Lexicon Project Working Papers 18

The Argument Structure of Igbo Verbs

P. Akụjụọobi Nwachukwu

September, 1987

Lexicon Project
Center for Cognitive Science
MIT
Cambridge, MA 02139

Acknowledgements

The preparation of this paper was undertaken as part of the Lexicon Project of the MIT Center for Cognitive Science. Support for the Lexicon Project was provided by the System Development Foundation.

1 The Argument Structure of Igbo Verbs

1.1 Introduction

What is presented here is a study of the argument structure of Igbo verbs with special emphasis on the subcategory of verbs characterised as inherent-complement verbs (ICVs), (cf. Nwachukwu 1983, 1985 and Emenanjọ 1984 and 1986). The main goal of our inquiry is to discover a test or set of tests that will unambiguously sort out Igbo verbs into subtypes according to the number of arguments that each set is associated with, regardless of whether it consists of inherent-complement verbs or not. In this regard, it is quite clear that Igbo verbs fall into two discrete classes on the basis of the above distinction: inherent-complement verbs and non-inherent-complement ones. These two subclasses are treated in sections 2 and 3, respectively.

Given the conflicting claims about the relevance of transitivity to Igbo and Yoruba syntax, (cf Emenanjọ, op.cit. and Awobuluyi 1972), it is necessary to show (i) that transitivity is very relevant in Igbo syntax, and, by implication, in Yoruba syntax as well, and (ii) that the same set of syntactic tests applies across the board to distinguish intransitive from transitive verbs in Igbo regardless of whether the verbs involved take inherent-complements or not. To this extent then, this study is part of a wider study on the lexical syntax and semantics of Igbo verbs. In the language verbs happen to be the most important and most prolific lexical category[1]. in the language.

[1]For example, the verb is the only category in the language that undergoes the morphological processes of inflection and derivation. The verb is the only category from which a plethora of words belonging to different lexical categories can be derived, and very often morphological processes,which are centred on the verb, have direct reflexes or analogues in syntax. The language is very much verb-centred, and any accurate description of its verbs amounts to an accurate description of the entire language

The paper is divided into four sections: section 1 is the general introduction to the whole paper,and includes its theoretical background; section 2 takes up the issue of transitivity in general and in Igbo in particular, with specific reference to all Igbo verbs which do not require an inherent-complement to specify their meaning. This section begins with a historical review of the analyses of transitivity in Igbo, and calls for a distinction between objects and complements, and by implication,between inherent-complement and non-inherent-complement verbs. The various types of complements which can be internal to the predicator are examined and their argumenthood determined by providing a syntactic test which can subclassify non-inherent-complement verbs (NICVs) into transitive and intransitive (unergative) subsets, including the finer distinction into unaccusative and unergative verbs, (cf Perlmutter 1978 and Burzio 1981). Section 3 is devoted to the study of inherent-complement verbs (ICVs)—the argumenthood of inherent complements, (ICs), in relation to the Theta-theory and the Case Filter. The conclusion reached in this section is that inherent complements are not arguments, except in those cases in which the inherent-complement verbs happen to be compositional in meaning. ICs therefore play no role in determining the number of internal arguments of their verbs. Consequently, a unified analysis of transitivity based on a movement rule, (Move-**BVC** for NICVs, and Move-*IC* for ICVs), is proposed for all Igbo verbs. This section concludes by raising the problem posed by a group of Experiential Verbs in Igbo to the theory of Predicate Argument Structure (PAS). These are verbs that express such human experiences as pain, fever, headache, etc, as though each of them involves two participants; thus the syntactic form in which the verbs express these human experiences is totally different in Igbo and, possibly other African languages, from how they are expressed in English and other European languages. They seem to fall outside the purview of the theory of Predicate Argument Structure as now formulated; a language-specific treatment is therefore advocated for them. In section 4 we look at the issue of transitivity alternations in Igbo with special reference to transitivization, detransitivization or middle formation and the alternation in the internal argument of verbs of the spray/load and fill/empty types in the language.

1.2 Some Facts about Igbo

Igbo is one of Nigeria's three major languages (others being Hausa and Yoruba) with a population of well over 15 million people who speak it as their mother tongue. Those who speak Igbo as second language are concentrated in Nigeria's Eastern states such as the Rivers and Cross River States. In these states, Igbo is the lingua franca followed by Pidgin English.

Tone and Tone Marking Conventions

Like all the languages of Southern Nigeria, Igbo is a tone language with two basic or underlying tones, high [◌́], and low [◌̀]; the third tone known as downstep or simply step is grammatical and, consequently, predictable. In existing grammars, (cf. Green and Igwe 1963 and Emenanjo 1978), step is indicated with a macron. In the Green and Igwe convention, all high tones are left unmarked, while low's and step's are consistently marked. But this is not the convention employed here. The tone-marking convention employed here is that found in Nwachukwu 1983 and subsequent publications: it uses only two tonal symbols to indicate all the pitch contrasts in the language. By this convention, the first syllable of every word/phrase is indicated, leaving subsequent syllables unmarked if they are on the same pitch level as the previous one, and marked, if they contrast with it. In this way, we never get a sequence of overtly marked high's or low's. This feature is therefore exploited to indicate a high-downstep relationship; in other words, any sequence of two or more high's indicates high followed by step,(a lowered or downstepped high). The following are illustrative examples.

```
ísi    ọcha          ísi    elé
H H    H  H          H H    H S
head   white

Ǹdidi        amáka          Ǒnyé  ká  Chi?
                                L  H   S   Same
L L L        L H H          who   is great than God?
patience     is very good
```

Relevant Grammatical Features

Igbo is an SVO language in which word order and tone are the sole determinants of grammatical relations; inflection is minimal, with the verb being the only category that can be inflected. Verbs are inflected for tense and aspect, and nouns are never inflected. Tonal morphology (change in the tone pattern of lexical items when they are in construction) is very important; for example, ownership is expressed in Igbo by an NP consisting of two adjacent nouns in which the first is the possessee, and the second, the possessor. In this type of nominal construction, tone assumes the function of the possessive marker, as in the examples below.

```
(a) ónye  #  ahya  --------->  ónye   ahyá
    H  H     H  H               H  H   H  S
                                person of market: customer.

(b) úlọ̀  #  Ụ́zọ̀  --------->  úlọ́  #  Ụ̀zọ
    H L      H L               H S     L L
    house    Uzo               house   of Mr. Uzo: Mr. Uzo's house.
```

The tone change is generally seen in the second or possessor noun, as in (a), although it can affect both nouns, as in (b) above; the determining factor is the lexical tone of the items, i.e. tone class membership. It is therefore necessary to distinguish between lexical and grammatical tones in the language. The two lexical categories

that can be distinguished on formal grounds are verbs and nouns; adjectives are very few in number, and there is a rich inventory of stative, intransitive verbs performing their function. Adverbs are determined by position and function in a sentence and are not different from nouns. There are two prepositions in Igbo, **nà** and **màka**, although only one of them, the "ubiquitous" **nà**, is mentioned in the existing grammars. It is not easy to pin **na** down to any one meaning because it derives much of its meaning from the specific verb with which it is co-occurring: **màka** on the other hand means 'for/on behalf of.' They occur in mutually exclusive contexts. Because **na** is found in virtually every context in Igbo, all transitivity alternations that entail preposition deletion result in double object predicates. (cf. sections 4.4.6 to 4.4.7).

1.3 Background: Lexical Representation

As a consequence of the Projection Principle, an important principle of the Government and Binding framework, (cf. Chomsky 1981), the lexicon plays a central role in determining syntactic representations. Thus, the phrase structure of any given language is largely a projection of the lexical properties of its verbs. The implication of this principle is that representations at each syntactic level - - d-structure, and s-structure – are projected from the lexicon, since such representations must be in accord with lexical properties. In addition to information about phonetic form and some aspects of meaning, the lexicon contains information about the theta-assigning properties of the verb, and must specify its subcategorisation and selectional restrictions. The selectional restrictions of a verb determine the type of arguments it can co-occur with, while the subcategorisation features are concerned with whether the verb is monadic (intransitive), dyadic (transitive), or tryadic, in which case it takes two internal arguments.[2].

[2]The distinction between external and internal arguments is due to Williams 1980. Whereas the internal argument is governed and assigned its theta-role by the verb, the external argument (the subject of the sentence) is governed by INFL but assigned a theta-role by the VP as a result of the principle of predication

Following Hale and Laughren (1983) and Hale and Keyser (1986a) we assume that the lexical representation of a verb consists of a Lexical Conceptual Structure (LCS) representing the meaning of the verb, in which the participants in the action, process or state denoted by the verb are explicitly represented as variables. The second component of the same representation is the Lexical Structure (LS), which is a projection of the category verb, and bear the argument positions. The bridge linking the two is a set of linking conventions that maps the variables in the LCS unto argument positions in the LS. The two representations constitute the Predicate Argument Structure (PAS) of the verb.

On empirical grounds we assume that a polyadic Igbo verb may contain as many as three internal argument positions in its LCS; we begin with Igbo change of possession verbs typified by *nye*'give' which displays this type of polyadicity:

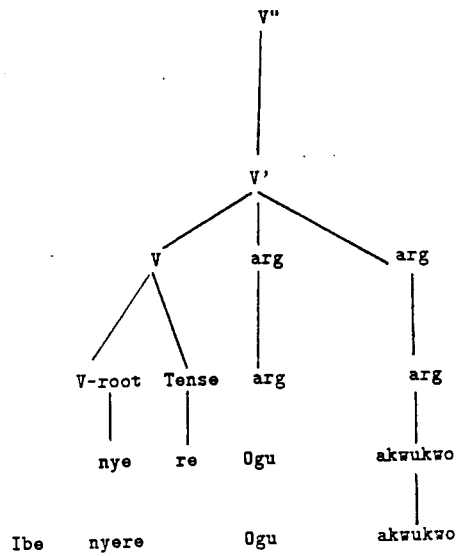


Fig.1.

Observe that there is a one-to-one correspondence between the number of arguments in the above figure and the number of theta-positions in the LCS. Thus, the LCS for this verb is as follows:

(1) **LCS for nye : w transfers to y x**

This LCS can easily translate into that for the English verb, 'give', which is **w transfers x to y**, a mere notational variant.

However, the number of internal arguments can be increased by one if the verb takes on an applicative NP, thereby yielding the expanded LCS given below:

(2) **Expanded LCS for nye : w transfer on behalf of x to y z**

The projection of the LCS can be represented on the following tree diagram:

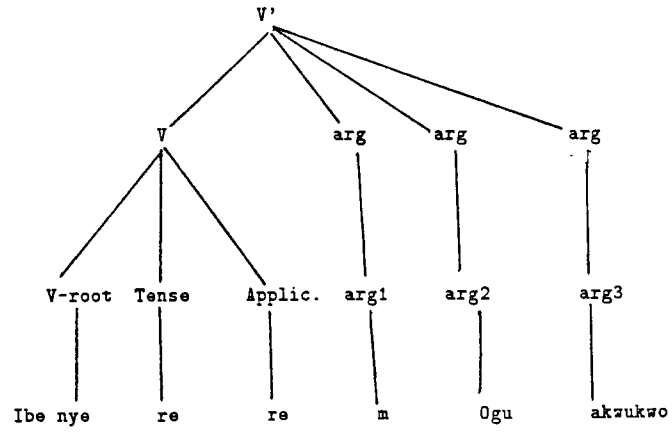


Fig.2.

Allowing for the external argument, one can then account for such sentences as 3(a), which is a non-emphatic statement:

(3) a Íbè nye + re + re m Ógù ákwụkwọ.

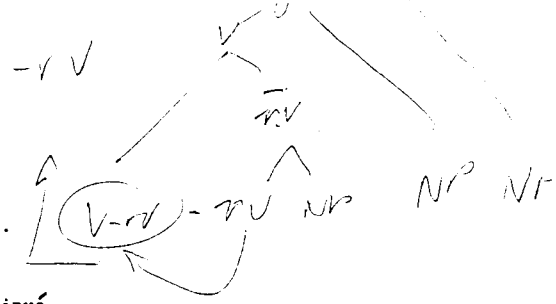
Ibe give past for me Ogu book.
Ibe gave the book to Ogu for me or on my behalf.

Example 3a is a neutral, non-emphatic sentence, which can be made emphatic by the addition of an emphatic marker or the bound verb complement (BVC) as in 3b.

(3) b Íbe nyè + re + re m Ógù ákwụkwọ enye (emphatic)

Ibe give+past for me Ogu book bvc:
Ibe actually gave the book to Ogu for me or on my behalf.

In order to understand the order of the internal arguments let us look at the following additional data:



(4) a Nyè ézigbo egó.
Give good money:
Make a handsome donation.

b Nyè Chúkwu ezigbo ònyinyé.
Give God good present:
Give a handsome present to God.

c Nyè + ré nnà m Fada ehi à.
Give for father my Rev. Father cow this.
Give this cow to the Priest on behalf of my father.

Observe the order of the arguments:

- Verb, Object in (5a);
- Verb, Indirect Object, Direct Object in (5b);
- Verb, Applicative Object, Indirect Object, Direct Object in (5c).

If the emphatic marker, the BVC, is required, it will come last as in the previous example (3b).

The syntax of this language is such that whenever there is more than one internal argument, the goal or beneficiary comes immediately after the verb, followed by the patient or theme. If there is an applicative NP, (the subject entity on whose behalf, interest, advantage or disadvantage the action expressed by the verb is carried out) in addition to two other internal objects, then the applicative NP which is always introduced by the *-rV* suffix displaces these other objects to second and third positions respectively; this is so because the applicative suffix is a bound form that is prepositional in function, and has to govern its object, that is, assign case to it. Obviously, in this language, the logical direct object is systematically displaced from its verb by the indirect object which is in turn displaced by the applicative NP whenever there is one. This fact is responsible for the order: verb, applicative object, indirect object and direct object.

This predicate argument order is at variance with what obtains in English and European languages where the position of the direct object is almost fixed as the position immediately after the verb. Even in double object predicates, the same order is preserved in Igbo as in English; we return to this issue in 1.4.

1.4 Linking Conventions for Igbo

Given the foregoing order of internal arguments, the following linking conventions seem appropriate for Igbo:

(5) Linking Conventions for Igbo

a. link the external argument to subject

b. link the first internal argument to the applicative NP

c. link the second internal argument to the indirect object

d. link the third internal argument to the direct object.

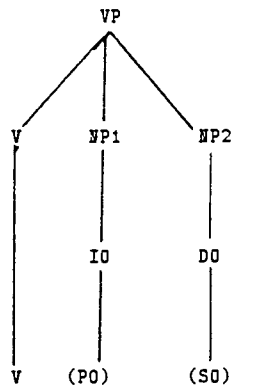
Note that no preposition is ever needed in the language to express the indirect object or the beneficiary/recipient of what is given or transferred.

1.5 Igbo as a Double Object Language

The order of arguments in the given PAS must be seen as basic and not derived. The verb involved here is *nyé* 'give', a triadic verb taking an agent as subject, and a theme and a goal as internal arguments. Note that no preposition is needed to express the goal or recipient of the exchanged object or theme in this language; therefore theta role assignment must be positionally determined and deep structure and surface structure positions are invariant. The logical consequence to this fact is that there is no such rule as Dative Shift in Igbo syntax, and therefore there is no double object alternation in the language. Since a structure that is basic in Igbo and other typologically related languages was once assumed to be derived transformationally in English, it means that English is at one end of this continuum of variation, while Igbo is at the other. As a matter of fact, we should expect three types: English, which combines both structures, Igbo, which has only the double object structure, and Berber, which has only the Dative Type and no double object

variant. The fourth possibility is a language which belongs to none of these types. Yoruba is such a language: to express the meaning 'give' it requires two separate verbs in a serial construction [3]. expressing the meaning 'take give'.

The fact that English has both structures — a predicate of the form [VP [V NP Prep.NP]], which can be transformed into a double object predicate of the form, [VP [V NP NP]] — has made the rule of Dative Shift necessary for the language, if at all it is a rule; the existence of double object verbs, be they basic or derived, has in turn created some problem for the Case Filter as it is conceived in Chomsky 1981: the Case Filter's strict adjacency requirement for English means that a verb can assign case only to one internal argument that is adjacent to it. The configuration of English double object predicate, like that of Igbo, is as follows:



[3]In Yoruba, a language with the most complex serial verb constructions, there is no preposition for expressing the person in whose interest, advantage or disadvantage an action is performed, and there seem to be no ditransitive verbs. Thus, 'Olu bought a dress for Ade' would be realised in Yoruba as"Olu ra aso fun Ade" literally meaning' Olu bought a dress give Ade'. This type of construction applies to all verbs of change of possession, a fact which is very much like the derivation of double object predicates in English through Verb Raising, cf. Larson 1987

(where PO = Primary Object, SO = Secondary Object)

Fig.3.

In this figure, the indirect object is the one that meets adjacency requirement for case assignement, having been advanced to that position from its oblique position as the goal argument. In order to account for these facts and satisfy the Case Filter, Larson 1987 proposes an analysis in which Dative Shift is compared to the Passive Rule because both of them involve NP advancement after the manner of Relational Grammar. An essential feature of this analysis is the reanalysis of the predicate, *send a letter to Mary* in such a way as to entail Verb Raising, which makes it possible for both internal arguments to receive case, (cf. Larson 1987:8-14). What is of interest to us is the fact that this derived double object predicate is basic in Igbo, as has been pointed out earlier. In the language, both rules — Dative Shift and Passive — are irrelevant. However, there is in the language a rule which I have describe as Locative Shift, (cf. 4.3 and 4.4.7), which has exactly the same effect as the application of the Dative Shift in English, namely it yields a double object output. But there is a difference, the semantic class of verbs that participate in the Locative Alternation are different from the class that is associated with double object verbs in English. The interesting question is this: Does Igbo need an analysis that entails Verb Raising in order to account for the case of the second object in a double object predicate? We shall try to answer these and related questions in a separate paper in preparation [4] arising from this study.

With respect to Igbo, the question to ask is why the direct object always gives way to the indirect object, and why the indirect object in turn gets displaced from its first position by the applicative NP?

The answer seems to lie in the following explanation: the applicative NP is

[4]Igbo as a Double Object Language

another type of dative argument expressing the entity or subject on whose behalf, advantage or disadvantage the action expressed by the verb is carried out. But there can be no two positionally determined dative NP's in one and the same sentence in Igbo; in other words no one verb can license two such datives without the use of another category which itself can license one of the positions. There is no free morpheme to perform this function since *na*, the one preposition that could have done it, never does it in the language. This licensing function is therefore performed by a verbal suffix, the *-rV* suffix (so called because its vowel is always the same as that of its root verb). The suffix is prepositional[5]in function and must govern the NP that is adjacent to it, a property which explains why it has to displace the dative NP. The above explanation follows from a general principle of language that a preposition must govern its right sister, and a posposition, its left sister, depending on whether the language is prepositional or postpositional.

But there is a functional explanation according to which a topic hierarchy (cf. Givon 1976) is crucial in determining the order of a predicate and its arguments. order. According to this hypothesis, which relies on cross-linguistic diachronic facts, the assignment of agreement markers between the verb and its arguments (both external and internal) used to be determined by topichood, and the indirect object is considered higher on the topichood hierarchy than the direct object in all double object constructions, and particularly, when the entity involved is human. For similar reasons, the applicative NP (another type of indirect object or dative case) is also considered higher than the indirect object that is not licensed by a preposition; consequently, we get a ranking reflecting the order of the internal arguments of a double object verb in Igbo, namely Agent, Applicative object, Indirect object, and Direct object. In other words, the direct object is considered much less of a topic than the indirect object in all double object constructions.

Following Dryer 1986, we assume that a double object verb is one which requires

[5]The preposition *na* is never involved in expressing the indirect object in Igbo. Because of its origin as a locative verb which has reanalysed as a preposition, it is very common in locative PP constructions.

no preposition to express the goal argument, and in which passivization is possible on either of the internal arguments. It is now known that a good many African languages with SVO order are double object languages in which, as in Igbo, the dative is expressed without the help of any preposition. Among these languages are Swahili, Kinyarwanda, Mandarin Chinese, Vietnamese, Twi, and Fulani. In all these languages as in Igbo, the predicate argument structure is as given above. As a conclusive proof that they are double object languages, passivization is possible on either the first or second argument, whereas passivization is possible in English only on the direct object. However, Igbo has no passive rule, the acid test for double objecthood, nevertheless it is a double object language sharing every other feature with these languages except the passive one: the same semantic class of double object verbs including the verbs of change of possession are involved in double object constructions in Igbo as in these languages; a list of double object verbs is provided Appendix 1.

We shall henceforth refer to Igbo as a double object language in which the internal arguments are described as first, second and third arguments/objects rather than as direct and indirect objects as is the case in English. The foregoing conclusion leads to a modification of the linking convention given in 5. The revised linking convention is as given in 6 below.

(6) **Revised Linking Convention for Igbo.**

Link the external argument to the subject;
Link the the applicative NP (if there is one) to the first object;
Link the second internal argument to the second object;
Link the third internal argument to the third object.

As expressed earlier, the applicative NP is a type of indirect object that must be licensed by a preposition in contexts with another indirect object that is positionally licensed. Thus, there are two contexts in which the indirect object needs licensing from a prepositional suffix: (i) with double object verbs, and (ii) with intransitive

verbs, (cf. 2.2).

1.6 Case Assignment

Given the theta-grid of double object verbs, (cf. Stowell 1981), it becomes clear that they can assign as many as three internal theta- roles to coincide with the three positions in their lexical structure. But each verb can assign case to only two of the internal arguments for which it is subcategorised since the first argument receives case not from its verb, but from the applicative or prepositional *-rV* suffix that governs it. It therefore follows from the foregoing analysis that ~~the object~~ case is assigned first to the applicative object, then to the primary and secondary objects, respectively. This order is also consistent with the order in English double object predicates,but it is in contrast with equivalent English word order in which the goal NP is introduced by a preposition. This difference in word order is due to typological differences. What the Igbo word order shows is that that linear sequence or order alone is the sole indicator of grammatical relation in the language in the absence of any morphological markings on nouns. It has often been said that grammatical relations, which are supposed to reflect mental processes, are too complex in nature to be reduced to mere linear processing, (cf. Chomsky 1986). There is no doubt that the working of the mind is like that of a complex computer, but linear operations must form part of this complex system. Without any doubt that there exist languages like Igbo in which linear order alone determines grammatical relations.

2 Transitivity in Igbo

2.1 Transitivity in Igbo Revisited

The relevance of transitivity to Igbo syntax has become a subject of debate since Nwachukwu 1983b, 1984 and 1986. Reacting to Nwachukwu 1983, Emenanjọ (cf. Emenanjọ 1984 and 1986) has argued that transitivity is not necessary in the syntax of Igbo verbs since, according to him, all Igbo verbs require some type of obligatory complement in both underlying and surface structures, although he does not define the term complement. He is inclined to agree with Awobuluyi (1972) who claimed that transitivity is irrelevant in Yoruba syntax because Yoruba verbs cannot be subcategorised on the basis of their object complements. A logical deduction leads to Emenanjọ's position: since transitivity is said to be irrelevant in Yoruba, it must be so in Igbo, the Eastern neighbour of this language; both of them are members of the Kwa subfamily of the Niger-Congo family of languages.

Given the cross-linguistic studies of transitivity and the findings from such extensive studies, (cf. Hopper and Thompson 1982), it is very doubtful that Awobuluyi's and Emenanjọ's claim can be sustained. Rather than play down transitivity as a language universal, these in-depth studies have succeeded in exposing the shallownes of earlier studies: for example, we do not now merely talk in terms of a binary distinction between transitive and intransitive verbs, but of a further distinction among intransitive verbs to account for unaccusative and unergative verbs, (cf. Perlmutter 1978). These issues are discussed in detail in sections 2.5 and 4.2.1.

Instead of transitivity, Emenanjọ advocates the substitution of complementation for Igbo verbs, a parameter which enables him to classify Igbo verbs as follows:

- general complement verbs
- inherent complement verbs
- bound complement verbs

- prepositional phrase complement verbs
- ergative complement verbs

Before we begin to characterize transitivity in Igbo, we would like to point out the inadequacy of each of these classificatory labels: none of them is a diagnostic characterization of any semantic class of Igbo verbs, consequently, they lead to unnecessary cross-classification. We briefly examine each of them below.

2.2 Bound (Verb) Complement Verbs

The bound verb complement (BVC) is a verbal particle which derives from and is bound to its verb; it has no independent existence outside the verbal complex. It is an emphatic marker which can occur with any Igbo verb whenever emphasis is desired. The following consist of pairs of examples in which (b) has a BVC, while (a) lacks it, in each case, the BVC is in bold face.

(7) a Ágà m ekwú ezi okwú
Fut. I speak true word :
I shall speak the truth.

b Ágà m ekwú ezi okwú **ekwu** (BVC)
Fut I speak true word (emph.):
I will certainly speak the truth.

(8) a Ógù byara áhya
Ogu came market.
Ogu came to the market.

b Ógù byara áhya abya (BVC)
Ogu came market (emphatic):
Ogu certainly came to the market.

(9) a Ọ̀ byara?
Q-He came:
Did he come?

b Ọ́ byàra. (unemphatic)
He came.

c Ọ́ byàra abyá (BVC)
He came (emphatic):
He certainly came.

I have tested pairs of sentences such as these with all my third year students at the University of Nigeria, Nsuka, for more than five years in succession and have got the same distinction between the non-emphatic and emphatic readings.

But there is more to the behaviour of the BVC than meets the eye. On the basis of Mbaisen (the author's dialect), I have been able to make the following additional observations, which I have corroborated cross-dialectally, viz that the BVC fills the empty patient/theme slot with intransitive verbs while retaining its emphatic meaning, whereas it occurs in addition to the object of a transitive verb and still retains its emphatic meaning, as the following examples show.

(10) a Ógù dara adá (BVC)
Ogu fell (emphatic):
Ogu certainly fell.

b Ógù dara áda. (noun)
Ogu fell fall:
Ogu had a fall.

c Ógù ga áda àdá (BVC).
Ogu will fall (emphatic):
Ogu will certainly fall.

(11) a Ógù gbúru ehi
Ogu killed a cow.

b Ógù gbúru ehi egbu (BVC)
Ogu killed cow (emphatic)
Ogu certainly killed a cow.

Note that all but 11 a-b are intransitive clauses, in 10 a-c, the BVC fills the patient/theme slot, whereas in 11 a-b which contain transitive verbs, the function of the BVC is merely that of an emphasizer. This behaviour is by no means restricted to verbs of activity, it extends to stative verbs as well.

With stative verbs, which I describe as adjectival verbs because they perform the function carried out by adjectives in other languages, the BVC is an obligatory element of the *-rV* form of the verb; the examples that follow illustrate this fact: (12a) with a stative verb but without the BVC is ill-formed and unacceptable in contrast with (12b) which contains a BVC.

(12) a *Ógu tóro.
Ogu is tall.

b Ógù tóro eto (BVC) = Ógù tóro ogologo.
Ogu is tall or Ogu is grown tall.

c Ógù buru ebú / íbù.
Ogu is big/bulky.

d Ógù nwụ́rụ anụ (BVC)
Ogu died (emphatic)
Ogu is dead = Ogu is stupid.

e Ó rére ere (BVC)
It rots rot:
It is rotten.

f Ọ́ kára aka.
It is ripe.

g Ọ chára acha.
It is ripe.

h Ó rùru erú / ǹné.
It produced seed:
It produced a good harvest or yield, (said of root crops generally).

There is no other way of expressing these adjectival (stative) meanings without the use of the BVC or the appropriate noun complement if there is one, the noun complements will feature in section 3 as inherent complements (IC's). This strategy is not dialect specific, it is a pan-Igbo feature. One is therefore led to the inevitable conclusion that the BVC is a necessary complement with all intransitive verbs, be

they activity or stative, but optional with their transitive counterparts for which it only seems an emphatic marker. This syntactic fact does not convert the BVC into the patient or theme argument of a transitive verb, nor does it make the intransitive verb transitive.

But even the obligatory co-occurrence of the BVC and intransitive verbs is limited to the -rV form of the verb, which has justifiably been described as the factitive verb form, (cf. Welmers 1968b). However, Welmers did not realise that there are a number of -rV suffixes in Igbo, (for such a distinction see Nwachukwu 1976). The BVC is never a required complement of the perfective form of any verb, transitive or intransitive; whenever it co-occurs with the perfective form of any verb, it serves as an emphatic marker, as in the following examples:

(13) a Ánụ à rére ere (BVC)
Meat this rots rot: This meat is rotten.

b Ánụ à e + ré + e + le.
Meat this [Pref. rot Suff. Perf. Suff]
This meat has become rotten.

c Ánụ à [e + ré +e + le] [é + re + e] (BVC)
Meat this has become rotten (emphatic):
This meat has already/certainly become rotten.

We may characterise the BVC briefly as follows:

- it is a bound verb-form, it can be inflected, as in (c) above:
- it is an emphatic particle and, consequently, optional;
- but it seems required with all intransitive verbs in the -rV form;

- it is certainly required in the -rV form of all stative verbs, which perform the function of adjectives in Igbo.

Since any and every verb in Igbo can be made emphatic with a BVC, it ceases to be a diagnostic for classifying verbs.

2.3 Inherent Complement Verbs: ICVs

An inherent-complement verb is one whose citation form is obligatorily followed by a meaning-specifying noun complement, (cf. Nwachukwu 1985). Examples of ICVs include *tu anya* 'expect', *ku ilu* 'be bitter, *si ike* 'be difficult'. Contrast these with the following non-inherent-complement verbs: *di* 'endure', *bi*, 'live', etc. ICVs occur at all times and in all forms with their meaning-specifying nouns/complements, which are described as inherent. Although the property of being obligatorily specified for an inherent complement sets apart a subclass of Igbo verbs, this property does not correlate with transitivity. Section 3 of this paper is devoted to this issue, and the main thrust of our argument in that section is to show that there is a single syntactic test for transitivity that applies to all Igbo verbs, regardless of the nature of their citation forms.

2.4 Prepositional Phrase Complement Verbs

It is true that a class of locative verbs are subcategorised for PP, but there are many other verbs which, though not locative verbs, may also take a prepositional phrase according to the intended meaning. Moreover, PPs provide a prolific method of expressing adverbial meanings in the language. It is therefore wrong to see the PP as a potential peg on which to hang transitivity distinctions. The following examples illustrate the PP complement of locative verbs.

(14) a Ógù bi n'Abá.
Ogu lives at Aba.

b Ógù nọ na bé yá.
Ogu is in place his : Ogu is in his house.

c Ógù jere n'úgbo.
Ogu went to the farm.

d Kwàá ahịhya nà gádịn̄.
Pour refuse in garden : Pour the refuse in the garden.

e Ánụ kwụ̀rụ n' ányа ọkụ́.
Meat is hanging in eye of fire (the fireplace).

f Gbáshàá àfe n'élu ụlọ̀.
Spread clothes on top of house:
Spread the clothes on top of the roof.

All the verbs in the above examples are subcategorised for PP;[6] they are verbs of location and movement. However, other verbs which do not belong to either of these classes also take PPs, as in the following examples.

(15) a Ógù byara ná mgbèdè.
Ogu came in the evening.

[6]The preposition in each case is *na*, the only preposition that can give the locative meaning. There is another preposition, *maka* meaning 'about', 'for', but it is never found in these constructions. Because it is little known in Igbo syntax, the impression has been given, (cf. Green and Igwe 1963, Emenanjo 1978, and others), that *na* is the only preposition in the language.

b Rí + e + nù ihe n'ogè.
Eat+ Infl. you people thing in time:
Eat in time, you people.

c Ógù huru m n'áhya.
Ogu saw me in the market.

Given the examples above, one would be making the wrong prediction about transitivity in Igbo if one were to see the ability of verbs to take PP complements as a distinctive feature.

2.5 Ergative Complement Verbs

The descriptive label, ergative complement verbs, is a misnomer for there is no such class of verbs in Igbo, nor is the language an ergative one in the sense of the Australian language, Dyirbal, a language in which grammatical relations between a verb and its arguments is as follows: the subject receives the patient role, while the object assumes the agent role. This is the converse of what obtains in an Accusative Language such as Igbo and English in which a subject receives the agent role, and the object the patient role. Thus, ergativity has to do with the case-assigning properties of a language; on this basis, languages fall into two types: Ergative languages such as Warlpiri and Dyirbal, both Australian languages, and Accusative languages, like Igbo, English, French, Spanish, etc. These differences can be graphically represented as follows:

(16)

(A) Accusative		(E) Ergative	
Sem. role	Gr. reltn.	Sem. role	Gr. reltn.
agent	subject	agent	object
patient	object	patient	subject

However, certain verbs in Igbo do participate in a type of transitivity alternation which,I assume, is responsible for the formation of middles, (cf 4.3 for details), but this feature does not make Igbo an ergative language.

In the chart, A represents the accusative languages, while E stands for ergative languages. From the above schema, Igbo can only be an accusative language since normally an Igbo verb assigns to its agent the subjective nominative case, and to its patient, the objective case. But case assignement takes place in surface structure, (except inherent case which is assigned in deep-structure). This means that the Ergative Hypothesis has to be sensitive to the distinction between the two, a requirement which leads to another hypothesis, the Unaccusative Hypothesis. The following table highlights the features of this new hypothesis:

(17)

Verb classes	Features	D-str. Relations
Transitive	[+T] [+d-obj]	both d-obj. and d-subj.
Unergative	[+T] [-d-obj]	only d-subject
Unaccusative	[-T] [+d-obj]	only d-object

(from Levin 1983:24).

Observe from the table that a transitive verb assigns both case and theta-role to its object, an unergative verb cannot assign the objective case, but assigns a theta-role to its subject, while the unaccusative verb cannot assign the nominative case because its surface subject is an underlying object. Furthermore,the table shows that surface grammatical relations give the misleading impression that verbs are either transitive or intransitive. Against this Perlmutter (1978) argues that the so-called intransitive verbs do not form a homogeneous class, but comprise two subclasses of verbs (the Unaccusative Hypothesis of Perlmutter 1978 and extended in Burzio 1981). Perlmutter argues that these two classes differ in that the subject of the

verb in the unergative class is an underlying subject, while the apparent subject of verbs in the unaccusative class is an underlying object. The following Igbo examples illustrate the above difference.

(18) a Ógù kụwara éfere ḿ.
Ogu broke plates my.

b Éfere ḿ kụ̀wara.
Plates my broke.

c Ógù dara.
Ogu fell (down)

While 18a shows that the direct object of the verb is "efere m", this same NP is seen in (b) as the surface subject of the sentence; (13c) on the other hand shows that we have an intransitive verb that has no internal argument or direct object. I am aware that the verb 'fall' does not qualify as an unergative verb that it is in Igbo, it means therefore that unaccusativity in Igbo needs some definition, such a definition is provided in sections 4.2 and 4.3.

Thus, the setting up of a class of ergative complement verbs in Igbo, rather than advance Emenanjọ's argument, undermines it since it is based on the presupposition that there is a class of true intransitives distinct from another class of pseudo-intransitives. Details of this subclass of Igbo verbs are to be found in section 4.3.

2.6 General Complement Verbs

The term, general complement verbs is Emenanjọ's descriptive label for verbs that are clearly transitive because they involve two participants in their LCS: an agent that receives the subject grammatical role, and a patient, that is an entity that

undergoes a change in state or location as a result of the action expressed by the verb, which receives the object grammatical role. But he does not want to call them transitive verbs. The essential problem with his analysis is that the term complement is not defined in any rigorous manner. Consequently, his subsets of verbs are far from being mutually exclusive. In the sections that follow, a rigorous definition is provided which relies on the argument structure of each class as the expression of the type of meaning associated with members of that class. The argumentation in these sections is designed to show that there is only one set of tests for transitivity involving all the verbs in Igbo.

2.7 Verb Classes in Igbo

Transitivity is the grammar of actions and participants in actions; the initiator of the action is the agent, the verb expresses the action, while the entity directly affected by the action of the verb is the patient or theme. Yet in any given language, there are many sentences involving two arguments which are not necessarily in the relation of agent and patient, there being no action instigated by an animate agent. Observations to this effect are not new in the literature: they have been made by a number of linguists including Ferguson (1958) with reference to classical Arabic, Brewer (1970) with reference to Spanish, and Lyons (1968) and Bolinger (1978) with regard to English and the passive formation in that language. George Lakoff (1977:244-245) suggested that "the agent-patient sentence was a prototypical concept determined by a number of factors which include the properties of agent and the patient". It was for the above reasons that Hopper and Thompson (1980) proposed a continuum of transitivity based on such factors as participants, aspect, punctuality, volitionality, mode, agency, affectedness of object and individuation of object. The transitivity rating of a clause, they maintain, should be a direct reflection of its cumulative scores on the above parameters, and this should hold cross-linguistically, (cf. Hopper and Thompson 1980:255).

Bearing this in mind, we give below select examples of Igbo verbs which must be classified as transitive in every sense of the term, beginning with Agent-Patient verbs whose PAS is given in Fig. 4 below.

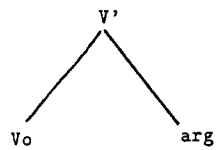


Fig.4.

2.7.1 Agent-Patient/Theme Verbs:Transitives

Agent-Patient/Theme verbs are the canonical transitives used in clauses in which the agent is a volitional entity whose action affects another entity that is perceived as the sufferer/patient of the action expressed by the verb. Verbs in this class are generally action verbs: to the agent they assign the grammatical function, subject, and to the patient or theme,[7] the function of object.

Examples of this class of verbs are given below.

(19) a Ógù gbúru ehi.
Ogu killed a cow.

b Ńdukwu bọ̀rọ́ éhi ahụ̀.
Ndukwu carved cow that.

c Ọ̀lí nà erí nri jí
Oli PROG eating food of yam.
Oli is eating pounded yam.

d Ònyé gà ará ọgwụ̀?

[7]There is a subtle difference between the two terms— patient and theme— as used in the literature to describe the object of a transitive verb:the object of a transitive verb is patient if it is totally affected by the action expressed by the verb, in other words, the object of *kill, destroy, break*, and the like are described as patient, while verbs involving change of position, locative verbs and verbs of transfer/change of possession have their direct object described as theme. Thus, the verb 'give' which takes three arguments is generally described as involving an agent as subject, a theme as object and the recipient as goal

Who will drink medicine?

(20) a Ńné nyère Ńgọzi ego.
Mother gave Ngozi money.

b Ányị̀ zụrụ nwókó nwá ji.
We bought man the yams:
We bought yams from the man.

c Ó bìri ńna̍ ḿ ego.
He borrowed father my money:
He borrowed money from my father.

d Ònyé kụ̀rụ́ éghu ḿ osisi n'isi?
Who struck goat my stick on the head?
Who struck my goat with a stick on the head?

Note that 20a-d are examples of double object verbs discussed in 1.2, the number of arguments in a-c (the valency of the verb) can be increased by simply adding the -rV applicative suffix, whose effect is the introduction of another NP that it must govern. The semantic classes of verbs involved here include:

- verbs of killing
- verbs of eating
- verbs of hitting and contact
- verbs of change of position
- verbs of change of state

- verbs of change of possession

Representative members of each class are listed in the Appendix 2, while members of the last subclass are associated with the PAS already given as Fig. 3 and repeated here for ease of reference as Fig. 5, rather than the PAS in Fig. 4.

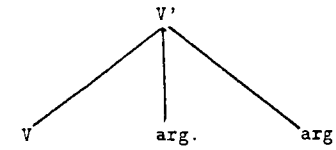


Fig.5.

2.7.2 Intransitive Verbs

It is now clear from the literature (cf. Perlmutter 1978, Burzio 1981) that intransitivity can no longer be adequately characterised on the basis of surface grammatical relations. It has been rightly pointed out in the works cited above that two classes of verbs are involved in what were traditionally described as intransitive verbs; these are unergative verbs or the canonical intransitives, and unaccusatives, which are related to verbs in transitive clauses in the sense that the surface subject of such clauses can be shown to be the deep structure object of their transitive counterpart. This important distinction has given rise to the two terms used above: unergative and unaccusative verbs. Their differences and similarities are reflected in the following table.

(21)	Semantic Role	D-Str. Relation	S-Str. Relation
Transitives.	agent.theme/patient	subj., obj.	subj., obj.
Unergatives.	agent	subj.	subj.
Unaccusatives.	theme	obj.	subj.

The similarity between unergative and unaccusative verbs is only superficial because at surface structure, each of them appears to be an intransitive verb. But there is a difference: the subject of an unaccusative construction started its derivational history as an underlying object, whereas the subject of the unergative counterpart maintains its underlying subject function in its surface form. The similarity between transitive and unaccusative verbs will become clearer in section 4.3 where it will be shown that the middle construction in Igbo is a form of the unaccusative construction in the language.

2.7.3 Unergative Verbs

In contrast to our earlier examples (19 and 20), each of which contains two arguments in the grammatical relation of subject and object, each of the following examples contains only one argument performing the function of subject in both deep and surface structures. Members of this class of verbs are the canonical intransitives, that is, monadic verbs which, according to Burzio, never assign the accusative case because they do not take an object, the abstract case generally associated with the direct object, and whose d-structure subject remains its s-structure subject. However, Chomsky 1981 is of the view that they can assign the accusative vaccuously. They are characterised by the PAS in Fig.6.

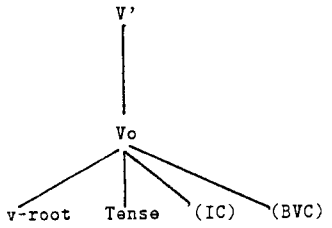


Fig.6

(22) a Ázụ̀ ḿ zụ̀rụ ụnyáà [e + ré + e + le]
Fish (that) I bought yesterday Pref. + rot + Suff. + Perf.Suff
The fish that I bought yesterday has become rotten.

b Nwókó nwá [a + dà + lá]
Man the Pref. + fall + Perf. Suff.
The man has fallen.

c Ńkwụ ḿ niíle [á + cha + a + la]
Palm fruits my all Pref. + ripe + Suff. + Perf.
All my palmfruits have ripened/become ripe.

d Áma ǹké à [e + zí + e + le]
Road the one hither Pref. + be straight + Suff. + Perf.
This road has straightened out/has become straight.

e Chí [é + ji + e + le]

Day Pref. be dark + Suff. + Suff.

Day has darkened: It is night.

The semantic classes of verbs found in the above type of constructions are varied, and include the following:

- verbs of weather condition
- verbs of deterioration/putrification
- verbs of maturation/ripening
- verbs of physical state or adjectival verbs

A fuller list is given in Appendix 3.

2.8 The Transitivity Test for Non-Inherent Complement Verbs

All the verbs used in the foregoing examples have been selected on the ground that they do not require a meaning-specifying noun of the type which we have referred to as inherent complement (IC), and the verb-root plus the inherent noun as inherent-complement verb (ICV), (cf. 2.3); these verbs are analysed exclusively in section 3. In addition to the theory of lexical conceptual structures, (LCSs), one would like to show that there is also a syntactic basis for the distinction between the three categories of verbs so far isolated in our analysis. There is such a basis, and it is provided by a movement rule which is yet to be adequately characterised (cf. 2.8.1). The application of this rule is sensitive to the occurrence of the emphatic element which we have described as bound verb complement (bvc),(cf. 2.2). This element occurs freely with transitive and intransitive verbs, although it is optional. Consider the following examples:

(23) a Úché ríri anụ eri.

Uche ate meat BCV: Uche certainly ate the meat.

b Úché dara adá.

Uche fell BVC: Uche certainly fell/failed.

Example 23(a) is a transitive clause, while (b) is an intransitive clause. Following our previous analysis in 1.3, their LCS would differ only by the presence in (a) and the absence in (b) of a direct object argument, in other words, the BVC is specified in the same position as below for each verb, that is immediately after the tense suffix. We propose that it is the constituent of a zero-level category, while the object is a constituent of a V' (V-bar) level category, as is shown in Fig.7 below.

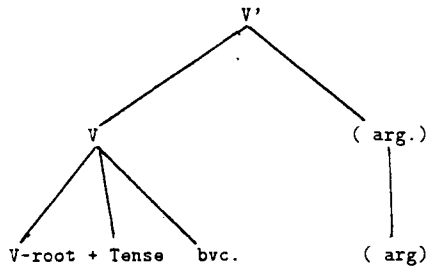


Fig.7.

Thus, 23(a) can be represented as 24(a), while (b) will be represented as 24(b) below.

(24) a *Úché rí+rV eri anụ ----> Úché ríri anụ eri.

b Úchè da+rV adá ----> Uche dara ada.

Thus, 23(a) is the output of the obligatory movement of some constituent that is yet to be identified, while 23(b) does not require such a rule because its verb does not have any internal argument. The movement of this yet undetermined element is motivated by the principle that an object in a monotransitive clause must be adjacent to its case assigner in order to receive case. Therefore, the occurrence of the BVC, an emphatic but optional element, forces a distinction between transitive and intransitive verbs in Igbo.

2.8.1 Determining the Moved Constituent

There are two possible candidates that could be affected by the movement rule under discussion, namely the BVC or the object NP; if this process involved NP-movement, it would nicely fall under the category of Move-alpha (cf. Chomsky 1981), while if it moved the BVC, it could be covered by such language-specific rules as Particle-Movement in English. Whichever of these two constituents gets moved, the result will be the same, the creation of an adjacency relationship between the verb and its direct argument. NP-movement is ruled out by the fact that the object is base-generated in its righful, argument position, from where it maintains a mutual c-command relationship with the verb which is its governor and case-assigner. At any rate, Move-NP always involves a movement from an argument to a non-argument position, with a trace of the moved item left at the extraction site; Move-NP in these examples under discussion would not satisfy any of these conditions.

But Move-BVC, if seen as a type of *Emphatic Particle Movement*, seems perfect: as a bound form it has to be attached to its verb in the morphology, but it is obligatorily displaced from that position only by an internal argument, which explains why it never gets moved in an intransitive clause except when there is an applicative NP. It binds no trace, and it moves from one non-argument position to another, subject only to the presence of any internal argument. We refer to this

movement as BVC-Movement, and therefore claim that what has applied to these examples is BVC-Movement.

BVC-Movement compared to IC-Movement

The BVC-Movement just described above has its analogue in the syntax of inherent-complement verbs (cf. 3.7.1): just as an internal argument forces the BVC to be displaced, so does it force the inherent complement to be moved away from its verb; in each case, the landing site of the moved item is the same or nearly so - it is a non-argument or adjunct position within the VP or V" (V-double bar). The similarity in syntactic behaviour between the BVC and the IC is matched by their semantic similarity: the BVC is an emphatic element, while the IC is a meaning specifier, and neither of them is an argument, except for the small subset of ICS which combine the two functions (cf 3.7.2). These two rules can therefore be subsumed under one rule, the particle-movement rule, although for the sake of clarity, we shall keep referring to them individually as BVC and IC Movements whenever they feature in this paper. It therefore follows that a BVC or IC is always displaced in Igbo from its deep structure position to a surface adjunct position so as to create adjacency between an argument and its case assigner. ICs are discussed in detail in section 3.

2.9 Verbs of Motion

Motion verbs in Igbo are generally associated with a PP complement, with **na** as the preposition involved. In spite of surface discrepancies, they must be analysed as subcategorised for a prepositional phrase (PP) complement, and are therefore not transitive verbs. Often, this PP complement is omitted, especially in dialects around Owere , thus giving the impression that motion verbs are truly transitive. This is not the case even in these dialects, it is generally agreed that the occurrence of the optional preposition, *na*, in constructions involving motion verbs does not cause ungrammaticality, as the following examples illustrate:

(25) a Há jèrè (ná) ugbo.
They went to farm.

b Ùnu sí (na) ụlọ̀ ejé akwụkwọ?
Q- you start from home go school:
Do you attend school from home?

c Sí (nà) Owere rú (nà) Abá wụ́ iri mà̰l anọ́.
Start from Owere reach to Aba is ten miles x four:
From Owerre to Aba is forty miles.

It has to be assumed that a PP complement follows motion verbs as a goal argument and that the preposition may be deleted, leaving an NP which gives the impression that motion verbs are transitive. Unless this assumption is made, the analyst will have problems explaining the occurrence of the PP in constructions involving motion verbs. A PP complement does not subcategorise a verb as transitive, although a subcategorised PP tells us the type of theta role that a verb can assign to its internal argument. As one would expect, a PP complement can co-occur with transitive as well as with intransitive verbs, just as the BVC does.

2.10 Conclusion

The theory of Predicate Argument Structure together with an independent principle of Universal Grammar, Move-alpha, has made it possible for us to sort out the problem of transitivity as it applies to Igbo verbs that do not require a nominal to specify their meanings, that is non-inherent-complement verbs. The constituent that gets moved is the BVC; the occurrence of the BVC, an optional, emphatic element, in transitive clauses creates the necessary condition for an obligatory application of

Move-BVC in all transitive clauses. The adjacency requirement on an internal argument makes it obligatory. Move-BVC is not required in intransitive clauses except when there is an internal argument licensed by the applicative suffix, -rV.s. The analogue of Move-BVC is Move-IC, which applies obligatorily in nearly all clauses containing a transitive ICV, except for two of such ICVs. Move-IC and Complex NP Restructuring belong to the syntax of ICVs, and are examined in section 3. 7. 1.

3 Inherent-Complement Verbs (ICV's)

A lexical subset of Igbo verbs has recently received attention (cf. Nwachukwu 1983, 1985) on the basis of its dual unit morphemes. In this morpholexical class, the citation form of the verb consists of a CV-root followed by a free noun (or in very few cases a prepositional phrase). The root and its nominal complement form a semantic unit, and any dictionary entry which excludes the complement lacks meaning because the complement is the meaning-specifying constituent of its verb. This property accounts for our label *inherent-complement verbs (ICV's)*. This section explores their syntax and semantics with special reference to the inherent complements (IC's): their status as direct objects and the classification of ICV's as transitive verbs using the same criteria that have been applied to their non-inherent-complement counterparts. It will be shown that ICV's behave like other verbs in the language and are subject to one and the same tests that distinguish transitive, unergative, and unaccusative verbs in Igbo.

As far as one can judge as a native speaker, the functional explanation for ICV's in the language lies in the interaction between two lexical constraints: a simple syllable structure (C) (Y) V or the syllabic nasal, N, which is restricted to initial or final position and is never found as the consonant of any verb root, and the preponderance of monosyllabic verb roots drawing on between eight and ten phonetic vowels [8] and two underlying tones. The range of possible verb shapes is consequently too small to carry the functional load of lexically distinguishing all the verbs without some additional formal mechanism, and the device that Igbo speakers seem to resort to is the ICV.

The phenomenon of ICV's in Igbo has had the effect of complicating an already complex issue, transitivity: it has led a number of scholars to see the issue as

[8] The number of vowels varies according to dialects; the Northern Igbo dialects of Nsukka and its environs have been reported as having ten vowels, while the Central dialects generally have eight or nine at most, cf. Ohiri-Aniche 1985.

irrelevant not only to Igbo but also to other related languages, (cf. Awobuluyi 1972, Emenanjo 1984 and 1986). In Igbo, a meaning-specifying noun is obligatory with each member of the ICV's; the BVC, though optional for most verbs, is obligatory for the -rV (factitive) form of what I have described as adjectival verbs, (cf. 3.5). Consequently, the tendency on the part of analysts is to ascribe objecthood to these two constituents because they happen to be verb-complements, which are often co-terminus with direct objects. The logical extension of this tendency is to see every Igbo verb as transitive. This is far from the truth.

In this section, it is argued that an IC is not necessarily synonymous with the direct argument of a transitive verb: as a matter of fact, both the IC of a verb and its direct argument co-occur, except in the case of a small number of ICVs whose ICs combine the two functions as both meaning-specifier and object at one and the same time, (cf. 3.7.2). Furthermore, ICs do not subcategorise verbs as transitive or intransitive since they are found with members of both syntactic classes, in each case appearing in a non-argument position in both deep and surface structures, as is shown in Figs.(8a and b) below. From these figures, it will be seen that both the IC and BVC are zero-level constituents. Each of them is in a non-argument position in d-structure; each of them is displaced from this position whenever there is an internal argument governed by either a transitive verb, or an applicative (-rV) suffix. Each of them is displaced to a non-argument/adjunct position where they cannot receive case.

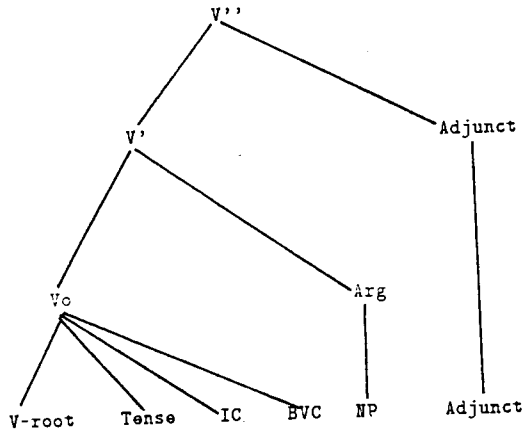


Fig.8a ======> Fig.8b

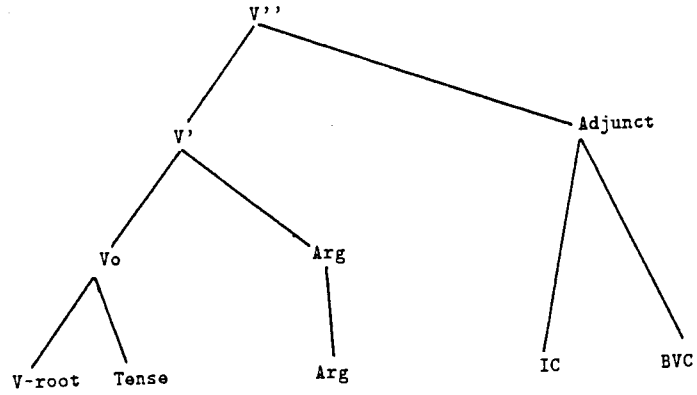


Fig.8b.

For an accurate determination of the PAS of Igbo verbs, it has been proposed by Nwachukwu (1983) that the following verb-complements be recognised:

- direct object, an argument associated with transitive verbs;
- second object, an argument associated with double object verbs, and secondly with any other verb that takes the applicative/prepositional *-rV* suffix (cf. Nwachukwu 1976b);
- inherent-complement, a meaning-specifier associated with both transitive and intransitive verbs;
- bound verb complement, a constituent of the category Verb, an emphasizer, neutral to transitivity;
- prepositional phrase complement, can co-occur with the above four, and sub-categorised by motion and location verbs.

Of these, the last two can be described as optional (although specific inflectional forms and semantic contexts affect optionality, (cf. 2.2 and Emenanjo 1984). Primary and secondary objects (the label we use here for indirect and direct objects respectively) are, of course, obligatory, as determined by the Projection Principle (Chomsky 1981). Because it is lexically specified as part of the verb, the inherent complement is by *definition* obligatory. Earlier accounts (e.g. Green and Igwe 1963, and Emenanjo 1978) describe the inherent complement as a 'cognate complement': there is no doubt that some complements are cognate with their verb roots, as in *bu ibu*, 'be fat' ;*ma mma*, 'be beautiful, good, moral'. However,the majority of inherent complements, are not cognate, e.g. *yba aka*, 'have nothing, be empty-handed'; *yba ama*, 'inform, betray'.

3.1 Categories of Inherent Complement Verbs

The following is a sample of the lexical subclasses or clusters of ICV's formed on the basis of one root in each case; the gloss for the free noun or PP complement in isolation is repeated in parentheses after the gloss for the verb as whole, and the free nouns/complements are cited with their lexical rather than grammatical tones:

(26) **-tụ́ cluster**

-tụ́ anya 'expect (eye)'

-tụ́ n'anya 'be surprised, surprise (in eye)'

-tụ́ ǹtụ́ 'tell a lie (lie)'

-tụ́ ọmụ 'summon (ritual palm frond)'

-tụ́ ngụ̀ 'make ngu sauce'[9]

-tụ́ ìkpe 'make indirect remarks (insinuation)'

-tụ́ ama 'sweep a street/road (street/road)'

-tụ́ ùkwe 'do an ukwe dance (ukwe dance)'

-tụ́ ime 'be pregnant (pregnancy)'

-tụ́ ụ̀tụ́ 'pay a levy (levy)'

-tụ́ máị 'pour a libation (wine)'

-tụ́ ǹgá 'imprison (prison)'

-tụ́ m̀kpọ́rọ́ 'imprison (prison)'

(27) **-gbá cluster**

[9] A type of creamy sauce (called ncha in other dialects) made from raw palm oil and powdered potassium and used in the preparation of oil bean salad (ugba). It is also used in eating yam, dried meat or fish.

-gbá mbọ̀ 'try (trial)'

-gbá àkwụla 'be a prostitute (harlotry/prostitution)'

-gbá ǹguzó 'loiter (loitering)'

-gbá ǹkịtị̀ 'ignore (ignoring/silence)'

-gbá ụ̀zọ́ 'set out early (earliness)' also

-má ụ̀zọ́

-gbá ájà 'consult a diviner (divination)'

-gbá ọnụ 'starve, fast (mouth)'

-bū ọ́nụ

-gbá ọtọ 'be naked (nakedness)'

-gbá àsịrị 'gossip (gossip)'

-gbá akwụkwọ 'summon to court (paper,summons)'

-gbá àma 'betray (information)'

-gbá aka 'be empty-handed (hand)'

-gbá ọ̀tọ́ 'be naked (nakedness)'

-gbá egbè 'fire/shoot gun (gun)'

-gbá ụ̀tá 'shoot an arrow (bow)'

-gbá kàtapọ́ọ̀t 'send a missile (catapult)'

-gbá ọsọ 'run (race)'

-gbá egwu 'dance (dance)'

-gbá igwè 'ride bicycle (bicycle)'

-gbá motò 'ride car (car)'

-gbá ụgbọ elú 'ride aeroplane (aeroplane)'

-gbá ụgbọ àla 'ride train (train)'

-gbá ụgbọ mmírì 'ride ship (ship)

(28) **-kpá cluster**

-kpá àgwa 'behave (behaviour)

-kpá akụ̀ 'make money, amass wealth (wealth)'

-kpá ǹganga 'be arrogant (arrogance)'

-kpá nkàtá 'joke (joke)'

-kpá ụ̀kpá 'have an extreme liking for meat/fish(taste for meat/fish)'

-kpá ụkpará 'give premonitions (signs)'

-kpá nkụ 'collect firewood (firewood)'

-kpá aka 'touch (hand)'

-kpá ụkwụ 'set foot (foot)'

(29) **-tá cluster**

-tá ahụhụ 'suffer (white ants)'[10].

-tá ntụ 'suffer extreme hardship (nails)' [11]

-tá ǹchára 'rust (rust)'

[10]The independent meaning of this nonn complement suggests a metaphoric derivation for the ICV to the effect that someone who is reduced to eating white ants for sustenance is undergoing extreme hardship

[11]Again the meaning of this ICV suggests a metaphoric derivation as in the previous case.

-tá arụ 'bite (bite)'

(30) **-kpọ́ cluster**

-kpọ́ ụgwụ 'hate (hatred)'

-kpọ́ asị̀ 'hate (hatred)'

-kpọ́ ọkụ 'be warm/hot (fire)'

(31) **-tí cluster**

-tí mkpu 'shout (shout)'

-tí ihe 'beat (thing)'

-tí egwu 'play music (music)'

(32) **-má cluster**

-má mma 'be beautiful (beauty)'

-má ụra 'slap on the cheek (cheek slap)'

-má ǹmánụ 'rub oil (oil)'

-má ọnwụ 'struggle in dying,rigor mortis (death)'

-má mmà 'stab (knife)'

-má ji 'stake yam shoot (yam)'

-má ụnọ̀ 'jump over a building (house)'

(33) **-mụ̀ cluster**

-mụ̀ ánya 'stay awake (anya)'

-mụ̃ ọ́kụ 'take fire (fire)'

-mụ̃ íhe 'learn something (thing)'

From these examples, it will be observed that an entirely new verb emerges with each different inherent nominal complement. The choice of nominal is not, however, completely free, even for the more productive clusters such as *-tu* and *-gba*. The meaning of the verb + nominal compound, moreover, is not compositionally predictable from the individual meanings of the constituents.[12] But this does not imply that significant semantic generalisations are absent from these data. One is therefore tempted to compare at least some Igbo ICV's to English idiomatic expressions, an issue that is taken up in section 3.10.

3.2 Movement in the Syntax of ICVs and BVCs

In this and the following sections, a number of syntactic issues are taken up concerning the transitivity of ICV's, especially as this relates to the movement of the IC, BVC, or both. As pointed in Nwachukwu 1983, the existence of ICV's has tended to blur the picture of transitivity in Igbo; nevertheless, the five types of complements listed in the previous section are independent in their lexical possibilities of occurrence: they can all be found co-occurring in a single construction. Except for objects, which can only be associated with transitive verbs, the others occur very freely, which is why they must all be recognised in a descriptively adequate analysis of the language. In particular, the classification of a verb's predicate argument structure with respect to the presence of a direct object (the test for transitivity) is independent of whether that verb is specified with an inherent complement or not. Whereas direct objects, and primary and secondary objects, (in the case of double

[12] An anonymous reviewer from the Unversity of California, Los Angeles, observed rightly that *mu anya and mu oku* must be related to the verb meaning 'to shine' as in *Anwu na amu: The sun is shining.* This happens to be so in this one set with very few members, in general,this kind of matching does not go far with other productive clusters.

object verbs), and PP's are VP constituents, i.e. a maximal projection, both IC's and BVC's are constituents of the category Verb, i.e. a zero-level (Vo) category and head of VP.

These distinctions are particularly needed in Igbo where the category, VERB, corresponding to V-bar (V') in the X-bar notation must be distinguished from an abstract Vo that bears the root-morpheme and all the relevant inflectional and extensional[13] markers. Fig. 9 below illustrates the necessary distinctions.

[13] By extensional markers we mean those suffixes reminiscent of erstwhile verbs which extend the scope of meaning of a verb; they include *-ta, -cha, -wa* among others. Their use is shown in the following examples: *Buo oche* 'Carry chairs'. *Buwe oche* 'Begin/continue to carry chairs'. *Bute oche* 'Bring chairs'. *Butechaa oche* 'Finish carrying chairs'. The extensional suffixes perform a variety of functions in the language.

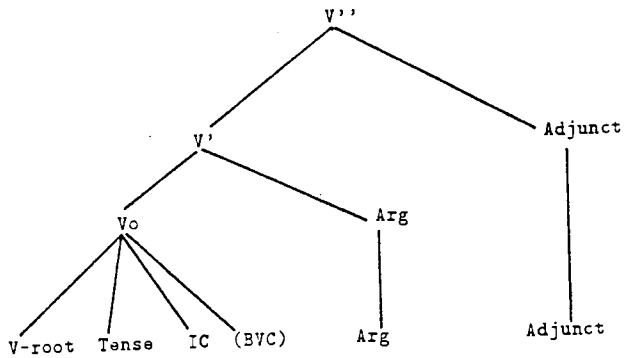


Fig.9.

Observe that the BVC is optional, and the IC is obligatory since we are dealing with ICVs. Being a meaning specifier, the IC has to come immediately after its root-verb, followed by an optional BVC. In constructions involving verbs other than ICVs, the BVC, a bound form, has to follow the root-verb from which it is morphologically derived and to which it is bound. Whereas Vo and Arg(ument)/direct object are direct daughters of V-bar (V'), and c-command each other, V-root, Tense, IC and BVC are morpho-syntactic forms and constituents of Vo. Thus, below the level of Vo, we are in the area of morpho-syntax, and above it we are dealing with strict syntax. Therefore, the question of an alternative position for these constituents (IC and BVC) does not arise. The following examples show the relevant movement.

(34) a Ógù ga erí anụ́ (unemphatic).
Ogu will eat meat.

b Ógù ga erí anụ́ eri (emphatic)
Ogu will eat meat BVC: Ogu will certainly eat meat.

(35) Ógù ga enyé re ḿ Ndukwu ego enye na mgbèdè.
Ogu will give for me Ndukwu money {\em bvc} in evening:
Ogu will certainly give some money to Ndukwu for me in the evening.

(36) Kọ́ọ̀tụ [a + má + ra + na] ányị ha ikpe ama nà
Court Pref.judge for Perf.Suff. us(PO) them(SO) case(IC) BVC in
ụtụ́tụ̀.
morning (PP): The court has surely convicted them for us this morning

Observe that the meaning difference between 34a and b, namely the added emphasis in the latter, follows from the presence of the BVC in (b) but not in (a): Note that the BVC is in an Adjunct position in 34b because obligatory Move-BVC has applied to create adjacency between the verb and its direct argument. In 35, four out of the five complements are present because *nye* is not an ICV. But in 36 with *ma ikpe*, an ICV, all the five complements are present: applicative NP/complement, primary object/goal, secondary object/patient or theme, IC and BVC. Note the position of the BVC in (35) and 36: it always comes after the IC. Note that the positions of the IC and BVC as adjunct; their displacement, (already seen in section 2.8) creates adjacency between the internal arguments and their governors/Case-assigners in keeping with general syntactic principles which license object NP's under government and Case-assignment. Move-BVC proved to be our acid test for distinguishing between transitive and intransitive verbs among those verbs that do not require the ICs to specify their meanings, (cf. 2.8.1). Whereas 34-36 are transitive sentences, the following 37a-c are intransitive constructions.

(37) a Ósisi a [a + bà + lá] urù. (nonemphatic)
Wood this Pref-V Perf. Suff. usefulness (IC):

This piece of wood has become useful.

b Ọ́ bàlá urù abá. (emphatic)
It V-perf. usefulness (IC) BVC:
It has certainly become useful.

c Ọ́ bà-rá -la ányị́ urù abá (emphatic)
It V- Applic Perf. us usefulness (IC) BVC:
It has certainly become useful to us.

The verb in the above examples is an ICV; 37a is a simple factual statement with no emphasis, (b) is its emphatic counterpart involving the BVC in addition to the IC. In both (a) and (b)sentences, the surface structure is the same as the underlying structure. In other words, there is no BVC- or IC- Movement if there is no internal argument. But in (c) there is a difference: the applicative NP comes before both the IC and BVC,as the following tree diagram shows.

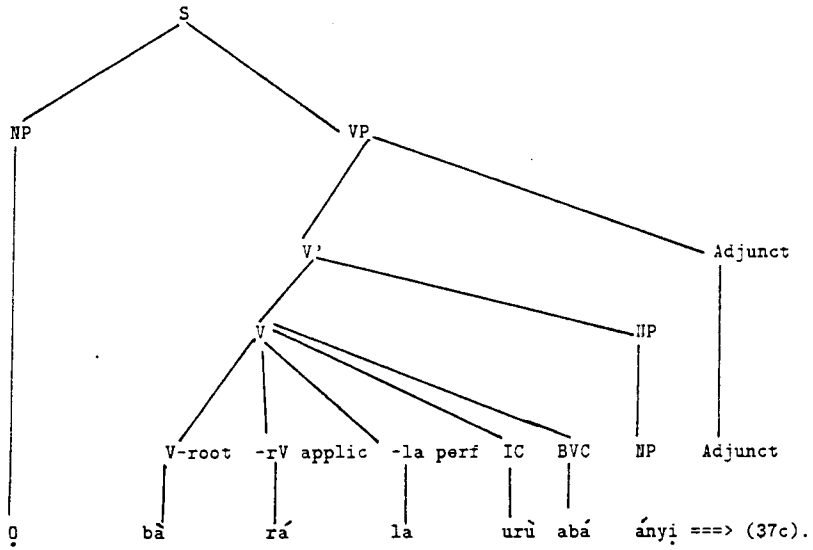


Fig.10.

The applicative NP is always an internal argument, but it is not governed by the verb, so it is not a direct argument of its verb. It is licensed by the-*rV* applicative suffix which also assigns case to it, a fact which explains why the applicative noun is always adjacent to its case assigner. The displacement of both the IC and the BVC from their d-structure positions suggests that neither of them is an argument. Certainly, a bound verb complement is not an argument, a fact which has been argued at length in 2.2, but the argumenthood of IC's is yet to be determined. While we leave the issue open for the meantime, it is necessary to emphasize that IC as well as the BVC is always displaced to a non-argument position by any internal argument. If we now go back to example (34c-d), we can understand why both the IC and the BVC have been displaced by an intervening direct argument: in (c) which involves three internal arguments, the BVC comes after the last of them in an

adjunct position; in (d), the IC and the BVC come after the two internal arguments. From these examples, it appears that the IC is also displaced from its underlying position by the presence of an internal argument just as the BVC is displaced in a transitive clause by an intervening argument, or in an intransitive clause by an applicative NP, (also an internal argument). Could this also be true of the IC? Let us see what happens as we try to supply the predicate argument structure (PAS) of various semantic subclasses of inherent-complement verbs.

3.3 PAS of Inherent-Complement Verbs and Transitivity

Following our earlier definition, we assume that a transitive predicate must have at least one internal argument that functions as its patient or theme. We expect all transitive ICVs to meet this requirement. Thus in addition to its inherent complement or meaning specifier, an inherent-complement verb must govern an object if it is transitive; conversely, it must not govern any object if it is intransitive. The success or failure to govern an object is part and parcel of a verb's predicate argument structure and meaning. Implicit in the above statements is the claim that inherent complements are not necessarily objects, although a few of them do qualify as such (cf. 3.7.2.) This statement must be emphasized in view of the fact that ICs and arguments behave alike in certain respects: for example, ICs are extractable just as internal arguments and adjuncts are and they can expand into maximal projections just as ordinary NPs do. But in spite of these shared characteristics, they remain basically different, as will be shown shortly.

Examine, for example, the following sentence whose verb is patently intransitive even though, like all ICVs, it is always followed by a free noun or IC:

(38) a Úchè tóro ogologo.
Uche is tall.

b Úchè tóro ogologo túrụ onye ọbụla n'ányá.
Uche be tall that surprise person all in eye:
Uche is tall in a way that surprised everybody.

c Ógologo kà Úchèé tóro t , ò búghì íbù.
Tallness that Uche grew, she is not fleshy:
Uche is merely tall, she is not fleshy.

The IC, *ogologo*, being a free noun, can be qualified by a relative clause as in (38b), it can also be topicalised as in (c). Yet it is not an object because it does not qualify as patient/theme, i.e. as the entity directly affected by the action expressed through the verb: therefore the verb involved is not transitive. The noun is just performing the function of an adjective in the sentence. Igbo is not alone in this respect; Berber uses the same strategy because it has no lexical category, Adjective. Therefore, in languages such as Igbo and Berber, the ability of a noun to be qualified, expanded, or topicalizsed does not tell us much about its argumenthood. The only reliable test for this syntactic function is provided by a clause-internal movement rule very similar to Move-BVC. Before discussing that rule in 3.7.1, let us quickly dispose of the issue of the expandability of ICs.

3.4 ICs as Maximal Projections

The ability of ICs to take relative clauses as modifiers appears to cause some problem for the lexical representation of ICVs, since an IC is not simply a noun but an expandable NP. I have taken the position that the verb root and its inherent nominal complement are entered as a unit in the lexicon. This position becomes controversial when the inherent complement is not simply a category of degree Xo but a maximal projection (X-max). However, it ought to be borne in mind that the expansion of the IC belongs to syntax, while the meaning-specifying function

belongs to the lexicon. There is therefore nothing contradictory about this, nor in the stand we have taken; it is in keeping with the principle of separation of syntactic levels. Since ICs behave like other internal arguments under extraction, we should expect them to be modifiable in syntax just like any other noun; but we do not get a situation where a predicator + IC combination is specified in the lexicon with any other than its simple, unexpanded meaning-specifier or inherent complement, an N, or PP in very few cases.

3.5 The PAS of Intransitive ICVs

Consider the following semantic class of ICVs that translate English *be + Adj* expressions, and can therefore be conveniently called adjectival ICVs. Emenanjo 1978 describes the nominal complements of such ICVs as "qualificative nouns", whileUwalaka 1981 describes the entire V + N complex as "qualificative verbs". They form a neat semantic class of stative adjectival verbs, each describing an attribute or quality that is associated with individuals or persons. Examples include:

(39)

-chá ọcha 'be fair-complexiopned, clean'

-jí nji 'be dark-complexioned, black'

-gó ugo 'be black'

-má mma 'be beautiful, good, morally acceptable'

-jọ́ njọ 'be ugly, bad, morally acceptable'

-tọ́ ụtọ/sọ́ ụsọ 'be tasty'

-bù íbù 'be big, fat, bulky'

-tó ogologo 'be tall'

-pé m̀pé 'be small, tiny'

-kụ́ ilu 'be bitter'

None of the above verbs can govern an internal argument distinct from the IC, that is they cannot assign accusative case, unless we assume that an IC, being a noun, must be assigned case by the verb to which it is adjacent. But this would amount to case without a corresponding theta-role because as predicators, each of these adjectival verbs describes the features of its subject or external argument: thus the LCS that can be assigned to the group is as follows:

(40) *x is describable in terms of the intrinsic feature y, where y is specified by IC*

There can be no internal argument with these verbs unless there is also an applicative suffix, a fact which suggests that such an internal argument is governed not by the verb but by the *-rV* applicative suffix, as in (37c) and the following examples:

(41) a Égbu à buru íbù.
Goat this Pres. be fat: This goat is fat.

b Égbu à buru + ru anyí ibù.
Goat this pres.be for us fat: This goat is fat for us.

c Nwá à na egó úgo.
Child this pres.be black: This child is black.

d Nwá à na egó + ro ḿ ezigbo úgo.
Child this pres. be for me good blackness:
This child is black(very much) to my liking.

However, a few of these adjectival verbs are idiosyncratic in behaviour since they can also govern an internal object which is not licensed by the applicative -rV suffix;

they must represent those stative verbs which show the transitive and intransitive uses. The following have been indentified, and their transitive use is shown below: *ma mma*, 'be good, beautiful; *j ọ njọ*, 'be bad, ugly; *tọ ụtọ*, 'be tasty; *kụ ilu*, 'be bitter.

(42) a Ófe à tọ́ ụtọ.
Soup this Pres. be tasty: This soup is tasty.

b Ófe à tọ́ Ogù ụtọ́.
Soup this Pres.sweet Ogu sweetness: This soup is tasty to Ogu.

From the above examples in (41-42) it is clear that an internal argument does to the IC precisely what it does to the BVC, namely it displaces it to a non-argument position , the outcome being that it (the internal argument) is adjacent to its governor and case assigner, the verb, thereby satisfying the Case Filter (cf. Chomsky 1981). If the two of them (BVC and IC) happen to co-occur in one and the same sentence, they are similarly displaced to a non-argument position by any internal argument, as in (35), (36), (37c), and Fig. 10. It is therefore tempting to equate the BVC with the IC as far as its syntactic behaviour is concerned: neither of them is an argument, and each is displaceable by an internal argument, whether it is governed by the verb or by the applicative -rV suffix. They also share some semantic similarities: the BVC is an emphatic element, while the IC is a meaning specifier. Thus, the same test applies to all intransitive verbs regardless of whether they take inherent complements or not. Since this IC-Movement, like BVC-Movement, is sensitive to the occurrence of an internal argument, we would expect it to apply to all constructions containing transitive inherent-complement verbs in the same way as it did to clauses containing their non-inherent-complement counterparts in 2.8.

There are other stative verbs that have similar, if not identical, PAS to the adjectival verbs under discussion; these are illustrated in the following examples:

(43) a Íbè gbá aka.
Ibe Pres. be with hand:
Ibe is empty-handed.

b Ọ́ gbá ọtọ.
He Pres.be naked:
He is naked.

c Íbè gbá ụkwụ efù bya.
Ibe Pres. be foot bare came:
Ibe came with bare feet.

d Ógù gbá ahụ úhworon. (Mbaisen).
Ogu Pres.be body bare.
Ogu is bare-bodied.

e Ógù gbá/bù ọnụ.
Ogu Pres.V mouth
Ogu is fasting or starving.

The semantics of the above verbs differs from that of the adjectival verbs only in terms of the features they denote. There is nothing intrinsic about 'being empty-handed, naked, bare-bodied, bare-footed,etc.' Therefore, their LCS, which does not contain the adjective *intrinsic*, is given as follows:

(44) *x is describable in terms of the feature y, where y is specified by IC.*

Thus, we are still dealing with the same LCS, but this time without the feature of intrinsicality.

Other verbs sharing the same or similar LCS include the verbs whose use is

shown in the following examples:

(45) a Ógù ka na agbá ókoro.
Ogu still PROG play youth
Ogu is still playing the bachelor.

b Ógù gala gbá-gha okoro. (Mbaisen) (=a)

c Ńdi mmadù na agbá ǹguzó ebe à
Plural person Prog. loiter place this:
People are loitering here.

d Díké na agbá ǹjaká. (Nneewi)
Dike HAB. V carefreeness
Dike is care-free.

e Bíkó, gbáa mbọ̀ étu i nwère íke.
Please, V-IMPER trial manner you have power:
Please, try as hard as you can.

f Bíkó, mèé ọsịíso, ọ gbágha ọ̀hụhụ. (Mbaisen)
Please, do-IMP quick, he V-PROG hurry:
Please, be quick, he is in a hurry.

g Jìsié iké, máa/gbàá úzọ.
Hold hard strength V-IMPER. earliness:
Try hard and set out in time.

It is by now clear that none of the verbs illustrated so far involves any patient as internal argument, except those already mentioned in examples (42). They must therefore share all the essential features of the LCS already suggested in this section. It has also become clear that except when there is an internal argument, both the IC and the BVC maintain their underlying order thus:

(46) *V-root Tns IC (BVC)*

This order changes whenever there is an internal argument, as in (47) below.

(47) V-root Tns IC (BVC) NP =======> V-root Tns NP IC (BVC)

The IC-Movement, which is responsible for the above order change, is very crucial for distinguishing between transitive and intransitive ICVs in the language, just as BVC-Movement was in the case of non-inherent-complement verbs. The movement of these two constituents makes for a unification of transitivity analyses for the two categories of verbs under examination here, an issue that is pursued in detail in 3.9.

Finally, because intransitive ICVs do not govern any object, no IC-Movement is required, and deep and surface order remains the same. However, the stem of an intransitive ICV may be separated from its nominal complement by one of the very few (to my knowledge, five, excluding morphological variants) Igbo qualifiers which precede their noun head, (in capitals in the examples below).

(48) a Ọ́ dị̀/pèrè ŃNUKWU mpé.
It pres. be great smallness:
It is very small.

b Ọ́ pèrè ÁHWAŃ mpé. (Mbaise (= a))

c Ó tòro ÉZIGBO ogologo
He grew great tallness:
He is very tall.

d Ógù tara ÚNUKWUTE éshi. (Nsukka)
Ogu emaciated very great body:
Ogu is very emaciated.

The items in capitals are nominals performing adverbial functions in the sense that they modify ICs, thereby having wide scope over the entire ICV. In their ability to be separated from their head verb stem (by a single-word adverbial expression for intransitive ICVs, and by the applicative NP for both transitive and intransitive ICVs where semantically appropriate), Igbo inherent-complements differ from their Chinese counterparts (John Whitman and Yuru Wu, personal communication). This difference is not major, however, considering the difference in phrase structure between the two languages. In fact, Igbo shares with Chinese the ability of ICs to be expanded into a relative clause, that is a maximal projection.

3.6 Intransitive ICV Semantics

All ICs play one common role, which is purely semantic: they specify verb meaning, where a verb consists of one or more verb roots, derivational and inflectional affixes (including various -rV suffixes), the -rV applicative suffix, if any, plus the inherent complement. The lexical existence of ICVs appears to disturb some analysts who are accustomed to treat all V+NP sequences as transitive predicates. But Igbo ICVs, Chinese "verb-compounds" (and similar constructions in other languages such as Arabic) disturb such a neat syntax-semantics correspondence. In fact, the inclusion of an inherent NP (or PP) complement in a lexical verb seems to be irrelevant to the verb's transitivity as that concept is defined semantically (cf. Hopper and

Thompson 1980).

Consider the adjectival verb *nu inu/ku ilu, 'be bitter'*. It would be glossed as follows by Emenanjo 1984:

(49) a Ó nù ínu. (Onicha)
It "bitters" bitterness: It is bitter.

b Ọ́ kụ́ ilu. (Mbaise)
It bitters bitterness: It is bitter.

c Ọ́ nà akụ́ mí ilu (Mbaise)
It PROG "bitters" me bitterness: It is bitter to me.

When such a thing as bitter kola (Igbo*aku ilu*, a nominalization of the predicate in (b)) is described as bitter in European languages, it is normally expressed in the form of Copula + Adj. or Adj.+ N, while in Igbo it is expressed by a V + IC. But the above gloss in double quotes is tendentious because there is no way to determine it independent of the inherent complement which already carries the entire semantic burden of 'bitterness'. This verb, like its counterparts (cf. 3.5 exx. 42) is transitive not because its IC *ilu* is an object, but because it can govern an internal object in addition to this IC as in (42b and 49c), and it is by no means a double-object verb. There would be no semantic basis for arguing that it is a double-object verb, knowing that the co-occurrence of ICs and true objects eliminates that possibility. It is true, however, that some ICs bear thematic relationships (theta-roles) to their predicators, as we show in 3.7.2, but this slight complication should not obscure the main function of ICs, which is the semantic specification of their respective verbs.

3.7 Transitive Inherent-Complement Verbs

The syntactic behaviour of transitive ICVs provides the most convincing evidence that the inherent complements are not direct/primary objects (D/POs), for in these predicates both ICs and objects co-occur. All transitive ICVs involve a governed NP as goal, experiencer, or affected entity; for the vast majority of them, this NP is in addition to the inherent complement. Our claim is that these ICVs are two-place predicators (3.7.1). The remaining transitive ICVs (the minority) are those which combine two functions in the IC, which is simultaneously the IC and the goal, theme, or affected entity (3.7.2). From this group we get the significant minority of double object ICVs, generally made up of verbs whose ICs are instrumental arguments surfacing as second object in addition to the patient argument which is the primary object (3.7.3.). In nearly every instance, IC-Movement is obligatory since the inherent complement is consistently displaced from its verb root by the governed NP; but there are one or two exceptions for which no movement is required.

3.7.1 Transitive ICVs: Move-IC, and NP Restructuring

In these examples, from the *gba* and *tu* clusters, the verb root is simply glossed 'V' because it requires its meaning specifier in order to really spell out its meaning, while the inherent complement is glossed like a free noun.

(50) a Ógù ga agbá unù ama (IC)
Ogu FUT. 'V' you-Pl. information:
Ogu will betray you.

b Gbá + a + nù nchi nwá akpụkpọ.
Skin IMPER. you-Pl. grasscutter the skin:
Skin the grasscutter, you people.

c Bíkó gba yá nkịtị̀.
Please V him disregard:

Please, ignore (gba nkiti) [14] Please,'V' him/her disregard:
Please, ignore him/her.

d Únù ga agbákwa ndi chí à nké.
You-Pl. FUT 'V'-also the ones of theft here watch:
You also have to keep an eye on these thieves.

e Ígbá nwokó nwa akwụkwọ kwèsịrị ekwésị.
To serve man the paper is appropriate (BVC)
To serve a [court] summons on the man is appropriate.

f Á gà atụ́ ya ọmụ
One Fut. serve him omu

He will be summoned (by being presented with the traditional, tender palm frond known as *omu* [15]

(50) g Àgwa ọjọ́ọ́ ya tụ̀rụ ónye ọ̀bụla n'ánya.
Behaviour bad his 'V'-past everybody in eye:

[14] Not every Igbo verb takes the open vowel suffix (OVS) in the imperative, open conditional constructions, narrative and perfective forms of the verb, (cf. Nwachukwu 1976:74-82 for discussion). The fact that only some of the members of the *gba* cluster take the OVS suggests that two homophonous *gba* roots are involved.

[15] In traditional Igbo society, *omu*, a tender palm frond, is sent to summon parties to a dispute.

His bad manners surprised everybody.

In each of the above examples, the IC has been obligatorily displaced by the intervening internal argument, and the output in every case is a well-formed sentence. One can therefore assert that Move-IC or IC-Movement is obligatory for all trasitive ICVs. However, in the following 51, Move-IC is obviously optional since both 51(a) and (b) are well-formed. so are (c) and (d) which are their dialectal variants.

(51) a Ú́nù ga atụ́ ndị ohí ụjọ
You-Pl. FUT. fear thieves fear:
You must fear thieves.

b Ú́nù ga atụ́ ụjọ ndi ohí (=51a)
You will have fear of thieves

c Ú́nù ga atụ́ Chukwu egwù.
You will fear God fear: You must fear God.

d Ú́nù ga atụ́ egwú Chúkwu
You will have fear of God. (=51c)

Note that while this verb may qualify as an ICV, it is obviously related to what Rev. Sr. Uwalaka has described as 'mirror image verbs', that is verbs that can switch their subject and object complement , as in : *Ukwara na akwa m*:'Cough is coughing me' and*Ana m akwa ukwara* , both meaning 'I am coughing.' I describe them as symmetric verbs in 4.3.4.

But the verb *tụ anya*, 'expect' appears to be the only ICV that does not require IC-Movement at all; thus, 52a-b are no more than tonal variants. When the rule applies, its output is the ill-formed (52c).

(52) a Ányị̀ nọkwa ná atụ́ ánya há.
We stay also PROG. expect eye of them:
We are still expecting them.

b Ányị̀ nọkwa ná àtụ́ anyá ha. (tonal variant of 52a).

c *Ányị̀ nọkwa ná àtụ́ há anya. (output of Move-IC).

It is curious that for the verbs in examples 51, the movement rule is optional. Why is this so? Why are 51a-b grammatical? The only plausible explanation is that the IC and the direct internal argument have restructured into an NP of the type shown below:

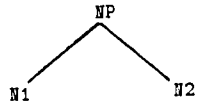


Fig.11.

In other words, the resultant NP is made up of constituents in genitival or associative relationship. The unexpressed semantic reason for the Movement rule is to avoid the derivation of a genitival NP, which in nearly every case is anomalous. In Igbo, the only way of expressing ownership or possession is through the juxtaposition of nouns as in Fig. 11, with the possessor coming second. In nearly every instance, the possessor is marked by tone as in the given examples. It is thus natural to read a genitival/associative meaning from the sequence of any two nouns in the language. A language-internal explanation for IC-Movement, apart from the need to satisfy the Case-Filter, is to avoid the generation of such a sequence of two nouns where it is semantically anomalous. But the case of *tụ́ ɛgwù/ụjọ* is unique because the deep structure is interpretable as *fear of God*, a meaning which is also supported by the tonal morphology of the resultant genitival construction, as the following tree diagrams show:

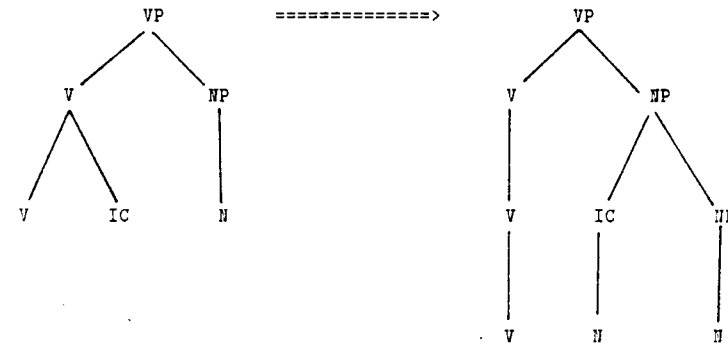


Fig.12.

The principle can be summarised as follows: **No re-ordering/IC-Movement is required where a genitival interpretation is possible.** This sort of restructuring is also available for another ICV with *anya* as its IC. Thus, the verb *so anya* 'respect' behaves like *tụ ɛgwụ* for exactly the same reason.

(53) a Àdá nà asọ́ anyá nnà yá. (No IC-Movement)
Ada PROG. avoid eyes of[father her]:
Ada is respectful to her father.

b Àdá nà asọ́ nnà yá anya. (IC-Movement) (= 53a)
Ada PROG. avoid father her eyes

But no NP restructuring is available for the following ICVs even though they have *anya* as their meaning specifier or IC.

(54)

-rọ̀ ánya 'eye'

-gbà ánya 'eye, warn with the eye'

-kpū ánya 'eye with contempt'

-hwūn ánya 'eye disrespectfully'

-chá anya 'eye threateningly'

-kágide anya 'overawe'

-thụ́ anya 'confer second sight or power of clairvoyance on someone'

The use of the last two ICVs are illustrated in the following examples:

(55) a Kà ányị́ thụ̀ọ ụmụ̀ okóroobyà níílé anya. (Mbaisen)
Let us open Pl. male adolescents all eye:

Let us confer second sight [16] on all the youths.

b Díké nà awá/àká anyá
Dike PROG 'V' eye: Dike is being bold.

c Há chọ̀rọ́ ịkágide m anya.
They want to overawe me eye: They want to overawe me.

[16] In traditional Igbo society, *ithu anya* is a ritual conveying on a person the power of clairvoyance (*ihwun ahwun*), it is performed by a seasoned native doctor who must be gifted in the art.

The movement classification of ICVs shows that for the vast majority of them, movement is obligatory; for two of them, *tu ujo/egwu* and *so anya*, it is optional; it is not at all required for one ICV, *tu anya*. In the two instances where movement is either optional or not required, the deviation from the norm may be explained by the fact that the resultant NP can be restructured as a genitival NP. In other words, movement is obligatory in all cases where a genitival interpretation of the NP is semantically anomalous, as the following shows:

(56) a *Má ikpe há (obligatory Move-IC has not applied)
(Unmeaningful, not an Igbo sentence)

b Má há ikpe. (obligatory Move-IC has applied)
Find them guilty.

In 56a the NP [*ikpe ha*] 'their case' does not make any sense with the verb *ma*, and therefore the sentence is bad. The anomaly we observe here is typical of all the verbs that are marked for obligatory IC-Movement. The (b) example, on the other hand, is normal and expected, being the output of obligatory Move-IC. Although *ha* 'they' and *ikpe* are two nouns, they cannot form a constituent in the same way as *ikpe ha* 'their case' can form; in other words, the same items in (a) are in construction, giving rise to a semantically anomalous genitival NP, whereas in (b) they are not in construction.

3.7.2 Transitive ICVs : ICs as Objects

As noted in section 3.7., in certain transitive ICV, the IC and the direct object are coterminus, ie. one and the same entity. These verbs stand at the boundary between transitive ICV idioms (to be discussed in 3.10) and ordinary transitive verbs, and

in nearly all cases, the meaning of the resulting predicate is largely compositional. Examples include the following:

(57)

-gbá egbè 'fire a gun (gun)'

-gbá ụ̀tá 'shoot an arrow (bow)'

-gbá bọ́ọ̀l 'play football (ball)'

-gbá igwè 'ride bicycle (iron, machine)'

-gbá motò 'ride a car (motor vehicle)'

-gbá ụgbọ elú 'ride in an aeroplane (areoplane)'

-gbá ụgbọ àla 'ride in a train (train)'

-gbá ọ̀bara 'emit blood,bleed (blood)'

-gbá àsìrì 'spread gossip/false gossip (gossip)'

To these may be added the following in which *yba* can be unambiguously glossed 'buy':

(58)

-gbá ohù 'buy slave (slave)'

-gbá ehi 'buy cow (cow)'

-gbá ǹnáma 'buy a cow (Hausa cow)'

-gbá àkụ 'buy four legged animals (animals)'

Other members of this same subset come from the *tu* cluster, as the following show:

(59)

-tụ́ iche 'throw stones/pebbles (pebbles)'

-tụ́ ǹkúmè 'throw stone (stone)'

-tụ́ mai/m̀mányà 'pour libation (wine)'

-tụ́ onụ 'burrow, make a hole (mouth)'

-tụ́ ama 'sweep road (road, street)'

-tụ́ ǹtụ́ 'lie,tell a lie (lie)'

-tụ́ ụ̀tụ́ 'pay a levy/contribution(levy)'

What is clear from the data given in 57 and 58 is that the meaning of each of these ICVs is compositional, a feature which contrasts sharply with the non-compositional nature of other ICVs. In each instance, the IC is the direct object of its verb; Manfredi has rightly labelled them 'Inherent-Patient Verbs'. As one would expect, IC-Movement does not arise because the IC is also the direct argument. The addition of another internal argument (the primary object) will achieve the same effect of displacing the theme to the position of a second object. This is illustrated in (60): the addition of *ha* 'them' in 60b forces the theme, *egbe* to move to second object position; the introduction of a BVC in 60c triggers the BVC-Movement that we are noe familiar with; the valency of each of these predicates can be increased by the addition of the applicative -rV which licenses a goal NP as in 60d.

(60) a Ókwu gbára egbè
Okwu fire PAST gun: Okwu fired a gun.

b Ókwu gbára ha egbè
Okwu fire PAST them gun: Okwu fired a gun at them.

c Ókwu gbára ha egbè agbá (BVC)

Okwu fire PAST gun (emph.):
Okwu certainly fired at them.

d Ókwu gbá + ra + ra ḿ ha egbè agbá (BVC)
Okwu fire + PAST + Applic me them gun (emph.)
Okwu certainly fired a gun at them for me.

(61) a Ńnà há gbára ohù. (Mbaisen)
Father their bought/owned slaves:
Their father owned slaves.

b Ńnà há gbá + ra + ra ha ohù.
Father their buy + PAST + Applic them slaves:
Their father bought/owned slaves for them.

Observe that *gba cybe* 'fire gun' is like *nye* 'give' in the number of its internal arguments: it is a double object verb. The occurrence of the applicative -rV suffix only serves to increase the number of internal objects to three, (cf. 1.4 and the following section for a fuller discussion). On the other hand, the verb *gba ohu* 'buy slaves' is not an inherently double object verb and, therefore, unlike *nye* 'give', requires the applicative *-rV* to license the goal NP.

3.7.3 Double Object ICVs

As pointed out in 3.7.2., double object ICVs belong to the same basic class as those for which the IC is coterminus with object. In other words, the first internal argument is the IC, if it is the only internal argument. But for those ICVs that take an additional argument without the use of the applicative -rV suffix, the deep-structure theme or patient, (the IC), is always displaced from its position adjacent

to the verb to the position of secondary object which is not adjacent to its verb. In other words, the IC is consistently displaced from its deep-structure position by an internal argument regardless of whether it is serving as object or as a mere meaning specifier. This fact makes the behaviour of the IC consistent in Igbo syntax. When displaced, the IC becomes the second object to the governed argument that functions as the primary object (or the semantic goal). Examples 60 and 61 which illustrate this have already been given in 3.7.2., to them we add the following:

(62) a Chíke gbára anụ ọhyá egbè.
Chike fired animal of bush gun:
Chike fired a gun at the wild animal.

b Ńdi úwe ojíí nà amá ónwe ha mmà
People of uniform black PROG strike selves their knife:
The policemen are stabbing one another with knives.

c Ọ́ kụ̀rụ́ éghu ḿ osisi n'isi.
He/she hit goat my stick on head:
He/she struck my goat on the head with a stick.

d É + lù + le mmádụ̀ okwúté.
IMPER throw not person stone:
Don't throw stones at people.

e [Gbá + a] yá ụkwụ.
IMPER strike him foot: Strike him with your foot.

Observe that what is functioning in these examples as an argument is expressed as an instrumental NP in English and other European languages. In Igbo serial verb

constructions [17] this fact becomes more obvious.

We can categorically assert that Igbo double object ICVs form a coherent semantic class, comprising verbs of offence and defence. In other languages (English, for example), the theme would be expressed with an instrumental NP, in Igbo it is the second object, second only to the recipient of the action, which is the primary object , but the indirect or oblique object in English and other such languages that mark the indirect object with a preposition. The final glosses in each of the examples given above bear this out.

3.7.4 Summary

Apart from an essential difference of LCS or PAS, the syntactic distinction between intransitive and transitive ICVs is provided by the displacement of the IC by an intervening internal argument. We have referred to this as IC-Movement. IC-Movement is required for all transitive ICVs, except *tu anya* 'expect'. It is optional for two other ICVs, *so anya*, 'respect' and *tu ujo* or *tu egwu*, 'fear'. It is never needed in sentences involving intransitive ICVs, unless such a verb also has an internal object licensed by the applicative *-rV* suffix. Thus, IC-Movement is the analogue of BVC-Movement for non-inherent complement verbs. Therefore, the fact that ICs can be extracted for focus or topicalisation or even expanded into maximal projections tells us nothing about their argumenthood.

3.8 Case Theory, Theta-Theory and Inherent Complements

The Case Filter (Chomsky 1981) requires that every phonetically realised NP be assigned abstract case so as to make it visible for theta-role assignement. Observe, however, that for both transitive and intransitive ICVs, the IC is base-generated in

[17] In serial verb constructions, two verbs would be involved in these sentences, *Chike jiri egbe gbaa anu ohya* 'Chike used a gun and shot the wild animal'. Such constructions would always involve two verbs, thefirst of which will always be the verb, *ji*, or its dialectal equivalent.

a non-argument position, as in Fig. 2 (repeated here in a simplified form as Fig. 13).

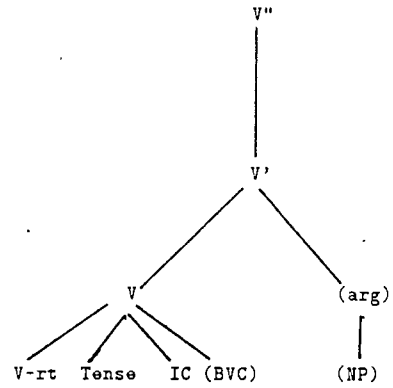


Fig. 13

By contrast, the internal argument (when it is present either because the predicator is transitive and governs it, or because it is licensed by the applicative -rV suffix) is base-generated in an argument position. But it cannot be assigned structural case because it is not adjacent to its case assigner, adjacency having been blocked by the intervening IC, and BVC whenever one is available as required by meaning. The purpose of IC-Movement is just to create adjacency between the verb and its argument so as to make case assignment possible.

There are two types of case that an argument can receive from its verb. One is inherent case which is the property of specific verbs. For example, in Latin and Romance languages, certain verbs are known to assign a specific case to their object: the verb *indigeo -ere 'to be in need'* assigns the genitive case to its object in classical

Latin, thus, 'I need money' would be rendered in Latin as *pecuniae indigeo* where *pecuniae* is in the genitive case as opposed to *pecuniam* its accusative/objective case conterpart found with other verbs such as *habeo* as in *pecuniam habeo* 'I have money'. No Igbo verb appears to possess this property, though we are talking in strictly abstract terms when we discuss case assignment in Igbo since Igbo nouns are never inflected. Inherent case is assigned in deep structure and merely realised in surface structure. The second type of case is structural case which is assigned to arguments in surface structure under adjacency. This is the relevant case being discussed here.

Observe, also, that the IC, like the BVC, is always displaced to a non-argument position; thus, the IC starts its derivational history in a non-argument position and ends up in another non-argument position. It therefore does not qualify for either a case or theta-role. The exception, of course, comes from ICs which are also patients or themes in the sense defined in 3.7.2. In all such instances, the meaning of the verb-root and its IC is compositional. The Case Filter as now formulated refers to the property of the predicator to assign case to its internal argument; it cannot therefore apply to ICs except when such an IC happens also to be an argument. Similarly, the Theta Criterion cannot be satisfied in constructions involving ICVs since ICs are not generally arguments. The consequence of these facts is that there are languages with specific predicate constructions involving nouns which lack both case and theta-role. In such languages, and Igbo is one of them, both the Case Filter and the Theta Criterion seem to be violated. Or is an instance of a theory that does not account for all observed linguistic data?

3.9 A Unified Theory of Transitivity for Igbo

Given the theory of Predicate Argument Structure (PAS), it becomes possible to classify Igbo predicates into distinct, non-overlapping syntactic classes. Non-inherent-complement verbs comprise three subclasses-transitives, unaccusatives and unergatives, while the inherent complement verbs divide simply into transitives and

intransitives; no transitive verb of the ICV class is known to participate in the ergative alternation, i.e having a second variant which is an unaccusative verb. But this analysis based only on the verbs' meaning-related argument structure seems weak and in need of a syntactic prop. Such a prop is provided by the Movement Rule which we have described as BVC-Movement for non-inherent complement verbs, and IC-Movement for their inherent complement counterparts. This rule, which we describecollectively as Particle Movement affects the two constituents, BVC and IC, which behave alike in all respects. The occurrence of any internal argument (be it governed by the verb or licensed in the case of intransitive verbs by the -rV applicative suffix) forces the BVC, IC, or both to be displaced from one non-argument position to another. Thus, BVC-Movement does for the non-inherent complement verbs what IC-Movement does for the inherent-complement verbs: it neatly subclassifies them for transitivity. This movement rule constitutes the acid test for transitivity in Igbo syntax, and has been likened to the Particle-Movement rule of English. In another respect, it is interesting to note that the two verb classes so far isolated in Igbo, inherent and non-inherent complement verbs, seem to mirror each other in one other respect, namely the occurrence of double object verbs in each subgroup. These parallels convince one that ICVs constitute an authentic subclass in the language on a par with their non-inherent complement counterparts.

3.10 Idiomaticity and Inherent-Complement Verbs

The ICV phenomenon in Igbo presents one of the strategies for meaning distinction available in human language and deserves serious study. From the analysis presented here, a pattern of meaning distribution is obvious: in all instances where the IC happens to coincide with the patient or theme, the meaning of the resultant predicate is compositional; therefore, all such examples fall outside the purview of idiomaticity. But in all other cases, it is very difficult to talk of verb meaning without the meaning-specifying complement which supplies the greater part, if not all of, the meaning. The question that immediately comes to mind is how these root verbs, especially the

two most productive ones, *gba* and *tu* came to lose whatever their original meanings might have been. One is of course assuming that the [verb+nominal] predicate is a later development in the language. Chinese has a similar verb-compound, (Yuru Wu and John Whitman both of the Dept. of Linguistics, Harvard University, p.c.), but it does not appear to have been studied in any detail at all. However, one must not fail to see some basis for comparison between Igbo ICVs and English idioms: whereas Igbo selects various types of nominal complements to a by-and-large restricted set of skeletal verbs, English makes use of its rich supply of prepositions in various combinations, called 'phrasal verbs' by Quirk et al 1973, as well as in what they describe as 'verbal idioms'. The two sets are given in (63a-b) respectively.

(63a) part with, deal with, agree to/with, concede to, get down to, insist on, rely on, be bent on, catch on, put up with, drink up, get up, take off, put out.

(63b)

put up 'provide accomodation for'

do up 'adorn, arrange or decorate'

make up 'cover (face) with cosmetics'

be hard up 'be temporarily impecunious'

do in 'murder, implicate, or cause to fail'

The dividing line between these two sets is not, however, clear. Members of both sets permit syntactic movement reminiscent of BVC/IC-movement in Igbo.

(64) a I can bring along Aunt Rose, if you want.

b I can bring Aunt Rose along, if you want.

(65) a I can put up your friend for two nights.

b I can put your friend up for two nights.

The line separating the two is even more tenuous when it is observed that most 'phrasal verbs' in 64, like 'idioms' in 65, display unpredictable semantic readings verging on non-compositionality.

How do these English facts shed light on Igbo ICVs? For one thing, as already noted, the Igbo ICV is a syntactic analogue of these English types, and for another, it is as close as any 'phrasal verb' to a true idiom. Both of them (Igbo ICVs and English prepositional idioms) are object idioms, that is, the idiom is a verb + complement construction in Igbo, but a verb + preposition construction in English. In other words, the idiom involves the predicate and never the subject. To put it in another way, idioms and idiomatic expressions in most, if not all languages of the world, are created by modifying a verb's function from arguments to predicates. That is, new values are given to the function for certain special input arguments. This situation gives rise to two kinds of asymmetry: an asymmetry in the compositional semantics of predicates (and of sentences). In Igbo, this asymmetry manifests itself in the form of a verb which is practically meaningless relying heavily or totally on the meaning of the inherent complement to give meaning to the resultant predicate. The second type of asymmetry is that between the subject and object of a sentence: in both Igbo and English, there are countless object idioms, while subject idoms are very rare, even when they are full phrases.

To the extent that an expression deviates from strict semantic compositionality, it is said to be semantically opaque. In his study of this phenomenon in Russian in the early 1960's, Weinreich (1966)identifies three degrees of idiomaticity which he

describes as *contextual selection*, (e.g. blind alley), *reciprocal selection* (e.g. blind date), and *suppletive homophony* (e.g. red herring). In the Igbo ICV, it is the verb root that is semantically opaque to the point of suppletive homophony in the case of *tu* and *gba* clusters.

At every stage, this problem of indeterminacy of root meaning confronts the analyst, and has often led to guess work. For example, *tu egwu* has been erroneously glossed as 'strike fear' following an equally wrong rendering of *tu anya* as 'strike eye'. None of these guesses seems justified in the face of cross-dialect data such as are presented below.

-tụ́	anya	(General Igbo)	'expect'
-lé	anya	(Mbaise)	'expect'

The above verbs differ only in their morphemic constituents, they are synonymous, being dialectal variants. In Mbaise *le anya* simply means 'look (eye)', idiomatically it means 'expect'. Since the two verbs are variants of each other, *tu* in General Igbo cannot be correctly glossed as 'strike eye' since such a gloss runs counter to the verbs idiomatic meaning. Similarly, the predicate *tu egwu* has also been wrongly glossed as 'strike fear' which would imply the meaning 'frighten'. But there are two different ICVs for 'fear' and 'frighten' within one and the same dialect:

-tụ́ egwù	'fear'
-yí egwù	'frighten'

or

-tụ́ ụjọ	'fear'
-ménye ụjọ	'frighten'

The first pair belongs to General Igbo, while the second belongs to Mbaisen: observe that the Mbaisen equivalent is a compound verb with *nye* as the second root, a fact which gives the compound verb a causative meaning. The use of both verbs is illustrated in the following examples:

(66) a [Á + tụ́ + na] mmadụ̀ égwù
IMPER-Pref fear NEG person fear:
Don't fear anybody.

b [É + yí + na] mmadụ̀ égwù
IMPER-Pref frighten NEG person fear:
Don't frighten anybody.

c [É + ménye + ne] mmadụ̀ égwũ/ụ́jọ.
IMPER-Pref make give NEG person fear:
Don't frighten anybody.

These examples underscore the importance of cross-dialect data in our effort to pinpoint the individual meanings of the root verbs. Secondly, they also suggest that success in that pursuit is likely to be limited because what seems to have happened is a gradual but persistent widening of the semantic coverage of the roots to the point of extreme vagueness. Consequently, specificity of meaning could only be restored through a strategy in which an extremely vague root is immediately followed by a meaning-specifying noun/inherent complement. In spite of this, most of the outputs of this long process can best be treated as a type of fixed or frozen compounds that are best seen as idioms. Compare the following ICVs with *dà* as root verb:

(67)	-dà	ọ́nụ	'be costly'
	-	áka	'be uneven, asymmetric, unequal'
	-	ógbù/ógbì	'be dumb'

-	ǹgwǫ́rǫ	'be lame'
-	ǹhá	'fine, penalise'
-ri	ìwú (Mbaise)	'fine, penalise')

Which of the above meanings can one justifiably associate with the meaning of *da* 'fall'? It seems a difficult question to answer. Even with the non-productive ICVs, the resolution of the problem of constituent meaning does not prove any easier, as the following clearly demonstrate:

(68)	-jú	oyi	'be cold'
	-kpǫ́	ǫkụ	'be hot, warm'
	-rá	ahụ	'be difficult'
	-kǫ́	ǫnụ	'make disparaging remarks'
	-nú	ǫkụ	'get heated,warm'
	-nyá	ǫkụ	'warm oneself'

Examples such as these are definitely more widespread than prolific clusters involving a single root, a fact which suggests that clusters are the exceptions rather than the rule. This being the case, it is not at all surprising that the vagueness of root meaning increases with the size of the cluster.

Another criterion, which applies in general to derivationally related structures, is Weinreich's transformational deficiency, i.e. syntactic irregularity or non-productivity such as became the focus of attention in Chomsky's 1970 Lexicalist Hypothesis. But there is nothing irregular or unproductive about either BVC-Movement or IC-Movement: this movement allows a basic condition on well-formed predicates to be met, i.e. the Case Filter of Chomsky 1981. It applies only when there is a constituent intervening between an object and its case assigner. The only items that can be found in such a position happen to be BVC's or IC's since none of the small number of adverbs in Igbo can occur in that position. The attraction of a prepositional object to a position immediately after the bound -rV prepositional suffix

is also of the same order: the object of the prepositional phrase must be adjacent to its case assigner. Following our earlier suggestion that these two constituents be seen as (verbal) particles, we can categorically state that they become obligatorily moved away from their verbs whenever there is an internal argument.

The semantics of Igbo ICVs forces the following conclusions: the ICVs divide into two classes — those that are truly opaque (the idioms) and those whose meaningns are compositional; this latter group consists of those members which have their ICs as patient or theme. For members of the first group, efforts have been made to find some meanings for the root verbs without much success; given our state of knowledge, we can conclude that the only meaningful approach to these verbs is in terms of predicate and not constituent meaning. The interesting point is that Igbo makes use of V + N collocations exclusively, with the semantic burden always falling on the N, whereas English uses V + Prep, with the V carrying most of the meaning.

3.11 Verbs of Bodily Sensation

The English language and, possibly, other European languages express various bodily sensations in the following manner:

(69) a I am hungry/thirsty/tired/sleepy/feverish/cold/hot, etc.

b I have headache/cough/cold/sore throat/belly/stomach upset, etc.

c I am feeling dizzy/sleepy/like vomiting/depressed, et cetera.

In each of these sentences the subject of the sentence is the experiencer of the of the relevant sensation, regardless of whether it is expressed with the verb 'to be,

have, or feel'. But the Igbo equivalent of these sentences displays a different type role relationship in which the sensation is perceived as afflicting the experiencer, which seems much more natural/primitive than their English equivalent sentences. Below are some illustrative examples presented according to the type of verbs they require in order to express the sensations.

(70) a Ágụụ́ nà agụ́ mḿ.
Hunger PROG afflict me: I am hungry.

b Ágụụ́ jì mḿ.
Hunger holds me: I am hungry.

c Èbí kpà mí (Yoruba)
Hunger holds me: I am hungry.

d Àhụ́ ọkụ́ jì mḿ
Body of fire holds me: I have fever.

e Ísi nà awá Iké
Head PROG break Ike: Ike has headache.

f Áfọ nà ahyí nwá m
Belly PROG twist child my: My child has belly ache.

(71) a Ọ́kọ okpòrókó dị́ há
Chicken pox is them: They have chicken pox.

b Nwáọ̀rị dịcha ụmụáká à.
Guinea worm is-all children these:

These children are all suffering from guinea worm.

c Òkpóọ̀nụma dị́ Ógù n'ụ́kwụ
Abscess is Ogu on leg:
Ogu has an abscess on his leg.

d Àka dị́ nné há n'àzụ́
Hunch is mother their on back:
Their mother has a hunchback (cf. aka azu 'hunch back').

(72) a Ǹshí nà ákpà nwátà.
Faeces PROG press child:
The child is pressed for stooling.

b Mámíri/Nwáámiri gà ákpá yá
Urine will press him:
He will be pressed to urinate.

c Ọ̀gbụgbọ́ nà enú mḿ
Vomiting PROG push me:
I feel like vomiting.

Observe that in each of these examples, the various bodily sensations, biological needs, or illnesses function as subject, while the individual is viewed as the experiencer and patient. This constitutes an obvious point of difference between Igbo and English, and also indicates the language-specific perceptions of these human experiences. Mary Laughren (1986) has drawn attention to a similar phenomenon in Warlpiri, an aboriginal language of Australia: Yoruba, Igbo's biggest neighbour among the Kwa languages of West Africa, has identical ways of expressing the same

phenomenon, which must be widespread in other Kwa languages. The question that begs for an answer is how to assign theta-roles to the arguments of predicates describing these human sensations. It seems that the method must vary from language to language.

4 Some Transitivity Alternations in Igbo

In this final section, we present some diathesis alternations in Igbo: the aim is simple: to see whether the same semantic class of verbs in different languages are involved in the same type of alternation. The comparison here is between English and Igbo, with occasional reference to other languages such as Moroccan Berber (cf. Guerssel 1986 and 1987).

The type of transitivity alternation that predicates exhibit in English has been the subject of serious study in the research program of the Lexicon Project of the Center for Cognitive Science at the Massachusetts Institute of Technology; thus Hale and Keyser (1986:1) summarise the gaols of the project as follows: "to design lexical entries, primarily for predicators, which will express the linguistic knowledge which a speaker of a given language possesses in relation to lexical items." The limited objective of this section is to discuss certain alternations involving Igbo verbs, especially transitivity alternations. In Igbo such alternations generally involve a change in the morphology of the verb, whereas in English, they do not.

4.1 Transitivization

The term **Transitivization** is used here to characterise the derivation of a binary function from a unary one, (i.e. the derivation of two-place predicate from a one-place one). When applied to an unergative verb in Igbo, the process involves the introduction of an external argument that assumes the subject grammatical role of the new verb as defined by the Predication Principle, (cf. Williams 1980), while the subject of the unergative verb becomes its patient, thereby assuming the object grammatical role according to the linking convention given as no. (6) in section 1.4. The examples that follow illustrate the point being made.

(73) a Ógù [a + vọ́ - ọ + la]
Ogu Pref. be open OVS Perf.Suff.:
Ogu has become disgraced.

b Íbè [e + mé + vọ + ọ + la] Ogù
Ibe Pref.+ do + be open + OVS + Perf. Suff. Ogu
Ibe has disgraced Ogu.

Note how the verb's argument structure varies with reference to the presence/absence of the causative root, **mé**, which means 'do, make '. Although the morphological process that gives rise to the transitive verb **mévọ** is generally described as causativization, it is part and parcel of the process of compound-verb formation in the language, which involves two root-morphemes, the first being a transitivizer, and the second, an unergative verb. Whenever compound-verb formation in Igbo involves a transitive root acting as a prefix to an unergative verb-root, the output is a transitive verb.

Although most verbs in Igbo can be made transitive through this morphological process, it is not the case that transitive verbs can also become intransitive in the same way. The transitive-intransitive relation in the language is not symmetrical as is the case in Berber, a language in which both transitivization and detransitivization occur as a morphological process, (cf. Guerssel 1986). Once transitive, an Igbo verb does not become intransitive unless such a verb happens to be one of a small subset of verbs that participate in middle formation, which is discussed in section 4.3 below.

4.1.1 Transitivization as Causativization

Except for the verbs of weather conditions and maturation, most if not all other unergative verbs in Igbo can be transitivized; the process consists in prefixing the root of a semantically appropriate verb to the intransitive verb, thereby making the

output a transitive, compound verb. The causative prefix seems always to be an action verb, and this fact makes it possible for stative verbs to become transitive, action verbs through causativization. The most productive, single causativizer is the root verb, **mé**, which can co-occur with any verb to produce a trnasitive compound. as the following examples illustrate; in the examples that follow, the more literal meanings are given first, followed by the idiomatic use:

(74)

Unergatives		Causativized Transitives.	
jọ́	'be bad'	méjọ	'treat badly'
hyè	'be not straight, be crooked'	méhyè	'offend, go astray'
vọ́	'be visible, appear'	mévọ	'expose, disgrace'
bì	'be spoilt'	mébì	'spoil'
jà	'become crushed,	méjà	'crush, disgrace'
zí	'be straight'	mézi	'repair, correct'
zù	'be complete	mézù	'complete'
fù	'be lost'	méfù	'spend, sell off'
jú	'be full'	méju	'fill, fulfill'
khwú	'be complete'	mékhwu	'complete'
sú	'become aroused'	mésu	'arouse, stir up crisis'
dà	'fall'	méda	'cause to fall'
bhà	'enter'	mébhà	'implicate'

Another prolific transitivizer is the root **gbá**, which has the general notion of motion as its core meaning [1] but it is not as productive as

mé. In the following sentences we illustrate the use of compound verbs resulting from the combination of **gbá** and certain unergative verbs.

[1] Obviously, there are a number of different verbs in Igbo with the same phonetic shape. Apart from the one meaning 'to ride' in 75a, there is another one meaning 'to churn/turn' which is obviously what we have in 75b. The *gba* in (d) is also different, it has a meaning related to 'expose'. It is thus impossible, and indeed wrong, to try to pull all this together into one gloss.

(75) a [Á + gbá + dà + la] úmùáká, bikó nwa mí.
IMPER- Pref. ride fall NEG children, please, child my:
Please, my child, don't run over any children.

b Ázụ̀ ńdụ̀ na agbájà n'ófe.
Fish fresh HAB churn-crush in soup:
Fresh fish dissolves in soup.

c Ányị̀ ga agbákwu há mà ányị̀ bìlíe ùgbú à?
Q We shall run meet them if we set out time this:
Shall we catch up with them if we set out now?

d Lèkwé onye gbávọ̀rọ̀ unù.
Look person that exposed you:
Look at the person who exposed you.

Note the resultant compound verb is compositional in meaning, with the first constituent generally indicating the manner of action of the predicator. Take, for example, the following compounds with **kụ́** 'beat', as transitivizer:

(76)	**kụ́wa**	hit break	'break by hitting'
	kụ́bì	hit snap	'cause to snap by hitting'
	kụ́bhya	hit depress	'cause to depress by hitting'
	kụ́kpọ̀	hit burst	'burst by hitting'
	kụ́ji	hit break	'break by hitting'
	kụ́zhen	hit crumble	'demolish'

The co-occurrence restriction between the verb and its arguments is responsible for these different compound verbs; for example, **kụ́ji** can only be used of metals, woods and such objects that can break into two parts, but it cannot be used of earthenware, or any object capable of shattering into many pieces, for these **kụ́wa** is the

appropriate verb. Other transitivizing roots include **bì**, 'ram, smash'; **kwà**, 'knock together items with hollow in them'. Each of these can form transitive compounds just as **mé**, 'do' does, though they are not as productive. Transitivization in Igbo is a complex and fascinating subject beyond the scope of this monograph, and we do not pretend to have provided any systematic account of it here.

4.1.2 The Inchoative Suffix, -wa/we

The fact that the inchoative transitivizer happens to be a suffix does not in any way suggest that it has no verbal origin, far from it. It is now an accepted assumption that all Igbo suffixes were once verbs which have reananlysed as function words, (cf. Emenanjọ 1983; Nwachukwu 1976, 1985, 1987). What is interesting about this morpheme is the fact that it is limited in function to a small set of semantically coherent verbs, and it has an inchoative meaning. Consider the following examples:

(77) a Àfe isé kòro n'ezí
Clothes five are hanging in compound:
Five items of clothing are hanging outside.

b Ókwu kòwere afe isé n'zi
Okwu hung clothes five in compound:
Okwu spread five items of clothing outside.

(78) a Ọ́dụ gbábiri n'agà ibhó.
Pestle is leaning by side of door:
A pestle is leaning by the side of the door.

b Ònyé gbábiwere ọdụ n'agà ibhó?
Who made lean pestle by side of door:
Who leaned a pestle by the side of the door?

These two pairs of sentences tell the story: the (a) examples are intransitive clauses, while the (b) examples are their transitive counterparts. Quite often, the derived verbs in this class are bimorphemic. Other members of the class include the following:

(79)

Unergatives		Transitives	
gbábi	'lean'	gbábiwe	'cause to lean'
kpòghu	'sit'	kpòghuwe	'seat'
túkwù	'stoop'	túkwùwe	'cause to stoop'
dàbi	'lean'	dàbiwe	'cause to lean'
bì	'live	bìwe	'house, cause to live'
kò	'hang'	kòwe	'spread/hang'

Inchoative Verbs or an Inchoative Suffix

Unlike Berber, Igbo does not seem to have a class of verbs that can be adequately described as inchoatives. What Guerssel 1986 describes as inchoative verbs in Berber can be subsumed under our class of stative verbs. Such verbs include the Berber verbs meaning 'to swell, to be wet, to melt, to sleep, etc. If the term **inchoative verbs** denotes change-of-state verbs, then the class will include many more Igbo verbs than seem covered by Guerssel's list, (cf. Guerssel 1986:11). For example, Igbo verbs of maturation, growth and decay, change of colour and meteorological verbs would all come under the same class. As Guerssel points out, these verbs share the following features with stative verbs: (i) they are generally monadic verbs indicating a state which may be intrinsic or biologically determined;
(ii) their perfective forms express a meaning that is consistent with their stative meaning.
In Igbo, they have the same features, whether the state is an intrinsic feature of the individual/entity that is the argument of its verb, or whether the state comes about

as a result of some biologically determined change. Consequently, they exhibit the same *-rV* morphology in their present form, as shown in the following examples.

(80) a Ókwu tára ahụ. (tá ahụ is an ICV)
Okwu is emaciated.

b Ókwu átaala áhụ.
Okwu has become emaciated.

(81) a Ányá yá zára aza.
Eyes his are swollen.

b Ányá yá ázaala.
Eyes his have become swollen.

In 80a-b, we have a stative verb, while in 81a-b we have what Guerssel would describe as an inchoative verb. In Igbo, they all pass as stative verbs, and the question of deriving the LCS of one from that of the other does not arise because there is only one LCS. Manfredi's attempt to apply the same analysis to Igbo therefore fails, (cf. Manfredi 1978: 29, mimeo). However, there is an inchoative suffix in Igbo, the *-wa/we* suffix discussed in this section, whose function is to denote the beginning or continuation of an action/state, and transitivize a small class of Igbo stative verbs. This suffix co-occurs with all stative verbs since a state may have a beginning and an end.

4.2 The Middle Construction

The middle construction in English is an example of a diathesis alternation in that language which has been the subject of sustained investigation (cf. Guerssel, Hale,

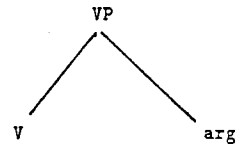
Laughren, Levin, and White Eagle 1985; Keyser and Roeper 1984; Hale and Keyser 1986, 1987). There is a transitive/middle relationship in the language, giving rise to to pairs of sentences such as **Sam bribes the jury easily** (transitive), and **The jury bribes easily** (middle). In terms of case and theta-role assignment, Keyser and Roeper (1986) held the view that the middle and passive constructions are formed in an identical way making use of the rule Move-alpha in the syntax (syntactic Move-alpha).

But Hale and Keyser (1986) reject this view, arguing that what is involved in middle formation is not the operation of Move alpha in the syntax, but in the lexicon (lexical Move-alpha). The effect of lexical Move-alpha is the deletion of the object node in Lexical Structure (LS), thereby freeing the patient argument from any commitment to the object grammatical role. The patient argument so "liberated" is now free to move into subject position in accordance with the Predication Principle; in other words, this process forces the externalisation of the internal argument.

The various approaches to middle formation in English agree only that a subset of transitive verbs form middles. However, not all of them agree that the condition on middle formation relies crucially on the feature [+ affected] on the direct object of the verb. It has been argued that the direct object of a transitive verb must be 'totally affected' by the action expressed by this verb in order for it to form a middle. Hale and Keyser state the condition as follows: "A dyadic transitive verb V may form a middle if and only if its object is TH-committed by the central participant in the LCS of V", (Hale and Keyser 1987:7). The above formulation implies that if a verb forms a middle, then it has an LCS of the form in 82.

(82) x cause [y "undergo change", (by ....)]

The projection of this LCS in syntax is as shown in Fig. 14 below.



[x brings about linear separation in y]

Fig. 14.

Thus, the English verb **cut**, which forms forms a good middle, must have an LCS roughly of the form in (83).

(83) x cause [y develop linear separation in material intergrity, by sharp edge coming into contact with the latter]

What Hale and Keyser call the "central event" in the above LCS is the subpart represented by the inner square brackets, it represents the circumstances in which some entity, the y-participant, undergoes a change from not having to having a separation. Other English verbs which must have the same structure as part of their LCS are given in 84.

(84) 'crush, slice, pierce, assemble, transpose, corrupt, convince, persuade, discourage, shock, anger', etc.

BY contrast, other transitive verbs such as 'see, hear, smell, hit, stab', etc do not have LCS representations of the type under discussion. They therefore do not participate in the middle formation. This brief discussion of middle formation in English is meant to serve as a necessary background for an examination of the same phenomenon in Igbo in the following section.

4.2.1 The Unaccusative and Unergative Distinction

The middle construction in Igbo cannot be adequately discussed in isolation from ergative verbs; we use the term 'ergative' to describe a subset of transitive verbs with two uses, a transitive use and an intransive one. The intransitive use of a transitive verb is its unaccusative use; the verb 'to bribe' has been used in that sense in this section. Such a use represents a type of transitivity alternation: thus, all ergative verbs are involved in this type of transitivity alternation that we shall examine in this and the following sections. Unergative verbs, on the other hand, are the canonical intransitive verbs, they therefore do not participate in any transitivity alternation.

Consider the following examples in 85 and 86:

(85) a Èbelè́ mái nwá wára awa.
Gourd of wine the broke BVC
The gourd of palm wine is broken.

b *Ònyé wára èbelè́ mái nwá?
Who broke gourd of wine the:
Who broke the gourd of palm wine?

(86) a Ebèlè́ mái nwá kụ̄wara akúwa.
The gourd of palm wine is broken. (= 85a)

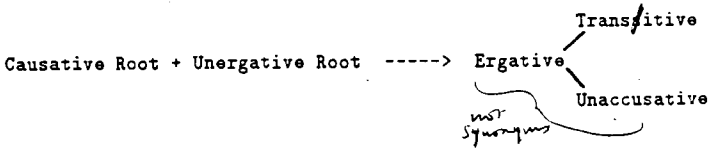
b Ònyé kụ̄wara ebelè́ mái nwá?
Who broke the gourd of palm wine? (=85b)

Observe that 85b is ill-formed, whereas 86a-b are perfectly grammatical and acceptable, yet they contain the same verb *wa*. The verb in 85 is monosyllabic, it is strictly speaking an unergative verb that never governs an object. This fact accounts for the ungrammaticality of 85b. The verb in 86 is a combination of *wa* plus a transitive root ku, the resulting compound is a transitive verb that governs an object, (cf. section 4. 1.). For the same reason, only the transitive compound can participate in the transitivity alternation exhibited in 87 below.

(87) a Éhi tàfuru ebelè́ mái m
Cow bit open gourd of palm wine my:
A cow bit open my gourd of palm wine.

b Èbelè́ mái m tàfuru atafú
Gourd of palm wine my has hole through biting:
My gourd of palm wine is leaky (from a hole bitten into it).

The type of transitivity alternation displayed in 87 is what we describe as ergative alternation, and it involves only transitive verbs; 87a represents the transitive use of the verb, while 87b stands for the unaccusative or intransitive use. As we shall demonstrate leter, middle formation in Igbo involves compound verbs such as *kuwa* and *tafu* in these examples, each of which can be analysed into its immediate constituents thus: Transitivizer + Unergative Root. The whole process can represented diagrammatically as in 88 below.



For the vast majority of Igbo ergative verbs, there is the above derivational link with simple, monosyllabic, unergative roots; the simple unergative verb never

participates in the alternation, a fact which explains the ungrammaticality of 85b. Although 89a-b are very often taken to be synonymous, they are not exactly so; the verb in (a) is an unergative verb, while (b) contains the ergative (transitive), compound derivative of the verb in (a). In addition, the verb in (b) tells us the manner of the plate's breaking, while (b) does not. On the other hand, 89c simply tells us that *kụwa* is a transitive verb.

(89) a Éfere à wára awa. (unergative -wá)
Plate this is broken.

b Éfere à kụwara akụ́wa. (ergative -kụ́wa)
Plate this is broken

c Ógù kụwara éfere ḿ.
Ogu knocked break plate my

4.2.2 The Middle Construction in Igbo

In Igbo, more than in English, the middle construction is the output of a transitivity alternation involving verbs that we have described as ergatives, following Keyser and Roeper 1984. As we shall show in 4.3.2., middle formation in Igbo is much more constrained than it is in English and the constraint on middle formation is always semantic. For example, there is no middle verb in the language that does not participate in what we describe as ergative alternation. But this is not the case in English where the class of ergative verbs is but a subset of the class forming good middles in the language. Further more, Igbo middle verbs are also those verbs with transitive and unaccusative uses occurring in a form that is morphologically distinct from that of the unergative counterpart. Very often, the unergative verb is monosyllabic, while its ergative counterpart is always bimorphemic, being the output of compounding

or causativization. In other words, the verbs that form middles in Igbo exists in suppletive pairs of transitive and unergative verbs, and only the transitive members participate in middle formation. This observation provides conclusive proof that only transitive verbs participate in the alternation cross-linguistically. This point is important, especially for languages such as English where members of the pair are very rarely morphologically distinct, except in the case of the pair die and kill, which happens to be an instance of suppletion.

The Grammar of Middles

It is thus clear that there exist some differences between the class of English verbs that form middles and their Igbo counterparts. Does this difference entail a different grammar for Igbo middle formation? Igbo lacks the passive rule, so there is no question whatsoever of equating middle formation in the language to a non-existent passive rule. One has therefore to look for another relationship that does not involve syntactic Move-alpha. Below we repeat some of the examples illustrating the transitive and unaccusative uses of what we take to be representative of Igbo middle verbs:

(90) a Èfe ḿ kára aka. (unergative -rá)
Clothes my are torn: My clothes are torn.

b *Úchè kára èfe ḿ.
Uche tore clothes my: Uche tore my clothes.

(91) a Ógù dọkara efe ḿ. (ergative -doka)
Ogu tore clothes my: Ogu tore my clothes.

b Èfe ḿ dọ̀kara adọ́ka.

Clothes my are torn: My clothes are torn.

For reasons which have already been advanced, 90b is ill-formed because the verb involved is unergative; therefore, there is no relationship between 90a-b. In 91, on the other hand, *dọ́ka* is an ergative compound verb, both (a) and (b) are not only grammatical, but share a relationship such that (a) represents the transitive use of the verb, while (b) stands for its unaccusative or intransitive use. The task of the analyst is to suggest how 91b is related to 91a, and in particular, how *éfɛ m* 'my clothes' functions as object of the verb in (a), but as subject of the sentence in (b).

The vast majority of Igbo verbs which form middles exist in the following type of suppletive pairs.

(92)

-- wá	(unergative)	'break'
gbáwa	(transitive)	'burst open, break'
tíwa	,,	'break by beating'
kpọ́wa	,,	'split open'
bíwá	,,	'break by knocking'
kpèwá	,,	'break by pulling apart'
dọ́wa	,,	'tear'
nyàwá	,,	'split'
jí	(unergative)	'break' (as of solid objects)
bíji	(transitive)	'break by knocking against sth.
gbàji	,,	
kpàji	,,	
gbúji	,,	
dàji	,,	
sọ́ji	,,	

kụ́ji ,,

What makes this large number of verbs meaning 'to break' possible is the co-occurrence restriction holding between the verb and its direct objects, a phenomenon which has been pointed out by Anoka (1983) with reference to the Igbo verbs meaning 'to buy'. In this language, the intrinsic nature of the direct object determines the verb that best expresses the mode of its breaking. As one can see, all these verbs belong to one semantic class and they all denote change of physical state with its attendant feature [+ affectedness].

The verb **da** 'cut' is very interesting for what it has to reveal about the feature [+ affectedness]. The verb simply means 'to inflict a cut' on the patient argument; even though the verb is transitive and commits its direct argument to the central action that it expresses, nevertheless, this verb does not form a middle because its direct argument is not 'totally affected'. But the related compound **dábè** 'cut into pieces' regularly forms a middle construction because its patient argument is totally affected. Thus, we can say:

(93) a Dàá osisi mmà
IMP-cut tree knife: Make a cut on the tree.

b Ápụ na adábì ńgwańgwa
Silkcotton tree ASP cut to bits easily:
A silkcotton tree easily cuts into bits.

c Ọ́kpòróko̍ ǹkó à na akwọ́bì ńgwańgwa.
Stockfish this ASP saws into pieces easily.

Other verbs of 'cutting' which behave exactly like **dá** in that they require **bè**

'be at an end,end', or **ji**, 'break' to form their middles are listed below; each sample verb is followed by its transitive compound, the only form that can form middles.

	(Trans.)		(Trans.)	
(94)	gbá	'bend, twist'	gbáji	'break by bending'
	kpà	'clip'	kpàji	'break by clipping'
	tí	'beat'	tíji	'break by beating'
	gbú	'kill,cut'	gbújí	'cut into bits'
	sọ́	'knock'	sọ́ji	'break by knocking'
	dọ́	'pull'	dọ́ji	'break by pulling'

Observe that although we are dealing with transitive verbs all the way, only the related compounds can form middles, a fact which makes them look like the compounds verbs resulting from transitivization, (cf. section 4.1.1 exx. 74-79).

The behavior of verbs such as these underscores the crucial importance of the feature [+ affectedness] in middle formation in Universal Grammar. From the data examined so far, the following points emerge: (a) middle formation is a property associated only with transitive verbs;
(b) certain languages (Igbo, for example), require that the patient argument be not only affected, but be totally affected by the central action expressed by a verb before middle formation is possible with certain transitive predicates;
(c) the existence of two morphologically distinct forms in Igbo, a mono-morphemic set (may or may not be unergative) which never forms middles, on the one hand, and a bimorphemic, transitive set whose members always form middles, on the other, reflects the choice that languages have to make in expressing transitivity alternations syntactically: it is a choice between having one and the same form, or two morphologically distinct forms for the alternation.
Whereas English employs the first option, Igbo makes use of the second option.

4.2.3 The LCS of These Igbo Pairs

One of the issues raised in Hale and Keyser (1986) is that of relatedness, especially, the relationship between the two members of the ergative alternation. In Igbo, we have two levels of relation to deal with: the relation between the unergative verb on the one hand, and its ergative counterpart on the other; and secondly, the relation between the two memebers of the ergative pair. The first relationship is purely derivational: the transitive (ergative) verb derives from the unergative one via the process of compounding/causativization. This relationship is lacking in English. The second relationship is what Igbo has in common with English, that is, the essential derivational relationship between the members of the ergative alternants.

There is no doubt whatsoever that the two alternants are related in every linguistically significant sense, they are in fact one and the same verb. A number of hypotheses are cited in Hale and Keyser to capture this relationship - the Primitive Conceptual Structure of Guerssel (1986), the Root-related Homonyms of Higginbotham (1986), and the theory of Conceptual Structures and Correspondence Rules developed by Jackendoff (1983, 1986). Out of these hypotheses, Hale and Keyser settle for Guerssel's Primitive Conceptual Structure, arguing that it is 'the most elemental representation of lexical conceptual structure'. According to them, the word 'lexical' is, perhaps, inappropriate since the PCS is probably 'prelinguistic' and may, therefore, have nothing to do with the argument-taking properties of a verb. Tentative as the PCS hypothesis may be, they argue that it is a step in the right direction.

Given the facts of Igbo, i.e. the derivational relationship and isomorphism between the members of the ergative pair, no level of PCS seems called for. It is simply enough to give the LCS of the transitive verb and that of its unaccusative alternant is *de facto* given. Let us once more reflect this derivational relationship as follows:

(95) Causative Root. + Unergative --------> Ergative ⟨ Transitive / Unaccusative

What is clear is that the unergative, the transitive and the unaccusative are derivationally related, the root morpheme being the unergative verb to which the causative marker is prefixed. As has been pointed out time and time again, the alternation holds between the transitive pair, whose members are already derivationally related, and must, therefore have identical core meaning in the sense already suggested by Hale and Keyser. In Igbo, the situation seems clear: the difference lies in the occurrence of an agent in the transitive construction and its absence in the unaccusative clause. How is this syntactic difference brought about?

Igbo has no passive rule and no passive constructions; the nearest to English passive sentences is in the form of indefinite constructions which must be distinguished from the indefinite passive constructions in languages such as French. The following illustrate the Igbo examples of indefinite constructions.

(96) a Á tụ̀rụ ńnukwu alọ́ bára urù
One put forward many plans that are useful:
Many useful plans/suggestions were put forward.

b É tìri óke egwú n'ahya
One beat great music in market:
Very good music was played in the market.

None of the Igbo sentences above contains any passive participle, which is crucial to any passive construction in English. Such a verb-form does not exist in Igbo. This fact rules out any conceivable relationship between the passive and the middle construction in the language, and, consequently eliminates syntactic Move-alpha as

a possible derivational relationship between the two constructions. There can be no relation between the passive and the middle constructions in a language without the passive. Since a process of syntactic Move-Alpha is ruled out, what other option is available for the language?

The fact that the Igbo verbs being discussed here each contains the causative marker forces one to the conclusion that they must have the same LCS. How does one account for the absence of this agent in the unaccusative variant? Hale and Keyser suggest an alternative analysis which avoids syntactic Move-NP even for English. By this analysis, the LCS of ergative verbs is the same for both middles and unaccusatives, which in fact amount to the same thing: where middles or unaccusatives stand for the intransitive members of an ergative alternation. I adopt the same analysis for Igbo middles which, by reason of the facts of the language, can be no other than unaccusatives. Thus, the Ergative-Middle alternation can be represented as in 97 below.

(97) [x cause [y ''undergo change''], (by ....)]

<----------->

[[y ''undergo change''], (by.....)]

As Hale and Keyser point out, this rule embodies the claim that middle formation and ergative alternation are grammatically equivalent, and this is the claim that we strongly make for Igbo, namely that a middle verb does not differ in any linguistically interesting sense from the unaccusative member of an ergative alternation. As we pointed out much earlier, there are no middle verbs in Igbo that do not also participate in ergative alternation. The observable difference in the above rule is the absence of "causer" in the LCS of the middle/ergative alternant: our

concern in the rest of this section is to show how the middle/unaccusative verb gets its surface syntax.

According to the Unaccusative Hypothesis (cf. Burzio, 1981), the single argument of an unaccusative verb is a deep-structure object. This hypothesis is generally accepted within the Government and Binding framework, although its origin is in Relational Grammar (cf. Perlmutter, 1978). Given this hypothesis, we must find the process that brings about the surface-structure difference, that is, the fact that this same argument becomes a s-structure subject in the middle/ergative alternation. The rest of the exposition follows Hale and Keyser (1986). I briefly repeat their argument here.

Syntactic Move-NP is ruled out as the operative mechanism that converts a d-structure object into an s-structure subject on grounds of the peculiar facts of Igbo syntax, (cf.4.3), and the reason is not necessarily the same reason that makes it unacceptable for English. But the theory of lexical semantics plus the Keyser and Roeper notion of lexical Move-alpha suggest a way out. Recall that according to this theory, the entries of a verb includes not only a representation of its meaning (the LCS) but also a representation of its syntactic projections (the LS), which defines the grammatical functions of the arguments of the verb. In Fig.14, for example, the LS projection of the transitive verb, **gbaji** is given; the patient argument represented by the y-variable is committed to the object grammatical function, while the agent argument, represented by the x-variable, is not theta-committed by the verb and therefore has to be assigned an external role.

Within the framework, the LS of an unaccusative verb would be identical with that of a canonical transitive verb, that is , essentially as in Fig.14 above, with the difference that the unaccusative verb has no external argument. Consequently, the lexical representation of a typical unaccusative verb is as follows:

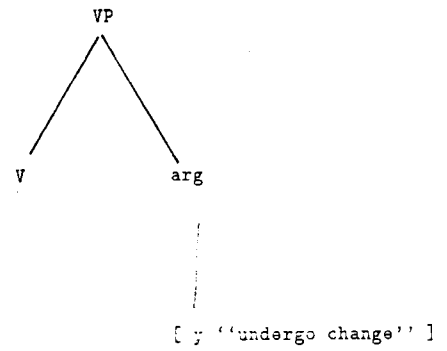


Fig.15

The figure above contrasts with the lexical representation of a typical intransitive (unergative verb, according to Perlmutter, 1978), such as *nwu*, 'die'; *da*, 'fall'; *gba oso*, 'run'; *ba uru*, 'be useful'; et cetera. Because these verbs are intransitive, their LS contains no object argument. The LS of an intransitive (unergative) verb is simply as shown in Fig.16.

Fig.16

What is required is an operation that would convert Fig.15 into Fig.16, that is, a process that would force the single argument of an unaccusative to assume the subject function in sentential syntax. The assumption is that such a mechanism already exists in Universal Grammar, as conceived within the Government and Binding framework. Specific reference is made by Hale and Keyser to the extension of Move-alpha proposed by Lasnik and Saito (1984), according to which the rule will encompass deletion in addition to what is traditionally regarded as movement. If we permit Move-alpha to apply in the lexicon, that is, specifically to the lexical syntactic structures which we describe as LS, then the natural realization of the rule will be "deletion" rather than movement for the reason that the subject position in English, as in Igbo, is not visible to the verb until the verb enters into a sentential syntactic construction with INFL. Thus, Move-NP deletes the object node (that is, the node labelled "arg" in the LS representation), thereby liberating it from its commitment to the object function. In this way, the "liberated"argument is assigned to subject position in surface syntax.

As worked out by Hale and Keyser, the account above incorporates the essential and relevant modifications in the theory of Government and Binding. It seems the only plausible account of middle formation or ergative alternation in languages such as Igbo, where the passive rule does not exist. That this analysis is good both for English and Igbo provides it with additional support. A passive analysis of the ergative alternation would have to explain how it is that Igbo and other languages like it have the ergative alternation, while lacking the passive rule.

Our only hesitation about the analysis stems from intuition, the intuition that two members of an ergative alternation, being morphologically identical, should have the same LS. But this is not necessarily correct for the simple reason that "the means" through which change is brought about is not always an agent. The means is embodied in the meaning of each individual ergative verb in the form of the first component of the transitive compound. For example, a piece of metal or wood can fall off a moving vehicle and break *kujie*; the branch of an orange or mango tree can

become so heavily laden with fruits that it breaks off from the parent tree and falls to the ground, *kwọ̀jị̀*; repeated use of a string on your clothes can give rise to slow but consistent wear so that the string eventually snaps, *ribi*, and so on. Thus, for each of these verbs "the means" is morphologically expressed and need not involve an agent. At any rate, the application of the rule of lexical Move-alpha to this LS accounts for the surface difference between middle constructions and their related transitive (ergative) clauses. In other words, the surface difference is due to their different derivational histories.

4.2.4 Igbo and English Middle Formation Compared

Only a transitive verbs whose direct object is totally affected by the action expressed by such a verb can form a middle in Igbo. This means that only the patient argument whose physical condition is totally changed as a result of the action of its verb can participate in middle formation. Of course this does not mean that all such verbs are involved in middle formation. As a matter of fact, verbs such as *gbù* 'kill' do not form middles, whereas verbs of destruction generally do; verbs of eating do not, whereas those of washing do. Definitely, no verb of change of location, and no verb of transfer of possession is ever found in the middle/ergative alternation in Igbo. This fact would suggest a change in the definition of the condition on middle formation even in English, if such a condition is meant to have any claim to universal status. It has always been my conviction that any rule of language that is semantics-based stands a better chance of belonging to Universal Grammar than one that is not so based. The alternative is, of course, to see the condition on middle formation as language-specific. But the fact remains that those verbs which Hale and Keyser describe as puzzling in their behaviour with respect to middle formation are precisely the same verbs that do not form middles in Igbo. On the other hand, all the change of state verbs that form good middles in English do so in Igbo, too. It would be wrong to see this correspondence as mere chance. The regularity observed in Igbo middle formation is obviously part of the native speaker's lexical competence. It

is what makes it possible for the Igbo child to generalise the condition on middle formation without having to look at each and every transitive verb in the language.

Another issue relevant to this section is the occurrence or non-occurrence of 'with instrument' and 'by instrument' in middles and passives, a fact which Manfredi (1987) discusses in detail in an effort to distinguish between middles, anti-causatives and passives. Since there is no passive rule in Igbo syntax, the distinction between middles and passives is irrelevant. Furthermore, sentential expression of instrument or means of doing something is possible in Igbo only in the form of serial verb constructions such as that exemplified in 98 below:

(98) a Ógù jiri ḿmà tíe ḿ.
Ogu used knife strike me: Ogu stabbed me with a knife.

b Há jìri ókpì kụ̀gbuo agwọ̀
They used club beat-kill snake:
They killed the snake with a club.

c Há kụ̀gbúru agwọ̀ (n') okpì.
They beat-kill snake with club

4.2.5 Causatives and Anti-causatives in Igbo

It must be assumed that the causative/anti-causative distinction is relevant only to English, and not to Igbo for all the steorotypical cases of the ergativity alternation or middle formation in the language involve what Guerssel describes as "morphologically induced transitivization", which has been characterised in section 4.1. as an instance of causativization. There are only very few exceptions, involving verbs such as *shi* 'cook', which do not require any causative morpheme because they are already transitive, as the following examples show.

(99) a Ńné shìri ánụ
Mother cooked meat.

b Ánụ shìri n'ọ́kụ
Meat is cooking on the fire.

The case of *gbe onu* 'open mouth, be open' is a bit tricky, but the verb follows the same causative pattern of ergative formation: 100a below must be given an intransitive reading, while its (b) counterpart with the prefixed root me has a transitive meaning and, consequently, is the only form of the verb that can participate in the ergative alternation exhibited by (c).

(100) a Ọ́ba jí ghère ọ́nụ
Barn of yams opened mouth: The yam barn is open.

b Ònyé mèghere ọ́ba ji (ọnụ)?
Who made open yam barn mouth: Who opened the yam barn?

c Ọ́ba jí mèghere eméghe.
Barn of yam opened BVC: The yam barn is open.

Although (a) and (c) are synonymous, the ergative relationship holds between (b) and (c) and not between (a) and (c).

Other verbs which Manfredi cites from Emenanjo 1986 as ergative verbs are certainly not ergative. It is true that some alternation exists among the following sentences, but it is not the ergative alternation for the simple reason that the verbs involved do not belong to the same semantic class as the rest of Igbo ergative verbs, and the ergativity alternation does not involve the switching of subject and object,

as in these examples.

(101) a Ógù na akwá ụkwarà
Ogu ASP cough cough: Ogu is coughing.

b Ụ́kwarà na akwá Ogù
Cough ASP cough Ogu: Cough is worrying Ogu.

A small class of verbs with this type of alternation was first pointed out by Uwalaka 1981, but she did not describe them as ergative verbs. Similarly, what I regard as a casual observation by Emenanjo equates the verbs in the following examples with ergative verbs, but they certainly do not belong to that class of verbs.

(102) a Mmíri na ézo
Rain ASP fall: It is raining.

b Ọ́ nà ézo mmíri
It ASP fall rain: It is raining.

What we see as the subject of sentence (b) must be seen as pleonastic 'it', a feature that is never found in the ergative alternation. At any rate, it must be pointed out that the (b) form above is very restricted in use. The last set of examples are derived from our earlier study of inherent-complement verbs; in an earlier section of this paper, we have observed that the verb *tụ́ ụjọ*, 'fear, be afraid' must belong to more than one class of verbs. There is no doubt that it qualifies as an ICV, but it has another syntactic characteristic that sets it apart from other ICV's, a feature

that is reflected in the following examples; it is certainly not an ergative verb.

(103) a Ógù na atụ́ ụjọ mmíri
Ogu ASP fear fear of water: Ogu is afraid of water.

b Ógù na atụ́ mmíri ụjọ (= a)

c Ụ́jọ mmíri nà atụ́ Ogù
. Fear of water ASP strike Ogu: Ogu is afraid of water.

The sentences in the triple above are synonymous, and the ergativity alternation does not result in synonymous pairs. Above all, the form of a middle/unaccusative verb in Igbo is unmistakable: the verb-form always ends in the *-rV* stative suffix which always has a present interpretation. This fact is very important for it establishes an essential relation between the syntactic feature 'intransitivity' on the one hand, and adjectives on the other. Recall that Igbo adjectival verbs are invariably stative and intransitive (cf.3.5). Middle or unaccusative formation is a type of detransitivization: it is not surprising, therefore, it is in fact logical that the two forms — intransitive statives and unaccusatives— should end up in one and the same category, adjectival verbs. In trying to force the ergativity analysis on certain verbs, Manfredi appears to have missed this important correlation.

Symmetric and Not Ergative Verbs

The verbs in 102 and 103 which are cited by Manfredi are neither isolated nor idiosyncratic. There are other semantically related verbs that behave precisely the same way. They include:

- (a) verbs of psychological state, *ọ iwe*, 'be angry'; *mẹ ihere*, 'be ashamed, shy, shame'; and *tụ́ ụjọ*, 'be afraid, fear';

- (b) verbs of involuntary sensation, *ghé ughereé*, 'yawn'; *má uzereé*, 'sneez'; *kwá ụkwarà*, cough; *kpọ́ utùtúrú*, 'belch'.

What these verbs have in common is their ability to function as symmetric predicates, that is, they are able to interchange subject and object without any apparent change in meaning as illustrated in 102 and 103 and the following 104.

(104) a Ókwu nà emé ihereé = Íhereé nà emé Okwú.
Okwu PROG do shyness: Okwu is a shy person.

b Ókwu nà ewé iwé = Íwe nà ewé Okwú
Okwu PROG do annoyance: Okwu is annoyed.

The symmetry in these examples is due to the fact that the subject and the predicate swap positions without any change or loss of meaning. Although we may describe this as a type of alternation, it is not a case of transitivity alternation, and certainly, the verbs involved are not middle verbs. I rather label them symmetric verbs.

4.2.6 Middles: A Summary

This brief study and comparison of middles and unaccusatives (the ergativity alternation) in Igbo and English demonstrates that:

- middles are no other than unaccusatives, and the ergativity alternation involves only transitive verbs;
- the syntax of middles in both languages entails the lexical rule of Move-alpha, which is realised as deletion following the Lasnik and Saito extension of that rule to include deletion, and its application at LS by Hale and Keyser. This analysis provides a uniform treatment of the phenomenon crosslinguistically:

- the phenomenon is much more restricted in Igbo than it is in English. In Igbo, the alternation involves only verbs denoting change of physical state. Hence one can authoritatively talk of a coherent semantic class of ergative verbs in Igbo but not in English because the ergative verbs in English do not constitute a coherent semantic class. However, the heterogenous class of English ergative verbs includes the Igbo class as a subset;
- the occurrence in Igbo of two morphologically distinct verbs, the unergatives and the ergative transitives derived from them via compounding, establishes the ergative alternation in the language on a very firm formal grounds.

4.3 The Igbo Equivalents of English 'spray/load' Verbs

Another diathesis alternation which has been studied in some detail in English is displayed by the following English sentences:

(105) a They loaded hay into the truck.
b They loaded the truck with hay.

(106) a The demonstrators smeared paint on the walls.
b The demonstrators smeared the walls with paint.

These two verbs represent a semantic class of English verbs whose arguments can change their roles from 'theme and goal' (in a) to 'goal and theme'(in b). The role-changing operation, which is similar to Dative Alternation, always entails preposition deletion and the appearance of a new one in English.

The alternation displayed by 'spray/load' verbs in English has an analogue in Igbo. The alternation involves precisely the same semantic class of verbs, that is, verbs that take directional complements, with the preposition *na* performing the functions that the various English prepositions perform. Below are illustrative examples:

(107) a Íke kwára ivu nà móto
Ike packed load into car: Ike packed loads into the car.

b Íke kwára motò ívu
Ike packed motor load: Ike packed the car with load.

Observe that with this simple verb, **kwá**, the alternation is from theme and goal to goal and theme, i.e. from theme and goal to double object, (DOO), where the 'promoted' goal argument now assumes the role of primary object. This alternation is reminiscent of the Dative Alternation in English which also entails preposition deletion. Very often, however, a compound verb is used in Igbo, as in the following:

(108) a Há kwájuru ji n'olù .
They packed full yams in pit: They filled the pit with yams.

b Há kwájuru olù (na) jí (= a)
They packed full pit (with) yams:
They filled the pit with yams.

(109) a Ó tère ézigbo pènti n'ụlọ yá

He sprayed good paint on house his:
He painted his house in beautiful colors.

b Ó tére ụlọ yá ezigbo pènti (= c)

(110) a Tụọ́ ji àg'a ngá à
Plant yam ag'a place this:
Plant ag'a yams here.

b Tụ̀ọ́ ǹgá à jí àg'a. (= a)

PLant here yams ag'a. [2] : Plant aga yams nere.

Note that the possibility of an optional *na* preposition in these pairs is due to the presence of *ju* 'be full' which in Igbo always takes a locative argument; elsewhere, there is no preposition. As hinted earlier on, the effect of this alternation is to create a double object predicate in which the goal argument becomes a primary object. This is not surprising because the output of what we may describe as Locative Shift in Igbo can be characterised as a theme instrument-predicate. As proof that the second argument is instrument, one only needs to turn the examples into serial verb constructions as in (111). Thus, (a) is the serial construction, while (b) and (c) below represent the ergative alternation which amounts to stylistic variation.

(111) a Ó jìri ézigbo pènti tée n'ụlọ yá
He used good paint spray on house his:

[2] This is a type of yam that produces big tubers during the rainy season: it is generally harvested twice yearly: in July/August and in October/November.

He painted his house in very beautiful colors.

b Ọ́ téré ezigbo pèntì n'ụ́lọ̀ yá. (= a)
He painted good paint on house his

c Ọ́ téré ụlọ̀ yá ezigbo pèntì (= a)
He painted house his good paint

Thus, the serial verb construction is a veritable acid test for instrumental NPs in Igbo predicates. Any Igbo construction in which an instrument is used in doing something must be reducible to a serial verb construction in which **jì** 'use' or **wè** 'take' is the first verb in the series. The double object constructions given in (62a-e) are but shortened forms of serialised verb constructions resulting from Locative Alternation. Therefore, Igbo double-object verbs are of two types: the truly double object verbs, that is, the triadic verbs represented by **nyé** 'give', on the one hand, and instrumental NP verbs such as *kụ́, tí* etc. whose double-object property is the result of Locative Alternation/Shift.

4.4 Other Types of Alternation

This is the last section of the paper; its aim is very limited: to compare Levin's work in progress, 'A Verbal Diathesis List for English' with corresponding examples from Igbo. One would like to see to what extent the same or identical semantic classes of verbs are involved in the same or similar diathesis alternation. The section is therefore a summary list and a befitting conclusion to section 4. of this work.

4.4.1 Ergativity/Middle Alternation

Only verbs of change of physical state, which includes those of mixing, participate in the above alternation in Igbo; below is a sample listing:

Verbs of Change of State: gbaji 'break', mebi 'spoil', sapu 'wash clean', kubi 'break' et cetera.

Verbs of Mixing/Blending: gwá 'mix', gwágbu 'blend', kpárìgbú 'mix well, blend' et cetera. Unlike English, Igbo verbs of change of position or change of psychological state are not involved in this alternation.

4.4.2 Causatives

The causative morpheme is visible in Igbo. It is either present or not present in any given verb. It is certainly not present in the Igbo equivalent of the following Manner of Motion verbs: jump, leap, walk, march, fly, swim, et cetera. There is, therefore, no transitive/intransitive pair of sentences related by causativization in Igbo of the following type:

(112) a The horse jumped over the obstacle with ease.
b The man jumped his horse over the obstacle with ease.

Whereas Igbo has a direct equivalent of (a), the (b) sentence can take the form of a serial verb construction as below.

(113) Nwókó ahụ̀ gbára ịnyinya yá wufèé ọgbà.
Man that rode horse his jump pass fence.
That man jumped his horse over the fence.

Thus, the following Igbo manner-of-motion verbs do not display any transitive, intransitive relation:

(114) gá ije 'walk', wụ̀ 'jump', wúfè 'jump over/across', wụ́bà 'jump into', gbábè 'float', rùngbú 'drown, sink', gwù mmírí 'swim', ńúgbu 'drown, sink' et cetera.

4.4.3 Unexpressed Objects

Igbo is a language in which a predicate complement (object, adjective, adverb, PP, IC and sometimes BVC) is always expressed. The phenomenon of the so-called intransitive use of a transitive verb does not arise in the language. For the English 'He is eating', the Igbo equivalent is *'Ó ríịa ihe*: He is eating something.' But there are a few exceptions below.

Verbs of Bodily Care

Verbs of this semantic class provide one of the few exceptions to the statement above, namely that a predicate complement in Igbo is always overtly expressed. The object of a verb of bodily care is omitted whenever it is reflexive and understood, as the following show.

(115) a Ó jìkere ńgwańgwa.
He/She dressed quickly.

b *Ó jìkere onwé yá ngwańgwa (= a)
\bad *He dressed himself quickly.

Other verbs in the same class include: *sa ahu*, 'have a bath', *saukwu*; 'wash feet/legs': *kwo aka*, 'wash hands':*kpu ahuon onu*, shave'; etc. With these verbs, the direct object is obligatorily expressed, but the expected possessive pronoun is never expressed

because body parts are inalienable.

(116) Jè sáa ezé
Go wash teeth: Go and clean your teeth.

4.4.4 Characteristic Property Verbs

This semantic class of verbs consists of verbs which express the property by which an individual/object is known; an example is a sentence such as 'Dogs bark'; 'Animals reproduce' etc. This is the second class of verbs whose object may be left unexpressed. Igbo verbs of this class display the same alternation as their English counterparts, provided such an object is in addition to any inherent complement (IC) that may be present, as is shown below:

(117) a Ákpị̀ na agbá mmadụ̀.
Scorpions ASP sting people

b Ákpị̀ na agbá ágba (BVC)
Scorpions ASP sting sting: Scorpions sting.

c Ńkịtá nà átá mmadụ̀ (árụ).
Dogs ASP bite people bite: Dogs bite people.

d Ńkịtá nà átà árụ́ (= c)
Dogs ASP bite (bite): Dogs bite.

Note that either the BVC or the IC is obligatorily present whenever the direct object has been left unexpressed. As we pointed out in 2.2, the BVC is a type of slot filler

for an unexpressed argument in transitive clauses.

4.4.5 Reciprocal Verbs

Reciprocal verbs in English are typified by the following sentences: 'John saw Mary' and 'John and Mary met'. Igbo verbs of the same semantic class behave exactly like their counterparts in English, as shown by the following examples:

(118) a Ógù hụrụ Ugo n'áhya
Ogu saw/met Ugo in market.

b Ógù na Ugo hụrụ n'áhya.
Ogu and Ugo met in market.

Verbs of this semantic class are not many in number; as pointed out before, they include the transitive verbs, *zù*, *kwú* and their compounds.

4.4.6 Verbs of Instrument

These are so called because the agent subject performs an action with the aid of an instrument/object. They do not exhibit any diathesis alternation, but always involve two types of constructions, serialization or double-object construction; this class of verbs has been treated at length in sections 3.7.3 and 4.4.

4.4.7 Transposition/Permutation of Internal Arguments

Dative Alternation

There is no Dative Alternation in Igbo as there is in English.

The absence of the alternation is due to the fact that the equivalent Igbo verbs are inherently double-object predicators (cf. sections 1.2 and 3.7.3). They are represented by the following sample list: *nyé*, 'give'; *zí*, 'send'; *kọ́*, 'narrate'; *ná*, 'take'; *bí*, 'borrow/lend'; *tí*, 'beat',etc.

Locative Alternation

As demonstrated in section 4.4., Igbo equivalents of English spray/load verbs are involved in the locative alternation, whose effect is the creation of double-object predicates. Whereas English has both Dative and Locative Alternations , Igbo has only Locative Alternation which creates the same surface structure as English Dative Alternation. In the last section of this chapter, we shall discuss this alternation in relation to the absence of Passive Rule in Igbo.

Verbs of Filling and Emptying

Verbs of filling do not feature in Levin's list, but we have found them a necessary complement to verbs of emptying which form part of Levin's verbs of 'clearing and emptying'. This class comprises verbs meaning 'to fill, drain, wash away,empty' et cetera; it is semantically coherent class As one would expect, they exhibit the same type of alternation as Locative and Instrumental verbs, (cf. 4.5.6 and 4.5.7 above). The probable reason for this convergence of surface structures is the existence in Igbo of only one preposition *na* that could conceivably be used in the contexts which in English would call for different prepositions. The following are illustrative examples.

(119) a Gbápú máị̀ nà atụma
Empty wine from jar: Empty the jar of wine.

b Gbápú àtụma máị̀ (= a)

c Gbányé mmíri n'èbele
Pour give water into gourd: Fill the calabash with water.

d Gbányé èbele mmírí (= c)
Pour give calabash water.

The verbs involved in this type of alternation are generally compound verbs such as *gbányé/gbápụ̀*, 'pour/empty; *gbáju/gbányé nkọ̀wa*, ' fill/half fill' and verbs like them. Once more, we are dealing with a small class of verbs.

Note that the objects in the above examples are liquids and their containers; the action does not involve solid objects as in the sentence 'Clear the dishes from the table' and 'Clear the table of the dishes', the Igbo equivalents of these will not show any alternation. Thus, we have only a partial corvrespondence to the English situation. Similarly, Igbo verbs of 'wiping/cleaning' participate in the same type of alternation. They include *zá*, 'sweep'; *zápụ̀*, 'sweep out';*hyọ́*, 'clean': *hyọ́cha*, 'wipe clean';*ná*, or nàcha, 'wring'.

The picture that has emerged from this comparison is one of a fairly consistent correspondence between semantic classes of verbs in English and their Igbo counterparts. But the Igbo analogues always constitute in each case a small but semantically coherent class of verbs. For example, the class of unaccusative verbs in English includes verbs of inherently directed motion, verbs of change of location, verbs of change of state, and verbs of appearance and existence; in Igbo, only the verbs of change of state belong to this class.

4.5 The Absence of the Passive Construction in Igbo

nThe passive construction is a well-known feature of English, as it is of many other Indo-European languages. In Africa South of the Sahara, the same construction

has been attested in the Bantu languages of East and Central Africa, especially in Swahili, Kikuyu, Chichewa and Setswana, to mention but a few. To the best of our knowledge, no language in West Africa that has been seriously studied is known to have the passive construction. In English, a further distinction has been seriously motivated: the distinction between what has been described as adjectival passives and verbal passives. Essentially of the same morphology as the verbal passive, the adjectival passive does not have the sentential source that the the verbal passive has, nor does it have the same distribution, (cf. Jaeggli 1986; Levin and Rappaport 1986; Wasow 1977; Williams 1981; and Bresnan 1982). All European languages with the passive construction have the passive/perfect participle.

One characteristic feature of passive formation is the suppression of the external argument i.e.agent or subject, and the movement of the internal argument or patient/theme to its position. The process bas been described in Relational Grammar as "demotion/chomeurization " of the agent subject, and the promotion of patient/theme. (cf.Perlmutter and Postal 1984) The above process makes it necessary for the 'by NP' phrase to occur in passive constructions crosslinguistically. The second essential process is the formation of the perfect participle of the verb in the passive construction. These operations are said to involve three functional domains: (a) Clausal Topic Assignment: the subject/agent of the active clause ceases to be topic, and a non-agent argument assumes, the topic function in the passive clause; (b) Impersonalisation: the identity of the subject/agent of the active clause is suppressed in the passive; (c) Detransitivization: the passive clause is semantically less active, less transitive and more stative than the active clause, (cf. Givon 1982). In other words, passive formation entails the dethematization of subject and the suppression of structural case.

Although passive formation in English generally involves these three domain features, there are many languages in and outside Europe that do not involve all of them, for example, many impersonal passives (in Italian, Spanish and Ute, (an Aztec language of New Mexico) do not follow the classical English method. But

each of them has passive verb morphology distinct from the active or non-passive one.

Igbo has no such passive verbal morphology, even though it has the impersonal construction that does duty for the passive, just as French impersonal constructions with 'on' do. These are illustrated below.

(120) a É kwùru na ọ́ nwụ́ọna
One said that he has died: He is said to have died.

b On dit qu'il est mort (French).
(same as (a) above in structure and meaning).

But the above Igbo and French examples are all active constructions; however, French as well as Italian and German, but not Igbo, have a corresponding impersonal passives; only the French example is given below.

(121) Il sera parlé de vous par tout le monde....
It will be said about you by everybody....

The crucial difference here is the presence of the French passive participle or *passé composé*, parlé in (121) and its absence in the previous French example (120b). Whereas (120) is a non-passive construction, (121) is a passive sentence.

To underscore the crucial importance of passive verbal morphology, let us point out that the Igbo VP is amenable to some form of demotion and promotion of certain internal arguments as required by the passive formation rule. For example, Locative Alternation described in 4.3. and 4.4.7 is precisely like Dative Alternation which is related to the passive construction in English whose output, like that of Dative

Alternation, is a double-object clause. That there is no rule of Dative Alternation in Igbo is due to the fact that the language has a set of inherently double-object verbs which are lacking in all languages with Dative Alternation, since the human language system observes the principle of economy: if Dative Shift has the effect of creating double object predicates, then the rule would be superflous in a language with inherently double object predicates. From another point of view, there seems to be a correlation between the absence of Dative Shift and Passive in Igbo: recent transformational accounts of Dative Shift (cf. Larson 1987) relate it to the Passive on the ground that each of the rules has the effect of moving an object to a subject position: Passive moves an internal argument to IP subject position, while Dative Shift promotes an argument to VP subject position. The following Figs. 17 and 18 (taken from Larson 1987: 22) illustrate the similarity.

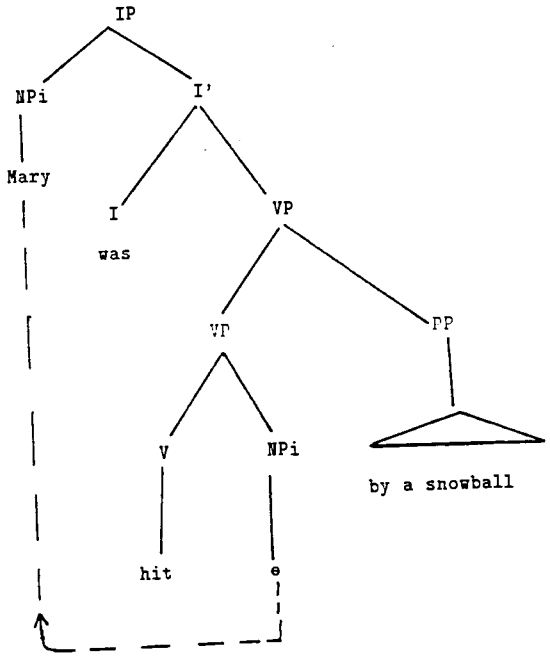


Fig. 17

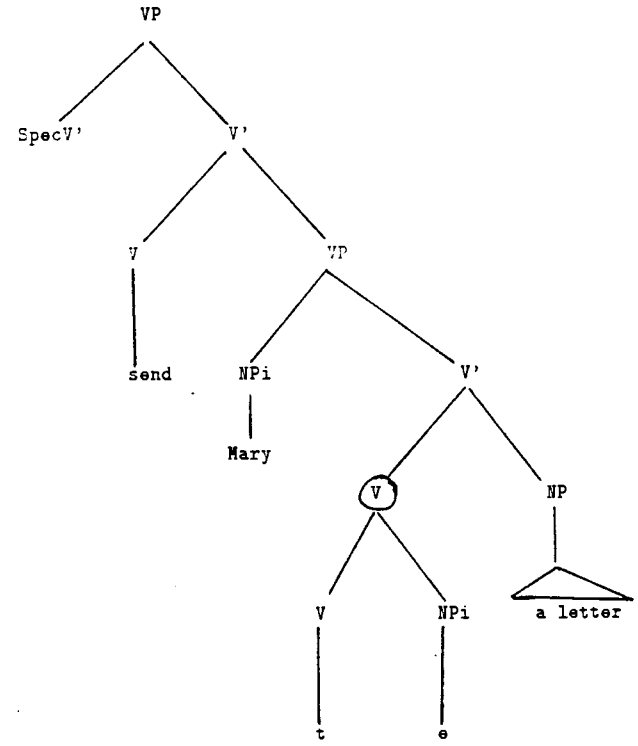


Fig. 18

Given these figures and the theoretical assumptions/claims that are built on them, there is no doubt that Dative Shift and Passive are very similar in English.

Thus, Igbo is full of active constructions, with stative (intransitive) verbs performing the function of adjectives, while the adjectival passive meaning is achieved through relative constructions of the following type:

(122) a nwáàhyị́ dí kpọ̀rọ ụ́gwụ tụ́
woman husband hated: the woman hated by her husband.

b ónyé a bùru ọ́nụ tụ́
person one cursed curse: a cursed person.

Observe that these are active relative clauses, which provide the only way to render the adjectival passive meaning in Igbo. It is thus clear that the adjectival passive is absent from Igbo for the same reason that the verbal passive is also absent. Therefore, any syntactic operation that appeals to the passive rule must be assumed to be inapplicable to languages such as Igbo.

4.6 Conclusion

This brief comparison of transitivity alternation across languages has revealed the following points:

- identical syntactic behaviour has been attested in classes consisting of semantically coherent members, e.g. the spray/load verbs, reciprocal verbs, and verbs of filling and emptying, which form but a subset of Levin's verbs of clearing;
- because the class of English middle verbs consists of heterogenous classes of verbs, it is not going to be easy to find their analogue in other languages. At best, one should expect to find only a partial orrespondence involving a coherent semantic class; this is what happens in Igbo in which only the verbs of physical change participate in middle formation;

- because of the peculiar nature of Igbo, the fact that every Igbo verb is followed in both deep and surface structures by one type of complement or another. (object, PP, IC, BVC), the language is bound to differ from English with respect to the phenomenon of unexpressed object. Instances of transitive verbs being used intransitively are far to seek in the language;
- for the same reason, verbs of bodily care have their direct objects expressed overtly but without the expected possessive pronoun since body parts are inalienable. Similarly, in constructions involving characteristic property verbs, the direct object can be omitted only when the BVC, itself a complement,is present; all these point to the fact that a post-verbal complement is obligatory in Igbo, thereby eliminating the possibility of unexpressed object;
- since Igbo is a double object language, it has no need for the rule of Dative Shift, which has the effect of creating the same double object predicate. However, the language shares with English the rule of Locative Shift, which has exactly the same effect as Dative Shift in spite of the fact that it applies to a different semantic class of verbs.

This brief comparison reveals that English is in many respects an exceptional language. For example, the two predicate structures [V NP1 Prep NP2] and [V NP2 NP1] are available in the language, the first is considered basic, while the second is derived. Even within European languages, not many are likely to have these two variants; many languages are likely to have one or the other: for example, Igbo has only [V NP NP], while Moroccan Berber has only the [V NP1 Prep NP2], predicate type without any Dative Shift to convert it into [V NP2 NP1].This fact has some consequences for the formulation of certain rules of language. For example, it should be possible to reformulate the Case Filter so that it accomodates languages where double object predicates are basic rather than derived. This would of course mean playing down on adjacency requirement for case assignment. But this is an issue that we shall not pursue any further in this paper because it is largely exploratory and only indicative of the direction of future research.

4.7 Concluding Summary

This paper has presented an analysis of transitivity in Igbo which treats all Igbo verbs in a uniform manner: the distinction between tansitive and intransitive verbs is mediated by one rule, Particle Movement. This rule has two subparts: Move-BVC for all non-inherent complement verbs (non-ICVs), and Move-IC for all inherent complement verbs (ICVs). The fairly detailed study of ICVs has shown that ICs are not arguments, although for a small number of ICVs, the IC combines the two functions of being a meaning-specifier and an argument. Move-IC is obligatory for all transitive ICVs, except in those cases where the IC forms a normal genitival or associative NP with the verb's direct argument, a situation which we describe as NP-Restructuring.

The analysis further reveals that Igbo is a double object language. Since this is the case, it means that double object verbs govern two internal arguments. From this fact it follows that adjacency cannot be a requirement for case assignment for double object verbs.

Igbo appears to observe the principle of strict semantic coherence among verbs that participate in a transitivity alternation; a typical example is the subset of Igbo verbs that exhibit the ergative alternation, they all denote physical change. Finally, the absence of passive constructions in Igbo is seen to correlate with the absence of Dative Alternation in the language.

Appendix

Given below are representative lists of the various classes of verbs that are central to the study. They are presented in the order in which they have been referred to in the text.

Appendix 1: Double Object Verbs

nyé	'give'	ná	'take'
bì	'borrow'	bìnye	'lend'
zhín	'show'	gósi	'show'
zụ́ (+ compounds)	'buy'	zụ̀tá	'buy'
tí/kụ́	'beat,stab	gbá	'strike'
lù/tụ́	'throw'	gbágha	'forgive'
wọ̀	'deny(food'		

Appendix 2: Transitive Verbs: Verbs of Killing and its Compounds

gbú	'kill'
tígbu	'kill by beating, beat to death'
kúgbu	ditto
kwúgbu	'kill by hanging, hang
mágbu	'kill by stabbing, stab to death'
rígbu	'kill by eating, empoverish'
ńúgbu	'kill by drinking, drink to death'

Verbs of Eating

rí, 'eat' ; ńụ́, 'drink' ; tá, 'chew' ; rá, 'eat/drink'; ló, 'swallow'.

Verbs of Hitting and Contact

These are generally ICVs with the instrumental NPs functioning as secondary object.

má/tí mmà	'stab with knife'
má ụ́rá	'slap in the face'
gbá ụkwụ	'strike with foot'
bì/métụ aka	'touch'
vùn/gbú asụn	'spit at'
kụ́ ihe	'beat with something'

The compounds of these verbs give conclusive proof that the inherent complement (IC) is an instrumental argument.

kúgbu n'okpì	'beat to death with a club'
tígbu na mmà	'stab to death with a knife'
gbágbu n'ụkwụ	'strike to death with feet'
chúgbu na nshi	'feed to death with poison, poison to death'
kwágbu n'ọkụ	'kill with fire, burn to death'
gbágbu n'egbè	'shoot to death'

Verbs of Change of Position

wétù/wéfù	'remove'
gbánwè	'change,
wébà	'send in
lù	'throw'
háfụ	'leave'

Verbs of Change of State

mébì	'spoil'	gbábì	'break'
gbúbì	'cut into two'	gbàji	'break'
dọ́rì	'tear to bits'	dọ́bì	'snap'
gbázhèn	'melt'	gbájà	'disslve'
kụ́ji	'break'	kụ́bya	'depress'
gwágbu	'mix'	kụ́wa	'break'
ríbì	'tear'	kụ́ji	'break
shí	'cook'	mé	'do, happen'
méghe	'open'	méchi	'close'

Verbs of Change of Possession

These are all double object verbs, and they have been given under that heading.

Appendix 3: Unergative Verbs or The Canonical Intransitives

a. Verbs of Weather Condition

chá	'shine'	Ánwụ na achá	The sun is shining.
gbá/tí	'shine'	Ọ́nwa gbára/tìri	The moon shone.
kụ́/dàra	'fall'	Ífjiriji kụ̀rụ	It was misty.
jí	'darken'	Chí éjiele	It has become dark.
gbà	ditto	Ḿnukwu ìtiri gbara	It is very dark.
gbú/ké	?	Àmụma na egbú	There is lightening.
gbá	shoot?	Égbè ígwé nà agbá	There is thunder.
zò/dò		Ḿmírí nà édò	It is raining.
dà	'fall'	Ákụ igwé nà áda.	Snow is falling.
vụ́n	'drizzle'	Ḿmírí nà avụ́n.	It is drizzling.

b.Verbs of Maturation and Deterioration

This class consists of the varioiis verbs describing the maturation of different

farm crops; because of strict co-occurrence restriction, Igbo has a number of verbs standing for the English word 'ripe'.

chá 'ripe' (for palm fruits, pepper, oranges, banana/plantain)
ká 'ripe' (for yams, coconut, maize, plantain, banana, oil bean)
gó 'ripe' (for African pears)
ré 'rot'; kwu 'rot internally
mághù 'show the first signs of putrification'
shì 'remain undercooked, stop cooking'
shìn/sì 'smell'
wá 'break' ; zhí/zí 'be straight, good, moral, etc'
hyè 'be crooked, bad, immoral, etc .
zù 'be complete, sufficient, enough
rụ́/lụ́ 'be defiled, ineffective, polluted
mì 'be deep, complex, difficult

c. Unergative Inherent-Complement Verbs: The Adjectival Verbs

bù íbù 'be fat, bulky'; pé mpé 'be thiny, lanky
má mmá 'be beautiful, good, moral, just
jọ́ njọ́ 'be ugly, bad, immoral, unjust
chá ọcha 'be fair, white, clean; ji nji 'be dark'
tó ogologo 'be tall; shi ike 'be difficult, hard/tough
fụ́ ụfụ 'be painful, hot; nú inu/kụ́ ilu 'be bitter'

References

Awobuluyi, O. 1972. "On the Classification of Yoruba Verbs", in Bamgbose ed. *The Yoruba Verb Phrase*, Ibadan: Ibadan University Press.

Baker, M. 1985 *Incorporation: A theory of Grammatical Function Changing*, Doctoral dissertation, MIT, Cambridge, Massachusetts.

Bolinger, D. 1978 "Passive and Transitivity Again", *Formal Linguisticum* 3: 25-28.

Bresnan, J. ed. 1982 *The Mental Representation of Grammatical Relations*. MIT Press, Cambridge, Massachusetts.

Brewer, W. B. 1970 "Extent of Verbal Influence and Choice between le and lo in Alphonsine Prose", *Hispanic Review* 38: 133-146.

Burzio, L. 1981 *Intransitive Verbs and Italian Auxiliaries*. Doctoral dissertation. MIT, Cambridge, Massachusetts.

Burzio, L. 1984 *Italian Syntax: A Government Binding Approach*. Reidel. Dordrecht.

Chomsky, N. 1970 "Remarks on Nominalisation" , in R.Jacobs and P Rosenbaum. eds. *Readings in English Transformational Grammar*. Ginn and Company. Waltham. Massachusetts.

——— 1981 *Lectures on Government and Binding*. MIT Press, Cambridge. Mass.

——— 1982 *Some Concepts and Consequences of the Theory of Government and Binding*. MIT Press, Cambridge, Mass.

——— 1986a *Knowledge of Language*. Praeger, New York.

——— 1986b *Barriers*. MIT Press, Cambridge. Mass.

Dryer, M. 1987 "On Primary Objects, Secondary Objects and Antidative", *Language* 62: 808-845.

Emenanjọ, E. N. 1984 "Igbo Verbs: Transitivity or Complementation?", paper presented at the 5th Annual Conference of the Linguistic Association of Nigeria, Nsukka.

———- 1986 "Igbo Verb Complements and the Argument Structure of Compounds", Linguistics 260 talk, Harvard University. March, 1986.

Ferguson, C. 1958. "Review of Fleisch, L'Arabe Classique", *Language* 34: 314-321.

Givon, T. 1976 "Topic, Pronoun, and Grammatical Agreement", in C. Li ed., *Subject and Topic*, Academic Press, New York.

——— 1982 "Transitivity, Topicality, and Ute Impersonal Passive", in *Syntax and Semantics 15: Studies in Transitivity*, Academic Press, New York.

——— 1984 "Direct Object and Dative Shifting: Semantic and Pragmatic Case", in F. Plank, ed., *Objects*. Academic Press,London.

Green, M.M. and G.E.Igwe 1963 *A Descriptive Grammar of Igbo*. Akademie Verlag, Berlin.

Guerssel, M. 1986 *On Berber Verbs of Chgange: A Study of Transitivity Alternations*, Lexicon Project Working Paper No. 9, MIT Center for Cognitive Science, Cambridge, Mass.

Guerssel, M. 1987 "Etraction out of Clitic Doubling Constructions in Tamazight," paper presented at the 18th Annual Conference on African Linguistics, Universite du Montreal a Quebec, April 24-26 1987.

Guerssel, M, Ken Hale, M. Laughren, B. Levin, and J. White Eagle. 1985 "A Cross-Linguistic Study of Transitivity Alternations," Paper presented at the Parasession on Causatives and Agentivity, 21st Regional Meeting of the Chicago Linguistic Society.

Hale, K. and J. Keyser 1985 *Some Transitivity Alternations in English*, Lexicon Project Working Paper No. 7, MIT Center for Cognitive Science, Cambridge, Mass.

Hale, K., and Jay Keyser 1987 *A View from the Middle*, Lexicon Project Working Paper No 10, MIT Center for Cognitive Science, Cambridge, Mass.

Hale, K., and M. Laughren 1983 *Warlpiri Lexicon Project: Warlpiri Dictionary Entries*, Warlpiri Lexicon Project, MIT Cambridge, Mass.

Higginbotham, J. 1985 "On Semantics," *Linguistic Inquiry* 16: 547-593.

——— 1986 "Elucidations of Meaning," MIT ms.

Hopper, P.J. and S.A.Thompson 1980 "Transitivity in Grammar and Discourse," *Language* 56: 251-299.

——— eds. 1982 *Syntax and Semantics 15: Studies in Transitivity*, Academic Press, New York.

Jackendoff, R. 1983 *Semantics and Cognition*. MIT Press.

——— (to appear) "The Status of Thematic Relations in Linguistic Theory," *Linguistic Inquiry*

Jaeggli, O. 1984 "Passives, Middles, and Implicit Arguments," unpublished ms., MIT, Cambridge, Mass.

——— 1986 "Passives," *Linguistic Inquiry* 17: 587-622.

Keyser, J. and T. Roeper 1984 "On the Middle and Ergative Constructions in English," *Linguistic Inquiry* 15: 381-416.

Lakoff, G. 1977 "Linguistic Gestalts," *Chicago Linguistic Society* 13: 225-235.

Lasnik, H., and M. Saito 1984. "On the Nature of Proper Government," *Linguistic Inquiry*, 15: 235-289.

Larson, R. 1987 *On the Double Object Construction*. Lexicon Project Working Paper 16, Center for Cognitive Science, MIT.

Levin, B. 1985a *On the Nature of Ergativity*, Doctoral dissertation, MIT, Cambridge, Mass.

———1985b "Introduction," in B. Levin, ed., *Lexical Semantics in Review*, Lexicon Project Working Papers 1, Center for Cognitive Science, MIT.

———1986 "The Formation of Adjectival Passives," *Linguistic Inquiry* 17: 623-663.

Levin, B. (in preparation) "Verbal Diathesis List for English."

Lyons, J. 1968 *Introduction to Theoretical Linguistics*, Cambridge University Press, London.

Marantz, A. 1984 *On the Nature of Grammatical Relations*, MIT Press, Cambridge, Mass.

Manfredi, V. 1987 "Antipassive and Ergative Morphology in Igbo," Harvard University ms.

Nwachukwu, P.A. 1976a *Noun Phrase Sentential Complementation in Igbo*. Doctoral dissertation, University of London.

———1976b "Stativity, Ergativity and the -rV suffixes in Igbo," in *African Languages/Langues Africaines* 2: 119-142.

Split ergativity ~ verb-raising?

————1983a "Towards a Classification of Igbo Verbs," in Nwachukwu, P.A. ed., 1983 *Readings on the Igbo Verb*. [Pilot Edition], Onicha, Nigeria: Africana/FEP (for The Igbo Language Association.)

———— 1983b "Transitivity in Igbo," in Nwachukwu, P.A., ed., 1983: 99-120.

———— 1985 "Inherent-Complement Verbs in Igbo," *Journal of the Linguistic Association of Nigeria (JOLAN)*, 3: 61-74.

———— 1987 "On Double Object and Inherent-Complement Verbs in Igbo." MIT Lexicon Project ms.

Perlmutter, D. 1978 "Impersonal Passives and the Unaccusative Hypothesis." *Berkley Linguistic Society* 4: 157-189.

Perlmutter, D.M. and Carol Rosen eds. 1984 *Studies in Relational Grammar 2*, Chicago University Press.

Quirk, R. and S. Greenbaum. (eds.) 1973 *A University Grammar of English*. London: Longman.

Rappaport, M., and B. Levin 1984 "A case study in Lexical Analysis: The spray/load alternation," MIT ms.

Rappaport, M., and B.Levin 1986 *What to do with Theta-roles*. Lexicon Project Working Paper 11, MIT Center for Cognitive Science, Cambridge, Mass.

Stowell, E. 1981 *Origins of Phrase Structure*. Doctoral dissertation. MIT, Cambridge, Mass.

Ụwalaka, A.A. 1981 *The Syntax and Semantics of the Igbo Verb: A Case Grammar Analysis*, Doctoral dissertation, University of Ibadan, Nigeria.

Wasow, T. 1977 "Transformations and the Lexicon," in P.W. Culicover, T. Wasow and A. Akmajian eds. *Formal Syntax*. Academic Press, New York.

Weinreich, U. 1966 "Problems in the analysis of idioms," in J. Puhvel (ed) *Substance and Structure of Language*, Berkley: University of California Press.

Williams, E. 1980 "Predication," *Linguistic Inquiry* 11: 203-238.

——— 1981 "Argument Structure and Morphology," *The Linguistic Review* 1: 81-114.