents. There is equally no discussion of the spaces left after movement. In addition, there is no mention of possible checks on the range of the moved constituents.

Culicover (1976) treats WH-Words as the most outstanding structures that undergo movement. He reasons that such WH words as what, who, when, where, why, how and which undergo a

form of inversion, exchanging the position of the Auxiliary with the WH-word.

Just like Akmajian and Heny (1975), Culicover (1976) does not explain what happens to the position from which the WH-word or phrase is extracted. He does not explain the relationship between that position and the existing WH-word in its present sentence - initial position.

Chomsky (1977a), drawing heavily from his (1973) "Conditions on Transformations" argues for a constraint on the descriptive devices of grammar. He calls for a reduction in the range of possible transformations in language and possibly to recognise just two generalised rules-Move WH and Move NP, both of which are the major sub-components of a more general rule - the Move Alpha.

This reduced range of operation of transformations, it is believed, will enhance a sharper typology of available languages of the world. It is possible, for instance to be categorical on which languages are movement-oriented and those that are not. With the introduction of the movement alternative, many practising linguists of the Extended Standard Theory (EST) tradition have devoted much of their research enterprise to the investigation of the different movement processes.

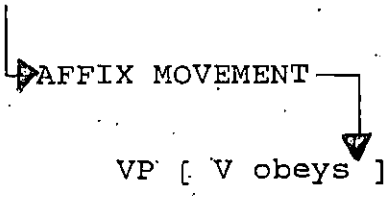
Akmajian and Wasow (1975) have analysed the V-movement phenomenon. According to this rule, the availability of finite Clauses without modal Auxiliaries, but which attract

the relevant Tense/Agreement features require the occurrence of Verb-movement as an aspect of the theory of grammar. It is the rule of V-movement that ensures the attachment of an empty INFL to the right of V to produce an inflected verb in a sentence like:

(1) John obeys her.

Obeys carries the -s inflection that characterises third person singular present tense form. This rule, Cook (1988) illustrates in (2).

(2) John [e] VP [V obey her]



Koompman (1983) proposes a more general formation of the rule, based on her research in Vata, a Kru language spoken in Ivory Coast. she proposes that, in finite clauses, where INFL does not contain a modal and hence is empty, that the head V of VP moves into INFL position by a rule of V movement and thereby acquires the Tense/Agreement features of INFL, thus becoming the inflected form. Under Koopman's analysis, the inflected V obeys in (1) ends up as a constituent of INFL, instead of remaining within the VP.

The V-movement analysis has been vigorously pursued, using evidence from Negation, Adverb distribution and Have contraction. However, there is still the fear that since INFL and V are adjacent in English, there is the possibility that

the rule will apply vacuously in either of the cases that attach V to INFL or INFL to V. Radford (1988) has further argued that the rule relates to few distributional incidents which do not yield varieties in English.

There is also the problem of establishing more than a single phrase marker if V movement is incorporated into the theory of grammar. These are the levels of D-structure serving as an input to the rule and a separate level of S-structure formed by the application of the rule. But already, these two levels have been combined, with syntactic processes now shared among the different sub-components of grammar. As a result of these problems, coupled with the fear that the rule relates more to the inflectional properties of few languages, V-movement will not be considered as a major variant of the Move Alpha. Again, since verbs interact with complements many of which are NP and WH constituents, the verb movement phenomenon can be adequately catered for by a rule of NP or WH movement - cf Radford (1988) pp.410.

There is also INFL movement which has been proposed by Den Besten (1978b), Koopman (1983), Rizzi (1983) and Chomsky (1986b) to replace subject-Auxiliary inversion occurring in the syntax of Direct Questions in English. One piece of argument to demonstrate the application of this rule is the existence of a gap left after certain kinds of direct questions have been generated. The inversion of modals under the INFL movement leaves a gap in the position from which the

modals have been moved. This position is usually between the subject pronoun and have as in (3-4) below.

(3) Should I ϕ have called the police?

(4) Would you ϕ have done it better?

The gap is represented by ϕ. The essence of the "gap" between the subjects and have, according to Radford (1988) is to block Have contraction, a fact that proves that modals originate in post-subject position and get to their new positions by a rule of "inversion".

Interestingly, the items that undergo INFL movement have the feature + AUX. These items have been noted to be affected by a rule of V-movement. Therefore, based on the symmetry between V and INFL movements, it would seem uneconomical to analyse them separately. This feeling is even stronger with the realisation that V and AUX are traditionally accorded verbal status. Therefore, it will be more profitable to collapse the two rules into one principle, since, according to Cook (1988), a straight GB account would be to assign the elements of INFL to the initial verbal element of the VP.

In furtherance of the desire to constrain the rule of grammar, Chomsky (1986b) has argued that the rule of V-Movement may be combined with WH-movement.

Let us now concentrate on NP and WH movements that seem to have been unanimously described as the variants of the Move Alpha.

2.2 NP Movement

As early as (1962), Chomsky had claimed that "Middle" constructions involve NP movement. Further in (1973), he proposed that both "Passive" and "Raising" were reflexes of a single NP movement. Though these observations were not finite in terms of identifying the origin and final location of the moved elements, and the possible locus of such movements, the observations triggered a lot of interest in the investigation of the movement processes involving the NP. Some of the most outstanding accounts of NP movement are recorded in Emonds (1976), Chomsky (1977a, 1981a, 1986b). Van Riemsdijk (1978), Rigter and Beukema (1985), Burzio (1986), Radford (1988), Cook (1988), etc.

There is agreement among these linguists that NP movement is crucial to the formation of passive structures in English. They argue that the traditional account of the exchange of the subject and the subject in passive formation is not compelling enough. Righter and Beukema (1985), Van Riemsdijk and Williams (1986) and Radford (1988) consider the passive formation as a process that relates to the D-structure in which the object NP occurring after the verb is moved to the subject position.

According to Emonds' "Structure Preserving Principle", (1976), a movement analysis for passives has empirical support from sub-categorisation (for verbs with more than one-place-argument). These verbs entertain gaps in the positions

formerly occupied by the moved NP objects. Where these gaps are filled, the sentences will become ungrammatical as in example (5).

(5) * [The car] will be put [the bike] in the garage.

There is a general conclusion emanating from (5) that the movement involved in passive formation entails an identity of thematic functions between active objects and passive subjects since they both occupy the same post-verbal position at the D-structure.

Though Chomsky (1981a) points out that different languages may have devices for suppressing the subject based on a range of alternatives from the U.G., Chomsky (1988) argues that the presence of the passive particle in English makes the language reflect the passive tendency more than many other languages.

Another construction involving NP movement, according to Chomsky (1973, 1977a) is Raising. Bresnan (1979) observes that Raising moves not only the subject of an S-complement, but also the subject of an SC (= small clause). According to him, while the subject of an S or SC complement can be raised by NP movement, the rule cannot apply to raise the subject of an S-bar complement. Such constraints will be highlighted later in this chapter.

However, based on the similarity of the restrictions holding for both Passives and Raising structures, Stowell (1981) and Burzio (1986) argue that the two constructions are manifestations of the same rule - that of NP movement.

Apart from Raising, Burzio (1986) identifies Ergative structures as deriving from NP movement. These structures, according to him, are intransitive clauses which have transitive counterparts, and in which the transitive object corresponds to the ergative subject. The following, according to Burzio, are examples of ergatives.

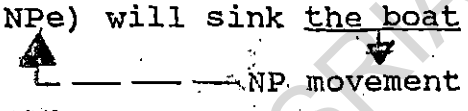
(6) The door broke.

(7) The boat will sink.

(8) The tank rolled down the slope.

The superficial subjects, Burzio explains, originate as the underlying objects of the transitive structures with an NP subject. The object is further moved into the superficial subject position by NP movement. Within this scheme, (7) will have the following structure.

(7a) (NPe) will sink the boat



7a demonstrates that transitive objects and their ergative subject counterparts are assigned the same θ-roles, and hence are subject to the same selectional restrictions.

In furtherance of Chomsky's (1962) work on Middle constructions, Keyster and Roeper (1984) offer an NP movement account of Middles. They argue that the subject NP's are interpreted as the direct objects of the verbs of the sentences in which they occur. To them, such sentences as (9) and (10) involve NP movement.

(9) Groundnuts sell fast.

(10) Greek translates easily.

Groundnuts and Greek, they explain, originate in the post verbal object position and are subsequently preposed into the proverbal position by NP movement.

Nwachukwu (1987c) argues that in Igbo, only verbs whose direct objects are completely affected by the actions expressed by such verbs can form Middle structures. He further offers a classification of the types of verbs that enter into the Middle Construction, and those that do not. According to him, verbs of destruction generally form Middles while verbs of eating and washing do not. However, he does not offer any linguistic explanation concerning this dichotomy.

Extra-position is another rule which Ross (1967), Reinhart (1980), Gueron (1980), Baltin (1981, 1984), McCawley (1982), and Gueron and May (1984) and Radford (1988) present as involving NP movement. Radford (1988) points out that Extra-position appears as a good example of adjunction rule in contrast to many other instances of NP movement which are mainly rules of substitution. There is agreement among the different linguists that Extra-position moves a PP or an S-bar within an NP (i.e. an adnominal PP or S-bar) to the end of the S containing it.

In an attempt to further strengthen the contention that Extra-position is an instance of NP movement, Radford (1988)

adduces sub-categorisation evidence which shows that different nominals require PP complements headed by different prepositions). There is also the argument that gaps exist after noun heads are moved out of their underlying subject NP's.

Some other accounts of Extra-position in English have been devoted to identifying the constraints to the operation of the rule. Some of them include Taralsden (1978) and Chomsky (1981b and 1986b). These constraints will be identified as the work progresses.

2.3 WH-Movement

There have been several accounts of different aspects of WH-movement in English. Linguists like King (1970), Baker (1981) and Schachter (1984) discuss Auxiliary contraction as an aspect of WH-Movement. Bresnan and Grimshaw (1978), Groos and Van Riemsdijk (1981), Harbert (1982, 1983) and Rivero (1984) analyse free Relatives as deriving from WH-Movement. There is also a wealth of literature on Appositive Relatives in Jackendoff (1977a) Emonds (1979), and Stuurman (1983). De Clerk (1984) and Rochemont (1986) write extensively on Clefts and Pseudoclefts as involving WH-movements. Van Aurera (1985) discusses the status of the relative that. And on the operation and landing sites of WH-movement, Katz and Postal (1964), Baker (1970), Chomsky (1973, 1977a, 1980 and 1986b), Bresnan (1976) and Baltin provide insightful accounts.

Interestingly, there is agreement among such linguists as Chomsky (1977a), Radford (1981, 1988), Rigter and Beukema (1985), Van Riemsdijk and Williams (1986), Ajeigbe (1986) and Cook (1988) that WH movement plays a major role in the syntax of WH-questions and relative clauses.

Chomsky (1980a, 1981a and 1986b) probably encapsulating the views of Katz and Postal (1964) and Baker (1970), explains that WH-movement moves a WH-phrase into COMP. However, this view accords more with the structure of English and other languages with clause-initial complementisers.

According to Rigter and Beukema (1985) and Cook (1988), Relative clauses involve WH-movement starting from a θ-marked A-position and goes into a position that is not θ-marked as demonstrated in (11) and (12).

(11) The student [whom the examiner failed] was Tom.

(12) The student [the examiner failed whom] was Tom.

Cook (1988) explains that whom is the GF-object, an A-position, and that it has moved to the specifies of C" to get the S-structure of (13):

(13) The student [whom the examiner failed] was Tom.

Though earlier perceptions tended to suggest that movement is into COMP, current investigations have supported the idea that WH movement is into the specifier of COMP- (cf Cook 1988). Apart from the desire to prove in linguistic terms the landing site for moved WH constituent, linguists are

equally concerned with proving the authenticity of Movement generation of different linguistic structures.

Some of the available pieces of evidence in support of the WH-movement construct of relative clauses, according to Radford (1988), include sub-categorisation facts, the Projection Principle and Binding. Thus, in spite of the apparent separation of the elements in relative structures, they are still affected and united by sub-categorisation, binding and the projection principles.

The application of WH-movement in the derivation of open-ended questions has been variously analysed by different linguists including Chomsky (1977a, 1981a, 1982 and 1986b), Rigter and Beukema (1985) and Ajeigbe (1986). Open-ended questions have been technically referred to as WH-questions because of the crucial role played by WH structures in their derivation. In an attempt to establish firmly WH-movement processes in linguistic theory, Radford (1988) offers some theoretical points for the phenomenon. He presents a generalised scheme for WH-movement for questions in the following ways:

(14) D-Structure $[S^{II}...[s...wh...xp...]]$

... WH-Movement

S-Structure $[S^{II}...wh - xp...[s...]]$

where xp stands for any WH-phrase.

cf Radford 1988:466

Structure (14) means that WH-phrases are never base-generated at the left-most positions of sentences. Rather, they occur post-verbally, and are brought to the specifier position by the rule of WH-movement. Radford offers evidence from sub-categorisation, idiom chunk, gaps, agreement features, Auxiliary and Wanna construction.

These arguments appear relevant for English since the Wh-constituents have antecedents somewhere in the sentence. In Igbo, and possibly other Nigerian languages, WH-word equivalents are base-generated since they are not just relative pronouns. This point will be further discussed in Chapters 3 and 4.

Other structures analysed as involving WH-movement by DeClerk (1984) Rochenmonth (1986) and Radford (1988) are Clefts and Pseudoclefts. There seems to be a consensus of opinions among these linguists that clefts have the following structure:

(15) [It be XP S^{I}]

where the XP contains Wh, that or ϕ forms, just as in relatives.

Based on a critical survey of the works done by Chomsky (1977a), Haaften, Smits and Vats (1983) and Cinque (1983); Van Riemsdijk and Williams (1986) describe Topicalisation as one of the structures that exhibit the WH-movement diagnostics without the appearance of overt WH words in English, especially in interrogatives.

Interestingly, Nwachukwu (1989a) analyses Igbo Topicalisation as involving an instance of WH-movement. The issues relating to Topicalisation will be further analysed in Chapter Four.

Though Chomsky (1981a) argues that WH-movement is an adjunction rule which adjoins WH-phrases to C, (and later in his subsequent writings) to the specifier of C, evidence abounds in a number of languages to question the universality of the leftword movement towards the complementiser. Some of such languages include Shavanahau (as in Frantz (1973), Cuzio Quechua (as in Lefebvre and Muysken (1979), Navajo (as in Kaufman (1975), and Kamaiuro (as in Brandon and Seki (1981)). Koopman (1983), using Vata, a language of the Kru family spoken in Ivory Coast discovers that, though there is WH-movement, moving WH-phrases into the clause initial position, the language positions complementiser clauses finally. This observation means that WH-movement does not involve adjunction to COMP either in a language like Vata or universally. The implication of this situation will be further analysed in Chapter Four.

Now that NP and WH movements have been individually considered, the next section will dwell on the possibility of collapsing them into a general rule of Move Alpha.

2.4 Alpha Movement

In an attempt to establish the similarity between NP and WH-movements, Chomsky (1973) advances evidence from comparative deletion where the WH-constituent may be deleted at the S-structure as in the following examples:

(16) Paul is taller than what John is_____.

(17) Paul is taller than John is _____.

Based on a thorough analysis of WH and NP movements, Radford (1988) argues that observations about the application of the different syntactic rules show NP and WH rules as mere manifestations of the same rule - a rule which moves a target XP (= a full phrase i.e. a maximal projection) out of its underlying position within INFL' into a matching empty XP slot of the same category and to the specifier of COMP. Radford reasons that since this rule moves an XP into a matching empty XP position, it could be referred to as a generalised X-movement. The same argument he explains, could be extended to minimal projections like in V-movement and INFL movement.

And to reconcile the possible mismatch between aspects of Alpha movement which are substitution rules, and those that are adjunction rules (like extra-position), Radford (1988) observes that adjunction applies only where substitution is blocked for some reason. This means that substitution and adjunction apply exclusively, thereby presenting a stronger forced of evidence that the two rules are reflexes of a single maximally general alpha movement rule stated as follows:

Move α where α is a category
Variable - i.e designates any
random category you care to choose

- cf Chomsky (1981d: 47)

The move alpha rule appears to be too powerful on the face value to the extent that it would clash with the established word-order. This fear is greatly allayed by the fact that languages have rules that move constituents from one position to another in a principled way. This principled way for movements is subject to parametric variations.

In spite of the close relationship between NP and WH-movements, Van Riemsdijk and Williams (1986) highlight major differences between the two. An outstanding difference between the two relates to the nature of the traces emanating from each structure. Traces, which are deemed to be left at the extraction sites of moved elements, in accordance with Emonds' (1976) "Structure Presenting Hypothesis", can be of the NP or WH or type. These traces or invisible forms have been referred to in GB literature, as EMPTY CATEGORIES. As a general summary, Van Riemsdijk and Williams (1986) present a topology of empty categories depending on whether they are of the NP or WH type.

Syntactic Process	NP Trace	WH Trace
Preposition Stranding	Only Subject to the natural predicate condition	Fairly Free (at least in English)
Wanna Contraction	Does not block contraction	Blocks contraction
Opacity Condition	subject to Opacity	Not subject to opacity

Source: Van Riemsdijk and Williams 1986:154

2.5 Semantic Construals to Movements

Following Chomsky's (1981c) "Empirical Motivation", many linguists of the revised EST tradition have argued that any moved constituent is perceived to leave behind empty categories. Thus Redford argues that...

> ...any moved constituent of a category X^n leaves behind in the position out of which- it moves, an empty category of the type
>
> $[X^{ne}-]$
>
> - cf Radford. (1988 555)

From a consideration of WH- questions and relative clauses, Chomsky (1982) concludes that if the Extended Projection Principle is correct, that an empty category is usually present whenever a role is assigned with the corresponding Θ - position containing no lexical material. He equally explains that in the Extended Projection Principle that the category S must Contain an EC, as subject if no overt

subject is present. This is the case with infinitival clauses or finite clauses in pro-drop languages (where the subject is missing or inverted).

These EC's according to Van Riemskijk and Williams (1986), and Ajeigbe (1986) could be those of NP's or WH phrases. And on a more elaborate scale, Chomsky (1981a 1982a), identifies four types of empty categories which are:

(i) Trace

(ii) PRC

(iii) Pro, and

(iv) Variables

2.5 Trace

The concept of Trace has been variously investigated in linguistic literature. Notable works within this area include Wasow (1972), later revised in (1978) Fiengo (1977), Chomsky (1976) Postal and Pullum (1978) and Brody (1985). From the analyses of these different works, Van Riemsdkjk and Williams (1986) describe a trace as a syntactic category (such as an NP) without a phonological content and internal structure, but which retains only an index identifical to the index of the material moved out of that trace position. They further argue that the essence of the index is to keep track of which category that has the trace, especially if the structure involves more than one movement. The following sentences exemplify the position of trace in English.

(18) (a) [NP who] NP_1 did you see [NPe] NP_1

b) Who_1 did you see $e_{i?}$

Since the symbol e is not terminal, just an identity element, Chomsky (1973, 1975) has suggested that trace should be better represented with the symbol (t).

According to Van Riemsdijk and Williams (1986), the concept of Trace has been motivated by the study of the parallelism between Movement structures and Antecedent - anaphor relations. These relations highlight two major notions - anaphor and c-command. Anaphors, according to them are just NPs that require antecedents - reflexives, reciprocals and obligatory control PRO. C-command on the other hand shows the relevant structural relations among nodes in a tree. This structural relation is crucial to movement and to anaphoric relations since movement is always within a c-commanding position, and an anaphor must be c-commanded by its antecedent.

Nwachukwu (1986, 1987a), Añunobi (1989) argue that the same empty category principle obtain in Igbo. Nwachukwu, however points out that in Kèdu embedded Question transformations, where the question operators are fronted as D-structure subjects, Movement is apparently absent, thus blocking the chance for real gaps. He concludes that extraction from subject position (for all Yes-No and in-situ questions) leaves behind a resumptive pronoun, while extraction from object or adjunct position gives rise to empty

categories of the trace type. Interestingly he argues that resumptive pronouns and gaps are in complementary distribution. Añuobi (1989) echoing Nwachukwu (1987a) concludes that both the resumptive pronoun and the gap are properly governed in accordance with the ECP or the Generalised Binding Conditions in the sense of Aoun (1985).

As already noted, traces could be of the NP or WH types depending on their syntactic and semantic characteristics.

2.5.2 PRO

This is another empty category which Chomsky (1981), Koster and May (1982) consider as a variant of Trace. Though Culicover and Williams (1986) basing their argument purely on evidence from gapping, pseudoclefts, apposition clefts, comparative and stylistic inversion argues that PRO is a non-syntactic element,Chomsky (1981a, 1982a), Radford (1981), Koster and May (1982) Brody (1985) and Ajeigbe (1986) believe strongly that PRO, as an EC exists. They believe that PRO is a pronominal anaphor characterised as + anaphor + Pronominal.

Its position, according to Chomsky is apparent in subjectless infinitival clauses in English sentences with empty COMP's and empty subject NP's. Thus, the position of PRO accounts for the differences between (19) and (20).

(19) COMP Harry tries [S^{I} COMP NP to be successful]

(20) COMP Harry seems [S^{I} COMP Np to be successful]

According to Obi (1988), the empty NP subject of the infinitive after seems in (20) represents a trace of the underlying subject of the be clause which is subsequently moved into the main clause subject position by NP movement. But in (19), Harry is not the underlying subject of be but rather the underlying subject of tries, while the underlying subject of the infinitive be clause is an empty pronominal NP - PRO which can be interpreted as referring to Harry by an appropriate semantic interpretive rule. The tries complement has an "invisible" pronominal subject - PRO, both underlyingly and superficially. Thus in (19), PRO is the underlying subject of the subordinate clause.

Ample evidence exists in Chomsky (1981a) to show that PRO has AGR features, a characteristic that makes it similar to Trace. However, Chomsky (1981d) has noted major differences between PRO and Trace. In the first place, the notion of PRO developed from the study of equi-NP deletion while that of trace as already noted developed from the study of transformational rules, especially those of Move Alpha. This observation seriously puts to question the claim that Movement is the only transformational process in syntax. This issue will be taken up in Chapter Six.

Other striking difference between PRO and Trace have been identified in Chomsky, (1981d):

i) trace is governed;

ii) the antecedent of trace is not in a θ position;

iii) the antecedent - trace relation satisfies the subjacency condition.

On the other hand:

i) PRO is ungoverned;

ii) its antecedent, if it has any usually has an independent θ - role as does PRO;

iii) the antecedent - PRO relation, where PRO has an antecedent need not satisfy the subjacency condition.

Ajeigbe (1986) basing his argument on a careful study of Chomsky's writings concludes that an EC. that is co-referential with its antecedent is a pronominal anaphor - PRO, while an EC left by a movement rule in its landing site is a trace. However, in spite of the differences between PRO and Trace, Chomsky (1981d) argues that Binding would apply just as well in exactly the same way if PRO and trace were not distinguished. It should be pointed out that the separatist hypothesis appeals to empirical analysis more than the hypothesis that calls for the collapsing of the two EC's (cf Chomsky 1982a).

2.5.3 Pro

Chomsky (1981b, 1982a) describes Pro as a purely pronominal element occurring as such personal pronouns as he, she, they, you, or an expletive. The expletive is a pleonastic element not instantiated in English, but only in null subject (Pro-drop) languages. As a pure pronominal, Pro

is characterised as

(-a +p) i.e. (- anaphor + Pronominal).

Since Pro is not a pure anaphor, it cannot be analogous with NP trace or WH-trace.

Torrego (1981) in his discussion of Spanish Interrogatives and Verb Fronting raises the argument that Pro is the element in an S-structure position generated at the D-structure and understood to behave like overt pronouns. According to Torrego, the finite verbs bears the subject in a governed position, where government is by the fronted verb. The same phenomenon has been observed by Chomsky (1982a) to be true of Direct and Indirect Questions as shown in the following questions:-

(21) With whom will Steve go to Kano?

(22) I don't remember to whom Steve lent the car.

The position taken by Steve in (21) and (22) is not only governed but also properly governed. It can therefore be filled by an EC - a missing subject (-Pro) in Pro-drop languages.

Jaeggli (1980) and Aoun (1985) maintain that a pronominal is just a spelling out of a pronoun (in this case - Pro). This means that we insert an appropriate phonological matrix for a pure pronominal EC with case at the S-structure. In Pro-drop languages, Pro with case can be left in the subject position governed by AGR since its content will be determined by AGR with Case, i.e. the PRO-INFL.

Borer (1982) extends the concept of Pro to the EC associated with clitics and developed the theory of cliticisation in which he argued that the clitic does not only govern the associated EC, but also determines its features as well. He then concludes that the EC associated with the clitic is presumably either an anaphor or PRO.

On the syntactic functions of Pro, Obi (1988), articulating the earlier writings of Chomsky, (1981a, 1982a), Jaeggli (1980) Borer (1982) Aoun (1985), points out that Pro functions as antecedents, sentence expletives and place holders for names.

2.5.4 Variables

Chomsky (1981b) sees variables as a variety of Trace which can be expressed as shown below:

(-a-Pro) i.e. (-anaphor - pronominal)

According to him, a Case-marked trace is a variable, while a Caseless trace is an NP-trace. Other characteristics of variables which Chomsky (1981d, 1982a) Brody (1984) have identified include:

i) variables are A-bound;

ii) variables are Case-marked;

iii) variables are subject to subjacency;

iv) variables are subject to licensing;

v) they are not subject to SSC or NIC.

We shall investigate these characteristics in detail in Chapter Five.

2.6 Syntactic Constraints on Movements

It has been noted at the previous section of this chapter that movement is checked by the rule of construal which relates to empty categories. There are also some syntactic restrictions which prevent the rules from applying too widely and thus over generating structures.

The first recorded attempt at establishing a general theory of conditions on transformations is Chomsky's (1964) Current Issues in Linguistics, in which he proposed "The A-Over-A Principle". The principle states among other things that:

i) An NP that is a conjunct of a co-ordinate structure cannot be questioned;

ii) An NP that is part of a subject cannot be questioned or relativised;

iii) An NP that is contained in the sentential complement to a noun cannot be questioned or relativised;

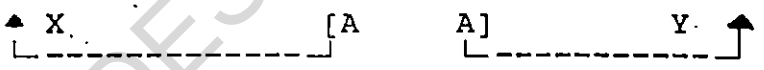
iv) An NP that is part of a relative clause cannot be questioned or relativised;

v) An NP that is part of an indirect question cannot be questioned or relativised.

These conditions account for the fact that a transformation involving two NP's, one of which is embedded in the other and both of which match the structural description of that transformation normally does apply to the higher one.

In spite of the strong appeal of the principle, especially during the time of its proposition, linguists argue that the principle is both too strong and too weak - cf Van Riemsdijk and Williams (1986). The principle is perceived to be too strong in so far as it excludes certain grammatical sentences, and too weak since it fails to exclude certain ungrammatical ones.

It was in recognition of these weaknesses that Ross presented "Constraints and Variables" (1967) for a doctoral research at the M.I.T. It seems that the term "Constraints" is favoured more by linguists than "Conditions". Ore Yusuf, (1990) in total admiration of Ross' terminology specifies the direction of these constraints and argues that in a movement involving [A], in the direction of the arrows shown below, the variables x and y must meet certain conditions, otherwise movement will not be well-motivated, and if it applies, it does so out of linguistic conventions:

(70) 

According to Ross, the most common constraints are: the Complex NP Constraint, Sentential Subject Constraint, Co-ordinate Structure Constraint, Pied Piping, Left Branching Condition and Upward Boundedness.

All these constraints build up to the subjacency condition proposed by Chomsky (1970, 1973). Subjacency is principally concerned with what form constituent nodes and the cyclic processes involved in the different Movement processes.

Horrocks and Stavron (1987) argue that the transformational rules of Move Alpha and their traces are subject to the locality condition - subjacency. This condition requires that not more than one barrier should intervene between the moved constituent and its extraction site since languages display Island Constraints.

Since Chomsky (1973) subjacency has been variously analysed, with the bulk of the argument centring on the choice of cyclic nodes across different languages. Chomsky (1973) and Horrocks and Stavron (1987) suggest NPs/s/s^1 as bounding nodes. Rizzi (1978) Radford (1981) and Van Riemedijk and Williams (1986) argue for NP/s^1. These points will be discussed in Chapter 6.

The second argument relates to the exact number of cyclic boundaries while the third seeks to determine the position of a cyclic boundary.

According to Chomsky and Lasnik (1977) the Subjacency Condition ensures that no phrase can be moved across more than one cyclic node. It also sets out to ensure that a movement rule does not operate over too large a distance, except it does so by iterating in a series of smaller hops, and never in one swoop.

Though the constraints within the Subjacency Condition have been vigorously analysed in English, there is paucity of material demonstrating its application in Igbo. Mbah (1991) working within Chomsky's (1986b) framework argues tentatively

that NP's and S's are cyclic nodes in Igbo. He concludes that subjacency is the main syntactic constraint in Igbo. We shall investigate this claim in detail in Chapter Six to find out exactly how the different constraints apply in the language. The aim is to see how they relate to and differ from those of English.

2.7 Concluding Remarks

In this Chapter, an attempt has been made to review some of the available literature on movement. The Chapter started with an overview of syntactic theory which eventually led to the discovery that Movements have been proposed to replace the numerous transformational phenomena. As a further move to constrain the rule of grammar, only two Movements - those of NP and WH are upheld as the main components of the general Move Alpha. These Movements have been noted to be constrained semantically by Empty category principles, and syntactically by subjacency. In the whole analysis, it has been discovered that English has received greater attention than Igbo. Therefore, the subsequent Chapters will be used to compare these Movement principles in the two languages.

CHAPTER 3

NP MOVEMENT

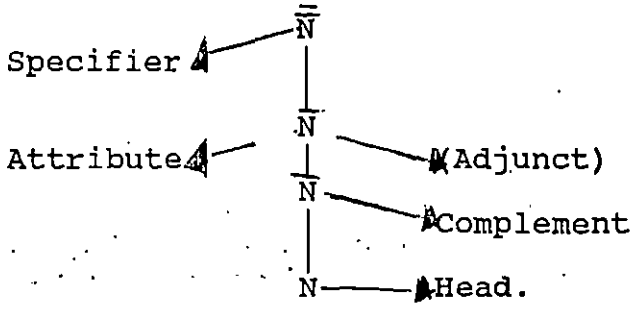
3.0 Introduction

This chapter presents an analysis of the different structures that derive from NP movement in English and Igbo. The data are analysed within the Principles and Parameters approach of the GB theory with the aim of identifying similarities and difference between NP movement processes in the two languages.

3.1 The Structure of the NP in English and Igbo

There are obvious differences in the NP structures of the languages. These differences relate more to the quantity of modifying elements and their systems of occurrence. For instance, while English admits as many as seven adjectives in addition to determiners cf Quirk et al (1972) Igbo admits relatively fewer adjectives before the noun-head. However, as a result of the repetition allowed in the range of items that modify the noun-head, the NP structure of the two languages is N"(N-double bar) as illustrated in (1)

(1)



The realisation in (1) is accounted for by the X - bar pruning mechanism which permits intermediate bars not dominating at least two branching nodes to be left out. Again, while English has mainly a modifier - first and noun-head last arrangement, in Igbo it is the other way round - cf Emenanjo (1978), Oluikpe (1978), Ogbulogo, (1987), etc.

A crucial element in the NP structure of the two languages and indeed any other language is the head noun which bears the essential characteristics. All other constituents before or after the head are mere satellites - cf Sells (1985). These satellites can be specifiers, attributes, adjuncts and complements. Specifiers are basically determiners; attributes are adjectives, while complements and adjuncts are basically prepositional phrases or relative clauses. Igbo does not, however, make us of prepositional phrase adjunct or complements.

3.2 Direction of NP Movements

Radford, (1988) has rightly observed that NP movement is a substitution rule which moves an NP into an empty NP slot. This means that the direction of NP movement could be either left or right, so long as the slot to be taken over is of the NP type. Already, this view has been supported by Van Riemsdijk and Williams (1986) in their claim that the Passive structure one of the main NP movements, involves two main operations - NP - preposing and NP post-posing.

It appears therefore that the analysis of the different structures will reveal the direction and focus of the moved NP in each case.

3.3 Structures Deriving from NP Movement

In Chapter Two, the following structures were identified as deriving from NP Movement in English.

i) Passive
ii) Raising
iii) Extraposition
iv) Ergatives
v) Middles
vi) Polar Questions.

In the sections that follow, these structures will be critically examined in both English and Igbo.

3.3.1 Passive

A passive structure and its active counterpart are related at the D-structure. The object NP occurring after the verb is moved into a subject position as in the following sentences.

(2) (a) John saw Mary
(b) Mary was seen by John.

(3) (a) The men killed the snake
(b) The snake was killed by the men.

Van Riemsdijk and Williams (1986) point out other processes which are spread across different sub-components of grammar. These are NP-preposing, NP post-posing, verbal morphology and Case assignment. For NP preposing, passivisation has the following scheme:

(4)	X	-	np	-	Y	-	NP	-	Z	
SD	1		2		3		4		5	→
SC	1		4		3		ϕ		5	

The process in (4) moves the object NP into the subject position.

NP-post-posing is schematised in (5)

(5)	X	-	np	-	Y	-	NP	-	Z	
SD	1		2		3		4		5	→
SC	1		ϕ		3		2		5	

By the process in (5), the underlying subject is move into a-by phrase to the right of the VP. The structure np stands for a lexically empty (or phonetically unrealised noun phrase), while NP is lexically filled.

The Verbal Morphology Principles within the Government subcomponent accounts for the relationship between the past participle (passive forms) and the Auxiliary be element to yield a passive.

Within the system of Case assignment, available semantic rules assign the role of Agent or Experiencer to a by - phrase and ensure that a grammatical object of the passive is interpreted as the underlying "logical" subject.

It is the verbal morphology that triggers movement and also ensures the changes in the passive structure. The relationship between moved NP's is accounted for by Emonds (1976) "Structure Preserving Principle". cf Emonds (1976).

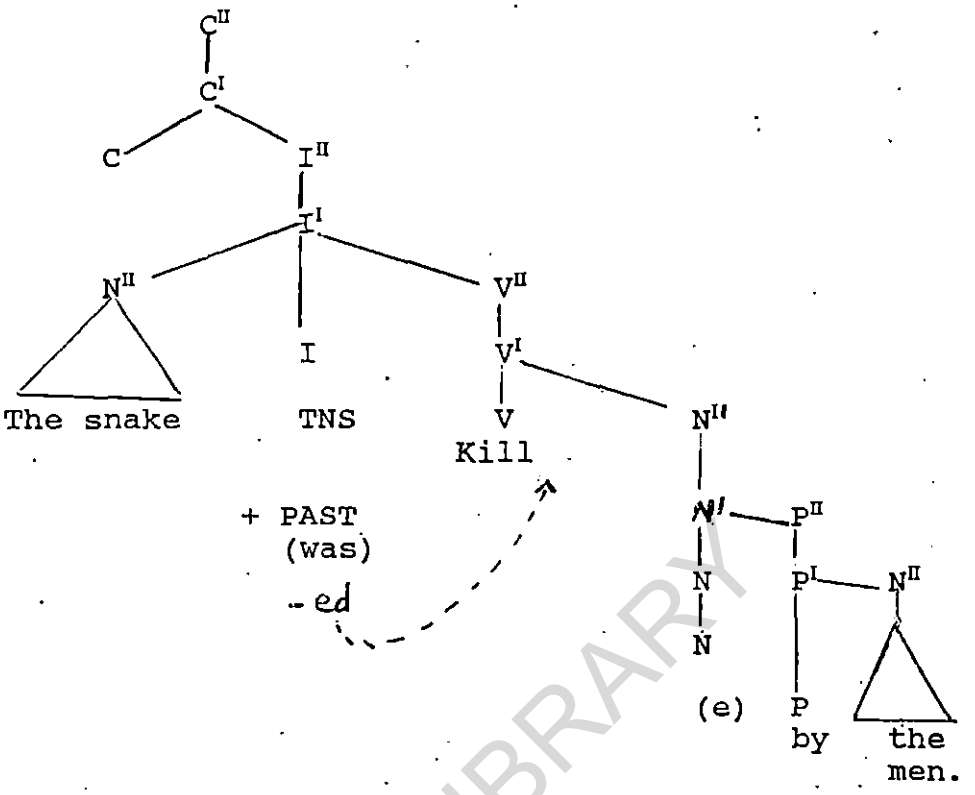
Passives involving - by phrases do not seem to have problems of explanation since NP's appear at both axes - (for two place argument verbs). In each of the following examples, one of the constituent NP's appears to be missing.

(6) Teachers were rewarded t.

(7) Ken will have been promoted t.

In (6) and (7), it is observed that the transitive verbs rewarded and promoted, have subcategorised empty NP nodes as traces - in accordance with the Empty Category Principle (ECP). The ECP will still obtain even in cases where a-by phrase occurs at the rightmost position. Consider sentence (3b) above, which has the structure (8), where there is an empty node (e) occurring as a trace after killed.

(8)



All our examples so far tend to uphold the adjacency condition for passivisation. This condition stipulates that only NP's immediately adjacent to verbs can be passivised. cf Van Riemsdjik, and Williams (1986). There are, however instances of sentences in which this condition is violated.

(9) Nothing was agreed ON - by the panel

(10) The information was asked FOR - by the Dean.

In (9) and (10), the passivised subjects seem to have moved out of their underlying positions marked "------" as prepositional objects.

A crucial element in the passive structure as demonstrated in all the sentences so far considered is the powerful verbal morphology that triggers movement. Igbo lacks

the -en (past participle) form. Therefore, there is nothing to trigger NP movement for the passive in the language. Instead, there is the use of the indefinite-subject construction in the place of passive as shown in the following sentences:

(11) A gbàrà mmadụ̀ egbè.
Someone shot (a) person gun
(A person was shot)

(12) A nụ̀rụ̀ akwa.
Someone heard (a) cry
A cry was heard.

Indefinite pronouns in Igbo are A and E which can be glossed as somebody someone or people generally. The choice of either A or E is determined by vowel harmony rule.

3.3.2 Raising

Culicover (1976) defines Raising as the extraction of the subject of a complement and making it the direct object of the main verb. It involves the movement of a target NP away from the subject of an embedded clause. The movement is through the SPECIFIER (SPEC) of INFL nodes. Wekker and Haegeman (1965), further add that Raising could be achieved with passive verbs, intransitive verbs (i.e. raising verbs) and adjectives.

For examples of Raising achieved with passive verbs, consider the following sentences:

(13a) I intend (for) the later parts to carry the conclusion.

(13b) The later parts were intended to carry the conclusion.

The higher clause in (13a) I intend is active, while the clause in (13b) were intended is passive. In (13a), the NP, the later parts occurs as the subject of the embedded S. In (13b), the later parts is the NP subject of the higher clause as well as the subject of were intended. It seems as if the embedded S in (13b) to carry the conclusion lacks an overt subject. Sentence (13b) is the passive counterpart of (13b). The original subject of intend - I is suppressed by passivisation. There is then the leftward movement of the subject of the embedded non-finite clause - the later parts now placed in the subject position of the higher clause, and thus leaving a gap in the original position. This issue is further clarified with the following structures.

(13c) [S^I [VP intended [S^I the later parts to carry the conclusion]]

(13d) [S^I [NP the later parts] [were intended [S^I [S... to carry the conclusion]]

In (13d), the NP subject of the higher clause binds the subject position (the gap in the lower clause), just the same way an antecedent Np binds a reflexive anaphor. As a result of the absence of the passive structure in Igbo, Raising involving passivisation does not obtain in the language.

Both languages achieve Raising by the use of raising verbs most of which are intransitive. Common examples are seem and appear (for English), tosiri/kwesiri (is supposed). Others include the verbals di ka (seems, is like, appears) and nwere ike (is capable). The following are movement-derived Raising structures.

(14) Joseph seems PRO to have hurt himself.

(15) Mariam appears PRO to have enjoyed herself.

(16) Adakụ Kwèsìrì/tòsìrì PRO ịnọrọ ọnwe ya
Adaku suppose PRO to stay self her
(Adaku is supposed PRO to be on her own)

(17) Anwụ dị kà PRO ọ nà-ẹti.
Sun is that PRO it is shining
(The sun seems to be shining).

(18) Ọkoro nwèrè ike PRO ịlọtà.
Okoro has power to return
(Okoro can return).

In both the English and Igbo examples, for each case, the embedded NP subject has been moved to the position of the matrix NP which would have been filled by the pleonastic element, it for English, and O/Q for Igbo. In their original forms, sentences (14) to (18) would appear as shown below.

(14a) It seems Joseph has hurt himself.

(15a) It appears Mariam has enjoyed herself.

(16a) O kwèsìrì Àdakụ ịnọrọ ònwe ya.
It suppose Adaku to stay self her.
(It is supposed for Adaku to be on her own)

(17a) Ọ dị kà anwụ ọ na-èti.
It is that sun it PRO is shining.
(It seems the sun is shining)

(18a) O nwèrè ike Òkoro àlọta.
It has power Okoro to return.
(It is possible (for) Okoro to return).

The English Raising structures have obligatory PRO occurring as the subject of the infinitive clauses which are the surface objects of the Raising verbs. The same PRO phenomenon occurs in Igbo, thus establishing a case for the existence of control and PRO structures in the language. While the presence of the obligatory PRO blocks the chance for a trace in English, in Igbo both PRO and a resumptive pronoun occurring as a trace can exist. See example (17a) above

Few adjectives in English trigger raising as in the following example.

(19) Peter was/likely/certain/------- to deny Ben.

Peter in (19) is the grammatical subject of was/ certain/likely which binds the subject position of the subordinate non-finite clause. However, Raising triggered by Adjectives does not obtain in Igbo because of the absence of such predicative adjectives that can trigger movement.

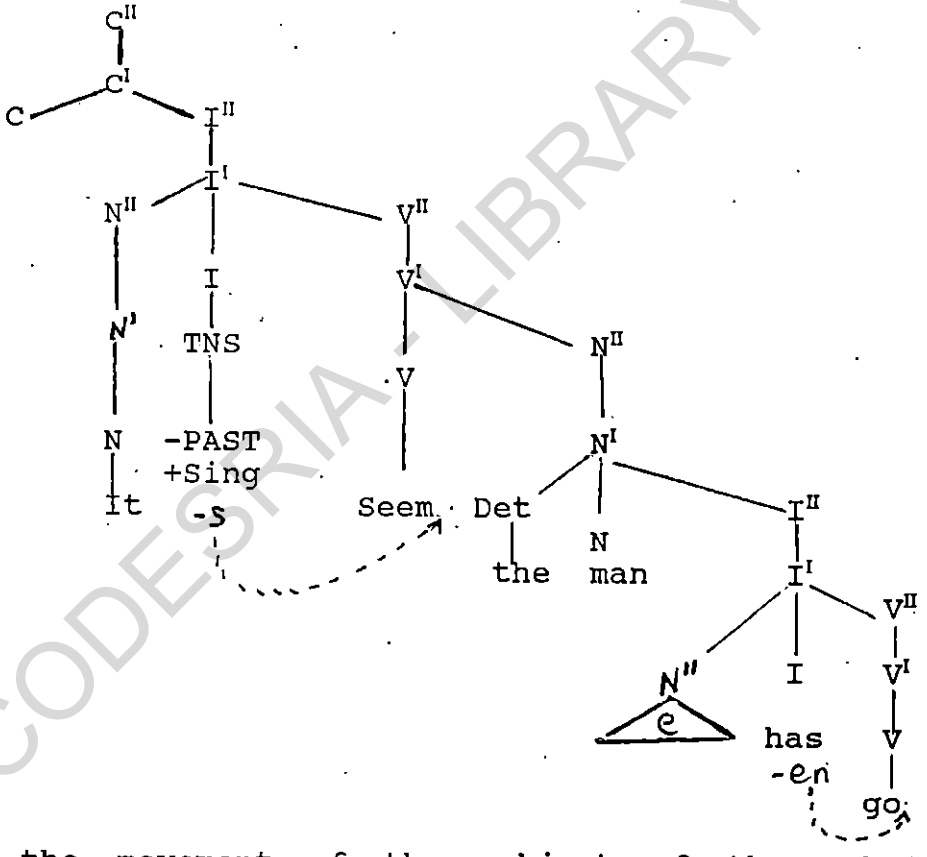
For there to be Raising in the two languages, the NP position of the Matrix sentence (which will now function as the landing site) must be empty. The following structures further illustrate NP movement from which derive Raising structures.

(20) It seems the man has gone.

Under a Raising construction, (20) becomes (21), sketched in (22) and (23).

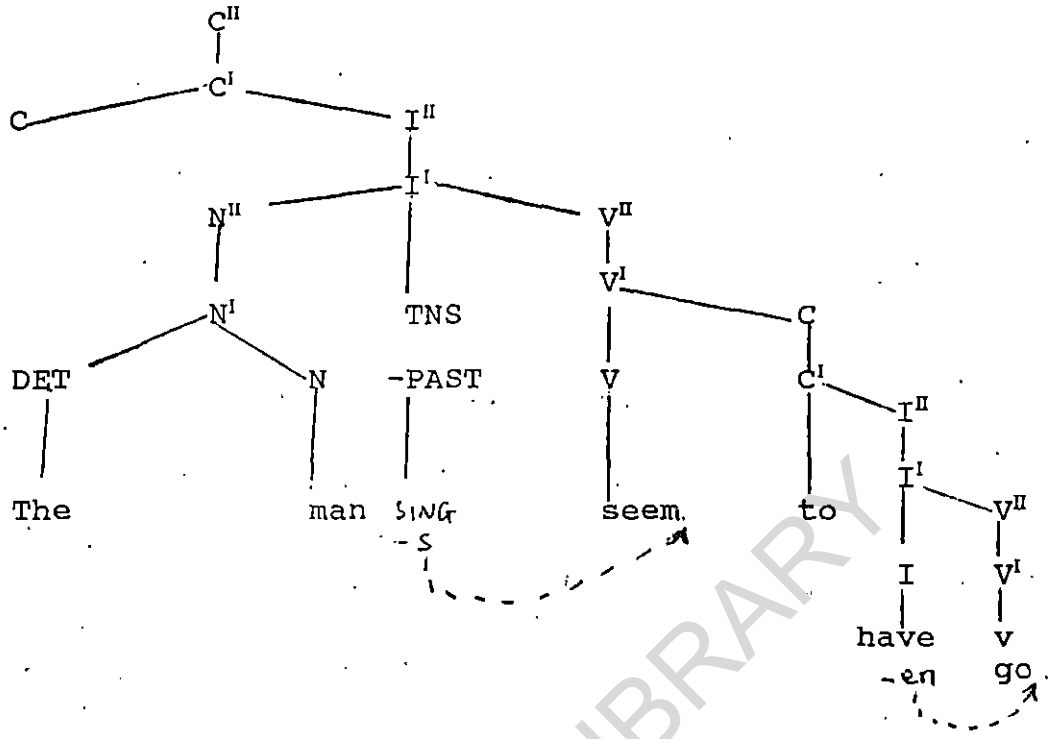
(21) The man seems to have gone.

(22)



(23) With the movement of the subject of the embedded sentence, (22) now becomes (23).

(23)



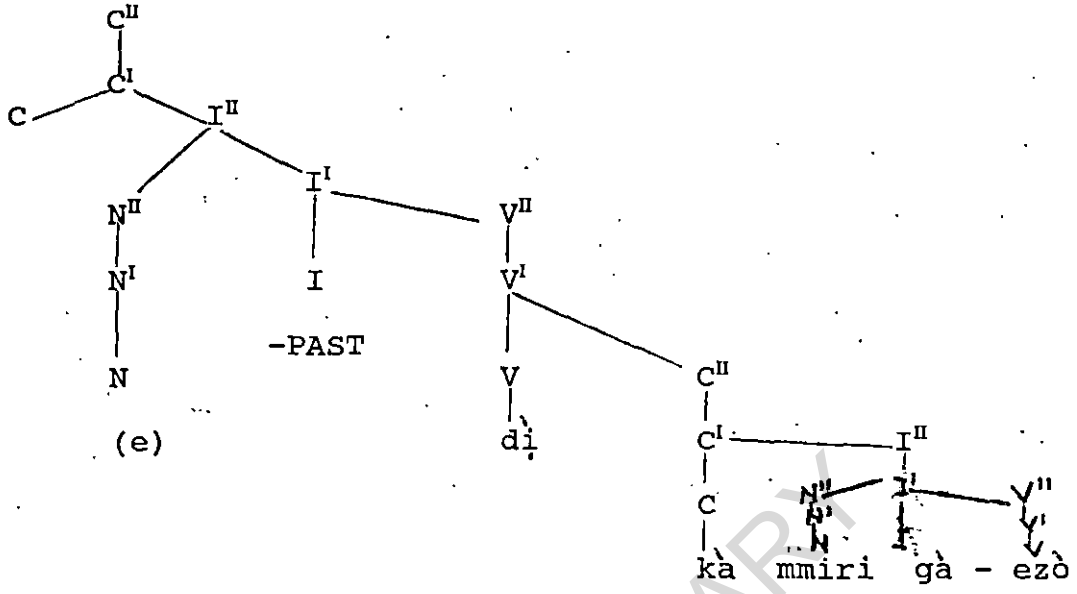
In Igbo, the same process can occur, using similar tree diagrams:

(24) Mmiri di ka O ga - ezo.

Rain is like it will rain.

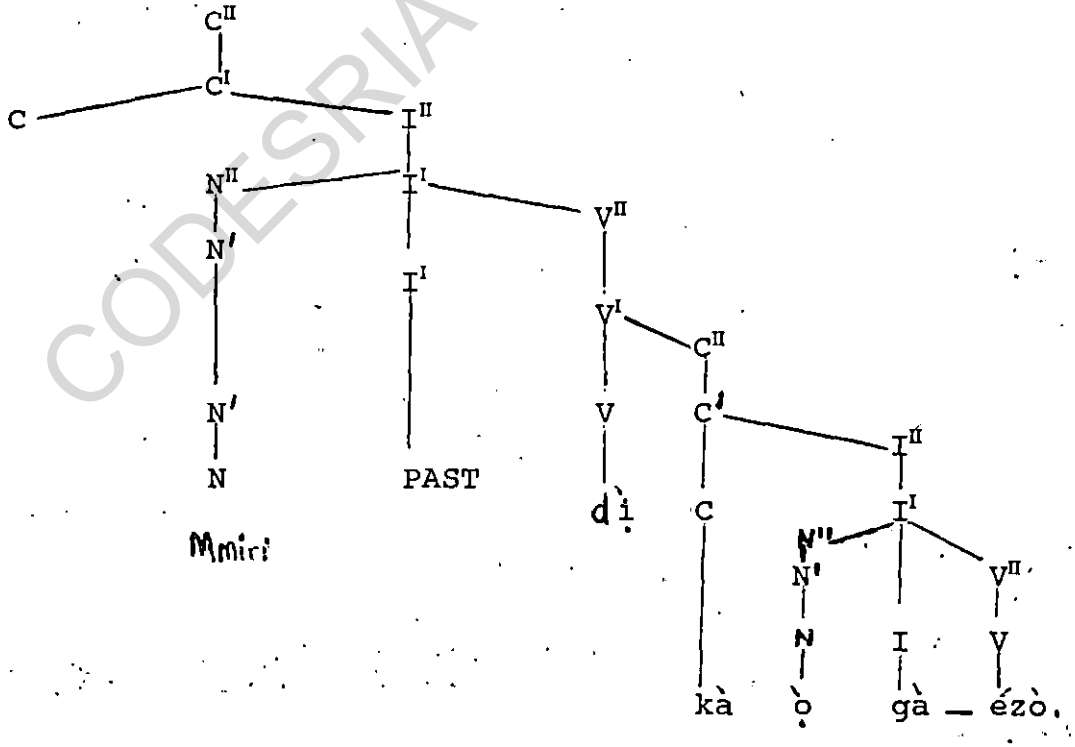
(Rain seems to fall (in the future)

(25)



Structure (25) shows the first step in the Raising structure which is extraction. The second step, landing is illustrated below:

(26)



The movement in Igbo makes the realisation of resumptive pronouns at the extraction site possible-a reaffirmation of an earlier contention that the NP position of the matrix sentence is not filled by lexical insertion when an embedded subject gets moved to a higher node:

Raising involving NP movement can be summarised as follows for both English and Igbo.

(27)

	X(e)	V^{I}	COMP/S	N^{II}	INFL	V	
	1	2	3	4	5	6]	
=>						]	Igbo
	4_i	2	3	pro_i	5	6]	

(28)

	X(e)	V′	COMP/S	N^{II}	INFL	V	
	1	2	3	4	5	6]	
=>						]	English
	4_i	2	3	t_i	5	6]	

The only difference in configuration is that where a resumptive pronoun occurs in Igbo there is a trace for English.

There is also another type of Raising deriving from the application of Raising predicates as shown in the following examples.

(29) There is <u>about</u> to be a fight.

(30) There is <u>apt</u> to be an outbreak.

(31) There is <u>bound</u> to be a riot.

(32) There is <u>liable</u> to be crisis.

(33) There is <u>going</u> to be a match.

(34) There <u>chanced</u> to be a knife around the corner.

- cf Radford (1988;p.443)

The underlined predicates in (33 - 38) permit non-referential subjects similar to the existential <u>there</u>. This observation confirms their status as "Raising" rather than "Control" predicates - cf Postal (1974).

<u>In Igbo</u>, there are "Middle structures" in the place of "Raising predicates". For instance, sentences 29 - 34 will have the following translational equivalents:

(29a) Ọgụ nà-àkwado ịda.
Fight is preparing to fall
(There is about to be a fight).

(30a) Ọrịà gà-èbido gbasàwa.
Disease will begin spreading
(There is apt to be an outbreak)

(31a) Ọgbaaghara gà-adà.
Riot will fall
(There is bound to be a riot)

(32a) Nsọgbu gà-adị
Trouble will be.
(There is liable to be crisis)

(33a) Isọmpi egwuregwu gà-àdị.
Locking horns play will be.
(There is going to be a match).

(34a) Mma dị̀ n'akụ̀kụ̀ ebe ahụ̀.

Knife be by side place there

(There chanced to be a knife around the corner)

Structures (29a - 0 34a) can, however be made more elegant by the introduction of the indefinite pronoun. Consider further (29a - 34a).

(29b) A nà - àkwadọ ilu ọ̀gụ̀.

Someone/people are preparing to fight fight

(People are preparing to fight).

(31b) A gà-ènwe ọ̀gbaaghara

(People will have crisis).

(32b) A gà-ènwe nsòɡbu

(People will have trouble).

(33b) A gà-ènwe isọ̀mpì egwùregwu

(People will have a match).

(34b) E nwèrè mmà dị̀ n'akụ̀kụ̀

Someone has (a) knife be by the side

(There was a knife by the side).

The English sentences, 29 - 34 each has an instance of there insertion, a phenomenon that instigates the movement of the subjective, and does not function as an underlying direct object.

3.3.3 Extraposition

Unlike other instances of NP movement which are mainly rules of substitution, Extraposition is an adjunction rule. It moves a PP or an S-bar within an NP (i.e. an adnominal PP or S-bar) to the end of the S-containing it. (cf Radford, 1988). The following sentences are examples of extraposition moving PP's out of their containing NP's in English.

(35a) Comments on his performance have appeared.

b) [Comments] have appeared - on his performance.

(36a) A book about current issues in linguistics has been published.

b) [A book] has been published - about current issues in linguistics.

In (35b) and (36b), the prepositional phrases which are parts of the subject NP's have been moved out of their containing NP's.

Structures like (35b) and (36b) do not obtain in Igbo because PP's do not perform adjectival functions in the language without the verbs that precede them. However, Extraposition can be realised in the language with such verbs

as gbasara (concerning) Metutara (relating). Consider the following examples.

(37a) Akụkọ gbàsara mpụ nà Legọọs èjula ebe niile.
Stories concerning crimes in Lagos have filled place all
(Stories concerning crimes in Lagos have spread everywhere).

(b) [Akụkọ] èjula ebe niile gbàsara mpụ nà Legọọs
Stories have filled place all concerning crimes in Lagos.
(Stories have spread everywhere concerning crimes in Lagos.

(38a) Nkọcha metụtara ndịọchịchị pụtàrà n'akwụkwọ akụkọ.
Criticisms relating to leaders appeared in papers news.
(Criticisms relating to leaders appeared in newspapers)

b) [Nkocha] pụtàrà n'akwụkwọ akụkọ metụta ndịọchịchị

In (38b), the extraposed segment carries a slightly different form of the verb - metuta which is semantically similar to metutara. If metutara, (with its tonal change) is used, there is a slight change in meaning. Consider further (38c).

(38c) Nkọcha pụtara n'akwụkwọ akụkọ metụtara ndịọchịchị.
Criticisms which appeared in paper news related to leaders.

to (Criticisms which appeared in newspapers related to leaders.

Sentence (38c) has a relative clause structure.

The implication of the Igbo examples is that the rule of Extraposition should incorporate VP's that are parts of NP's.

The second kind of structure allowing Extraposition in an S-bar, a complementiser clause, as in the following examples:

(39a) [A rumour that he had arrived] circulated fast.

b) [A rumour-] circulated fast <u>that he had arrived</u>.

(40a) [The theory that the earth is spherical] has been proved.

b) [The theory-] has been proved <u>that the earth is spherical</u>.

(41a) [A dimension which I didn't foresee] has emerged.

b) [A dimension-] has emerged which I didn't foresee.

In (39b - 41b) we observe that complementiser clauses headed by <u>that</u> and <u>which</u> undergo movement from their positions immediately after the subject NP to a position after the VP.

Following Wekker and Haegeman (1985) there could be a

combination of Extraposition and It insertion to form It Extraposition as shown in the following examples.

(42a) That the man is lame arouses pity.

b) It arouses pity that the man is lame.

In (42b), pity functions as a direct object which has been moved by it - Extraposition.

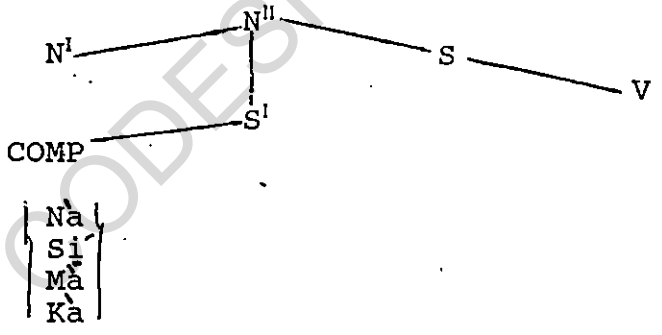
Following Nwachukwu (1976), Igbo complementisers are na, mà, kà/mà and si each of which performs a different function:

nà - indicative, Kà/mà - subjunctive

mà - interrogative si - imperative

Mbah (1991) argues that Igbo sentential complements except those headed by na are not liable to Movement. He presents a typical NP sentential complement structures as (43) below.

(43)



He further observes that the Na complement is amenable to two possible transformations - either delete or extrapose. Following Nwachukwu (1976), Mbah (1991) explains that it is the Na Complement clause that asserts the truth of what it

says, affirms or declares. It is factive and verifiable as in the following examples.

(44) O wùtèrè m nà Ò jeghi.

It pained me that she/he didn't go.

(45) Nà O kwènyèrè mèrè e jìrì hapụ ya

That she/he admitted led to his/her release.

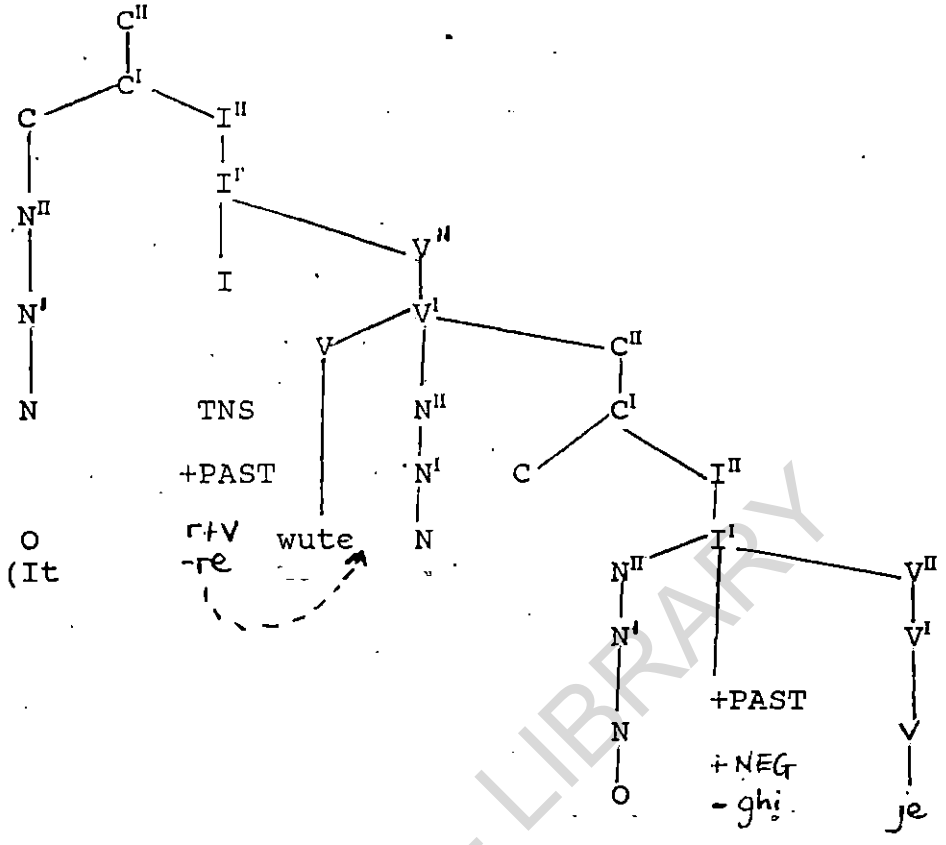
The verbs wùtèrè (pained) and kwènyèrè (admitted) presuppose or entail the truth of what is said in each case. That propositional force enables the embedded clause to undergo Movement to the matrix sentence when the NP position is empty as in the following example:

(46) Nà Ò jeghì - wùtèrè m

That she/he didn't go pained me.

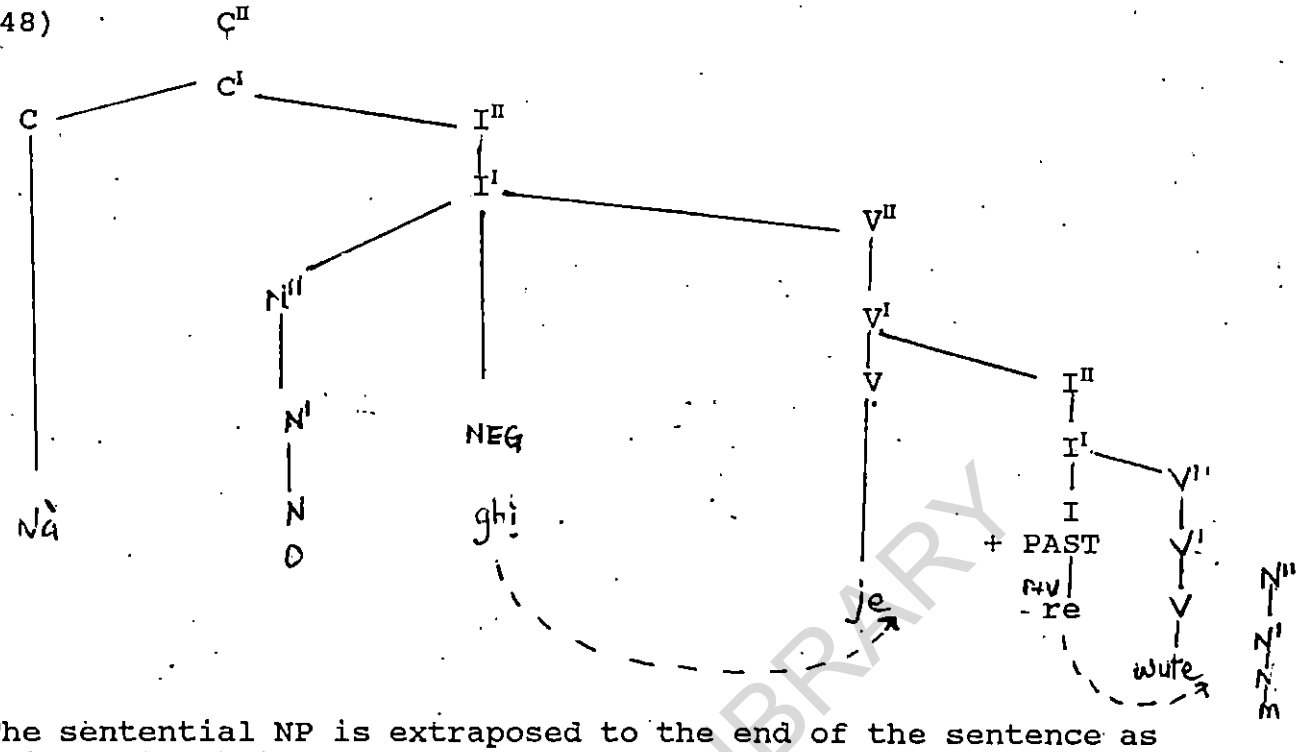
Underlying structure:

(47)



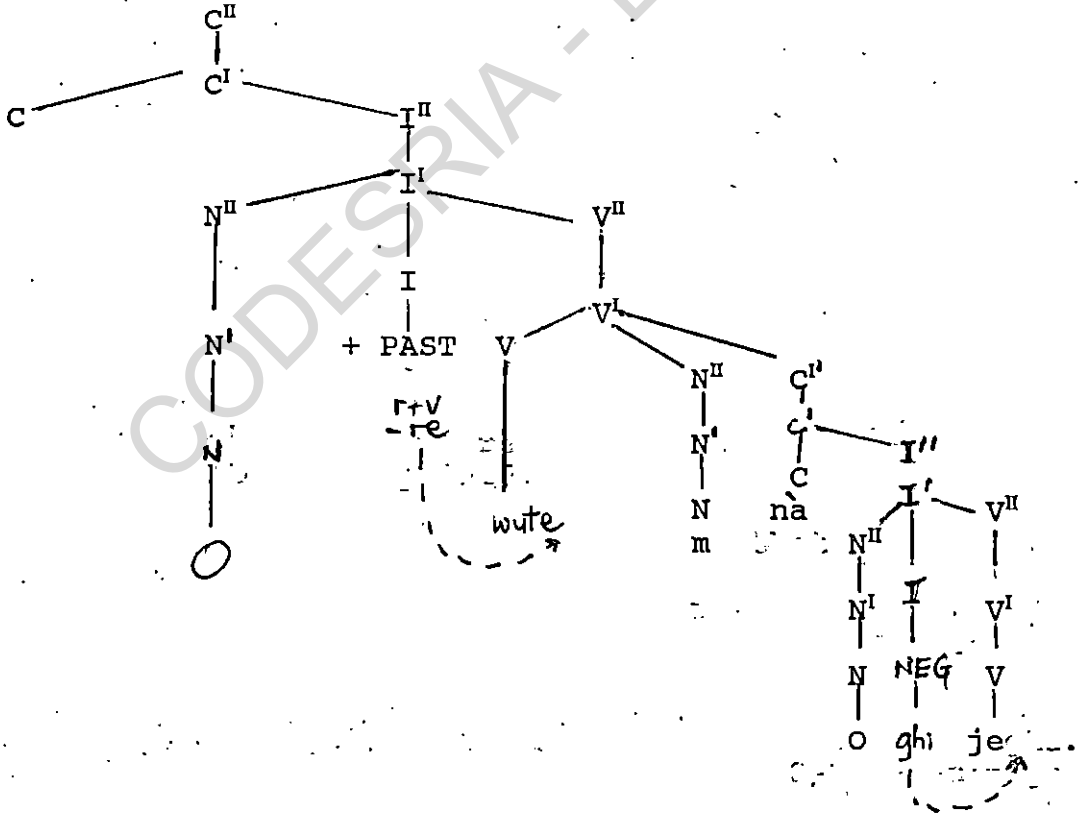
Movement and Extraposition:

(48)



The sentential NP is extraposed to the end of the sentence as illustrated below:

(49)



That the three remaining sentential complements are not subject to Movement, according to Mbah (1991) is because Ka a subjunctive complement expresses a wish, or an open proposition; Ma introduces interrogation, while Si heads an embedded imperative sentence. Their common feature, as well as the barrier which does not permit them to move is that none of them is declarative. Incidentally, that kind of restriction does not obtain in English. Indeed, all the complementisers (what, who, which whether, if, for ...to) etc can undergo Extraposition.

3.3.4 Ergatives

Burzio (1986) characterises an Ergative structure as one in which the superficial subject NP originates as the underlying object of a transitive counterpart. This means that an intransitive clause features as a transitive one with the transitive object corresponding to the Ergative subject. The NP subject is moved into the superficial object position by a rule of NP Movement.

The following sentences exemplify English Ergative structures:

(50) The boat will sink

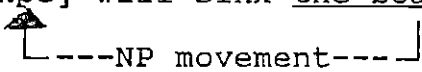
(51) The car rolled down the slope

Each of (50) and (51) will have the same derivation as shown below.

(52) [npe] INFL VP

Applying the rule to (50) above, we have (53)

(53) [npe] will sink the boat



The empty subject node has been taken over by the real object of the transitive verb.

There are a few transitive verbs that can undergo NP Movement to generate Ergative structures. They include break, sink, capside, scatter, tear, split, drown, thaw, melt, roll, hang, etc. Consider the following sentences:

(54) Eggs break(e) easily.

(55) The warship will sink (t).

(56) Seeds scatter (t) with a clap.

(57) Her clothes tear (t) always.

(58) The group splits (t) with a slight provocation.

(59) Good swimmers hardly drown (t).

(60) Criminals hang (t) in shame.

The empty node represented by (f) in each case occurs in the position that should have been occupied by the moved NP subject since the verbs are all transitive.

Such verbs as rain, shine, drizzle, beam, glow, thaw, melt, etc are always used in their Ergative forms as in the following examples:

(61) It rains daily.

(62) The sun shines.

(63) The light beamed.

(64) The candle glows weakly.

(65) It drizzled all night.

(66) Snow hardly thaws in winter.

(67) These ice blocks melted easily.

In Igbo, Ergativity seems to be restricted to certain verbs of force like:

biwaa	(break by knocking)	kpewaa	(break by pulling apart)
bijie	(break by knocking against something)		
daji	(break by falling)	soji	(break by forcefully falling on the ground)
gbajie	(break by bending)		
gbawaa	(break by explosion)		
kujie	(break by hitting)		
Kpewaa	(break by pulling apart)		
Sojie	(break by forcefully falling on the ground).		

Other verbs, in addition to those of force, and which readily occur in Ergatives include:

Mebie (spoil) and rebie (tear by burning) chara (ripened

For more on Ergative verbs in Igbo see Nwachukwu (1987c).

The following sentences illustrate the use of the Ergative verbs.

(68) Ite ahụ ga-ebiwa (t).

Pot that will break (t).

(That pot will break (t)).

(69) Akwà gị ádọwaala (t).

Clothes your have torn (t).

(Your clothes have torn (t)).

(70) Nkụ à èbijiela (t).

Wood this has broken (t).

(This wood has broken (t)).

(71) Mkpọ nna ya agbajiela (t).

Staff father his has broken (t).

(His father's staff has broken (t)).

Just like English, the Igbo sentences in (68) - (71) show an instance of the movement of the underlying object to the subject position. The superficial object position is thus occupied by an empty category (e) in each case.

However, while English has a wider range of verbs that enter into the Ergative construction, Igbo tends to restrict its Ergative to verbs that carry some form of force.

3.3.5 Middle constructions

Middles are not used in exactly the same way as in Adetugbo (1979). Rather following Keyster and Roeper (1984), Middle constructions entail the interpretation of the subjects of sentences as their direct objects. There is then a very strong connection between Middles and Ergatives - cf Nwachukwu

(1987c). However, on a closer observation, Middle constructions relate more to verbs which indicate "a change of state" or "transfer" of some sort. In English, such verbs include sell, exchange, translate, transmit, transform, transfer, etc.

The following sentences are examples of middle constructions.

(72) Sugar sells (t) fast.

(73) The dollar exchanges (t) easily.

(74) French translates (t) well.

(75) Such messages don't transmit (t) fast.

(76) People transform (t) with age.

(77) Heat transfers (t) slower than light.

Just like Ergative structures, there are also empty categories occurring after the transitive verbs whose objects have been made the superficial subjects of the structures in which they occur. The close similarity between Ergatives and Middles makes their structural representation identical.

Interestingly, all the "change-of-state" verbs that form good Middles in English do so in Igbo. What is perhaps required is a process that would collapse into one all the arguments that make any accusative to assume the nominative function of a sentence structure.

This phenomenon is deemed to have been incorporated into the U G, especially within the GB framework. This is a major

point of the Move Alpha Construct in accordance with the proposal by Lasnik and Saito (1984). In the light of this proposal, Move Alpha incorporates Deletion. And if movement is permitted to apply in the lexicon, especially within the Logical Structure, then Deletion will naturally occur in the place of ordinary Movement for the simple reason that the subject position in English and Igbo is not visible to the verb until the verb gets into a syntactic construction with INFL.

In this way, the NP Movement rule deletes the object node (i.e. the node labelled "Argument" in the LF representation, thereby liberating it from functioning as object). In this way, the liberated argument takes the subject position at the surface structure. This account is powerful enough to work for such languages as Igbo which lack the Passive structure.

3.3.6 Polar Questions - Yes No Questions)

Polar Questions have been variously characterised using different terms. Welmers (1973) refers to them as "Questions that ask for substantive answers" while Emenanjo (1979) describes them as "Categorical Questions". Ikekeonwu (1987) calls them "Definite Answer Questions". Essentially, they are questions that require "Yes" or "No" as answers.

The underlying structure of polar questions assumes that there are such pre-sentential nodes as Q, NEG, IMP, etc at the construction of every sentence type. These pre-sentential

nodes, located in COMP trigger the Movement processes necessary for the generation of Yes-No questions.

Thomas (1973) presents the structure of English Yes - No questions as:

(78) SD Q NP Tn (AUX) X =>

SC ϕ ϕ Tn (AUX)

These configurations, Oluikpe (1978) explains, operate with the following conditions:

78(i) AUX = Modal, be, have dominated by AUX

78(ii) If AUX = null, then Tn = Tn + do.

Within the GB framework, AUX has been replaced with INFL to incorporate Agreement elements

The NP subject of the declarative sentence undergoes Movement and exchanges its position with INFL which occurs as the initial constituent of the clause, and from which the whole clause projects. The NP Movement processes in the derivation of Yes-No questions are illustrated below:

(79) John will come.

Sentence (79) will become (80) after NP movement.

(80) will John come?

There is equally an attendant intonation rise. By the second condition in (78) above, Do occurs if there are no such elements as can, will, be, etc. There is the assumption that

Do occurs in the D-structure as a member of the Modal group of INFL. The original tense of the verb in the declarative sentence that now requires to be made interrogative determines the tense of do, either present or past. By adjustment processes within the verbal morphology, the correct tense of the verb is featured. Consider the following sentences:

(81) Hazel speaks Igbo.

(82) Does Hazel speak Igbo?

In (81), the verb speaks is present and singular in the declarative sentence. In the interrogative form in (82) does occurs at the sentence-initial position and carries the features of the main verb of the declarative.

It appears that in Igbo there is the movement of the NP subject of the declarative sentence into the position of the dummy symbol Q, and thus giving room at the extraction site, a resumptive pronoun on low tone. The resumptive pronoun shares agreement features with the subject NP. The position designated Q above has been characterised as Top by Teke (1989), Añunobi (1990) and Ndimele (1991).

What happens at the pre-sentential node regarding the low tone marker can be explained in two principled ways - cf Mbah (1991). There is the assumption that there are two segments to each syllable of a tone language; one is the tonal tie and the other the segmental tie. These segments affect syntactic Movement as shown in the following examples:

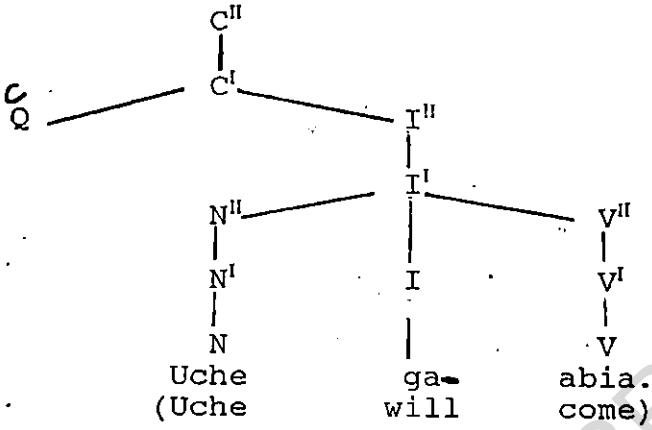
(83) Uche O ga-abia?

Uche he will come?

(Will Uche come?)

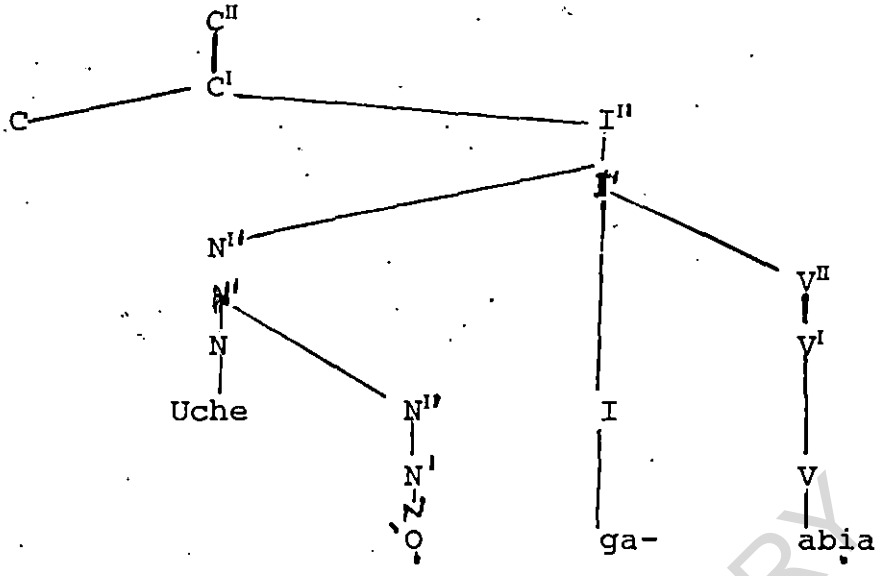
Underlying structure:

(84)



There does not seem to be any apparent extraction. Rather, there is the appearance of resumptive pronoun after the subject NP. The resumptive pronoun carries the low tone which is a pre-requisite for the formation of Yes-No questions in Igbo. The resumptive pronoun in apposition to the subject is in agreement with the subject. A polar question in Igbo using the resumptive pronoun will have the following structure:

(85)



The same resumptive pronoun phenomenon can be extended to cases where the subject NP's are plural as in the following examples:

(86) Ada na Ngozi ga - abia (declarative)
Ada and Ngozi will come).

(87) Ada na Ngozi ha ga-abia (interrogative)
Ada and Ngozi they will come?
(Will Ada and Ngozi come?)

In (87), ha is plural, thus establishing agreement with the plural antecedent Ada na Ngozi (Ada and Ngozi). If the subject is a pronoun, the question tone is now applied to the subject pronoun thereby blocking the place for a resumptive pronoun. Consider also the following examples:

(88) (a) Ha na - agba egwu) (declarative)
They are dancing dance
(They are dancing).

(88) (b) Ha na - agba egwu?
They are dancing dance?
(Are they dancing?)

(89) (a) O ga - esi nri
(S/he will cook food)

(89) (b) O ga - esi nri?
S/he will cook food?
(Will she cook food?)

3.4 Concluding Remarks

In spite of the peculiarities of the two languages in terms of the direction of modification in the NP structure, the application of the pruning principle ensures an N-double bar representation of English and Igbo NP's. Our analysis shows that English has more structures that derive from NP movement than Igbo. For instance, Igbo does not have the Passive structure. Again, the Ergative-Middle distinction appears more relevant to English than Igbo. Though Polar Questions have a wider scope of analysis in Igbo, their phenomenon is not a Movement process per se. The resumptive

pronoun occurring in apposition to the main subject is base-generated and exists there by a process of Insertion. This observation has an important implication for the entire GB framework. This implication will be considered in detail in Chapters Five and Seven.

CHAPTER 4

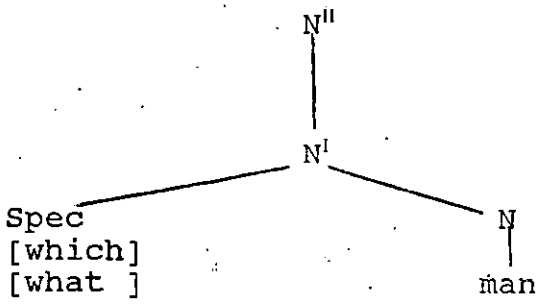
WH-MOVEMENT

4.0 Introduction

It will be recalled that WH-Movement has been identified as one of the two main variants of the Move Alpha rule. In this chapter, WH-Movement processes in English and Igbo are characterised within the Principles and Parameters framework of the GB theory. The Chapter is structured into three interrelated sections. The first section concentrates on the configuration of WH structures in the two languages while the second section dwells on the direction of Movement, including the argument basis of moved elements. The third section analyses the different structures deriving from WH-Movement.

4.1 WH-Structures in English and Igbo

Linguists like Akmajian and Heny (1975), Culicover (1976) and Chomsky (1977a) agree that WH-words are base-generated by phrase structure rules. Some of the WH-structures, according to this view, occur as Determiners, functioning as Specifiers, by the provisions of the X-bar convention. As specifiers, they occur as expansions of the NP node, making the N-bar node expand into N-double bar as shown in the following scheme:



The combination of the WH-specifiers and the noun heads to produce N makes the whole structure open to Movement.

Some of the WH-structures can function as full Nps, acquiring the status of double bar projections as in the following sentences:

(2) What did he do?

(3) He did what?

(4) Whom does she know?

(5) She knows whom?

In examples (2 - 5), the WH-words function as "interrogative pronouns" which in the Deep structure, have the potential to seek to establish given references. The answers deriving from such questions can normally be reduced to NP's. Therefore, such WH-structures can be construed as a special class of NP's.

English also has WH-words occurring as complementisers, where they function to generate relative clauses. The common WH-complementisers are who, whom, which and whose as in the following examples:

(6) The man who came late...

(7) The boys whom we met...

(8) The tree which fell down...

(9) The women whose husbands play chess...

Structures as where, when, why and how are construed as expansions of the Ad(verb) node in sentence final positions. They occur as parallels to such adverbial as yesterday, in the church, for no just cause, like the mad man, etc.

The Igbo equivalents of the WH-words are as follows:

(+ WH)

gini	(what)
onye	(who)
ebee	(where)
etu ole	(how)
kedu	(how)

- cf Ndimele (1991a:131)

Following Ndimele (1991a) it can be argued that there are other counterparts of structures but which are not (+WH) in their preposed positions, except in association with Kedu, a base-generated operator that triggers Movement. They include the following:

(-WH)

ihe	(thing)
onye	(person)

ebe (place)

etu (manner)

- cf Ndimele (1991a:132)

The position of kedu as an operator has been supported by Goldsmith (1981), Nwachukwu (1988b, 1989) and Añunobi (1989). What is perhaps in contest among linguists is the original position of Kedu. Interestingly, Kedu can co-occur with every other (-WH) structure to receive a (WH) interpretation as in the following examples:

Kèdu	ebe	(where, which place)
Kèdu	onye	(who, which person)
Kèdu	etu	(how)
Kèdu	mgbè	(when)

Following Goldsmith (1981), it can be argued that the Igbo equivalents of WH constituents do not function as complementisers, unlike English. Rather, they can function as full NP's as in the following examples:

(10) Hà chọ̀rọ̀ ònye?
(They want who?)

(11) Ò mèrè gini?
(He did what?)

(12) Ònyé nwụrụ?
(Who died?)

(13) Gịnị dàrà?
What fell
(What fell down?)

Based on the analysis so far, the characteristics of WH structures in English and Igbo can be summarised as follows:

	English	Igbo
i)	+ WH	- WH
ii)	+ NP	+ NP
iii)	+ Complementiser	- Complementiser
iv)	+ relative pronoun	- relative pronoun

These characteristics have serious implications for a movement analysis of the two languages.

4.2 Direction and Focus of WH-Movement

A major issue deriving from the differences between WH structures in English and Igbo is the origin and landing site of such structures. On a general note, WH Movement is considered to be an unbounded domain of operation since the category or position into which WH structures move has the potential to cross many categorical nodes - cf Van Riemdijk and Williams (1986).

In line with Chomsky (1977a) preposed WH structures move into COMP, a position outside S. According to Chomsky (1977a), and incorporating his modifications in (1981d), the rule of WH-Movement is as follows:

$$(14)\quad [\text{COMP}^{X}\ [\ \begin{Bmatrix} \text{WH} \\ \text{for} \end{Bmatrix}\ ]]$$

- Chomsky (1981d:53)

The rule, according to Chomsky, makes WH Movement an Adjunction rule which adjoins a WH phrase to COMP (i.e. Wh-in situ moves to pre I" position) at the S-structure.

However, based on feedback and criticism from some linguists, Chomsky has had to revise the C-adjunction analysis, and has adopted the stand that WH Movement is to the left of COMP (i.e. the specifier of the complementiser projection). Thus, the rule of WH Movement can be restated as follows:

(15) $S^{I} \rightarrow C^{II} = [\ldots [C^{I}\ C\ I^{II}]]$

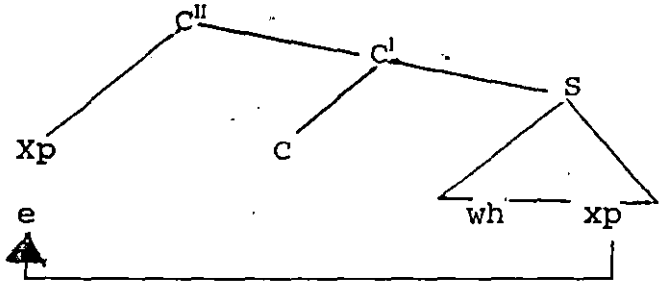
With the scheme in (15), Chomsky (1981d) argues that sentence (17) would derive from the D-structure (16).

(16) [[e] [c] [Peter [greet who]]]

(17) Who did [Peter [greet]]

The configuration in (16) can be schematised as follows:

(18)



- cf Radford (1988:504)

In (18), XP is a base-generated empty specifier for the Complementiser projection C", while wh-xp is the WH phrase generated internally within the minimal S. The scheme in (18) shows that XP (i.e. the Specifier or Complementiser projection into which the preposed WH-phrase moves) is outside the minimal S, which can now be represented as I". This view is strongly shared by Baltin (1982) and Nwachukwu (1988a).

In spite of a number of works which have attempted to offer alternative analyses to the landing sites of moved WH structures - cf Teke (1986, 1987), Ndimele (1991 a&b), there appears to be a convergence of opinions that any WH phrase in sentence-initial position occurs there as a result of WH-Movement. This is aptly demonstrated in Radford (1988).

> ... clause initial WH phrases cannot originate in their superficial position as the left most constituent of S-bar, but rather must originate inside S.
>
> - Radford (1989:466)

Thus, notwithstanding Teke's TOP argument that any Movement of a WH-phrase into a θ-position is an instance of Topicalisation, there is agreement among T.G. scholars that Movement rules in whatever guise share some common characteristics:

i) A gap exists somewhere in the sentence and an "extra" constituent somewhere else.

ii) That "extra" constituent bears the normal semantic relations it would have if it were in that gap.

iii) A constituent must have existed in the gap at some stage of the derivation for the transformation to apply.

iv) That "extra" constituent mentioned in (ii) shows evidence of having been somewhere in the sentence.

- cf Soames and Perlmutter (1979:60-1)

These characteristics have much relevance to the nature of traces deriving from Movement. Traces and other empty categories will be analysed in Chapter Five.

It seems that the natural position of WH structures is in the SPEC-C' position. In this position, such structures are similar to the quantifier. This means that WH Movement shares identical traits with operations that characterise predicate logic where there is an obvious distinction between a quantifier (operator) and its variable as in the following examples:

(19) Who$_i$ did they hurt t_i?

(20) Which house$_i$ did John rent t_i?

Logical Form interpretations for (19) and (20) are (19a) and (20a) respectively:

(19a) For which X_i, X_i a person, did they hurt X_i

- Ndimele (1992:67)

Structure (19a) can be represented as (19b) below:

(19b)? X_i (X_i = who), did they hurt X_i.

(20a) For what X_i, X_i a thing did you rent X_i?

This can be abbreviated as follows:

(20b)? X_i (X_i = which house) did you rent X_i.

From (19) and (20), it is noticed that the raised WH word, just like a quantifier, binds its trace at the original extraction site.

In English, there are a variety of items that derive from a combination of WH-words and other constituents. In the following sentences, the underlined NP's containing WH-structures have been moved from their object positions to their present sites.

(21) What name does she answer _____?

(22) Which students did the teacher punish _____?

(23) How much money have the women spent _____?

In the following sentences, whole prepositional phrases containing Wh-Np objects have undergone WH-Movement.

(24) To whom can I send this letter _____?

(25) For what did they come this early _____?

(26) In which town did it happen _____?

Adjectival phrases can also undergo WH Movement as in the following examples:

(27) How terrible will the news be _____?

(28) How intelligent has the child become _____?

In the following sentences, Adverbial phrases have undergone WH-movement.

(29) How readily will they accept the proposal ____?

(30) How badly did she do in her exams _____?

Similarly, in Igbo, some of the equivalents of the WH words can combine with other structures to produce WH-NP's. Such NP's are also targets of WH-Movement. Consider further the following sentences:

(31) Mmadụ onye kà ọ gà-aghọ̀ri _____?

person who that he will cheat _____?

(which person will he cheat _____?)

(32) Ego gịnị Kà ị nà-acho _____?

Money what that you are seeking _____?

(which sort of money are you seeking _____?)

Prepositional phrases containing WH-words can also be moved in Igbo as in the following sentences:

(33) N'ụlọ onye kà ha bi _____?

In house who that they live _____?

(In whose house do they live _____?)

(34) N'ahia ebee kà a nà-èrè mmadù _____?

In market where that someone is selling people

(In which market are human beings sold _____?)

It appears that English has a wider range of items undergoing WH-Movement. However, an obvious conclusion to draw is that in English and Igbo, the target of the WH Movement is a wh-xp constituent - where wh-xp is a phrase containing a WH-word or its equivalent. (cf Radford 1988:494). Such phrases move into the SPEC or C^{I}.

4.3 Structures Deriving from WH-Movement

It will be recalled that some of the structures deriving from WH Movement were highlighted in Chapter Two. They include the following:

i) WH-Questions

ii) Relative clauses

iii) Clefts

iv) Pseudoclefts, and

v) Topicalisation

These structures will be critically analysed in the subsequent sections.

4.3.1 WH-Questions

WH-Questions have been technically described as "Open ended" in contrast to Yes-No questions cf Chomsky (1977a), 1981a), (1982c), (1986b); Rigter and Beukeman (1985) and Ajeigbe (1986). These questions are referred to as WH-questions because of the crucial role played by WH-structures in their derivation. Consider the following examples:

(34) What did John say _____?

(35) Whom did Mary see _____?

(36) Which will the boys take _____?

(37) Where does the man live _____?

(38) When will the girls arrive _____?

(39) Gini ka Eche kwuru _____?

What that Eche said _____?

(What did Eche say _____?)

(40) Ònye kà Ụka gà-àlụ _____?

Who that Uka will marry _____?

(Who will Uka marry _____?)

(41) Èbee kà ha bì _____?

Where that they live _____?

(Where do they live _____?)

In their present forms, the structures in (34 - 41) for both English and Igbo indicate the movement of WH phrases into

the SPEC of C′, and thus leaving gaps after the subcategorising verbs. Without Movement, the sentences will have the following representations.

(34a) John said what?

(35a) Mary saw whom?

(36a) The boys will take which?

(37a) The man lives where?

(38a) The girls will arrive when?

Sentences (34a - 38a) appear more like echoes used in retorting situations. This means that as "real interrogative", WH-Movement is obligatory because, as Ndimele (1992) observes, "only categories in SPEC-C[1] position can be questioned".

Without WH Movement, the Igbo examples will also appear as echo questions:

(39a) Eche kwuru gini?
(Eche said what?)

(40a) Uka ga-alu onye?
(Uka will marry who?)

(41a) Ha bi ebee?
(They live where?)

For the Igbo examples to appear as "real" WH-questions, there will be resumptive pronouns co-occurring with the base-generated WH words as in the following examples:

(39b) Eche ò kwùrù gini?

Eche he said what?

(What did Eche say?)

(40b) Ụka ọ ga-alụ onye?

Uka he will marry who?

(Who will Uka marry?)

The question tone now applies to the pronominal trace. But where there are only pronominal subjects, the question tone remains with the pronouns. Consider the following examples:

(41b) Hà bì èbee?

They live where?

(Where do they live?)

(42) Ọ gà-àlụ ònye?

He will marry who?

(Whom will he marry?)

The implication of the Igbo phenomenon is that the language, like Japanese, Chinese and a number of other languages, allows categories to be questioned in their base-generated positions without necessarily invoking any movement into the SPEC-C[I].

Interesting linguistic propositions concerning the nature of WH-questions in Igbo appear in Goldsmith (1981), Nwachukwu

(1987a, 1988a) and Añuobi (1989). Goldsmith (1981), for instance, recognises two types of WH-questions in Igbo - those that have question-initial words, roughly corresponding to the English WH-word; and kèdu - forms. Nwachukwu (1988a) on the other hand makes a distinction between those that are base-generated in the subject position (what Ndimele (1991a) calls subject-in-situ), and those that are base generated in the object position (predicate in-situ). These base-generated in-situ questions are structurally different from those that have initial kèdu.

Kèdu as an initial constituent has been described by Añunobi (1989) as a WH-operator which triggers Movement; and which specifies "a position next to its right as the landing site for the moved constituent" - cf Ndimele (1991a:131). However, the presence of kèdu as an operator blocks the position of the focus marker as in the following sentences:

(43) *Kèdu onye kà ha nà-àchọ _____?

*Which person that they are seeking _____?

The combination of Igbo WH-words and Kedu in the derivation of sentences yields WH-clefts. This point will be addressed further as this chapter progresses.

An emerging argument from the on-going analyses is that WH-Movement applies in appropriate contexts to NP's with or without an underlying WH. This Movement is triggered by a focus marker in the specifier of C' for Igbo. In English, WH questions involve the movement of WH - NP and an INFL (where

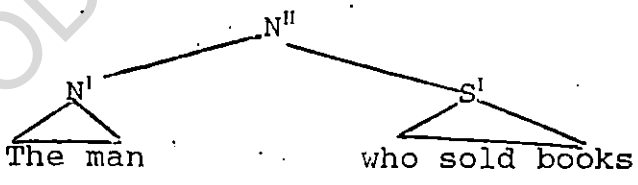
there is an INFL). These two elements get moved into a position outside S, but within S-bar, and thus end up in pre S-position within S-bar at S-structure. Therefore, in line with a popular view by Chomsky and other transformationalists, whether a language has overt WH-Movement or not, there is an obligatory raising of a WH-phrase at the LF.

4.3.2 Relative Clauses

Relativisation is a syntactic process for adjoining a whole clause within an NP with the aim of achieving modification. Thus, a relative clause is perceived as an NP complement where it occurs as the daughter of N".

The Chomsky-adjoining (C-adjoining) theory for relative clauses has been pursued to some detail in Ross (1967) with a lot of appeal because of its simplicity of analysis. It treats the antecedent of the relative pronoun as just the entire lower NP (cf Jackendoff 1977). By the c-adjoining scheme, a typical relative clause will have the following structures:

(44)



The Chomsky-adjoining phenomenon is achieved through the process of WH-Movement for the English relative clause. Though a variety of relative clauses exist for the language

based on a number of criteria, Restrictive Relative clauses which contain overt WH-pronouns will form the basis of analysis.

In addition to WH Movement, other conditions necessary for the realisation of English relative clauses include:

i) a WH-word on the surface in the COMP position of an S^I;

ii) a gap in the S dominated by S^I; and

iii) a subjacency relation between the WH-word and the gap in the S.

The WH-words as already observed in section 4.2 above include who, which, whose, where and when, all of which perform a complementiser function, attaching the embedded S to the antecedent NP. The WH-words can be replaced by that to produce that-relatives. The structure S^I in (44) suggests a combination of COMP + S, giving rise to the following surface readings:

(45) ...who came ...

(46) ... which ran ...

(47) ... whose house got burnt ...

(48) ... that fainted ...

Any of the structures in (45 - 48) can be extended and sketched as in (49) below:

(49) [N" the girl [S' [COMP] [S^I Paul beat whom]]

The element whom is moved to the COMP position in front of S^{I}, thus keeping the intransitive verb beat "stranded" without subcategorising a nominal element as object. Consider further the following sentences:

(50) [N^{II} the girl [S^{I} [COMP whom] [S Paul beat]]]

Other examples include:

(51) [N" the student] [S^{I} COMP whom] [S the examiner failed whom]]]

The structure whom occurs as the GF object, an A position. It moves to the specifier of C or C" to get the structure (52):

(52) [N" the student] [S^{I} [COMP whom] [S the examiner failed]]]

As already noted, that can occupy the same position as which, who, or whom as in the following examples:

(53) [N" the house] [S' [COMP] [S Ojo built that]]]

(54) [N^{II} the house] [S^{I}] [COMP - that][Ojo built -]]]

After the movement of Ojo clause, 53 it becomes 54.

Further evidence that WH and that relatives share identical properties is shown in (54). For instance, they both occupy the same N^{I} position; there is usually a gap after the WH or that phrase has been moved. The gap and the WH/that structure obey the same subjacency condition. The close similarities between the properties of WH and that relatives show that they are in complementary distribution. This accounts for the Doubly Filled COMP condition ___ cf Chomsky (1981c).

Igbo relative clauses do not necessarily have the feature (+WH) so as to attract WH-Movement to the specifier of COMP. Again, antecedents in Igbo relative clauses are always in Argument positions; therefore, there is usually no position to be filled if a moved element has to land. This observation means that there is no specifier for the CP position in the relative clause. Thus, there is nothing to trigger any left-word movement.

The situation is further complicated by the absence of relative pronouns, which in English also function as complementisers. This means that at the D-structure, a relative clause in Igbo, will have two identical NP's a situation that calls for deletion.

According to Oluikpe (1978), Igbo relative clauses can be of the subject or object types. In subject relative clauses, the verb follows the unexpressed relative markers and the object of the embedded sentence is adjacent to the subject. Thus, the subject of the embedded sentence is deleted by a rule of equip-NP deletion. Consider the following sentences:

(55) 1[NP Ha] ríri [NP ji] 2[NP ji] rèrè ure.]]]
S S
They are ate yam yam rotted rot
(They ate yam yam was rotten)

Under a relative structure, (55) becomes (56)

(56) S [Ha ríri ji] [NPϕ] [rere ure]]]
They ate yam rotted rot

(57) $_{S}$[NP O] zùrù [NP egbe] $_{S}$[NP egbe] màrà mmá]]]

He bought gun gun is beauty

(He bought a gun gun is beautiful)

This becomes:

(58) S [NP O] zùrù [NP egbe] [NP ϕ] mara mma]]]

He bought gun which is beauty

(He bought a gun which is beautiful)

Based on the analysis of sentences like (55 - 58) above, Oluikpe summarises the structure of a subject relative clause as shown below:

(59) SD x: [NP_1 [NP_2 VB] Y =>

SC x: [NP_1 [ϕ VB] Y
+ t
rel

where $NP_1 = NP_2$

+t = step Tone

rel = relative clause

cf Oluikpe (1978:59)

There are also object relative clauses whose relativised NP's are the objects of the embedded sentences. The following are some examples:

(60) $_{S_1}$[NP Ha] jìdèrè [NP nwoke [$_{S_2}$NP m] hụ̀rụ̀ [nwoke]]]

They caught man I saw man

(They caught the man I saw -

Under a relative clause structure, (60) will become (61).

(61) [NP Ha] jìdèrè nwoke] [NP m] hụ̀rụ̀ ---]

They caught man I saw --

(They caught the man I saw.)

The structure of the objective relative clause can be sketched as follows:

(62) SD: W [NP1 X V NP2] Y =>

SC: W [NP1 NP2 x V Y

where NP1 = NP2.

The major syntactic operation in the derivation of the Igbo relative clause is the Equi - NP deletion and the attendant tone change. The NP deletion and tone change phenomena are further illustrated in (63).

(63) Nwoke gbara egwu nwètàrà otito.

Man danced dance got praises

The Man that danced got praised.

Structure (63) will be underlyingly described as in (64).

(64) Nwoke gbara egwu ... nwoke nwetara otito.

Man danced dance ... Man got praises

There is the deletion of the second nwoke (man) which is also identical (equal) to the subject NP. There is the change of

tone of the verb gbàrà (danced) which in the underlying structure carries low tones at both syllables - (gbàrà). A remarkable tonal characteristic of Igbo relative clauses is that there is normally a pitch rise somewhere around the relative clause juncture. This juncture is the exact point where a relative clause joins the NP it modifies. Where the subject Np is co-referential with the preceding NP and where the antecedent NP is followed by a relative clause verb, the last syllable of the NP is always a non-low tone (i.e. either a high or a step tone). An exception to this rule is when the last word preceding the NP is the deitic word à (this). As a general rule, the final syllable of the word preceding a takes a downstep and the à itself has the same pitch level as the syllable before it.

The tone change in the final syllable of the preceding NP operates in the following principled ways:

(i) Final high tone remains high.

(65) Aka kpatara àkụ̀ gà-èri àkụ̀.

Hand collected wealth will enjoy eat wealth

(He who acquires wealth will enjoy it).

There are however, exceptions in some noun-noun constructions, where a high tone becomes a step as in:

(66) Akpụkpọ eke tụrụ agwa nà-ada ọnụ.

Skin boa has colour is costing mouth

(The skin of a boa that is coloured is expensive).

(ii) Final syllable on a down step preceded by a vowel syllable or syllabic nasal or two bilabial nasals and a vowel becomes high as in the following examples:

Inherent	Associative (for relatives)
Égō	Égó (money)
Óchē	Óché (chair)
Ḿgbǭ	Ḿgbǫ́ (bullet)
Ḿmánụ̄	Ḿmánụ́ (oil)

Consider the following structure with the operation of change of tone:

(67) Ego Eze kwùrù ya bààrà yà urù.
Money Eze paid him entered him gains
(The money which Eze paid him was useful to him)

iii) Final syllable on downstep rather than only of those in (ii) remains downstep

Ányánwụ̄	Ányánwụ̄ (sun)
Ágádī	Ágádī (an elder)
Nwókē	Nwókē (man)

Consider the following examples:

(68) Ányánwụ̄ Óji hùrù
Sun Oji saw
(The sun which Oji saw)

(iv) Final syllable on low tone preceded by a low tone syllable become a high tone.

Ùdù	Ùdú
àlà	àlá

Example:

(69) Ùdà ùdú Ada mèrè kpòtèrè ànyị

Sound pitcher Ada made woke us

(The sound which Ada's pitcher made woke us up)

(v) Final low tone syllable preceded by a high tone becomes a downstep:

Mbà	Mbā
Ụkà	Ụkā

Example

(70) Ékwé mbā ụfọdụ nà-àkụ dị iche iche

Wooden gongs towns some are beating are different

(The wooden gongs which some towns beat are different)

cf Uba-Mgbemena (1981)

In spite of the absence of WH-Movement in the derivation of declarative relative clauses in Igbo, there is still the application of other sub-systems of the entire GB framework. For instance, the vacant position left after the Equi-NP deletion is subject to the same Binding Principles which relate to Empty categories. Empty categories will be characterised in the next chapter.

4.3.3 Clefts and Pseudoclefts

Clefting is a syntactic process which gives both thematic and focal prominence to a particular element of the clause. The operation divides a simple clause into two separate sections, each with its own verb. The relationship between the two sections is established with a complementiser. The presence of this complementiser triggers the movement of the focus constituent to a position at the specifier of the COMP. This movement is usually of the WH-type for English. Consider the following sentences:

(71) It was John [who/that] bought the car]

(72) It was the car [which/that] John bought]

(73) It is in Lagos [that she lives].

The parts enclosed in square brackets and which begin with who, which, that have the superficial appearance of relative clauses. However, where Clefting relates to the subject, Movement applies vacuously (as in 71), while it is apparent if Clefting occurs to front the objects (as in 72). Clefting for the subject allows the subject to maintain the focal position thus blocking the need for any Movement.

The same clefting phenomena obtains in Igbo with very close similarities with what obtains in English. Consider the following sentences.

(74) Ọ bụ anụ [ka Okoro zụrụ----]

It be meat that Okoro bought ---

(It was meat that Okoro bought---)

(75) ọ bụ̀ agụụ [gbùrù nwoke ahụ]

It is hunger killed man that]

(It was hunger that killed the man)

In (74) where the object is fronted by Clefting, there is a gap after the verb zụrụ, while in (75) where the subject is fronted, there is no gap since there is no apparent Movement. Consider further the following sentences:

(76) ọ bụ̀ Òkoro [bụ̀ onye zụrụ anu].

It be Okoro be who bought meat

(It was Okoro that bought meat)

(77) ọ bụ̀ osisi [bụ̀ ihe dagburu ya].

It be tree (be thing fell kill him)

(It was a tree that fell on the man)

In (76) and (77) where Clefting has involved the subjects, there is the verb bụ̀ (be) co-occurring with the complementiser - like structure onye (person) and ihe (thing). It will be recalled that such structures as onye and ihe have been identified to co-occur with kedu to acquire proper WH-reading.

Pseudoclefts in English begin with WH words which have been moved to the specifier positions as in the following examples:

(78) What John did was (to) cook the food.

(79) What Peter will do will be to visit us.

(80) What the students want to do is to leave.

There are three distinct parts to the Pseudocleft:

(a) the left-most part which takes the form of a WH-question without inversion.

(b) an INFL consisting of a segment of the verb be; and

(c) the right-most part which supplies the answer to the question posited at the left-hand position.

For instance, in (78-80), cook the food answers the question -What did John do? Visit us answers the question - what will Peter do? Leave answers the question - What did the students want to do?

The left-hand parts of the Pseudo-cleft seek the nature of the action, the right-hand side parts provide the answers in the form of verb phrases. In other words, if the questions were asked in the proper interrogative forms, using WH-words, there would have been gaps coming after the verbs, especially if the verbs are transitive.

The Igbo equivalent of the English Pseudocleft in (78) above is as follows:

(81) Ihe Obi mère bụ - isi nri

What Obi did be to cook food

(What Obi did was to cook food)

It appears that Pseudoclefts are not easily realised with the common Igbo WH-equivalents. This observation tends to suggest that Igbo Pseudoclefts do not entail much of WH-Movement. The Pseudocleft appears more apparent with certain kinds of Igbo questions.

Nwachukwu (1987a) and Añunobi (1989) share the same belief that clefting operates in WH-questions in Igbo as shown in the following examples:

(82) Ónye$_1$ kà ha chọ̀rọ̀ e$_1$?

Who that they wanted___?

(Who did they want_____?

(83) Gini$_2$ kà ha mèrè e$_2$?

What$_2$ that they did e$_2$?

(What$_2$ did they do e$_2$?

In examples (82) and (83), the question morphemes which have been identified as WH-word equivalents have been moved from their predicate positions without any change of form. There is, however, the presence of the non-WH COMP Ka which equally occurs in topicalisation. Examples (82) and (83) have relative clause structures with properly governed traces. These traces, as already noted are gaps generally associated with extraction from the object position.

Another variety of Clefting is technically referred to as kèdu Cleft because kedu, a special kind of WH-word appears

prominent in their derivation. The following are examples of kedu clefts:

(84) Kèdu onye a gà-àkpọ _____?
Which person one will call _____?
(Who should be called _____?)

(85) Kèdu ihe o mèrè _____?
Which thing he did _____?
(What did he do _____?

(86) Kèdu etu ha dị _____?
What how they are _____?
(How are they _____?

Kèdu cleft questions carry with them relative clause structures. The presence of the question morpheme, kèdu triggers the movement of WH-word since it has to be followed by an NP complement. This observation shows that though Movement is not employed in the structure of Igbo declarative relative clauses, it does occur in relative structures that are parts of interrogative.

Clefting appears more apparent in interrogative than in declaratives. What accounts for this is the normal in-situ position of the question morpheme. Our examples so far suggest that clefts and pseudoclefts are instances of focus through topicalisation or left dislocation - cf Nwachukwu

(1987a, 1988a). Though topicalisation leaves and left dislocation are similar in many respects, a major difference lies in what happens to the extraction site after Movement. Topicalisation leaves a gap after extraction, while left dislocation has an overt pronominal a gap after extraction, while left dislocation has an overt pronominal element referring to the left dislocated constituent - cf Radford (1988). In each of the Clefts and Pseudoclefts considered so far, the predicate constituents have been moved to a focus prominent position at the beginning of the sentences leaving behind properly governed empty categories as traces.

The distinction between Clefts and Pseudoclefts is made clearer in Quirk et al (1972). According to them, a Pseudocleft is an SVC sentence which has a WH-relative nominal clause occurring as a subject or complement. It differs from the Cleft sentence in its being analysed in terms of the main and subordinate clauses. A Pseudocleft is simply a sentence whose subject NP is a free relative clause and whose verb is be, etc.

There is a very close relationship between Relatives and Clefts in English and Igbo. WH-Movement is apparent in situations where the object is fronted, while Movement is vacuous when Clefting relates to the subject. Again, examples 74-77 above demonstrate that Clefting in standard Igbo has one instance of WH-Movement as against Uwalaka's (1988) multiple Movement analysis.

4.3.4 Topicalisation

Based on an extensive work by Van Haaften, et al (1983), Cinque (1983), Van Riemsdijk and Williams (1986); Radford (1988) characterises Topicalisation as one of the constructions that may exhibit WH-diagnostics, without the appearance of overt WH-words in English, especially in declarative forms.

(87) That man, nobody likes _____

(88) That man, John says nobody likes _____

(89) These steps he could never climb _____

If sentences (87-89) are construed as answers to real questions, the position of WH words will become apparent. Following Chomsky (1977a), a rule of Topicalisation in English is as follows:

(90) $S^{II} \rightarrow$ Top S^{I}, and

S^{I} = COMP S

(91) [S^{II} Top [S^{I} COMP [S...]S [S^{I}] S^{I}

The rule of WH-Movement in (90) and (91) will enable the interpretive rules to interpret the S as a property applied to the NP topic. There could be a rule of WH-deletion, deleting WH-words from COMP. The only proviso is that a filter will rule out as ungrammatical all such structures in which a WH-word has not been moved and deleted.

The following topicalised structures indicate movement of different WH-constituents.

(92) [What] has he given to Mary?

(93) [Which soldiers] will they accuse _____ of espionage?

(94) [To whom] can I send this letter _____?

(95) [About what] were they quarrelling ____?

(96) [How famous] has Chomsky become _____?

Examples (92) and (93) involve the movement of NP objects. For (94) and (95) prepositional phrases have been moved while in (96), an Adjectival phrase has been moved. In these examples, topicalisation occurs very much like WH-questions with WH constituents apparent.

The analysis so far agrees with Nwachukwu (1987b) that Topicalisation is a movement of a constituent from its position in the predicate to a sentence-initial position with the aim of achieving Focus. Focus represents the bit of information that is relatively new in the sentence. Thus, the topicalised segment is usually construed as an answer to some question. This question and answer scenario is illustrated in the following Igbo examples:

(97) Gịnị ka ọjị mere _____?

What that ọjị did _____?

(What did ọjị do _____?

(97a) Ibe akwa ka ọjị bere _____

To cry cry that Oji did _____

(To cry was what Oji did _____)

(98) Onye kà Ngozi chọrọ _____?

Who that Ngozi choro _____?

(Who did Ngozi want _____?

(98a) Obi ka Ngozi choro _____

Obi that Ngozi want _____

(It was Obi that Ngozi wanted _____)

(99) Ebee kà Chike gàrà _____?

Where that Chike went _____?

(Where did Chike go _____?)

(99a) Aba kà Chike gàrà _____

Aba that Chike went _____

(It was Aba that Chike went _____)

(100) Kèdu mgbè Ada bịàrà _____?

Which time Ada came _____?

(When did Ada came _____?

(100a) N'abàlì kà Ada bịàrà _____

At night that Ada came _____

(It was at night that Ada came _____)

Topicalisation in English and Igbo is closely related. For the declarative, NP Movement appears apparent; consider (98a - 100a) and their English translations. In the interrogative form on the other hand, WH appears apparent.

4.4 A-Movement and $\bar{A}$-Movement: a Balance

The discussion of the Move Alpha rule has been based on NP and WH Movements. However, there is another dimension to the issue. Movement can be analysed in terms of whether it is from a position that has the potential to receive θ-role to another such position, or whether it is just into an empty slot. This perception gives rise to the opposition between A-movement and $\bar{A}$-movement.

Following Lasnik and Uriagereka, Movement is of the A type if a category is moved.

> ... from a position that is potentially a recipient of θ-role to another such position (for example, from object position to subject position, or from subject position to a higher subject position.
>
> - Lasnik and Uriagereka (1988:20)

There is usually a connection between the moved category and its null trace. That connection produces the A-chain. On the other hand, $\bar{A}$-movement occurs when a target constituent is moved out of its base-generated position within the IP (the clause) into a matching empty slot in the Specifier of C^I (SPEC-C __ i.e the immediate left of C). This means that $\bar{A}$-Movement is from a position that has θ-role into another where neither Case nor θ-role is assignable. This form of Movement is left-word unbounded Movement since the operator has relative freedom over the number of slots it would cross. The implication is that NP-movement is of the A-type while WH-movement is of the $\bar{A}$-type.

The on-going contention will hold for English since WH-words are merely antecedents to traces, and are therefore in non-argument (i.e Ä positions). Those of Igbo are in Argument - (i.e. Ä positions) since they function as full NP's. There is no position to be filled if a moved element has to land since there are no relative pronouns functioning as specifiers of the CP clause which would have sustained an element moved to the specifier position.

4.5 Concluding Remarks

There are apparent WH constituents in English which have a wider range of functions than their Igbo translational equivalents. These equivalents have +WH and -WH readings. Those without a +WH-reading can, however, be given a +WH status by placing kèdu, an operator before them. Movement in the two languages is to the sentence initial COMP - the specifier of COMP. There is also disparity in the number of structures deriving from WH-Movement in the two languages. The shortfall in Igbo is accounted for by the fact that Relativisation is not Movement generated. There are also in-situ WH questions in the language.

CHAPTER 5

RESULTS OF MOVEMENTS: EMPTY CATEGORIES

5.0 Introduction

There was reference at the Literature Review in Chapter Two, to the existence of Empty Categories occurring after Movement has taken place. This chapter examines closely the nature of those categories that are technically referred to as "empty". The categories are characterised in the two languages with the aim of drawing out their similarities and differences. However, for the sake of clarity, other related categories are discussed.

5.1 Locating Chains in Movement

Movements, following Emonds' (1976) "Structure Preserving Principle" do not necessarily "rub off" categories from their former positions. Rather, an "Empty" node of that same constituent is perceived to be left behind. Emonds' (1976) stand is further strengthened by Chomsky's (1981d) "Empty Node Principle" which states that any moved constituent of a category X^n leaves behind in the position out of which it moves an empty category of the type (x^{nc}) - cf Radford (1988:555).

Within the Movement and Structure preserving framework, a number of linguistic consequences are apparent:

i) the P-marker must contain a site for the moved constituent, otherwise that constituent would not be attached;

ii) the moved constituent must leave behind a trace of its former presence so as not to obliterate the original site;

iii) the trace so left, must be linked (coindexed) to the moved item so as to keep track of the origin of the moved element; and

iv) the S-structure must show clearly the original structure. The D-structure is of course related to the S-structure by the Move Alpha.

- cf Ndimele (1992).

In addition to the consequences highlighted above, further motivations for the Empty Category phenomenon abound. There is, for instance, the parallelism between Movement structures and antecedent anaphor relations from which derive the notion of c-command. The notion of C-command operates in Movement structures and in anaphoric relations since Movement must always be to a C-commanding position, and an anaphor must be C-commanded by its antecedent - cf Nwachukwu (1988a).

Another motivation for the Empty Category (EC) principle, and which is closely related to the Structure Preserving principle is the Projection Principle. The principle requires lexical properties to feature at all levels of syntactic

representation. A major condition for the Projection Principle is the Theta Criterion which ensures that a lexical NP must occupy one and only one theta position. Nwachukwu (1988a) explains that the occupation must be by a lexical entity or by a trace bound by that lexical entity. This condition implies the existence of a syntactic chain.

The operation of some of the consequences and motivations is illustrated in the following movement derived structures:

(1) The food was cooked t. — passive - (NP-Movement)

(2) Àkwa ahụ gà-àkụwa t]
Egg that will break t] - Ergative - (NP-Movement)
That egg will break t]

(3) The dollar exchanges t easily — Middles - (NP-Movement)

(4) Sugar sells t well

(5) What has Peter done t?

(6) Ònye kà Ngọzi hùrụ t? — WH-Questions
Who that Ngozi see t? (WH-Movement)
(Who did Ngozi see it?)

(7) Gịnị kà Ada mèrè t?
What that Ada did t
(What did Ada do t?)

(8) The boys [who Ben employed t]-Relative - (WH-Movement)

(9) It was the car [which Akin bought t]-Cleft-(WH-Movement).

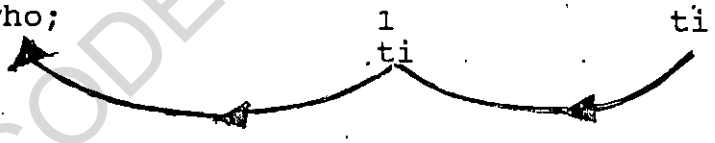
From a consideration of examples (1 - 9), it is observed that Empty Categories marked by t result from both NP and WH Movements in the two languages. The Empty Categories so

generated occupy the original positions out of which constituents have moved.

In Frampton's (1990) estimation, Move α rule which accounts for the presence of traces in the p markers has a two-step operation. The first is the copying of a constituent to its target location. This is followed by the co-indexing of the source and target positions. This co-indexing leads to the deletion of the source, leaving in its place an indexed trace. However, the contents of traces can be recovered by the "Recoverability Deletion Principle". The principle ensures that elided or deleted elements in a sentence are retrievable.

The Indexing Principle ensures that no trace in any part of the sentence is stranded. That trace must enter into a chain formation with the moved constituent in line with the θ-criterion. A chain comprises a head (which is the preposed constituent) and a number of bound traces as in the following scheme:

(10)



Chains can be of the A or Ä types. The type A-chains are created where there are "head-to-head" Movements, while Ä chains occur where there are Movements of heads to adjoined positions. Chains of the A-type are headed by constituents which are in A-positions, while Ä chains are headed by constituents in Ä positions. The relationship between a moved

WH-word and its trace is that of an Ä-chain. There could also be an e-chain (expletive chain) which exists between the expletive it and a focused constituent. It is not θ-chain, unlike the relationship between NP's and WH-phrases and their traces. - cf Chomsky (1973, 1981d, 1986b); Lasnik and Uriagereka (1988); Frampton (1990) and Ndimele (1992).

GB linguists (cf Chomsky 1986a; Frampton (1990) contend that each member of a chain must be subjacent to its predecessor in line with the Subjacency Condition. Each argument occurs in a chain that contains a special visible θ-position P, and each θ-position P is visible in a chain comprising a unique argument. It is this argument that now assumes the θ-role assigned in P.

5.2 Gaps in Chain Composition

GB literature identifies two major types of gaps occurring as constituents of chains. These are Real Gaps (RG) and parasitic Gaps (PG). Following Chomsky (1980b, 1986b); Contreras (1984), etc, RG's (also called primary gaps) are left behind by Move α rule, while parasitic gaps depends on an RG. The relationship between an RG and a PG is illustrated below:

(11) Which food did she hate t before tasting p.

In (11), the position marked by t is the RG while the position designated as p is the parasitic gap which depends on t. Thus, RG's are synonymous with Empty categories.

Though comments about PG appeared first as early as in 1967 in Ross' Constraints on Variables in Syntax, there is still a lot of controversy around its origin and characteristics. Lasnik and Uriagereka (1988) argue that the controversy occurs because PG constructions seem to involve a particular WH-phrase moving simultaneously from two different positions since such constructions also have RG's. Thus, a PG construction presents a picture of two gaps bound by one operator.

PG's, according to Contreras (1984), Chomsky (1986b), Frampton (1990), etc are licensed in the object position by an operator-bound variable; they cannot occur in the subject position. For a PG to be licensed means that it has to be functionally determined as a variable - (cf Lasnik and Uriagereka (1988). Following Chomsky (1986b), Van Riemsdijk and Williams (1986), a PG is licensed in the following configuration.

(12) WH-xi ... ti ... ei

(Where WH-xi is the operator or filler);

ti = the RG created by movement of WH-xi and

ei = the PG.

The relationship between the WH-xi and ti is subject to subjacency, while the relationship between WH-xi and ei is not. Furthermore, whereas the θ-role assigned to WH-xi and ti and the Case properties are identical, the PG ei, is differently Case-marked and has an independent θ-role.

From a consideration of Lasnik and Uriagereka (1988), and Chomsky (1986b), a summary of the properties of PG's is presented as follows:

i) A PG can only be licensed by an operator-bound trace/variable.

ii) The operator-bound trace that licenses a PG must be an EC which is also a gap.

iii) The operator-bound trace must be a consequence of the Move α rule since it must be syntactically bound.

iv) The operator-bound trace must be properly governed or antecedent-governed by a constituent in Ä-position.

v) A PG is usually the tail of a maximal chain.

vi) Any gap licensed by a non-operator-bound element is never parasitic.

vii) Any PG licensed by an operator-bound trace in a position other than the object must be affected by the general constraint guiding the distribution of parasites.

- cf Ndimele (1992:99)

Opinions diverge on the origin of PG's. While the stand held by Contreras (1984), Chomsky (1986b) and Authier (1989) that RG and PG are bound by the same operator in Ä position tends to suggest Movement generation for PG's, Kayne (1983)

and Frampton (1990) believe that PG's are base-generated, and therefore not produced by Movement. These two divergent views require vigorous investigation to arrive at a consensus. Let us begin this investigation with some Igbo examples which may appear to contain PG's:

(13a) * Ụba tàtùrù anu a_1 tupu ọ zuru anu a_1.
Ụba tasted meat this before he bough meat this.
(Uba tasted this meat before buying this meat).

b) Ụba tàtùrù anu a_2 tupu ọ zuru ya_2.
Ụba tasted meat this before he bought it
(Ụba tasted this meat before buying it)

c) Ụba tàtùrù anu a_3 tupu ọ zuru $(t)_3$
Uba tasted meat this before he bought (t)
(Uba tasted this meat before he bought (t)

The structure in (13c) exhibits the characteristics of PG specified by Chomsky (1982a, 1986b), Lasnik and Uriagereka (1988) and Frampton (1990). These characteristics are as follows:

i) PG's are generally in the object position where they receive the Accusative Case from the verb.

ii) PG's have nominal status since they are in a Case-marking position (i.e. after the verb).

iii) They are licensed by an operator-bound variable in Ä-position.

iv) PG's are usually associated with the embedded clause, hence they are the tails of the maximum chain.

v) The RG's do not c-command the PG, because they are not immediately dominated by the same maximal projection.

The connection between RG's and PG's tends to suggest that PG's are just traces/variables left after Empty Operator (EO) Movement. This view is held by Contreras (1984) and Chomsky (1986b); but, it appears more improbable that an empty category can also be extracted out of its original site. It is more linguistically motivated to argue that empty categories are immune to the move α since the PG position is not co-referentially related to that of the NP or WH phrase. The connection between the PG e in (13c) and the NP anu a (this meat) is not as a reflection of Movement, but a process of some form of semantic identity generated by some independent parameters. Therefore, the presence of a PG in (13c) for instance, is essentially a Deletion convention which helps to reduce redundancy in natural languages, under certain grammatical constraints.

The Deletion argument for PG's clarifies another linguistic issue. Ndimele (1992) argues that the Deletion

phenomenon debunks some of the popular claims about the position occupied by a PG at S-structure:

i) that the PG is an abstract PRO at D-structure, - cf Safir (1984).

ii) that PG is a base-generated empty category both at D-structure, - cf Kayne (1984) and Frampton (1990).

iii) that the PG is a pro(nominal) at D-structure, - cf Chomsky (1982a).

Such views expressed above tend to suggest that the S-structure position held by the PG is originally occupied at D-structure by an EC. Specifically, Safir's argument that PG is an abstract PRO appears improbable because PRO is usually the subject of an infinitival clause, and not the object. Furthermore, Chomsky's contention that PG is a pro needs re-examination since pro must have a syntactically and semantically controlled antecedent, rather than making an arbitrary reference. Even more overwhelming than any other speculation, there is the understanding that UG does not house EC's at D-structure ____; EC's are usually instatiated at the s-structure.

It does appear that the strongest reason for the confusion about the status of PG is its availability for chain formation. Much of Chomsky's (1982a) analysis claims that chains are not necessarily Movement derived. Chain composition is essentially a semantic phenomenon. Two, or

even more different positions in a p marker may constitute a chain not just because of any syntactic connection among them by the Move α, but because the two positions are semantically related by the possibility of co-referentiality. Thus, PG's can enter into chain composition with a constituent not in an adjoined position. The implication is that a PG is syntactically a non-variable either at the S-structure or the LF since it is outside the scope of the operator.

From a consideration of (13b) above, we notice that a phonetically realised pronoun can be used in the same syntactic position with PG in (13c). Thus, a PG cannot just be classified as an Empty Category (EC).

5.3 Classification of Empty Categories

Real Gaps or Empty Categories are "unobservable" or phonetically null entities. Based on the peculiarities of Movement processes and other possible sources, Chomsky (1981d, 1982a) outlines four types of Empty categories, each of which corresponds with some visible categories of expression. These are:

i) pro,

ii) PRO

iii) NP trace, and

iv) WH trace or variable

These EC's are in complementary distribution and partition the distribution of NP's. Since these EC's partition the

distribution of NP's, they are deemed to be functionally determined. Some of these EC's are Movement derived, while others are not. The subsequent sections will examine in some detail the characteristics of these EC's.

5.3.1 Pro

Within GB theory, there are two null pronominals occurring as Arguments. They are pro and PRO. The EC, pro is a non-anaphoric null pronominal usually associated with the subject position in finite clauses of pro-drop languages. These are languages with enough information within their verbal morphology and which renders the presence of an overt pronoun in SPEC - I^{I} position superfluous. In other words, the overt personal pronoun in that SPEC I^{I} position can be deleted since its meaning and reference can be inferred from the verbal morphology - cf Newmeyer (1983, 1986); Horrocks (1987); Crystal (1991); Ndimele (1992), etc. Pro-drop languages include Spanish and Italian, among others. Let us illustrate this phenomenon with the following Italian examples:

(14) pro vado al cinema
pro go to the movies
(I go to the movies)

(15) pro e motto contenta
pro is very happy
(She is very happy) - cf Hyams (1986:17)

The English glosses of (14) and (15) indicate that pro has a definite pronominal reference (which can be inferred from the inflection of the verb). The reference of pro is inherent and does not receive its reference from another NP. Thus, pro can be characterised as a "pure pronominal" without a phonological matrix. By extension, pro corresponds to such personal pronouns as:

M/Mụ	O/Ọ	Ya	I/Ị	Gí	Anyị	Ha	Unù
He/she/it	Him/her	You	You	We/us		They/them	You(pl)

It also includes an expletive, a pleonastic element instantiated only in null-subject languages.

However, as a result of its position, at the SPEC-I^I slot, it is not Movement generated. Rather, it is an EC in a definite θ-position at the D-structure. As an EC, pro has the following characteristics:

i) It is governed, not in the sense of NP trace or variable; and,

ii) It is not bound.

- cf Chomsky (1982a)

The kind of government open to pro is government by AGR of the INFL since pro is in the subject position. Again, pro is not bound because it is not c-commanded by any lexical item or even AGR.

5.3.2 PRO

PRO is another null pronominal which occurs as an Argument. Just like pro, it appears in a θ-position at D-structure. This means that PRO is based-generated - cf Chomsky (1982a), Hyams (1986) and Ndimele (1992). It is perceived to be the subject of some form of infinitive clauses. Consider the following examples:

(16) James$_1$ promised [PRO$_1$ to resign]

(17) Peter forced Ted$_2$ [PRO$_2$ to leave]

(18) It is clear what [PRO to do]

In (16) and (17) PRO is "controlled". In other words, the reference for PRO is determined by the matrix NP with which it shares an index. In (16), PRO is controlled by the NP James, while in (17), it is controlled by the NP Ted. PRO is controlled by the subject or object based on the lexical properties of the matrix verb. In (16), promised, a one-place argument verb is subject controlled, while in (17), forced is a two-place argument, and also object controlled. In (18), PRO is not controlled. Where PRO has no controller, it is arbitrary; but where it is controlled, it becomes anaphoric. Thus, PRO can be characterised as:

(+ pronominal + anaphor)

Even though PRO can be controlled, it bears an independent θ-role, unlike the anaphoric empty element (NP t) trace.

PRO structures are also possible in Igbo. Consider the

following sentences:

(19) Ifeọma$_1$ kpebìrì [PRO$_1$ ịzụ ákpà]
Ifeọma decided [PRO to buy (a) bag]

(20) Uche mànyèrè Ada$_2$ [PRO$_2$ ịzụ akpa]
Uche wants Ada [to buy (a) bag]

In (19), PRO is controlled by the subject Ifeọma, while in (20), it is controlled by the object Ada.

Interestingly, the status of arbitrary PRO is not uniform in all languages. In English, since it suggests one, someone or people generally, it can be argued to be indefinite. But, in Italian, arbitrary PRO is specified as masculine, plural, while in Spanish, it is masculine, singular - cf Belleti, (1982).

In addition to the information on PRO touched upon in the preceding sections, a summary of PRO properties is presented below:

i) PRO is not governed.

ii) PRO and its antecedent (if it has any) may have independent θ-roles.

iii) The antecedent - PRO relation (where there is any) need not satisfy the Subjacency Condition.

iv) PRO is not Case-marked even though it may be specified for person, number and gender.

v) PRO is not bound.

vi) PRO is always the head (X′) of a chain.

- cf Chomsky (1981b:56)

The appearance of PRO in the subject position of infinitivals which is usually ungoverned ensures that PRO is not governed. This phenomenon is aptly demonstrated in (16-20) above with the square brackets marking off the s-bar which blocks government. It will be recalled that governors are lexical categories (±N, ± v), and the head of INFL, i.e. AGR or lexical AUX.

Though PRO may be controlled, it is not just as anaphoric as the pure empty element (NPe). Let us illustrate this point with the following sentences:

(21) Bede wants [PRO to play tennis]

(22) Udo chọ̀rọ̀ [PRO ịgba egwu]
Udo wants [to dance]
(Udo wants [to dance])

In both (21) and (22), PRO bears an independent θ-role. In (21), Bede bears the θ-role experiencer while PRO is agent. Similarly, in (22), Udo is the experiencer and PRO the agent. This situation so described satisfies the second condition.

For the third condition, since PRO is not Movement derived, the need to look for subjacency does not even arise. Again, since PRO occurs as the subject of infinitivals (i.e. clauses which lack AGR), then PRO is not Case-marked.

That PRO is not bound derives naturally from the fact that PRO is not governed. This is because PRO has no local domain. Thus, with respect to Chomsky's (1982a) Binding conditions, PRO is free.

Finally, because of the position of PRO (i.e. occurring as subject of infinitival clauses), it is always the head of a chain.

5.3.3 NP Trace

In Section 5.1 above, some of the examples of the structures that derive from NP Movement were presented. In each case, a phonetically null trace of the moved category indicated by t exists. There is equally another interesting example of trace found in polar questions:

(23) Uche na Ada_i ha_i ga-ala?

Uche and Ada_i they will go?

(Will Uche and Ada go?)

In (23), there is a resumptive pronoun trace ha, which now carries a low tone as a pre-requisite for interrogation in the language. The resumptive pronoun phenomenon was hitherto treated as an instance of a clitic spell-out rule (cf Borer (1983)). The available resumptive pronoun trace is co-indexed with its antecedent. It does appear that Igbo and perhaps many other Nigerian languages present a radically different position from Frampton's (1990) stand that no overt traces could exist. Drawing evidence from Etche, an "Igboid language" spoken in Rivers State, Ndimele (1991a) argues that in polar question:

i) the SPEC-C^I does not occur as a position that can be assigned a θ-role, and since the

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i) the SPEC-C' does not occur as a position that can be assigned a θ-role, and since the

operator occupies a position that excludes it from receiving Case and θ-role, that operator receives its case and θ-role from its variable via a θ-role and Case of the operator in SPEC-C' position and its variable located somewhere in the IP;

ii) since the SPEC-C^I position is generally taken to be empty (i.e. SPEC-C^I cannot contain a substantive operator at D-structure) so as to provide a landing site for the preposed constituent at S-structure, there is the possibility for overt traces;

iii) the variable bound by the operator at S-structure receives all the grammatical features of the operator since the variable is left by the rule of Move α; and

iv) any variable bound by a substantive Xp contained in SPEC-C^I and which must have been moved into that SPEC-C^I position at S-structure must be the trace, of Xp, be it null or overt.

These generalised conditions on resumptive pronoun traces appear very relevant to WH-traces. They shall be considered in the next section.

It will be recalled that NP Movement has been characterised in Chapter Three as the movement of an NP from one Argument position to another. This means that it is a substitution rule, unlike WH-movement which is a rule of adjunction. As a substitution rule, the moved NP and its trace must be identical in all respects. However, the range of identity between the moved NP and its trace is determined by the nature of the movement. Again, the kinds of NP Movement that are possible are largely determined by θ-theory, Binding theory and the Case theory.

Following Chomsky (1973, 1975, 1977a, 1980d and 1982a) Postal and Pullum (1978), Brody (1985) and Radford (1988), the following characteristics are identified for the NP trace, at least in English and many other Germanic languages.

i) NP trace is governed;

ii) NP trace is bound in its local domain;

iii) The antecedent of NP trace lacks independent θ-role and it is in an Ä-position;

iv) The antecedent-trace relation satisfies the Subjacency Condition;

v) NP trace is never the head of (X^I) of a chain.

Interestingly, these characteristics bear some relevance to the many interlocking sub-theories of the entire GB framework. In the sections that follow, these characteristics will be critically examined in English and Igbo on a comparative basis.

To fully appreciate the first characteristic of traces, Government should be taken to mean the relationship between a head and the elements occurring within the maximal projection of that head - (cf Chapter One). In line with the observations in Chapter One, Government entails an element being C-commanded by a governor which is usually the lowest node in a tree (i.e. the minimal node), so long as no NP,S or S^I intervenes between the two. It will also be recalled that common governors are Verbs, Nouns, Prepositions, and AGR.

NP-Movement is always to a c-commanding position. Indeed, the position to which Movement takes place is the subject NP or VP, which invariably c-commands all other positions dominated by that VP, including the trace positions. Consider the following sentences:

(24) John$_1$ was killed t_1

(25) Oil$_2$ sells t_2 well

(26) Greek$_3$ does not translate t_3 easily

(27) The boat$_4$ will sink t_4

In each of the sentences (24 - 27), the trace of the underlined NP's are governed since they occur after the translative verbs. The same government relation exists between the dominating (c-commanding) VPs and traces in Igbo clauses. Consider further the following sentences:

(28) Efere$_1$ àkụwaala - t_1
Plate broken t
(A plate has broken t)

(29) Nri ahụ$_2$ gà-èmebi - t_2
Food that will spoil - t
(That food will spoil - t)

(30) Mmiri$_3$ dị kà ọ$_3$ nà-awụfu - t_3
Water is like it is pouring - t away
(Water seems to be pouring - t away)

Just like what obtains in English, the trace in each of the sentences (28), (29) and (30) is governed since each trace is sub-categorised by a transitive verb. In sentence (30) where there are two instances of the same trace (that first a resumptive pronoun, and the second a null trace), the null trace is sub-categorised for by the transitive verb awufu (pouring away).

Though it has been pointed out that Igbo could have overt traces, there is still the same Government relation. After all, governors are Verbs, Nouns, Prepositions and AGR. A resumptive pronoun is usually governed by the first NP that precedes it. Consider also the following sentences:

(31) Ada$_1$ ọ$_1$ gà-abịa?

Ada she will come?

(Will Ada come?)

(32) Ada nà Chike$_2$ hà$_2$ gà-àbịa?

Ada and Chike they will come?

(Will Ada and Chike come?)

In (31) and (32), the resumptive pronouns ọ and hà are traces of the NP's Ada and Ada na Chike. These resumptive pronouns are in the subject position; they share agreement features with their antecedents in the focus positions.

Perhaps, the status of a resumptive pronoun occurring as a governed trace is more apparent in topicalisation.

(33) [Dibịà ahụ̀]$_1$ bụ̀ onye$_1$ anyị nà-àkọ màkà yà$_1$

Doctor that is who we are taking about him

(That doctor is whom we are talking about t)

In (33), there is an appropriate resumptive pronoun trace ya coindexed with the NP Dibia ahu, and the operator onye. The position of Ya after a preposition makes it governed.

The second property of NP trace is that it must be bound in its local domain. It has been observed at the introductory sections of this chapter that one of the motivations for traces is the parallelism between Movement structures and antecedent-anaphor relations. It was also pointed out that what derives from that relationship is the concept of c-command which explains a number of syntactic and semantic relationships. The c-commanding relationship holding between an anaphor and its trace, and a moved element and its trace finds expression in an independent principle - Proper Binding. The principle holds that

> an anaphor (including trace) must be properly bound (i.e. coindexed and c-commanded) by its antecedent (including moved phrases).
> - cf Van Riemsdijk and Williams (1986)

Let us demonstrate the operation of Proper Binding using NP traces:

(34) Biddy$_1$ was promoted - t_1

(35) The dollar$_2$ exchanges - t_2 easily

(36) It was John$_3$ they wanted - t_3

In each of (34), (35) and (36), the trace t shares an index with its antecedent. And by the definition of c-command by Safir (1982), the traces are c-commanded by their antecedents. After all,

> α c-commands ß if the first maximal projection dominating α also dominates ß and α does not contain ß

The Proper Binding phenomenon also operates in Igbo traces as in the following sentence:

(37) Ìtè ahù$_1$ ga-ebiwa - t_1

Pot that$_1$ will break - t_1

(That pot$_1$ will break - t_1)

In sentence (37), as in sentences (28 - 30) above the NP trace is co-indexed with the subject NP ìtè ahù which also c-commands it.

Another characteristic is that the antecedent of the NP trace lacks an independent θ-role and that it is in Ä-position. This condition derives from the Projection Principle, and particularly the θ-criterion which states that a lexical NP must occupy one and only one θ-position. The notion of trace is crucially involved since "occupy" means "lexically occupy or bind a trace that occupies" - cf Van Riedmsdijk and Williams (1986).

By virtue of the θ-criterion, Biddy in (34) above cannot occur as both the subject argument and the object argument of the verb promoted. Since Biddy binds a trace in the object

argument position, it cannot be a subject argument. Thus, the NP trace shares the same θ-role with Biddy. It also follows that the antecedent Biddy cannot be in an argument position.

The fourth characteristic of NP trace is that it satisfies the Subjacency Condition. The condition, as already noted in Chapter One ensures that a constituent cannot be moved (in any single application) across more than one bounding node. One outsiding way of reflecting this condition is to link moved elements to the Opacity conditions. These are the conditions which specify the grammatical contexts in which an expression cannot be free. And since, as it has been observed in the preceding sections , NP traces are bound in their governing category, they obey the Opacity condition.

In specific terms, Movement from all other embedded positions (except that affecting the subject position of an infinitive clause) is blocked by the Specified Subject Constraint (SSC) and the Tensed Subject Constraint (TSC). These constraints will be investigated in detail in the next chapter.

Finally, NP trace cannot be the head of X^{I} of a chain. A chain usually consists of an NP head and locally bound traces. To be locally bound means that the binding could relate to a trace whose c-commanding binder is the head, or a trace whose nearest c-commanding binder is a locally bound trace. The implication of NP trace not occurring as the head of X^{I} of a chain means that NP trace cannot occur as subject

of a clause (either finite or infinitival). Consider the following ill-formed structures.

(38) *e_1 was promoted Biddy$_1$.

e_2 ga-ebiwa ite ahu$_2$

e_2 will break that pot)

In (38) and (39) bound traces have been forced to occur as heads of X′ of the chains in which they occur.

5.3.4 WH-Trace (Variable)

WH-Movement has been analysed in Chapter Four as involving the movement of a WH-phrase (WH-Xp) to the specifier of COMP. This means that the WH-X is moved from its original position, and thus leaving a trace in accordance with the Trace Convention.

WH-Traces are referred to as variables because they are found in A-positions (i.e. as subjects, objects, etc) but are locally $\bar{A}$-bound. To be locally $\bar{A}$-bound means that variables do not select antecedents within minimal clauses. The implication is that the reference of WH-traces are not as definite as those of NP traces. There is usually an operator (a WH-form) that goes with a variable. However, that operator and its variable must share the same θ-role. A summary of the most outstanding characteristics of variables has been presented by Chomsky (1982a) and Brody (1984).

i) Variables are $\bar{A}$-bound.

ii) Variables are Case-marked.

iii) Variables are subject to subjacency.

For variables to be Ā-bound means that constituents bind them. Thus, they are free everywhere. In this sense, variables are similar to overt lexical NP's like John, Ada, Ben, Uche, etc. An Ā-position is exactly the opposite of an A-position which is the position in which an argument may appear at D-structure (e.g. subject, object, indirect object, etc). Again, since WH-Movement is into the specifier of COMP, such a movement is deemed to be outside the domain of the Binding Theory since COMP is an Ā-position. Verbs do not take arguments in COMP the way they take arguments in subject or object positions. However, an argument of a verb may appear in COMP by the process of WH-Movement, but no θ-role is ever directly assigned - cf Van Riedsdijk and Williams (1986). Consider the following sentences:

(40) Ónyé [ká Óbi chọ́rọ́ _____ t_1?]

Who that Obi wants _____ t?

(Who does Obi want _____ t?)

(41) This is the man [whom$_2$ Ada hates _____ t_2]

In each of (40) and (41) the WH-structure gets moved to its present position. In that position, there is nothing to bind it in the sense of a subject or an object. Indeed, COMP is not governed by a Case-assigner; and therefore not bound by a

visible argument. The S^I boundary protects COMP from government by anything outside of the clauses, and because COMP c-commands everything and is not c-commanded by anything in the clause, it is not governed by anything inside the clause either. Consider the following scheme:

(42) ... [S^I COMP [S ...]s] S^I

The second characteristic says that variables are Case-marked. However, if Case were assigned in the S-structure, it will be impossible to account for Case on the WH-word in COMP. It is true that the position to which WH-words (i.e. SPEC of COMP) is Caseless because nothing governs it and nothing binds it; yet, it appears possible that the WH-word in COMP must require its Case from the position occupied by its trace. Uniform Case assignment at the D-structure will invariably assign Case to WH-words. This is essentially so because the WH-word must bind a variable which is left after the WH-Movement. The incidence of Case-assignment to variables is demonstrated in the following sentences:

(43) Who$_1$ do they know [t_1 will play for us]?

(44) Kèdu$_2$ onye$_2$ anyị chèrè [t_2 ga-azụ anụ]?

Which$_2$ who$_2$ we thought [t_2 will buy meat]?

(Who do we think [t will buy meat?]

In both (43) and (44), the variable occurs in the second clause. Thus, the variable in each case is the subject of that second clause. It is then assigned nominative Case by INFL. If variables and their WH-word antecedents were to occur in the same clause, they (the variables) will receive

the objective Case. Consider further the following sentences:

(45) $\underline{\text{Who}}_1$ did John see $\underline{t}_1$?

(46) Ònye kà Ngọzị hùrù - t?

Who did Ngozi see - t)

Deriving from (43) through (46) are two other relevant conditions: that a variable must receive a θ-role, and that a variable must be the head of a chain.

The third outstanding property of variables is that they must be subject to the Subjacency rule. Since, it has been demonstrated that variables are EC's which derive from Movements, it follows that they (variables) must have restrictions in the number of bounding nodes they cross in one hop. These restrictions, like the ones relating to NP traces will be analysed in the next chapter.

The fourth property of variables states that they are subject to some of the licensing options. Licensing is crucial in formulating conditions on representations. Every element in a well formed structure has to be licensed in a certain way. For instance, elements assigning thematic roles are so licensed if they have recipients in appropriate syntactic positions - such as subjects or objects - cf Chomsky (1986a).

Indeed, the issues relating to Empty categories and their connection with the Projection Principle and the different sub-systems of the UG, and which are linguistically motivated

have something to do with the licensing options. Following Chomsky (1986b), the following licensing options are presented:

i) An operator is licensed by binding a variable from which it is not "too distant" in a certain well defined abstract sense;

ii) A variable must be strongly bound, etc.

Chomsky (1986b:93)

5.4 Concluding Remarks

In the course of the on-going analysis, a number of distinctions have been made among the different gaps and empty categories. There has been the distinction between Real and Parasitic Gaps. While Real Gaps derive from Movement, parasitic gaps do not; rather, they are base-generated and are coindexed with the WH-phrases that binds them by an LF rule. Thus, like a WH-trace, a PG is Case-marked and must receive a θ-role which is completely independent of that received by the trace.

There is also the distinction made between NP trace and PRO in terms of their position in the clause. Apart from the fact that PRO is usually the head of (X^{I}) of a chain, while NP trace is not, the two categories behave differently in contraction. Following Chomsky (1981a), whereas trace blocks contraction, PRO does not. Thus, PRO can be perceived as a bridgeable gap, while trace is not. In some dialects of English, want to cannot be contracted as wanna, when a trace

or an overt lexical NP intervenes. Consider the following sentences:

(47a) What$_1$ do you want PRO$_1$ to eat t_1

b) What$_1$ do you wanna eat t_1

(48a) Who$_2$ do you want t_2 to do the work?

b) *Who do you wanna do the work?

The structure (47b) instead of (48b) is acceptable since the intervening constituent in (47b) between want and to is PRO.

Furthermore, pro which occurs as the null subject of pro-drop languages like Spanish and Italian has been found to bear no relevance to English and Igbo. Its position at the SPEC-I^I slot precludes it from Movement.

More fundamentally, in spite of the different attributes of NP and WH-traces, a number of striking similarities tend to unify them. Both traces are somehow bound. While NP trace is A-bound, that of WH is $\bar{A}$ bound. Further evidence of their unity will be advanced in the next chapter. There is a strong indication that both traces are a common reflection of a single constituent hence the need to hold the Move α as the only transformational rule. This view is crucial in Igbo because Movement involving WH and Np traces in the language could occur outside the minimal clause. Thus, both of them can be locally $\bar{A}$-bound. Consider the following sentences:

(49a) Ada hụrụ Obi

(Ada saw Obi)

b) Ọ bụ Obi$_1$ ka Ada hụrụ t$_1$

(It was Obi$_1$ that Ada saw t$_1$)

(50a) Ada ọ hụrụ ònye?

Ada she saw who

(Who did Ada see?)

b) Ọ bụ ònye [ka Ada hụrụ - t?]
COMP

(It was who that Ada saw - e?)

The movement of either the NP Ada or the WH word onye in the (b) options is outside the minimal clauses which contain their source positions. Ada and onye in (49b) and (50b) are in positions to which no independent θ-role is available by the applicant of the θcriterion and the projection principle - cf Ndimele (1992).

There is evidence that the null trace phenomenon is not absolute in Igbo. There are instances of resumptive pronoun traces in the language in such structures as topicalisation, clefts questions, etc. Perhaps, what tends to present a peculiar picture of the resumptive pronoun phenomenon in Igbo is the desire to characterise all instances of resumptives as "extra". Thus, following Caskey (1990) languages with true resumptives may be perceived to lack overt morphological Case. This will be, of course, presenting a strait-jacket account of language, a perception that will be counter-parametric. Perhaps, what is required at this stage is to invite as many instances as possible - cf Ogbulogo (1993).

In general terms, a resumptive pronoun trace in Igbo is always found in the subject position in the place of the moved NP functioning as antecedent. That the resumptive pronoun occurs in the subject position tends to suggest that that kind of subject is not properly governed as its internal argument - cf Koopman (1983). That subject then c-commands its resumptive pronoun trace and assigns it all the necessary properties.

Interestingly, resumptive pronoun traces deriving from both NP and WH structures tend to share identical characteristics. Consider the following sentences.

(51) Obi$_1$ ọ$_1$ hụrụ Ada?

Obi he saw Ada

(Did Obi see Ada?)

(52) Obi$_2$ ọ$_2$ hụrụ ọnye?

Obi he saw who

(Did Obi see who?)

The connection between the resumptive pronoun (ọ) in both (51) and (52) tends to support a unified account for transformations in the language.

All along the analysis, reference has been made to all the independent but interrelated sub-theories of the GB framework. The reference to the Projection Principle which justifies the appearance of EC's is within the x-bar theory; PRO is accounted for by the Control theory, the internal structures of traces and variables are explained within the

Binding principles. Indeed, the EC's as a fall out of the Movement Construct provides justification for the circular view of grammar enunciated in Chapter One.

The Empty categories so far analysed and their related principles ensure that Movement rules are not just arbitrary; they operate within some semantic and syntactic constraints. Outstanding semantic constraints which derive from the Empty category principle include the Trace Movement principle, the Chain Transmission principle, the path containment principle, etc - cf Kayne (1981); Radford (1988); Ndimele (1992), etc. The Trace Movement principle, it has been observed, ensures that any moved constituent (X) leaves behind at its extraction site an identical empty category (X^{nc}). The Chain Transmission principle states that grammatical properties (both inherent and assigned) are freely transmitted between an antecedent and its trace through a Movement chain. The Path Containment principle ensures that the antecedent of a trace can be traced through a clear and logical path on a tree in such a way that the path goes up only through right branches. In the Chapter that follows, syntactic constraints will be specifically analysed.

CHAPTER 6

CONSTRAINTS ON MOVEMENT

6.0 Introduction

The Move Alpha has been presented as the major transformation in grammar. It has also been shown in Chapter Two to be the major uniting factor between the D-structure and the PF and the LF through the S-structure. However, there is the fear that the Move Alpha will very likely over-generate structures, and thus making the grammar highly unconstrained. Interestingly, in Chapter Five, the ECP has been discussed as a result, and as a condition on Movement. The Trace Movement Principle (of Radford 1988), the Chain Transmission Principle, the Path Containment (cf Kayne 1981) and a number of other related principles build up to the notion of semantic constraints on Movement.

Again, in Chapter One, the Bounding theory was presented as a principle limiting the domain of Movement rules. It has, as its principal component the Subjacency Condition which ensures that Movement operations are not across more than one barrier (i.e. a bounding node).

This chapter analyses some of the outstanding constraints in English and Igbo, on a comparative basis. It is organised in such a way as to highlight the constraints that relate to NP and WH Movements respectively. There is also a discussion of those that relate to the two variants of the Move Alpha, as a way of emphasising the unitary account of the construct.

6.1 Motivation for Syntactic Constraints

Transformational rules, within the TG framework, have already been feared to be too powerful - cf Chomsky (1965). It has been argued that they can overgenerate structures. It appears even more likely that the decision to collapse all transformational rules to just the Move α and will heighten the fear of excessiveness. Such a feeling led to some weak claims over what could or could not be obtained in human language.

Chomsky (1964) proposes what appears to be the first outstanding condition on transformations. A major survivor of his generalised conditions is the A-over-A principle which will be analysed in some detail shortly. According to Newmeyer, (1983), several specific proposals from the mid 1960's, such as the Condition on Recoverability on Deletion, the Base Recursion hypothesis, and even the A-over-A principle were construed to be directed towards a reduction of the expressive power of transformational rules.

The expressive power of grammar is perceived to be too powerful when it overgenerates structures. Overgeneration occurs when a rule leads to the emergence of both grammatical and ungrammatical structures.

Though overgeneration appears to be a syntactic phenomenon, critics of the generativist autonomy thesis argue that the ill formedness of constructions that violate "Island" Constraints is not accounted for within the principles of

formal grammar, but rather form some other principles - cf Ndimele (1991a). Following Newmeyer (1983), Ndimele argues that if Island violations are explained outside the domain of grammar, then such violations must be as a result of the limitations of the human language processing mechanism. Thus, such constraints will become more psychological than linguistic.

6.2 The Consensus on Bounding

Bounding theory as a subpart of the GB framework, has been presented in Chapter One, as a check on the scope of Movement. Thus, while Move Alpha ensures that constituents are moved from and to determined positions, Bounding indicates how far they can be moved. The operation of bounding is within the specifications of the Locality Condition. A Local domain is the domain of the closest C-commanding subject - cf Chomsky (1986b).

Right from the publication cf Ross' (1967) treatise which formed a major motivation to the new agenda in linguistic research, there have been spirited efforts to identify all the principles that can affect the range of moved constituents. Ross (1967) developed a catalogue of "Island Constraints". An Island, in a general term, is a constituent across whose boundary some forms of relations between two elements cannot hold. It refers to a structure from which constituents cannot be moved.

Chomsky (1970), (1973), and 1977b) proposes the Subjacency Condition as a general constraint on Movement. The condition states that no constituent can be moved (in any single application) across more than one bounding node. Opinions tend to converge on the possibility of collapsing many related constraints to just Subjacency - cf Bresnan (1970, 1972), Jenkins (1976), May (1979), Grimshaw (1979) and Newmeyer (1983/1986).

Some of the outstanding issues relating to the Subjacency Condition include the internal structure of COMP, the principles for WH interpretation, the COMP-to-COMP Condition and the Strict Cycle Condition - cf van Riemsdjik and Williams (1986).

In spite of the general appeal of the Subjacency, a lot of intense linguistic arguments derive from it. Postal (1972), for instance argues that a rule of unbounded deletion exists. According to Postal, transformations producing dangling prepositions violate Subjacency. Interestingly, the arguments on dangling prepositions were countered in Chomsky and Lasnik (1977b). Den Besten (1978b), Kayne and Pollock (1978), Vat (1978) and Torrego (1984) advance evidence from a variety of languages and structures to support Subjacency.

Apart from the efforts to disprove the universality of Subjacency, there have been attempts to replace the Condition with alternative principles. Bach and Horn (1976) have proposed the NP Constraint, while Koster (1978a) has proposed the Bounding Condition.

Ultimately, the debate seems to have settled with the acknowledgement, by the proponents of the unbounded deletion proposal, that a cyclic chain of coindexed intermediate complementisers governed by Subjacency had to be assured within a deletable structure - cf Bresnan and Grimshaw (1978), McCloskey (1979), Cinque (1983) and Rizi (1983). Thus, Subjacency occurs as the principal element in the Bounding theory. The subjacency condition, following Chomsky (1977b) states that:

(1) ...no constituent can be moved out of more that one containing bounding node in any single movement.

6.3 Bounding Nodes in English and Igbo

Chomsky's (1973) strict Cycle Condition ensures that no rule can apply to a domain dominated by a cyclic node. A cyclic node can be conceived as an S-node. By this formulation, subjacency can be formalised as follows:

(2) No rule can relate X, Y in the structure

...X...[α ...[ß...Y...[or: ...Y..] ß..] α ... X]

where α and ß are bounding nodes.

The application of the strict Cycle Condition is strengthened by the incorporation of the COMP to COMP Condition, which states that:

(3) Once a phrase is in COMP, it can only move to a higher COMP.

And since a structure that has COMP is designated as S^{I} (S-bar, CP, C^{II}), it follows that S^{I} is also a bounding node for English.

Again, since Chomsky (1973, 1977a) and Van Riemsdijk and Williams (1986) demonstrate that the complex NP constraint derives from Subjacency, NP can also be considered a bounding node.

The operation of the restrictiveness of the identified bounding nodes is demonstrated in the following Igbo examples:

i) NP as Bounding Node

(4) Ọ nabàtàrà àkụkọ [nà agha gà-adà]
He accepted story (that war will fall)
(He believed the story [that a war will break out])

In (4), the NP is akụkọ na agha ga-ada (the story that a war will break out). Movement cannot extract any element within that total NP structure. Consider the following ill-formed structure:

(5) Kèdu akụkọ ọ nabàtàrà [nà agha gà-adà?]
which story he accepted [that war will fall?]
(which story did he believe [that a war will break out?]

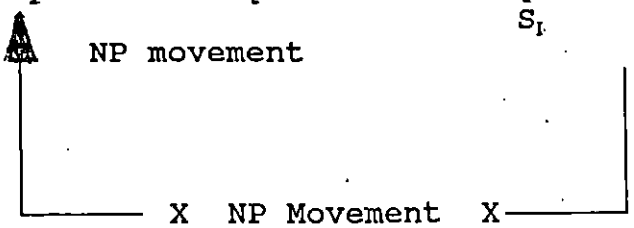
ii) S(IP) as Bounding Node;

(6) O kwèsìrì Adà ịmata[nà Obi mèzìrì]
It fits that Ada knows that Obi did well
Ada ought to know [that Obi did well]

Sentence (6) can be sketched as (7) below:

COMP

(7) Npe kwèsìrì [IP Adá ɪmata [nà òbɪ mèzìrì]]
S_I



Only the first NP Adá can be moved by raising to become the main clause subject, but not Obɪ. Adà crosses one S-boundary, while Obi would have crossed more than one S-boundary. Thus, (8), instead of (9) is grammatical.

(8) Adà kwèsìrì ɪmata nà òbɪ mèzìrì
(Ada is supposed to know that Obi did well)

(9) Obɪ Adà kwèsìrì ɪmata[nà (e) mèzìrì]
(Obi Ada is supposed to know [that (e) did well]).

iii) S^I (S-bar) as Bounding Node

The structure S′ (s-bar) is a complementiser clause (C"). It is headed by any of the complementiser - nà, mà, sí, kà etc.

Consider the following sentence:-

(10) Uchè chèrè nà Otì mààrà nà Ẹgbe zụ̀rụ̀ akwụ̀kwọ.
Uche thought that Oti knew that Egbe bought books)

By the application of a Movement rule to produce a Cleft, a stepwise approach using successive processes will produce (11).

(11) ọ bụ̀ otì [s^{I} COMP kà Uchè chèrè COMP [mààrà nà Egbe zụ̀rụ̀ *ji*]

It will not be possible to move the second s^{I} nà Egbe zụ̀rụ̀ akwụkwọ (that Egbe bought books) above the first clause.

From the on-going discussion, a certain picture of Subjacency seems to be emerging. Ross (1967) has assumed that transformations can be generalised as:

(a) Monocyclic or clause-mate transformations. (These are transformations operating within one clause (s-domain) such as passive and reflexivisation).

(b) Bicyclic transformations - i.e. transformations across one s-boundary (applying to adjacent clauses). They include Equi-NP Deletion, Object Raising etc.

(c) Unbounded transformations: i.e. transformations operating across arbitrarily many clause boundaries - such as WH-Movement.

Within a Subjacency framework, all transformations are perceived to be bicyclic. In this regard, to be bicyclic means that a rule may apply either monocyclically or at most bicyclically. Subjacency therefore implies that no transformational rule should move any constituent (in any single application) across more than one bounding node. To be subjacent is to permit at least one intervening node. Two structures are adjacent if nothing intervenes between them.

Therefore, since our rule operates in the environment of one node, it is subjacent and thus bicyclic.

It appears therefore that bounding nodes for English and Igbo are similar. The sections that follow will, then, be devoted to the analyses of the different constraints.

6.4 Syntactic Constraints and their Application

It has been observed that Ross (1967) dissertation was a major instigation to interesting research programmes devoted to the discovery of constraints on the scope of the application of transformational rules. A major contribution from Ross was the formulation of a general explanatory system of conditions on transformations. According to Ross, many characteristics of individual transformations apply to larger groups of transformations and thus making them parts of the UG.

Van Riemsdijk and Williams (1986) point out that before Ross (1967), what were available were only the most general universals about the forms and functioning of transformations. Such general universals concerned the basic formalism, the elementary operation and the cycle principle. There was hardly any serious investigation of the specific properties of transformations, in terms of universal constraints.

Perhaps, the only pre-Ross treatment that attempted to offer an insight into the nature of universal constraints was Chomsky's (1964) A-over-A Principle. However, the discovery

of the principle could not instigate rapid research towards the elaboration of a generalised constraint systems, probably because the A-over-A principle concentrated on a small domain of rules and constructions. The principle was also confronted with an overwhelming range of empirical problems - cf Van Riemsdijk and Williams (1986). In other words, the A-over-A principle was found to be both too restricted and too powerful. It is too restricted in that it fails to exclude certain ungrammatical sentences, it is too powerful because it excludes certain grammatical sentences - cf Ross (1967).

Following Ross' (1967) analysis of a great variety of English sentences, a number of Islands were discovered. Ross' aim was to provide a generalised view of constraints since no single constraint can cater for all constructions. The following constraints have been found to be relevant to English.

i) A-over-A principle, from which derive:
   (a) Left Branching Constraint (LBC)
   (b) Co-ordinate structure Constraint, (CSC)
   (c) Prepositional Stranding Constraint (PSC)
ii) Complex NP Constraint (CNPC)
iii) COMP-Island Constraint (CIC)
iv) Unit Movement Constraint (UMC)
v) Upward Boundness Condition (UBC)
vi) Sentential Subject Constraint (SSC)

In this section, the syntactic constraints so far identified will be analysed using English and Igbo as data base.

6.4.1 A-Over-A Principle

Following Chomsky (1964, 1968a), the A-over-A principle ensures that if a transformation applies to a structure of the form:

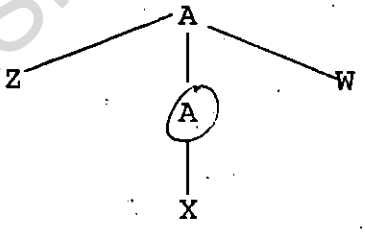
(12) [S...[A...]A...]S, then, for any category A, it must be interpreted as applying to the maximal phrase of the type A.

By way of further explanation, Chomsky (1964) argues that:

> ...If the phrase X of the category A is embedded within a larger phrase ZXW which is also of the category A, then, no rule applying to the category A applies to X, (but only to ZXW)
>
> Chomsky 1964:931.

Ross (1967) demonstrates the operation of the principle in the following scheme:-

(13)



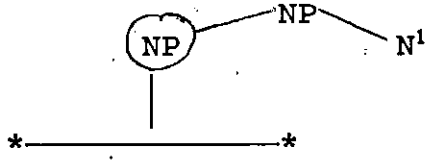
Ross (1967) then argues that all transformations which refer to A must relate to the topmost instance of A, and not the A in the circle.

From a consideration of Chomsky (1964, 1968) and Ross (1967), it appears that the A-over-A principle is essentially a constraint on extraction. As already pointed out, the principle manifests in a number of constraints which will be investigated shortly.

6.4.2 Left Branching Constraint (LBC)

Bresnan's (1976a) "Relativised A-Over-A principle" was, perhaps the first proposal to derive the Left Branch Condition from the A.O.A. Within the TG framework, the Left Branching Constraint ensures that no NP on the left branch of another NP can be extracted from the first NP. Van Riemsdijk and Williams (1986), paraphrasing Ross (1967), explain that the LBC asserts that no NP which forms the leftmost constituent of a larger NP can be moved out of that NP. In another sense, the LBC states that no element occurring as the leftmost constituent of a maximal projection can be moved out of that larger structure. Ndimele (1992) explains the LBC phenomenon using the following configuration.

(14)



In the syntactic configuration like (14), no Movement rule can extract the circled NP. The application of the LBC is demonstrated below:

(15) (a) They met the registrar's daughter's fiancee.

(b) Whose daughter's fiancee did they meet t?

(c) * Whose t did they meet daughter's fiancee?

(d) * Whose daughter's t did they meet fiancee?

The ill-formedness of (15c and d) is because in each case the left most constituent of a larger NP has been extracted. The LBC imposes obligatory pied piping in such structures as (15c and d).

Pied piping, a concept formulated by Ross (1967) following a suggestion from Robin Lakoff of Van Riemsdijk and Williams (1986) was a reaction to the feeling that A-over-A principle was too strong in certain issues. Pied piping ensures that the constituents of larger more inclusive NP's attract others within the entire structure. In a more formal description, Riemsdijk and Williams (1986), paraphrasing Ross (1967), explain that:

> ...Any transformation that is stated in such a way as to move some specified node NP, where this node is preceded and followed by variables in the structural description of the rule, may optionally apply to this NP or to any non coordinate NP that dominates it, as long as there are no occurrences of any coordinate node, or of the node S, on the branch connecting the higher node and the specified node.
>
> - cf Ross (1967:4, 180), Van Riemsdijk and Williams (1986:29)

An interesting phenomenon of the pied piping is that it is optional. That means that languages may exist which prohibit or allow the principle.

For LBC to obtain, NP modifiers must be to the left of the head (i.e. head final as in English). But if the NP takes specifiers to the right (i.e. head first, as in Igbo), what obtains is Right Branching constraint. Consider the following structures:-

(16) Anyị kèlèrè <u>enyì</u> dí Ngọzı.

We greeted friend husband Ngozi

(We greeted Ngozi's husband's friend).

In (16), <u>ényì</u> (friend) is the head of the NP <u>ényì dí Ngọ́zí.</u> (Ngozi's husband's friend). Any attempt to move the right-most constituent out of the entire NP will lead to ungrammaticality. Consider further (16a and b) below:

(16a) * Onyé kà anyị kèlèrè <u>enyì</u> dí t?

Who that we greeted friend husband t?

b) * ọ bụ Ngọzı kà ànyị́ kèlèrè <u>ényì</u> dí - t.

It is Ngozi that we greeted friend husband e?

6.4.3 <u>Co-ordinate Structure Constraint (CSC)</u>

The Co-ordinate Structure Constraint asserts that no constitute that forms part of a co-ordinate structure can be moved out. Any extraction from such a co-ordinate structure must be across the board - cf Horrocks (1987). The constraint blocks the movement of a complement and or an element contained in a conjunct. The following English structures illustrate this constraint.

(17a) Ben is [AP afraid of [NP the teachers] NP and [AP angry with [NP his fellow students]NP] AP.

b)* Who is Ben [AP afraid of [NP the teachers] NP] AP and [AP angry with]]

The same rule applies to Igbo in the following sentences:-

(18a) Ngọzı hụ̀rụ̀ [ego n' anya] ma [kpọ̀ọ̀ ọrụ́ike asị̀]]
(Ngozi loves money but hates hardwork)

(18b)* Kèdú ıhe Ngọzı hụ̀rụ̀ [Npe n' anya] ma [kpọ̀ọ̀ t asị̀]]
What thing Ngozi loves [Np e] but [hates e?]]

In (18b) the operator structure Kèdú ihe is an instantiation of the moved constituent ego; but the second NP conjunct órúíke does not have a track of Movement with the first NP. Thus, the sentence appears ill-formed. The operation of the constraint will be better illustrated with the following examples:-

(19a) Amaka [nwèrè ego nà àkọnụchè]
Amaka has money and knowledge

b)* (Kèdú ıhe [Amaka nwèrè e] nà àkọnụchè?]

Sentence (19b) is ill-formed because the first conjunct égo has been moved to the sentence initial position in the form of WH-structure and thus leaving the second conjunct of the co-ordinate structure hanging.

6.4.4 Prepositional Stranding Constraint

This constraint states that no Movement rule should extract a WH-phrase or any other constituent for that matter

which occurs as a direct object of a preposition. Consider the following sentences.

(20a) The men always peep $[_{pp}{}^{out}[_{p:}$ of $[_{NP}$ that opening]]] In (20a), p is contained within a larger structure pp. Therefore no extraction of p, from pp is allowed. Thus sentence (20b) below is ungrammatical.

(20b) * [Of that opening]$_i$ the men always peep out e_i However, Extraction is possible for an NP that is part of the pp, thus leaving the preposition stranded at the source position. Consider further the following example:-

(20c) [That direction]$_i$ the men always peep out of t_i. Though (20c) appears to be an instance of left dislocation, it nevertheless supports the view that pp in English may not always pied pipe.

Though the illustration in (20c) tends to suggest that Prepositional Stranding is allowed in English, the phenomenon appears more natural with WH-Movement or non-clause internal Movement than with clause-internal Movement. Ndimele (1992) suggests that clause internal movement of an NP is usually in response to Case Filter requirement. He illustrates this phenomenon with the following sentences:-

(21a) John was paid for how many days? (echoic)

b) [How many days]; was John paid for e;

c)* [Many days]; were paid for e;?

Ndimele (1992) argues that the ungrammaticality of sentence (21c) is because Movement is intra-clausal involving

an NP from a Case-marked position into another Case-marked position. It can be deduced from (21c) that an NP can be moved from one position to another position within the same clause if the source position is not Case-marked. The source position of the NP many days in (21c) is already Case-marked by the preposition for, and can therefore not move to the SPEC-I^1 position where it is accessible to another Case by a tensed INFL.

In Igbo, and possibly many other related languages, Prepositional Stranding constraint is obligatory. No Movement can extract a constituent that forms the direct object of a preposition - for both inter and intra-clausal structures Consider the following sentences.

(22a) Okéké tìnyèrè aka ya nà ngịga
Okeke put hand his in basket
(Okeke put his hand in the basket)

(22b) Na ngịga ka òkeke tìnyèrè aka yà
In basket that Okeke put hand his
(It is in the basket that Okeke put his hand)

(22c) * Ngịga ka òkeke tìnyèrè aka ya nà.
Basket that Okeke put hand his in.

Sentence (22c) rather than (22b) is ill-formed, because the preposition is stranded in the original position. Therefore, the whole of the pp must pied pipe in Igbo. Any contrary situation leads to ungrammaticality.

Thus far, the discussion of the LBC, the CSC and the PSC depend on the difficulty of extraction of a sub-constituent out of a more embracing one. Therefore, they are true expressions of the A O A principle.

6.4.5 The Complex NP Constraint (CNPC)

In Ross' (1967) estimation, the (CNPC) asserts that no element contained in an S dominated by an NP with a lexical head noun should be moved out of that NP. The central idea is that Noun complement clauses (NCC) or Relative Clauses (RC) form islands from which no Movement can extract any element.

According to Radford (1988), NCC and RC are Adnominal clauses which build simple NP's into complex ones. Such complex NP's are islands out of which no element can be moved. The structure of a complex NP is represented below:

(23) [NP...N-[cp...X...]...]

In the configuration in (23) above, the complex NP structure is headed by a nominal modified by a clause. The following sentences illustrated the restrictions on adnominal clauses

(24a) They hated [the idea [Cp that teaching is thankless]

b)* The idea they hated [CP that teaching is thankless]]

In (24b), the Cp that teaching is thankless, has been extracted from the main NP the idea, and thus, rendering the

structure ill formed. Consider further the following structures:-

(24c) *Which idea did they hate [that teaching is thankless]

(24d) *It is the idea they hate [that teaching is thankless]

In each of (24c) and (24d), the extraction of the CP yields an ungrammatical sentence.

(25a) We saw the man [RC who broke the jar]

(25b) *It is [who broke the jar] we saw the man

(25c) *Did we see [who broke the jar] the man?

In each of (25b) and (25c), the illformedness of the sentence is because, the relative clause part of the total complex NP has been extracted.

Let us now illustrate the application of the NPC to Igbo.

(26a) Uche anabataghị nkwenyé [Cp na agha ebiela]
Uche rejected belief [cp that war ended has]
(Uche rejected the belief [cp that the war is over]

(26b) *O bù nkwényé kà Uché ànàbàtàghì [nà àghà èbìélà]
*It is belief that Uche rejected [that the war is over]

(26c) *[Nà agha ebiela] ka Uche anabataghị nkwenye
*[That war ended has] that Uche rejected belief
*[That the war is over] that Uche rejected the belief.

Just as in the English examples, each of the sentences (26b) and (26c) is illformed because the complement clause has been extracted from the entire complex NP with nkwenyé as head. There is the same restriction in Igbo relative clauses. Consider further the following structures:-

(27a) Mgbéké chọ̀rọ̀ nwoke ji egó.
Mgbeke wants man has money
(Mgbeke wants a man who has money)

(27a) * Ọ bụ nwoke ká Mgbeke chọ̀rọ̀ ji egó.
*It is man that Mgbeke wants has money
(*It is a man that Mgbeke wants that has money)

6.4.6 The COMP Island Constraint (CIC)

The COMP - Island constraint states that no element can be extracted out of a clause with an overt complementiser or WH-phrase in COMP. The implication is that an indirect question introduced by a complementiser is an Island. The following sentences illustrate the operation of the CIC.

(28a) He asked me [whether Peter loves movies]

(28b) *[Movies]; he asked me whether ei loves ti;

(28c) *[Peter]; he asked me whether ti loves movies.

Recall that ma has been identified as an Igbo complementiser that introduces interrogative. Let us now examine its position in the CIC phenomenon.

(29a) Eberè jụ̀rụ̀ m [mà ì ṇwèrè ụgbọ̀àlà]
Ebere asked me whether you have car
(Ebere asked me if/whether you have a car)

(29b) ọ bụ̀ [ì nwèrè ụgbọ̀àlà] kà Ebere jụ̀rụ̀ m ma
(*It is [you have car] that Ebere asked me whether)

In all of (28b), (28c) and (29b), no movement can extract any aspect of the COMP clause. That explains the ill-formedness of the structures.

6.4.7 Unit Movement Constraint (UMC)

The Unit Movement Constraint was proposed by Schwartz (1972). It states that no single Movement can extract two or more elements simultaneously if these elements do not form part of a continuous constituent. Consider the following examples:-

(30a) Henry turned off from where? (echoic)

b) [From where]$_i$ did Henry turn off e_i

c) *[Off from where]$_i$ did Henry turn e_i?

In (30a) the structure off from where does not form a well motivated unit. Rather, off is a part of the verbal turned off (i.e. a phrasal verb) while from where is a prepositional phrase. Therefore no simultaneous extraction of the two separated elements is allowed. The UMC can then be perceived as a corollary to any of the variants of AOAC already discussed.

The UMC appears more relevant to English because of the case with which phrasal verbs are formed. Indeed, Igbo does not have phrasal verbs. Therefore, it appears that the UMC does not obtain in the language.

6.4.8 Upward Boundedness Condition (UBC)

The UBC prohibits the demotion of constituents, but allows their promotion. This means that the constraint prevents constituents from being moved rightward out of the next higher clause. Within this framework, any Movement in which a constituent leaves a higher clause into a more embedded one is barred. Let us examine the following structures.

(31a) [That [justice and equity - will return in this country] is what we want]].

(31b) [That [in this country, justice and equity will return] is what we want]].

(31c) [That [- justice and equity in this country will return] is what we want]].

In each of (31b) and (31c), the pp, in this country still circulates within the first embedded clause, IP. That means that no Movement has extracted a higher clause into a more embedded one. But, in the following sentences, the situation has changed. The pp in this country has moved beyond the first embedded clause IP, and thus producing ill-formed structures.

(31d) *[That [justice and equity will return in this country what we want]].

(31e) *[That [justice and order will return) is what in this country we want]].

(31f) *[That [If justice and equity will return] is what - we want in this country]].

The same constraint also obtains in Igbo. Consider the following sentences:-

(32a) [Nà [ùdo nà ọ̀gànihu - gà-àlọ̀ghachi n'òbòdò ànyị] bụ ịhè ànyị nà-àrịọ.
[That [peace and progress will return in our town] is what we are praying (for)]]

(32b) [Na [n'obodo anyị - udo na ọganihu ga-alọghachi] bụ ihe anyị na-arịọ.
[That [in our town peace and progress will return] is what we are praying (for)]]

If the pp n'obodo anyi moves beyond the first embedded clause, IP, there will be the violation of the UBC. Consider further, the following sentences.

(32c) *[Na (udo na ọganihu ga-aloghachi] bụ ihe n'obodo anyi anyị na-arịọ.
[That [peace and progress will return] is what in our town, we are praying (for).

6.4.9 The Sentential Subject Constraint (SSC)

Another of Ross' (1967) constraints is the SSC. Neijt (1988) explains that the constraint restricts the extraction of any element dominated by an S, if the S node is a chain dominated by an NP which is itself immediately dominated by S. Neijt (1980) further explains that the rule applies to both for and that clauses. Consider the following structures.

(33a) For Biddy to pass the test is important.

(33b) *What is for Biddy to pass important?

(33c) *It is the qualifying test that for Biddy to pass is important.

In both (33b) and (33c), the non-finite subject clause (i.e. the sentential subject) has been extracted form the dominating (i.e. the higher) IP and are thus ungrammatical.

(34a) That [the pastor is acquiring a property] [confused the village]]

(34b) [Acquiring a property] [that the pastor is -] [confused the village]]

(34c) *The pastor that is acquiring confused a property the village

The implication of (33a-c) and 34a-c) is that no constituent forming part of the construction that the pastor is acquiring a property can be extracted by Movement. Therefore, sentential subjects are islands.

In Igbo, the constraint relates to na complementiser clauses. Consider the following sentences:-

(35a) [Nà ànyị kwèkọrịtàrà] dị onye ọbụlà mma.
That we agreed is everybody good
(That we agreed is good for everyone)

(35b)* Anyị kwèkọrìtàrà [na dị onye ọbụla mma.
We agreed (that is everybody good)

The SSC has a lot in common with the Unit Movement. Interestingly, both the SSC and the UMC are similar in many respects, to the variants of the AOAC already discussed.

6.5 Syntactico-Semantic Constraints

In line with different components of the GB framework, an account of the constraints on movement has an input from the semantic component. But because these constraints bear relevance to Movement which is essentially a syntactic process, they are discussed in this distinct section. Some of the common syntactico-semantic constraints are as follows:

(i) Tensed S Constraint (TSC)
(ii) Specified Subject Constraint (SSC)
(iii) Nominative Island Constraint (NIC)

6.5.1 Tensed S. Constraint (TSC)

According to Van Riemsdijk and Williams (1986), the Tensed-s-condition is a strategy for blocking over generation due to Move NP. A straightforward Movement account of this

constraints states that no constitutent can be mmoved out or into a tensed subordinate clause. Indeed, to check interclausal overgeneration by Move NP, TSC asserts that no NP in a tensed clause is accessible to Move NP. Van Riemsdijk and Williams (1986) argue that even in infinitival clauses, only the subject position is accessible.

On a purely syntactic consideration, TSC occurs well in raising structures. Consider the following examples:-

(36a) (e) Seems Abdul hates syntax

(36b) * Syntax$_i$ seems e$_i$ hates Abdul.

(37a) (e)$_i$ appears Ted$_i$ to admire Pisky.

(37b) Ted$_i$ appears e$_i$ to admire Pisky.

(38a) (e) Ben believes Han is a star

(38b) * Han$_i$ is believed ei is a star

(39a) (e) believes Han to be a star

(39b) Han$_i$ is believed to be a star

From a consideration of (36 - 39), it is noted that NP Raising out of an untensed clause - cf (37b and 39b) is allowed, while it is prohibited in a tensed clause cf (36b, 38b). Thus, (36b and 38b) rather than (37b and 39b) are ill-formed. That constraint further explains the ease of passivising of (39b).

The TSC also restricts some semantic interpretations. The TSC states that co-referential identity is prohibited between two constituents if one of them is contained in a

tensed clause. Following Chomsky (1973),

(40) No rule may relate X and Y in the structure

...X...(α ...Y...)α ...(or:...(α ...Y...)α ...X...)

Where α is a tensed clause; where Y is not in COMP. In (40), X and Y are NP positions. While Y may be the position from which an NP can move, X may be the landing site or an argument position in a matrix clause, and α is the clausal domain of Y.

As a check against the rule of Anaphora construal, TSC states that no rule can construe an anaphor contained within a tensed clause with an antecedent outside the minimal clause of that anaphor. The phenomenon is illustrated in the following structures:

(41a) Joseph$_i$ believes himself$_i$ to be an actor

(41b) *Joseph$_i$ believes himself$_i$ is an actor

Sentence (41b) is ill-formed because Joseph is coindexed with himself, an anaphor contained in a tensed clause.

The discussion so far shows that the TSC relates greatly to the verbs of Raising which are somewhat tenseless. In their underlying structure, raising verbs are non-finite. The subject position is not normally filled. It becomes possible for the subject of the embedded clause to be raised to the focus prominent position of the subject of the main clause.

The is a different picture for the constraint in Igbo because of the presence of resumptive pronouns at the extraction site of NP movements. Consider the following examples:

(42a) Ọ dị̀ kà Akụnnà gà-àlà.

It is like Akụnna will go

(It appears that Akunna will go)

The underlying structure for (42a) is (42b)

(42b) NP dì [kà [Akụnnà gà-àlà]

NP is [COMP like Akụnna will go]

The unfilled NP subject position of the matrix sentence triggers an obligatory movement of the subject of the embedded clause, giving rise to (42c).

(42c) Akụnna$_i$ dì [kà ọ$_i$ gà-àlà]

(Akụnna$_i$ is like she$_i$ will go)

The subject position is then filled by the moved element and there is also a resumptive pronoun left behind. The resumptive pronoun is co-referential with the moved constituent. The presence of the resumptive pronoun means that there is a visible element to share co-referential relation with the moved element. That the moved element (now outside the embedded clause) shares identity of reference with the resumptive pronoun trace (now occurring as the subject of the embedded clause) means that Igbo violates the TSC.

The resumptive pronoun may not be apparent in some structures as shown below:

(43a) O kwèsìrì Ìwu ịgwà Ezè ihè nıílè.

It expects Iwu to tell Eze thing every

(It is expected for Iwu to tell Eze everything).

The underlying structure for (43a) is shown below:

(43b) [e] kwèsìrì Iwu ịgwa Eze ihe nɪɪle.

[e] expects Iwu to tell Eze thing every.

Since the subject position of the matrix sentence is empty, there is the need for an obligatory Movement to the subject position of the embedded clause to fill the empty position in the matrix sentence. With that Movement, we now have (43c).

(43c) Iwu_i kwèsìrì e_i ịgwa Eze ihe nɪɪle.

Iwu_i expects e_i to tell Eze thing every

(Iwu_i is expected e_i to tell Eze everything.)

Even without the presence of the resumptive pronoun, the position taken up by (e) is still understood to be a reflection of the moved constituent. It is bound by that moved item. This in principle, is because the subject position of the embedded clause is already occupied by the infinitive which is itself a nominal.

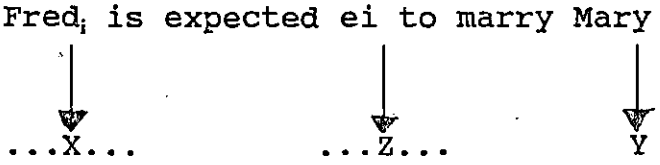
From (43c), the absence of the resumptive pronoun suggests that certain transformational processes will apply before the final version of (43c) is derived. First, the pre-nominal prefix to the verb has to be deleted; then there is infinivisation.

6.5.2 Specified Subject Constraint (SSC)

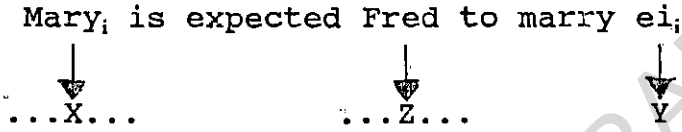
Just like the TSC, the SSC restricts transformational and interpretive rules. Syntactically, the constraint prohibits the extraction of any constituent contained within the

specified subject of a subordinate clause or NP. Such a subject is usually a lexical NP, a pronominal or a trace but not PRO. In other words, the constraint blocks the Movement of a non-subject constituent out of a CP or an NP. The operation of the SSC phenomenon is illustrated below:

(44a) [e] is expected Fred to marry Mary



(44c)



Within the SSC framework, only the subject position of an infinitive clause is accessible to Movement rule. In (44c), the object has been moved, hence it is ill-formed.

As a check on semantic interpretation, the SSC bars co-referential identity between two constituents where one of them is a non-subject constituent. In other words, following Neijt, (1980) the SSC can be expressed as:

> No rule can involve or relate X and Y in a structure of the type:

(45) Xi [α ...Z...Yi...]

(Where X = CP or NP with Z as its specified subject which is not in SPEC-C^1 position; to relate or involve means - move an item from Y to X to coindex the constituents in X and Y.)

According to Van Riemsdijk and Williams (1986), a pronoun that is anaphorically free with respect to the domain of a subject can lose its index. This rule operates at the LF after indexing rules have applied.

An outstanding characteristic of anaphors (- i.e. reflexive and reciprocals) is that they have antecedents. Interestingly, the relationship between antecedents and anaphors is greatly determined by SSC. If the antecedent of Yi is Xi in (45) above, the loss of index of the two components is easily predicted as in the following examples;-

(46a) Jane believes herself to be a princess.

(46b) *Jane believes that herself is a princess.

(46c) Ted believes Jane to admire herself.

Ordinarily, Igbo will construct equivalents of (46a) without apparent reflexives. Rather, there will be an S^1 where the embedded clause has a proximate pronoun as subject. Consider the following examples:-

(47) Ada mààrà [nà ya bu Adaèzè]

Ada knows [that she is (a) princess]

Echoing Neijt (1980), Mbah (1991) points out that the constraint relates more to reciprocals. Consider further the following examples:-

(48a) <u>The students</u>$_i$ believe <u>each other</u>$_i$ to be frauds

(48b) *<u>The students</u>$_i$ believe [<u>that each other</u>$_i$ are frauds].

The SSC rules out (48b) as ungrammatical because the NP the students is deemed to relate to the reciprocal each other across the clause boundary.

Incidentally, Igbo does not have distinct structures for reciprocals. Rather reflexives double as reciprocals in the language - cf Ogbulogo (1991, 1993, 1994). And since, as observed in (47) above, Igbo equivalents of the English structures (46a) are possible without apparent reflexives, it does appear that Igbo does not accommodate this constraint.

Interestingly the TSC and the SSC have been described as the Opacity Conditions. The Opacity Conditions specify the grammatical contexts in which an expression cannot be free. The conditions specify that whenever NP Movement operates across a clause boundary, it can only affect the subject position of an infinitival clause. Therefore, NP Movement from all other embedded positions is blocked by SSC and the TSC. Thus, NP-trace relation is subject to the Opacity conditions, just as Subjacency restricts most of the WH-Movement phenomena. A simple demonstration of the opacity conditions is shown below:

(49a) They believe [each other to be exciting]

(49b) *They believe [each other are exciting].

In (49a) the NP each other is in a transparent context. It can be co-indexed with an NP outside the clause. In (49b) on the other hand, each other is in an opaque context and cannot be co-indexed with an item outside its containing clause. The

(49b) structure is illformed because the anaphor each other should be bound within its governing category (i.e. the embedded clause), but no Np is available for this binding to take place.

6.5.3 Nominative Island Constraint (NIC)

The Nominative Island Constraint was proposed by Chomsky (1980). The constraint restricts the freedom of Movement of items which occur inside a clause that has a nominative-marked subject. As a condition on interpretation, the NIC states that a nominative anaphor (i.e. reflexive or reciprocal) must be bound inside its minimal clause. Consider the following sentences:

(50a) Ben_i believed [that he_i would pass]

(50b) *Ben_i believed [that $himself_i$ would pass]

(51a) Ben_i appears ei to hate Pat

(51b) *Ben_i appears [that ei hates Pat]

Sentence (50b) is ill-formed because himself, an anaphor is bound by Ben which occurs outside its local domain. Sentence (51b) is also ungrammatical because the NP trace (which is also anaphoric) is bound by Ben which is also outside its minimal clause. Sentences like (50b) and (51b) suggest that anaphoric subjects of tensed clauses are in an opaque domain.

Interestingly, the NIC will accommodate sentences which TSC will rule out. Consider the following sentence:

(52) Pat_i knows [that [Np pictures of [himself]$_i$ have been printed]

(53) They$_i$ discovered [that [NP$_j$ pictures of [each other]$_i$ NP$_j$ are available.

In (52), the reflexive himself is bound to the matrix subject Pat; in (53) the reciprocal each other is bound by they. The TSC rules out (52) and (53), but NIC does not. The constituent NP; in (53) is not an anaphor, but nominative, while each other is an anaphor but not nominative. It follows that NIC is superior to TSC.

In spite of the apparent lack of distinction between reflexives and reciprocals, the NIC applies to Igbo. Consider the following sentences:-

(54) Obi na Ada$_i$ mààrà [na [NP foto onwe ha]$_i$] NP$_j$ dị ebe a.
Obi and Ada know (that (NP pictures of (themselves/each other) are here.

In (54) onwe ha (each other/themselves) is bound by Obi and Ada

6.6 Concluding Remarks

The analysis so far has pointed out a number of constraints on Movement. These constraint emphasise the understanding that the move Alpha is not just arbitrary; it is within a specified framework. That the different instances of the Move Alpha are checked with a somewhat universal range of constraints reaffirm the authenticity of the Move Alpha construct. On the other hand, that most of the structures related to the WH-movement obey the Subjacency rule, while

those of Np Movement obey the Opacity Conditions suggest that the Move Alpha Construct can be conveniently analysed as NP and WH-movements. Again, most of the issues relating to Movement have been handled by other related components of the GB. Thus, the GB framework is perceived essentially as circular and all-embracing.

CHAPTER 7

SUMMARY OF FINDINGS, IMPLICATIONS AND CONCLUSIONS

7.0 Introduction

It will be recalled that, in line with the objectives of this research, a number of hypotheses were presented. They are represented below for ease of reference:

i) The Move Alpha rule applies to both English and Igbo as the principal transformation.

ii) Both languages have structures that derive from NP Movement.

iii) Both languages have structures deriving from WH Movement.

iv) Both NP and WH Movements in the two languages leave traces.

v) These traces are equally open to the Binding Conditions.

vi) There are identical bounding nodes for the two languages.

vii) Movement in both languages is subject to Subjacency.

viii) There could be parametric variations in the Movement operations of the two languages.

In the spirit of the hypotheses advanced, this study has critically examined the application of Movement rules in English and Igbo. Evidence has been advanced to demonstrate that Movement is a major syntactic rule in both languages, and that a number of implementation procedures within the GB framework are at work in the derivation of a variety of structures in the two languages. These procedures, as well as the issues that relate to the internal structures of the major components that undergo Movement are presented. The similarities, peculiarities of these components and the procedures that relate to them are highlighted in the following sections. There is equally the presentation of the general linguistic and psychological implications of the findings. From a careful analysis of the findings and their implications a conclusion has been reached.

7.1 Summary of Findings

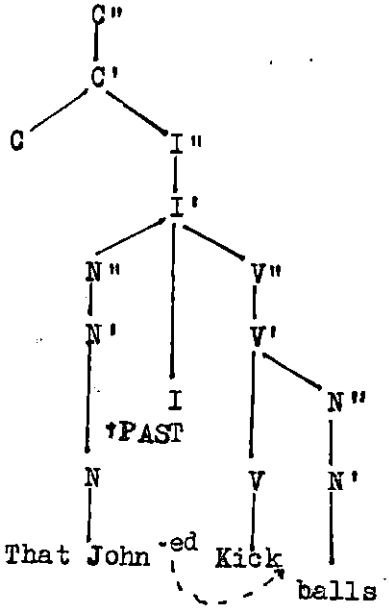
Even though English has more works that have applied the Move Alpha construct than Igbo, the investigation shows that both languages show enough Movement diagnostics. However, most of the Igbo analyses dwell on individual constructions that relate to aspects of Movement. Some of the notable works include Goldsmith (1981), Nwachukwu (1987a, 1987b, 1988a, 1988b, 1989, 1990), Uwalaka (1988), Anunobi (1989) and Ndimele (1991a, 1991b).

Within the X-bar convention, and following Stowell (1981) and Chomsky (1986b) particularly, the clause structures of the two languages are found to be identical. There is the assumption that the non-lexical categories of Complementiser (C) and INFL (I) can head projections. Thus, S occurs as the maximal projection of I (IP or I"); S_I is the maximal projection of C (hence CP or C") The subject is then the specifier of I_I while the specifier of C_I is the landing site of WH-Movement. The complementiser (C) is the pre-subject position usually occupied by simple clause introducing particles - (that, for, to, wh forms etc) for English and (na, si, ma, ka) in Igbo. A major difference is that while English WH-forms double as complementisers and NP's their Igbo equivalents (Ònye, gini, èbee, etc) do not occur as complementisers. Interestingly, most of the English WH forms which function as complementisers (eg. who, whom, which and whose) are technically referred to as relative pronouns. This discovery explains the major syntactic difference between English and Igbo relative structures. While English achieves relativisation by a purely syntactic process, Igbo achieves it more by a phonological process. This point will be further illustrated in subsequent sections of this chapter.

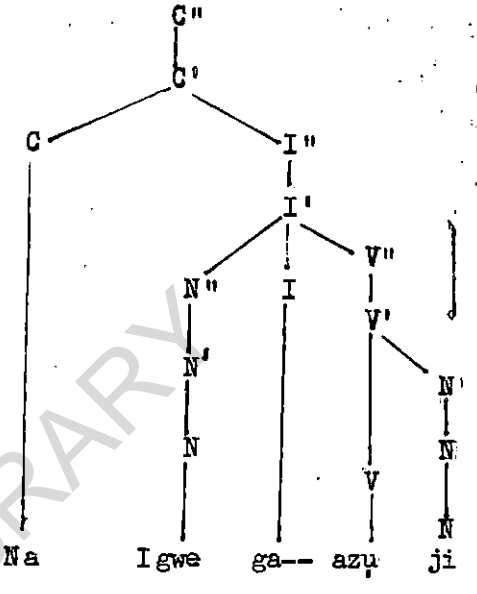
The full clause for both languages is C" (C double bar). The structure C, takes an S (-IP) complement and together with its S-complement, it forms a C_I (C-bar) constituent. By the addition of appropriate phrasal specifiers, the C-bar

constituent can further be expanded into C" (C-double bar), a CP i.e. complementiser phrase. The clause structures for both English and Igbo are presented below:

(1)



(2)



That Igwe will buy yams

There is also the same left-right canonical structure for the clauses of both languages, a condition that has relevance to the notion of Structure Dependency and to the direction of Movement. Other striking similarities between the two languages relate to their being non-pro-drop languages, and their being head-initial and complement final languages.

English and Igbo are construed to be non-pro-drop in the sense that unlike Spanish and Italian, subject pronouns cannot be absent (except in imperatives, where the subject NP is usually understood to be the second person pronoun). The two languages are to a large head-initial in the sense that the head of each syntactic constituent comes at the beginning of the constituent. They are both complement final in the sense that they have complements at the end of the head constituents. These peculiarities are demonstrated in the following configurations:-

3(a) start (the engine) (V+ Complement)

(b) afraid (of dogs) (A + complement)

(c) love (of movies) (N+ Complement)

(d) in (the city) (P + Complement).

4(a) bido (egwu) (V+ complement)

start (the dance)

(b) ịtụ ụjọ (nkịta) (A+ complement)

being afraid (dogs)

being afraid of dogs

(c) na (ngịga) (P+ complement)

in (basket)

in (the basket)

It is in the English NP that we have head final configurations.

Differences exist in the internal structures of the Np and WH constituents in the two languages. These differences

relate more to the quantity of modifying elements and their systems of occurrence. For instance, while English admits as many as seven adjectives, in addition to determines, Igbo admits relatively fewer adjectives before the nounhead. Consider the following examples:-

(5) The humble intelligent young dark poverty-striken Nigerian medical student...

(6) ọmaricha nnukwu ji ọcha ahụ
Good big yam white that
That good big white yam.

Furthermore, while English has mainly a modifier first and nounhead last arrangement, Igbo has almost the opposite. Consider the following structures:-

(7)(a) ji ukwu
yam big

(b) nwaànyị ọma
woman good

(c) akwa ọcha
cloth white

(b) efere ojii
plate black

It is, perhaps, it few adjectives like ajọ (bad) ọmarịcha (good) and nnukwu that Igbo adjectives precede the nouns they modify - cf Ogbulogo (1987).

In spite of the range of items that modify the nounhead in both languages, the pruning mechanism of the X-bar theory which permits intermediate bars not dominating at least two branching nodes to be left out restricts the NP structure of the two languages to be N" (N-double bar)- cf Chapter 3 No. 1.

It is discovered that English has more structures that derive from NP Movement than Igbo. While Raising, Polar Questions and Ergatives are common NP Movement - derived structures for the two languages, English has Passives, Extraposition structures and Middles as additional constructions. There is also the lack of the distinction between Ergatives and Middles in Igbo.

What prevents the Passive formation in Igbo is the absence of the kind of verbal morphology which triggers Movement in English. Igbo uses the indefinite construction in situations that would require passives. Consider the following sentences taken from Chapter 3 (11-12) represented below as (8) and (9) for reference:

(8) A gbàrà mmadụ egbe
Someone shot person gun
(A person was shot)

(9) A nụrụ akwa
Someone heard (a) cry
(A cry was heard)

Indefinite constructions have indefinite pronouns as subjects. Igbo has two indefinite pronouns A and E, both of which can be glossed as somebody, someone, people or a person generally. The choice of either A or E is determined by the vowel harmony rule.

This work has not just stopped at highlighting the absence of the Passive; it has gone as far as highlighting

what bars the passive structure. The study further reveals that English has more verbs that enter into the Ergative structure than Igbo. The few Igbo verbs that occur in Ergative construction are those that relate to force and to some change of state. They include:

bìwaa (break by knocking)

bìjie (break by knocking against something)

dàji (break by falling)

gbajie (break by bending)

gbawaa (break by explosion)

kujie (break by hitting)

kpèwaa (break by pulling apart)

sọji (break by forcefully falling on the ground

- cf Nwachukwu (1987b)

These verbs have been used in sentences in Chapter 3 - examples 68-71.

Again, Igbo does not reflect the Ergative-Middle distinction. There is evidence to show that instances of the object assuming the subject function of a sentence, can be collapsed into just a structure - instead of two. Though Middle structures relate more to change of state verbs, there is the discovery that those change of state verbs in English can have translational equivalents in Igbo with the same degree of elegance. Such verbs include: sell, exchange, translate, transmit, transform, transfer all of which translate as nà-èrè, nà-àgbanwe nà-àtụghari, nà-àga, nà-agho,

<u>nà-àgafe</u> respectively.

It seems that the proposal to collapse both Ergatives and Middles can be adequately incorporated into the UG, especially within the GB framework since the same forms of Empty Categories occur after the transitive verbs whose objects have been made the superficial subjects of the structures in which they occur. This form of economy of representative is at the heart of the Move Alpha construct in accordance with the proposal by Lasnik and Saito (1984). In the light of this proposal, Move Alpha incorporates Deletion. And if Movement is permitted to apply in the lexicon, especially within the LF, then Deletion will naturally occur in the place of ordinary Movement. The basic reasoning is that the subject position of English and Igbo sentences is not visible to the verb until the verb gets into a syntactic construction with INFL. In this way, the NP Movement rule deletes the object node (i.e. the node labelled "Argument" in the LF representation) and thus liberating it from being the object. In this way, the liberated argument takes the subject position at the S-structure. This account is powerful enough to work for such languages as Igbo which lack the Passive structures.

Though both languages have Raising, there is the absence of the type of Raising which depends on Passivisation for Igbo. Again, Igbo does not apply the Raising predicate analysis, which in English entails the insertion of the existential <u>there</u>. It is this instance of <u>there</u> insertion

that instigates the Movement of the subject to the right of be. There is a mere expletive, and does not function as an underlying direct object.

Igbo has very few raising predicates. What is used to augment this shortfall is the use of some kinds of "Ergatives" - cf examples (3) and (4) of Chapter 3.

Both English and Igbo achieve Raising by the use of Raising verbs. However, while the use of such Raising verbs in English gives rise to the appearance of PRO, Igbo has resumptive pronouns which occur as overt traces. The realisation has been demonstrated in examples 5 and 6 of Chapter 3. The PRO and resumptive pronoun phenomena, together with their linguistic implications will be presented as this chapter progresses.

It is also observed that Extraposition moving pp's from their containing NP's does not apply in the same way for English and Igbo. The main difference is that pp's do not modify NP's in Igbo. Extraposition is only possible in Igbo in the presence of such verbs as gbasara (concerning) and metụtara (relating) which can be described as "prepositional verbs". From a careful analysis of the structures that derive from Igbo, it is argued that the rule of Extraposition should incorporate VP's that are part of the NP's (in the presence of such verb as metụtara) as in the following examples taken from Chapter 3 (nos. 37a and 38a)

(10) Nkọcha metụtara ndịọchịchị pụtàrà n'akwụkwọ akụkọ.

Criticism relating to leaders appeared in paper news

(11) Akụkọ gbasara mpụ na legọọs èjula ebe niile
Stories concerning crimes in Lagos filled have place all
Stories about crimes in Lagos have filled everywhere)

While English has a rule that allows an S-bar (i.e. a complementiser clause) to undergo NP Movement, Igbo has some restrictions on such clauses. It is only a clause with na as complementiser that can undergo Extraposition. In is only a na complement clause that asserts the truth of what it declares. It is therefore that propositional force that enables the embedded clause to undergo Movement to the matrix sentence when the NP position is empty - cf Nwachukwu (1976) and Mbah (1991). Illustrations of the Movement of na complement clauses are featured in nos. 46-49 of Chapter 3

There is also the observation that while Yes/No questions in English tend to have a simple Movement structure (just inverting the subject and INFL, and allowing some adjustment processes within the verbal system) with attendant rise in intonation, Igbo has a much more complex pictures. There is the Movement of the NP subject of the declarative sentence into the position of a dummy symbol Q, a phenomenon that gives room at the extraction site for a resumptive pronoun trace on low tone. The resumptive pronoun shares agreement features with the preposed subject NP. Like all other instances of trace and the resumptive pronoun already mentioned, further

discussion will be reserved till subsequent sections of this chapter.

As a prelude to proper characteristation of WH Movement, some discoveries have been made concerning the structure of WH-constituents in the two languages. while such constituents have apparent WH configurations in English, Igbo only has semantic equivalents. Some of these Igbo equivalents have overt WH reading while others do not.

Those with overt WH reading include:

gịnị	(what)	Ebeee	(where
onye	(who)	etu ole	(how)
mgbe	(when)	Kèdu	(how)

However, such other non-WH counterparts as ihe (thing), onye (person), ebe (place) etu (manner) can acquire proper WH-reading in association with kèdu, a kind of operator. This operator is base-generated. The interaction of kedu and other structures to give WH-reading is demonstrated below:

Kèdu ihe (what)

Kèdu onye (who)

kèdu ebe (where

kèdu etu (how)

Kèdu mgbe (when)

There is also evidence to prove that the Igbo equivalents of WH-structures do not function as complementisers, unlike English. Rather, they function as full NP's. Consider examples 10-13 in Chapter 4.

The implication of the peculiarities of English and Igbo WH structures can be generalised as follows:

English	IGBO
+ WH	-WH
+ NP	+NP
+ Complementiser	- Complementiser
+ relative pronoun	-relative pronoun

These characteristics of WH structures in English and Igbo have fundamental consequences on a Movement analysis of the two languages.

There is also the discovery that WH Movement involves a transfer of a WH constituent to the sentence-initial position - i.e into the specificer of COMP for languages. COMP(lementiser) is a zero-level category whose maximal projection C" is the highest level of grammatical construction. It is the first element in a full phrase (or clause).

The study does not uphold the proposal that Movement is into TOP as presented by Teke (1988). There seems to be a very close relationship between TOP in Teke's estimation and COMP in the Chomskyan model. Therefore, the two levels of analysis seem to present different sides of the same argument. It is also observed that TOP could be located within COMP. This observation accords with the much more established proposal that the specifier of COMP is the landing site for preposed WH-phrases.

WH-questions are discovered to involve WH-Movement in the two languages. However, while English WH-questions appear more natural when the question word or phrase is moved into the specifier of COMP, Igbo permits the in-situ type just as much as its Movement-generated counterpart. The in-situ type has the base-generated WH-phrases in their initial positions. Consider the following examples taken from chapter 4 (nos.39a - 41a)

(12) Eche Kwùrù gịnị?
(Eche said what?)

(13) Ụka gà-àlụ onye?
(Uka will marry who?)

(14) Hà bì ebee/
(They live where

For the Igbo examples to appears as "real" WH questions, there will be resumptive pronouns co-occurring with the base generated WH-words as in the following examples, also taken from Chapter 4 nos. 39b and (40b)

(15) Eche ọ Kwuru gịnị?
Eche he said what/

(16) Ụkà ọ gà-àlu onye?
Uka he will marry who?
(who will Uka marry?)

There is also the kedu type of WH question where kedu further occurs as an operator which triggers Movement and which binds a number of variables. It can be argued that while WH-questions involve a left-ward Movement of the WH phrase there are other internal strategies peculiar to each of the languages. These strategies will be further analysed during the discussion of the implication.

The study further reveals that, while relative clauses in English are Movement-generated because of the presence of WH-words in the COMP position Igbo relative clauses do not necessarily have the feature (+WH) so as to attract WH-Movement. WH-words in English function as antecedents to traces and are thus in non-argument positions - i.e. (A) positions. Those of Igbo are in Argument (A) positions since they function as full NP's. There is therefore no position to be filled if a Moved element has to land since there are no relative pronouns, functioning as specifiers of the CP clause which would have sustained an element moved to the specifier position. As a result, there is nothing to trigger Movement to the left position. The implication is that at the D-structure, an Igbo relative clause will have two identical NP's, a situation that calls for Deletion.

Apart from equi-NP deletion, relativisation in Igbo attracts a tonal change. There is normally a pitch rise somewhere around the relative clause juncture. This juncture is the exact point where a relative clause joins the NP it

modifies. In an Igbo relative clause in which the subject NP is co-referential with the preceding NP and where the antecedent NP is followed by a relative clause verb, the last syllable of the NP is always a non-low tone (i.e., either a high or step tone). An exception to this rule is when that last word preceding the NP is the deitic word a (this). As a general rule, the final syllable of the word preceding a takes a downstep and a itself has the same pitch level as the syllable before it.

The tone change in the final syllable of the preceding NP operates in the following principled ways:

i) Final high tone remains high

(17) Aka Kpatara àkụ̀ gà-èri àkụ̀.

Hand collected wealth will eat wealth

(He who acquires wealth will enjoy it)

There are, however, exceptions in some noun-noun constructions, where final high tone becomes a step as in the following example.

(18) Akpụkpọ eke turụ àgwà nà-ada ọnụ

Skin boa has colour is costing mouth

(The skin of a boa that is coloured is expensive)

ii) Final syllable on a down step preceded by a vowel or a syllabic nasal or two bilabial consonants and a vowel becomes high as in the following examples:-

Egō - Ego (money)

Óchē - Óché (chair)

Mgbǭ - Mgbǫ́ (bullet)

Mmánụ̄ - Mmánú (oil)

The operation of the change of tone obtains in the following example:

(19) Ego Eze kwụ̀rụ̀ ya bàárà ya urù.

Money Eze paid him entered him gains.

(The money which Eze paid him was useful to him)

iii) Final syllable on downstep other than any of those in (ii) above remains down step.

Ányánwụ̄ - Ányánwụ̄ (the sun)

Ágádī - Ágádī (an elderly person)

Nwókē - Nwókē (man)

Consider the following examples:

(20) Anyanwụ̄ Ójī hụ̀rụ̀

Sun Oji saw

The sun which Oji saw)

iv) Final syllable on low tone preceded by a with a low tone syllable becomes high.

Ùdù - Ùdú

Àlà - Àlá

Example:

(21) Ụ̀dà Ùdu Ada mèrè Kpọ̀tèrè ànyị

Sound pitcher Ada made woke us

(The sound which Ada's pitcher made us wake up)

v) Final low tone syllable preceded by a high tone

becomes a step:-

Mbā - Mbā

Ụkà - Ụkā

Example:

(22) Ekwe mbā ụfọdụ nà-àkụ dị iche iche

Wooden gongs town some are beating are different different

(The wooden gongs which some towns beat are different)

- cf Uba-Mgbemena (1981).

Though overt Movement is not employed in the structure of declarative Relative clauses in Igbo, it does occur in relative structures that are part of the Interrogative. Thus, such relatives share common ties with Clefts. This close similarity between Clefts and Relatives obtains in both languages. There is apparent WH- Movement in situations where the object is fronted. But where Clefting relates to the subject, Movement applies vacuously. Consider examples 82-86 in Chapter 4.

The two languages also employ Clefts and Pseudocelfts with a great deal of similarity. This close similarity is demonstrated in examples 71-75 of Chapter 4. There is always a complementiser which joins the two sections of the Cleft sentence. It is this complementiser that triggers Movement. Interestingly, our analysis demonstrates that Clefting in standard Igbo has one instance of WH-Movement in contrast to

Uwalaka's (1988) multiple Movement analysis.

Another structure deriving from WH-Movement in the two languages is Topicalisation, especially in the Interrogative form. For the declarative sentence, NP Movement appears apparent. Consider examples 98a - 100a) in Chapter 4.

On a wider spectrum, the study makes some observations on the dichotomy between A and $\bar{A}$ Movements. The A type of movement is from a position, that is a potential recipient of θ-role to another such position, whereas $\bar{A}$ movement is from a position that has a θ-role into another where neither θ role nor Case is assignable. Thus, $\bar{A}$ movement can be perceived as leftward unbounded since the operator has relative freedom over the number of slots to cross. The implication is that NP Movement should be of the A-type while WH movement should be of the $\bar{A}$ type. Interestingly, such a typology will be relevant to English since WH-words are mere antecedents to traces, and are therefore in non-argument ($\bar{A}$) positions. Those of Igbo are in Argument positions since they function as full NP's. There is no position to be filled if a moved element has to land. After all, there are no relative pronouns occurring as specifiers of CP which would have sustained any element moved to COMP.

The study further reveals that Movement in both languages creates a position for "Empty categories". There is the observation that empty categories are "real" gaps which derive from Movement as against parasitic gaps. Interestingly, both

English and Igbo do not have pro as an empty category. In languages that have it, pro occupies the SPEC I_i slot, a position that precludes it from Movement. The two languages have control structures, and thus harbour PRO. However, whereas English allows uncontrolled PRO (because of the presence of the expletive it), Igbo does not.

Though the two languages have traces after Movement, Igbo provides a radically different picture. There is evidence that the null trace phenomenon is not absolute in Igbo. There are instances of resumptive pronoun trace phenomena in the language in such structures as Topicalisation, Clefts, and Questions. Consider examples 23, 31, 32 in Chapter 5. However, the traces of both languages are bound by the same Trace Conditions. That Igbo traces could have overt forms has an important linguistic implication since the general view has favoured the null trace convention.

There has been a desire to characterise all instances of resumptives as "extra". In this connection, Caskey (1990) characterises all languages with true resumptives as lacking overt morphological Case. This view appears to be rather simplistic. What is perhaps required is a wealth of data to reach parametric conclusions.

In general terms, resumptive pronoun traces occur at the subject positions in the place of moved NP's functioning as antecedents. This means that the subject positions of structures with resumptive pronouns are not properly governed

as the internal arguments of the verbs. The subject then c-commands its resumptive pronoun trace and assigns it all the necessary properties.

Resumptive pronouns which derive from both NP and WH structures share identical characteristics; see Nos. 51 and 52 in Chapter 5. For both English and Igbo, the different Empty Categories which derive from Movement offer stimulating justification for the circular view of grammar enunciated in Chapter 1.

This study has also highlighted a number of syntactic constraints which inhibit Movement. These constraints have been proposed to restrict the expressive power of transformations and thus prevent over-generation and over-generalisation. The notion of constraints derives from the Subjacency Condition which restricts transformational rules from moving constituents (in any single application) across more than one bounding node. To be subjacent is to permit at least one intervening node. This means that rule application is bicyclic.

The analysis in Chapter 6 (see examples 4, 5, 6, 8, 9, 10 and 11) outlines NP, S and S-bar as bounding nodes for Igbo. Meanwhile, such structures have been found to be bounding nodes for English - of Chomsky (1973, 1977a) and Van Riemsdijk and Williams (1986).

The different constraints which have been identified by Chomsky (1964), and Ross (1967) and which have been

considerably analysed by Neijt (1980), Fiengo (1980) Horrocks (1987) etc, include the A-over-A Constraint (AOAC) from which derive the Prepositional Stranding Constraint (PSC), the Left Branching Constraint (LBC) and the Co-ordinate Structure Constraint) (CSC). Others are the complex NP Constraint (CNPC) the COMP Island Constraint (CIC), the Tensed S-constraint (TSC), the Specified Subject Constraint (SSC), the Unit Movement Constraint (UMC) and the Nominative Island Constraint (NIC).

The work upholds the complex NP constraint, and the COMP Island constraint as common barriers to Movements in English and Igbo. The left Branching Constraint which bars the NP which forms the leftmost constituent of a larger NP from moving from that larger NP applies to English while in Igbo, it is the Right Branching Constraint. For LBC to obtain, NP modifiers must be to the left of the head (i.e. head final as in English). But if the NP takes specifiers to the right (i.e. head first, as in Igbo), what obtains is the Right Branching Constraint. This point has been demonstrated in Chapter 6 no. (16). The Prepositional Stranding Constraint which has been identified as a subpart of the A-O-A Constraint appears to have limited application in English. It appears more natural with WH-Movement or non-clause internal Movement than with clause iinternaal Movement. In Igbo, the constraint is obligatory. The obligatory application of the PSC is demonstrated in Chapter 6 - examples 22a, 22b and 22c.

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Again, the Unit Movement Constraint which states that no single Movement can extract two or more elements simultaneously if these elements don not form part of a continuous constituent appears more relevant to English than to Igbo since it relates more to complex phrasal verb configurations. Indeed, Igbo.does not have phrasal verbs.

While some of the constraints are purely syntactic, others are syntactio-semantic. Among the syntactio-semantic constraints are Tensed S constraint, (TSC) the Specified Subject Constraint (SSC) and the Nominative Island constraint, (NIC). The NIC applies to both languages.

Though English and Igbo obey the TSC, Igbo has a peculiar characteristic because of the presence of resumptive pronouns which function as "visible" traces of the moved elements. Where there are no resumptive pronouns, in Raising structures, for instance, there is a position of a null trace as in the following example taken from Chapter 6 no. 43a.

(23) Ìwu kwèsìrì (e) ịgwa Eze ihe niile.

Iwu expects to tell Eze thing every

(Iwu is expected to tell Eze everything)

The Specified Subject Constraint (SSC) which relates to reciprocals does not have relevance to Igbo because of the lack of the distinction between reflexive and reciprocals in the language.

Interestingly, the different constraints have been found to build up to two related but distinct constructs. These are

the Subjacency and Opacity Conditions. Structures related to WH-Movement are checked by Subjacency, while those related to NP Movement obey the Opacity Condition.

7.2 Linguistic Implications

A general emerging picture from the study is that not all constituents have the same degree of freedom for Movement; at least if Movement is taken to replace the numerous instances of transformations. The V-movement proposal, though tentative does not necessarily achieve any form of structural differentiation between clauses. It is basically a matter of twitching of particles, which, at best can be handed at the PF level. In the main, none of our examples showed a verb being moved or focussed without going with its object. These objects are usually of the NP or WH phrase constituent. Indeed, instances of V-Movement reveal that there can be two positions for the verbs, (V,VP), i.e. a verb directly dominated by a VP and (V, INFL), i.e. a verb directly dominated by INFL. The former derives from a D-structure representation and the latter from Movement. There are differences in the kinds of roles the two verb positions play. The V dominated by VP is "θ-assigning position, while the V dominated by INFL is a $\bar{\theta}$ assigning position. When a verb occupies a θ assigning position, it assigns a θ role to an internal argument (usually of a NP sort). Interestingly, the full Manifestation of the V-Movement phenomenon gets clearer

when it gets attached to an NP construction. Similarly Emonds (1976) has observed that AP Movement is within the general WH-fronting rule. Such observations reinforce the need to reduce Movements to NP's and WH's.

The fact that English has more structures which derive from syntactic Movement tends to suggest that the UG could have internal variations. Indeed, it is within the provisions of the recent theories of Grammar (cf Chomsky 1980a, 1981b, Hyams, 1986, Cook 1988) that UG has a parameterised perspective. It contains a set of principles and which hold universally. The parameters specify the range of possible variations. It is conceivable that a language allows Movement of different categories - but perhaps not all.

Languages may differ with respect to the linguistic level at which Movement applies. In English, Move α applies in the syntax. In Chinese, for instance, following Haung (1982) it applies elsewhere. Haung (1982) highlights that the interpretation of Chinese Interrogative (direct and indirect) is identical to their English counterparts. He then concludes that in Chinese, WH-Movement applies at the LF. Therefore at the LF level, the WH element (in both English and Chinese) occur at the sentence-initial position, and are converted to a quantifier variable representation. Thus, English and Chinese can be perceived to differ minimally; the latter restricts the Move α at the LF. But that does not preclude the instantiation of the Move α. Further evidence for the

opposition between syntactic and LF Movement comes from Japanese and Bahasa Malaysia - cf King (1980). King argues that English requires syntactic Movement while Bahasa Malaysia and Japanese do not. He observes that a language with syntactic Movement requires a complex theory to relate the moved element and unmoved forms, and that the language assumes an original level at which the elements are unmoved. According to him, since Japanese does not involve syntactic Movement, there is no need for structure dependency for Movement.

It can then be argued that while English depends for its structures, on syntactic Movement per se, Igbo has a combination of syntactic and LF movement. It could also suggest that English has more facilities to enable it to draw from the repertoire of UG. It could also mean that languages like Igbo, have more economical ways of reflecting structural patterns. After all, the same structures have been known to suffice for Ergatives and Middles.

To support the possibility that English has more structures, it has been argued that the passive structure is based on the availability of rich verbal morphology which can make the verb to assume different forms based on their positions in the sentence. In the absence of the passive structure, Igbo, and perhaps many other KWA languages use the indefinite subject construction.

In spite of the apparent differences in the range of

structures that derive from Movements in the two languages, there is enough evidence to argue that NP and WH Movements are a common feature of language. While English has overt + WH structures, Igbo, and indeed many other languages have words with direct WH reading and those that acquire WH reading in association with other constituents. In Igbo, that constituent is kèdu, while in Akan, it is Den or Ben, both of which can be glossed as what (cf Saah 1986). In Afrikaans, wat occurs as a general WH-constituent which functions in the derivation of such structures as relatives and questions (cf de Besten, 1986). In Yoruba, the constituent that can give some other-WH structures overt WH reading is ni. It occurs in association with ta (who) ti (what) and nibo (where) before they undergo Movement in Question formation, for instance. These structures together with ni function as focus markers. - cf Sonaiya (1989).

Though Saah (1986) declares that WH Movement is absent in Akan, he agrees that there is a rule of focus which moves WH-words/phrases to the clause-initial position. Such a process, to me, is a Movement. Even if there were no overt shift, there will be at least an LF Movement as in Chinese and Japanese already cited. The same explanation applies to Yusuf's (1989) assertion that certain points about Question formation and other structures in Yoruba would pose a challenge to the theory which recognises only Movement as the basic transformation.

The fact that relative clauses in Igbo, and perhaps many other languages, involve deletion and tonal rise means that the Move Alpha Construct would need to be more exhaustively characterised. Movement, according to Crystal (1991) can be conceptualised as Delete Alpha, Replace Alpha, Insert Alpha and of course Move Alpha. Delete Alpha erases elements at the underlying structure; Replace Alpha substitutes one element for some other, Insert Alpha fixes an additional element within a structure, while Move Alpha sees to the internal switching of elements. Interestingly however, the structures that we have so far analysed exhibit diagnostics for one or another of the Movement manifestations.

In a bid to expand the scope of the Move α Construct there has been the call to replace it with AFFECT ALPHA - cf Lasnik and Saito (1984), Chomsky (1988 and 1991), Ndimele (1991) etc. In whatever guise Movement occurs, it takes account of the syntactic categories of words and the structural relationships of the sentence, instead of the linear order of words. That means that Movement, like all other formal operations in the grammar of any language is structure dependent - Cf Cook (1988).

The on-going analysis seems to suggest that the presence or absence of syntactic Movement is a parametric variation between languages. Indeed, syntactic Movement is unmarked while LF movement is marked in Igbo relative clauses and a few other constructions in similar languages.

Again, the fact that Igbo and many other languages, may have resumptive pronouns occurring as "visible" traces means that the Trace condition in Framption's (1990) estimation will need to be re-appraised. Since Igbo and other related languages provide an alternative source of analysis. Trace may not, after all, be null in all cases.

Interestingly, many of the constraints to Movement apply across the board. Even when Warburton (1982), based on her argument on her extensive analysis of Modern Greek argues that Tensed Clause Condition (variously named the Propositional Island Constraint and Nominative Island Constraint) may not be universal, she admits that the constraint may be restricted to languages that distinguish between finite and infinitive clauses.

With more vigour other results of the constraint have been discovered to hold for Modern Greek. The Propositional Island Constraint which derives from the Tensed Clause Condition, according to Kim (1976) has been observed to apply to Korean, a language, which like modern Greek does not draw a formal distinction between finite and non-finite clauses.

The universality of many of the constraints so far enunciated points to the fact that human language has internal checks. That such constraints are introduced within grammar means that, they are not mere manifestations of the failure of human language processing mechanism.

The close similarity between English and Igbo, two unrelated languages gives the impression that no particular language should be seen as comprising a specific rule system.

There are equally no construction-specific principles. A language is therefore not a system of rules, but a set of specifications for parameters set in an invariant system of Universal Grammar.

Prior to the introduction and re-invigoration of TG linguistics, a basic contention had been that languages existed sui generis and could "differ from one another without limit in unpredictable ways" - cf Saussure (1933), Bloomfield (1935), Joos (1957), etc. However, under a TG analysis, especially within the framework of UG, there is the contention that:

> ... the existence of deep-seated formal universals implies that all languages are cut to the same pattern.
>
> Chomsky (1965:30).

On the surface, Chomsky's position appears to be over-ambitious. Thus, Warburton, taking a critical look at the two diametrically opposed views to the issue of languages, argues that languages have basic characteristics in common but differ in their details.

And in a bid to provide definite statements about the nature of universals, the bulk of Chomsky's works in 1980's together with those that comment on these works have been devoted to an exhaustive explication of what constitutes Universal Grammar. Chomsky (1986a, 1988) for instance, argues that language appears to be a species property, unique to the

human species, and that it is a common part of human shared biological endowment. To him, there is very little variation among humans apart from serious pathology. Therefore, a theory of the human language faculty can be conveniently referred to as universal Grammar (UG). It is the UG that strives to formulate operating principles of the language faculty.

The grammar of any language is perceived to be an account of the language faculty after acquiring some experience of data. Universal Grammar, on the other hand is a presentation of the free state of the language faculty before any experience.

Therefore, knowledge of language must depend on certain physical structures of the brain which are the basis of computations and representations, often described in an abstract way.

The discussion so far, has relevance to two main approaches to the analysis of language - the Externalised (E-language and the Internalised (I-language) approaches. - cf Chomsky (1986a, 1987). Under the E-language approach there is a collection of sentences and an attempt to study the sentences independently of the properties of the mind. The kind of grammar from the study is described in terms of the properties of the individual language data through structures and patterns. The I-language concerns itself with what a speaker knows about language and where his knowledge derives

from. Under the I-language approach, language is treated as an internal property of the human mind, rather than something external.

The language faculty is then perceived as a distinct system of the mind with an initial state - (S^0), common to the species ("to a close first approximation apart from serious pathology") - cf Chomsky (1988). Given appropriate experience, this faculty advances from the (S^0) state to the steady state (S^s) which then is peripherally modified (by acquiring new vocabulary items, for instance), Grammar under the I-language system is perceived to consist of principles and parameters.

The aim of linguistic investigation within the I-language framework is to represent grammar as it occurs in the mental state of the individual as opposed to the perception of language as a social phenomenon. Perhaps, the strongest attack to the over-reliance on social perception of language is the failure of the so-called pattern drills and functional approaches to language teaching - cf Chomsky (1988). Furthermore, the fact that people can learn different languages at a time, goes to suggest that there could be a common phenomenon within the human structure that favours the mastery of languages.

Even though the environmental - social factors in language learning tend to make substantial inputs, it does appear, following Chomsky (1986a), that the language

particular features are what the speaker learns while the universal parts are just innate and are determined by the human organism itself. Chomsky then concludes that success in separating the universal from the language - particular components leads to the making of authentic claims about the nature of the mind.

Since children learn languages within a short period and from limited data, it appears more economical to operate within a theory of linguistic structure which reduces the job of the learner to the minimum. Such a theory will definitely maximise the universal components.

The discovery of all the universal components builds up to the notion of UG. The UG is concerned with core grammar rather than with the periphery. Within the core, there is the possibility that some parameter settings are more marked than others. Languages that apply syntactic Movement for instance, may relate to the UG more than those that do not. Thus, English appears unmarked, while Japanese is marked (as earlier on pointed out). Markedness relates more to evidence of deviation available to the learner. Unmarked settings of parameters are easily learnt from the least of the positive evidence. Children, in their acquisition of languages, need evidence to move from unmarked to marked settings. Within a UG framework, the knowledge of a particular language is the tacit knowledge of how that language utilise the provisions of UG, and the parameters therefrom.

In line with the parameters approach to linguistic theory, Hyams (1986) argues that, confronted with the jumble of input available to the child, the duty of the linguistic theoretician is to explain how a child can acquire any human language. This, to her, entails the positing of an innate mechanism which must meet two opposite constraints - it has to be broad enough to account for the diversity of human language, and narrow enough to prevent the child from making numerous irrelevant hypotheses.

If Movement processes are correlated with the provisions of the I-language phenomenon, it will be apparent that human languages, at the inner recess, have Movement either syntactic or within the LF. The Trace phenomenon also has a universal appeal since our study has shown that trace may not be "null". Indeed, all the subcomponents of UG (since UG represents the GB framework) seem to in human languages apply. Indeed, the Move Alpha appears to be the uniting point about the diversity of human languages.

The general picture emerging from this study is that the GB theory and Movement processes are not concerned with specific syntactic points such as Passives, Relatives or Interrogative, which feature as shorthand labels for particular interactions of Principles and Parameters. The different labels are a complex of various principles, each of which will have effect on the total practice in syntax.

7.3 Conclusions

The study has upheld all the eight hypotheses proposed for the work. In the course of our discussion the similarities (forming the core) and the differences (forming the parametric variations) have been presented. There is also the observation that both NP and WH-Movements conflate to the general move Alpha.

All along, there has been the use of principles while the subject is on movement rules. There appears to be preference for principles to rules since the latter tends to relate to earlier versions of the TG theory. Rules are basic idiosyncratic phenomena that account for specific aspects of one language. Principles, on the other hand highlight the properties of all rules and all languages. Universal Grammar is concerned with positing a single principle that applies to all rules, rather than devising a large corpus of rules repeating the same information. Rules can still be used as labels for the combination of principles involved in a particular point. In this respect, the title of the work is well motivated.

Following Jackendoff (1977) our choice of two languages is equally well motivated. In this connection, two methodological biases are presupposed:

i) that it is only by investigating a system thoroughly that we come to some definite understanding of it; and

ii) that evidence from actual languages can really provide substantial evidence for linguistic universals.

These two biases have been pursued somewhat exhaustively. The discoveries so far made, have reinforced the universality of language properties. While this study has attempted to test the GB/Move Alpha construct using English and Igbo, it is believed that more findings relating to the construct, and indeed other aspects of the overall linguistic theory will emerge as many more languages of the world are investigated, especially side-by-side other well-studied European languages. This study is just a catalyst to provoke other research efforts, all of which will contribute to the emergence of +really authentic theories of language.

BIBLIOGRAPHY

ABNEY, S.T. (1987). "The English Noun phrase in its Sentencial Aspect". In Mallen, E. (1991). Linguistiche Beriche.

ADETUGBO, A. (1979). "Subcategorising the Verb in English". LARES, Vol.1pp.1-10.

AJEIGBE, O. (1986). "Movement Rules in the Theory of Government and Binding". LIWURAM, Vol.2. PP.37-53.

AJEIGBE, O. (1988). "The Category INFL in English Syntax". LARES, Vol. x, pp.22-40.

AKINKUGBE, O.(1934) "An Internal Classification of the Yoruboid Group - (Yoruba, Isekiri, Igala. Journal of West African Languages, Vol.11, pp.1-19.

AKMAJIAN, A. and F. HENY (1975). An Introduction to the Principles of Transformational Syntax. Massachusset: M.I.T. Press.

AKMAJIAN, A. and T. WASOW (1975). "The Constituent Structure of VP and the Position of the Verb BE". Linguistic Analysis, Vol.5, pp.205-247.

AMFAN, A. (1991). "The Noun Phrase in Hausa". Paper presented at the 12th Annual Conference of the Linguistic Association of Nigeria, at Imo State University, Okigwe, August 1991.

AÑUNOBI, I.A. (1989). "The Interrogative Construction in Igbo". JOLAN, No. 4, pp.110-126.

AOUN, J. (1985). A Grammar of Anaphora. Cambridge: Cambridge University Press.

AOUN, J. and D. SPORTICHE (1983). "On the Formal theory of Government". The Linguistic Review, No. 2, pp.211-236.

ARMSTRONG, R.G. (1981). The Idomoid Language Sub-family of the Eastern Kwa Borderland: a Progress Report". Berliner Afrikanni Shsche Vortrage, Serie A. Band, Vol.28, pp.5-23.

AUTHER, J.M.P. (1989). "Two Types of Empty Operators". Linguistic Inquiry, Vol.12, pp.637-645.

AWOYALE, Y. (1985). "Reflexives in KWA Languages". Current Approaches to African Linguistics, Vol.3, pp.

AWOYALE, Y. (1990). "On the Nature and Types of Alpha Movement in Yoruba". University of Ilorin Mimeo.

BACH, E. and G. Horns (1976). "Remarks on Conditions on Transformations". Linguistic Inquiry, Vol.7, pp.265-299.

BAKER, C.L. (1970). "Notes on the Description of English Questions: The Role of the Abstract Question Morpheme". Foundations of Language, Vol.6, pp.197-219.

BAKER, C.L. (1978). Introduction to Generative-Transformational Syntax. New Jersey: Prentice-Hall.

BAKER, C.L. (1981). "Auxiliary-Adverb Word Order". Linguistic Inquiry, Vol.12, pp.209-315.

BAKER, C.L. and J.J. McCarthy (eds) (1981). The Logical Problem of Language Acquisition. Massachessets.

BALTIN, M. (1981). Strict Bounding". In Baker C.L. and J.J. McCarthy (eds). The Logical Problem of Language Acquisition, pp.257-295.

BALTIN, M. (1982). "A Landing Site Theory of Movement Rules". Linguistic Inquiry, Vol.13, pp.1-38.

BALTIN, M. (1984). "Extraposition Rules and Discontinuous Constituents". Linguistic Inquiry, Vol.15, pp.157-163.

BAUGH, A.C. and T. CABLE (1951). A History of the English Language. London: Routledge and Kegan Paul.

BELLETI, A. (1982). "Morphological Passive and Pro-drop: the Impersonal Construction in Italian". M.S.

BELLITI, A. et al (eds) (1981). Theory of Markedness Generative Grammar. Pisa: Scoula Normale Superiore.

BHATT, C. (1989)., "Parallels in the Syntactic Realisations of the Arguments of Verbs and their Nominalisations". Lobel E. and Schmidt (eds). Syntactic Phrase Structure Phenomena in Nouns. Amsterdam: John Bengamins.

BLOOMFIELD, L. (1935). Language. London: George Allen and Unwin.

BORER, H. (1981). "Parametric Variations in Clitic Constructions". Doctoral Dissertion, M.I.T.

BORER, H. (1982). Parametric Syntax. Dordrecht: Foris.

BOUCHARD, D. (1984). On the Content of Empty Categories.

BRANDON, F.R. and L. SEKI (1981). "A Note on COMP as a Universal". Linguistic Inquiry, Vol.12, pp.659-65.

BRESNAN, J.W. (1970). "On Complementisers: Towards a Syntactic Theory of Complement Types". Foundations of Language, Vol.6, pp.297-321.

BRESNAN, J.W. (1972). "Theory of Complementation in English Syntax". M.I.T. Doctoral Dissertation.

BRESNAN, J.W. (1976). "On the Form and Functions of Transformations". Linguistic Inquiry, Vol.7, pp.3-40.

BRESNAN, J.W. (1979). Theory in Complementative in English Syntax. Oxford Publishers, New York.

BRESNAN, J.W. and J. GRIMSHAW (1978). "The Syntax of Free Relatives in English". Linguistic Inquiry, Vol.9, pp.331-391.

BRODY, M. (1984). "On Contextual Definitions of the Role of Chains". Linguistic Inquiry, Vol.15, pp.335-380.

BRODY, M. (1985). "On the Complementary Distribution of Empty Categories". Linguistic Inquiry, Vol.16, pp.505-46.

BURZIO, L. (1986). Italian Syntax. Dordrecht: Reidel.

CARREL, P. (1970). A Transformational Grammar of Igbo. London: Oxford University Press.

CASKEY, A. (1990). "On Resumptive Pronouns in Creole Languages". Current Analysis of African Languages, Vol.7, No.11, pp.125-135.

CHOMSKY, N. (1957). Syntactic Structures. The Hague: Mouton.

CHOMSKY, N. (1962). "A Transformational Approach to Syntax". Hill, A.A. (ed). Proceedings of the 3rd Texas Conference on Problems of Linguistic Analysis in English. Texas: Texas University Press.

CHOMSKY, N. (1964). Current Issues in Linguistic Theory. The Hague: Mouton.

CHOMSKY, N. (1965). Aspects of the Theory of Syntax. The Hague: Mouton.

CHOMSKY, N. (1968a). Language and Mind. New York: Harcourt Brace.

CHOMSKY, N. (1970). "Remarks on Nominalisation". Jacobs, R.A. and P.S. Rosenbaum (eds). Readings in English Transformational Syntax. Walttham, Mass: Gin and Co. pp.184-221.

CHOMSKY, N. (1973). "Conditions on Transformations". Anderson, S.R. and P. Kiparsky (eds). A Festschrift for Moris Halle. New York. Holt, Rinchart and Winston, pp.232-286.

CHOMSKY, N. (1975). The Logical Structure of Linguistic Theory. New York: Plenum.

CHOMSKY, N. (1976). Reflections on Language. London: Fontana.

CHOMSKY, N. (1977a). Essays on Form and Interpretation. Amsterdam: North Holland.

CHOMSKY, N. (1977b). "On WH-Movement". Culicover, P.W. et al (eds). Formal Syntax. New York: Academic Press, pp.71-132.

CHOMSKY, N. (1980a). Rules and Representations. Oxford: Blackwell.

CHOMSKY, N. (1980b). "On Binding". Linguistic Inquiry, Vol.11, pp.1-46.

CHOMSKY, N. (1981a). Markedness and Core Grammar". Belleti, A. et al (eds). Theory of Markedness in Generative Grammar. Pisa: Scoula Normale Superiore.

CHOMSKY, N. (1981b). "Principles and Parameters in Syntactic Theory". Hornstein, N. and D. Lightfoot (eds). Explanations in Linguistics. London: Longman.

CHOMSKY, N. (1981c). "On the Representation of Form and Function". The Linguistic Review, pp.3-40.

CHOMSKY, N. (1981d). Lectures on Government and Binding. Dordrecht: Foris.

CHOMSKY, N. (1982a). Some Concepts and Consequences of the Theory of Government and Binding. Mass: M.I.T. Press.

CHOMSKY, N. (1982c). The Generative Enterprise: A Discussion with Huybregts and Van Riemsdijk. Dordrecht: Foris.

CHOMSKY, N. (1986a). Knowledge of Language: Its Nature, Origin and Use. New York: Praeger.

CHOMSKY, N. (1986b). Barriers. Cambridge: M.I.T. Press.

CHOMSKY, N. (1987). "Kyoto Lectures". MS.

CHOMSKY, N. (1988). Language and the Problems of Knowledge: The Managua Lectures. Cambridge: M.I.T. Press.

CHOMSKY, N. (1991). "Some Notes on Economy of Derivation and Representation". Freidin, R. (ed). Principles and Parameters in Comparative Grammars. Forthcoming.

CHOMSKY, N. and H. LASNIK (1977). "Filters and Control". Linguistic Inquiry, Vol.13, pp.39-77.

CINQUE, G. (1980). "On Extraction from NP in Italian". Journal of Italian Linguistics, Vol.1, pp.47-99.

CINQUE, G. (1983). "Constructions with Left Peripheral Phrases, Connectedness, Move Alpha and E.C.P.". MS.

CONTRERAS, H. (1984). "A Note on Parasitic Gaps". Linguistic Inquiry, Vol.15, pp.698-701.

COOK, V.J. (1988). Chomsky's Universal Grammar. Oxford: Blackwell.

CRYSTAL, D. (1991). A Dictionary of Linguistics and Phonetics. London: Basil Blackwell.

CULICOVER, P. (1976). Syntax. New York: Academic Press.

CULICOVER, P. and W. WILKINS (1986). "Control, PRO and Projection Principle". Language, Vol.65, No.1, pp.

CRYSTAL, D. (1991). A Dictionary of Linguistics and Phonetics. London: Basil Blackwell.

DADZIE, A.B.K. (1988). "Prescriptivism and the Second Language Learner". LARES, Vol.x, pp.10-21.

deCLERK, R. (1984). "Some Restrictions on Clefts that Highlight Predicate Nominals". Journal of Linguistics, Vol.20, pp.131. "On the Presence and Absence of WH-Elements in Dutch den BESSTEN, H. (1978b) Comparatives Linguistic Inquiry, Volume 9, PP.641-71.

den BESSTEN, H. and M. Van WALRAAVEN, C. (1986). "The Syntax of Verbs in Yiddish". HAIDER, H, and M. PRINZHORN (eds). Verb Second Phenomena in Germanic Languages, pp.111-135.

DRESHER, B.E. and N. HORNSTEIN (1979). "Trace Theory and Movement Rules". Linguistic Theory, Vol.10, pp.65-82.

ELUGBE, B. (1979). "Some Tentative Historical Inferences from Comparative Edoid Studies". Kiabara, Vol.2, pp.82-101.

EMENANJO, N. (1978). Elements of Modern Igbo Grammar. Ibadan: Oxford University Press.

EMENANJO, N. (1979). "Some Aspects of Interrogation in Igbo". Kiabara, Vol.2, pp.1-2-112.

EMENANJO, N. (1984). "Igbo Verb Complements and the Argument Structure of Compounds". Linguistics 260 Talk, Harvard University, March, 1984.

EMONDS, J.E. (1976). A Transformational Approach to English Syntax. New York: Academic Press.

EMONDS, J.E. (1979). "Appositive Relatives have no Properties". Linguistic Inquiry, Vol.10, pp.211-243.

FELIX, S. (1990). "The Structure of Functional Categories". Linguistiche Berichte, Vol.125, pp.46-76.

FIENGO, R. (1977). "On Trace Theory". Linguistic Inquiry, Vol.8, pp.35-62.

FIENGO, R. (1980). Surface Structure. Cambridge: Harvard University Press.

FILLMORE, C. (1968). "The Case for Case". Bach, E. and R.T. Harms (ed). Universals in Linguistic Theory. New York: Holt, Rinehart and Winston.

FRAMPTON, J. (1990). "Parasitic Gaps and the Theory of WH-Chains". Linguistic Inquiry, Vol.12, pp.49-77.

FRANTZ, D. (1973). "On Question Word Movement". Linguistic Inquiry, Vol.9, pp.519-549.

FUKKUI, N. (1986). "A Theory of Category Projection and its Applications". M.I.T. Doctoral Dissertation.

GASS, S. (1979). "Language Transfer and Universal Grammatical Relations". Language Learning, Vol.29, No.2, pp.327-244.

GAZDAR, G. et al (1955). Generalised Phrase Structure Grammar. Oxford: Blackwell.

GREEN, M.M. and G.E. IGWE (1963). A Descriptive Grammar of Igbo. London: Oxford University Press.

GOLDSMITH, J. (1976). "Autosegmental Phonology". M.I.T. Doctoral Dissertation. Distributed by Indiana University Linguistic Club.

GOLDSMITH, J. (1981). "The Structure of WH-Questions in Igbo". Linguistic Analysis. No.4, pp.367-393.

GRIMSHAW, J. (1975). "Evidence for Relativisation by Deletion in Chaucerian English". University of Massachusetts Occasional Papers.

GRIMSHAW, J. (1979). "Complement Selection and the Lexicon". Linguistic Inquiry, Vol.10, pp.279-326.

GROOS, A. and H.C. Van RHMSDYK (1981). "Matcching Effects in Free Relatives: A Parameter of Core Grammar". In BELLEJI,A. et al (eds) (1981).

GRUBER, J.S. (1965). "Studies in Lexical Relations". M.I.T. Doctoral Dissertation.

GRUBER, J.S. (1990). "Complex Thematic Structures". M.I.T. Ms.

GUERON, J. (1980). "On the Syntax and Semantics of PP-Extraposition". Linguistic Inquiry, Vol.11, pp.639-678.

GUERON, J. and R. MAY (1984). "Extraposition and Logical Form". Linguistic Inquiry, Vol.15, pp.1-31.

HAAFFEN, T. et al. (1983). "Left Dislocation, Connectedness and Reconstruction". Ehlich, K' and H.C. Van Riemsdijik (eds). Connectedness in Sentence, Discourse and Text: Tilburg Studies in Language and Literature, 4, Tilburg University.

HARBERT, W. (1982). "On the Nature of the Marking Parameter". Linguistic Review, Vol.2, pp.237-284.

HARBERT, W. (1983). "A Note on Old English Free Relatives". Linguistic Inquiry, Vol.14, pp.549-53.

HAUNG, C. (1983). "A Note on Binding Theory". Linguistic Inquiry, Vol.14, pp.554-561.

HAWKINS, R. (1987). "The Notion of 'Typological Markedness' as a Predicatory Order of Difficulty in L2 Acquisition of Relative Clauses". Paper Presented at the BAAL Seminar on the Place of Linguistics in Applied Linguistics. University of Essex CILT Workshop on Acquiring Language and Learning Languages.

HIGGINGBOTHAM, J. (1980). "Pronouns and Bounding Variables". Linguistic Inquiry, Vol.11, pp.679-708.

HIGGINGBOTHAM, J. (1983). "Logical Form, Binding and Nominals". Linguistic Inquiry, Vol.14, pp.3995-420.

HORNSTEIN, N. (1977). "S and X-Bar Convention". Linguistic Analysis, Vol. 3, pp.137-176.

HORNSTEIN, N. and D. LIGHTFOOT (1981). Explanations in Linguistics. London: Longman.

HORROCKS, G. (1987). Generative Grammar. London: Longman.

HORROCKS, G. and M. STAVRON (1987). "Bounding Theory and Greek Syntax: Evidence for WH-Movement in Noun Phrases". Journal of Linguistics, Vol.23, pp.

HYAMS, N.M. (1987). Language Acquisition and the Theory of Parameters. Boston: D. Reiddel.

IKEKEONWU, C.I. (1987). "Igbo Interrogatives - A Revisitation". Nsukka Journal of Linguistics, Vol.1, pp.20-9.

JACKENDOFF, R. (1977a). X-Bar Syntax: A Study of Phrase Structure. Mass.: M.I.T. Press.

JACKENDOFF, R. (1977b). "Constraints on Phrase Structure Rules". Culicover, P. et al (eds) Formal Syntax, pp.249-283.

JAEGGLI, O. (1980). "Remarks on To - Contraction". Linguistic Inquiry, Vol.11, pp.239-246.

JENKINS, L. (1976). "Movement Transformations as Interpretive Rules in the Extended Standard Theory". Rohrer, C. (ed). Actes du Colloque Franco-Allemondd de Linguistique Theorique. Tubingen: Max Niemeyer Verlag.

JOOS, M. (1957). Readings in Linguistics. New York: American Council of Learned Societies.

JUNAIDU, I. (1987). "Topicalisation in Hausa". Doctoral Dissertation, Indiana University.

JUNAIDU, I, (1988). "The Relationship between Topicalisation and Left Dislocation in Hausa". JOLAN, Vol.4, 1990, pp.35-43.

KALU, J.A. (1987). "PRO and Related Categories in the Theory of Government and Binding". M.A. Dissertation, University of Lagos.

KATZ, J.J. (1972). Semantic Theory. New York: Harper and Row.

KATZ, J.J. and P.M. POSTAL (1964). An Integrated Theory of Linguistic Descriptions. Mass: M.I.T. Press.

KAUFMAN, E. (1973). "Theoretical Responses to Navajo Questions". M.I.T. Doctoral Dissertation.

KAYNE, R.S. (1981). "E.C.P. Extensions". Linguistic Inquiry, Vol.12, pp.93-133.

KAYNE, R.S. (1983). "Connectedness". Linguistic Inquiry, Vol.14, pp.223-

KAYNE, R.S. (1984). Connectedness and Binary Branching Dordrecht: Foris.

KAYNE, R.S. and J.Y. POLLOCK (1978). "Stylistic Inversion, Successive Cyclicity and Move NP in French". Linguistic Inquiry, Vol.9, pp.595-621.

KEYSTER, S.J. and T. ROEPER (1984). "On the Middle and Ergative Constructions in English". Linguistic Inquiry, Vol.15, pp.381-416.

KIM, W.C. (1976). "The Theory of Anaphora in Korean Syntax". M.I.T. Doctoral Dissertation.

KING, H. (1970). "On Blocking the Rules for Contraction in English". Linguistic Inquiry, Vol.1, pp.134-136.

KOOPMAN, H. (1983). The Syntax of Verbs. Dordrecht: Foris.

KOSTER, J. (1978a). Locality Principles in Syntax. Dordrecht: Foris.

KOSTER, J. and R. MAY (1982). "On the Constituency of Infinitives". Language, Vol.58, pp.116-143.

LANGACKER, R.W. (1969. "On Pronominalisation and Chain of Command" in REIBEL, D. and S. SCHANE (eds). Modern Studies in English. Englewood Cliffs: Prentice Hall, PP.160-186.

LASNIK, H. and M. SAITO (1984). "On the Nature of Proper Government". Linguistic Inquiry, Vol.15, pp.235-289.

LASNIK, H. and J. URIAGEREKA (1988). A Course in GB Syntax. Cambridge: M.I.T. Press.

LEFEBVRE, C. and P. MUYSKEN (1979). "COMP in CUZCO Quechua". Montreal Working Papers in Linguistics No.11.

LIGHTFOOT, T.D. (1976). "Trace Theory and Twice Moved NP's". Linguistic Inquiry, Vol.7, pp.559-582.

MAY, R. (1979). "Must COMP to COMP Movement be stipulated"? Linguistic Inquiry, Vol.10, pp.719-726.

MBA, M.B. (1991). "Noun Phrase Movement in Igbo". M.A. Dissertation, University of Nigeria, Nsukka.

MALLEN, E. (1991). "Noun Phrase Structure, Clitic - Doubling and Extraction". Linguistiche Beriche, Vol.134, pp.276-309.

MANFREDI, V. (1987). "Antipassive and Ergative Morphology in Igbo". Harvard University, Ms.

McCAWLEY, J.D. (1982). "Parenthelicals and Discontinuous Constituents". Linguistic Inquiry, Vol. 13, pp.91-106.

McCLOSKEY, J. (1979). Transformational Syntax and Model Theoretic Semantics. Dordrecht: Reidel.

NDIMELE, O.M. (1991a). "Question Formation in GB Syntax: Insights from Etche". PhD Thesis University of Port Harcourt.

NDIMELE, O.M. (1991b). "Headed Chains and the Parasitic Gap Phenomenon". Paper Presented at the 12th Annual Conference of the Linguistic Association of Nigeria at the Imo State University; Okigwe, August, 1991.

NDMELE, O.M. (1991c). "On an Inadequate Defence of the Move-Alpha". Promotional Paper Presented at the 12th Annual Conference of the Linguistic Association of Nigeria - August, 1991.

NDIMELE, O.M. (1992). The Parameters of Universal Grammar. Owerri: African Educational Services.

NEIJT, A. (1980). Gapping: A Contribution to Sentence Grammar. Mass: M.I.T. Press.

NEWMEYER, F.J. (1980. Linguistic Theory in America. New York: Academic Press.

NEWMEYER, F.J. (1983/86). Grammatical Theory: Its Limits and Its Possibilities. Chicago: Chicago University Press.

NWACHUKWU, P.A. (1976). "Noun Phrase Sentential Complementation in Igbo". PhD Thesis, SOAS University of London.

NWACHUKWU, P.A. (1982). "NP Sentential Complements in Igbo". JOLAN, Vol.1, pp.47-61.

NWACHUKWU, P.A. (1986). "Inherent Complement Verbs in Igbo". JOLAN, Vol.3, pp.61-74.

NWACHUKWU, P.A. (1987a). "Unified Account of Igbo Questions". Lexicon Project, Centre for Cognitive Science, M.I.T. Massachussets.

NWACHUKWU, P.A. (1987b). "Topic, Focus and Move Alpha". Niger-Congo Syntax and Semantics, Vol.1. Boston University, African Studies Centre. (Forthcoming).

NWACHUKWU, P.A. (1987c). "Igbo Questions, Movement and Trace". Nigerian Journal of Linguistics, University of Ibadan. (Forthcoming).

NWACHUKWU, P.A. (1987d). Argument Structure of Igbo Verbs. Lexicon Project, Cognitive Science Centre, M.I.T.

NWACHUKWU, P.A. (1988a). "Case Theory, the Theta Critenori and Igbo Inherent Complement Predicates". Nsukka Journal of Languages and Linguistics. No.3. (Forthcoming).

NWACHUKWU, P.A. (1989a). "From Data to Theory: Nigerian Languages and Linguistic Theorising". JOLAN, Vol.4, 1990, pp.2-21

NWACHUKWU, P.A. (1989b). "Igbo Cleft Sentences as Focus Constructions: A Comment". JOLAN, Vol.4, 1990, pp.87-97.

OBI, N.A.J. (1988). "Empty Categories in the Theory of Government and Binding". M.A. Dissertation, University of Lagos.

OGBULOGO, C.U. (1987). "The Noun Phrase in English and Igbo". M.A. Dissertation, University of Lagos.

OGBULOGO, C.U. (1991). "Towards a Unified Theory of Anaphors". Paper Presented at the 12th Annual Conference of the Linguistic Association of Nigeria, at the Imo State University, Okigwe, August, 1991.

OGBULOGO, C.U. (1993). "The Trace Phenomenon in Igbo Syntax". Sent on Invitation to The Languages of the World, Munchen, Germany: LINCOM EUROPA.

OGBULOGO, C.U. (1994). "Opacity Conditions in English and Igbo". Journal Article Sent to LARES, University of Lagos.

OLSEN, S. (1989). "AGR(eement) in German NP". Bhatt, C. et al (ed). Syntactic Phrase Structure Phenomenon in Noun Phrases and Sentences. Amsterdam: John Benjamins.

OLUIKPE, B.O. (1978). English in Igboland: A Contrastive Study of English and Igbo Syntax. Onitsha: Africana Educational Publishers.

OLUIKPE, B.O. (1979). Igbo Transformational Syntax: The Ngwa Dialect Example. Onitsha: Africana Educational Publishers.

OMORUYI, T. (1989). "Some Features of Edo Relative Clauses and WH-Questions". JOLAN, Vol.4.

PERZANOWSKI, D. (1980). "Appositive Relatives Do Have Properties". Cahiers Linguistiques de Ottawa, Vol.9, pp.355-368.

POSTAL, P.M. (1972). "On Some Rules that are not Successively Cyclic". Linguistic Inquiry, Vol.3, pp.211-222.

POSTAL, P.M. (1974). On Raising. Cambridge: M.I.T. Press.

POSTAL, P.M. and G.K. PULLUM (1978). "Traces and the Description of English Complementiser Contraction". Linguistic Inquiry, Vol.7, pp.104-110.

PULLEYBLANK, D. (1986). Clitics in Yoruba". Borer, H. (ed). Syntax and Semantics, Vol.19, pp.43-64.

QUIRK, R. et al. (1972). A Grammar of Contemporary English. London: Longman.

QUIRK, R. et al. (1985). A Comprehensive Grammar of English. London: Longman.

RADFORD, A. (1981). Transformational Syntax. Cambridge: Cambridge University Press.

RADFORD, A. (1986). "Small Children's Small Clauses". Research Papers in Linguistics, Vol.1, pp.1-38.

RADFORD, A. (1988). Transformational Grammar. Cambridge: Cambridge University Press.

REINHART, T. (1980). "On the Position of Extraposed Clauses". Linguistic Inquiry, Vol.11, pp.621-624.

REINHARD, T. (1983). Anaphora and Semantic Interpretation. London: Croom Helm.

RIGTER, B. and F. BEUKEMA (1985). A Government and Binding Approach to English Sentence Structure. Van Walsenver: Apeldulm.

RIVERO, M. (1978). "Topicalisation and WH-Movement in Spanish". Linguistic Inquiry, Vol.9, pp.513-517.

RIVERO, M, (1984). "Diachronic Syntax and Learnability: Free Relatives in Thirtieth Century Spanish". Journal of Linguistics. Vol.20, pp.81-129.

RIZZI, L. (1980. "WH-Movement, Negation and Pro-drop Parameter". Mimeo, Scoula Normal Superiore.

RIZZI, L. (1983). "On Chain Formation". M.S. M.I.T.

ROCHENMONT, M.S. (1986). Focus in Generative Grammar. Amsterdam: John Benjamins.

ROEPER, T. (1982). "The Role of Universals in the Acquisition of Gerunds". Gleitman, L. and E. Wanner (eds) Language Acquisition. Cambridge: Cambridge University Press.

ROSS, J.R. (1967). "Constraints on Variables in Syntax". Doctoral Dissertation M.I.T. Distributed by the Indiana State University Linguistics Club.

ROSS, J.R. (1986). Infinite Syntax. New York: Abbex.

SAAH, K. (1986). "The Structure of WH-Questions in Akan". Paper Presented at the 17th West African Languages Conference, University of Ibadan.

SAFIR, K. (1982a). "On Small Clauses as Constituents". Linguistic Inquiry, Vol.14, pp.730-735.

SAFIR, K. (1984). Syntactic Chains. Cambridge: Cambridge University Press.

SAUSSURE, F. de. (1955) (Translation). A Course in General Linguistics. New York: Philosophical Library.

SELLS, P. (1985). Lecture Notes on Contemporary Syntactic Theories. Cambridge: Centre for Cognitive Science.

SCHACHTER, P. (1944). "Auxiliary Reduction: An Argument for GPSG". Linguistic Inquiry, Vol.15, pp.514-523.

SOAMES, S. and D.M PERLMUTTER (1979). Syntactic Argument and the Structure of English. Berkeley: University of California Press.

STOWELL, T. (1981). "Origins of Phase Structure". M.I.T Doctoral Dissertation.

STUURMAN, F. (1983). "Appositives and X-bar Theory". Linguistic Inquiry, Vol.14, pp.736-744.

STUURMAN, F. (1985). Phrase Structure Theory in Generative Grammar. Dordrecht: Foris.

SZABOLCSI, A. (1989). "Functional Categories in the Noun Phrase". In Kenesei, I. and J. Szeged (eds). Approaches to Hungarian II, pp.167-189.

TARALDSEN, K.T. (1978). "The Scope of WH-Movement in Norwegian". Linguistic Inquiry, Vol.9, pp.623-40.

TEKE, G.T. (1986). "The by-Insertion Rule in Passive Construction as a Consequence of Topicalisation". M.S.

TEKE, G.T. (1989). "Top is a Super Category". In JOLAN, Vol.4, 1990, pp.21-35

THOMAS, O. (1973). Transformational Grammar and the Teacher of English. New Yoke: Holt and Winston.

TORREGO, E. (1981). "Spanish as a Pro-drop language". M.S. University of Massachusséts.

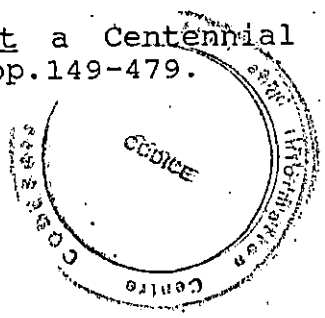
TORREGO, E. (1984). "On Invention and Some of Its Effects". Linguistic Inquiry, Vol.15, pp.103-129.

UBA-MGBEMENA, A. (1981). "Relativisation in Igbo". M.S

UMOH, P.M. (1990). "Application of X-Bar Syntax to the Analysis of Structural Ambiguity and Explanatory Adequacy in English". University of Lagos, M.A. Dissertation.

UWALAKA, M.A. (1988). "Focus Construction in Igbo". JOLAN, Vol.4, 1990.

VAN de AUWERA, J. (1985). "Relative That a Centennial Dispute". Linguistic Inquiry, Vol.21, pp.149-479.



VAN RIEMSDIJK, H. (1978). A Case study to Syntactic Markedness: The Binding Nature of Prepositional Phrases". Dordrecht. Foris.

VAN RIEMSDIJK, H. and E. WILLIAMS (1986). Introduction to the Theory of Grammar. Mass.: M.I.T Press.

VAT, J. (1978). "On Footnote 2: Evidence for the Pronominal Status of pe in Old English Relatives". Linguistic Inquiry. Vol.9, pp.695-716.

WASOW, T. (1972). Anaphora in Generative Grammar. Ghent: E. Story Stientia. Revised as WASOW (1978).

WASOW, T. and T. ROEPER (1972). "On the Subject of Gerunds". Foundations of Language, Vol. 8, pp.44-61.

WARBURTON, I.P. (1982). "Constraints on Rules of Grammar as Universal". Crystal, D. (ed) (1982). Linguistic Controversies: Essays in Linguistic Theory and Practice in Honour of F.R. Palmer. London: Edward Arnold.

WEKKER, H. and L. HAEGEMAN (1985). A Modern Cause in English Syntax. London. Croom Helm.

WELMERS, W.E. (1973). African Language Structures. California: UCLA Press.

YUSUF, O. (1989). "The Derivation of the Focus Construction in Yoruba: A Problem for the Trace Theory". JOLAN, Vol.4, 1990.

YUSUF, O. (1992). Syntactic Analysis. Ilorin: University of Ilorin Press.

ZAENAN, A. (1980). "Extraction Rule in Icelandic". Harvard University Doctoral Dissertation.

ZAENAN, A. (1983). "On Syntactic Binding". Linguistic Inquiry, Vol.14, pp.469-504.

ZWICKY, A.M. (1986). "Incorporating the Insights of Autolexical Syntax". Ohio State University Working Papers in Linguistics.