

## NUMBER IN SWAHILI GRAMMAR

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Kiswahili hat ein doppeltes System der nominalen Klassifikation. Das erste System ist das aus dem Bantu (Niger-Congo) bekannte System der konkordierenden nominalen und "pronominalen" Präfixe; das zweite, jüngere System gründet sich auf das Bedeutungsmerkmal [belebt]. Die grammatische Kategorie NUMERUS (SINGULAR::PLURAL) gilt nur im zweiten System; innerhalb des ersten Systems ist die Bildung der Nominalpaare, z.B. *mtu/watu*, ein derivationaler Prozeß und bezieht Konkordanz sich ausschließlich auf die Kategorie KLASSE.

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### 1. Two approaches to number and gender

In a Niger-Congo language such as Swahili, number distinctions are typically intertwined with nominal classes. There are (at least) two ways to describe the relation between nominal classes of the kind we find in Swahili on the one hand and number on the other. Either the traditional nominal classes are taken as the primary units of nominal classification, or else this role is ascribed to the singular/plural pairs of classes which are seen as genders comparable to masculine/feminine/(neuter) in Indoeuropean and Afroasiatic languages.

The prevailing view about nominal classification in a wider, typological perspective (e.g., Corbett 1991) is to treat pairs of noun classes as genders, each class being the exponent of a particular number of a particular gender. In this approach, number is a subordinated inflectional category with two members or values: singular and plural. This again appears to be mainstream linguistics since number is often cited as a typical inflectional category.

Swahili nominal classification from a "gender-plus-number" point of view is shown in (1). Abbreviations: NPx = Nominal Prefix; APx = Adjectival Prefix; PPx = Pronominal Prefix.

(1)		NPx	APx	PPx		NPx	APx	PPx	
	I	SG	<b>MU</b>	<b>mu</b>	<b>yu, a, mu</b>	PL	<b>WA</b>	<b>wa</b>	<b>wa</b>
	II	SG	<b>MU</b>	<b>mu</b>	<b>u</b>	PL	<b>MI</b>	<b>mi</b>	<b>i</b>
	III	SG	<b>JI</b>	<b>ji</b>	<b>li</b>	PL	<b>MA</b>	<b>ma</b>	<b>ya</b>
	IV	SG	<b>KI</b>	<b>ki</b>	<b>ki</b>	PL	<b>VI</b>	<b>vi</b>	<b>vi</b>
	V	SG	<b>N</b>	<b>n</b>	<b>i</b>	PL	<b>N</b>	<b>n</b>	<b>zi</b>
	VI	SG	<b>U</b>	<b>mu</b>	<b>u</b>	PL	<b>N</b>	<b>n</b>	<b>zi</b>
	VII	SG	<b>U</b>	<b>mu</b>	<b>u</b>	PL	<b>MA</b>	<b>ma</b>	<b>ya</b>
	VIII	SG	<b>KU</b>	<b>ku</b>	<b>ku</b>				
	IX	SG	<b>-ni</b>	<b>pa</b>	<b>pa</b>				
	X	SG	<b>-ni</b>	<b>ku</b>	<b>ku</b>				
	XI	SG	<b>-ni</b>	<b>mu</b>	<b>mu</b>				

The other, contrasting view accords primary status to the noun classes themselves and regards their singular/plural pairings as secondary. Swahili nominal classification from such a "class-plus-pairings" point of view is sketched in (2). The classes are numbered conventionally and refer to the reconstructed Protobantu system of noun classes.

(2)	NP <sub>x</sub>	AP <sub>x</sub>	PP <sub>x</sub>		NP <sub>x</sub>	AP <sub>x</sub>	PP <sub>x</sub>	
1	MU	mu	yu, a, mu	—————	WA	wa	wa	2
3	MU	mu	u	—————	MI	mi	i	4
5	Ji	ji	li	—————	MA	ma	ya	6
7	KI	ki	ki	—————	VI	vi	vi	8
9	N	N	i	—————	N	N	zi	10
11	U	mu	u					
15	KU	ku	ku					
16	-ni	pa	pa					
17	-ni	ku	ku					
18	-ni	mu	mu					

## 2. The double classification of nouns in Swahili

Before turning to the respective merits and problems of the two approaches we need to add another aspect of nominal classification found in Swahili (and in some other Niger-Congo languages inside and outside Bantu). The nominal classification as described in (1) and (2) is historically based on cognitive distinctions such as human, plant, animal, congregation, size, shape etc., but has become conventional and overtly marked with almost all nouns. There is, however, another kind of nominal classification which is truly (synchronically) based on meaning and divides nouns into two kinds: animate versus non-animate, where [animate] is a property of humans and animals (but not of plants). This semantically-based classification cuts across the first, formal noun-class classification in the following way: Nouns referring to animate beings may have any of the nominal prefixes of classes 1 through 10 (11?); words showing agreement with such nouns take class 1 concord markers when referring to singular nouns and class 2 ones when referring to plural nouns. In other words, the semantically based nominal classification ("second" in the terminology of Wurzel 1986 because it is historically younger) takes precedence over the first nominal classification. The second classification is incomplete in the sense that it has no bearing on non-animate nouns, which follow the agreement rules of the first, formal classification. The second classification is parasitic on the first one in that it uses the agreement markers of the formal classification of classes 1 and 2. This is triggered by the fact that nouns overtly marked for classes 1 and 2 (i.e., nouns that would take class 1/2 agreement even in the absence of the second classification) are all humans

(plus two recent additions: *mnyama* 'animal' and *mdudu* 'insect'), but note that not all nouns referring to humans belong to these classes.

I have no answer to the question why Swahili has chosen the feature [animate] for its second nominal classification. The feature [human] would have seemed more natural since it is already embedded in the semantics of the much older system of nominal classes. We may compare this to the situation in Lingala, which does use [human] for its second classification, and has eliminated both class and number agreement from its first classification.

This introductory sketch of Swahili nominal classification omits certain details of fact and analytical alternatives, which, I hope, are of minor importance to the following discussion. Details of fact concern prefix-less nouns, mostly kinship terms and loanwords, as well as specific concord rules applying to diminutives, augmentatives and again to kinship terms. Analytical alternatives concern the independent status of the adjectival prefix AP<sub>x</sub>, which is linked to the relation between class 11 and class 3 and to the morphology of the locative classes.

### 3. Merits and problems of the alternative approaches

Many grammars and textbooks of Swahili avoid taking a clear stand on the issue "class" versus "gender". While most authors use the term "(noun) class" to the exclusion of the term "gender", they see no problem in having the same term referring to either the class proper or to the gender in different contexts. For example, Ashton writes on the same page (1944:10):

*Nouns in Swahili fall into classes distinguished by Nominal Prefixes. Those are termed Class Prefixes. With two exceptions, the prefix in the plural Class differs from that of the singular Class. ...*

*Each class is associated with one or more underlying ideas. Thus Nouns with M-WA- as the distinguishing prefixes for singular and plural respectively express the names of human beings.*

In the first paragraph, Ashton asserts that there are singular classes and different plural classes. Then, after exemplifying each class with a noun, she continues to ascribe an underlying idea to each class pairing or gender, which again she calls a "class". Such small inconsistencies are frequent in the literature.

Authors of Swahili grammars and textbooks are generally more consistent in how they deal with the second, semantically based classification. Most authors (e.g., Ashton 1944) regard the formal noun classes-plus-agreement system as basic, which may be overruled by the second, semantically based kind of agreement. Others (e.g., Kapinga 1983, Mohamed 1986) try to avoid a double system of classification and define noun classes solely on the basis of agreement without reference to the nominal prefix. Thus, *mjusi/mijusi* 'lizard', *jogoo/majogoo* 'rooster', *kiboko/viboko* 'hippopotamus' and *mbwa/mbwa* 'dog' are all classified lexically as nouns of classes 1/2. This may seem to be an elegant solution, presenting a simpler view of the grammar, but it introduces a new complication. In this analysis, the set of allomorphs of the nominal

prefixes of classes (or gender) 1/2 contains, in addition to *mu-* and *wa-*, the same set of forms as the nominal prefixes of classes 3 through 10 (11?), and there is no motivation for this duplication of forms.

My major objection against the gender-plus-number analysis concerns the three pairs of identical prefix series in genders VI/VII in the singular and in genders III/VII and V/VI in the plural. In an analysis where genders are the primary elements, there is no way to express the identity of forms occurring in two genders; such identical sets of class-and-agreement markers become inexplicable coincidences, much as the German article *der* which functions as masculine nominative, feminine genitive and dative, and also as genitive plural of all three genders.

It is only when we recognize the nominal classes as the primary building blocks of the Swahili (Bantu) system that we can identify, for example, a single class 6, characterized by the agreement prefix series *ma-/ma-/ya-*, which then functions in two different class pairings.

What is problematic about this (rather traditional) noun class analysis is the precise status of these singular/plural class pairings, or genders. These pairings are clearly part of the grammar; more specifically, they, too, need to be learned and specified in the lexicon.

#### 4. A compromise proposal

I suggest analysing the noun classes as the basic, lexically specified units of nominal classification. I further suggest analysing the relation between singular and plural forms not as number inflection but as instances of derivation.

Of course, this proposal is only meaningful in a framework where the distinction inflection vs. derivation is recognized. This distinction is intimately linked to the traditional division between WORDs as lexemes and words as their formal exponents in phrases and sentences. My proposal implies that *duka* and *maduka* are different lexemes, the second one being derived from the first one.

This puts number on a par with other semantically motivated derivational shifts of nominal class, and more general with class assignment as a derivational process. All other shifts of class are uncontroversial instances of derivation:

Diminutives:	<i>kichupa</i>	< <i>chupa</i>	bottle
Augmentatives:	<i>jumba</i>	< <i>nyumba</i>	house
Collectives:	<i>masimba</i>	< <i>simba</i>	lion
Manner:	<i>kifalme</i>	< <i>mfalme</i>	king
	<i>Kizaramo</i>	< <i>Mzaramo</i>	Zaramo
Quality:	<i>utoto</i>	< <i>mtoto</i>	child
	<i>ufalme</i>	< <i>mfalme</i>	king

	<i>Uzaramo</i>	< <i>Mzaramo</i>	<i>Zaramo</i>
	<i>umoja</i>	< <i>-moja</i>	one
Fruits:	<i>buyu</i>	< <i>mbuyu</i>	baobab
Locatives:	<i>mtoni</i>	< <i>mtu</i>	river

The example *umoja* 'unity' is instructive in that involves a shift of grammatical category from (numeral) adjective to noun, which could never be a case of inflection. All deverbative nouns also involve class assignment as part of the derivational process.

<i>mazungumzo</i>	conversation	< <i>-zungumza</i>	converse
<i>neni</i>	word	< <i>-nena</i>	say
<i>kiapo</i>	oath	< <i>-apa</i>	swear

Regarding the relation between singular and plural forms as derivational raises a question familiar from other derivational processes: Which is the direction of the process? I think we may safely assume that, in general, plural forms are derived from singular ones. In some cases, however, the direction may well be the inverse, and our proposal allows, for example, to derive *ukuni* (class 11) 'a piece of firewood' from *kuni* (class 10) 'firewood'. Our proposal is also compatible with the existence of nouns occurring in one class only, which is atypical for inflectional categories. In this connection it is surely significant that one-class nouns occur in all classes except in classes 1/2; for some examples see §6. (I here neglect speakers who insist that *Mungu* 'God', class 1, has no plural, and also dictionaries that list *wafanyakazi*, class 2, 'proletariat' as a separate entry from *mfanyakazi* / *wa-*, classes 1/2, 'worker'.)

The proposal to treat plural formation as a kind of derivation is not novel, cf. "The plural as a lexical derivation" by Beard (1982). And Dressler (1989:6), though he thinks that "Beard 1982 goes too far", does list nominal number as a non-prototypical category, i.e., one that is neither prototypical for inflection nor prototypical for derivation.

## 5. Number and the two noun classifications

Our arguments for regarding number as a derivational category are only valid for the "first" classification, i.e., the one based on the "formal" noun classes, which is remarkably insensitive to the number category values "singular" and "plural". Our arguments do not hold for the "second" classification, i.e., the one based on the semantic feature [animate].

Within the first nominal classification, I can think of no formal rules in the grammar of Swahili which makes reference to either "singular" or "plural" (but see section 7 below). If I want to know whether the word *water* in English is singular or plural, I can look at agreement: *the water IS boiling*. The form of the auxiliary verb, *is*, clearly shows that *water* must be a singular noun; if it were plural we would get the form *are*. Not so in Swahili: *maji YAnachemka*, where the subject agreement marker *ya-* shows no more and no less than that *maji* is a noun of class 6. For any noun to get its appropriate forms of agreement we must know its class, but we never need to know which classes are singular and which are plural. There is no rule that applies to all

the singular classes or to all the plural classes, thus providing an argument for the existence of the category number.

By contrast, for nouns falling under the second classification by being [+ animate], number appears to be a valid grammatical feature. Since the class of the noun itself is irrelevant for its agreement, what controls the selection of either class 1 or class 2 agreement must be number.

Possessor agreement, too, provides a clear indication about the difference between the first and the second nominal classification. When the possessor is [+ animate] there are different forms for the singular (class 1) and the plural (class 2); when the possessor is [- animate] there is only one form for all classes. This form is parasitic on class 1, irrespective of the number (singular or plural) of the possessor.

<i>miguu ya-ke</i>	its legs	possessor:	<i>ng'ombe</i> 9	cow
<i>miguu ya-o</i>	their legs	possessor:	<i>ng'ombe</i> 10	cows
<i>mizizi ya-ke</i>	its/their roots	possessor:	<i>mti/miti</i> 3/4	tree/trees

Compare this to the general Bantu strategy for pronominal possessives, which asks for agreement with the noun class of the possessed and also with either the person (first and second) or the noun class of the possessor. Nyamwezi exemplifies this strategy in which, again, number appears to play no role whatsoever.

<b>βageni βaá-kwé</b>	his guests	possessor:	<b>m̄nhu</b> 1	someone
<b>βageni βaá-βoó</b>	their guests	possessor:	<b>βanhhu</b> 2	people
<b>magulu yaá-yoó</b>	its legs	possessor:	<b>ηoombe</b> 9	cow
<b>magulu yaá-joó</b>	their legs	possessor:	<b>ηoombe</b> 10	cows
<b>mizi yaá-goó</b>	its roots	possessor:	<b>m̄tú</b> 3	tree
<b>mizi yaá-yoó</b>	their roots	possessor:	<b>mitú</b> 4	trees

Other examples of number insensitivity of the first nominal classification come from quantifiers. The word *-moja* 'one' might be expected to occur only with singular nouns. In fact, however, it can occur in any noun class; the examples are from Sacleux (1939):

<i>watu hawa si wamoja</i>	ces gens-là ne sont pas tous les mêmes (pareils, ayant les mêmes sentiments)
<i>vitu hivi vimoja</i>	ces choses sont semblables

Similarly, *-ingi* 'many, much' and *-ote* 'all, whole' are not restricted to a subset of classes with either singular or plural meaning. I take my examples again from Sacleux:

<i>watu wengi, miti mingi</i>	[many people, many trees]
<i>mtama mwingi</i>	[much millet]
<i>jua jingi</i>	beaucoup de soleil, grand soleil
<i>chuma kingi</i>	beaucoup de fer

*watu wote*                      tous les hommes, tout le monde  
*nyumba yote imeungua*      la maison entière a brûlé

## 6. A catalogue of derivational and inflectional properties

Plank (1994) provides a catalogue of 28 typical properties contrasting inflectional and derivational processes of word formation. Applying this catalogue to some morphological categories of English, he finds that nominal plural formation has 22 inflectional properties as opposed to only 6 derivational ones. When we apply the same catalogue of properties to some morphological processes of Swahili, the results are similar for animate nouns but somewhat different for inanimate nouns.

In our context it is interesting to look at those properties which differ for plural formation of the two nominal classifications of Swahili. There are six such properties, and each time plural formation of non-animate nouns is derivational as against inflectional for animate nouns. (In the quotes from Plank 1994, (a) refers to inflectional properties and (b) to derivational properties of complex non-compound words = CNCWs.)

*The specification of the morphological category is grammatically (a [INFL]) obligatory or (b [DER]) non-obligatory for CNCWs of the relevant word-class.*

Words such as *mahali* 'place(s)' or infinitives (class 15; *kuimba* 'to sing, the singing') are unmarked for number nor can their number be inferred from agreement. Animate nouns, on the other hand, are necessarily either singular or plural (e.g., *mugeni* 'guest', *vipofu* 'blind people', *simba* 'lion' or 'lions': homophonous but not ambiguous).

*The semantic contribution of the morphological category is (a [INFL]) uniform for all bases or (b [DER]) diverse.*

Unlike with animate nouns, so-called number distinctions can represent other meanings than singular/plural with inanimate nouns; e.g., *ukuni* :: *kuni* (classes 11/10) 'a piece of firewood : firewood', *moshi* :: *mioshi* 'smoke : plumes of smoke'.

*The semantic relationship between CNCWs and their bases is (a [INFL]) transparent for all occurrences of the morphological category or (b [DER]) at least occasionally opaque.*

Some such opaque relationships are attested for inanimate nouns: *utenzi* 'a big work or operation, especially a kind of literary work' :: *matenzi* 'an evil spell'. I have found no such examples for animate nouns.

*The applicability of the morphological category to bases of particular word-classes is (a [INFL]) unlimited or (b [DER]) limited in one way or another.*

It seems that animate nouns always occur as singular-plural pairs. Infinitives (class 15), locatives (classes 16 through 18) and different kinds of mass nouns (classes 6 and 11) resist plural formation (assuming that these are singular nouns)

*There are (a [INFL]) no or (b [DER]) some words expressing the morphological category whose base is only attested in those words themselves.*

Unpaired (“one-number”) inanimate nouns occur in all classes except classes 1/2; e.g., *mchanga* 3 ‘sand’, *mirathi* 4 ‘inheritance’, *joto* 5 ‘heat’, *maisha* 6 ‘life’, *kiu* 7 ‘thirst’, *vita* 8 ‘war’, *njaa* 9 ‘hunger’.

*The morphological category (a [INFL]) cannot or (b [DER]) may be assigned more than once to the same base.*

If noun class morphology is seen as expressing number, then combinations of nominal prefixes and locative suffixes would be cases as double marking, e.g., *ma-duka-ni* ‘at the shops’. Such locatives are not formed from animate nouns.

## 7. Conjoined noun phrases

Conjoined noun phrases are often presented as demonstrating number agreement. A conjoined noun phrase consisting of two singular nouns that demands plural agreement, so it is said, shows that agreement is not with the nouns themselves but with the noun phrase as a whole. The class or gender features of the conjoined nouns percolate to the level of the NP, where the plural number feature is added. In fact, the situation is rather more complex, as has been shown by Lutz Marten (2000).

First, Marten observes that conjoined nouns cannot be modified by adjectives or possessive or demonstrative pronouns. Instead, each noun has to be specified separately. Hence, agreement with conjoined noun phrases is restricted to predicates, mainly verbs. Marten distinguishes three strategies of conjoined noun phrase agreement with the verb:

1. “Morphological agreement”, where the conjoined nouns belong to the same (singular) class and the verb agrees with the corresponding plural class;
2. “Anaphoric agreement”, where the conjoined nouns belong to different classes and the verb shows “agreement” with a fixed class, mainly class 8, but sometimes also class 10 or class 6;
3. “Syntactic agreement”, where the verb agrees with the closest noun, i.e., with the second noun of a preceding conjoined NP or with the first noun of a following conjoined NP.

A fourth strategy is also reported to occur (Schadeberg 1992). We may label it “morpho-syntactic”, since it combines features of Marten’s first and third agreement strategies

4. “Morpho-syntactic agreement”, where the verb shows “agreement” with the plural class corresponding to the class of the closest noun.

The first strategy is the one which crucially depends on reference to the category “plural number”. Not surprisingly, this strategy is obligatory only for animate nouns, and only if the conjoined noun phrase precedes the agreeing verb form. For inanimate nouns, the first strategy



is only available (as an option) if both nouns belong to the same (singular) noun class, and for any other constellation of conjoined nouns, one of the other two or three strategies has to be applied.

I believe Marten offers a new and superior interpretation to account for the various agreement strategies, which he supports with examples from a novel (Muhammed Said Abdulla, *Mwana wa Yungi hulewa*, East African Publishing House: Dar es Salaam, 1976). However, since I am not fluent in his theoretical framework I can only try to paraphrase my own interpretation of his solution. I suggest that, for inanimate nouns, there are but two strategies: anaphoric agreement and non-joined agreement.

What looks like plural agreement is in fact “anaphoric agreement”; it involves substitution of the conjoined noun phrase with some other head noun, either overtly or implied, and this new head then rules agreement.

*misaada na mikopo vitahatarisha uhuru wetu*  
 gifts and loans will jeopardize our independence  
 (Azimio la Arusha)

... kisu na mkono wake Amamullah vyote vimeloa damu, ...  
 ... Amamullah's knife and arm were all soaked in blood, ...  
 (Muhammed Said Abdulla 1976:74)

What looks like singular agreement is in fact “non-joined agreement” with the noun closest to the verb.

*fedha na wakati tunaotumia*  
 money and time which we spend  
 (Azimio la Arusha)

... kilimjia kizuli na kiwewe kwa ghafla ....  
 she suddenly felt dizziness and confusion  
 (Muhammed Said Abdulla 1976:103)

What is important for us is that neither strategy attaches a feature [plural] to a nominal phrase which then controls agreement on the verb.

## 8. Conclusion

To conclude, I suggest that in the grammar of Swahili, the inflectional number category [singular/plural] is restricted to the second nominal classification that is based on animacy. In the first, general Bantu-like classification of nouns into classes, the formation of “singular” and “plural” forms are derivational processes and play no separate role in controlling agreement.

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