CV Phonology of the Syllable in the Oluwanga Language of Western Kenya

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Abstract

This paper describes the syllable structure of Oluwanga words within the framework of the Generative CV phonology theory which views the syllable as consisting of three tiers, the syllable tier, the CV tier and the segmental tier. It seeks to establish the extent to which the rules advanced by the CV phonology theory are applicable to the Oluwanga syllable system. The data used in the study was obtained from a personal elicitation by the author who is a native speaker of the dialect as well as through conversations with informants, who are competent native speakers of the language. Whereas Troyer (2007) observes that the Oluwanga syllable structure consists of five syllables, (V-, CV-, CVV-, NCV-, CGV-), this study argues that there are six syllable types, which are not necessarily a result of the application of the two rules postulated by Clements and Keyser (1983), namely, deleting the syllable initial C resulting into the V syllable and inserting the syllable final C resulting in the CVC syllable. The study contends that in Oluwanga, there is a V-only syllable with a clear grammatical function. There is also the CVC syllable found in words that have the glide consonant /j/ in the syllable boundary position. The study concludes that the preferred core association structure is that of one-to-one, followed by the many-to-one association, the latter being a syllable structure of the long vowels. Syllable transformations, which lead to the process of vowel insertion, occur in Oluwanga loan words.

Key words: CV phonology, syllable, core syllable, syllable association, syllable tier, syllable node, syllable transformation.

Introduction

This paper sets out to discuss the CV phonology of the syllable system of words in the Oluwanga dialect. It provides a broad overview of the syllable structure of the dialect, thereby shedding light on the concept of the syllable as well as the key principles underlying CV phonology theory. In addition, the paper briefly describes the consonant and vowel inventories of Oluwanga as a necessary prelude to the discussion of the CV syllable structure of the dialect.

The study employs a descriptive qualitative analysis as its research design. Taylor et al. (2016, p. 7) observe that "qualitative methodology refers, in the broadest sense, to research that produces descriptive data, people's own written or spoken words and observable behaviour." The data were sourced from both oral and written materials, including words extracted from the electronic *Luwanga–English Dictionary* (2008). The study also draws on existing literature on Oluwanga, which provided the secondary data. The primary data consisted of oral data obtained through conversations with three informants, all of whom are fluent native speakers of the dialect.

The data analyzed comprised 45 words sampled from a total of 200 words collected in the form of Oluwanga nouns, verbs, and adjectives. These items were elicited orally by posing specific questions to the informants in order to obtain prompt responses. The responses were recorded and subsequently checked for accuracy by the author, who is a native speaker of the dialect. The process of data analysis was carried out in a systematic and structured manner. First, the oral data were transcribed using symbols from the International Phonetic Alphabet (IPA). The transcribed forms were then categorized into various syllable types, including V-, CV-, CVV-, VV-, CVC-, and CGV-type syllables. These syllable forms were analyzed in accordance with the principles of CV phonology theory, after which conclusions were formulated.

The paper is structured as follows: Section 2 provides a brief account of the syllable, given its centrality in the study of the phonology of a language, and highlights the two main constituents of the syllable, namely the Onset and the Rhyme. Section 3 presents a brief description of the Oluwanga dialect within the broader context of the Luyia language. Section 4 outlines the key principles of generative CV phonology theory, with particular reference to the Onset and Rhyme categories, where the Rhyme comprises an obligatory peak and an optional coda, and where the peak functions as the syllable nucleus. Section 5 discusses the various syllable types attested in Oluwanga based on CV phonology. Section 6 outlines the permissible onset syllable types in Oluwanga, focusing on syllables with single and double consonant onsets. Section 7 illustrates the processes involved in syllable transformations in loanwords of English and Kiswahili origin, which constitute the two main source languages for lexical borrowing in Oluwanga. Finally, Section 8 presents the conclusion of the study.

The Syllable

This section provides a brief account of the concept of the syllable, given that the syllable is a core concept in the study of the phonology of any language. A syllable consists of three phonetic constituents: the onset, the peak (also referred to as the nucleus), and the coda. For instance, in the word *pin*, /p/ functions as the onset, /ɪ/ constitutes the peak, and /n/ serves as the coda. When represented phonologically, the syllable is structured hierarchically and is divided into the onset and the core. The core is further subdivided into the peak and the coda, as illustrated in Figure 1 below.

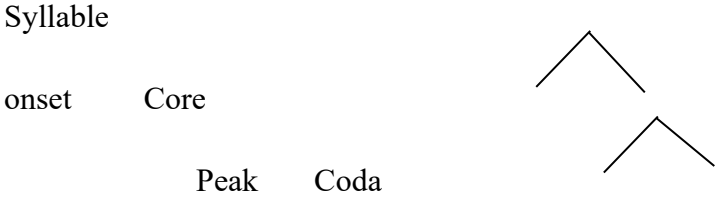


Figure 1: The Structure of a Syllable **(Adopted from Roach, P. 2009:60)**

Onsets may consist of a single segment, may be empty, or may be complex, that is, consisting of more than one segment. In addition to the onset, the syllable also consists of the rhyme. The rhyme serves to explain the sense in which two or more words rhyme by isolating the vowel and any segments that follow it. Some languages do not permit complex onsets and therefore have syllables that begin with a single consonant (C) only. Other languages do not permit rhymes that contain consonants and instead have syllables whose rhymes consist solely of a vowel. Such syllables are referred to as *open syllables*. In contrast, *closed syllables* are those that have more complex rhymes containing one or more consonants in addition to the vowel.

In order to distinguish between open and closed syllables, linguists have proposed a further division within the rhyme, separating it into the nucleus and the coda. The nucleus contains the syllabic element, which is usually a vowel, while the coda consists of any consonantal segments that follow the nucleus. In languages that permit neither complex onsets nor closed syllables, words tend to exhibit relatively simple syllable structures. However, in languages that allow greater phonotactic complexity, up to three consonants may occupy onset and coda positions. The symbol σ is conventionally used to designate the syllable, while the segments preceding the rhyme (R) are referred to as the onset and are marked by the symbol O.

Hyman (1975, p. 188) views the syllable as a phonological unit and argues that words, as well as larger utterances, can be syllabified on the basis of the phonotactic constraints of a given language. Nevertheless, syllabification is also guided by certain universal principles. One such principle is that, in many languages, the CV pattern represents the optimal syllable structure. This preference reflects both articulatory ease and perceptual salience and is therefore widely attested across languages.

Katamba (1989, p. 156), citing Clements and Keyser (1983), observes that CV phonology theory may be used to accomplish several important tasks: to state universal principles governing syllable structure, to describe syllable structure typology by defining the range within which syllable structures may vary from language to language, and to specify language-specific rules governing syllable structure. On the basis of this theoretical framework, the syllable is analyzed as comprising three tiers, namely the syllable node (σ), a CV tier, and a segmental tier.

Oluwanga Dialect

Before discussing the CV phonology of the Oluwanga syllable system, it is important to provide a brief overview of the dialect. Lewis (2009) observes that Oluwanga belongs to the Masaba–Luyia cluster of languages. It is spoken by the Abawanga people, who reside primarily in western Kenya. The Abawanga form part of the larger Abaluyia community, which is classified within the Northern Bantu subgroup and is characterized by the use of languages that are largely mutually intelligible. At present, there are no precise estimates of the number of Oluwanga speakers. According to the 2009 Kenya national census, the former Mumias and Matungu constituencies, identified as the main Oluwanga-speaking areas at the time, had a combined population of 359,381 inhabitants occupying an area of approximately 590 square kilometres. It is, however, important to note that the areas currently dominated by Oluwanga speakers, namely the three sub-counties of Mumias East, Mumias West, and Matungu, are highly cosmopolitan in nature and host a substantial number of speakers of other languages and dialects in addition to Oluwanga.

Maho (2009) refers to the Oluwanga dialect as Wanga and assigns it the classification JE32a within the Tervuren system. Oluwanga is one of the 17 dialects initially identified within the broader Luyia linguistic grouping (Were, 1967; Whiteley, 1974; Itabete, 1974; Agongo, 1993). Etakwa (2019) later expands this classification by adding Lunyala B,

Lunyala K, and Olutura to the list of Luyia dialects, thereby increasing the total number of recognized Luyia dialects to 19. Angogo further categorizes these dialects into three subgroups, namely northern, central, and southern. The northern dialects include Lubukusu, Lunyala, Lusamia, Lukhayo, and Lumarachi. The central dialects comprise Oluwanga, Lumarama, Lutsotso, Lushisa, Lukabras, Lunyole, and Lutachoni, while the southern dialects include Luidakho, Luisukha, Lutiriki, and Luloogoli. This subcategorization is based on several criteria, including results from intelligibility tests, the availability of linguistic data, and speakers' attitudes toward the respective dialects.

Principles of the Generative CV Phonology Theory

This section outlines the key principles of generative CV phonology theory. The theory views the syllable as comprising three tiers, namely the syllable tier, the CV tier, and the segmental tier. As an offshoot of the theory of syllable representation proposed by Kahn (1976), which treated the syllable as consisting of only the syllable and segmental tiers, generative CV phonology emerged in response to limitations identified in Kahn's model. In particular, the inadequacy of the earlier theory was evident in its inability to distinguish clearly between syllable peaks and the elements that constitute the internal structure of the syllable. Generative CV phonology was therefore developed to address these shortcomings and to provide a more explicit account of syllable organization.

Generative CV phonology theory is built on two main principles, namely core syllable division and syllable transformation. The principle of core syllable division provides guidelines for syllabifying words in languages as well as procedures for marking syllable boundaries within words. As a result, every language is assumed to have a set of core syllables. In almost all languages, the basic syllable type is CV (consonant followed by a vowel), although additional syllable types may occur depending on the phonological characteristics of the language. Clements and Keyser (1983, p. 28) observe that other syllable

types are derived in languages through the application of one or both of the following rules to the CV syllable type: deleting the syllable-initial consonant, resulting in a V syllable, and inserting a syllable-final consonant, resulting in a CVC syllable. The application of these two rules gives rise to four syllable categories that may be adopted as core syllables in languages, namely CV, V (by applying rule i), CVC (by applying rule ii), and CV (by applying both rules i and ii).

One of the primary objectives of the generative CV phonology model is to specify well-formed phonological expressions. The model is non-linear and is represented across three tiers. The syllable tier is denoted by the symbol σ, the CV tier is represented by the symbols C and V, and the segmental tier is represented by phonetic segments. These tiers are interconnected through association lines. The principle of syllable association accounts for the relationship between the C and V elements of the CV tier and the segments on the segmental tier. Both universal and language-specific core syllable associations exist between these tiers.

The universal core syllable association principle stipulates that V-elements dominate [−consonant] segments, which include vowels and syllabic consonants, while C-elements dominate both [+consonant] segments and [−consonant, −syllabic] segments. In other words, V-elements are associated with syllabic segments, whereas C-elements are associated with non-syllabic segments. Furthermore, core syllable associations may take the form of one-to-one, one-to-many, or many-to-one relationships. The one-to-one association is considered ideal for languages in which syllables consist of a single segment, such as V syllables, as it links individual C and V elements directly to a single segment, as illustrated in the example below.

Figure 2: One-to-one Syllable Association

A one-to-many association links the C or V element to two or more segments. It is considered ideal for complex segments and may be illustrated thus:

Figure 3: One-to-many Syllable Association

A many-to-one association links more than one C or V element to a single segment. It is ideal for geminate segments and may be illustrated as follows:

Figure 4: Many -to-one Syllable Association

The syllable transformation principle states that there are phonological processes that affect the syllable structure of the words involved. The transformations take place in the CV syllable.

Oluwanga Consonant and Vowel Sounds

The Oluwanga consonant inventory comprises sixteen consonants and two glides. These segments are /p, β, t, k, m, n, ɲ, ŋ, f, s, ʃ, x, ts, tʃ, r, l, w, j/. In addition to these segments, Oluwanga exhibits five prenasalized consonants, namely /mb, nd, ŋg, ɲɟ, nz/. The phoneme /l/ has a corresponding allophone [ɾ], which occurs in specific phonological environments.

In terms of place and manner of articulation, the consonants of Oluwanga can be classified as follows: bilabial stop /p/, alveolar stop /t/, velar stop /k/, bilabial nasal /m/, alveolar nasal /n/, palatal nasal /ɲ/, velar nasal /ŋ/, bilabial fricative /β/, labiodental fricative /f/, alveolar fricative /s/, post-alveolar fricative /ʃ/, velar fricative /x/, alveolar affricate /ts/, palatal affricate /tʃ/, bilabial glide /w/, palatal glide /j/, alveolar lateral /l/, alveolar flap /ɾ/, and alveolar trill /r/. The prenasalized consonants include the bilabial nasal compound /mb/, alveolar nasal compounds /nd/ and /nz/, the palatal nasal compound /ɲɟ/, and the velar nasal compound /ŋg/.

The vowel functions as the nucleus of the syllable in Oluwanga. The vowel system consists of ten vowels, comprising five short vowels and their corresponding long counterparts: /a, aː, e, eː, i, iː, o, oː, u, uː/. These vowels may be realized as either tense or lax, depending on their phonological environment. Vowel length in Oluwanga is phonemic and serves a grammatical function, as it is used to contrast meaning.

The vowel inventory includes two high vowels /i/ and /u/, one mid-high vowel /e/, one mid-low vowel /o/, and one low central vowel /a/. With respect to tongue position, Oluwanga has one front vowel /i/ and three back vowels /u, o, a/. In terms of lip rounding, vowels realized with lip spreading (unrounded) include /i/ and /e/, whereas /o/ and /u/ are realized with lip rounding. Short vowels may be lengthened to yield their corresponding long vowels. In Oluwanga, vocalic length is phonologically expressed through vowel reduplication.

Oluwanga Syllable

The Oluwanga syllable is made up of two segments, a consonant and a vowel. No consonants occur at word-final position since all the words end in a vowel. As in all other Bantu languages, the most preferred syllable structure in Oluwanga is the open one. In the following section, we discuss the CV syllable structure of words with both short and long vowels.

The CV Syllable with the Short Vowels

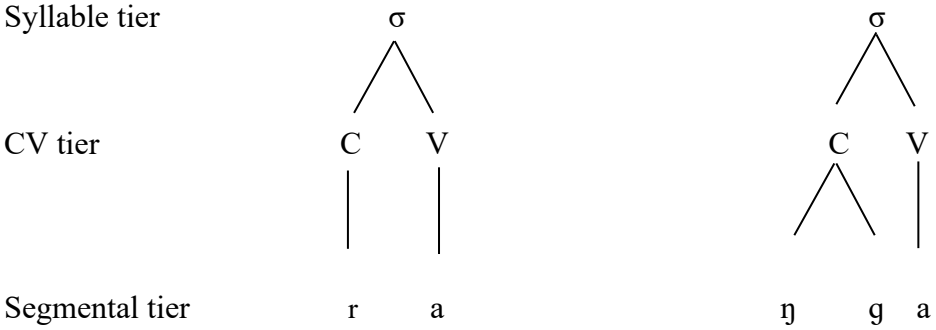
In the Oluwanga syllable system, all vowels serve as a syllable nucleus, and all vowels occur as a permissible syllable in monosyllabic, bisyllabic, trisyllabic, and polysyllabic words. The single vowel (V) can form a syllable, consequently forming the peak (nucleus) of the syllable as well as its obligatory part. The single vowel (V) in the CV tier usually dominates the terminal element of the phonemic tier.

The CV Syllable in Monosyllabic Words

As earlier stated, the most prevalent syllable sequence in Oluwanga is the CV syllable, which occurs in monosyllabic, disyllabic, and polysyllabic words. Example 1 illustrates monosyllabic words that consist of the CV syllable.

1.	Orthography	phonetic representation	Gloss
(i)	'ra'	[ra]	'put'
(ii)	'nga'	[ŋga]	'such as'

The words 'ra' and 'nga' are monosyllabic, with a CV syllable sequence as shown below:

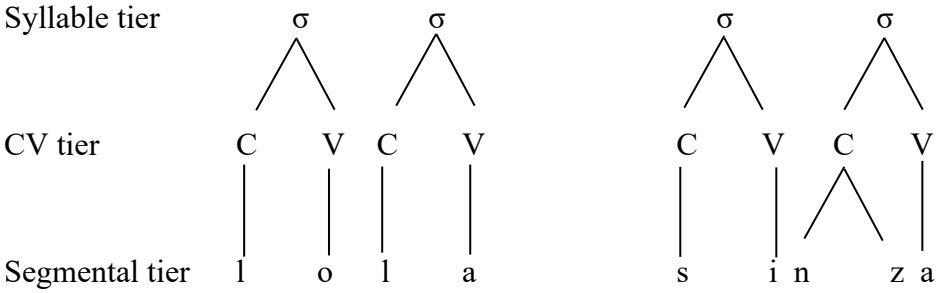


In the word 'nga', the (C) element branches because it consists of a prenasalized compound [ŋg].

The CV Syllable in Bisyllabic Words

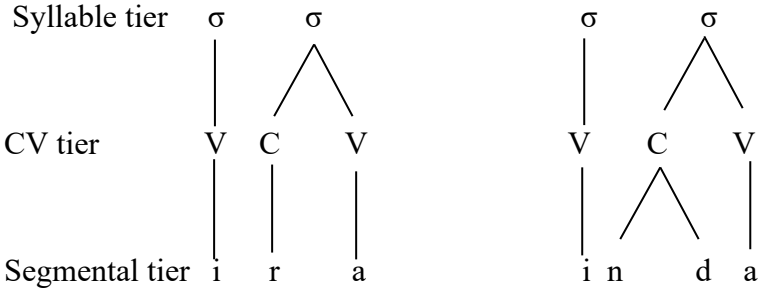
In Oluwanga, the CV syllable sequence can be found in two-syllable words, as shown in example 2 below.

2.	Orthography	phonetic representation	Gloss
(i)	‘lola’	[lola]	‘see’
(ii)	‘sinza’	[sinza]	‘slaughter’



The words [lola] and [sinza] are bisyllabic with a CVCV syllable sequence. In each word, the two syllables are short. The nucleus (V) does not branch. However, the (C) branches in the second syllable of ‘sinza’ because the syllable comprises a nasal compound [nz]. The CV syllable is also found in bisyllabic words that are preceded by the V-only syllable as shown in example 3 below.

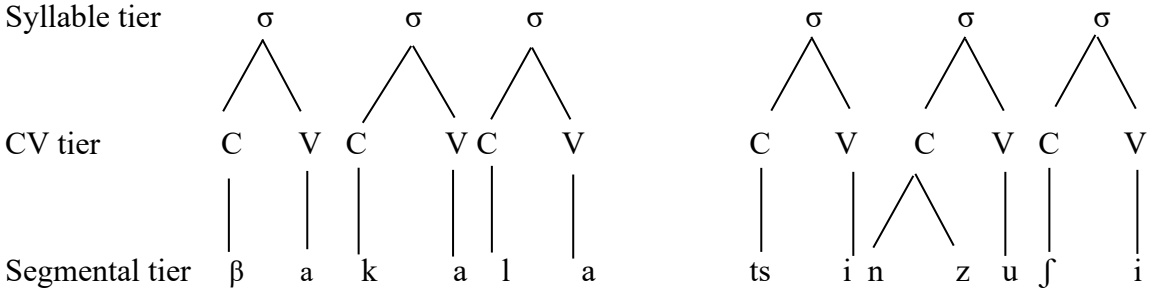
3.	Orthography	phonetic representation	Gloss
(i)	‘ira’	[ira]	‘kill’
(ii)	‘inda’	[inda]	‘stomach’



The CV Syllable in Trisyllabic Words

The syllable in example 4 below comprises trisyllabic words with the CVCVCV syllable structure.

4.	Orthography	phonetic representation	Gloss
	(i) ‘bakala’	[βakala]	‘dry in the sun’
	(ii) ‘tsinzushi’	[tsinzuʃi]	‘bees’

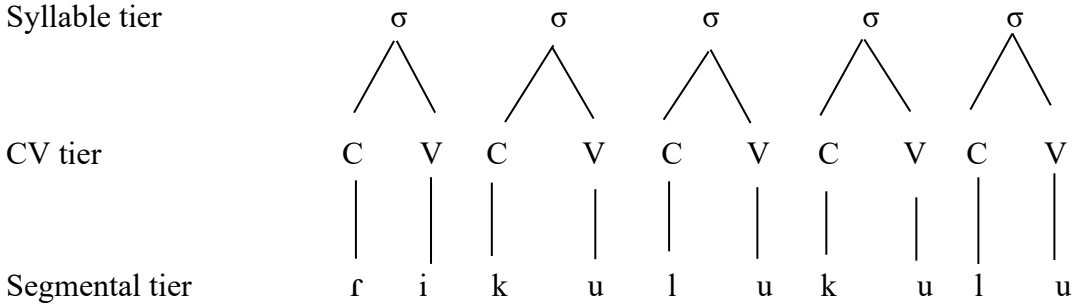


The words ‘bakala’ and ‘tsinzushi’ are trisyllabic with a CVCVCV syllable sequence. Each (V) forms a peak of prominence in the syllable in which it occurs. The CV syllable sequence in both words occurs in the first, second, and third syllables. In the word ‘tsinzushi’, the (C) branches into two consonants, thus forming the compound consonant [ts].

The CV Syllable in Polysyllabic Words

In Oluwanga, the CV syllable is also present in polysyllabic words of four, five, six, and seven syllables. Examples include ‘likulukulu’ for‘turkey’ (bird), ‘likuyukuyu’ for ‘butterfly’, ‘linyolonyolo’ for ‘wild green vegetable’, ‘lisangusangu’ for ‘inside the cheek’, ‘tsindayindayi’ for ‘mumps’, ‘litendechere’ for ‘worn out’, ‘lishirishiro’ for ‘place of treatment’, ‘litsiamolu’ for ‘praying mantis’, and ‘tsindeberende’ for ‘rust’. Example 5 illustrates the CV sequence in four-syllable words.

5.	Orthography	phonetic representation	Gloss
(i)	‘kalushira’	[kaluʃira]	‘repeat’
(ii)	‘sinjirira’	[siɲɟirira]	‘be in charge’

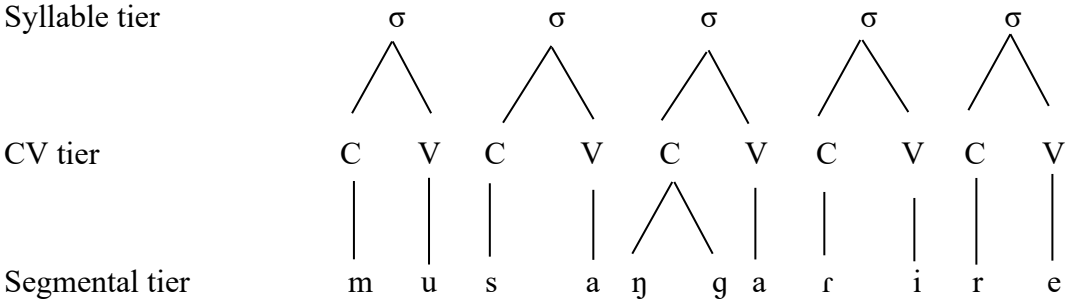


The five-syllable words exhibiting a CV sequence are predominantly Class 5 nouns, many of which arise through reduplication. There are, however, notable exceptions, such as *litendechere* ‘worn out’ and *litsiamolu* ‘praying mantis’. Troyer (2007, p. 18) describes Oluwanga Class 5 nouns as follows:

> Class 5 nouns typically begin with the VCV prefix *[ɛɾi-]* and mark singularity. Most nouns bearing this prefix, however, surface with the alternate form *[ji-]*. Unlike other noun prefixes of the VCV type, the VCV and CV realizations of the Class 5 prefix occur in complementary distribution. The forms *[ɛɾi-]* or *[ɛɾj-]* occur before vowel-initial roots, while *[ɾi-]* occurs before consonant-initial roots.

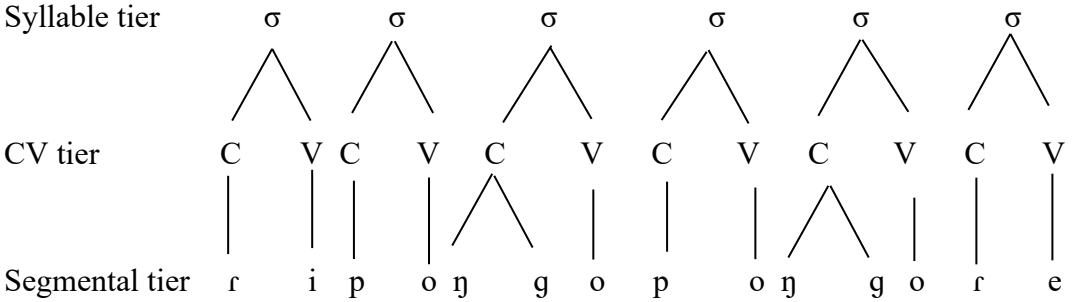
The CV syllable structure is also attested in five-syllable verb forms. In Oluwanga, as in other Bantu languages, entire clauses may be realized as single words composed of a sequence of morphemes encoding subject agreement, tense, and verbal meaning. An exception is observed in forms referring to the first person singular, second person singular, and third person singular pronouns, which are marked by a vowel-only (V) syllable rather than a CV syllable. Example 6 illustrates five-syllable words exhibiting the CV syllable sequence.

6.	Orthography	phonetic representation	Gloss
(i)	‘musangalire’	[musaŋgaɾire]	‘you (pl.) are happy’
(ii)	‘balomalome’	[βalomalome]	‘they have spoken’
(iii)	‘musebulane’ farewell’	[museβulane]	‘you (pl.) have bid each other



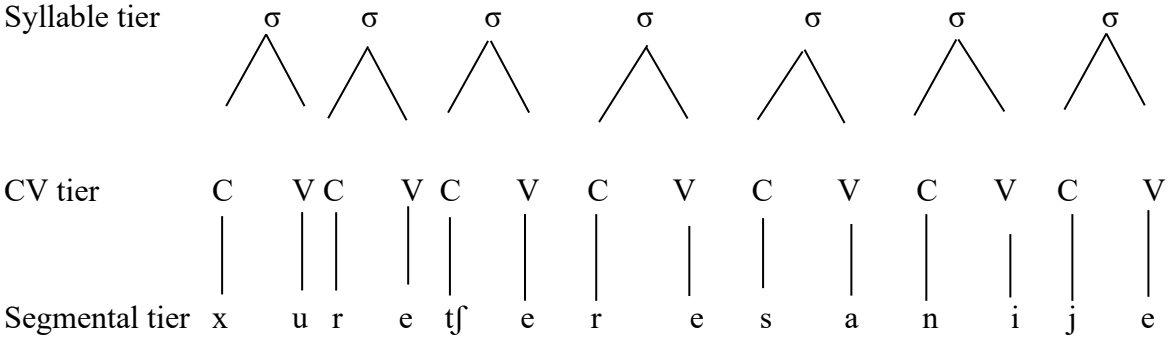
In Oluwanga, the CV syllable type in six-syllable words occurs in nouns and verbs such as ‘lipongopongole’ for ‘lizard’ and ‘khubasinjirire’ for ‘we are in charge of them’ respectively as shown in example 7. The verbs comprise a series of morphemes that mark the person, verb and tense.

7.	Orthography	phonetic representation	Gloss
	‘lipongopongole’	[ɾipoŋgopoŋgoɾe]	‘lizard’



The CV syllable in seven-syllable words occurs in verbs with a maximum of seven syllables, such as ‘khurecheresaniye’ for ‘we have understood each other’ as illustrated in example 8 below.

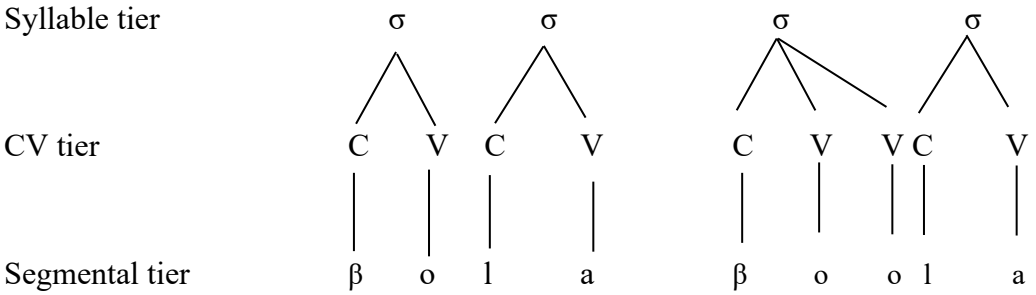
8.	Orthography	phonetic representation	Gloss
	‘khurecheresaniye’	[xuretʃeresanije]	‘we have agreed with each other’



The CVS Syllable with the Long Vowels in Oluwanga

As stated earlier, Oluwanga has five long vowels: [aː, eː, iː, oː, uː]. Vowel length in Oluwanga is phonemic, meaning that it serves to contrast lexical meaning. Consequently, long vowels are not allophonic variants of their short vowel counterparts. For purposes of illustration rather than comparison, the words presented in Example 9 are cited to demonstrate the occurrence of both short and long vowels, with each set conveying distinct meanings.

9.		Orthography	phonetic representation	Gloss
	(i)	‘bola’	[βola]	‘rot’
	(ii)	boola’	[βoːla]	‘speak’



The words *bola* and *boola* are disyllabic, exhibiting CVCV and CVVCV syllable sequences, respectively. In the word containing a long vowel, the nucleus of the first syllable

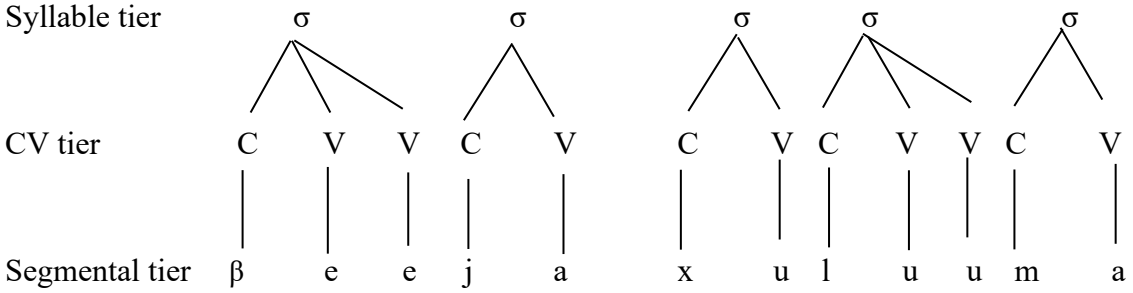
is branching, in contrast to the non-branching nucleus found in the corresponding syllable with a short vowel. In Oluwanga, the CVV syllable type does not occur in monosyllabic words; however, it is attested in disyllabic, trisyllabic, and polysyllabic words of up to six syllables.

In verbs, the CVV syllable sequence occurs in both word-initial and word-medial positions, as illustrated in Example 10 below.

10. Orthography phonetic representation Gloss

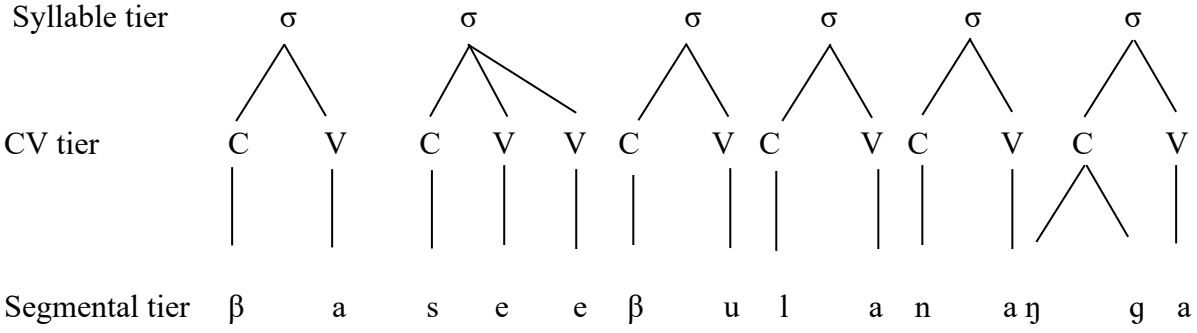
(i) ‘beeya’ [βeːja] ‘say a lie’

(ii) ‘khuluuma’ [xuluːma] ‘we push’



The CVV syllable type also occurs in verbs comprising four syllables. These verbs encode distinctions in tense, including past, present, and future. In such verbs, the long vowel CVV typically appears in the penultimate syllable. Moreover, the CVV syllable occurs in the word-medial position of both five- and six-syllable words. Example 11 illustrates the CVV syllable sequence in a six-syllable verb in Oluwanga.

11.	Orthography	phonetic representation	Gloss
	‘baseebulananga’	[βaseːbulanaŋga]	‘they bid each other farewell’



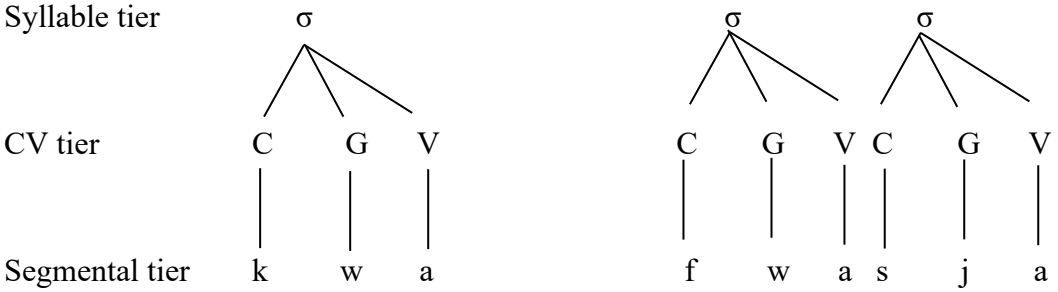
The C in the final syllable branches because it consists of a nasal compound.

The CGV Syllable Structure

In Oluwanga, this syllable structure consists of a consonant onset followed by the glides /w/ and /j/, and then a vowel. In nouns, this syllable is typically preceded by a V-only syllable, which serves to mark grammatical number. The consonants that form this cluster occur as separate sound segments. In verbs, the cluster is found in the word-initial position. This syllable type also occurs in monosyllabic words, particularly in imperative verbs, both singular and plural, where it generally occupies the word-initial position, as in *kwa* (‘fall’), *lya* (‘eat’), *fwa* (‘die’), and *sya* (‘grind’).

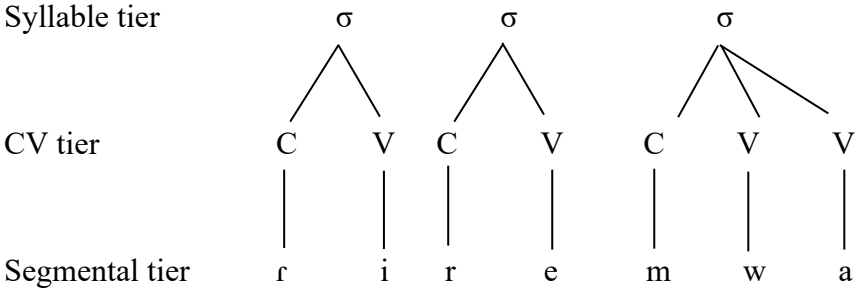
In disyllabic words, the syllable occurs mainly in verbs and may appear once or as part of a series of two syllables. When it occurs once, it can be in the word-initial position, as in *fwala* (‘dress’), or in the word-final position, as in *rusya* (‘remove’). When the CGV syllable occurs as a series of two syllables, it may appear in both the word-initial and word-final positions, as in *fwasya* (‘to dress someone’). In the noun *imwo* (‘seed’), the CGV syllable is preceded by a V-only syllable. Example 12 illustrates the CGV syllable in monosyllabic and disyllabic words.

12.	Orthography	phonetic representation	Gloss
(i)	‘kwa’	[kwa]	‘fall’
(ii)	‘fwasya’	[fwasja]	‘dress someone’



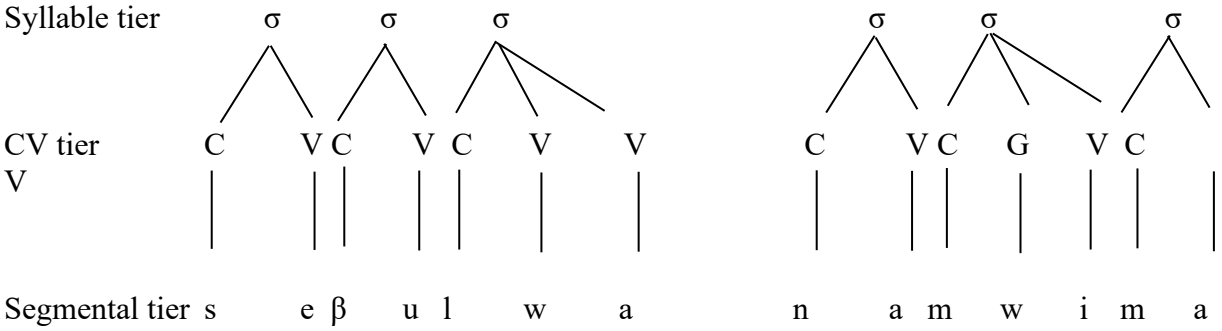
The CGV syllable is also found in trisyllabic nouns of classes other than class 5, such as *eshiswa* (‘anthill’), which consists of three syllables and is preceded by a V-only syllable. This syllable cluster occurs primarily in word-medial and word-final positions, with exceptions such as *mukhwasi*, a class 1 noun. Notably, *mukhwasi* is a synonym of *omukhwe*, which is preceded by a V-only syllable. The CGV syllable also appears in trisyllabic class 5 nouns that begin with the *li-* prefix and are not preceded by a V-only syllable. Additionally, it occurs in the word-final position in nouns such as *liremwa* (‘banana’) and *litumwa* (‘maize’). Example 13 illustrates a word containing the CGV syllable sequence in the word-final position.

13.	Orthography	phonetic representation	Gloss
	‘liremwa’	[ɾiremwa]	‘banana’



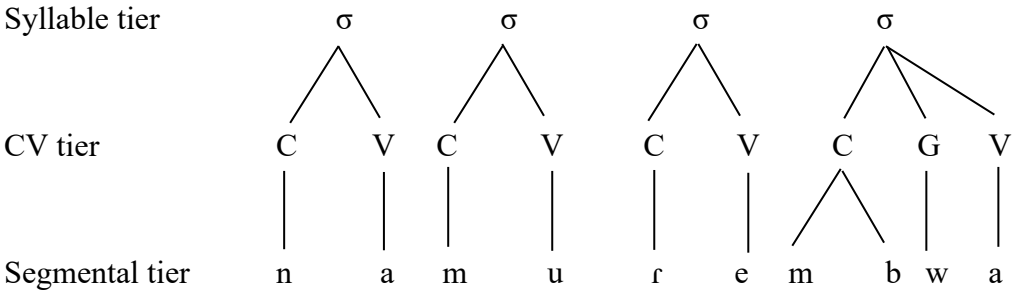
The CGV syllable cluster also occurs in trisyllabic verbs, primarily in word-initial and word-final positions. These verbs are typically in the passive form. Additionally, the CGV syllable appears in adjectives referring to women, particularly those attributed to their clan, as illustrated in Example 14.

14.	Orthography	phonetic representation	Gloss
(i)	‘sebulwa’	[seβulwa]	‘to be bid farewell’
(ii)	‘namwima’	[namwima]	‘of the Mwima clan’



The CGV syllable sequence also occurs in polysyllabic words in the initial, medial and final word positions. Some nouns in this category are preceded by the V-only syllable. The syllable also occurs in adjectives that are attributed to women from one of the *Abawanga* clans as illustrated in example 15.

15.	Orthography	phonetic representation	Gloss
	‘namulembwa’	[namuɾembwa]	‘of the Mulembwa clan’



The V-only Syllable

In Oluwanga, the V-only syllable occurs in the initial syllable position of nouns, adjectives, and demonstratives in monosyllabic, disyllabic, trisyllabic, and polysyllabic words. This syllable structure is referred to as the zero-onset syllable (Ø) because it consists solely of the nucleus, without any branching. Example 16 illustrates the use of the V-only syllable as an exclamation.

16.

Orthography	phonetic representation			Gloss
'a' 'e' 'o'	[a]	[e]	[o]	'exclamation'
Syllable tier	σ	σ	σ	
CV tier	V	V	V	
Segmental tier	a	e	o	

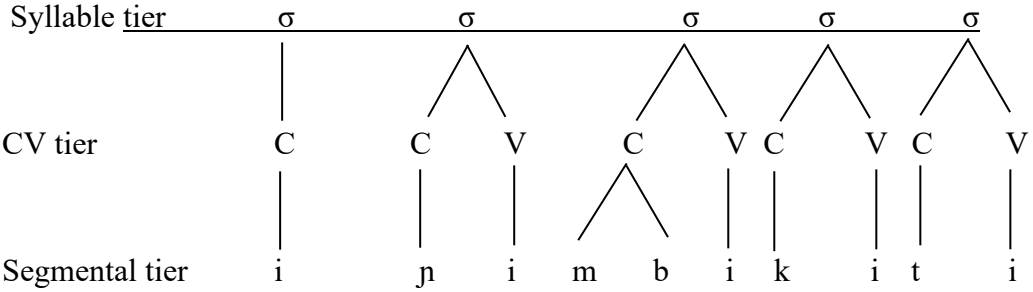
The vowel i- occurs as a V-only syllable at the word-initial position of nouns, verbs and adjectives. In nouns, it occurs in class 9 nouns as illustrated in example 17 below.

17.

Orthography	phonetic representation						Gloss
'iyaywa'	[ijajwa]						'axe'
Syllable tier	σ		σ			σ	
CV tier	V	C	V	C	G	V	
Segmental tier	i	j	a	j	w	a	

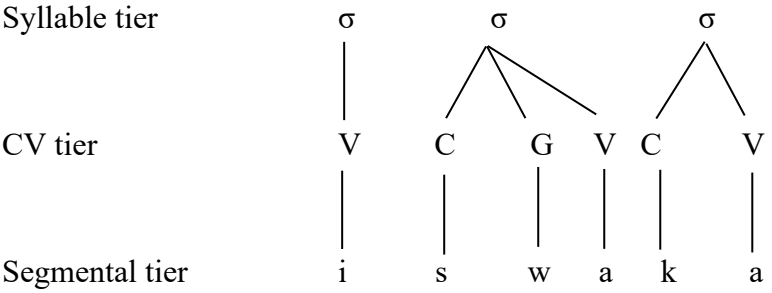
In adjectives, it occurs at word-initial position and is used to describe class 5 nouns as shown in example 18 below.

18.	Orthography	phonetic representation	Gloss
	‘inyimbikiti’	[iɲimbikiti]	‘short one’



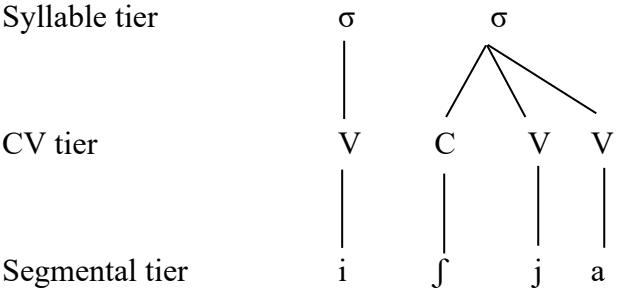
In verbs, it occurs as a marker for the class 5 nouns as illustrated in example 19 below.

19.	Orthography	phonetic representation	Gloss
	‘iswaka’	[iswaka]	‘it pounds’



It also occurs in the imperative form of verbs, as illustrated in example 20 below.

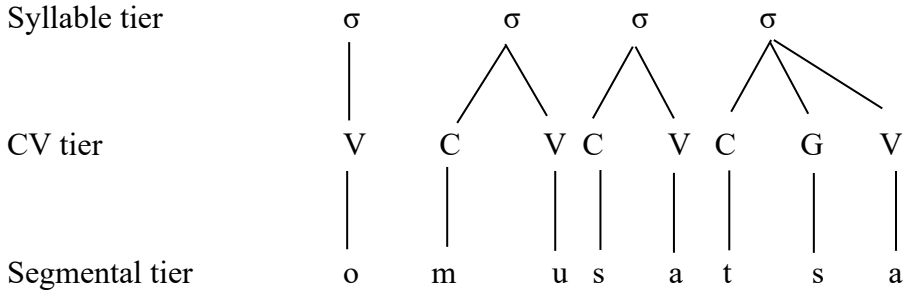
20.	Orthography	phonetic representation	Gloss
	‘ishya’	[iʃja]	‘bring it down’



The vowel /o/ occurs as a V-only syllable in the word-initial position in nouns, verbs, and verbal nouns in Oluwanga. In nouns, it appears in class 3, class 11, and class 20 nouns, with class 20 representing the gargantum form of nouns. Example 21 illustrates words in which the vowel /o/ functions as the V-only syllable.

21. Orthography phonetic representation Gloss

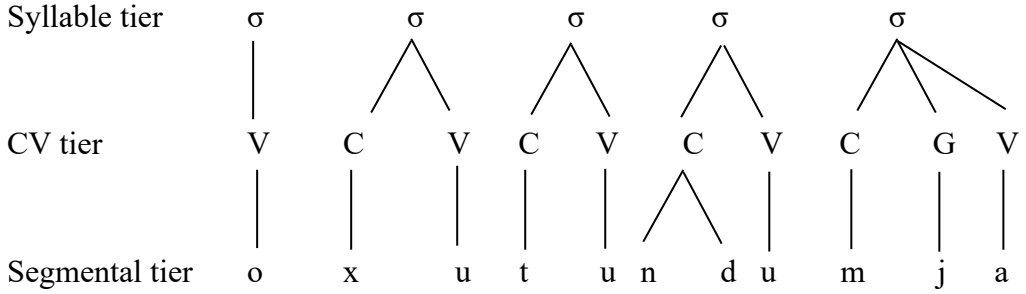
‘omusatsa’ [omusatsa] ‘man/husband’



In verbs, it occurs at the word-initial position of infinitive verbs as illustrated in example 22 below.

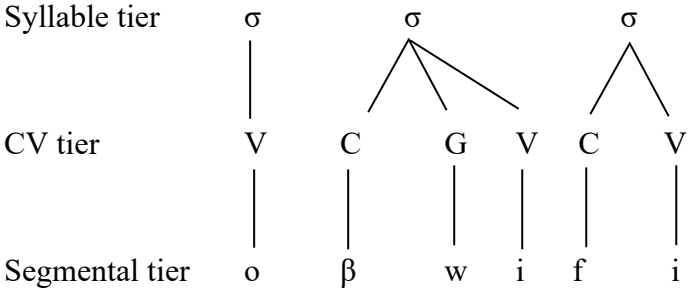
22. Orthography phonetic representation Gloss

‘oxutundumya’ [oxutundumja] ‘to warm’



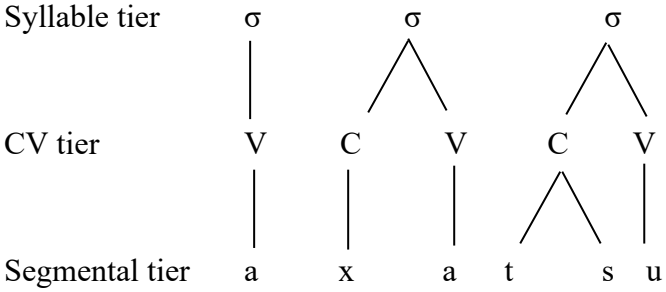
In verbal nouns, it occurs at the syllable intial position as shown in example 23 below.

23.	Orthography	phonetic representation	Gloss
	‘obwifi’	[oβwifi]	‘theft’



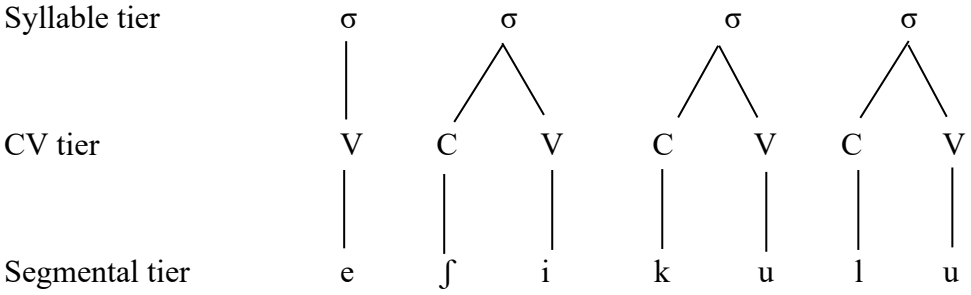
The vowel a- occurs as a V-only syllable in classes 2 and 12 nouns of Oluwanga, as in example 24.

24.	Orthography	phonetic representation	Gloss
	‘akhatsu’	[axatsu]	‘small house’



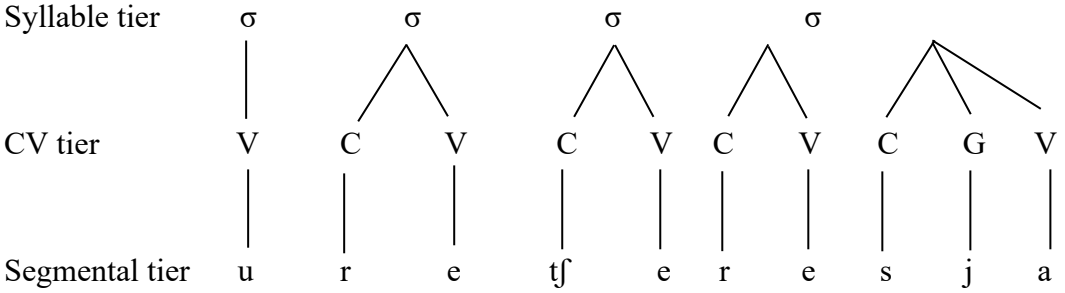
The vowel e- occurs as a V-only syllable in classes 4 and 7 nouns of Oluwanga, as in example 25.

25.	Orthography	phonetic representation	Gloss
	‘eshikulu’	[eʃikulu]	‘hill’



The vowel u- occurs as a V-only syllable in verbs where it serves as a pronoun marker. to refer to ‘he/she’ as illustrated in example 26 below.

26.	Orthography	phonetic representation	Gloss
	‘urecheresya’	[uretʃeresja]	‘he/she who listens’

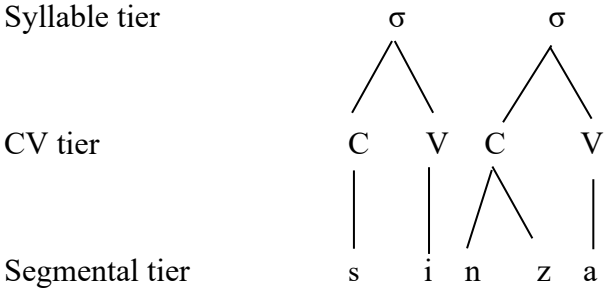


The Permissible Syllable Onset in Oluwanga

All Oluwanga consonants, including the prenasalized ones, constitute permissible single onsets. In addition, a few onset clusters occur, typically consisting of a consonant followed by one of the glides /w/ or /j/. In Oluwanga, as in other Bantu languages, glides function both as consonants and as semi-vowels. The examples below illustrate words containing the various syllable onsets in Oluwanga.

(a) ***Onsets with a Single Consonant***

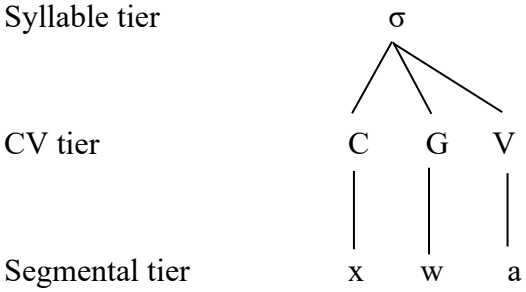
27.	Orthography	phonetic representation	Gloss
	‘sinza’	[sinza]	‘slaughter’



(b) ***Onsets with a Double Consonant***

28.

	Orthography	phonetic representation	Gloss
	'khwa'	[xwa]	'pay dowry'



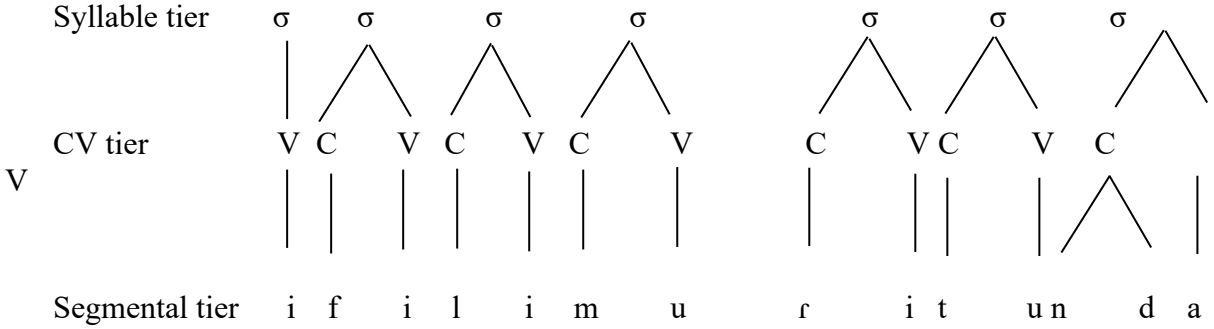
The word 'khwa' is monosyllabic and has a syllable sequence of CGV with an onset of a double consonant, unlike the word 'sinza', which has one consonant associated with two segments that form a compound sound.

Syllable Transformations in Oluwanga

The process of syllable transformation in Oluwanga occurs during borrowing. Using examples of English and Kiswahili words, it may be posited that, like in other languages, *Oluwanga* loan words undergo syllable transformations in order to realize the well-formed structure of the syllable in the Oluwanga word. The words in the source language are considered ill-formed vis-à-vis the syllable structure of Oluwanga. Examples of loan words include 'ifilimu' and 'lirungeti' from the English 'film' and 'blanket', as well as 'litunda' and 'inasi' from the Kiswahili 'tunda' for 'fruit' and 'nazi' for coconut, respectively. Example 29 illustrates this phenomenon.

29.

	Orthography	phonetic representation	Gloss
(i)	'ifilimu'	[ifilimu]	'film'
(ii)	'litunda'	[ɾitunda]	'fruit'



The syllable structure of the Oluwanga loanword [ifilimu], borrowed from English, becomes polysyllabic, in contrast to the source language word, which is monosyllabic. This syllable transformation occurs through the insertion of the high front vowel /i/ and the high back vowel /u/ in a phonological process known as vowel insertion, thereby increasing the number of V-elements in the borrowed word compared to the single vowel in the source language. This transformation ensures that the word conforms to the syllable structure conditions of well-formed Oluwanga words, which are defined in terms of the phonemic segments comprising each syllable. Similarly, the Oluwanga word 'litunda,' borrowed from the Kiswahili word 'tunda,' consists of three syllables, whereas the source language word contains only two. In this instance, the transformation occurs through syllable insertion at the word-initial position. These examples demonstrate that all short vowels [a, e, i, o, u] are inserted into loanwords borrowed into Oluwanga. Consequently, it can be argued that the inserted vowels correspond to those present in the source language word.

Conclusion

This study aimed to investigate the syllable system of the Oluwanga dialect by examining the syllable patterns of a range of words. The analysis focused on syllable forms involving both short and long vowels, with syllables categorized into short and long types.

The study highlighted key phenomena related to the CV phonology of the Oluwanga dialect. Specifically, five syllable patterns were identified, which occur both as monosyllables and within multisyllabic words. Consistent with many other languages, the CV syllable functions as the core syllable in Oluwanga.

In addition to the core CV syllable, Oluwanga exhibits syllables formed through consonant and vowel clusters, which may appear in word-initial, word-medial, or word-final positions. The five identified syllable patterns are V, VV, CV, CVV, and CGV. The study further demonstrated that, in Oluwanga, all consonants, including the glides /j/ and /w/, are dominated by C-elements, whereas all vowels are dominated by V-elements. Consequently, core syllable associations in Oluwanga include both one-to-one and many-to-one relationships between elements, reflecting the intricate internal structure of the dialect's syllable system.

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