

## **Swahili Loanwords in Gorwaa and Iraqw: Phonological and Morphological Observations**

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### **Abstract**

When Swahili words are borrowed into Gorwaa and Iraqw, they are typically nativized according to a series of observable patterns. This work offers an account of how Swahili borrowings are integrated phonologically and morphologically into these languages. Phonologically, non-native phonemes are typically replaced by native sounds which are featurally similar to the original Swahili phoneme, and where no such similar phoneme exists, the non-native sound is tolerated. In order to repair words whose etymon begins with a syllabic nasal, either a vowel is inserted to break up the cluster, or the initial nasal is deleted. Vowels are very often lengthened on the stressed (penultimate) syllable. Where Swahili words do not violate any phonological rule, they are adopted without change. Morphologically, borrowed verbs are assigned a verbal derivational ending to identify the forms as verbs. The gender system of Swahili differs markedly from Gorwaa and Iraqw, and, as such, every borrowed noun must be assigned a gender. Typically (but not always), this is done according to the phonetic form of the noun. Nouns ending in round vowels are assigned masculine gender and nouns ending in the front vowel are assigned feminine gender. Pluralizing forms whose base is singular, or singularizing forms whose base is plural are more complicated, with a series of weakly productive rules operating to assign number suffixes to base forms. This results in a high number of irregular forms.

**Keywords:** *Swahili, Gorwaa, Iraqw, loanwords, phonology, morphology, gender, number*

### **Introduction**

Swahili is currently the language from which Gorwaa and Iraqw borrow the most extensively. Though Gorwaa and Iraqw present a grammatical systems markedly different from that of Swahili, loanwords are typically nativized according to a series of observable patterns. This work will offer an account of how Swahili

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borrowings are integrated phonologically and morphologically into these languages.<sup>3</sup>

What follows is a short description of Gorwaa and Iraqw, the nature of their interaction with Swahili, as well as the data used in this paper. Subsequently, the way in which loanwords are phonologically adapted to Gorwaa and Iraqw will be examined. Morphological adaptations will then be treated, first focusing on verbs, and then focusing on nouns (specifically gender and number assignment).

#### *Data and Methodology*

Gorwaa and Iraqw are South Cushitic languages spoken in north-central Tanzania. Iraqw is a widely-spoken language with approximately half a million native speakers (Johnstone and Mandryk 2001), whereas Gorwaa is a smaller language, spoken by some 15,000 individuals (Mous 2007). Both languages border on each other, share a common remembered history, traditional religion, and several other salient cultural traits. As both languages are mutually intelligible and highly similar grammatically, it was considered appropriate to treat them together in this paper.

The past 50 years have seen sweeping changes in the areas in which Gorwaa and Iraqw are spoken, bringing Swahili to the fore as the major language of commerce, communication between ethnic groups, and national life in general. Radio and television, large ‘international’ religions such as Christianity and Islam, as well as multiethnic (and multilingual) marriages have all contributed to securing Swahili as the language through which speakers of Gorwaa and Iraqw view the

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<sup>3</sup> Gorwaa data were collected between 2012 and 2016 during several visits to Babati district.

outside world. This is immediately visible in the types of loans passing into Gorwaa and Iraqw – virtually all modern concepts are expressed by a Swahili loan. In the long-term, it is conceivable that fewer children will speak Gorwaa and Iraqw in the home. In the case of Gorwaa, the language faces real challenges to remain a spoken tongue into the next century. Virtually all speakers of Gorwaa and Iraqw are bilingual, with Swahili as the second language.

For this paper, 234 Swahili words that have passed into Gorwaa, Iraqw, or both were collected from previous scholarship (Nahhaato, Margwee, and Kießling 1994; Mous, Qorro, and Keißling 2002; Mous 2009; and Magway 2009), as well as from fieldwork conducted by Andrew Harvey between 2012 and 2016. These words were then compared with their etymons<sup>4</sup>

### **Phonological Adaptation**

Swahili may be described as possessing a (C)V syllable structure, where V may hold the value of one timing unit or two timing units. It possesses a five-vowel system – [a], [e], [i], [o], [u], and commonly features word-initial syllabic nasal consonants. Recent borrowings (especially from English) have introduced consonant clusters into the language (Batibo 1994), though it is still uncertain as to whether these borrowings can be said to be fully nativized (Harvey 2015). Either way, many of these recent borrowings have passed again from Swahili into Gorwaa and Iraqw, and will be examined herein.

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<sup>4</sup> The full list is included as an appendix.

Gorwaa and Iraqw possesses a CV(C) syllable structure<sup>5</sup>, where V may hold the value of one timing unit or two timing units. As Swahili, it possesses a five-vowel system of [a], [e], [i], [o], [u]. The consonant system is rich, featuring a series of labialized consonants, ejectives, and an ejective alveolateral [tɬ']. Voiced fricatives such as [v] and [z] are notably absent.

#### *Zero Derivation*

Very commonly, words are integrated into Gorwaa and Iraqw without change. This is particularly common for words which are interpreted in Gorwaa and Iraqw to be of the (cross-linguistically unmarked) CV syllable structure, though there are many instances of non-CV structures being zero-derived as well (see 1d) and e)).

- |     |    |          |    |          |               |
|-----|----|----------|----|----------|---------------|
| (1) | a. | [bata]   | -> | [bata]   | 'duck'        |
|     | b. | [sigara] | -> | [sigara] | 'cigarette'   |
|     | c. | [umeme]  | -> | [ʔumeme] | 'electricity' |
|     | d. | [benki]  | -> | [benki]  | 'bank'        |
|     | e. | [soksi]  | -> | [soksi]  | 'socks'       |

It is noteworthy that the majority of these zero-derived words typically represent semantic fields which are so new to Gorwaa and Iraqw culture that it may be argued that such forms have not been fully nativized. Fields such as Christianity, newly-introduced crops, animals or farming methods, and the modern government are particularly reliant on loans from Swahili. Often, if the Swahili etymon has two meanings – one representing a modern concept and the other representing an older and more traditional concept, the Gorwaa and Iraqw borrowing will only mean the former, with a native Gorwaa and Iraqw word being retained to represent the latter.

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<sup>5</sup> All syllables must start with a consonant in Gorwaa and Iraqw. Words written with an initial vowel are understood to begin with a glottal stop [ʔ].

The Swahili *umeme*, for example, means both ‘lightning’ and ‘electricity’. In Gorwaa and Iraqw *umeme* bears only the latter meaning, whereas ‘lightning’ is expressed as the native *mankari*.

#### *Replacement of Non-Native Phonemes*

Sounds which are not present in the phonetic inventory of Gorwaa and Iraqw are obligatorily replaced by featurally similar sounds from the native inventory.

Most commonly, this means that the voiced fricatives of Swahili lose their voicing.

[z] becomes realized as [s], and [v] becomes realized as [s].

- |     |    |            |    |             |               |
|-----|----|------------|----|-------------|---------------|
| (2) | a. | [zaburi]   | -> | [saburi]    | ‘psalm’       |
|     | b. | [utʃaguʒi] | -> | [ʔutʃagusi] | ‘election’    |
|     | c. | [vita]     | -> | [fita]      | ‘(World) war’ |

#### *Adoption of Non-Native Phonemes*

Sounds which are not present (or at least so rare as to be considered exotic or foreign) in Gorwaa and Iraqw may be adopted outright. This situation is less common than the replacement of non-native phonemes, but occurs quite frequently with the alveopalatal fricatives [ʃ] and [ʒ] and the alveopalatal affricates [tʃ] and [dʒ].

- |     |    |            |    |             |                       |
|-----|----|------------|----|-------------|-----------------------|
| (3) | a. | [maʃine]   | -> | [maʃi:ni]   | ‘machine’             |
|     | b. | [ʒela]     | -> | [ʒe:la]     | ‘prison, prison cell’ |
|     | c. | [utʃaguʒi] | -> | [ʔutʃagusi] | ‘election’            |
|     | d. | [mferedʒi] | -> | [fere:dʒi]  | ‘ditch’               |

In contrast to situations in which non-native phonemes are replaced by native phonemes, these non-native phonemes seem to be adopted because there are no featurally similar phonemes in the Gorwaa and Iraqw phonetic inventory which sufficiently approximate the Swahili sounds.

#### *Adaptation of Initial Syllabic Nasals*

Prothesis inserts a vowel at the beginning of a word where the Swahili etymon features an initial syllabic nasal:

- (4) a. [ngamia] -> [ʔangamia] 'camel'  
 b. [mpira] -> [ʔimpi:rmo] 'ball (e.g. football)'  
 c. [ndege] -> [ʔindege] 'aeroplane'

Vowel-insertion generates a vowel directly after a word-initial syllabic nasal:

- (5) a. [mkate] -> [maka:te] 'bread'  
 b. [mchele] -> [muchele] 'rice (cooked or uncooked)'

A small set of nouns with an initial syllabic nasal are zero-derived:

- (6) a. [msumari] -> [msuma:ri] 'nail'  
 b. [mdudu] -> [mdudu] 'insect'

Consonant-deletion is another strategy used to repair illicit syllabic nasals in the Swahili etymon.

- (7) a. [mferedʒi] -> [fere:dʒi] 'ditch'  
 b. [mnada] -> [nada] 'cattle market'  
 c. [ndama] -> [da:ma] 'calf'

With regards to when a vowel is inserted versus when a consonant is deleted, vowel-insertion appears to take place most commonly when the word-initial cluster is of the composition [NASAL + STOP]. Consonant-deletion (i.e. deletion of the syllabic nasal) occurs most commonly when the word-initial cluster is of the composition [NASAL + CONTINUANT] (but see 7c.).

#### *Vowel-Deletion*

Gorwaa and Iraqw tolerate closed syllables, and as such, many Swahili loanwords will exhibit the deletion of a vowel present in the etymon. Where deletion is present, the deleted vowel corresponds to the antepenult of the etymon, the least prominent vowel.

- (8) a. [barabara] -> [barbara] 'road'  
 b. [serikali] -> [sirkali] 'government'  
 c. [matofali] -> [matfali] 'bricks'

Deletion of the antepenultimate vowel is not, however, mandatory. This does not appear to be a question of phonological structure, but more likely one of speaker variation or possibly recency of adoption of the individual words.

- (9) a. [karatasi] -> [karatasi] 'paper'  
 b. [kibiriti] -> [kibiri:ti] 'match (i.e. to start fires)'  
 c. [uchaguzi] -> [ʔuchagusi] 'election'

#### *Vowel-Lengthening*

Lengthened vowels will be on the stressed (i.e. penultimate) syllable

- (10) a. [filimbi] -> [fili:mbi] 'flute'  
 b. [gazeti] -> [gase:ti] 'newspaper'  
 c. [kalamu] -> [kala:mu] 'pen'

#### *Others*

Words in Gorwaa and Iraqw cannot feature a stressed final vowel which is long, as such, words adopted from Swahili featuring a stressed final vowel will be repaired by the suffix /-ʔX/, where X is a short vowel corresponding to the long vowel of the etymon.

- (11) a. [tʃo:] -> [tʃo:ʔo] 'toilet'  
 b. [sa:] -> [sa:ʔa] 'hour, time'  
 c. [ta:] -> [ta:ʔa] 'lamp, light'  
 But: d. [mta:] -> [mta:] 'block, neighbourhood'

Several loans feature devoicing of the initial [b] of the Swahili etymon.

- (12) a. [baisikeli] -> [paske:li] 'bicycle'  
 b. [bunduki] -> [punduki] 'gun'  
 But: c. [benki] -> [benki] 'bank'

Vowel clusters are often simplified by reducing one vowel of the Swahili etymon to a glide.

- (13) a. [barua] -> [barwa] 'letter'  
 b. [gauni] -> [gawni] 'dress'  
 c. [kofia] -> [kafya] 'hat'  
 But: d. [faini] -> [faini] 'fine'

But: e. [funguo] -> [funguo] 'key'

### Morphological Adaptation

Swahili is an agglutinative language, in which the morphology builds words in which there is often a one-to-one correspondence between morpheme and function.

- (14) a. ni -me -lal -a  
1.SG-PRF-sleep-Fv  
'I slept'
- b. u -me -lal -a  
2.SG-PRF-sleep-FV  
'You slept'
- c. ni -ta -lal -a  
1.SG -FUT -sleep -Fv  
'I will sleep'
- d. u -ta -lal -a  
2.SG -FUT -sleep -Fv  
'You will sleep'

Gorwaa and Iraqw, on the other hand, are inflectional languages in which two or more functions may be fused together into one morpheme. Furthermore, many grammatical concepts are expressed suprasegmentally (i.e. by vowel-length and pitch-accent).

- (15) a. a guú  
Aux1 sleep\1Sg.PST  
'I slept'
- b. a gú  
Aux2 sleep\2Sg.PST  
'You slept'
- c. a -n guu  
AUX1 -EXPECT sleep\1Sg.SUBJ  
'I will sleep'
- d. a -n gu  
AUX2 -EXPECT sleep\2Sg.SUBJ  
'You will sleep'

The following will examine adaptation strategies for two major parts of speech, beginning with verbs, and then moving to nouns.

*Verbs*

Verbal forms are consistently borrowed from Swahili in their bare (e.g. infinitive) forms and then merged with one of the ‘derivational suffixes’ native to Gorwaa and Iraqw.

(16)	a.	anza	->	ansiim	‘to begin’
	b.	tafsiri	->	tafsiruus	‘to translate’
	c.	batiza	->	batiis	‘to baptize’
	d.	soma	->	somuus	‘to read, to study’
	e.	fyeka	->	fekuus	‘to clear away’

In each of the above cases, the verbal root of the etymon is fused with either the durative ending *-m* or the causative ending *-s*. The choice of linking vowel (either [i:] or [u:]) seems to be arbitrary. Even in Gorwaa and Iraqw, the function of these endings is less straightforward as their labels suggest (Kießling 2000: 14), and for borrowings, these endings do not seem to consistently add any durative or causative meaning to the verbs. Instead, the endings should be viewed as the general verbalizing mechanism used to build verbs from non-native forms. In fact, the ‘verbalizing mechanism’ argument may be equally applied for a whole class of native verbs in Gorwaa and Iraqw as well. From the noun *bimbila* ‘germinated millet dried in the sun’ is derived the verb *bimbiliim* ‘soaking millet before drying’, or ‘grinding the dried sprouted millet’ – essentially, the activities associated with the root noun.

In at least two cases, verbs have been adopted together with their Swahili extensional endings, *pona* ‘heal intrans.’ has been adopted as *ponya* ‘heal trans.’ with the applicative ending, and *ungana* ‘join together’, has been adopted as *unganisha* ‘cause to join together’ with the causative ending.

(17)	a.	pon-y-a	->	ponyuus	‘to heal’
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- b. ungan-ish-a -> unganishiim 'to join'

### *Nouns*

The single difference between the nouns of Gorwaa and Iraqw and Swahili most consequential to this paper is that of the gender systems. For Hockett (1953:231) gender is a property which divides the nouns of a language into different groups based on the agreement triggered on associated words. Gender systems may base this classification on semantic contrasts, formal criteria, or both (Corbett 1991).

Swahili exhibits a system of 18 genders, more commonly known as noun classes. This is a common feature of Bantu languages, which tend to divide nouns along semantic criteria (humans, natural forces, elongated objects, etc.). As with most gender systems, these patterns are merely tendencies, and cannot be used to characterize every noun in a given class:

- |      |    |                         |   |                          |
|------|----|-------------------------|---|--------------------------|
| (18) | a. | m-tu 'person'           | / | wa-tu 'people'           |
|      | b. | m-hindi 'Indian person' | / | wa-hindi 'Indian people' |
|      | c. | mw-islamu 'Muslim'      | / | wa-islamu 'Muslims'      |
| But: | d. | Ø-askari 'soldier'      | / | ma-askari 'soldiers'     |
| But: | e. | Ø-rai 'president'       | / | Ø-rai 'presidents'       |

Essentially, *m-* and *wa-* are used respectively to denote a person or people (though, again, as 18d and 18e demonstrate, this is merely a tendency), and constitute two of the 18 gender classes of Swahili. All nouns will be assigned to one of these classes.

Gorwaa and Iraqw, on the other hand, exhibit a system of 3 genders. Commonly, these 3 genders are referred to as M(asculine), F(eminine), and N(euter), based on the loose tendency of nouns to group with nouns of a like sex.

Once again, however, these are mere tendencies and Gorwaa and Iraqw possess large sets of nouns in each group which do not comply with the labels:

- (19) a. hhawata 'man' (M)  
 b. garma 'boy' (M)  
 c. awu 'bull' (M)  
 But: d. dasu 'girls' (M)  
 e. haree 'woman' (F)  
 f. desi 'girl' (F)  
 g. slee 'cow' (F)  
 But: h. barisee 'old men' (F)  
 i. xweera 'evening' (N)  
 j. bahhi 'side of body' (N)  
 k. loo'eema 'truth' (N)

The relationship between gender and number in Gorwaa and Iraqw is complex. Plural nouns may be formed from morphologically simpler singular bases (as in 20), or, conversely, singular nouns may be formed from a morphologically simpler plural base (as in 21). In each case, these derived forms will carry a number suffix (e.g. the plural suffix *-á* in 21a, and the singulative suffix *-o* in 21).

- (20) a. siník 'riddle' -> siniká 'riddles'  
 b. bee/i 'sheep' -> bee/aangw 'sheep (pl).'  
 c. wa/angw 'canyon' -> wa/eeri 'canyons'
- (21) a. xa'i 'trees' -> xa'ano 'tree'  
 b. ba'ár 'flies' -> ba'arimo 'flies'  
 c. tla/e 'stones' -> tla/ano 'stone'

The gender of any given noun can only be predicted if the noun is derived (i.e. if it has a number suffix). Plural nouns with the suffix *-eeri* are, for example, consistently N. Singular nouns with the suffix *-o* are typically M. The gender of underived nouns (either singular or plural) is largely unpredictable: *garma* (M) 'boy', and *xweera* (N) 'evening' bear the same /a/ ending, but are different genders, the same applies for *desi* (F) 'girl' and *bahhi* (N) 'side of the body'. There is a slight

tendency for underived nouns ending in round vowels (/o/, and /u/) to be masculine, and the front vowel (/i/) to be feminine, but there are so many exceptions as to make this a very weak correlation indeed.

What sets the Gorwaa and Iraqw gender system apart from more familiar systems such as that of Latin for example, is that the gender of a given noun in the singular may be different from the gender of that same noun in the plural. For example, in the singular, the noun *iinsaangw* ‘fox’ triggers masculine agreement (i.e. *iinsaangw* ‘fox’ is a masculine noun), however the plural form *iinsaawee* ‘foxes’, triggers feminine agreement (i.e. *iinsaawee* ‘foxes’ is a feminine noun). As illustrated in (22), this may occur for nouns of any gender and result in corresponding plural forms of almost any gender.

- |      |    |                       |    |                        |
|------|----|-----------------------|----|------------------------|
| (22) | a. | /aambalu ‘lizard’ (M) | -> | /aambál ‘lizards’ (M)  |
|      | b. | iinsaangw ‘fox’ (M)   | -> | iinsaawee ‘foxes’ (F)  |
|      | c. | qara ‘poison’ (M)     | -> | qareeri’ ‘poisons’ (N) |
|      | d. | sluma ‘yard’ (F)      | -> | slumoo ‘yards’ (F)     |
|      | e. | fiitsi ‘broom’ (F)    | -> | fiitsáy ‘brooms’ (M)   |
|      | f. | baha ‘hyena’ (F)      | -> | bahu ‘hyenas’ (N)      |
|      | g. | gila’ ‘hide’ (N)      | -> | gileeri’ ‘hides’ (N)   |
|      | h. | yaamu ‘land’ (N)      | -> | yaamee ‘lands’ (F)     |

These patterns motivate the conclusion that gender in Gorwaa and Iraqw is derivational, rather than inflectional. That is, base nouns do not inflect to form their singular or plural forms. Instead, they merge with number suffixes to form new words. Number suffixes contain their own gender, and it is this gender which triggers agreement on targets (such as adjectives and verbs). Further evidence for this exists in the occurrence of more than one plural form of a word with more or

less the same semantic meaning. It would be very rare for an inflectional system to contain two alternatives for a single form, but derivationally, this is normal:

- (23) al/aya ‘trickery’               -> al/ayma’a ‘trickeries’  
or  
-> al/agiingw ‘trickeries’

A derivational system of 3 genders featuring highly unpredictable assignment of gender and operations that may build a plural from a singular base or a singular from a plural base – all of these language-specific characteristics bear upon the adaptation of Swahili loanwords into Gorwaa and Iraqw.

Mous and Qorro (2009) were the first to note that phonetic form plays a much larger role in the assignment of gender in the borrowed part of the vocabulary. As such the tendency noted above (nouns ending in round vowels are assigned M (24) and nouns ending in the front vowel are assigned F (25)) is much more vigorous. Indeed, most nouns collected in their underived forms, comply with this rule.

- (24) a. angaano 'wheat' (M)  
b. kilaabu 'club' (M)  
c. rooboo 'quarter' (M)  
But: d. kijikoo 'spoon' (F)
- (25) a. baati 'corrugated iron sheet' (F)  
b. sukaari 'sugar' (F)  
c. polooti 'plot' (F)  
But: d. patri 'priest' (M)

The exception (25d) can be explained as a case of semantics (*patri* an entity strongly marked as male) overriding phonetic form.

The derivation of forms is largely irregular – that is, the number suffix taken by any given noun is unpredictable. Plural-to-singular derivation usually employs the singulative ending *-mo* (M), but sometimes the ending *-to'o* (F) is used.

- |      |    |                             |    |                              |
|------|----|-----------------------------|----|------------------------------|
| (26) | a. | miti (F) 'trees'            | -> | mitmo (M) tree               |
|      | b. | shilingi (F) 'shillings'    | -> | shilingamo (M) 'shilling'    |
|      | c. | samaki (F) 'fish'           | -> | samakumo (M) 'fish (sg.)'    |
| But: | d. | kasiis (F) 'Irish potatoes' | -> | kasiito'o (F) 'Irish potato' |
|      | e. | machungwa (M) 'oranges'     | -> | machunguto'o (F) 'orange'    |

Singular-to-plural derivation is less predictable. F base nouns which end in /i/ may derive a plural form in *-ay* (M), whereas M base nouns may not. However, F base nouns may also take other pluralizing endings.

- |      |    |                         |    |                            |
|------|----|-------------------------|----|----------------------------|
| (27) | a. | harusi (F) 'wedding'    | -> | harusay (M) 'weddings'     |
|      | b. | chahi (F) 'tea'         | -> | chahay (M) 'teas'          |
|      | c. | surwaali (F) 'trousers' | -> | surwaalay (M) 'trousers'   |
| But: | d. | basi (F) 'bus'          | -> | basidu (N) 'busses'        |
| But: | e. | siptaali (F) 'hospital' | -> | siptaalidu (N) 'hospitals' |

Beside not taking the pluralizing ending *-ay* (M), the pluralizing process for M base nouns is irregular:

- |      |    |                               |    |                            |
|------|----|-------------------------------|----|----------------------------|
| (28) | a. | kalaamu (M) 'pen'             | -> | kalaamadu (N) 'pens'       |
|      | b. | Masoongamo (M) 'white person' | -> | Masoong (M) 'white people' |
|      | c. | sandukmo (M) 'box'            | -> | sandukw (M) 'boxes'        |
|      | d. | fulaanamo (M) 'shirt'         | -> | fulanama (N) 'shirts'      |
|      | e. | kitaangw (M) 'chair'          | -> | kiteeri (N) 'chairs'       |

Some nouns which are singular in the Swahili have been reanalyzed as plural in Gorwaa and Iraqw.

- |      |    |                        |    |                        |
|------|----|------------------------|----|------------------------|
| (29) | a. | tofali (F) 'bricks'    | -> | tofalimo (M) 'brick'   |
|      | b. | askaari (F) 'soldiers' | -> | askaarmo (M) 'soldier' |
|      | c. | embee (F) 'mangoes'    | -> | embito'oo (F) 'mango'  |

Two nouns referring to people have retained their Swahili class prefixes in the plural.

- (30) a. /arabmoo (M) 'Arab person' -> Wa/arabu (M) 'Arab people'  
b. Muhindmo (M) 'Indian person' -> Wahindi (F) 'Indian people'

The name for a Chaga person forms its base from the Swahili plural form and derives its singular.

- (31) Wachaga (F) 'Chaga people' -> Wachagamo 'Chaga person'

### **Conclusion**

This paper has reviewed the process by which Swahili words pass into a considerably different pair of languages: Gorwaa and Iraqw. This may be described as the manner in which Gorwaa and Iraqw 'fits' novel forms into its existing system. Phonologically, this process is one of fitting novel forms into the existing phonology. Forms are either adapted outright (because they already fit the phonology), modified to the new system (i.e. made to fit), or, more rarely, accommodated even if they do not fit. Morphologically, verbs are adapted by assigning them verbalizing suffixes already present in the system as derivational endings. Because nouns come from a system featuring a markedly different system of gender, rules must be applied to fit each new form to a group, thus 'making' the form a noun. Gender-assignment rules have been shown to be weak, and exceptions are common. Number-assignment rules are even less predictable.

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**Appendix: Swahili Loanwords in Gorwaa and Iraqw**

<b>Borrowed Words</b>	<b>Meaning</b>	<b>Language<sup>6</sup></b>	<b>Swahili Source Word and Meaning</b>	<b>Gender</b>	<b>Plural Form (Gender)</b>	<b>Notes</b>	<b>Source<sup>7</sup></b>
/aansuus	v. start	I	(ku)anza v. start	N/A	N/A	c.f. <ansiím>	1
afkeeki	n. bun (hard) made with eggs	I	hafkeki n. bun (hard) made with eggs	F	afkeekay (M)	singulative form is <afkeekito'oo> (F)	1
alaama	n. sign	I	alama n. sign, symbol	F	alaamudu (N)		1
alafu	adv. then	G	halafu adv. then	N/A	N/A		
angaano	n. wheat	I	ngano n. wheat	M		singulative form is <angaanomoo> (M)	1
angamiya	n. camel	I	ngamia n. camel	F	angamiyadu (N)		1
ansiím	v. start	G	(ku)anza v. start	N/A	N/A	c.f. </aansuus>	
anwaani	n. address	I	anwani n. address	F	anwaanaay (M); anwaanidu' (N)		1
/arabmoo	n. Arab	I	Mwarabu n. Arab	M	wa/arabu (M)	Swahili class prefix is retained in the plural	1
askaarmoo	n. soldier	I	askari n. soldier	M	askaari (F)	in this case, the pl. form appears to be the base, and the singular derived from it	1
askofu	n. bishop	G	askofu n. bishop	M	askofuma' (M)		
ayna	n. type, sort	G	aina n. type, sort	M			

<sup>6</sup> G = Gorwaa; I = Iraqw; G/I = Gorwaa and Iraqw

<sup>7</sup> 1 = Maarten Mous; Martha Qorro; and Roland Kiessling 2002; 2 = Maarten Mous 2009; 3 = John Konki Nahhaato, Thomas B. Margwee, and Roland Kießling 1994; 4 = Josephat B. Maghway 2009.

baati	n. corrugated iron sheet	I	bati n. corrugated iron sheet	F	baatay (M); mabaati (F); mabaataay (M)	singulative form is <baatito'oo> (F) <mabaatito'oo> (F)	1
bahari	n. ocean, sea	I	bahari n. ocean, sea	F	mabahari (F)		2
balaasimó	n. pigeon-peas	G	mbaazi n. pigeon-peas	M	balaasi (F)		3
bamíya	n. okra	G	mbamia n. okra	F		singulative form is <bamiyamó> (M)	3
baloosi	n. local party official (ten house leader)	I	mbalozi n. consul, political agent	F	baloosamoo (N)		1
bara	n. continent	I	bara n. continent				2
barafu	n. ice	I	barafu n. ice				2
barbara	n. road	G/I	barabara n. road	M	barbardu (N)		2
barwa	n. letter	I	barua	F	barwadu (N)	singulative form is <barwito'oo> (F)	1
basi	n. bus	I	basi n. bus	F	basidu (N)		1
basi	adv. so	I	basi adv. so				2
bata	n. duck	I	bata n. duck, pygmy goose				2
batíís	v. baptize	G	(ku)batiza v. baptize	N/A	N/A		
benki	n. bank	I	benki n. bank				2
bikra	n. nun	I	bikra n. virgin	F	bikradu (N)		1
bisibisi	n. screwdriver	I	bisibisi n. screwdriver				2

boksi	n. box	G	boksi n. box	F	boksay (M)		
bomba	n. pipe	G	bomba n. pipe	F	bombadu (N)		
bomu	n. bomb	I	bomu n. bomb				2
breki tseeg	n. break (of a vehicle)	I	breki n. break (of a vehicle)				2
burashi	n. brush	I	burashi n. brush	F	burashay (M)		1
burungeti	n. blanket	I	blanketi n. blanket	F	burungeetay (M)		1
bustaani	n. vegetable garden	I	bustani n. garden (flowers or vegetables)	F	bustaanay (M)		1
chabumo	n. chigger	G	chawa n. chigger	M	chaabu (M)		3
chahi	n. tea	I	chai n. tea	F	chahay (M)		1
chapaati	n. wheat flour pancake (savory)	I	chapati n. wheat flour pancake (savory)	F	chapatay (M)	singulative form is <chapito'oo> (F)	1
choo'o	n. toilet	I	choo n. toilet				
chukaa	n. lime	I	chokaa n. lime	F			1
chumba	n. room	I	chumba n. room	F	chumbadu (N)		1
chupa	n. bottle	I	chupa n. bottle				2
daftaari	n. exercise book	I	daftari n. exercise book	F	daftaaray (M)		1
dakiika	n. minute	I	dakika n. minute	F	dakiikay (M)		1
daktari	n. Western-style doctor	I	daktari n. Western-style doctor	F	daktaray (M)		1
damaa	n. calf	G	ndama n. calf	F	damaay (M)		4

dawa	n. medicine	I	dawa n. medicine				2
deebe	n. measure of grain	I	debe n. measure of grain				2
dini	n. faith, religion	I	dini n. faith, religion				2
dirisha	n. window	I	dirisha n. window	F	dirishidu (N)		1
duka	n. shop	I	duka n. shop				2
embito'oo	n. mango (fruit)	I	embe n. mango (fruit)	F	embee (F)	in this case, the pl. form appears to be the base, and the singular derived from it	1
faini	n. fine	I	faini n. fine				2
faras	n. horse	I	farasi n. horse	M			1
fekuús	v. clear away	G	(ku)fyeke v. clear away	N/A	N/A		
fereeji	n. ditch	I	mfereji n. ditch	F	fereejay (M)		1
filimbi	n. flute	I	filimbi n. flute	F	filimbay (M)		1
film	n. film	I	filamu n. film				2
fita	n. (World) war	G	vita n. war	F			
fulaanamoo	n. shirt	I	fulani n. shirt	M	fulaanama' (N)		1
fundi	n. technician	I	fundi n. technician				2
funguo	n. key	I	funguo n. key				2
gaari	n. car	I	gari n. car	F	gaaridu (N)		1
gadoro	n. mattress	I	godoro n. mattress				2
garangaar	v. fry	I	kaanga v. fry				2

gaseeti	n. newspaper	I	gazeti n. newspaper	F	gaseetay (M)		1
gawni	n. dress	I	gauni n. dress				2
geebo	n. gable	G	gebo n. gable	M	mageebodu (N)		
gilasi	n. glass	I	gilasi n. glass				2
gunyá	n. sack	G/I	gunia n. sack	F	guniyedu (N)		1
guruuwee	n. pig	I	nguruwe n. pig	F	gurudu (N)		1
harsasi	n. bullet	I	risasi n. bullet	F	harsasáy (M)		1
harusi	n. wedding	G/I	harusi n. wedding	F	harusay (M)		1
hema	n. tent	I	hema n. tent				2
hela	n. money	G	hela n. money	F			
ili	adv. such that	G	ili adv. such that				
impiirmo	n. ball (e.g. football)	I	mpira n. ball (e.g. football), rubber	M	impirma' (N)		1
indege	n. aeroplane	I	ndege n. bird, aeroplane				2
injin	n. engine (i.e. of a vehicle)	I	injini n. engine (i.e. of a vehicle)				2
jaaluus	v. care about	I	(ku)jali v. care about	N/A	N/A		1
jeela	n. prison, prison cell	I	jela n. prison, prison cell	F	jeeladu (N)	<jeelamoo> (N) 'inmate'	1
jimbo	n. state	G	jimbo n. state	M	majimbodu (N)		
kabeechi	n. cabbage	G/I	kabichi n. cabbage	F	kabeechay (M)		1
kabisa	adj. completely	G	kabisa adj. completely	N/A	N/A	the adjective is invariable	

kadi	n. postcard	I	(posti)kadi n. postcard				2
kahwa	n. coffee	I	kahawa n. coffee				2
kalaamu	n. pen	I	kalamu n. pen	M	kalaamadu (N)		1
kalenda	n. calendar	I	kalenda n. calendar				2
kaniisa	n. church	I	kanisa n. church				2
karanguus	v. fry	I	(ku)kaanga v. fry	N/A	N/A		1
karatasi	n. paper	I	karatasi n. paper				2
kasi	n. work	G	kazi n. work	F			
kasiito'oo	n. Irish potato	I	kiazi n. Irish potato	F	kasiís (F)	in this case, the pl. form appears to be the base, and the singular derived from it	1
kataani	n. sisal	G/I	katani n. sisal	F		singulative form is <kataanto'oo> (F)	1
kengeele	n. bell	I	kengele n. bell	F	kengeledu (N); kengelay (M)		1
Keengereesaa	n. English	G	Kiingereza n. English	F			4
kibriiti	n. match (i.e. to start fires)	I	kibiriti n. match (i.e. to start fires)	F	kibriitay (M)		1
kijiji	n. village	G	kijiji n. village	F	kijijay (M)		
kijikoo	n. spoon	I	kijiko n. spoon	F	kijikudu (N)		1
kilaabu	n. bar	G	kilabu n. bar	M	kilaabma (N)		4

kipisi	n. small part or piece	G	kipisi n. small part or piece	F	kipisay (M)		
kisiwa	n. island	I	kisiwa n. island				2
kitaabu	n. book	G/I	kitabu n. book	M	kitaabamaa (N)		1
kitaangw	n. chair	G/I	kiti n. chair, headquarters	M	kiteeri (N)		1
kituungurmoo	n. onion	G	kitunguu n. onion	M	kituungurma' (M)		4
kiwanda	n. factory	I	kiwanda n. workshop, factory				2
kiwanja	n. site, open space	I	kiwanja n. site, open space	F	kiwanjadu (N)		1
kiyo	n. mirror	G	kioo n. glass, mirror	F	kiyodu (N)		3
kofyá	n. hat	I	kofia n. hat	F	kofyeedu (N)		1
koleeo	n. pliers	G	koleo n. pliers	M	koleeadu (N)		
kona	n. corner	G	kona n. corner	F	konadu (N)		
koodi	n. tax	G	kodi n. tax	F			4
koopoo	n. tin, cup	I	kopo n. any vessel of metal	F	koopodu (N)		1
kosa	n. sin	I	kosa n. sin				2
koti	n. coat (i.e. clothing)	I	koti n. coat (i.e. clothing)	F	kotay (M)		1
kunjuus	v. fold	I	(ku)kunja v. fold	N/A	N/A		1
lakini	conj. but	G	lakini conj. But				
maali	n. possession, money	I	mali n. possession	F	malu (N)		1

machunguto'oo	n. orange (i.e. fruit)	G	machungwa n. oranges (i.e. fruit)	F	machungwa (M)	in this case, the pl. form appears to be the base, and the singular derived from it	3
Magoogomoo	n. Gogo person	I	Mgogo n. Gogo person	M	Magoogoo	in this case, the pl. form appears to be the base, and the singular derived from it	1
makaasi	n. scissors	I	makasi n. scissors	F	makaasidu (N)		1
makaate	n. bread	I	mkate n. bread	F			1
malmawumó	n. lemon	G/I	mlimau n. lemon	M	malmaw (M)	in this case, the pl. form appears to be the base, and the singular derived from it	1
malmu	n. teacher	I	mwalimu n. teacher	M	malmi'i (N)		1
mashiini	n. machine	I	mashine n. machine				2
Masoongamoo	n. white person	G	Mzungu n. white person	M	Masoong (M)		4
matfalmoo	n. brick	I	matofali n. bricks	M	matfali (F)		1
mauwa	n. sunflower	G/I	maua n. flowers	F	mauwadu (N)		1
mayli	n. mile	I	maili n. mile	F	mayladu (N)		1
mchongoma	n. sp. of thorny shrub	G	mchongoma n. sp. of thorny shrub	F	michongodima' (M)		
mdudu	n. insect	I	mdudu n. insect				2
meesa	n. table	G/I	meza n. table	F	meesadu (N)		1
meli	n. ship	I	meli n. ship				2

mifugo	n. cattle	I	mifugo n. cattle				2
mishnarimo	n. missionary	G	mishonari n. missionary	M	misgnarima' (M)		
mitmoo	n. tree	G/I	miti n. trees	M	miti (F)	in this case, the pl. form appears to be the base, and the singular derived from it	1
miwito'oo	n. sugarcane	I	miwa n. sugarcane plants	F	miwa (F)	in this case, the pl. form appears to be the base, and the singular derived from it	1
miwaani	n. glasses	I	miwani n. glasses				2
mkoa	n. region	G	mkoa n. region	F	mkoa (F)		
mtaa	n. block, neighbourhood	I	mtaa n. block, neighbourhood				2
muchele	n. rice (cooked or uncooked)	I	mchele n. rice (uncooked)	M			1
Muhindmoo	n. Indian person	G/I	Mhindi n. Indian person	M	Wahindi (F)	Swahili class prefix is retained in the plural	1
muhoogo	n. cassava	I	muhogo n. cassava				2
mushumaa	n. candle	I	mshumaa n. candle				2
musiki	n. music	I	musiki n. music				2
musmaari	n. nail	I	msumari n. nail				2
Muungú	n. God (of the Judeo-Christian tradition)	G/I	Mungu n. God (used by Christians, Muslims, and some traditionalists)				
mwisho	n. end	G	mwisho n. end	F			

naada	n. cattle market	G/I	mnada n. auction, public notice, cattle market	F	naadadu (N)		1
naasi	n. coconut	I	nazi n. coconut				2
nafaasi	n. possibility, opening	I	nafasi n. possibility, opening, space	F	nafaasidu (N)		1
namba	n. number	I	namba n. number	F	nambadu (N)		1
ndoa	n. marriage	G	ndoa n. marriage	F	ndoadu (N)		
noti	n. note (i.e. currency)	I	noti n. note (i.e. currency)	F	notay (M)		1
nusu	n. half	I	nusu n. half	M	nuseemoo (N)		1
nuundu	n. hammer	I	nyundo n. hammer	M	nuundadu (N)		1
nyanya	n. tomato	I	nyanya n. tomato	F			1
nyouus	v. shave	I	(ku)nyoa v. shave	N/A	N/A		1
paanga	n. machete	G	panga n. machete, sword	F	paangadu (N)		
paasiim	v. pass (an exam); iron clothes	I	(ku)pasi; (ku)piga pasi v. pass (an exam); iron clothes	N/A	N/A		1
panguus	v. plan	I	(ku)panga v. plan	N/A	N/A	<pangumiis> durative form	1
papaymo	n. papaya	G	papai n. papaya	M	papáy (F)	in this case, the pl. form appears to be the base, and the singular derived from it	3
paskeeli	n. bicycle	I	baisikeli n. bicycle				2

						in this case, the pl. form appears to be the base, and the singular derived from it	
patarmoo	n. priest	l	padri n. priest	M	patri (M)		1
peesa	n. money	l	pesa n. money				2
pembetatu	n. triangle	G	pembetatu n. triangle	F	mapembetatu (F)		
pete	n. ring (i.e. jewellery)	l	pete n. ring (i.e. jewellery)				2
petroli	n. petrol	l	petroli n. petrol				2
picha	n. picture; photo	G/l	picha n. picture; photo	F	pichadu (N)		1
piimuus	v. measure	G/l	(ku)pima v. measure, test	N/A	N/A		1
piipa	n. drum, pipe	l	pipa n. drum, pipe	F	piipadu (N)		1
pilipili	n. spice	l	pilipili n. spice (esp. hot pepper)	F			1
plastiki	n. plastic	l	plastiki n. plastic				2
polisi	n. police	l	polisi n. police				2
polooti	n. plot	G/l	ploti n. plot	F	polootay (M)		1
ponyuus	v.intrans. heal	l	(ku)ponya v. trans. save, deliver, rescue, cure	N/A	N/A	<ponyumiis> durative form	1
posta	n. post office	l	posta n. post office				2
punduki	n. gun	l	bunduki n. gun				2
rais	n. president	l	rais n. president				2
rangi	n. colour	l	rangi n. colour				2

reediyo	n. radio	I	radio n. radio				2
ringuus	v. be proud, put on airs	I	(ku)ringa v. be proud, put on airs	N/A	N/A		1
rooboo	n. quarter	I	robo n. quarter	M	roobadu (N)		1
saa'a	n. clock, time	I	saa n. clock, time	F	saa'adu (N)		1
saaliim	v. pray	G/I	(ku)sali v. pray	N/A	N/A		1
sabiibamoo	n. grape	G/I	zabibu n. grape, bunch (of fruit)	M	sabiibu (M)	in this case, the pl. form appears to be the base, and the singular derived from it	1
sabuuni	n. soap	G/I	sabuni n. soap	F	saabunay (M)		1
saburi	n. psalm	G	zaburi n. psalm	F	saburi (F)		
sahaani	n. plate	G/I	sahani n. plate	F	sahanay (M)		2
saisi	adj. average size	G	saizi adj. average size	N/A	N/A	the adjective is invariable	
sakafu	n. cement	I	sakafu n. cement or concrete floor, the floor or roof of a flat-roofed stone building				2
samakumo	n. fish	G	samaki n. fish	M	samaki (F)	in this case, the pl. form appears to be the base, and the singular derived from it	
sambarawumo	n. Java plum	G	zambarau n. Java plum	M	sambarawu (M)	in this case, the pl. form appears to be the base, and the singular derived from it	3

sandukmoo	n. box	G/I	sanduku n. crate, box	M	sandukw (M)		1
sawaadi	n. present, gift	G/I	zawadi n. present, gift	F	sawaadu (N)		1
sementi	n. cement	G/I	sementi n. cement	F	N/A		1
senti	n. cent	G/I	senti n. cent	F	sentay (M)		1
shaati	n. shirt	I	shati n. shirt	F	shaatay (M)		1
shanguus	v. be astonished	G/I	(ku)shangaa v. be astonished	N/A	N/A		1
shayiiri	n. grain	I	shayiri n. grain				2
shiida	n. problem	G/I	shida n. problem	F	shidadu (N)		1
shilingamoo	n. shilling	G/I	shilingi n. shilling	M	shilingi (F)	in this case, the pl. form appears to be the base, and the singular derived from it	1
shitakuus	v. accuse	I	(ku)shtaki v. accuse				2
shuule	n. school	I	shule n. school	F	shuuledu (N)		1
sifuus	v. praise	I	(ku)sifa v. praise	N/A	N/A		1
sigara	n. cigarette	I	sigara n. cigarette				2
simu	n. telephone	I	simu n. telephone				2
sindamo	n. needle	I	sindano n. needle			Original ending /-no/ has been replaced with Gorwaa-Iraqw suffix /-mo/	2
sinki	n. sink	I	sinki n. sink				2
siptaali	n. hospital	I	hospitali n. hospital	F	siptaalidu (N)		1
sirkaali	n. government	I	serikali n. government				2

soko	n. market	G	soko n. market, emporium	M	masoko (M)		
soksi	n. socks	G/I	soksi n. socks	M	soksi (M)		2
soomuus	v. study, read	G/I	(ku)soma v. study, read				2
stempu	n. postage stamp	I	stempu n. postage stamp				2
sufuriya	n. metal pot	I	sufuria n. metal pot				2
sukaari	n. sugar	G	sukari n. sugar	F			4
supu	n. soup	I	supu n. soup				2
surwaali	n. trousers	I	suruali n. trousers	F	surwaalay (M)		1
taa'a	n. lamp, light	I	taa n. lamp, light	F	taa'adu (N)		1
taambi	n. rope	G	tambi n. noodles, string	F	taambay (M)		
tafsiruu	v. translate	I	(ku)tafsiri v. translate	N/A	N/A		1
Tansania	n. Tanzania	G	Tanzania n. Tanzania	F			
tawlo	n. towel	I	taulo n. towel				2
tofalimo	n. brick	G	tofali n. brick	M	tofali (F)	in this case, the pl. form appears to be the base, and the singular derived from it	
uchagusi	n. election	I	uchaguzi n. election				2
uma	n. fork	I	uma n. skewer, sting (of an animal), fork				2
umeme	n. electricity	I	umeme n. lightning, electricity				2
unganishiím	v. join	G	unganisha v. join	N/A	N/A		

Wachagamoo	n. Chaga person	I	Wachaga n. Chaga people	M	Wachaga (F)	in this case, the pl. form appears to be the base, and the singular derived from it	1
wasiri	n. minister (i.e. government)	I	waziri n. minister (i.e. government)				2
wiiki	n. week	I	wiki n. week	F			1
ya'aani	interj. that is to say	G	yaani interj. that is to say	N/A	N/A		