

OGBAHU GERUNDIVIZATION: A MORPHO-PHONOLOGICAL STUDY

Georgina O. Maduagwu

*Department of Linguistics & African Languages,
University of Ibadan,
Ibadan, Nigeria.*

Abstract

Gerundivization refers to gerund formation. Previous works on Igbo gerundivization merely focused on the morphological aspect, using Standard Igbo as case study, without bias to any Igbo dialect. The studies were not in-depth. The present study is therefore an in-depth investigation of the Ogbahu gerund, in terms of its morphology and phonology, comparing the Ogbahu gerund with gerund of some other Igbo dialects as well as Standard Igbo. Ogbahu dialect is one of the linguistically under-researched dialects of the Igbo language of Nigeria. The Igbo language is one of the three major languages spoken in Nigeria. The other two languages are Hausa and Yoruba. Gerund formation in Ogbahu is established as an affixation process in this article. The Ogbahu gerunds are formed by full /CI-/CU-/ verbal reduplication with O-/O-vowel prefixation. Ogbahu differs from other dialects of Igbo (including Standard Igbo) in her gerundivization process. Whereas Ogbahu articulates two phonological processes: ATR Vowel Harmony and Labiality Harmony (or assimilation) between labial consonant and reduplicate vowel, other Igbo dialects, as well as Standard Igbo, in addition, articulate a third phonological process i.e. Roundness Harmony between verb stem vowel and reduplicate vowel. The paper further establishes the interface of morphology and phonology in Ogbahu gerund formation as well as gerundivization of other Igbo dialects and Standard Igbo.

Key words: Ogbahu dialect, Igbo language, Gerundivization, Morphology, Phonology, Assimilation.

This paper seeks to establish the interface of morphology and phonology in Ogbahu .gerund formation. In Ogbahu, gerunds are formed by full /CI-/CU-/monosyllabic verbal reduplication with o-/o-vowel prefixation. The vowel of the basic CV verb stem is either a close or non-close vowel. In the gerund formation, the CV verbs with non-close vowels exhibit different manifestations from the CV verbs with close vowels. Hence, the discussion of gerund formation as a result of full /CI-/CU-/monosyllabic verbal reduplication with prefixation will be in two sections: 1 and 2. Furthermore, in sections 3 and 4, CVCV disyllabic verbs with non-close and close vowels respectively are discussed. The reason is to substantiate our claim that Ogbahu

gerunds are formed by full /CI-/CU-/ monosyllabic verbal reduplication with o-/o- vowel prefixation.

1. CV verbs with non-close vowels

Below are examples of such verbs:

1. a. -me 'do'
b. omume 'doing'

2. a. -ma 'know'
b. omuma 'knowing'

3. a. -be 'cut'
b. obube 'cutting'

4. a. -fe 'worship'
b. ofufe 'worshipping'

5. a. -fo 'wash' (of leaves)
b. ofufo 'washing (of leaves)'

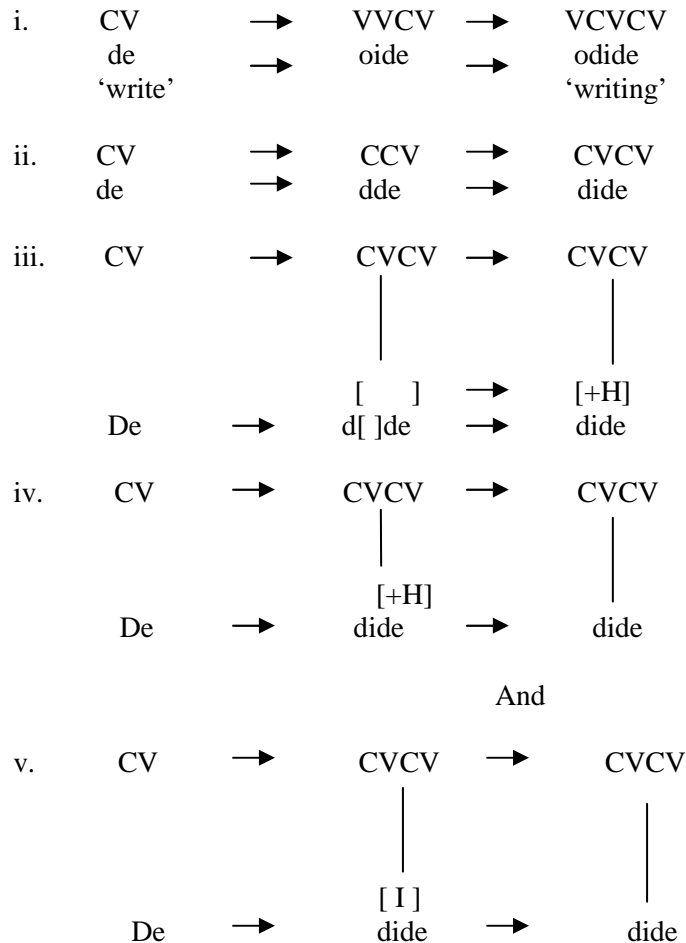
6. a. -ga 'pass'
b. ogiga 'passing'

7. a. -cho 'look for'
b. Ochicho 'looking for'

8. a. -se 'draw'
b. osise 'drawing'

9. a. -ko 'plant' (of cassava)
b. okiko 'planting' (of cassava)

Ogbahu syllable structure does not permit consonant clusters. There are alternative analyses of the above Ogbahu reduplication examples. These are:



In the alternative (i) above CV VVCV, word - initial vowel cluster is an unacceptable syllable structure in Ogbahu. In this analysis, it could be postulated that in the /C-/CU-/ monosyllabic verbal reduplication, to form a gerund in Ogbahu, we have the 6 or 6 plus the vowel I/U in a sequence as a unit morpheme. But, because there-is word-initial vowel-cluster constraint in Ogbahu, the C is inserted to break the vowel sequence. In Ogbahu, we must always have a prefix vowel when we have these gerund forms. Nevertheless, this analysis is not plausible because if we tie the gerund prefix vowel together with the I/U and claim that they amount to some kind of morpheme, we will run into problems. We will not be able to defend that claim. The syllable structure will be

violated because it . is an unacceptable syllable structure, in Ogbahu.

In the alternative (ii) above, CCV .(consonant cluster) is an unacceptable syllable structure in Ogbahu. It could be argued that, .in the reduplication process above, the verbal nouns (gerunds) are formed by first reduplicating the initial, consonant of the CV verb stem CV —» CCV, then a harmonizing close front vowel i or i is inserted into this reduplicated consonant¹ to break the consonant cluster that would have been created if the consonant is non-labial.

C C V → CiCV/CiCV

[-labial][-labial]

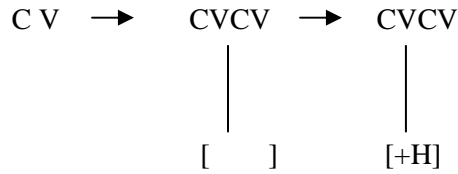
and also if the vowel of the CV verb stem is not a close back vowel u or u (examples 6 -9). If the consonant is labial, the close back harmonizing vowel u or u is infixed according to the vowel harmony group of the vowel of the verb stem:

C C V CuCV/CuCV

[+labial][+labial]

The labiality of the consonant therefore appears to- influence the choice of the reduplicating vowel, hence the choice of u/u (examples 1 - 5) as opposed to i/i (examples 6 - 9). It must be noted also that the reduplicating vowel takes the tone of the verb stem vowel. Rule (ii) fails to account for the nature of the reduplicating vowel in Ogbahu. This, in fact, is not the major problem.' This work claims that there are two major problems here. First, it creates an impermissible structure that needs to be repaired by some other process. Also, contrary to the. morphological structure of words and morphemes in Ogbahu dialect, it proposes a morpheme that is underlying consonantal without a vocalic nucleus. This derives from the fact that every morpheme-(including reduplicated morphemes) has a structure. Such a structure cannot violate the Morpheme Structure Condition (MSC) of the dialect/language.

In the third alternative analysis (iii), we have:



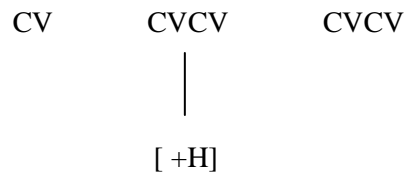
In this analysis, an identical consonant plus an unspecified vowel are prefixed to the basic CV verb stem, resulting in



Following this, the unspecified vowel or a V-skeleton is inserted, i.e. we have

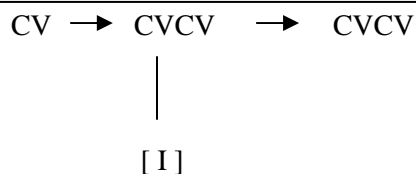


This analysis has a problem. One will need to extrinsically constrain the repetition of the vocalic material in the unspecified ^cV slot. This means that the unspecified vowel is then inserted by redundancy rules.-This is not necessary in hypothesis (iv) represented below:



This alternative analysis (iv) seems to have the best chance of accounting for the phenomenon thus far.

Nevertheless, there is yet another alternative analysis (v) to account¹ for the process:-



This appears to be the most economical way of analyzing the data. Hence our preference for alternative (v). In this analysis, it is postulated that the gerundive duplicate is just CI-. The CU- is derived from it. In other words, CI- is realized as Ci-/Ci- if the verb stem vowel is non-high and the C is non-labial. If C is [+labial], labial harmony takes place and I- gets realized as u-/u-. However, if the verb stem vowel is [+high], complete reduplication occurs and only the class prefix vowel o-/o- is added.

In examples (1) through (9) above, the gerunds (i.e. the (b) examples) are formed by the reduplication of the monosyllabic CV verb and the affixation of the gerund prefix vowels o-/o- (depending on the vowel harmony group of the stem vowel and on the labiality of the consonant). The non-close Vowels (e, o, a, o) o-"the verb root have as their reduplicating vowel the close back rounded vowel u/u (depending on the vowel Harmony group of the verb stem vowel) if in the CV sequence, the C (consonant) is a labial in the reduplication process (examples 1 - 5). But, if the consonant is non-labial, then the reduplicating vowel will be the close front unrounded vowel i/i (depending on the vowel harmony group of the verb stem vowel) in the reduplicated form (examples 6 - 9). Apart from the affixation of the gerund prefix vowel o-/o-, two phonological processes are involved in the above CV reduplication to form gerund in Ogbahu. In the first instance, however, the prefix is 'CV-' with the 'V' partially specified phonetically as [+high]. The phonological processes are:

- (a) ATR Vowel Harmony and
 - (b) Labiality Harmony (or assimilation) between labial consonant and reduplicate vowel.
- Ogbahu activates only these two phonological processes.

Other Igbo dialects, in addition, articulate a third phonological process: (e) Roundness Harmony between stem vowel and reduplicate vowel.

The reduplicate prefix changes its vowel quality to [+round] because the 'V' of the CV verb stem is prespecified as [+round]. The above processes are further illustrated in the following table:

Table 1

Ogbahu		Other Igbo dialects
Reduplication	-be; -so; -go	-be; -so; -go
(a) ATR Harmony	ci-be; ci-so; cf-go	ci-be; ci-so; cf-go
(b) Labiality Harmony	ci-be; ci-so; cj-go	ci-be; ci-so; cf-go
(c) Roundness Harmony	bube; ,_	bube; _
Consonant copy	— —	ci-be; cu-so; cu-go
	blbe; siso; gigo	bibe; suso; gugo

Usually, reduplication does not create an unacceptable syllable structure in the dialect language.

2. CV verbs with close vowels

The CV verbs with close vowels include the following examples:

- | | | | |
|-----|----|---------|--------------------------|
| 10. | a. | -ti | ‘beat’ |
| | b. | otiti | ‘beating’ |
| 11. | a. | -chi | ‘rule/reign (v)’ |
| | b. | ochichi | ‘ruling/reigning’ |
| 12. | a. | -bu | ‘carry’ |
| | b. | obubu | ‘carrying’ |
| 13. | a. | -su | ‘pound’ |
| | b. | osusu | ‘pounding’ |
| 14. | a. | -zu | ‘train’ |
| | b. | ozuzu | ‘training’ |
| 15. | a. | -mu | learn |
| | b. | omumu | learning |
| 16. | a. | -fu | ‘miss/lose’ |
| | b. | ofufu | ‘missing/losing’ |
| 17. | a. | -gu | ‘name/lose voice’ |
| | b. | ogugu | ‘naming/losing of voice’ |
| 18. | a. | -si | ‘smell’ |
| | b. | osisi | ‘smelling’ |

The above gerunds (examples (10b) to (18b)) are formed in Ogbahu by completely reduplicating or doubling the verb stem of a monosyllabic CV structure and then adding a harmonising low tone vowel prefix 6- or o- to the reduplicated form. This is seeming evidence that reduplication is a level I morphological process and vowel prefixation is a level II morphological process. This happens only when the vowel of the verb stem is the close front vowel i/i or the close back vowel u/u irrespective of the tones. In these examples, the tones of the derivand (the form which results when a process or operation is applied, e.g. in English language, 'sailed', consists of the operand - the form to which it is applied (i.e. 'sail'), plus a new formative '-ed' which has been added or affixed to it, Matthews (1984: 124) copy the tones of the operand. This process can be captured by the following rule:

C V → CVCV
CV → CVCV
s i " → s i s i + o-(gerund prefix) -> osisi 'smelling' (gerund)
'smell'

CV → CVCV
bu → bubu + o- (gerundprefix) -> obubu 'carrying' (gerund) . 'carry'

This means in effect, that full /CI-/CU-/ monosyllabic verbal reduplications in Ogbahu are treated as instances of prefixation in this study. Examples of full /CI-/CU-/ monosyllabic verbal reduplication discussed above are used to signal gerundive nominalisation from monosyllabic monomorphemic verbs. Furthermore, in Ogbahu, as highlighted earlier, the two types of full /CI-/CU-/ monosyllabic verbal reduplication (i.e. sections Land 2) are semantically identical, -why then are they phonologically different? Some linguistically significant generalization could be lost if we do not relate them to each other. Therefore the paper at this juncture opts for the Feature Dependency Analysis to capture the two since it is the same process:

The /CI-/CU-/ monosyllabic verbal reduplication is achieved through doubling of the monosyllabic CV verb and subsequent prefixation of a harmonic vowel. The prefix vowel must be of the same vowel harmony set as the vowel of the basic CV verb. The fact remains that, by treating reduplication as an affixation process, reduplication is the affixation of a morpheme template (in the shape of a CV-skeleton) to a stem (Marantz, 1982),

(e.g. bu → ,bubu + o-(gerundprefix) → obubu 'carrying' (gerund)
'carry' C VCV

The /CI-/CU-/ monosyllabic verbal reduplication is a level I morphological process and it precedes the 6-/o- vowel prefixation (a Level II morphological process) in Ogbahu gerund formation. Level I precedes Level II. In other words, the ordering of levels determines the sequencing of morphological processes in word-formation. If this order is reversed, the derivand will be meaningless. This will then contradict the purpose for the whole analysis since morphology and semantic ideas are usually linked. Owolabi (1995: 104) states: -

One of the most 'influential views in contemporary morphology is that morphologically complex words have heads (see Williams (1981). Scalise (1984) and Spencer (1991) among others). In morphology, the term 'head' is used, essentially in the same way it is used in syntax where the head of a construction 'is what determines the syntactic category of that construction. Compare, for instance, the following remark by Scalise (1984: 96) about the head of a morphologically complex word:

The head assigns to the entire word its category by means of a mechanism referred to as-percolation. In agreement with contemporary views in morphology, therefore, the o-/o- prefix vowel is the head of the Ogbahu gerund (a morphologically complex word) since it assigns the category label, gerund nominal to the derivand. Hence the LHR is operational in Ogbahu gerund formation.

3. CVCV disyllabic verbs with non-close vowels

Examples:

19	a.	-mefe	'overdo'
		do over	
	b.	omumefe	'overdoing' (gerund)
20.	a.	-mafe	'overknow'
		know over	
	b.	omumafe	'overknowing' (gerund)
21.	'a.	-befefe	'overcut'
		cut over	
	b.	obubefe	'overcutting' (gerund)
22.	a.	-kofe	'overplant'
		plant over	
	b.	okikofe	'overplanting' (gerund)

In the above CVCV disyllabic verbs, examples (19a) through (22a), the first CV is the basic CV verb stem while the second CV is a bound extensional suffix. Hence

reduplication in the process of gerundivization takes place only at the level of the basic CV verb stem as shown in examples (19b) through (22b), the gerundivization process is the same as discussed for CV monosyllabic verbs with non-close vowels of section 1.

4. CVCV disyllabic verbs with close vowels

Examples:

- | | | | |
|------|----|---------------------|-------------------------|
| 23. | a. | -tife
beatover | 'overheat' |
| | b. | otitife | 'overheating' (gerund) |
| 24. | a. | -chife
rule over | 'overrule' |
| | b. | ochichife | 'overruling' (gerund) |
| 25., | a. | -biife
carryover | 'overcarry' |
| | b. | obubufe | 'overcarrying' (gerund) |
| 26. | a. | -sufe
poundover | 'overpound' |
| | b. | osusufe | 'overpounding' (gerund) |

In the above CVCV disyllabic verbs, examples (23a) through (26a), the first CV is the basic CV verb stem while the second CV is a bound extensional suffix. Hence reduplication in the process of gerundivization takes place only at the level of the basic CV verb stem as shown in examples (23b) through (26b). The gerundivization process is the same as discussed for CV monosyllabic verbs with close vowels of section 2.

Conclusion

In this paper, Ogbahu gerunds are formed by full /CI-/CU-/ monosyllabic verbal reduplication with o-/o- vowel prefixation; The vowel of the basic CV verb stem is either a close or non-close vowel. If the vowel is any of the non-close vowels e, o, a, o, two phonological processes are involved apart from the affixation of the gerund prefix vowel o-/o- in the CV reduplication to form gerund in Ogbahu. These are: ATR Vo Harmony and Labiality Harmony (or assimilation) between labial consonant and reduplicate vowel. Ogbahu activates only these, two phonological processes. Other Igbo dialects, in addition, articulate a third phonological process, i.e. Roundness Harmony between verb stem vowel and reduplicate vowel. Here, the reduplicate prefix changes its vowel quality to [+round] because 'the 'V of the CV verb stem is prespecified as [+round]. On the other hand, if the vowel of the basic CV verb stem is a close one, i.e. i, i, u or u, the gerund is simply formed by completely reduplicating the verb' stem of a monosyllabic CV

Ogbahu Gerundivization: A Morpho-Phonological Study

structure and then adding a harmonising low tone vowel prefix 6- or o-to the reduplicated form. In this work, a gerund is formed by the prefixation (reduplication) of a morpheme template (in the shape of a CV-skeleton) to a CV verb stem and a subsequent prefixation of a gerund prefix vowel o-/o-. Gerundivization is an affixational morphological process. Contrary to Williams' (1984: 248) universal Right hand Head Rule (RHR), the Left hand Head Rule (LHR) is operational in Ogbahu gerund (a morphologically complex word). This is because the 6-/o- prefix vowel is the head of Ogbahu gerund since it assigns the category label, gerund nominal to the derivand.

Notes

1. I represents vowels i/i (depending on the vowel harmony group of the vowel of the basic CV verb stem). U represents vowels u/u (depending on the vowel harmony group of the vowel of the basic CV verb stem).
2. When the head of a morphologically complex word is on the right hand side of the word, the Right hand Head Rule (RHR) applies. On the other hand, if the head-is on the left hand side of the word, the Left hand Head Rule (LHR) applies.

References

- Archangeli, D. 1983. The root CV-template as a property of the affix: evidence from Yawelmani. *Natural Language and Linguistic Theory*, 47 - 84.
- Broselow, E. 2003a. Salish double reduplication: subjacency in morphology. *Natural Language and Linguistic Theory*. 1, 347 - 84.
- Broselow, E. and McCarthy, J. 1983. A theory of internal reduplication. *Linguistic Review*, 3:25-88.
- Gafos, D. 1998. A templatic reduplication. *Linguistic Inquiry*, 29; 515 - 527. Marantz, A. 1982. Re-reduplication. *Linguistic Inquiry*, 13; 435 - 482.
- Matthews, P.H. 1984. *Morphology: an introduction to the theory of word structure*. Cambridge: Cambridge University Press, i
- Owolabi, K.'(ed) 1995. More on Yoruba prefixing morphology. *Language in Nigeria: essays in honour of-Ayo Bamgbose*. Ibadan: Group Publishers 6: 92-112.
- Scalise, S. 1984. *Generative morphology*. Dordrecht Foris.
- Williams, E. 1981b. On the notions "Lexically Related" and "Head of a Word". *Linguistic Inquiry*, 12: 245 -

