

The Syllable In Tshivenda And Xitsonga

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Abstract

The aim of this study is to unpack the internal structure of syllables in two mutually unintelligible languages, namely, Tshivenda and Xitsonga. The study finds that the analysis of the syllable in both languages permit many structural patterns; and that the syllable, which has no coda in the two languages, normally begins with one or more consonants, and terminates with a vowel, which serves as the nucleus. The structure of the syllable generally assumes the CV representation, which occurs freely in both languages, and which can be broken up by vowel insertion and glide formation. Moreover, Tshivenda accommodates a cluster of consonants at word-initial position, but consonants in Xitsonga occur in both word-initial and word-final positions. Finally, it is recommended, among others, that future studies should pay attention to syllabic patterning and other related issues in Bantu languages.

Keywords: Phonology; Syllable; Syllable Structure; Tshivenda; Xitsonga; CV-Phonology.

1. Introduction

Most scholars, specifically those in the domain of generative phonology, concede that the syllable is an important unit of words in languages, and that its understanding as the basic unit of sound organisation is essential (Baixone, 2015; Roach, 1998). Katamba echoes this sentiment, arguing that “the syllable is at the heart of phonological representations. It is the unit in terms of which phonological systems are organised. It is a purely phonological entity”; but warns that it (the syllable) “cannot be identified with a grammatical or semantic unit” (1989:153).

This study seeks to determine syllabic patterning in Tshivenda and Xitsonga, in terms of whether or not both languages assume identical or distinct syllable structures; if they permit the syllabic patterning assumed by other languages such as English; if there are any types of syllable structures that may be best used to represent the syllabic structures of both languages; and if principles that undergird the

syllable structure and pattern in one of the two languages are identical with or distinct from those of the other or vice versa. Although both Tshivenda and Xitsonga are Bantu languages, they are mutually unintelligible, and are therefore seen as unrelated languages (Prah, 2007). But both languages are spoken mainly in Limpopo Province, South Africa. While Tshivenda is also spoken in certain parts of Zimbabwe, speakers of Xitsonga can also be found in Mozambique.

2. Towards a definition of the syllable

Duanmu (2008:58) acknowledges that providing a phonetic definition of the syllable is notoriously difficult, but still proceeds to allude to the common view that “a syllable is a prominence peak” (cf. Ayyub, 1968). Notable in this argument is that the syllable is confined to the phonetic domain. This is not surprising considering that scholars are divided on whether the nature of the syllable encapsulates phonetic, phonemic or phonological aspects (Satter, 2015). Scholars such as Abercrombie

(1967), Gimson (1970), Jakobson and Halle (1968), Stageberg (1971) and Stetson (1951), for instance, seem to follow the phonetic approach in their definition of the syllable, whereas Clements and Keyser (1983) and Crystal (1980) regard the syllable as a phonological element.

Hassan (1979) adopts a broader view, relating the syllable to a phonetic, phonological and linguistic unit. But MacCarthy (1978:107) is of the opinion that the word 'syllable' should not be used in either a phonetic or a phonological sense, but as "part of a word that can be separated from other parts in accordance with the structural rules of the given language". For Katamba, "the syllable is the unit in terms of which phonotactic rules are best stated" (1989:165). By 'phonotactic rules' (also known as Morpheme Structure Conditions), Katamba refers to "the rules which reflect speakers' knowledge of what combinations of sounds are allowed in their language" (1989:165). Fudge (1969) identifies two types of syllables, namely; phonetic and phonemic syllables. While the latter serves as a foundation for the structural description of the language, the former typically entails the norm of pronunciation, which essentially comprises articulatory features.

Our interest in this study is the phonological approach of the definition and description of the syllable in Tshivenda and Xitsonga because "phonological research has amassed evidence showing that the syllable is the hub of phonological organisation" (Katamba, 1989:173). Duanmu (2008:58) critiques yet "another common definition", which views the syllable as "related to a chest pulse, or a pulse of air pressure". This common understanding of the syllable, according to Duanmu, does not say much about where syllabic boundaries are. The second problem with this common definition relates to a lack of clarity on "why some phonetic peaks are not treated as syllables, such as the [s] in stop, extra, and cats" (2008:58 original italics). This, for Duanmu, is one of the

reasons why some scholars are sceptical when it comes to the consideration of the syllable as a linguistic unit. From this perspective, there is clear, if not commonly accepted definition of the syllable. Notwithstanding, Duanmu still assumes a position on this issue that we also cherish in this study: "just as the lack of a definition of life (or death) does not prevent biologists from studying living things, the lack of a definition of the syllable should not prevent us from studying syllables" (2008:58). From here, Duanmu argues that many questions about the syllable such as, "what the maximal syllable size is, what a possible onset is, and how to determine syllable boundaries" can be addressed and reasonably answered (2008:58). This line of thinking, Duanmu (2008:58) believes, "constitutes concrete progress towards the understanding of the syllable".

By contrast, scholars such as Skandera and Burleigh regard the syllable "as the smallest rhythmic unit of [a] spoken language" (2005:65). Similarly, Crystal (1985:164) posits that the syllable is "an element of speech that acts as a unit of rhythm which is noticeable in [the] English pronunciation and consisting of a vowel, a syllable consonant or a vowel plus consonant combination". To Hancock (2003:50), the syllable is "a group of one or more sounds with a peak or nucleus", while Baixone (2015:4) defines it as "the unit which sounds loud in a spoken word, formed normally by a nucleus, which stands as the centre of the syllable" (2015:4). Yet, Forel and Puskás (2005:35) see the syllable as consisting of a phoneme, if not a sequence of phonemes.

In view of the ambivalence that characterises the definition and even the description of the syllable, in harmony with Ayyub (1968) and Hassan (1979), we view the syllable as a group of sounds in a language or a phonological unit with a peak of sonority, usually consisting of a single vowel (short or long) with one or more consonants. Also connected to this view is the understanding that the syllable is marked by a

number of functions (Katamba, 1989:84; cf. Fudge, 1969):

- phonotactic regulation (constraining the combination of consonants and vowels of a language);
- regulation of subsegmental structure through the CV-tier; and
- serving as the unit of the phonological hierarchy in terms of which the behaviour of higher units of the prosodic hierarchy such as stress, tone and duration is stated.

3. Methodology

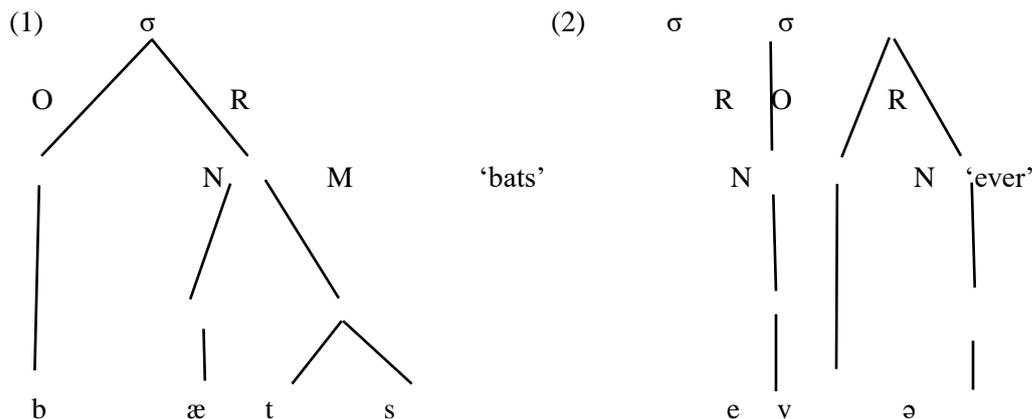
Our conception of the syllable structure in Tshivenda and Xitsonga depends predominantly on our intuitive knowledge of the two languages as native speakers, respectively. This stance finds credence in the argument that “the syllabification of the word is a natural process which is carried out by the native speaker of a particular language, [and] the agreement of the syllables in a word is mostly triggered by the intuition of the native speakers, which guides them to syllabify the words in a natural way of speech” (Abbasi & Hussain, 2012:124).

4. The Structure of the Syllable in Tshivenda and Xitsonga

Although we are conscious of the fact that some scholars consider the syllable as a phonetical unit, we primarily look at the Tshivenda and Xitsonga syllable from a phonological perspective, which in itself entails paying attention to the probable combinations of phonemes (Ayyub, 1968). To begin with, we

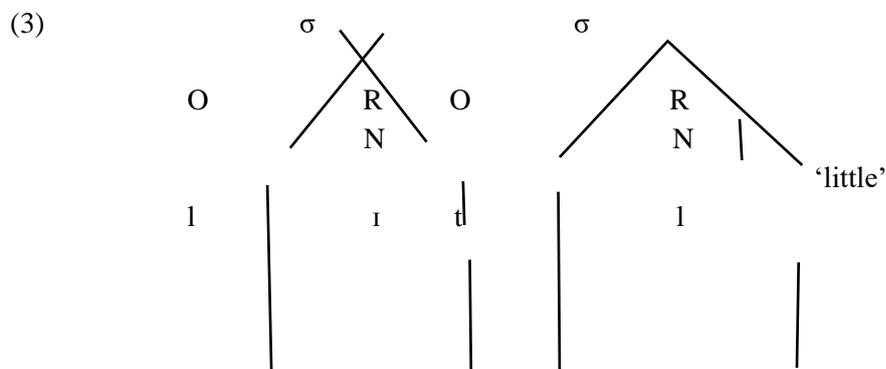
look at what can occur in the initial position of the syllable, which involves being attentive to what happens at the beginning of the word when we speak after a pause (Baixone, 2015). As will soon emerge, in Tshivenda and Xitsonga, we may find that some words begin with a vowel, or with one consonant. However, the common phenotype of the Tshivenda and Xitsonga syllable is a consonant and a vowel cluster, in that order. In fact, most syllables in the two languages are formed by a consonant and a vowel (Milubi, 2004). Also, words in Tshivenda and Xitsonga end with a vowel, and not with a consonant, except in the case of ideophones, which are phonologically aberrant (Kubayi & Maɖadzhe, 2015). There are also exceptional cases where words in the two languages can end with two vowels. Typical examples include interjectives such as ndaa (greeting) and ahee (response greeting) (also known as a heavy syllable), respectively.

Most phonologists, according to Katamba (1989), envisage a branching hierarchical structure when it comes to the representation of the syllable. Among such phonologists are Harris (1983), Halle and Vergnaud (1980), Kiparsky (1979) and Steriade (1982). These phonologists have proposed what is regarded as a revamped version of the hierarchical branching theory using a Multi-Tiered Phonological Theory. According to Katamba, “this is an approach where phonological representations are viewed as consisting of a number of independent levels that are linked to each other” (1989:154). In terms of this view, syllable structures can be represented as follows:



In the (1) and (2) above, ' σ ' represents the 'syllable node', 'O' the 'onset', 'R' stands for 'rhyme', 'N' for 'nucleus' and 'M' represents the 'margin'. Thus, the syllable principally constitutes two elements, namely; the onset, which comes at the beginning, and the rhyme, which follows it (Katamba, 1989:154). "Technically", avers Baixone (2015:5), "the basic elements of the syllable are the onset (one or more consonants) and the rhyme," where the latter comprises the nucleus and the coda. The rhyme is the only obligatory constituent of

syllables in most languages (Cairns & Feinstein, 1982). To Katamba, although languages vary, the rhyme is the only essential element of the syllable in English, and "the nucleus slot in the rhyme is occupied by a vowel, but occasionally a consonant may fill that position as in the final [l] of little which is syllabic" (1989:155). From this perspective, it is instructive to borrow Katamba's (1989:154) representation of the syllable structure of 'little' hierarchically:



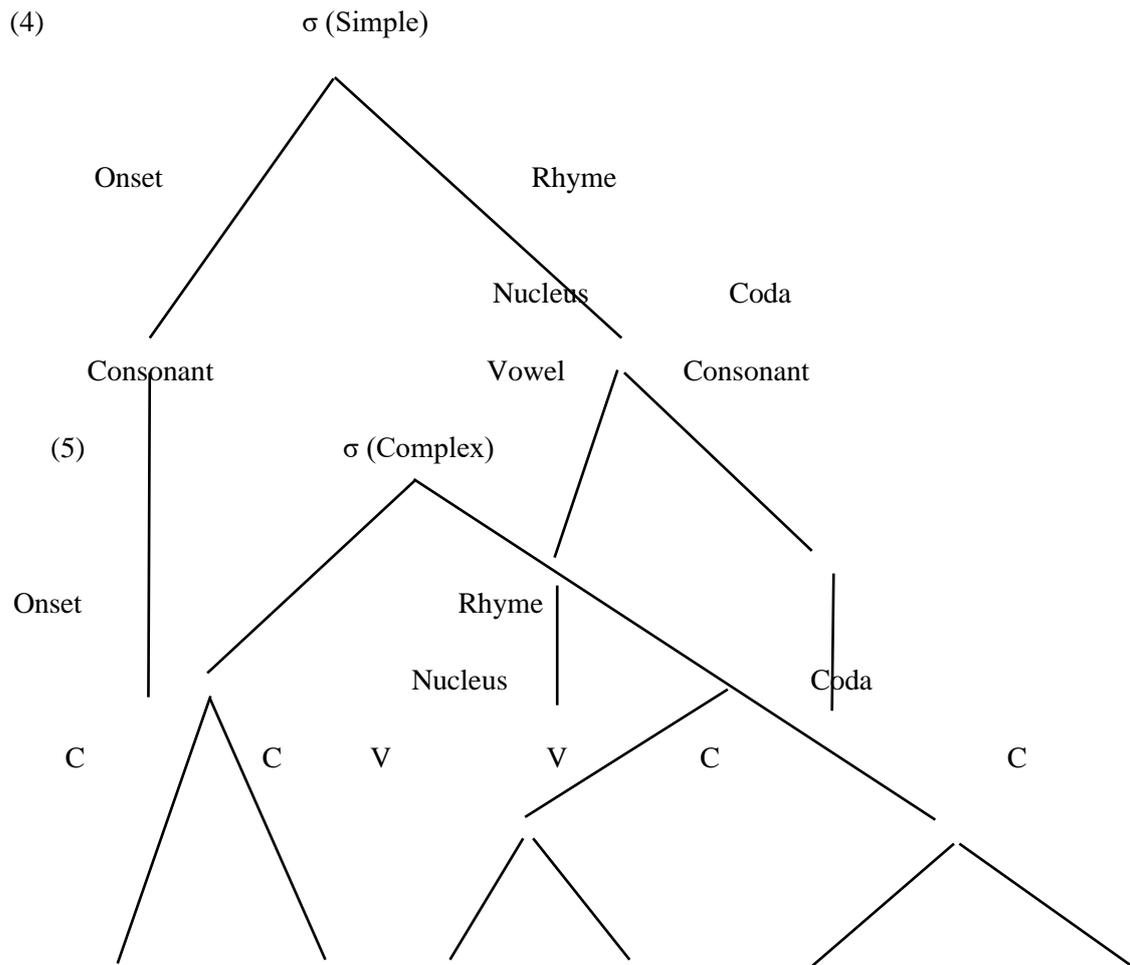
In his explanation of elements constituting syllable structures (1), (2) and (3) above, Katamba believes that the word 'bats' consists of one syllable, precisely the onset and the rhyme. In terms of this view, in the first syllable of 'e-ver', the rhyme is simple, which means, "it does not branch" (1989:154-155), or contains just one constituent, namely; the vowel. But when we consider the rhyme of bats,

we realise that it branches (it has a vowel which is followed by a consonant). In this sense, the rhyme is essentially the head constituent, that is, it is "the only compulsory constituent" of the syllable; while the onset is "the part that branches off the left of the rhyme, coming from the same node"; and as noted in the word, 'ever', "it is possible in English for a well

formed syllable to contain no onset” (Katamba, 1989:155).

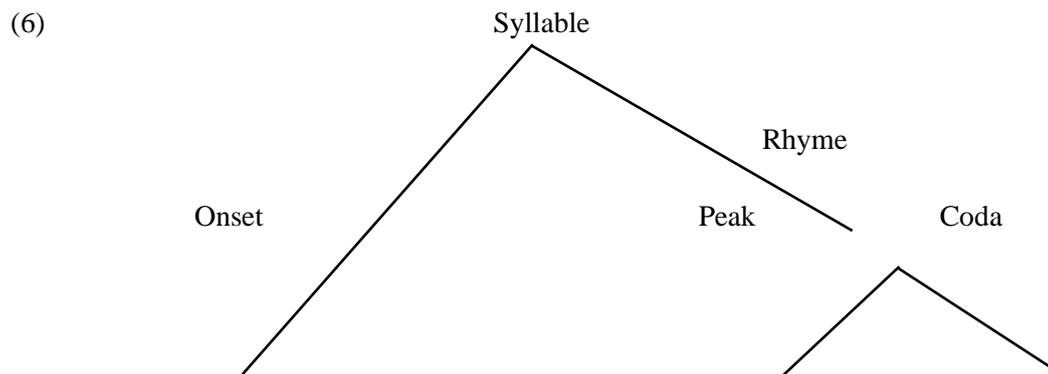
In Tshivenda and Xitsonga, we advocate for this possibility in light of respective interjectives such as aa! and ee!, for example. It is not possible, however, for a well-formed syllable to exist without a rhyme (Katamba, 1989), and this is also true of the two languages. The rhyme constitutes a vowel, which is regarded as the nucleus, plus any following consonant(s), described as the coda (Baixone, 2015:5). In fact, the syllable consists of a single onset consonant, plus a single vowel, followed by a single coda consonant. A single consonant between vowels goes with the following vowel as onset, while two consonants between vowels are divided; the former being a coda for the preceding vowel, the latter an onset for the following vowel (Hockett, 1958). For Hayes (2009), the syllable may be described in this manner: the coda is the consonant or sequence of consonants at the end of a syllable. The nucleus of a syllable is the vowel or diphthong found at the syllable’s core and functioning as its sonority peak (i.e. nucleus). It is obligatory

for a syllable to have a nucleus, common for a syllable to lack a coda, and less common for it to lack an onset (Hayes, 2009:251). Yule (2006) argues that syllables that have an onset and a nucleus, but do not have the coda are known as open syllables, whereas those that have the coda are known as closed syllables. According to Akanlig-Pare (1994), syllable structures are often motivated by the need to preserve preferred syllables or to readjust those that are not preferred. For instance, the consonant-consonant-vowel (CCV) cluster may, at times, appear alien to the syllable structure of Tshivenda and Xitsonga, thus requiring vowel insertion between the consecutive consonants to break up the CCV cluster into CVCV. To Cairns and Feinstein (1982), “the primacy of the simple open CV syllable is generally accepted [because] virtually all languages exhibit such syllables”. In other words, the CV rule is universal (Rubach & Booij., 1990). This brings into view the notion of the ‘simple’ and ‘complex’ illustrations of the internal structure of the syllable which, according to Hockett (1958:99), may be represented as follows:



Illustrations (4) and (5) above show that internal structures of syllables may vary quite significantly in terms of the complexity of their phenotypes, but they will still retain the same genotype. This assertion is supported by Hockett (1958:86), who acknowledges that

onsets, codas and nuclei vary a great deal in complexity. Roach's (1998:73) representation of a syllable structure assumes a slightly different phenotype from (4) and (5) above but retains the same essence genotypically:



In languages such as English, “both the onset and coda can consist of more than one consonant, also known as a consonant cluster”, [and] “The combination /st/ is a consonant cluster (CC) used in the word stop, and as coda in the word past” (Baixone, 2015:5 original italics). The CC onset combination permitted in English phonotactics – the study of rules governing possible phoneme sequences in a language – for example, “blank, bread, trick, twin, flat and throw”, where the “liquids (/l/, /r/) and glide (/w/) are being used in second position” (Baixone, 2015:5), is not permitted in Tshivenda and Xitsonga because a vowel is required between the consonant to break onset combinations or consonant cluster. English can have larger onset clusters, as in the words

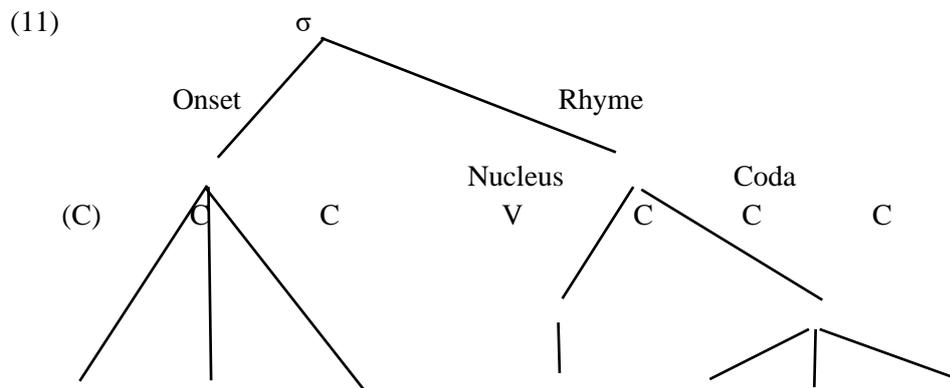
‘stress’ and ‘splat’, consisting of two or more initial consonants (CCC) (Baixone, 2015). The same is true for Tshivenda and Xitsonga, as evidenced by the words mpfuna (love me) and ntlhonthlo (challenge), respectively. Similarly, vowels occur as the nucleus of the syllable, consonants form the onset of the syllable whereas the coda does not occur in the two languages since all Tshivenda and Xitsonga syllables in particular and words in general terminate with a vowel or vowels. On the latter aspect, however, we may consider some Tshivenda and Xitsonga ideophones in an effort to show that a coda may be forced to occur although examples will appear grammatically aberrant in both languages. For instance:

- | | | |
|------|--|-----------|
| (7) | Goloi yo ima ya ri tserrr!
Car Agr stop Agr says tserrr!
(The car screeched to a sudden halt). | Tshivenda |
| (8) | Duvha li fhisa li tou ri nzirrr!
Sun Agr hot Agr says nzirrr!
(The sun is scorching hot). | Tshivenda |
| (9) | Movha wa yima wu ri tswirrr!!
Car Agr stop it say tswirrr!
(The car stops with a sound). | Xitsonga |
| (10) | Njiya ya haha yi ri phurrr!
Locust Agr fly Agr says phurrr!
(The locust flies away). | Xitsonga |

The syllable structures in Tshivenda ideophones in examples (7) and (8) are both CCVCCC, while the Xitsonga examples in (9)

and (10) are CCCVCCC and CCVCCC, respectively. If the examples in (7) to (10) were to be represented in a hierarchical syllable

structure, they would similarly appear as (11) below:



In both languages, although the syllable typically assumes the CV (consonant-vowel) structure, there are instances where the vowel may form the syllable alone (see also Milubi, 2004). The /a/ which is used as a form of greeting (by females) in Tshivenda i.e., aa! or as an exclamation in Xitsonga (aa!), can function as the syllable. Similarly, the vowels /e/ and /i/ are used in both languages in interactional agreement. In such instances, the vowels will be clustered, i.e., /ee/ and /ii/, respectively. In the same vein, disagreement is expressed by the vowel /e-e/ (no) in Xitsonga.

There are also cases where the vowel occurs in the initial position of the word in Tshivenda, e.g. “i: ma”, “i: mba”, “e: la” and “o: la”, or we may put it this way:

- (12) /i/ /ma/ (ima): stand
 /i/ /mba/ (imba): sing
 /e/ /la/(ela): measure
 /o/ /la/ (ola): draw

Again, this is not unique to Tshivenda. Examples abound in Xitsonga, including the following:

- (13) /a/ /hee/ (ahee): response
 greeting
 /e/ /nta/ (enta): deep
 /a/ /ka/ (ala): reject
 /o/ /nha/ (onha): destroy
 /o/ /xa/ (oxa): roast

The Tshivenda and Xitsonga syllables assume various patterns, including nasal speech sounds syllabic consonants, namely; /n/, /ŋ/ (spelled /ñ/ in Tshivenda or /n'/ in Xitsonga) and /m/ in both languages. These syllabic consonants function as syllables when they are used to indicate interlocutory agreement by saying: /n:/ and /m:/, and are often spelled variously as uhn, uhm, nhm or mmh in the two languages.

Tshivenda and Xitsonga syllables comprise mainly three components: the initial, the medial and the final parts. Cases in point include *liivha* (dove) and *gidima* (run) in Tshivenda, and *vuoswi* (adultery) and *tsutsuma* (run) in Xitsonga. The table below is illustrative:

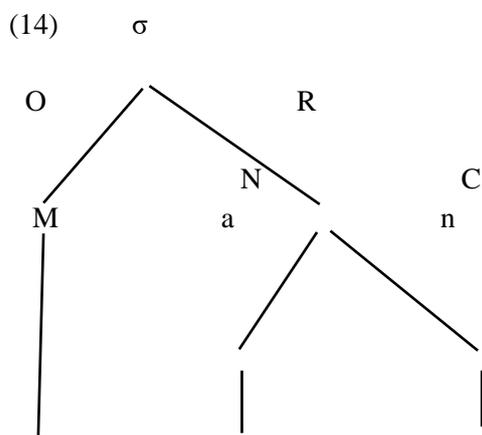
Table 1: Components of the Tshivenda and Xitsonga Syllable

Language	Initial part	Medial part	Final part
Tshivenda	li-	-i-	-vha
Tshivenda	gi-	-di-	-ma

Xitsonga	vu-	-o-	-swi
Xitsonga	tsu-	-tsu-	-ma

However, there are instances where the components of the syllable are not clearly discernible. Examples include monosyllables such as *fa* (die) and *ka* (fetch), which have the same meanings in both languages. In addition, it is important to point out that syllabication (the division of a word into syllables) (Crystal, 1980) in Tshivenda and Xitsonga is not the preserve of verbs, but a feature of all word categories (nouns, adjectives, ideophones, etc.). Generally, both of these languages are deprived

of words that end with consonants as evidenced in Northern Sotho nouns such as ‘Thabang’ (be joyful/happy) and locatives such as ‘Thabeng’ (at the mountain), and English verbs such as ‘singing’ and ‘cooking’. Thus, syllables in both Tshivenda and Xitsonga can be described as open syllables. Therefore, the coda as accommodated in English and Northern Sotho, for example, is not applicable in the syllable structure of the two languages. For example:



It is possible to identify both heavy and light syllables in Tshivenda and Xitsonga. Whereas a heavy syllable ends with two vowels (or branches) (CVV), a light syllable is characterised by one vowel (CV) (Hyman, 2003). Examples of the former include ‘kuvhea’ (washable) in Tshivenda and ‘ahee’

(response greeting) in Xitsonga. A light syllable can be pinpointed by the respective ‘fa’ (die) in both languages. Thus, both languages are characterised by light and heavy syllables as well as open syllables. In what follows, attention is paid to some of the potential and common syllabic patterns in the two languages.

Table 2: Possible Syllabic patterns in Tshivenda and Xitsonga

Pattern No.	Syllabic pattern	Examples in Tshivenda	Examples in Xitsonga	Description
1.	/CV/	fa (die)	fa (die)	short, open
2.	/CCV/	n̄e (me)	-----	short, open
3.	/CVCV/	bika (cook)	teka (take)	short, open
4.	/VCV/	-----	ala (reject)	short, open
5.	/VCCV/	inwi (you)	enta (deep)	short, open
6.	/VCVCCCV/	-----	ehenhla (above)	short, open
7.	/CCCVCV/	-----	nhloti (eyes, tear)	short, open
8.	/VCCCCVCV/	-----	endzhaku (at the back)	short, open

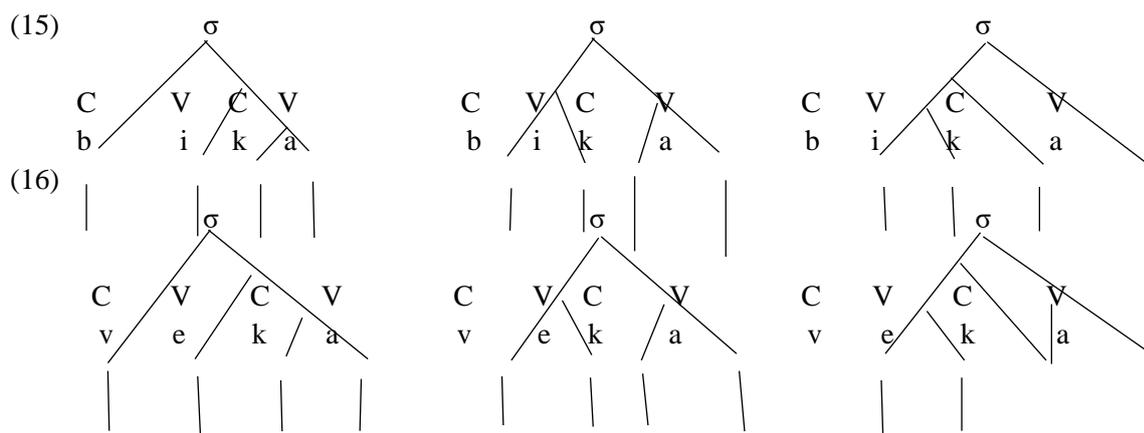
9.	/VCVCCVCV/	-----	emahlweni (in front of)	short, open
10.	/CVVCV/	ńwana (child)	n'wana (child)	short, open
11.	/CCCCV/	mmbwa (dog)	-----	short, open
12.	/CCCVCV/	nkhana (deny/reject me)	nkhavi (stick)	short, open
13.	/CCCCVCV/	-----	ntshava (mountain)	short, open
14.	/CVVCCV/	maanda (strength; power)	vuoswi (adultery)	short, open
15.	/CCCVCCV/	----	ngwenya (crocodile)	
16.	/CCCCVCCV/	ntswenya (bother me)	-----	short, open
17.	/CVCCV/	-----	xikwa (earth worm)	short, open
18.	/CVCCCV/	-----	xinkwa (bread)	short, open
19.	/CVCCCV/	ḽinngo (mango)	-----	short, open
20.	/CVCCCCV/	-----	nantswo (flavour)	short, open
21.	/CVCCVCCCCV)	-----	xirhandzwa (well-loved person)	short, open
22.	/CCVVCVVCV/	ndugisela (fix for me)		short, open
23.	/CCCVCVVCV/	-----	ntwanano (agreement)	short, open
24.	/CVCVVCVVCV/	-----	muhariva (sister-in-law)	short, open
25.	/CVCCCVVCV/	-----	lunghisa (fix - a machine)	short, open
26.	/CCCCVCCVVCV CV/	-----	ndzhundzhuluko (in grammar, transformation)	short, open

As noted in Table 2 above, both Tshivenda and Xitsonga syllables constitute short vowels and open syllables. In both languages, short vowels are pronounced in the following way, respectively: **a** is pronounced /ǎ/ as in amba (talk) or ala (reject); **e** or /ě/ is pronounced /ɛ/ as in ela (flow) or enta (deep); **ĩ** is pronounced /i/ as in inwi (you) or xilo (thing); **õ** is pronounced /ɒ/ as in ola (draw) or onha (destroy); and **u** is pronounced /u/ as in unda (mould) or rhuma (send). As for the distribution of syllabic patterns in the two languages, it is easy to recognise that the CC, CCC and CCCC clusters tend to occur word-initially and word-medially, but not word-finally in Tshivenda. However, in Xitsonga these clusters do occur word-finally (e.g. xiganga (a place that slopes upwards), xienhlo (a place that slopes downwards) and ntlhontho (challenge)). In the exceptional case of Tshivenda words such as ḽinngo (mango), the CCC /nng/ cluster occurs somewhat word-medially.

Further, it is clear from Table 2 that there are numerous potential patterns and structures that can be constructed in the representation of the syllable in Tshivenda and Xitsonga. There are also instances where the syllable in both languages can assume the CC cluster in the onset and in the medial position of the syllable, i.e., /nḽ-/ , /nw-/ , /mmbw-/ , /nkh-/ and /ntsw-/. In the latter examples, certain kinds of phonological processes contribute to the display of the syllable. However, due to spatial limitations, phonological processes such as velarisation (notable in ńwana), glide formation (in ńwana, ntswenya, mmbwa), for example, cannot be discussed broadly. Of importance, however, is that these processes occur in order to address the common need for vowel insertion, which is often required to break up a CC cluster into CVCV in both languages. This need is often notable in the linguistic adaptation of loanwords, where Afrikaans words ‘brood’ (CCVVC) and ‘venster’, for example, become vurotho (bread) (CVCVCV) and fasiṭere

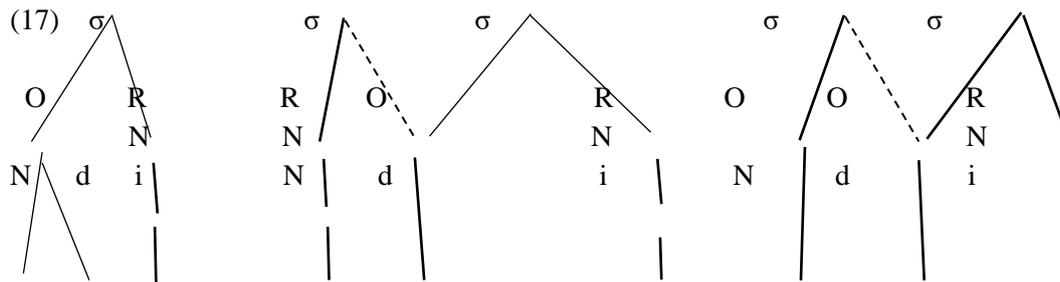
(window) (CVCVCVCV), respectively. A vowel insertion was required to break up the cluster when the two words were adopted and subsequently adapted into Tshivenda and Xitsonga, respectively. Thus, the syllable structure processes, which apart from vowel insertion may include elision, epenthesis and glide formation, can be motivated by the need to realise simpler and acceptable forms in both languages (cf. Akanlig-Pare, 1994).

Also noteworthy in Table 2 is that possible (and even alternative) patterns of the syllable in both languages increase with the length of the CV. In accord with Clements and Keyser (1983), we may represent one of the possible patterns of both Tshivenda and Xitsonga syllables in Table 2 in varied 'trees' as exemplified in (15) and (16) below, respectively:



Although fairly accurate in their representation of the internal structure of the Tshivenda word *bika* (cook) and the Xitsonga word *veka* (put down), the syllable structures above do not highlight the nucleus and the rhyme, which is why the syllable structure that incorporates the nucleus is preferred. It must also be noted that Milubi (2004:57) views 'clustered' speech sounds such as /nd/, /nd/ and /mb/, among others, as a single speech sound in Tshivenda. Although he does not acknowledge this, Milubi probably adopts his stance from Clements and Keyser (1983:8-9), who correctly represent speech sounds such as /dʒ/ in 'Jennifer' as one consonant. Milubi's argument that speech sounds such as /nd/ and /mb/ are single speech

sounds contradicts his classification of Tshivenda nasal speech sounds (i.e., /n/, /m/ and /ŋ/) as syllabic consonants. If Milubi's argument is to be credited, it should then follow that the /n/ (syllabic consonant) in /nd/ should be isolated as a syllable on its own, and the accompanying /d/ as an independent speech sound, thus positing that /nd/ has one syllable /n/ and one consonant /d/. This line of thought, however, becomes problematic because it requires us to clarify whether the /n/ speech sound or syllable should assume the position of the onset or nucleus, or both, particularly in the hierarchical representation of *ndi* (I), for example. Hence, the confusion may result in the following representations of *ndi* in Tshivenda:



Thus, a problem may arise in the representation of speech sounds that are clustered with syllabic consonants in their formation of the syllable in Tshivenda. The problem stems from the recognition of syllabic consonants as syllables on their own and the accompanying speech sounds which also project vocalic elements. If syllabic consonants (which are accompanied by other speech sounds) are not isolated as independent syllables in Tshivenda, we must then explain what happens to the syllabicity of such nasal speech sounds. To this end, these central questions must be answered: should syllabic consonants that are clustered with other speech sounds be treated as independent syllables, or do syllabic consonants lose their 'syllabicity' when they are clustered with other speech sounds. This issue of syllabic consonants being accompanied by other speech sounds may be a critical area of interest for future studies on the syllable in Bantu languages in general.

5. Conclusion

This study has demonstrated that the syllable is present in two mutually unintelligible languages: Tshivenda and Xitsonga. It has emerged that the analysis of the syllable in both languages permit many structural patterns; and that the syllable, which has no coda in the two languages, normally begins with one or more consonants, and terminates with a vowel, specifically, one vowel, which serves as the nucleus in both languages. Consequently, the syllable structure in Tshivenda and Xitsonga generally assumes the CV representation. In fact, possible patterns and their distribution demonstrate that /CV/ pattern occurs freely in

both languages. But there are exceptions. The first is that in rare cases, the syllable of both languages can end with two vowels. Secondly, in certain ideophones, which by definition are phonologically aberrant, the syllable can end with the coda. In the third place, certain vowels can stand alone as syllables.

Whereas Tshivenda accommodates a cluster of consonants at word-initial position, in Xitsonga these consonants occur in both word-initial and word-final positions. In most cases, phonological processes such as vowel insertion and glide formation are often required to break up the CC cluster in both languages, especially where loanwords are involved. In instances where there are two or three consonants at the beginning of a syllable or in the middle of a word in Tshivenda, it seems that the syllabic consonant(s) or glide must be present. Both languages subscribe to Clements and Keyser's (1983) CV-Phonology Model and adapt successfully into the hierarchical structure that allows for the expression of the nucleus.

Finally, more studies are recommended towards the examination of syllabic patterning and other related matters in Bantu languages. This will go a long way in the determination of both permissible and impermissible forms of those languages and the implications thereof for orthography and pronunciation, among other aspects. As noted, the issue of syllabic consonants being accompanied by other speech sounds also needs further scrutiny in future studies on the syllable in Bantu languages in general.

References

1. Abbasi, A.M & Hussain, S. 2012. Syllable Structure and Syllabification in Sindhi-English Loanwords. *International Researcher*, Vol. 1 (4): 119-134.
2. Abercrombie, D. 1967. *Elements of General Phonetics*. Edinburgh: Edinburgh University Press.
3. Akan-Pare, G. 1994. *Aspects of Buli Phonology*. M. Phil. Thesis. Legon: University of Ghana.
4. Ayyub, A. 1968. 'Language Sounds' (2nd ed.). Cairo: maTba 9at il.
5. Baixone, C.B. 2015. *English Syllable: Phonetics and Phonology*. Quelimane: Universidade Pedagógica.
6. Cairns, C.E. & Feinsten, M.H. 1982. Markedness and the Theory of Syllable Structure. *Linguistic Inquiry*, Spring, 13 (2): 193-225.
7. Chomsky, N. & Halle, M. 1968. *The Sound Pattern of English*. New York: Harper & Row Publisher Inc.
8. Clements, G.N. & Keyser, S.J. 1983. *CV Phonology*. Cambridge, Massachusetts: MIT Press.
9. Crystal, D. 1980. *A First Dictionary of Linguistics and Phonetics*. London: Andre Deutsh Ltd.
10. Crystal, D. 1985. *What is Linguistics?* London: Edward Arnold.
11. Duanmu, S. 2008. *Syllable Structure: The Limits of Variation*. Oxford: Oxford University Press.
12. Forel, C.A & Puskás, G. 2005. *Phonetics and Phonology: Reader for First Year English Linguistics*. Geneva: University of Geneva.
13. Fudge, E.C. 1969. Syllables. *Journal of Linguistics*, 5: 253-286.
14. Gimson, A.C. 1970. *An Introduction to the Pronunciation of English* (2nd ed.). London: Edward Arnold Publishers Ltd.
15. Halle, M. & Vergnaud, J.R. 1980. Three-Dimensional Phonology. *Journal of Linguistic Research*, I: 83-105.
16. Hancock, M. 2003. *English Pronunciation in Use: Self-Study and Classroom Use*. Cambridge: Cambridge University Press.
17. Harris, J.W. 1983. *Syllable Structure and Stress in Spanish*. Cambridge, Massachusetts: MIT Press.
18. Hassan, T. 1979. 'Research Methods in Language'. Cairo: n.p.
19. Hayes, B. 2009. *Introductory Phonology*. Malden: Wiley-Blackwell.
20. Hockett, C.F. 1958. *A Course in Modern Linguistics*. New York: Macmillan.
21. Hyman, LM. 2003. *A Theory of Phonological Weight*. Stanford: CSLI Publications.
22. Kubayi, S.J. & Madadzhe, R.N. 2015. The Non-derived Ideophone in Xitsonga. *South African Journal of African Languages*. 35 (2): 261-271.
23. Jakobson, R. & Halle, M. 1968. *Phonology in Relation to Phonetics*. In: *Manual of Phonetics*, edited by Malmberg, B. London: North-Holland Publishing Company.
24. Katamba, F. 1989. *An Introduction to Phonology*. London: Longman.

25. Kiparsky, P. 1979. Metrical Structure Assignment is Cyclic. *Linguistic Inquiry*, 10: 421-441.
26. MacCarthy, P. 1978. *The Teaching of Pronunciation*. Cambridge: Cambridge University Press.
27. Milubi, N.A. 2004. *Ngoma ya Vhatei*. Polokwane, South Africa: NAM.
28. Prah, K.K. 2007. Challenges to the promotion of indigenous languages in South Africa. Review Commissioned by the Foundation for Human Rights in South Africa. October – November 2006. The Center for Advanced Studies of African Society: Cape Town.
29. Roach, P. 1998. *English Phonetics and Phonology* (2nd ed.). United Kingdom: Cambridge University Press.
30. Rubach, J. & Booij, G. 1990. Syllable Structure Assignment in Polish. *Phonology*, 7 (1) 1990: 121-158.
31. Satter, M.A.A. 2015. Syllabic Licensing in Iraqi Arabic and Kuwaiti Arabic: A Phonotactic Study. *The Arab Gulf*, Vol. 43 (3-4): 1-20.
32. Skandera, P. & Burleigh, P. 2005. *A Manual of English Phonetics and Phonology*. Bindung: Gunter Narr Verlag.
33. Stageberg, N.C. 1971. *An Introductory Grammar* (2nd ed.). New York: Holt Rinehart and Winston, Inc.
34. Steriade, D. 1982. *Greek Prosodies and the Nature of Syllabification*. Doctoral Thesis. Cambridge, Massachusetts: MIT Press.
35. Stetson, R.H. 1951. *Motor Phonetics* (2nd ed.). Amsterdam: North-Holland Publishing Co.
36. Yule, G. 2006. *The Study of Language* (3rd ed.). Cambridge: Cambridge University Press.