

Percolation Principle Perspective of Verb-Suffix Distinction in Igbo Verb Compounds

by

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Abstract

This paper attempted a distinction of verb-suffix in Igbo verb compounds from the Percolation Principle perspective- which is a convention regarding the distribution of features in compounds. The descriptive survey method was adopted with Percolation convention as the theoretical orientation. The study found that when a verb compound in Igbo obeys Percolation principle, it infers, by our analysis, that the second element of such a compound is a verb otherwise, it is a suffix. This we have done, underscoring the fact that Igbo verb compounds are left-headed. The study concluded that Percolation convention provides a clearer distinction of verb-suffix in Igbo verb compounds and recommended other studies in this direction in the form of testing the Percolation principle in Igbo.

Key words: Percolation, verb compound, verb root and suffix

Introduction

The existence of compounds in the Igbo language has long been settled as championed by Nwaozuzu (1991), Oluikpe & Nwaozuzu (1995), Anagbogu (1995) among other works. There are equally nominal and verb compounds in Igbo. With regard to verb compounds, studies (such as Lord, 1975, Mbah, 2005, Onukawa, 1999, Onwukwe, 2015), have shown that verb compounds in Igbo exhibit this form: Verb-verb compound and Verb-suffix compounds hence verb compound in Igbo is subcategorized thus:

$V_C \rightarrow V_1 + \{V_2/S\}$

This form has often posed uncertainty as to determining when the second element of the verbal compound is a verb or an affix (suffix). This is as a result of the fact that the distinction between verbs and suffixes in the Igbo language is not a sharp one (c.f. Ward 1936, Emenanjo 1979, Green & Igwe 1963). It is held that suffixes are verbals in origin in Igbo (Emenanjo, 1979, Onukawa 1999).

This seeming uncertainty in determining when the second element of a verb compound in Igbo is a verb root or affix (suffix) has led to various distinction attempts. Notably, Lord (1975) on Igbo verb compounds, Emenanjo (1978) on suffixes in Igbo, Emenanjo (2015) on extensional suffixes, and Onukawa, (1999) on the order of extensional suffixes in Igbo. We therefore attempt a distinction of verb root and suffix in Igbo verb compounds from another perspective- the Percolation Principle.

Percolation principle is a rule that governs the constituents of a compound and ensures that a constituent and its 'head' have the same feature complex (c.f. Williams, 1981). It was expounded by Selkirt (1986) in the explanation of compounding and the idea of headedness of compounds.

The tone convention adopted in this paper is that of Green and Igwe (1963) where low and step tones are marked and high tones unmarked. The paper is structured as follows: Percolation principle explained, briefs on the Igbo verb compound, previous verb-suffix distinctions, the Percolation principle explanation and then summary and conclusion.

Literature Review

Selkirt (1986, p.21), formalizes the Percolation principle thus: "If a constituent α is the head of a constituent β , α and β are associated with an identical set of features (syntactic and diacritic)"

Percolation principle is therefore a convention that governs the relationship between compounds or associative constructions, in that there must be a head of the structure which shares its features with other non-head constituents. In other words, the features of the head, diacritic and syntactic, *percolate* on the other constituents. Williams (1981) holds that "the head of a constituent plays a crucial role in the description of the distribution of the diacritic features related to both inflectional and derivational morphology. Specifically, a general well-formedness condition on syntactic representation, commonly referred to as Percolation, ensures that a constituent and its head have the same feature complex" (cited in Selkirt, 1986).

The features which play a role in this convention can be assigned to two classes: the syntactic features and diacritic features. The syntactic features could mean the category features such as noun, verb, adjective, etc or other relations necessary in explaining the syntactic structure of the construction while the diacritic features “include those relevant to the particulars of inflection and derivational morphology. The inflectional features might include, for example, conjugation or declension class markers, features of tense, gender, person, number and so on.” (Selkirt, 1986, p.7)

Percolation principle stems from the position of Williams (1981) that word structures (either compounds or affixed structures) are headed and that the convention regarding the distribution of (category) features in such a syntactic representation is called percolation.

Igbo Verb Compound

“A compound verb is the verb which has a minimum of two verbs that may act as independent verbs. In its citation form, it may mean or refer to any verbal construct, which is not accessible to the vowel harmony rule. In other words, though the affixes attached to them may copy vowel harmony from them, they cannot alter their forms to reflect this harmony” (Mbah, 2005 p.584). Taiwo (2008) describes this type of verb compounding as “amalgamation of verbs’ – the amalgamation of verbs is a process in which two or more verbs are combined to form a compound verb” (p.351). This differs from other verbal compounds involving the incorporation of nouns, prepositions, and other form classes. From available studies, verb compounds in Igbo have two forms: verb-verb and verb-suffix.

Mbah (2005) presents some criteria for identifying verb compounds in Igbo thus: (i) free forms form compounds (ii) compounding of the free forms produces new matter or word and (iii) the meaning of the compound incorporates the individual meaning of the constituents among others. The tense markers affixed to them have not influenced their forms. Rather, they have determined the class of vowels that will form the tense marker. Mbah (2005) states that this singular characteristic is a major distinguishing factor between the compound verb and complex verb. The argument however is that the structure of the forms verb+suffix is morphological to the extent that they block vowel harmony.

What is therefore basic about Igbo verb compounds is that they subcategorize verb + verb or suffix where the first verb (V₁) is a simple verb root and the second constituent can be a verb root or a suffix. In the literature, the suffix has taken certain nomenclatures such as “Extensional suffixes” (c.f Emenanjo 1978), (Onukawa 1999), “Meaning modifiers” (Nwachukwu 1983, Winston 1973, Lord 1975) and “Class-maintaining type of derivational affixes” (c.f Kari 1995) among others. Given the semblances between verb roots and the suffix in Igbo verb compounds, there have been some distinction attempts which we captured here.

Previous Verb-Suffix Distinctions

We discuss here the views of Lord (1975), Emenanjo (1978), (2015) and Onukawa (1999) as obtainable and representing popular view in literature. Lord (1975) though from a transformational perspective, identified that there is great difficulty in determining whether a particular element (i.e., the second element) is a verb or a suffix in Igbo verb compounds of this type: verb + verb/Suffix. And this partly accounts for her imputation that using transformational rules to derive such compound structures is inadequate. Lord (1975) argues that verb-verb compounds and verb-suffix compounds occur with causative and same-subject interpretation. She presents the following examples for causative verb-suffix compounds:

(2) (A) (i)	<i>beka</i>	<i>be</i>	<i>-ka</i>
	“Cut up”	cut	apart
(ii)	<i>sèka</i>	<i>se</i>	<i>-ka</i>
	“tear by pulling”	pull	apart
(iii)	<i>tilù</i>	<i>ti</i>	<i>-lu</i>
	“bruise”	hit	‘be spoiled’

Similarly, she argues the following are examples of verb-suffix compounds with same-subject interpretation.

(B) (i)	<i>nọsi</i>	<i>nọ</i>	<i>-si</i>
	“finish staying”	‘beat’	‘finish’
(ii)	<i>fèlari</i>	<i>te</i>	<i>-lari</i>
	“fly away from”	‘fly’	‘away from’

Lord (1975) posits that the meaning of verb-verb compound may differ from the combined meanings of its components; this may result in different selectional restrictions on objects. A sentence with a verb-verb compound requires an action-result interpretation for the subparts of the event represented by the components and in this respect it differs from the consecutive construction and form two simple sentences in juxtaposition. “The meaning discrepancies argue against a transformational derivation; the verb-suffix compounds do not lend themselves to transformational derivation; they are similar to verb-verb compounds and have probably evolved from them historically” (p.32-33). Our concern with Lord’s (1975) analysis is that she indirectly avoided presenting any means of determining when the second element in a verb compound is a verb or suffix and this led to her glossing over of most verbs as suffixes in her study.

Emenanjo (1978) attempted a distinction as he observes that “An element is verb if it is fully cognate with known verbs by having a morphological structure, inherent basic tone pattern, and meaning which are identical with a known verb”. Our concern with this view is the seeming difficulty in applying it to verb compounds in Igbo giving the unique feature of verb compounds in that an element can in one analysis of (V+ V/S) be a suffix and in another be a verb (when the position is juxtaposed). Emenanjo (2015) expands his view on the distinction between verb roots and extensional suffixes in Igbo. He holds as follows:

ESS (Extensional suffixes and verbs share the same CV (CV) canonical shape. Indeed, some ESS can be shown to be of verbal origin, but the acis test is that: any element which is clearly and fully cognate with a known verb is not an extensional suffix but a verb. An element is regarded as fully cognate with a verb when its basic morphological structure, canonical shape, inherent tone pattern and meaning are identical with those of the basic form of a known verb. Where, however, one of these three aspects, especially the tonal pattern, is different, we regard it as only partially cognate. Such partially cognate forms are treated as suffixes even where they are known to be diachronically or semantically related to or even derived from known verbs. (p.234).

Onukawa (1999) presents a detailed distinction attempt of verb roots and suffix in verb compounds. He holds that we can distinguish when the V_2 is a verb or suffix in Ibeme Igbo by using the framework of thematic relations of Chomsky (1981). Onukawa (1999) citing Ogwueleka (1986) observes that “one of the basic assumptions of thematic relations is that the verb assigns theta roles to each of the implied arguments that relates to it” (p.3). He further states that the principle underlying the interaction of the theta roles is determined by each of the constituent verbs in a compound, and refers to it as “compounding principle” (c.f Onukawa 1999). This principle has it that the theta role assigning properties of a second verb of the constituent verbs in a compound-must be satisfied and this may be within the complement of the verb phrase. This means that the complement of a compound must consist of the items to which the second verb can assign theta roles. Following this principle, he states that if the second constituent element of a verb compound has a theta role-assigning property and assigns a theta role to a complement, the second constituent is a verb; but if it does not have any role assigning property and does not assign a theta role to a complement, it is a suffix. He presents the following examples:

“(4a) *Uchè gbu-dà-rà osisi*
Uche cut-fall –Assert tree
'Uche cut down a tree'

(b) *Osisida-ra*
Tree fall-ASSERT
'A tree fell down'

(5a) *Uchè gbù-tè-rè osisi*
Uche cut-DIRECTION-ASSERT tree
'Uche cut a tree'
(b) **Osisida-tè-rè*" (Onukawa, 1999, p.113)

He holds that in sentence (4a) *dà* is the second constituent element and it clearly assigns the theta role of "theme" to the complement *osisi*, 'tree', hence, we can have 4(b) as a grammatical construction. In 5(a) *tè* is the second constituent element, but does not assign any theta role to the complement *osisi*, hence 5(b) is ungrammatical.

The position of Onukawa (1999) in verb root and suffix distinction in verbal constructions or compounds has been given credence by some recent studies notably Onwukwe (2015), Ejinwa (2016) among others. However, Emenanjo (2015, p.235) comments thus: "Unfortunately, Onukawa (1999) does not provide us with a list of the ESS that are verbs, or of verbs that are not ESS". We therefore present another dimension of the distinction using Percolation Principle.

Results and Discussion

Using this principle, we impute the following:

- (i) The left-most constituent rule as the HEAD applies in Igbo verb compounds hence V_1 is the HEAD of the $V_1 + V_2/S$ form of Igbo verb compound.
- (ii) A syntactic feature of the head of a verb compound which must *percolate* on other (in this case, second element) constituent includes that "the argument of the V_1 and object of sentence being identical".
- (iii) A diacritic feature of the HEAD which must *percolate* on other constituents is that " V_1 can serve as HOST of inflection in relation to the object of the sentence to have a semantically correct structure"
- (iv) That $V_1 + V_2$ verb compound type obeys the Percolation principle of compounding as opposed to $V_1 + S$ type of Igbo verb compounds. Hence, we are using $V_1 + V_2$ type of verb compounds as basis for our distinction.

It follows therefore that the second element of a verb compound in Igbo is a verb if the two features (diacritic and syntactic) mentioned in (ii) and (iii) above *percolate* on the second element but if not, the second element is a suffix. In other words, if the second element of a verb compound SHARES the mentioned features in (i) and (ii) with the V₁, then it is a verb but if it does not share these features with V₁ then it is suffix.

In support of these features in (i) and (ii) as syntactic and diacritic respectively, Mbah (2005) with regard to syntactic feature, observes that verb compounds in Igbo are “superficially morphological entities but end products of syntactic processes” (p.583) and identifies one of the syntactic rule that apply as that the argument of the V₁ and object of sentence must be identical. Similarly, with regard to diacritic feature, Selkirt (1986) alludes that diacritic features include those relevant to the particulars of inflection. Consider the following examples:

(1a) *Dupụ*
 V₁+V₂
 Escort/Follow-leave

(b) *Eze dupùrụ Ada*
 Eze escort-leave-ASSERT Ada
 ‘Eze escorted out Ada’

(c) *du Ada* “Escort/follow Ada”
 (d) *pụ Ada* “leave Ada”

So, from the examples, the second element *pụ* of the verb compound in 1(a) is a verb because the syntactic feature of “the argument of the V₁ and object of the sentence being identical” *percolates* on it or is shared by it as can be seen in 1(d). Also, the diacritic feature of “hosting inflection in relation to the object of the sentence to have semantically correct structure” *percolates* on the second element which by our analysis makes the second element a verb as can be seen below:

(e) *Dùrù Ada*
 Escort/follow-ASSERT Ada
 Escorted/Followed Ada

(f) <i>Pùrù Ada</i>	<i>or</i>	<i>Ada Pùrù</i>
Leave-ASSERT Ada		Ada leave/depart-ASSERT
‘Left Ada’		‘Ada left/departed’

The inflection in this above case is the *rV* (which we analyze as Assertive suffix in Igbo). Consider another example below where the second element *pù* is analyzed as suffix:

- 2(a) *wepù*
Take -leave
- (b) *Eze wepùrù akwùkwọ*
Eze take-ASSERT book
'Eze took away book'
- (c) *wè akwùkwọ̄* 'take book'
- (d) **pù akwùkwọ̄* 'leave book'

From the examples, we see that the second element *pù*, does not share the syntactic feature of "the argument of the V_1 and object of the sentence being identical" with the V_1 as can be seen in 2 (d) and hence makes the structure semantically faulty and unacceptable. Also, the diacritic feature of "hosting inflection in relation to the object of the sentence to have semantically correct structure" does not *percolate* on the second element which by our analysis makes the second element a suffix as can be seen in 2 (f) which is semantically incorrect and thus unacceptable.

- (e) *Wèrè akwùkwọ̄*
Take-ASSERT book
'Took book'
- (f) **Pùrù akwùkwọ̄*

We further present another example to buttress our point here which is that when a verb compound obeys the percolation principle, then the second element of such form is a verb but when it does it obey percolation principle; the second element is a suffix. Consider the example below where the second element *dà*, is analyzed as a verb because the syntactic and diacritic features of V_1 , *gbu*, as mentioned in 1 (ii) and (iii) respectively *percolate* on it as in 3(d) and (f).

- 3(a) *gbudà*
Cut-Fall
- (b) *Emeka gbudàrà Osisì*
Emeka cut-fall-ASSERT tree
'Emeka cut down a tree'

- (c) *gbu osisi* ‘cut tree’
- (d) *da osisi* ‘fall tree’
- (e) *gbùrù Osisi*
cut-ASSERT tree
‘cut down tree’
- (f) *dàrà Osisi* or *Osisi dàrà*
fall-ASSERT tree tree fall-ASSERT
‘fell tree’ ‘Tree fell’

Similarly, consider the example below where the second element, *dà*, is analyzed as suffix.

- 4 (a) *Wèdà*
Take-fall
- (b) *Uche wèdàrà Isi*
Uche take-fall-ASSERT head
‘Uche brought down the head’ or ‘Uche bowed down the head’
- (c) *Wè Isi* ‘take (ones) head’
- (d) **da Isi* ‘fell head’
- (e) *Wèrè Isi*
Take-ASSERT head
‘took (ones) head’
- (f) **dara Isi*

In the above example, the second element, *dà*, is a suffix because the syntactic and diacritic features as stated in 1 (ii) and (iii) do not *percolate* on it or are not shared with it (by V_1) as can be seen in the forms in 4 (d) and (f). In other words, the argument of the V_1 and object of the sentence is not identical in 4(d) and the second element does not host the assertive inflectional suffix (rV) and make a semantically correct structure in relation to the object of the sentence as in 4 (f) which could only be allowed when used figuratively.

Summary and Conclusion

We have been able to attempt a distinction of verb-suffix in Igbo verb compound from a Percolation principle perspective. The thrust of our discussion is that percolation principle applies to Igbo verb compound just like in general compounding in various languages as alluded by Selkirt (1986). To that effect, when a verb compound in Igbo that obeys Percolation principle, that infers, by our analysis, that the second element of such a compound is a verb otherwise, it is a suffix. This we have done, underscoring the fact that Igbo verb compounds are left-headed.

We conclude that our discussions here point to the fact that adopting the Percolation convention is somewhat related to the Theta role theory as adopted by Onukawa (1999) in distinguishing verb roots from suffix in Igbo verb compound. However, its merits is that Percolation convention provides a clear distinction method between such elements that have the same phonological form but can in one instance, be a verb and in another, be a suffix (as can be seen in our illustrations in 1 and 2 above-where the second element, *pù*, is analyzed as a verb in 1 and a suffix in 2 likewise 3 and 4 involving *dà*).

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