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Esau Mangoya & Gift Mheta

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# A COMPARATIVE STUDY OF OPERATIONS OF LIQUIDS IN BARWE AND CENTRAL SHONA

**Esau Mangoya**

African Languages Research Institute  
University of Zimbabwe  
esaumangoya@yahoo.com

**Gift Mheta**

Writing Centre  
Durban University of Technology  
giftm@dut.ac.za

## ABSTRACT

One universal characteristic of a language is that it has particular speech sounds that are organised and governed by rules. This article presents an analysis of functions and operations of liquids in Barwe. Barwe is a variety of Eastern Shona, a cross-border language spoken in Zimbabwe and Mozambique. The article draws comparisons between liquids in Barwe and those that obtain in Central Shona dialects, mainly Zezuru, spoken in and around Zimbabwe's capital Harare, and Karanga, which is spoken in the Masvingo and Midlands provinces of Zimbabwe. Liquids are found to occur in all the varieties that constitute the Shona group. According to Trask (1996), liquid is a conventional label for any non-nasal sonorant. In this paper, added focus is on three sounds which are: the lateral [l], the flap [r] and the trill [r]. We thus make a comparative study of the

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laterals as they operate in Barwe and Central Shona. A phonological comparative analysis aids us in identifying the sound operations in the two varieties under discussion. The comparative study is conducted through analysis of corpora of these varieties which are in written and audio form. The phonological data are analysed using Kiparsky's (1982) Lexical Phonology Theory, which accounts for the systematic organisation of sounds in languages.

**Keywords:** Barwe, Central Shona, consonant, corpora, flap, function, lateral, liquid, trill, phonology

## 1. INTRODUCTION

Doke (2005) identifies Shona as a language constituted by the Korekore, Zezuru, Karanga Manyika and Ndaou dialects. However, there has been a push in recent harmonisation efforts to include a variety such as Barwe, which was initially excluded from the Shona cluster by Doke (Prah 2000). Scholars like Alfandega, Chebanne and Chigidi (2008) have revisited the classification and grouping criteria of languages in terms of the grammatical homogeneity. Alfandega et al. (2008:7) place Barwe in the group that they call the Shona (S) group together with other varieties that include Karanga, Korekore, Zezuru, Hwesa, Ndaou, Manyika, Lilima, Nambya and Teve. Lilima is spoken in Botswana while Teve, like Barwe, is spoken in Mozambique. It is in this context that this paper seeks to probe deeper into Barwe and to see how it compares with Karanga and Zezuru, the Central Shona varieties.

Considering the new classification given by Alfandega et al. (ibid.), Barwe belongs to the Eastern Shona group while, as traditionally given by Doke (2005), Zezuru and Karanga belong to the Central Shona group. The present study seeks to analyse the operations of liquids in the two varieties, that is, Barwe and Central Shona by drawing up comparisons between them. Zezuru and Karanga are generally believed to be quite close to one another grammatically. Thus when writing a proposal for the standardisation of Shona dialects Doke (2005, 80) says '[t]hat a unified grammar be standardized on the basis of Karanga and Zezuru and these two are here considered as Central Shona varieties.' In this study, the Central Shona group is considered to be fairly homogenous grammatically and comparisons are made with Barwe, which is geographically separated from the central varieties to the north-east crossing into Mozambique.

According to Hock (1991, 16), '[v]arious r- and l- sounds are commonly classed as liquids'. These liquids occur in all the varieties of Shona. However, these liquids occur in these varieties of the same sound. It is these variational forms of liquids which we seek here to analyse and describe as we also look at the environment in which these variations occur. According to Trask (1996, 198), '[l]aterals (the group under which liquids fall) are produced as air is blocked from flowing through the medium line. It flows through the sides....The side or sides do not make a complete

blockage but remain in a near closure position, hence the sounds produced that way are approximants’.

As we look at the operations of these liquids, we use Kiparsky’s (1982) Lexical Phonology Theory. This theory suggests that there is a close relationship between morphology and phonology. It recognises that any morphological interaction in a word results in some new phonological developments in that particular word. The word as a morphological structure possesses some phonological characteristics that originate from its morpheme interaction. eg the noun prefix /mu/ + noun stem /-ana/ where the actual word becomes /mwana/ (child). Thus the noun prefix becomes /mwa-/ and the stem becomes /-na/. In this particular case, the word is the domain in which we find phonological characteristics that constitute an individual word. The theory can be extended to look at the phonological elements that arise at syntactic level.

## 2. DATA ANALYSIS

### 2.1 General occurrence of the liquids in the chosen varieties

Central Shona has a rolled consonant [r]. According to Doke (2005, 46), ‘[t]he use of a fully-rolled r is one of the features of Shona... The sound is produced with a clear tongue tip trilling’. The articulation of the sound is characterised by a rapid hitting of the alveolar ridge by the tongue tip. The following are examples of words in which the trill occurs in Central Shona:

1.

| Central Shona | English gloss                               |
|---------------|---------------------------------------------|
| /siririsa/    | ‘to look miserable’                         |
| /rembe/       | ‘animal dewlap’                             |
| /ramba/       | ‘non-child bearing cow’                     |
| /muromo/      | ‘mouth’                                     |
| /chirukwa/    | ‘woollen knit cloth’                        |
| /zezuru/      | ‘name of one of the Central Shona dialects’ |
| /karanga/     | ‘name of one of the Central Shona dialects’ |

The examples above show the occurrence of the trill in Central Shona. It can occur with the five vowels of Shona. The trill results from a single pulmonic airstream puff. As such, an individual who is speaking and stressing issues can say words with a prolonged trilling, which is produced as the tongue keeps pressing and tapping on the alveolar ridge. In the examples that follow, we indicate the lengthened trilling with a repeated /r/.

2.

| Central Shona         | English gloss                                           |
|-----------------------|---------------------------------------------------------|
| /ndinokur-r-r-r-rova/ | 'I can beat you up'                                     |
| /r-r-r-r-ruben/       | 'name of a person'                                      |
| /ŋgir-r-r-ri/         | 'imitation of a ringing phone sound'                    |
| /ndur-r-ru-r-r-ani/   | 'a person with superficial behaviour/ a naughty person' |
| /r-r-r-amba/          | 'to refuse to do something'                             |

The above examples demonstrate the prolonged articulation of the trill. As pointed out, this occurs when one wishes to emphasise something as in folklore and storytelling. In some instances, the elongation can be a result of an individual's idiolect. The elongated trill is produced from a single puff of air of the egressive pulmonic airstream. However, this is in contrast to Barwe, in which there is a single flap lateral [ɾ], which is produced when the tongue tip touches the alveolar just once. The following are examples from Barwe in which the flap occurs:

3.

| Barwe        | English gloss      |
|--------------|--------------------|
| /berekɑ<br>/ | 'to bear children' |
| /pɑrɑzɑ/     | 'to destroy'       |
| /dzjɲirirɑ/  | 'to oppress'       |
| /nerɑ/       | 'to beat someone'  |
| /marimɔ/     | 'dry, warm season' |
| /bwera/      | 'to come'          |

The above examples show the occurrence of the flap lateral in Barwe. Like the Central Shona [r], the flap lateral occurs with all five the vowels of Barwe in syllable formation. However, Barwe also has a lateral /l/ as a variant of the flap lateral [ɾ]. See the examples that follow.

The above examples show the occurrence of the /l/ in original Barwe words. However, it has to be noted that /l/ and the flap /ɾ/ do not occur in free variation in Barwe. The two cannot freely substitute each other. The language has separated the two by way of role allocation eg /vula/ (open) and /longa/ (arrange, organize). The /l/ cannot be substituted for us to have /vura/ and /ronga/ respectively. We can also have /hirira/ (travel back) and /bwera/ (come) where the flap /ɾ/ cannot be substituted by /l/ as well. At the same time, these two /l/ and /ɾ/ cannot form a minimal pair. Barwe words like /fuka/ 'cover oneself' and /fula/ 'wash clothes' can represent a minimal pair.

4.

| Barwe      | English Gloss      |
|------------|--------------------|
| /lowola/   | 'to marry'         |
| /mbuluka/  | 'to fly'           |
| /tangula/  | 'to explain'       |
| /lawila/   | 'to taste food'    |
| /taula/    | 'to speak'         |
| /palalila/ | 'to get scattered' |

In the two given words, the consonants /k/ and /l/ are contrastive as they occur in the same sequence, following the same vowels but producing different meanings. According to Trask (1996, 224), '[t]he existence of such a pair demonstrates that conclusively the two segments which are different must belong to different phonemes'. This leads to the conclusion that /l/ and /r/, which fail to make minimal pairs and at the same time cannot substitute each other in free variation, are the same sound in the process of separation as they adhere to strict role allocation. On the other hand, /l/ occurs in Central Shona as in adoptives (borrowings).

As noted by Doke (2005, 46), Central Shona generally uses the rolled trill, with exceptions in Karanga where the flap [ɾ] is said to occur in particular instances. The occurrence and the phonological environment of the perceived flap lateral [ɾ] in Karanga is discussed below and explained in examples 10a and 10b. Otherwise, outside of those special phonological environments, Karanga uses the trill [r] like Zezuru. However, there has been an increase in the use of [l] from adoptives imported from other languages with which Central Shona is in contact. Making an observation about the adoption of English words with lateral sounds, Chimhundu (2002, 134) observes that 'in the speech of many people, English /l/ may be produced as a roll /r/ or flap /ɾ/ or the lateral /l/ may be retained'. Examples of lexical borrowings which contain the lateral /l/ in Central Shona are shown below. Also shown in the examples are situations in which the /l/ is substituted by the trill /r/.

From the above examples, we see more liberality in Central Shona than in Barwe as the two sounds are used in free variation insofar as borrowings are concerned. It is the individual who chooses to retain the [l] from the source language or to substitute it with the [r]. Of course, there are other sociolinguistic factors linked to the differentiation by individual Central Shona speakers, for example, one's level of proficiency in both languages. When the option to adopt the /l/ is chosen there is no placement of a vowel after it as in /silk/ and /sel/. This is not the case when one opts to substitute it with a trill /r/ as a vowel has to be compulsorily placed after this sound. This has also been demonstrated in examples listed under 5 below.

5.

| Central Shona | Central Shona | English gloss |
|---------------|---------------|---------------|
| /lainzimeni/  | /rainzimeni/  | 'linesman'    |
| /laime/       | /raimu/       | 'lime'        |
| /lita/        | /rita/        | 'litre'       |
| /loni/        | /roni/        | 'lawn'        |
| /loni/        | /roni/        | 'loan'        |
| /lupu/        | /rupu/        | 'loop'        |
| /lofeni/      | /rofeni/      | 'lotion'      |
| /lori/        | /rori/        | 'lorry'       |
| /sel/         | /sero/        | 'sale'        |
| /silk/        | /sirika/      | 'silk'        |

Barwe already has [l] as part of its phoneme inventory and there is no reason why there would be an alternative to the sound in adoptives. The dominant language with which Barwe has been in contact is Portuguese. Adoptives with the sound [l] are imported with the /l/ sound. However, Barwe speakers place a vowel after every consonant. As such, in situations where /l/ does not have a vowel in Portuguese, Barwe will place a vowel in that position upon the adoption of the word. See the examples that follow:

6.

| Portuguese            | Barwe adoptive | English gloss      |
|-----------------------|----------------|--------------------|
| alfandega /alfandega  | /alifandega/   | 'customs'          |
| alifinete /alifinete/ | /alifineti/    | 'a pin'            |
| alferes /alfereʃ/     | /aliferi/      | 'rank in the army' |
| alfaiate /alfajate/   | /alifajati/    | 'tailor'           |

The above examples demonstrate that the Portuguese examples are adopted into Barwe with the sound /l/. In Central Shona options are created where /l/ is either substituted by the trill /r/ or is retained. In the case of Barwe, no alternatives are created. The /l/ sound is not substituted with the Barwe flap /ɾ/. However, it has to be noted that when a foreign word occurs with a trill [r], Barwe substitutes it with the single flap /ɾ/ as in the following examples:

7.

| Portuguese         | Barwe adoptive | English gloss |
|--------------------|----------------|---------------|
| igreja /igreʒa/    | /igereʒa/      | 'church'      |
| dinhero /dijero/   | /dijero/       | 'money'       |
| barraca /baraka/   | /baraka/       | 'kiosk'       |
| verdade /veridadi/ | /veridade/     | 'the truth'   |

The above examples show that there is distinct distribution of the flap [r] and the lateral [l] in adoptives by Barwe. When the source language has the trill [r], the adoptive takes the flap [r]. When the [l] occurs in the source language, Barwe does not substitute it but adopts the [l] from the source language. This is in contrast to Central Shona that allows for liberal distribution of the trill [r] and [l] in the adoptives that have [l] from the source language as it has to use the liquids in complementary distribution. The Barwe scenario is different from what Hock (1991, 17) observes when he says, 'thus, a number of languages have lost the distinction between [r] and [l] as a result of sound change. Others such as Japanese simply lack the contrast with some dialects preferring the pronunciation [l], others including the standard dialect [r]'. We can observe that Barwe has instead separated the two while Central Shona has lost the [l] which sometimes features in adoptives and is sometimes substituted by [r] in free variation.

## 2.2 Transitional liquids in Barwe and Karanga

Liquids basically stand as the consonant (C) components in syllables of both Barwe and Central Shona. In all the examples, the liquids, be it the lateral [l] the flap [r] or the trill [r], are realised as syllable onsets. In many situations the three, in their phonological environments combine with other consonants to form cluster onsets, a phonological phenomenon that we notice in prenasalized sounds as in the following examples:

8.

| Barwe     | English gloss             | Central Shona | English gloss |
|-----------|---------------------------|---------------|---------------|
| /mbuzi/   | 'goat'                    | /mbeua/       | 'mouse'       |
| /mbuluka/ | 'to fly'                  | /mbava/       | 'thief'       |
| /ntondo/  | 'name of indigenous tree' | /ndege/       | 'aeroplane'   |
| /bonde/   | 'sleeping mat'            | /ndebvu/      | 'beard'       |



In the above examples, we observe that /b/ and /d/ are prenasalized by /m/ and /n/ respectively. We thus see that we get /mb/ and /nd/, both of which have a two-consonant sound quality. Whilst in the majority of cases the laterals constitute one consonant sound quality, we find some occurrence of them in a prelateral position in Barwe and Karanga. In Barwe, the flap lateral has been found to occur before [k] and [ʒ]. It will be noted that the prelaterals are presented with a superscript in the examples that follow.

### 9. (a) before /k/

| Barwe                      | English gloss                       |
|----------------------------|-------------------------------------|
| /ci <sup>h</sup> ba'ke/    | 'the Barwe people's language'       |
| /mub <sup>h</sup> vali'ke/ | 'someone's way of dressing'         |
| /pa <sup>h</sup> ti'ke/    | 'to hand over something'            |
| /ce <sup>h</sup> me'ka/    | 'to be called/to cry for something' |
| /wa <sup>h</sup> chi'ka/   | 'to wash for'                       |

### (b) before /ʒ/

| Karanga               | English gloss |
|-----------------------|---------------|
| /kur <sup>h</sup> ʒa/ | 'to eat'      |
| /fo <sup>h</sup> rʒa/ | 'tobacco'     |

The above examples show that the lateral that does not occur as a syllable onset itself but partners the sound it precedes as a preflap. On the other hand, a similar process of a lateral occurring before a consonant also occurs in Karanga. Doke (2005, 58) notes that:

Although [r] is generally used in Karanga dialects we find before the vowel [i] and the voiced fricative [j] (the voiced fricative of [j]) a species of flapped lateral a consonant. This is not a continuant sound but is enunciated by a single flap of the tongue and differs radically from [l].

However, listening to the Karanga themselves speaking, the writers of this article noticed that a mini trill occurs before the sound [j] and [k] as in the examples that follow:

The above examples show some of the occasions on which /r/ occurs as a prelateral in Karanga. However, we notice that there is a difference between the prelaterals of Barwe and of Karanga. The two differ in the manner of articulation details. In Barwe, it is just a lateral flap produced as the lower side of the tip of the tongue touches the alveolar ridge in a retroflex manner.

## 10. (a) before /j/

| Karanga | English gloss |
|---------|---------------|
| /kurja/ | 'to eat'      |
| /forja/ | 'tobacco'     |
| /hurju/ | 'hip'         |

## (b) before /k/

| Barwe       | English gloss         |
|-------------|-----------------------|
| /'kaka/     | 'boiling of porridge' |
| /ku'ka/     | 'to be afraid'        |
| /ka'kamara/ | 'being surprised'     |
| /'kava/     | 'whip'                |

The above examples show some of the occasions on which /ɾ/ occurs as a prelateral in Karanga. However, we notice that there is a difference between the prelaterals of Barwe and of Karanga. The two differ in the manner of articulation details. In Barwe, it is just a lateral flap produced as the lower side of the tip of the tongue touches the alveolar ridge in a retroflex manner. As defined by Trask (1996, 308), the term 'retroflex' is 'a label conventionally applied to any of various consonants and vowels articulations in which the tip of the tongue is bent back and up to some extent'. It is produced as a retroflex. The Karanga prelateral is a mini trill as opposed to the common trill that occurs in Karanga and the rest of Central Shona. This mini trill also differs from the Barwe flap in the manner in which it is produced. The Karanga one is produced as the upper side of the tip of the tongue trills against the alveolar ridge. However, the trill is not as prolonged in articulation compared to the ordinary trill of Central Shona. We see that it is limited in its trill duration, which caused Doke to view it as a flap.

As noted above, Doke (2005:58) is suggesting that Karanga ceases to employ the trill in the circumstances described. However, the present researchers, having looked at both Barwe and Karanga in juxtaposition, take a different view. In Barwe, it is a lateral flap /ɾ/, while in Karanga it remains a trill /ɾ/ with a minimised trilling period.

By comparison, we see that Barwe employs the flap lateral that is commonly used in the language. Under similar circumstances of prelateralization, Karanga transforms the trill so that it becomes a mini trill. Doke had perceived this mini trilling to be a single flap. However, it has to be noted that in most cases, Central Shona uses the trill which is only conditioned to a mini trill in the Karanga dialect under the above demonstrated circumstances of prelateralization. Thus Barwe employs the flap

lateral /r/ where Karanga employs a mini trill in the same phonological environment, i.e. before /k/ and /ʒ/.

As we further probe the operations of the laterals in the two regions we also realize the difference in the sequencing of the laterals preferred by Barwe and varieties of Central Shona. According to Mangoya (2013, 224), ‘Barwe does not prefer [l] margined syllables in succession. It prefers the preceded syllable to the [l] margined syllable to be [r] margined’. This trend was observed particularly in verbs and nouns as demonstrated in the following examples:

11.

| <b>Barwe</b> | <b>English gloss</b>               |
|--------------|------------------------------------|
| /lira/       | ‘to cry’                           |
| /lera/       | ‘to rear a child’                  |
| /leruka/     | ‘light weighted’                   |
| /kulira/     | ‘to grow up at a particular place’ |
| /lirime/     | ‘tongue’                           |
| /malire/     | ‘boundary’                         |

When a syllable has an /l/ onset, Barwe differentiates the preceded syllable onset by inserting the flap /r/. Going by the above examples, we can formulate a rule as we observe the environment in which they occur as below:

$$IV + rV / i,e,a,o,u$$

We see that this rule applies from left to right. Both /l/ and /r/ occur with the five vowels of Barwe.

However, this is different from Central Shona, in which the /l/ has been found not to occur except in borrowed words. Thus the contiguous syllables will both have the trill /r/ and no effort is made to differentiate the two syllables as shown in the following examples:

12.

| <b>Central Shona</b> | <b>English gloss</b>                            |
|----------------------|-------------------------------------------------|
| /zorora/             | ‘to rest’                                       |
| /raririra/           | ‘to sleep on’                                   |
| /rurama/             | ‘go straight’                                   |
| /gururumba/          | ‘small flying termite’                          |
| /gororo/             | ‘thief’                                         |
| /garira/             | ‘to sit on/stop something from passing through’ |

In the above examples, we observe that Central Shona uses the trill consistently. No changes are realised when the trill onset syllables are in succession. With the Barwe examples in 12, we realise that this language prefers the consecutive syllable onset to be the flap /r/ when the preceding syllable has an /l/ onset.

However, the scenario in Barwe is different when syllables with the flap lateral /r/ are in succession. In that case, when the preceding syllable of the consecutive syllables has a flap onset, the preceded syllable can also take the flap lateral as in the examples that follow:

13.

| Barwe       | English gloss                            |
|-------------|------------------------------------------|
| /masiriri/  | 'dripping saliva'                        |
| /dziwirira/ | 'to protect'                             |
| /ciri-ro/   | 'crying of many people at the same time' |
| /narara/    | 'to remain silent'                       |
| /hirira/    | 'to go back'                             |

In the above examples, we see that Barwe allows the flap /r/ onset in successive syllables. Examples in 11 show that it seeks to differentiate them when the preceding syllable onset is /l/. However, Barwe treats contiguous syllables with /l/ and /r/ onsets differently in passive extended verbs. The passive extension is -il- when the root final consonant is /l/ and is also flap -ir-/er when the final root consonant is a flap /r/ as in the examples that follow.

14.

| -il- extended verbs | English gloss                  | -ir- extended verbs | English gloss        |
|---------------------|--------------------------------|---------------------|----------------------|
| /taul-il-a/         | 'to tell someone'              | /bwer-er-a/         | 'to come on behalf'  |
| /vul-il-a/          | 'to open for'                  | /dziwir-ir-a/       | 'to protect for'     |
| /gal-il-a/          | 'to wait on behalf of someone' | /ner-er-a/          | 'to hit for someone' |
| /lal-il-a/          | 'to sleep on'                  | /swer-er-a/         | 'to spend the day'   |

The above examples demonstrate that when the root final consonant is /l/, the passive extension is /-il-/ and when the root final consonant is /r/ the extension is either /-ir-/ or /-er-/. However, we note that there is confinement of the /-il-/ extension to the /l/ final roots. We see that unlike its flap counterpart /r/, the /l/ final root consonant is limited to the /-il-/ extension. The examples in 11 show that there are limitations to the occurrence of /l/ in a word as the syllable preceding it cannot take another /l/

onset. Unlike examples in 11 where /l/ onset syllables cannot be in succession, the examples of extensions in 14 above show that the rule is overridden when the /l/ final verb takes a passive extension, as the extension remains strictly /-il-/. We can thus also formulate the extension rule as follows:

$$[l + il > lil]$$

$$\text{cf } [*l + el > lel]$$

In the above rule, it has been demonstrated that when the final root consonant is /l/, the extension is /-il/ as, at the same time, the /-el/ extension is not allowed when the final root consonant is /l/. There is a different trend in the examples listed under 14. When the final root vowel is a mid-vowel and the final root consonant is /r/, the extension takes the mid-vowel to become /-er/ as in /ner-er-a/, ‘hit for someone’. The extension is /-ir-/ when the final consonant is /r/ and the final root vowel is a non-mid as in /dziwir-ir-a/, ‘protect for’, in the examples in 14. When the final root consonant is /l/, the extension takes the /-il/ extension, whether the final root vowel is mid or not. Thus we have /taul-il-a/, ‘tell someone’, where the final root vowel is /u/, a non-mid-vowel. The extension remains /-il-/ in /lal-il-a/, where the final root vowel is /a/, also a non-mid vowel. However, it has to be noted that the /l/ final consonants were not in abundance in the data. We could not get examples with /e/ as the final root vowel.

At the same time, syllables with /r/ onset are allowed in succession. In the same vein, /l/ final roots are allowed only to take the /-il-/ extension whilst the /r/ final roots can take either the /-er-/ or /-ir-/ form of the extension, depending on the root final vowel. If the root final vowel is /e/, the extension is also /-er-/, and if the root final vowel is /i/ the extension is /-ir-/.

We thus realise the flap /r/ is liberally used in Barwe while the /l/ occurs in limited phonological environments. While both /l/ and the flap /r/ may originate from the same historical parent as has been demonstrated in other languages, the two sounds are going separate ways as the flap /r/ is used more flexibly than /l/ in Barwe. At the same time, Central Shona no longer uses the lateral /l/ and has been substituted by the trill /r/. As noted above, /l/ can occur in adoptives in Central Shona. In cases where the adoptives are verbs with /l/ as the root final consonant, Central Shona reverts to the use of the trill /r/ in passive extensions. Note the examples from Central Shona and English that follow:

In the above examples, we observe that the lateral /l/ is accepted from the source language. In the process of adoption the extension takes either the /-er/ or /-ir-/ form. The /l/ may be retained from the source language in the adopted root but the phonology of the language limits its recurrence, as the preferred trill takes over in the extension and the /l/ final roots do not take the /-el-/ or the /-il-/ form as we have noticed in Barwe, where the /l/ final roots may take the /-il-/ passive extension.

15.

| Unextended adoptive verb | English gloss | Passive extended adoptive verb | English gloss          |
|--------------------------|---------------|--------------------------------|------------------------|
| /fila/                   | 'to fill'     | /fil-ir-a/                     | 'to fill on behalf'    |
| /sila/                   | to seal       | /sil-ir-a/                     | 'to seal on behalf'    |
| /pula/                   | 'to pull'     | /pul-ir-a/                     | 'to pull on behalf'    |
| /kala/                   | 'to colour'   | /kal-ir-a/                     | 'to colour on behalf'  |
| /rengular/               | 'wrangle'     | /rengul-ir-a/                  | 'to wrangle on behalf' |
| /kwela/                  | 'to quell'    | /kwel-er-a/                    | 'to quell on behalf'   |
| /shela/                  | 'to shell'    | /shel-er-a/                    | 'to shell on behalf'   |

### 3. RECOMMENDATIONS

It is normally on the basis of a language's phonology that a language's day to day orthography may be designed. As a consequence, we see that the orthography of Central Shona is orthographically close to the phonological sounds of the language. We also observe variational articulation of some words in the Central Shona dialects, as Karanga speakers would have /furo/ while Zezuru has /tsuro/ for 'hare'. So Karanga has /f/, a palatal fricative while Zezuru has the alveolar affricate /ts/, which in general orthography are represented by <sh> and <ts>, respectively. In actual practice, pupils who write *tsuro* or *shuro* are not penalised as long as they are consistent in using them. So the orthography recognises both /f/ and /ts/ in the two varieties. In a similar way, the variant liquids /r/ and /l/ can be represented in the spelling system to cater for the Barwe. A writer who uses them is expected to do so consistently. The Barwe can write *linga* where Central Shona speakers can write *ringa*, 'stare at', and the meaning remains the same. If the eastern Barwe variety should to be harmonised with the Central Shona, through the process that has been initiated by Praah, Magwa and others, the three liquids /r, r, l/ should be represented in the alphabet. Readers and writers should use and represent the sounds of the variety they are comfortable with.

### 4. CONCLUSION

We have made the above exploration in order to consider the operations of liquids in Barwe and Central Shona. This is against the background of the new grouping and grammatical homogeneity classification. There is a need to make comparisons of the varieties. The aim is to highlighting the grammatical features they share and those that make them vary as they are harmonized as a single language group.

We have also demonstrated that the lateral /l/ occurs in some original Barwe words. We draw the conclusion that the Barwe /l/ and flap /ɾ/ are one sound that has

role allocation, as the two sounds cannot make a minimal pair for us to recognise their differences and distinctiveness. Occasionally, /l/ and /r/ occur in free variation in Central Shona, but only in adoptives, as /l/ does not generally occur in Central Shona.

At the same time, we see adoptives with /l/ taking /l/ in Barwe, while adoptives with a trill /r/ in the source language take the flap /ɾ/. Whilst the laterals /ɾ/ and /r/ occur as syllabic onsets, we notice another environmental conditioning in which they act as prelaterals before /k/ and /ʒ/ in Barwe and Karanga. In Barwe, the preflap is the ordinary flap /ɾ/, while in Karanga we notice that it is produced as a shortened trill. While both the flap /ɾ/ and /l/ occur in Barwe, we however observe that /l/ margined syllables are not generally allowed in succession as the preceded syllable takes an /ɾ/ margin. At the same time, contiguous /ɾ/ margined syllables are allowed in Barwe. However, Barwe commits phoneme role allocation in passive verbal extensions: When the root final consonant is /l/, the extension takes the /-il-/ form, and when the root final consonant is /r/, the extension is either /-er-/ or /-ir-. Inflexibility is noticed with the /l/ final consonants in Barwe in that the extension is only /-il-/ and there is no evidence of an /-el-/ extension, while /r/ final roots take either /-er-/ or /-ir-/ extensions, depending on the root final vowel. In situations where the root final consonant is /l/ in adoptives in Central Shona, we note that the passive extension takes the /ɾ/ form, which shows that /l/ is minimally acceptable in Central Shona. On the one hand, Central Shona shows its lack of flexibility as it rigidly minimises the use of the /l/ sound. On the other hand, Barwe prefers the laterl flap /ɾ/ with a limited use of /l/. At the same time, Central Shona prefers the trill /r/ and the flap /ɾ/ occurs under specific phonological environment in Karanga. Central Shona uses the laterl /l/ mainly in adoptives.

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