

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 first look 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 fricatives. That is, /β/ is substituted for /p/, /b/, /f/ and /v/. This substitution is illustrated by the data in (1):

(1)	<u>Kitharaka Word</u>	<u>Source Word</u>	<u>Source Lang.</u>	<u>Gloss</u>
	mɔβira	mpira	Kiswahil	ball
	βaði	pasi	"	iron
	mɔβukɔ	mfukɔ	"	pocket/bag
	βurana	fulana	"	flannel
	mbunɟɛ	bunɟɛ	"	parliament
	βaisikiri	baiskɛli	"	bicycle
	mbureki	breik	English	brake
	βɛtɛrɔri	petrɛl	"	petrol
	βɛsti	vest	"	vest
	mbɔksi	bɔks	"	box

In the words *mbunɟɛ*, *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)	<u>Kitharaka Word</u>	<u>Source Word</u>	<u>Source Lang.</u>	<u>Gloss</u>
	mpɛŋgu	piŋgu	Kiswahili	handcuffs
	faɛri	faɪl	English	file (for papers)

morao	plau	"	plough (noun)
morengeti	blanjɛti	Kiswahili	blanket

In these data, the /p/ in /pingu/ is retained in the Kitharaka form /mpɛngo/. 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 /morengeti/ 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
	ɲkɛŋɛɾɛ	kɛŋɛɾɛ	Kiswahili	bell
	baisikiri	baiskɛli	"	bicycle
	ɲkare ¹	ka:(r)	English	car
	moβira	mpira	Kiswahili	ball
	βiriŋgi	filimbi	"	whistle
	suruare	suruali	"	trousers
	karamu	kalamu	"	pen
	βurana	fulana	"	flannel, sweater
	morao	plau	English	plough (n.)
	ɔiri	ɔil	"	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 the replacement of /s/ and /z/ by /ð/.

¹ It is probable that the form /ɲkare/ 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
	mbesa	pesa	"	money
	suruare	suruali	"	trousers
	matangaso	matangazo	"	news bulletin
	sito:	sto:(r)	English	store
	situ: (implement)	stu:l	"	stool
	βesti	vest	"	vest
(5)	ōimo	simu	Kiswahili	telephone
	mēōa	mēza	"	table
	ōa:	sa:	"	watch, clock
	monaōi	mnazi	"	coconut palm
	moseōo	mtfεzo	"	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 [ɲ]. The palatal and alveo-palatal consonant replacement is exemplified by the data in (6).

(6)	Kitharaka Word	Source Word	Source Lang.	Gloss
	moseōo	mtfεzo	"	play (n.)
	so:βa	tʃupa	"	bottle
	saβusiβo	sɔbtʃi:f	English	sub-chief
	sati	ʃ3:t	"	shirt
	ɲɛrikani	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/ in 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	kəmi:ti	"	committee

(8)	Kitharaka Word	Source Word	Source Lang.	Gloss
	moyatɛ	mkatɛ	Kiswahili	bread
	karayita	træktɔ	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 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
	ŋkengeŋe	kengeŋe	Kiswahili	bell
	mbunge	bunge	"	parliament
	mpenjo	pingu	"	hand-cuffs
	keβanga	paŋga	"	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 in 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 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
	mpɛŋgo	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
	sukurunderεβa	skru:draivə	"	screw driver
	asiβirini	æspirin	"	aspirin
	motuka:	məʊtaka:	"	motor car
	eβuku	bʊk	"	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 retained. The motivation for the retention 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 and alveolars 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 a *close* bundle of distinctive features, and not necessarily the closest bundle.

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/																		
	<table style="border: none;"> <tr><td style="border-left: 1px solid black; border-right: 1px solid black; padding: 5px;">+cons</td></tr> <tr><td style="border-left: 1px solid black; border-right: 1px solid black; padding: 5px;">-nas</td></tr> <tr><td style="border-left: 1px solid black; border-right: 1px solid black; padding: 5px;">-cont</td></tr> <tr><td style="border-left: 1px solid black; border-right: 1px solid black; padding: 5px;">+ant</td></tr> <tr><td style="border-left: 1px solid black; border-right: 1px solid black; padding: 5px;">-cor</td></tr> <tr><td style="border-left: 1px solid black; border-right: 1px solid black; padding: 5px;">-voice</td></tr> </table>	+cons	-nas	-cont	+ant	-cor	-voice	<table style="border: none;"> <tr><td style="border-left: 1px solid black; border-right: 1px solid black; padding: 5px;">+cons</td></tr> <tr><td style="border-left: 1px solid black; border-right: 1px solid black; padding: 5px;">-nas</td></tr> <tr><td style="border-left: 1px solid black; border-right: 1px solid black; padding: 5px;">+cont</td></tr> <tr><td style="border-left: 1px solid black; border-right: 1px solid black; padding: 5px;">+ant</td></tr> <tr><td style="border-left: 1px solid black; border-right: 1px solid black; padding: 5px;">-cor</td></tr> <tr><td style="border-left: 1px solid black; border-right: 1px solid black; padding: 5px;">+voice</td></tr> </table>	+cons	-nas	+cont	+ant	-cor	+voice	<table style="border: none;"> <tr><td style="border-left: 1px solid black; border-right: 1px solid black; padding: 5px;">+cons</td></tr> <tr><td style="border-left: 1px solid black; border-right: 1px solid black; padding: 5px;">-nas</td></tr> <tr><td style="border-left: 1px solid black; border-right: 1px solid black; padding: 5px;">+cont</td></tr> <tr><td style="border-left: 1px solid black; border-right: 1px solid black; padding: 5px;">-ant</td></tr> <tr><td style="border-left: 1px solid black; border-right: 1px solid black; padding: 5px;">+cor</td></tr> <tr><td style="border-left: 1px solid black; border-right: 1px solid black; padding: 5px;">+voice</td></tr> </table>	+cons	-nas	+cont	-ant	+cor	+voice
+cons																					
-nas																					
-cont																					
+ant																					
-cor																					
-voice																					
+cons																					
-nas																					
+cont																					
+ant																					
-cor																					
+voice																					
+cons																					
-nas																					
+cont																					
-ant																					
+cor																					
+voice																					

According to this feature matrix /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 retained and not replaced by /β/.

The preference for /β/ over /p/ in the position of /p/ in the 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 insertion

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, /mokondɔrɔ/) 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
	nkunea	gunia	"	sack (noun)
	mbereka	birika	"	tea-pot
	nkengere	kengere	"	bell
	mpengo	pingu	"	handcuffs
	βamba	pamba	"	cotton
	ngorβa	gorofa	"	storey
	mbureki	breik	English ²	brake
	ɲɛrikani	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
	ndiyiri:	dɪgri:	"	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 /morengeti/.

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
	ɔiri	oil	"	oil
	βɛtɛɔri	petrəl	"	petrol
	siβirini	spriŋ	"	spring
	kurutu	rɪkrut	"	recruit
	sa:ti	ʃɜ: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 that besides these source words undergoing sound substitutions and 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	ɲɟɛrikani	ɲɟɛrikani	jerry-can
	sʌmənʒ	samansi	nsamansi	summons

The data in (17) and (18) reveal two facts. First, the sounds in the reanalysed 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.