

Vowel sequences

These are: ie , ia , io , ioi (Do), ei (Lp), ai , au (both in Do/Lp), oi , ou (Do), ue (Lp), ua , uo (both in Do/Lp);

ie (Do), ia , io (Do/Lp), ai (Lk/Lp), oi .

Across morpheme boundary only, the following have been noted:

ei (Do), ai , au (both in Lk), oi (Do), ou (Lk), ue (Do) .

Vowel harmony

This definitely plays an important rôle in all LOTUKO dialects, but here no attempt is made to describe the rules of the system. Examples of category shift are rather frequent in my data, especially between singular and plural (see above).

7.2.3.2.3. Tone

On the surface, the same four tones as in Lt occur: high, low, mid, and high-falling. They appear to be relevant both lexically and grammatically.

7.2.4. The ONGAMO-MAA Group

7.2.4.1. Ongamo

7.2.4.1.1. Consonants

Obstruents

On phonemic obstruents include at least six stops and four fricatives occurring at six points of articulation:

	bilab.	dental	alv.-palat.	palat.	velar	glottal
plosive		t			k	
implosive	ɓ	ɗ		ɟ	g	
fricative		s	ʃ			h
	β					

Interestingly, there is no voiceless bilabial stop although [p]

may sometimes be heard in very emphatic speech. Likewise, /ʒ/ lacks a voiceless counterpart. Heine & Voßen (1975/76:83) have noted a voiceless alveo-palatal stop /tʃ/ which, however, occurs only in the item 'name' na-hánʃá and may, moreover, be peculiar to the idiolect of their informant since Ehret's material has na-hárná (pl) for 'name'. In nominal stem-initial position, /k/ and /ʃ/ alternate before high front vowels, apparently in correlation with gender allocation, /k/ being used with masculine nouns and /ʃ/ with feminine nouns. Compare:

	masc.		fem.
'female breast'	ɔ-kína	'goat'	na-ʃíné
'eleusine (millet)'	ɔ-kíma	'meat'	na-ʃiriŋó-ì
		'water'	na-ʃiβí

Sonorants

There are four nasals, four liquids, and four glides:

	bilabial	dental	alveo-palatal	palatal	velar
nasal	m	n		ɲ	ŋ
lateral		l			
rolled		r	ɾ		
		rr			
glide	w			y	
	ww			yy	

It could easily be demonstrated that *On* words never end in consonants but always in vowels. When comparing *On* with other Eastern Nilotic languages, diachronically speaking, it becomes evident that in many cases, the root-final consonant is omitted either in the singular or in the plural unless followed by a vowel. Compare:

	Proto-Eastern Nilotic	<i>Ongamo</i>
'female breast'	*-k ₁ ɪn ₂ -	ɔ-kí-na (sg)/ɔ-kíí (pl)
'heart'	-tau(dʒ)-	ɔ-táú (sg)/ɔ-táú-ʒá (pl)

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Consonant sequences

These are very rare in *On* and confined to sonorant compounds:

nasal + glide	mw , ŋw
liquid + nasal	rn .

7.2.4.1.2. Vowels

Like in the other Eastern Nilotic languages, the vocalical system of *On*, too, is governed by rules of vowel harmony. Accordingly, two sets of five vowels each are distinguished:

[+ATR]:	i , e , a , o , u
[-ATR]:	ɪ , ɛ , a , ɔ , ʊ .

[+ATR]/a/ and [-ATR]/a/ are phonetically identical and therefore represented by the same symbol a . All vowels may occur both short and long.

Vowel sequences

The following may be observed in this study:

iɛ , iei , ia , io , iɔ , ai , au , aʊ , oi , ou , ua ;
ɪɛ , ɪʊ , aɪ , ɔɪ .

Occurring across morpheme boundaries only: ioo , ɛa , aa , aar , oo .

Vowel harmony

Since linguistic data on *On* are still scanty, a systematic analysis of the vowel harmony system does not seem possible. There are a number of irregularities in the material published by Heine & Voßen; yet, at least two safe interdependent conclusions may be drawn:

(1) As a rule all vowels in a given word belong to the same vocalical set, i.e., either [+ATR] or [-ATR], the quality of the root-vowel being decisive. For the following examples see Heine & Voßen (1975/76:84):

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[+ATR]		[-ATR]	
'tail'	o-kiteréi	'bull'	o-kitéŋ
'feather'	o-hoβír	'giraffe'	o-hoɾí

(2) Consequently, there is no instance of vowel category shift between singular and plural nouns in our data.

7.2.4.1.3. Tone

The following surface tones are recorded: high, low, mid, and high-falling.

7.2.4.2. *Maasai*

7.2.4.2.1. Consonants

Obstruents

Ma phonemic obstruents include eight stops and two fricatives occurring at five points of articulation:

	bilabial	alveolar	alveo-palatal	palatal	velar
plosive	p	t		c	k
implosive	b	d		ɟ	g
fricative		s	ʃ		

Sonorants

There are four nasals, three liquids, and four glides:

	bilabial	alveolar	palatal	velar
nasal	m	n	ɲ	ŋ
lateral		l		
rolled		r		
		rr		
glide	w		y	
	ww		yy	

For comments on pronunciation as well as phonetic change and its conditioning factors the reader may consult Tucker & Mpaayei

(1955:xv ff.). With regard to the comparative sections, it should be noted that - like in *On* - root-final consonants are omitted either in the singular or in the plural of a noun unless followed by a vowel. Compare:

Proto-Eastern Nilotic	Maasai
'female breast' * $-k_1r_1n_2-$	ɔl-kí-na (sg)/ɪl-kí (pl)
'heart' * $-tau(d^v)-$	ɔl-táú (sg)/ɪl-tau-ǰá (pl)
'meat' * $-k_1i-riŋ-$	eŋ-kiri-ŋó (sg)/iŋ-kírí (pl)
'moon' * $-ɬapat^v-$	ɔ-lápà (sg)/ɪ-lapa-itín (pl)

Consonant sequences

These are very rare within morphemes but occur frequently across morpheme boundaries:

plosive + glide	kw
nasal + plosive	mɸ , nt , ŋk
nasal + implosive	mɓ , nd̥ , nɟ , ŋɠ
nasal + glide	ŋw
liquid + plosive	lt , lc , lk , rt
liquid + implosive	ld̥
liquid + nasal	lm , lŋ , rn .

7.2.4.2.2. Vowels

Ma has ten phonemic vowels, again being divided into two sets consisting of five vowels each. Thus:

[+ATR]:	i , e , a , o , u
[-ATR]:	ɪ , ɛ , a , ɔ , ʊ .

These vowels may all be short or long. No different symbols are used henceforth for /a/[+ATR] and /a/[-ATR] as they can only be distinguished on morphophonological grounds.

Vowel sequences

In the present study one may come across the following clusters:

ie , ia , io , ioi , ei , oi , ue , ua , uo ;
ai , au .

lexical items. In grammar tone is particularly relevant to nominal case and verbal tense marking. A detailed discussion of one is provided in Tucker & Mpaayei (1955:167ff.). A re-analysis of nominal tone functions has been ventured by Wallace (1979).

Ma surface tones are: high, low, mid, and (less numerous) high-falling. Lexical data taken from Heine are marked for tone as follows: high (^), low and mid (unmarked), high-falling (ˆ).

7.2.4.3. North Maa: *Camus* and *Sampur*

The following notes summarize briefly Heine's more detailed study of *ca* and *sa* (Heine 1980b:102f. for *ca*; unpublished field notes for *sa*).

7.2.4.3.1. Consonants

Obstruents

ca and *sa* have eight phonemic stops and one fricative phoneme at five points of articulation:

	bilabial	dental	alveolar (<i>Ca</i>)	palatal	velar
plosive	p	t		c	k
implosive	ɓ	ɗ	ɗ	ɟ	ɡ
fricative		s	s		

/ɗ/ and /s/ are dental obstruents in *sa* whereas in *ca* they are pronounced as alveolar sounds. /c/ is optionally replaced by [ʝ] in both dialects, except after consonants.

Sonorants

There are four nasals, three liquids, and four glides:

	bilabial	dental (<i>Sa</i>)	alveolar (<i>Ca</i>)	alveo-palatal	palatal	velar
nasal	m	n	n		ɲ	ŋ
lateral		l		ɭ		
rolled		r	r			
		rr	rr			

	bilabial	palatal
glide	w	y
	ww	yy

Here, dental sonorants are confined to *Sa* while alveolar sonorants occur only in *Ca*, /l/ being realized with the tip of the tongue retracted such as to give it an alveo-palatal or post-alveolar pronunciation.

Nasals are generally deleted when followed by fricative, nasal, lateral, and rolled consonants as well as before /y/. /n/ is velarized before /k ɣ/; it is likewise labialized preceding /p ʙ/. These rules are also valid for *Ma*.

The lateral /l/ is deleted before fricative, lateral, and rolled consonants as well as preceding /y/. /r/ undergoes regular change into /rɾ/ in word-final position, even though this has not always been marked in the lexical data below.

In the sections on *On* and *Ma* consonants it has been stated that, historically, root-final consonants tend to be omitted either in the singular or in the plural of a noun unless followed by a vowel. This rule also applies to *Ca* and *Sa*.

Consonant sequences

In most cases consonant sequences occur on nouns across morpheme boundaries, arising through the /l/ and /n/ gender formatives or else their morphophonemic variants. However, /rt/ and /rn/ are sequences occurring root-internally. The following clusters may be encountered in the lexical data of sections 7.4. and 7.6.:

plosive + glide	kw
nasal + plosive	mp , nt , nc (<i>Sa</i>), ŋk , (ŋkw , <i>Sa</i>)
nasal + implosive	mɓ , nɟ , ŋɣ (<i>Ca</i>)
nasal + glide	ŋw
liquid + plosive	lt (<i>Sa</i>), lc , lk , rt
liquid + implosive	lɗ , lɟ (<i>Ca</i>)
liquid + nasal	lm , ln , rn .

7.2.4.3.2. Vowels

North Maa vocalic phonemes are the same as in *Ma*. Thus:

[+ATR]: i , e , a , o , u

[-ATR]: ɪ , ɛ , a , ɔ , ʊ .

[+ATR]/a/ and [-ATR]/a/, henceforth symbolized equally by a , are merely distinguished on morphophonological grounds, being phonetically identical.

All vowels may occur as both short and long vowels.

Vowel sequences

The following occur in the lexical data:

ie , iei (Ca), ia , io , ei , ai , ao , oi , ue (Sa), ua(Ca);
ra (Sa), ar , ur (Ca), va (Sa) .

Across morpheme boundaries only, the following have been noted:

re (Sa), ra (Ca), ioi (Sa), eii (Ca), aa , ao , uei (Ca),
uaa .

Vowel harmony

Heine's comment on vowel harmony in North Maa suggests clearly that the basic rules of the system are the same as in *Ma*. For examples of nominal and verbal category shift see under "*Maasai*".

7.2.4.3.3. Tone

There are three distinct tones in North Maa: high, low, and high-falling. They are mainly grammatically relevant, but purely lexical function is also attested. Lexical data on *Ca* and *sa* taken from Heine are marked for tone as follows: high (´), low (unmarked), high-falling (^).

7.3. Notes on morphology

As pointed out earlier (see section 7.), the present study does not aim at describing at length the morphological structure of Eastern Nilotic languages, nor are morphological reconstruc-

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