

THE PHONOLOGY OF BORROWED WORDS IN KITHARAKA

**Kithaka wa Mberia
University of Nairobi**

One consequence of language contact is borrowing. Kitharaka, a Bantu language spoken in the Eastern Province of Kenya, has had such contact with a number of languages including Kiswahili and English. As a result, several Kiswahili and English words have been borrowed into the language. Borrowed words undergo adjustments at the various linguistic levels in the process of being accommodated in the borrowing language. Although such word adjustments can sometimes be effected at the semantic and syntactic levels, they usually occur at the phonological and morphological levels. This paper examines the nature of phonological adjustments of Kiswahili and English words that have entered Kitharaka.

1. Introduction

This paper discusses the phonological behaviour of borrowed vocabulary in Kitharaka. It is concerned primarily with phonological adjustments that this vocabulary undergoes so as to be accommodated within Kitharaka grammar. Specifically, it looks at the various strategies that Kitharaka speakers use in order to ensure that borrowed words conform to the rules of the native vocabulary.

Whereas the thrust of the paper is phonological investigation, we shall make observations on morphological adjustments whenever these crop up in the data.

For both of consonants and vowels, we shall look first at the phenomenon of sound substitution and then at that of sound insertion. Regarding sound substitution, Anttila (1972: 158) observes that

Native speakers are aware of the distinctive features of their phonology... In sound substitution, the borrowers apparently make a kind of distinctive feature analysis of foreign sounds and assign them the closest native bundle.

We would like to see to what extent data from Kitharaka would support this observation.

2. Sound substitution in borrowed words in Kitharaka

2.1 Consonant substitution

One of the strategies that speakers use to bring incoming words into harmony with native words is substitution. Labial obstruents in foreign words entering Kitharaka are replaced by the voiced bilabial fricative. That is, /β/ is substituted for /p/, /b/, /f/ and /v/. This substitution is illustrated by the data in (1):

| (1) | Kitharaka word | Source word | Source lang. | Gloss |
|-----|----------------|-------------|--------------|------------|
| | moβira | mpira | Kiswahili | ball |
| | βaði | pasi | “ | iron |
| | moβukɔ | mfukɔ | “ | pocket/bag |
| | βurana | fulana | “ | flannel |
| | mbungε | bungε | “ | parliament |
| | βaisikiri | baiskɛli | “ | bicycle |
| | mbureki | breik | English | brake |
| | βetɛrɔri | petrəl | “ | petrol |
| | βesti | vest | “ | vest |
| | mbɔksi | bɔks | “ | box |

In the words *mbungε*, *mbɔksi* and *mbureki*, the voiced bilabial fricative is changed into /b/ by a regular phonological process of continuant hardening. The hardening of the fricative takes place because of the influence of the nasal consonant, which is introduced into these forms as Class 9 and Class 10 noun prefixes.

There are a few borrowed words that do not follow the patterns illustrated in (1) above, though. These words include:

| (2) | Kitharaka word | Source word | Source lang. | Gloss |
|-----|----------------|-------------|--------------|-------|
|-----|----------------|-------------|--------------|-------|

| | | | |
|----------|----------|-----------|-------------------|
| mpɛŋgo | pingu | Kiswahili | handcuffs |
| faɛri | faɪl | English | file (for papers) |
| morao | plau | “ | plough (noun) |
| morenɛti | blankɛti | Kiswahili | blanket |

In these data, the /p/ in /pingu/ is retained in the Kitharaka form /mpɛŋgo/. Likewise, the /f/ in /faɪl/ is retained in /faɛri/. The /p/ in /plau/ and the /b/ in /blankɛti/ are replaced by the class 3 prefix /mo/ in the words /morao/ and /morenɛti/ respectively.

The lateral liquid /l/ in foreign words entering Kitharaka is replaced by Kitharaka /r/ whereas /r/ is retained:

| (3) | Kitharaka word | Source word | Source lang. | Gloss |
|-----|--------------------|-------------|--------------|------------------|
| | ŋkɛŋɛɛ | kɛŋɛɛ | Kiswahili | bell |
| | baisikiri | baiskɛli | “ | bicycle |
| | ŋkare ¹ | ka:(r) | English | car |
| | moβira | mpira | Kiswahili | ball |
| | βiringi | filimbi | “ | whistle |
| | suruare | suruali | “ | trousers |
| | karamu | kalamu | “ | pen |
| | βurana | fulana | “ | flannel, sweater |
| | morao | plau | English | plough (n.) |
| | ɔiri | oil | “ | oil |
| | βetɛrɔri | petrɔli | Kiswahili | petrol |

Generally, borrowed words have /s/ in positions where the corresponding source-words have /s/ or /z/. However, there are several cases where /ð/ is substituted for /s/ and /z/. The data in (4) exemplify the replacement of foreign /z/ and /s/ by Kitharaka /s/, while those in (5) exemplify that of /s/ and /z/ by /ð/.

¹ It is probable that the form /ŋkare/ comes not from English /ka:r/ but from Swahili /gari/. If the latter is the case the adjustment of /g/ (in the Swahili /gari/ to become /k/ in the Kitharaka form /nkare/ would probably be a result of a dissimilation process whereby the voiced velar stop /g/ occurs in the environment of the voiced consonant /r/) in the following syllable.

| (4) | Kitharaka word | Source word | Source Lang. | Gloss |
|-----|----------------|-------------|--------------|-------------------|
| | mosoŋko | mzungu | Kiswahili | white |
| | mbɛsa | pɛsa | “ | money |
| | suruare | suruali | “ | trousers |
| | matanɔgaso | matanɔgazo | “ | news bulletin |
| | sito: | sto:(r) | English | store |
| | situ: | stu:l | “ | stool (implement) |
| | βɛsti | vest | “ | vest |
| (5) | ðimo | simu | Kiswahili | telephone |
| | mɛða | mɛza | “ | table |
| | ða: | sa: | “ | watch, clock |
| | monaði | mnazi | “ | coconut palm |
| | mosɛðo | mtʃɛzo | “ | play (noun) |

Palatal and palato-alveolar consonants are replaced by /s/ and /j/. Specifically, /tʃ/ and /ʃ/ are replaced by /s/ whereas /dʒ/ is replaced by /j/ preceded by a nasal. Due to the processes of homorganic nasal assimilation and consonant strengthening, the sequence of a nasal and /j/ is phonetically realized as [ɲj]. The palatal and alveo-palatal consonant replacement is exemplified by the data in (6).

| (6) | Kitharaka word | Source word | Source lang. | Gloss |
|-----|----------------|-------------|--------------|-----------|
| | mosɛðo | mtʃɛzo | “ | play (n.) |
| | so:βa | tʃupa | “ | bottle |
| | saβusiβo | sʌbtʃi:f | English | sub-chief |
| | sati | ʃ3:t | “ | shirt |
| | ɲjɛrikani | dʒerikæn | “ | jerry-can |

Kitharaka has at least one borrowed word that does not follow the above pattern. The English word /tɔ:tʃ/ (torch) has become /tɔtʃi/ in Kitharaka, rather than */tosi/.

One may want to account for the retention of /tʃ/ by arguing that it is phonetically unattractive to replace /tʃ/ with /s/ in the environment of a

following /i/ because of the tendency of consonants to weaken when they precede /i/. However, we have to take note of the fact that in both /siβo/ (chief) and /saβusiβo/ (sub-chief), /tʃ/ has been replaced by /s/ in the environment of a following /i/. Still, one may be tempted to maintain the argument that /tʃ/ is retained in the /i/ environment by drawing a distinction between the details of the environment of /tʃ/ in /totʃi/ on the one hand and those of /siβo/ and /saβusiβo/ on the other hand by pointing out that whereas in /siβo/ and /saβusiβo/ the high front vowel is followed by a consonant, in /totʃi/ the vowel is followed by a pause. It is difficult to be certain that the difference in the two environments is indeed responsible for the dropping of /tʃ/ in some instances and its retention in others. However, it looks a plausible hypothesis.

The next group of consonants we would like to consider is that of the velars, namely /k/, /g/ and /ɣ/. In the majority of cases, the /k/ of source - words is retained in the Kitharaka form. However, there are instances where /k/ is replaced by /ɣ/. Retention of foreign /k/ by Kitharaka is illustrated in (7), whereas its replacement by /ɣ/ is illustrated in (8).

| (7) | Kitharaka word | Source word | Source lang. | Gloss |
|-----|----------------|-------------|--------------|------------|
| | karamu | kalamu | Kiswahili | pen |
| | moβukɔ | mfukɔ | “ | pocket |
| | mbereka | birika | “ | tea-pot |
| | βikiβiki | pikipiki | “ | motor-bike |
| | kurutu | rɪkru:t | English | recruit |
| | motuka: | məʊtəkɑ:(r) | “ | motor car |
| | sukuru | sku:l | “ | school |
| | kamete | kəmɪti | “ | committee |
| | | | | |
| (8) | Kitharaka word | Source word | Source Lang. | Gloss |
| | moyatɛ | mkatɛ | Kiswahili | bread |
| | karayita | træktə | English | tractor |

In some cases the Kitharaka /k/ has replaced foreign /g/, as in:

| (9) | Kitharaka word | Source word | Source lang. | Gloss |
|-----|-----------------------|--------------------|---------------------|--------------|
| | ŋkare | gari | Kiswahili | car |
| | mokondoro | godoro | “ | mattress |
| | ŋkunea | gunia | “ | sack (noun) |

In the majority of cases, the /g/ of the source-word has been retained in the Kitharaka form. However in the case of such retention /ŋ/ is always added before /g/ because Kitharaka phonology does not allow the segment /g/ except when it occurs within the /ŋg/ cluster. Examples include:

| (10) | Kitharaka word | Source word | Source lang. | Gloss |
|------|-----------------------|--------------------|---------------------|--------------|
| | ŋkengeɛ | kengeɛ | Kiswahili | bell |
| | mbunɣe | bunɣe | “ | parliament |
| | mpeŋgo | piŋgu | “ | hand-cuffs |
| | keβanga | panga | “ | machete |

We have seen that foreign /k/ is sometimes retained and at other times replaced by /ɣ/. Moreover, we have seen that in some instances the foreign /g/ is replaced by Kitharaka /k/. The situation for the velar consonants thus appears not only arbitrary but indeed absurd. The apparently confused scenario is actually far from being arbitrary. There is perfect predictability.

A rule called Dahl's Law operates in Kitharaka (See Wa Mberia 1981 and 1993). The rule, which also operates in several East African Bantu languages, prevents consonants of the same voice quality from being next to one another in adjacent or nearby syllables. In essence it voices the prefix consonants when the root begins with a voiceless consonant. Thus the /k/ of the source word is retained by Kitharaka if the next syllable has a voiced consonant. If the next syllable has a voiceless consonant, the /k/ of the source word is replaced by Kitharaka /ɣ/. The replacement of /g/ of the source word either by the native /k/ is guided by the same principle.

2.2 Vowel Substitution

In most cases Kitharaka words borrowed from Kiswahili have vowels similar to those of the source-words. This similarity results from the fact that the two languages are genetically related. When substitution does take place, the high vowels of Kiswahili words are replaced by mid vowels in Kitharaka as shown in (11) below:

| (11) | Kitharaka word | Source word | Source lang. | Gloss |
|------|----------------|-------------|--------------|-------------|
| | ŋkare | gari | Kiswahili | car |
| | ŋkunea | gunia | “ | sack (noun) |
| | mbereka | birika | “ | tea-pot |
| | soβa | tʃupa | “ | bottle |
| | mpεŋgo | pingu | “ | handcuffs |
| | βatere | padri | “ | priest |
| | eβaβae | papai | “ | pawpaw |

Almost all the words borrowed from English have had many of their vowels replaced by Kitharaka vowels. For instance:

| (12) | Kitharaka word | Source word | Source Lang. | Gloss |
|------|----------------|-------------|--------------|---------------|
| | karayita | træktə | English | tractor |
| | morao | plau | “ | plough (noun) |
| | suβana | spænə | “ | spanner |
| | sukurundεεβa | skru:draivə | “ | screw driver |
| | asiβirini | æspiri:n | “ | aspirin |
| | motuka: | məʊtaka: | “ | motor car |
| | eβuku | buk | “ | book |
| | sa:ti | ʃ3:t | “ | shirt |

2.3 Summary and conclusion to sound substitution

Anttila's contention quoted earlier is only partly supported by sound substitutions in Kitharaka. We have seen that nasal consonants at all the

articulatory points are replaced with phonetically similar sounds. The motivation for the substitution is probably best explained by the fact that each of the nasal consonants in the foreign words has a bundle of distinctive features that are phonetically similar to some ‘native bundle’ of features.

In the case of [-NASAL] consonants, we have seen that foreign labials, non-sonorant alveolars as well as /r/ are retained in Kitharaka whereas /l/ is replaced by /r/. Foreign palatals and palato-alveolars are replaced by a native palatal or alveolar and velars are retained or replaced by a different velar. However, in some instances, sounds are not ‘assigned the closest native bundle’. What is true as far as Kitharaka data is concerned is that any foreign sound is assigned just a *close* bundle of distinctive features, but not necessarily the closest.

Let us illustrate this observation with labials. We have already seen that foreign labial obstruents are replaced by /β/. That is the case, for instance, for /p/ in the Kiswahili /mpira/ (ball). /p/ and /β/ are quite close phonetically as can be seen by comparing their distinctive features with, for instance, those of /j/, a palatal sound.

(13)

| /P/ | /β/ | /j/ |
|--|--|--|
| $\left(\begin{array}{l} +\text{cons} \\ -\text{nas} \\ -\text{cont} \\ +\text{ant} \\ -\text{cor} \\ -\text{voice} \end{array} \right)$ | $\left(\begin{array}{l} +\text{cons} \\ -\text{nas} \\ +\text{cont} \\ +\text{ant} \\ -\text{cor} \\ +\text{voice} \end{array} \right)$ | $\left(\begin{array}{l} +\text{cons} \\ -\text{nas} \\ +\text{cont} \\ -\text{ant} \\ +\text{cor} \\ +\text{voice} \end{array} \right)$ |

According to these feature matrices /p/ is closer to /β/ than it is to /j/. Whereas /p/ and /β/ differ on only two features, [CONT, VOICE], /p/ and /j/ differ on four features, that is, [CONT, ANT, COR, VOICE]. Since /p/ is closer to /β/ than it is to /j/, its replacement by /β/ and not with /j/ is within Anttila’s prediction. However, there is a problem with the

generalizability of Anttila's assertion. Not only does Kitharaka have /β/ in its consonant inventory, but it also has also /p/, which is the native bundle of distinctive features closest to the /p/ of the foreign words. So, it appears that it is not always true that 'in sound substitution, the borrowers apparently make a kind of distinctive feature analysis of foreign sounds and assign them the closest native bundle'. If that were the case, the /p/ in foreign words such as /mpira/, /kupinga/ and /pasi/ would have been replaced by a native /p/ and not by /β/.

The preference for /β/ over /p/ as a replacement for /p/ in foreign words appears to be founded on the fact that /p/, while being one of Kitharaka consonants, is not very attractive in the language's phonological system. Indeed, there is evidence in the Central Kenya Bantu languages to which Kitharaka belongs, that /p/ has been undergoing a historical change which weakens it into fricatives. As a result of this historical process, the frequency of /p/ in Kitharaka vocabulary is very low. No wonder, then, that it is not a preferred consonant in the phonological modification of borrowed words.

3. Sound Insertion in borrowed words in Kitharaka

3.1 Consonant substitution

Besides the substitutions, a number of borrowed words show an inserted consonant. Some of these insertions are motivated by phonological factors whereas others are morphologically motivated. Phonological motivation refers to a situation where a consonant is added into a borrowed word so as to create a phonologically acceptable sound sequence in accordance with Kitharaka phonology. By morphological motivation we mean an instance where the addition of a consonant results from the introduction of a class prefix into the borrowed word so as to make it conform to Kitharaka morphological structure. In (14) below, the /n/ inserted into the first item (that is, /mokondɔɾɔ/) is phonologically motivated because in Kitharaka /d/ has to be preceded by /n/. On the other hand, the consonant insertions in the other words in (14) are morphologically motivated: these insertions are

nasals introduced into the words as Classes 9 and 10 prefixes. Moreover, the initial /m/ in the first item is part of the Class 3 prefix /mo/. Thus, its occurrence in the item is morphologically motivated.

| (14) | Kitharaka word | Source word | Source lang. | Gloss |
|------|----------------|-------------|----------------------|-------------|
| | mokondoro | godoro | Kiswahili | mattress |
| | mbunge | bunge | “ | parliament |
| | ηkunea | gunia | “ | sack (noun) |
| | mbereka | birika | “ | tea-pot |
| | ηkengere | kengere | “ | bell |
| | mpengo | pingu | “ | handcuffs |
| | βamba | pamba | “ | cotton |
| | ηgorβa | gorofa | “ | storey |
| | mbureki | breik | English ² | brake |
| | ηjɛrikani | dzerikan | “ | jerry-can |

Some borrowed words have consonant insertions that have resulted from a combination of both phonological and morphological factors. Such words include:

| (15) | Kitharaka Word | Source Word | Source Lang. | Gloss |
|------|----------------|-------------|--------------|----------|
| | ndawa | dawa | Kiswahili | medicine |
| | nderesa | dirifa | “ | window |
| | ndasita | dʌstə | English | duster |
| | ndiηgiri | digrɪ: | “ | degree |

In each of the above Kitharaka words, the initial /n/ serves two functions simultaneously: first, it ‘props’ /d/ because in Kitharaka /d/ occurs only after /n/ and, second, it serves as the Classes 9 and 10 marker.

² One is not sure whether the Kitharaka form /mbureki/ originated directly from English; it could as well have entered the language through Kiswahili. The forms of the word in both English and Kiswahili are very similar to the Kitharaka form. This uncertainty about the source language is also applicable to some other forms such as /moreηgeti/.

3.2 Vowel insertion

Vowel insertion in borrowed words has the function of opening up closed syllables to make them conform to Kitharaka syllable structure. Vowel insertion operates especially on words borrowed from English. Words entering into Kitharaka from Kiswahili are rarely affected by vowel insertion since Kiswahili syllables are generally open. Words entering Kitharaka from English undergo extensive vowel insertions. The data in (16) below exemplify the phenomenon:

| (16) | Kitharaka word | Source word | Source lang. | Gloss |
|------|----------------|-------------|--------------|--------------|
| | mbureki | breik | English | brake |
| | oiri | oil | “ | oil |
| | βetɛrɔri | petrəl | “ | petrol |
| | siβirini | sprɪŋ | “ | spring |
| | kurutu | rɪkrut | “ | recruit |
| | sa:ti | ʃ3:t | “ | shirt |
| | nsɛra | sel | “ | cell (place) |

4. Conclusion

The analyses and interpretations in this paper rest on the assumption that source-words come into contact with Kitharaka in their surface or phonetic forms and besides that these source words undergoing sound substitutions, insertions, they also undergo morphological re-analysis in accordance with Kitharaka morphological requirements. Specifically, they are acted upon by morphological spell-out rules. (See Hooper (1976) for a description of such rules.) In this way, Kitharaka words originating from foreign words are assigned a morpheme structure and morpheme boundaries similar to those of the native words. These morphological spell-out rules ‘re-analyse’, so to speak, the underlying morphemes—usually stems—in these words. This phenomenon is illustrated by the data in (17) and (18) below. (17) shows words originating from Kiswahili whereas (18) shows words originating from English.

| (17) | Source word | Reanalysed stem | Kitharaka word | Gloss |
|------|-------------|-----------------|----------------|-----------|
| | duka | ruka | nduka | shop |
| | dawa | rawa | ndawa | medicine |
| | pɛsa | βɛsa | mbɛsa | money |
| | gari | kare | ŋkare | vehicle |
| | sanduku | sanduku | esanduku | box |
| | papai | βaβae | eβaβae | pawpaw |
| | birika | βereka | mbereka | kettle |
| (18) | Source word | Reanalysed stem | Kitharaka word | Gloss |
| | dʒɛrikæn | ŋjɛrikani | jɛrikani | jerry-can |
| | sʌmənʒ | samansi | nsamansi | summons |

The data in (17) and (18) reveal two facts. First, the sounds in the reanalyzed stems undergo phonological processes in a manner identical to that of similar sounds in the native stems. Thus, all the stem-initial continuants undergo the consonant hardening process every time they are preceded by a nasal. Second, the sounds in the new stems condition phonological processes in the same manner as they would if they were occurring in native stems. Thus, the word-initial nasal in the borrowed words undergoes homorganic nasal assimilation just as it would when prefixed to native stems. In a nutshell, the segments in the new morphemes are just as active phonologically as similar segments in the native morphemes. It appears, then, that borrowed words can be used to test the synchronic productivity of phonological rules.

References

- Anttila, R. 1972. *An Introduction to Historical and Comparative Linguistics*. New York: The Macmillan Company.
- Hooper, J. 1976. *An Introduction to Natural Generative Phonology*. New York: Academic Press.

Wa Mberia, K. 1981. 'The consonants of Kitharaka'. Unpublished M.A. thesis, University of Nairobi.

Wa Mberia, K. 1993. 'Kitharaka segmental morphophonology with special reference to the noun and the verb.' Unpublished PhD thesis, University of Nairobi.