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VOWEL HARMONY AND VOWEL ALTERNATION IN MAYAK (WESTERN NILOTIC)*

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Like several other Western Nilotic languages, the Mayak variety of Northern Burun has two sets of vowels distinguished by the feature [ATR], the [-ATR] vowels [i, e, a, o, u] and the [+ATR] vowels [i, e, ʌ, o, u]. However, the mid [+ATR] vowels [e] and [o] are variants of the mid [-ATR] vowels /ɛ/ and /ɔ/ conditioned by a following high [+ATR] vowel. This allophony is the effect of one of four general vowel harmony processes. In addition, [-ATR] root vowels exhibit grammatically conditioned alternation which affects either [ATR] or height. The mixed character of this alternation invites the hypothesis that original mid [+ATR] vowels have merged with the high [-ATR] vowels, and this hypothesis is confirmed by a comparison of Mayak with other Western Nilotic languages.

1. Introduction

Mayak is a little documented Western Nilotic language spoken in the southern part of Blue Nile Province of Sudan. It belongs to the group of languages which Evans-Pritchard [1932] called Northern Burun. Together with the Southern Burun languages, they constitute one of the three branches of Western Nilotic in Köhler's [1955] internal subgrouping of the Nilotic languages, the two other branches being the Nuer-Dinka languages and the Luo languages.

Like many other Western Nilotic languages, Mayak has a lot of vowel quality alternation. To a large extent, this alternation is similar to what is found in the Luo

* This article is an expanded version of a paper entitled "Layers of vowel harmony in Mayak (Western Nilotic)" read at the 6th Nilo-Saharan Conference, UCLA, March 27-29, 1995. The Mayak data used in the article were collected in Sudan in 1982 and during a number of short periods between 1988 and 1993. I wish to thank the Danish Research Council for the Humanities for financial support for the fieldwork, and my Mayak consultants Saman Frajalla and Kherallah Hesseem Tiko for their assistance. I also wish to thank the editor and an anonymous referee for valuable comments on an earlier version of this article.

languages, where the alternation operates in terms of the feature [Advanced Tongue Root], abbreviated [ATR]. In Mayak, however, the vowel alternation sometimes involves a change in height rather than in [ATR], and in some cases these two changes combine so that a root vowel has four different alternants. In this article I shall outline the main aspects of the vowel alternation system in Mayak, and I shall argue that it consists of two historical layers of [ATR] alternation. Firstly, there is phonologically conditioned [ATR] alternation, namely [ATR] harmony, and secondly, there is grammatically conditioned alternation, which was originally a pure [ATR] alternation, but whose [ATR] character was partly distorted by a sound change that eliminated some vowels through vowel merger.

Accordingly, the article is organised as follows. Section 2 presents the vowel inventory and outlines the distribution of the vowels. Section 3 demonstrates the existence of phonologically conditioned vowel alternation, which can be accounted for by means of four rules, three of which impose vowel harmony in terms of the feature [ATR]. Section 4 demonstrates the existence of grammatically conditioned vowel alternation, which involves either [ATR] or height. Section 5 hypothesises a sound change that explains the mixed character of the grammatically conditioned vowel alternation system. Sections 6 and 7 provide comparative evidence for this hypothesis, first from Mabaan, which belongs to the Southern Burun subbranch of Burun, and then from languages of the two other branches of Western Nilotic as well. Finally, section 8 looks at the sound change in a typological perspective.

Mayak is a tone language, but since I have not yet finished working out its tonal system, my transcription does not include tone.

2. Vowels and their distribution

2.1. Word structure and syllable structure. Basically, a Mayak word consists of a stem and zero or more inflectional suffixes. The stem consists of a root and zero or more derivational suffixes. All verbal roots and many noun roots are monosyllabic and mostly have the shape CVC or CVVC, and other noun roots also begin with CVC or CVVC.¹ Syllables in Mayak normally have the structure CV(V)(C).²

2.2. Vowel inventory. Mayak has ten different vowel qualities. And, as in the Luo languages, they fall into two sets distinguished by the feature [ATR], as indicated in Table 1. Phonetically, [ʌ] is less open and more back than [a], but as will become clear in section 3.4, it is structurally the [+ATR] counterpart of [a], so it must be classified as a low central vowel. All ten vowels can be short or long, and length is

¹ In addition, verbs may contain one or more proclitics, and nouns borrowed from Arabic may begin with /al/ or /a/, which reflect the definite article in that language. However, such words are not relevant to the subject matter of the present article and will be ignored here.

² In addition, there are V(C) syllables, but they can only occur word-initially, in verbs as proclitics, see footnote 1.

Table 1. Vowel qualities in Mayak.

	[-ATR]	[+ATR]
high	ɪ ʊ	i u
mid	ɛ ɔ	e o
low	a	ʌ

contrastive. Unlike at least some Luo languages, Mayak has no diphthongs, no consonant clusters consisting of a consonant and a glide, and no syllables ending in a glide.

2.3. Distribution of vowels. Eight of the ten vowel qualities, whether short or long, occur in monosyllabic words, as exemplified by the nouns in (1) below.³ The mid-vowel qualities of the [+ATR] set, [e] and [o], have a restricted distribution.

- (1) /i/ ?ic 'ear' /ii/ pii 'water' (pl.)
 win 'ropes' riiɬ 'smoke'
 /ɪ/ ?ɪc 'penis' /ɪɪ/ wɪɪɪ 'tail'
 ɲɪɪ 'eyes' dɪɪɬ 'goats'
 /ɛ/ ɛɛp 'tongue' /ɛɛ/ ɛɛɛc 'elephant'
 ɛɛk 'teeth' mɛɛk 'spider'
 /ʌ/ ɲʌc 'back' /ʌʌ/ pʌʌm 'mountain'
 ʔʌɬ 'house' mʌʌn 'females'
 /a/ kac 'leopard' /aa/ jaatɬ 'tree'
 pal 'navel' maac 'fire'
 /ɔ/ ɬɔɲ 'spear' /ɔɔ/ ʔɔɔk 'male'
 pɔk 'mouth' dɔɔɪ 'anus'
 /ʊ/ pʊɾ 'road' /ʊʊ/ gʊʊk 'dog'
 kʊm 'eggs' bʊʊc 'ant-hill'
 /u/ ɬuɲ 'horn' /uu/ luum 'grass' (pl.)
 ʔum 'nose' ɬuuɬ 'soil'

³ In this article my transcription of Mayak and other Western Nilotic languages conforms to IPA, so that [j] is a palatal glide and [ʃ] a voiced palatal stop. However, in order to maximise the graphical difference between the interdental stops [t̪, d̪] and the alveolar stops, I use the (retroflex) symbols [ɽ, ɽ̪] for the latter.

Unlike all other vowel qualities, they virtually do not occur in monosyllabic words, the only exception encountered being the word *ḡooc* 'five'. Apart from this exception, [e] and [o] occur only in syllables that are followed by a syllable containing either [i] or [u], i.e., a high [+ATR] vowel.⁴ Their occurrence in such words is exemplified by the nouns and the pronoun in (2).

(2)	[e]	<i>ley-it</i>	'tooth'
		<i>ʔeð-it</i>	'faeces' (sing.)
	[ee]	<i>beekum</i>	'monkey'
		<i>weejic</i>	'you' (pl.)
	[o]	<i>kol-it</i>	'sky'
		<i>ʔokur</i>	'chickens'
	[oo]	<i>mooð-ic</i>	'your brother'
		<i>roon-ic</i>	'your maternal uncle'

Since the presence of [e] and [o] is conditioned by the presence of [i] or [u], they cannot have independent phonemic status, but must be allophones of some other vowels. This allophony can be seen as an effect of vowel harmony imposed by the high [+ATR] vowels, so we would expect [e] and [o] to be allophones of the corresponding [-ATR] vowels /ɛ/ and /ɔ/. In fact, this analysis is perfectly possible, since [ɛ] and [ɔ] do not occur before [i] and [u], as indicated in Table 2, which shows the co-occurrence of vowels in disyllabic words. Table 2 also reveals that the high [-ATR] vowels [ɪ, ʊ] do not co-occur with the high [+ATR] vowels [i, u]. The fact that [ɪ] and [ʊ] are excluded *before* [i] and [u] can be seen as an effect of the same rule as the one that changes /ɛ, ɔ/ to [e, o] before /i, u/. Thus, both phenomena are captured by a rule of vowel harmony whereby a non-low [-ATR] vowel becomes [+ATR] before a high [+ATR] vowel. On the other hand, the absence of [ɪ] and [ʊ] *after* [i] and [u] is not paralleled by [ɛ] and [ɔ], which do occur in that position. In section 3 it will be demonstrated that the gaps in Table 2 are, in fact, not accidental but are due to co-occurrence restrictions, and that they reflect two types of [ATR] harmony.⁵ But Table 2 also shows that the [ATR] harmony is not complete, as some [-ATR] vowels may co-occur with some [+ATR] vowels: (i) [-ATR] vowels may co-occur with [ʌ] in either order; (ii) [a] may co-occur with [i, u] in either order, and, as already mentioned, (iii) [ɛ, ɔ] may occur

⁴ In the data available to me, all instances of [e] and [o] occur in the *first* syllable, which is *immediately* followed by a syllable with [i] or [u]. It is not clear whether there are other possibilities.

⁵ Moreover, the [-ATR] vowel [ʊ] seems not to occur after the low [+ATR] vowel [ʌ], and [ʊ] has not been attested after the [-ATR] vowels [ɛ, ɔ] either. It is not clear whether these gaps are systematic or accidental.

Table 2. Co-occurrence of vowels in disyllabic words.

			second syllable									
			[-ATR]					[+ATR]				
			ɪ	ɛ	a	ɔ	ʊ	i	e	ʌ	o	u
first syllable	[-ATR]	ɪ	+	+	+	+	+	-	-	+	-	-
		ɛ	+	+	+	+	?	-	-	+	-	-
		a	+	+	+	+	+	+	-	+	-	+
		ɔ	+	+	+	+	?	-	-	+	-	-
		ʊ	+	+	+	+	+	-	-	+	-	-
	[+ATR]	i	-	+	+	+	-	+	-	+	-	+
		e	-	-	-	-	-	+	-	-	-	+
		ʌ	+	+	+	+	-?	+	-	+	-	+
		o	-	-	-	-	-	+	-	-	-	+
		u	-	+	+	+	-	+	-	+	-	+

after [i, u].⁶

All of the attested vowel combinations are documented somewhere else in this article and will therefore not be illustrated separately here.

3. Vowel harmony

3.1. Regressive [ATR] assimilation. The absence of [ɪ, ʊ, ɛ, ɔ] before [i] and [u] is no coincidence, but is due to a general constraint, as evidenced by the morphology. Consider, for instance, the tense inflection of non-derived transitive verbs in clauses with the constituent order SVO, as in (3), a clause type that I call subject-oriented (S-oriented).⁷ In subject-oriented clauses, a non-derived transitive verb

- (3) a. *buuŋu ʔam kuɽer* 'The hyena is eating a pig'
hyena eat pig
- b. *buuŋu ʔam-u kuɽer* 'The hyena ate a pig'
hyena eat-PST pig

⁶ In this way the vowel harmony of Mayak differs from those of, for example, the Luo language Pāri [cf. Andersen 1989] and the Central Sudanic language Madi [cf. Andersen 1986b]. In the latter languages the [ATR] harmony is total, except that /a/ may co-occur with [+ATR] vowels.

⁷ The following abbreviations are used in interlinear translations: 1PEX = first person plural exclusive, 1S = first person singular, 2S = second person singular, 3S = third person singular, AP = anti-passive, PST = past tense, SUF = suffix.

Table 3. Present and past tense forms of non-derived subject-oriented transitive verbs with a short root vowel.

	Underlying root vowel	Present tense	Past tense	
	/i/	ʔit	ʔið-u	'shape with an axe'
	/ε/	lep	lew-u	'open'
[-ATR]	/ɔ/	kɔc	koj-u	'take'
	/ʊ/	gʊt	gʊð-u	'untie'
	/a/	ʔam	ʔam-u	'eat'
	/i/	ʔiŋ	ʔiŋ-u	'hear'
[+ATR]	/ʌ/	nʌk	nʌɣ-u	'beat'
	/u/	tuc	tuj-u	'send'

Table 4. Present and past tense forms of non-derived subject-oriented transitive verbs with a long root vowel.

	Underlying root vowel	Present tense	Past tense	
	/ii/	ɖiim	ɖiim-u	'weed'
	/εε/	ʔεεk	ʔεεɣ-u	'spear'
[-ATR]	/ɔɔ/	bɔɔr	boor-u	'skin'
	/uu/	ʃuuɔ	ʃuuɣ-u	'find'
	/aa/	maaʔ	maað-u	'drink'
	/ii/	wiin	wiin-u	'cook'
[+ATR]	/ʌʌ/	gʌʌp	gʌʌw-u	'catch in the air'
	/uu/	puur	puur-u	'hoe'

stem can have a form which is identical to the bare root, as in (3a). This form, which is inflectionally unmarked, expresses the present tense, while the past tense is expressed by a suffix *-u*, as in (3b).⁸ Tables 3-4 show the present and past tense forms of a verb for each of the eight possible short and long root vowels.⁹ As can be observed in these tables, [-ATR] root vowels become [+ATR] before the suffix *-u*, except for the root vowel quality /a/, which retains its [-ATR] value. Notice

⁸ The labels "present tense" and "past tense" are provisional, as the "tenses" should perhaps be analysed as aspects.

⁹ For a description and analysis of the root-final consonant alternation that can be observed in these and some other examples, see Andersen [1999].

also that [ATR] is the only feature of the vowels that changes, the vowels retaining their height. Thus, the [+ATR] suffix vowel /u/ harmonises non-low [-ATR] vowels, [ɪ, ɛ, ɔ, ʊ], of the root into the corresponding [+ATR] vowels, [i, e, o, u]. This harmonisation has two consequences. Firstly, it neutralises the underlying contrast between [-ATR] and [+ATR] in high root vowels. Secondly, it gives rise to the vowel qualities [e] and [o], which must therefore be analysed as allophones of /ɛ/ and /ɔ/, respectively, as also suggested in section 3.2 above. The harmonisation is purely phonologically conditioned, as it takes place before any suffix that contains an underlying /u/, for instance, also the second person singular possessive suffix *-u* of nouns, as illustrated in section 3.3 below.

Suffixes with /i/, the other high [+ATR] vowel, have exactly the same effect. Consider, for instance, the subject inflection of non-derived transitive verbs in clauses in which the logical object is preverbal, as in (4), a clause type which I call object-oriented (O-oriented). As illustrated by the past tense verb forms, the first and second person singular suffixes are *-ɿr* and *-ir*, respectively, both of them with a [+ATR] vowel, while the third person singular suffix is *-er*, with a [-ATR] vowel. Tables 5-6 show these three forms of a non-derived verb for each of the eight possible short and long root vowels. As can be observed in these tables, the [-ATR]

- (4) a. *ʔaak maad-ɿr* ‘I drank the milk’
 milk drink:PST-1S
- b. *ʔaak maad-ir* ‘You drank the milk’
 milk drink:PST-2S
- c. *ʔaak maad-er* ‘He drank the milk’
 milk drink:PST-3S

Table 5. Past tense verb forms with subject suffixes and a short root vowel.

	Underlying root vowel	1S	2S	3S	
[-ATR]	/ɪ/	<i>ʔɪɖ-ɿr</i>	<i>ʔɪɖ-ir</i>	<i>ʔɪɖ-er</i>	‘shape with axe’
	/ɛ/	<i>gɛb-ɿr</i>	<i>gɛb-ir</i>	<i>gɛb-er</i>	‘beat’
	/ɔ/	<i>nɔn-ɖ-ɿr</i>	<i>nɔn-ɖ-ir</i>	<i>nɔn-ɖ-er</i>	‘fold’
	/ʊ/	<i>gʊɖ-ɿr</i>	<i>gʊɖ-ir</i>	<i>gʊɖ-er</i>	‘untie’
[+ATR]	/a/	<i>ʔam-b-ɿr</i>	<i>ʔam-b-ir</i>	<i>ʔam-b-er</i>	‘eat’
	/i/	<i>ʔib-ɿr</i>	<i>ʔib-ir</i>	<i>ʔib-er</i>	‘shoot’
	/ʌ/	<i>pʌɖ-ɿr</i>	<i>pʌɖ-ir</i>	<i>pʌɖ-er</i>	‘untie’
	/u/	<i>tʊɟ-ɿr</i>	<i>tʊɟ-ir</i>	<i>tʊɟ-er</i>	‘send’

Table 6. Past tense verb forms with subject suffixes and a long root vowel.

	Underlying root vowel	1S	2S	3S	
	/ɪɪ/	ɖiim-b-ɔɾ	ɖiim-b-ir	ɖiim-b-er	'weed'
	/ɛɛ/	ʔeeg-ɔɾ	ʔeeg-ir	ʔeeg-er	'spear'
[-ATR]	/ɔɔ/	pɔɔg-ɔɾ	pɔɔg-ir	pɔɔg-er	'wash'
	/ʊʊ/	ʃʊʃ-ɔɾ	ʃʊʃ-ir	ʃʊʃ-er	'find'
	/aa/	caab-ɔɾ	caab-ir	caab-er	'cook'
	/ii/	wiin-q-ɔɾ	wiin-q-ir	wiin-q-er	'cook'
[+ATR]	/ʌʌ/	ʔʌʌb-ɔɾ	ʔʌʌb-ir	ʔʌʌb-er	'catch in the air'
	/uu/	puur-d-ɔɾ	puur-d-ir	puur-d-er	'hoe'

suffix *-er* leaves the root vowel unaffected, and so does the [+ATR] suffix *-ɔɾ*. In forms with the [+ATR] suffix *-ir*, by contrast, root vowels change in the same way as they do before the past tense suffix *-u*.

Again, the harmonisation triggered by the verbal suffix *-ir* is purely phonologically conditioned, as it takes place before any suffix with an underlying /i/. Thus, the same effects can be observed in singular nouns with the singulative suffix *-it*, when compared with the corresponding plural forms, which have no suffix, as in (5).¹⁰ The plural forms reveal that the root vowel is underlyingly [-ATR] in (5a-c), and [+ATR] in (5d-e). In (5a-c) the singulative suffix harmonises non-low root vowels.

(5)	Singular	Plural	
a.	ʔin- <i>it</i>	ʔin	'breast'
b.	ʔeð- <i>it</i>	ʔeɛ	'faeces'
c.	kol- <i>it</i>	kol	'sky (sg); clouds (pl)'
d.	riŋ- <i>it</i>	riŋ	'meat'
e.	wɔɾ- <i>it</i>	wɔɾ	'cow dung'

In summary, Mayak has a general rule of *Regressive [ATR] Assimilation* to the effect that a high [+ATR] vowel spreads its [ATR] value to a non-low [-ATR] vowel of the preceding syllable. In this type of vowel harmony, [+ATR] is dominant and [-ATR] is recessive. But the low vowels are neutral. Thus, [+ATR] /ʌ/ does not trigger harmony, and [-ATR] /a/ is not harmonised.

¹⁰ An outline of the major number inflection patterns in Mayak is given in Andersen [in press b].

3.2. Regressive rounding assimilation. In the previous section, we saw that the [+ATR] vowel qualities [e] and [o] are manifestations of the underlying [-ATR] vowel qualities /ɛ/ and /ɔ/, respectively. However, a short [o] is not always a manifestation of /ɔ/. It may also be a manifestation of [+ATR] /ʌ/ if followed by [u], as illustrated by the verb forms in (6)-(7). The intransitive verbs constituting the clauses have anti-passive stems (cf. section 4 below). In the past tense forms (6b) and (7b), which have a past tense suffix *-uð* immediately after the stem, the stem vowel exhibits free variation between [ʌ] and [o].¹¹ However, in the corresponding present tense forms (6a) and (7a), which have the suffix *-ir*, the stem vowel can only be [ʌ], so [ʌ] is the basic variant, while [o] is conditioned by the following [u].

- (6) a. *ʔʌm-ir* 'He is eating'
eat:AP-SUF
- b. *ʔʌm-uð-i* ~ *ʔom-uð-i* 'He ate'
eat:AP-PST-SUF
- (7) a. *tʌk-ir* 'He is washing'
wash:AP-SUF
- b. *tʌk-uð-i* ~ *tok-uð-i* 'He washed'
wash:AP-PST-SUF

The same variation between [ʌ] and [o] can be seen in nouns, as in the first syllable of disyllabic plural nouns with [u] in the second syllable, whether the [u] belongs to an inflectional suffix, as in (8a-b), or is part of the stem, as in (8c) (cf. section 4 below).

- | | | | |
|-----|---------------|-------------------------------|-------------|
| (8) | Singular | Plural | |
| a. | <i>naac</i> | <i>nʌj-uk</i> ~ <i>noj-uk</i> | 'calf' |
| b. | <i>gaal</i> | <i>gʌl-uk</i> ~ <i>gol-uk</i> | 'arm, hand' |
| c. | <i>nanaan</i> | <i>nʌnun</i> ~ <i>nonun</i> | 'snake' |

In conclusion, Mayak has a general phonological rule of *Regressive Rounding Assimilation*, whereby the rounding of [+ATR] [u] is optionally spread to a short /ʌ/ of the preceding syllable, so that /ʌ/ is realised as [o]. This is one of the reasons why /ʌ/ must be classified as [+ATR] in the first place.

¹¹ The past tense suffix exhibits grammatically conditioned alternation. Thus, for instance, it is *-u* in a subject-oriented transitive clause, but *-uð* before the suffix *-i* in an anti-passive clause. See also Andersen [1999].

3.3. Progressive [ATR] assimilation. In section 3.1 we saw that Mayak has a rule of Regressive [ATR] Assimilation. But vowel harmony with the opposite direction also occurs. This can be observed, for instance, in the possessive inflection of nouns. This type of inflection, which especially applies to body part nouns, is illustrated in Table 7, which shows four forms of a noun for each of the eight short root vowels: the non-possessed form, which has no suffix, and which is identical to the bare root, and forms with a vowel suffix that expresses, respectively, a first, second, and third person singular possessor. The possessive suffix is followed by the consonantal suffix *-k* if the possessed stem is plural, as in the possessive forms of the words for ‘eyes’ and ‘teeth’ in the table.

A first person singular possessor is expressed by a high front vowel, which is either [-ATR] or [+ATR]. The [+ATR] variant [i] occurs if the root vowel is [+ATR] and high, as in the possessive forms of the words for ‘ear’ and ‘knee’; otherwise, the [-ATR] variant [ɪ] occurs. This distribution shows that the suffix vowel is underlyingly [-ATR]. So here we have a suffix vowel that does not harmonise the root vowel, but which is itself harmonised by that vowel.

Table 7. Non-possessed and singular possessive forms of nouns.

	Underlying root vowel	Non-possessed	1S	2S	3S	
	/i/	<i>ɲɪn</i>	<i>ɲɪɲ-ɪ-k</i>	<i>ɲɪɲ-u-k</i>	<i>ɲɪɲ-ɛ-k</i>	‘eyes’
	/ɛ/	<i>lɛk</i>	<i>lɛk-ɪ-k</i>	<i>lɛk-u-k</i>	<i>lɛk-ɛ-k</i>	‘teeth’
[-ATR]	/a/	<i>pəl</i>	<i>pəl-ɪ</i>	<i>pəl-u</i>	<i>pəl-ɛ</i>	‘navel’
	/ɔ/	<i>wɔɲ</i>	<i>wɔɲ-ɪ</i>	<i>wɔɲ-u</i>	<i>wɔɲ-ɛ</i>	‘eye’
	/ʊ/	<i>tʊk</i>	<i>tʊɣ-ɪ</i>	<i>tʊɣ-u</i>	<i>tʊɣ-ɛ</i>	‘outer mouth’
	/i/	<i>ʔic</i>	<i>ʔid-ɪ</i>	<i>ʔid-u</i>	<i>ʔid-ɛ</i>	‘ear’
[+ATR]	/u/	<i>ʔuɲ</i>	<i>ʔuɲ-ɪ</i>	<i>ʔuɲ-u</i>	<i>ʔuɲ-ɛ</i>	‘knee’
	/ʌ/	<i>ʔʌm</i>	<i>ʔʌm-ɪ</i>	<i>ʔʌm-u</i>	<i>ʔʌm-ɛ</i>	‘thigh’

Other suffixes with an underlyingly [-ATR] /i/ behaving in the same way are, for instance, the plural suffix *-ɪn* of nouns, as in (9), and the verbal suffix *-ɪr*, which will be illustrated in section 4 below.¹²

The situation is different with the second person singular possessive suffix, as illustrated in Table 7 above. This suffix is invariably [+ATR] *-u*, and as we also saw in section 3.1 above, such a suffix vowel triggers Regressive [ATR] Assimilation, whose effect can be observed in the words for ‘eyes’, ‘teeth’, ‘eye’, and ‘outer mouth’.

¹² In noun stems with more than one vowel, as in (9c), it is the features of the last vowel that determine the [ATR] value of the suffix.

(9)		Plural	Singular	
a.	/ɪ/	<i>kɪɪð-in</i>	<i>kɪɪ</i>	‘guinea-fowl’
b.	/ɛ/	<i>wɛɪɣ-in</i>	<i>wɛɪɣ-ɔn</i>	‘rib’
c.	/a/	<i>guɟumað-in</i>	<i>guɟumaɟ</i>	‘fishing spear’
d.	/ɔ/	<i>ɬɔŋ-in</i>	<i>ɬɔŋ</i>	‘spear’
e.	/ʊ/	<i>bʊɣ-in</i>	<i>bʊk</i>	‘arm’
f.	/i/	<i>kɪij-in</i>	<i>kɪic</i>	‘orphan’
g.	/ʌ/	<i>ʒʌŋ-in</i>	<i>ʒaaŋ</i>	‘crocodile’
h.	/u/	<i>ɬuŋ-in</i>	<i>ɬuŋ</i>	‘horn’

A different behaviour is exhibited by the third person singular possessive suffix. This suffix is [-ATR] -*ɛ* throughout and thus is not affected by the root vowel, and it does not itself affect the root vowel either. Hence, it behaves like the third person singular subject suffix -*ɛr* illustrated in section 3.1 above.

The [-ATR] suffix vowel /ɔ/ behaves like /ɛ/. Thus, it neither affects nor is affected by the root vowel. This is shown by the first person plural exclusive (1PEX) subject suffix -*ɔnɔn* of object-oriented verbs, as exemplified by the present tense forms in (10), which also shows the corresponding inflectionally unmarked verb forms, the latter occurring in subject-oriented clauses. Again, all of the eight root vowel qualities are exemplified, except for /u/, which has not been attested with the 1PEX suffix.¹³

Some (but not all) suffixes with the [-ATR] vowel [a] behave in the same way. One example is the plural suffix -*ak* of nouns in (11), which also shows the corresponding singular forms. All of the eight underlying root vowel qualities are exemplified.

(10)		Unmarked	1PEX	
a.	/ɪ/	<i>gɪɪw-ɪ</i>	<i>gɪɪw-ɔnɔn</i>	‘beat’ (multiplicative stem)
b.	/ɛ/	<i>gɛp</i>	<i>gɛw-ɔnɔn</i>	‘beat’
c.	/a/	<i>maaɟ</i>	<i>maað-ɔnɔn</i>	‘drink’
d.	/ɔ/	<i>nɔn</i>	<i>nɔn-ɔnɔn</i>	‘fold’
e.	/ʊ/	<i>kʊʊm</i>	<i>kʊʊm-ɔnɔn</i>	‘fill’
f.	/i/	<i>ʒip</i>	<i>ʒiw-ɔnɔn</i>	‘shoot’
g.	/ʌ/	<i>ʒʌɬ-ɪ</i>	<i>ʒʌɬ-ɔnɔn</i>	‘pull’ (centrifugal stem)

¹³ While the verb forms in (10b-f) have non-derived stems, those in (10a) and (10g) have derived stems, multiplicative and centrifugal, respectively. The formation of multiplicative stems may involve a grammatically conditioned change in the quality and length of the basic root vowel, as is the case here, since the stem in (10a) is derived from the root of the non-derived stem in (10b). However, this does not affect the behaviour of the 1PEX suffix.

(11)		Singular	Plural	
a.	/ɪ/	<i>bɪl</i>	<i>bɪl-ak</i>	'iron'
b.	/ɛ/	<i>ɬɛl</i>	<i>ɬɛl-ak</i>	'lower leg'
c.	/a/	<i>kac</i>	<i>kaj-ak</i>	'leopard'
d.	/ɔ/	<i>ɔɔk</i>	<i>ɔɔɣ-ak</i>	'bull with one testicle'
e.	/ʊ/	<i>kur</i>	<i>kur-ak</i>	'boat'
f.	/i/	<i>kic</i>	<i>kij-ak</i>	'bee'
g.	/ʌ/	<i>kʌm</i>	<i>kʌm-ak</i>	'elbow'
h.	/u/	<i>kuɬ</i>	<i>kud-ak</i>	'nest'

Lastly, the high back [-ATR] vowel [ʊ] also occurs as a suffix vowel, but its behaviour in that position has not been investigated systematically. Given the fact that an underlying /u/ behaves like an underlying /i/ with respect to vowel harmony, one would also expect an underlying /ʊ/ to behave like an underlying /i/ in this respect. But so far, I have not been able to establish whether there are any suffixes with an *underlying* /ʊ/. Other examples with [ʊ] will be discussed in section 3.4.

In summary, Mayak has a general rule of *Progressive [ATR] Assimilation* to the effect that a high [+ATR] vowel spreads its [ATR] value to a high front [-ATR] vowel of the following syllable. It is similar to *Regressive [ATR] Assimilation* in that [+ATR] is dominant and [-ATR] recessive. But it is more restricted, since all non-high vowels are resistant to harmonisation.

3.4. Progressive [ATR] spreading. In sections 3.1 and 3.2 we saw examples of suffixes with low vowels which exhibit no variation and which do not trigger vowel harmony, namely the first person singular subject suffix *-ar* and the plural noun suffix *-ak*. However, there is at least one suffix which exhibits phonologically conditioned variation between [-ATR] [a] and [+ATR] [ʌ], namely the singulative noun suffix *-aɬ* ~ *-ʌɬ*, as in (12). The stem of singular forms with this suffix is underlyingly identical to the corresponding plural form. The distribution of *-aɬ* and *-ʌɬ* is in agreement with, and is determined by, the [ATR] value of the root vowel. Given this variation, the vowel of *-aɬ* ~ *-ʌɬ* must be underlyingly different from both of the vowels of the invariable suffixes *-ak* and *-ar*. My suggestion is that the vowel of *-aɬ* ~ *-ʌɬ* is underlyingly unspecified for [ATR] and that it gets its surface [ATR] value from the root vowel. The vowel harmony in nouns with this suffix is progressive like the vowel harmony produced by the rule of *Progressive [ATR] Assimilation*. However, while suffix vowels affected by that rule do not agree in [ATR] with the low [+ATR] root vowel /ʌ/, the vowel of *-aɬ* ~ *-ʌɬ* agrees in [ATR] with all three [+ATR] root vowels, as shown in (12d-f). This is what is predicted if the harmony is here not the effect of a rule that replaces an already existing [-ATR] value with the opposite value, but the effect of a rule that specifies an unspecified [ATR] value. This rule will be referred to as *Progressive [ATR] Spreading*.

(12)		Singular	Plural	
a.	/i/	<i>rim-aɬ</i>	<i>rim</i>	‘blood’
b.	/a/	<i>dʌal-aɬ</i>	<i>dʌal</i>	‘flower’
c.	/ʊ/	<i>kʊm-aɬ</i>	<i>kʊm</i>	‘egg’
d.	/i/	<i>ʔin-ʌɬ</i>	<i>ʔin</i>	‘intestine’
e.	/ʌ/	<i>ʔʌʌw-ʌɬ</i>	<i>ʔʌʌp</i>	‘bone’
f.	/u/	<i>ruuj-ʌɬ</i>	<i>ruuc</i>	‘worm’

There is at least one other suffix whose variation is also accounted for by Progressive [ATR] Spreading, namely the plural noun suffix *-uk* ~ *-uk*, as in (13). Some nouns with this suffix in the plural exhibit grammatically conditioned root vowel alternation; but the relation between the stem of the plural form and that of the singular form is not pertinent to the phonological form of the suffix, and it will therefore not be dealt with until section 4. The plural suffix in (13) exhibits variation between [-ATR] [ʊ] and [+ATR] [u] in agreement with the [ATR] value of the stem vowel, including the low [+ATR] stem vowel /ʌ/, as in (13d). Again, this distribution can be explained by assuming that the suffix vowel is underlyingly unspecified for [ATR] and, hence, affected by Progressive [ATR] Spreading.

(13)		Plural	Singular	
a.	/i/	<i>mɪɣ-uk</i>	<i>mɛɛk</i>	‘spider’
b.	/ʊ/	<i>gʊj-uk</i>	<i>gɔɔc</i>	‘bowl’
c.	/i/	<i>cim-uk</i>	<i>cɪma</i>	‘knife’
d.	/ʌ/	<i>jʌŋ-uk</i>	<i>jaaŋ</i>	‘crocodile’
e.	/u/	<i>bul-uk</i>	<i>bul</i>	‘stomach’

In section 2.2 it was claimed that although [ʌ] is phonetically higher and more back than [a], it is the [+ATR] counterpart of that vowel. But as we saw in section 3.1, /ʌ/ does not trigger Regressive [ATR] Assimilation, and as we saw in section 3.3, /a/ does not become [ʌ] by Progressive [ATR] Assimilation. These processes, therefore, do not provide any structural evidence that /a/ and /ʌ/ are [-ATR] and [+ATR], respectively, nor that they are mutual [ATR] counterparts. However, that [ʌ] is indeed the [+ATR] counterpart of [a] is clearly shown by the suffix vowel variation examined in the present subsection. Thus, the [+ATR] value of [ʌ] is revealed by the fact that a low suffix vowel underlyingly unspecified for [ATR] is realised as [ʌ] when the [+ATR] feature is spread to it, and also by the fact that /ʌ/ itself spreads this feature to suffix vowels underlyingly unspecified for [ATR].

3.5. Summary of [ATR] harmony processes. The previous subsections have demonstrated the existence of three different types of phonologically conditioned [ATR] harmony processes, which were labeled Regressive [ATR] Assimilation,

Progressive [ATR] Assimilation, and Progressive [ATR] Spreading. Several suffixes have been used as examples. Some of them trigger Regressive [ATR] Assimilation, others are affected by either Progressive [ATR] Assimilation or Progressive [ATR] Spreading, and still others neither trigger nor are affected by any of these processes. The suffixes that have been commented upon are listed in Table 8, where they are grouped according to the [ATR] process that they trigger or undergo. The table also indicates their underlying [ATR] value, their semantic function, and the class of the words in which they occur.

Table 8. Some suffixes and their involvement in [ATR] harmony processes.

Form	Underlying [ATR] value	Function	Word class	[ATR] process
-ak	-	plural	noun	none
-ʌr	+	1S subject	verb	none
-ε	-	3S possessor	noun	none
-εr	-	3S subject	verb	none
-ɔnɔn	-	1PEX subject	verb	none
-ir	+	2S subject	verb	regressive assimilation
-iṭ	+	singulative	noun	regressive assimilation
-u	+	past tense	verb	regressive assimilation
-u	+	2S possessor	noun	regressive assimilation
-uḏ	+	past tense	verb	regressive assimilation
-i, -i	-	1S possessor	noun	progressive assimilation
-m, -in	-	plural	noun	progressive assimilation
-r, -ir	-	present tense	verb	progressive assimilation
-aṭ, -ʌṭ	0	singulative	noun	progressive spreading
-uk, -uk	0	plural	noun	progressive spreading

4. Grammatically conditioned vowel alternation

In addition to the phonologically conditioned vowel alternation described above, which involves either [ATR] or rounding, there is also grammatically conditioned vowel alternation, and the latter involves either [ATR] or height. This type of alternation is regular in the derivational morphology of verbal roots, and it can be observed, for instance, when comparing non-derived transitive stems and the corresponding anti-passive stems. The latter are derived intransitive stems that lack the object of the former. The basics of the alternation system can be seen by comparing four morphologically different forms with the same transitive root. These four forms are the present tense and past tense forms of subject-oriented

non-derived transitive verbs, as in (14a) and (14b), respectively, and the present tense and past tense forms of anti-passive verbs, as in (14c) and (14d), respectively.

(14) a. S-oriented, present tense

ʔir lep ʔaŋkaɛ ‘The thief is opening the door’
thief open door

b. S-oriented, past tense

ʔir lew-u ʔaŋkaɛ ‘The thief opened the door’
thief open-PST door

c. Anti-passive, present tense

ʔir lip-ir ‘The thief is opening’
thief open:AP-SUF

d. Anti-passive, past tense

ʔir lip-uð-i ‘The thief opened’
thief open:AP-PST-SUF

The sentences in (14) illustrate the behaviour of roots with /*ɛ*/. As shown in (15), the shift from present tense to past tense here involves a change from [-ATR] to [+ATR] in the root vowel (from /*ɛ*/ to /*e*/, and from /*ɪ*/ to /*i*/), and the shift from subject-oriented to anti-passive involves raising (from /*ɛ*/ to /*ɪ*/, and from /*e*/ to /*i*/). In roots having /*ɪ*/, by contrast, as illustrated in (16) with a root meaning ‘to shape with an axe’, the shift from subject-oriented to anti-passive involves a vowel change from [-ATR] to [+ATR] rather than raising.

		S-oriented	Anti-passive
(15)	Present	<i>lep</i>	<i>lip-ir</i>
	Past	<i>lew-u</i>	<i>lip-uð-i</i>
(16)	Present	<i>ʔit</i>	<i>ʔit-ir</i>
	Past	<i>ʔið-u</i>	<i>ʔit-uð-i</i>

Table 9 shows the four forms with one root for each of the eight underlying short root vowels. Column 1 of Table 9 contains stems in which the underlying root vowels surface unchanged. Column 2 shows stems exposed to Regressive [ATR] Assimilation, as accounted for in section 3.1 above. Column 3 shows grammatically conditioned variants of the root vowels. Note first that the pre-sent tense suffix here exhibits [ATR] variation between [ɪr] and [ir]. Underlyingly, its vowel is [-ATR] /*ɪ*/, which undergoes Progressive [ATR] Assimilation after stems with /*i*/ or /*u*/. The grammatically conditioned variation in the root vowels only concerns root vowels whose basic alternants are [-ATR]. High and low vowels become [+ATR] without changing their height, and mid vowels become high with-

Table 9. Vowel alternation in transitive verbal roots.

	1	2	3	4		
Basic root vowel	S-oriented, pres. tense	S-oriented, past tense	Anti-passive, pres. tense	Anti-passive, past tense		
	/ɪ/	ʔɪt	ʔið-u	ʔɪt-ir	ʔɪt-uð-i	'shape'
	/ɛ/	dɛc	dɛj-u	dɪj-ir	dɪj-uð-i	'grind'
[-ATR]	/a/	ʔam	ʔam-u	ʔam-ir	ʔam-uð-i	'eat'
	/ɔ/	kɔc	koj-u	kuj-ir	kuj-uð-i	'take'
	/ʊ/	ɡʊt	ɡuð-u	ɡʊt-ir	ɡʊt-uð-i	'untie'
	/i/	tɪŋ	tɪŋ-u	tɪŋ-ir	tɪŋ-uð-i	'hear'
[+ATR]	/ʌ/	nʌk	nʌɣ-u	nʌk-ir	nʌk-uð-i	'beat'
	/u/	tuc	tuj-u	tuc-ir	tuc-uð-i	'send'

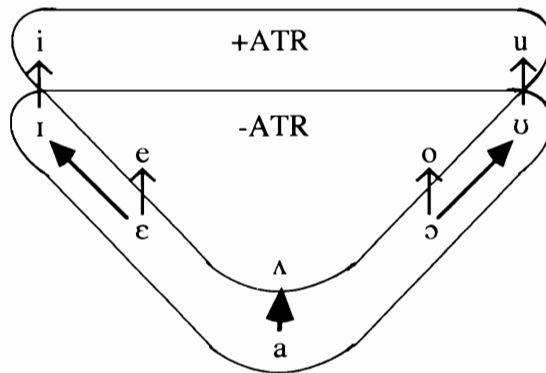
Table 10. Vowel alternation (grade system) in transitive verbal roots.

	1°	2°	3°	4°
	ɪ	i	i	i
	ɛ	e	ɪ	i
[-ATR]	a	a	ʌ	ʌ
	ɔ	o	ʊ	u
	ʊ	u	u	u
	i	i	i	i
[+ATR]	ʌ	ʌ	ʌ	ʌ
	u	u	u	u
	Underlying root vowels	Phonologically conditioned alternants	Grammatically conditioned alternants	Phonologically conditioned alternants of grammatically conditioned alternants

out changing their [ATR] value. Finally, column 4 contains stems which combine the effects of columns 3 and 2; that is, their root vowels have grammatically conditioned alternants exposed to Regressive [ATR] Assimilation.¹⁴

Table 10 schematises the vowel alternation system exemplified by the roots in Table 9. Since what we are dealing with may be called a vowel gradation system, the four columns of Table 10 will be referred to as grades 1 through 4, with grade 1 being the basic grade. As Table 10 shows, the number of different alternants depends on the underlying root vowel. Root vowels that are underlyingly [+ATR] do not alternate at all; underlying /i/, /a/, and /u/ have two alternants, underlying /e/ and /o/ four alternants. Using in modified form a diagram created by Labov [1994: 230], I illustrate in Figure 1 the changes involved in the vowel alternation system. Thin arrows indicate phonologically conditioned changes, thick arrows grammatically conditioned changes.

Figure 1. Phonological and grammatical changes in ATR



The same grammatically conditioned vowel alternation can be found, for instance, in number inflection of nouns, as illustrated in (17)-(19). The nouns in (17) have monosyllabic roots, and here the root vowel has grade 1 in the singular and grade 3 in the plural.¹⁵ The five [-ATR] grade 1 vowels are exemplified here.

¹⁴ Although not indicated in the table, stems with [ʌ] here have free variants with [o]: [ʔʌmuði] ~ [ʔomuði] 'He ate' and [nʌkuði] ~ [nokuði] 'He killed'. This is due to the rule of Regressive Rounding Assimilation, as described in section 3.2 above.

¹⁵ Although the root vowel /u/ in *guy-ɪŋ*, or its variant *guy-in*, 'dogs' is followed by a high [+ATR] suffix vowel, it does not belong to grade 2. The reason is that the vowel of the suffix in question is one that undergoes Progressive [ATR] Assimilation, as evidenced by the fact that it is [-ATR] after a [-ATR] vowel, as in *ʔɔŋ-m* 'spears', cf. section 3.3 above.

(17)	1°	Singular	3°	Plural	
a.	/ɪ/	ʔɪm-aɾ	/i/	ʔin	'hand'
b.	/ɛ/	gɛɛl	/ɪ/	gɪɾ	'lion'
c.	/a/	jaaɾ	/ʌ/	jʌn	'tree'
d.	/ɔ/	jɔɔm	/ʊ/	jʊm-ɖɪn	'type of monkey'
e.	/ʊ/	gʊʊk	/u/	guɣ-ɪɲ	'dog'

In (18), the singular is either a monosyllable or a disyllable ending in /a/, and the (first) root vowel has grade 1. The plural is formed from the singular by means of the suffix *-uk* ~ *-uk*, and at the same time word-final vowels are deleted, long root-vowels are shortened, and root vowels are shifted to grade 3. As argued in section 3.4 above, the vowel of the suffix is underlyingly unspecified for [ATR], so that it is exposed to Progressive [ATR] Spreading. In (18c) an underlying stem vowel /ʌ/ has undergone Progressive Rounding Assimilation.

(18)	1°	Singular	3°	Plural	
a.	/ɪ/	cɪɪma	/i/	cɪm-uk	'knife'
b.	/ɛ/	mɛɛk	/ɪ/	mɪɣ-uk	'spider'
c.	/a/	baɾɾa	/ʌ/	boɾɾ-uk	'slave, servant'
d.	/ɔ/	gɔɔc	/ʊ/	gʊj-uk	'bowl'
e.	/u/	bul	/u/	bul-uk	'stomach'
f.	/i/	ɖɪɾ	/i/	ɖɪɾ-uk	'shield'
g.	/ʌ/	mʌʌl	/ʌ/	mʌl-uk	'calf of leg'
h.	/u/	pura	/u/	pur-uk	'cloth'

The examples in (19) belong to a class of nouns that have a disyllabic root and which form the plural from the singular without affixation. The singular form is identical to the root and has the shape CV(V)C(C)V(V)C with grade 1 vowels in both syllables. The first syllable of the singular forms exemplifies all five [-ATR] vowels.

The plural of such nouns is formed in the following way: Long vowels are shortened, the vowel of the first syllable is shifted from grade 1 to grade 3, and the vowel of the second syllable is replaced with a short high back vowel. The latter exhibits the same type of [ATR] variation as the short high back vowel of the plural suffix *-uk* ~ *-uk* in (18) above and must therefore be analysed as underlyingly unspecified for [ATR] but exposed to Progressive [ATR] Spreading. Using /U/ as a symbol for a high back vowel unspecified for [ATR], plural forms are derived as in (20), using examples from (19). The grade 3 alternant of /a/ may exhibit the additional effect of Regressive Rounding Assimilation, as also indicated in (20).

(19)	1°	Singular	3°	Plural	
a.	/ɪ/	<i>dɪwar</i> <i>kɪkɑt</i>	/i/	<i>dɪwur</i> <i>kɪkʊt</i>	‘squirrel’ ‘broom’
b.	/ɛ/	<i>rɛɛkɑt</i>	/ɪ/	<i>rɪkʊt</i>	‘type of pot’
c.	/a/	<i>kamal</i> <i>nanaan</i>	/ʌ/	<i>komul</i> <i>nʌnun, nonun</i>	‘girl’ ‘snake’
d.	/ɔ/	<i>ɔɔŋɔl</i> <i>mɔrcɔŋ</i>	/ʊ/	<i>ɔʊŋʊl</i> <i>mʊrcʊŋ</i>	‘cock’ ‘horse’
e.	/ʊ/	<i>kʊtɛr</i> <i>ʔunɥɛl</i>	/u/	<i>kʊtʊr</i> <i>ʔunɥʊl</i>	‘pig’ ‘cotton’

(20) Root:	<i>dɪwar</i>	<i>rɛɛkɑt</i>	<i>nanaan</i>	<i>ɔɔŋɔl</i>	<i>kʊtɛr</i>
Plural formation:	<i>dɪwʊr</i>	<i>rɪkʊt</i>	<i>nʌnʊn</i>	<i>ɔʊŋʊl</i>	<i>kʊtʊr</i>
Progressive [ATR] Spreading:	<i>dɪwʊr</i>	<i>rɪkʊt</i>	<i>nʌnʊn</i>	<i>ɔʊŋʊl</i>	<i>kʊtʊr</i>
Regressive Rounding Assim.:	—	—	<i>nonun</i>	—	—

Note, incidentally, that the plural forms in (19) share a template with the plural forms that contain the suffix *-uk* ~ *-uk* exemplified in (18) above. This template has the following properties: (i) the segmental shape is CVC(C)VC, with short vowels in both syllables; (ii) the first vowel belongs to the set /ɪ, ʊ, i, ʌ, u/; and (iii) the second vowel is /U/, exposed to Progressive [ATR] Spreading. Hence, one may speculate that the plural formation strategy utilised in (19) has arisen as an analogue of the strategy utilised in (18).

5. Internal reconstruction: Sound change

We have seen that in the grammatically conditioned alternation of root vowels, only underlying [-ATR] vowels alternate. The three non-mid vowels, /ɪ, a, ʊ/, become [+ATR] and thus change to /i, ʌ, u/. By contrast, the two mid vowels, /ɛ, ɔ/, become high and thus change to /ɪ, ʊ/. This mixed character of the alternation system needs a historical explanation. Assuming that the alternation was originally an [ATR] alternation throughout, we must hypothesise that /ɛ, ɔ/ originally alternated with */e, o/, but that at some later point in the past, */e, o/ underwent an unconditional change to /ɪ, ʊ/.

Table 11 diagrams the history of the root vowel alternants in accordance with this hypothesis. As we see in column 3, the original [ATR] alternation created [+ATR] alternants of underlying [-ATR] vowels throughout, and the mid [+ATR] vowels were later changed, while the others remained unchanged. Column 4 shows that some instances of /i/ and /u/ reflect three changes: first a change from [-ATR]

Table 11. History of root vowel alternants

	1°	2°	3°	4°
[-ATR]	i	i ← I	i i ← I	i i ← I
	ε	e ← ε	I < e ← ε	i ← I < e ← ε
	a	a a	Λ Λ ← a	Λ Λ ← a
	ɔ	o ← ɔ	ʊ < o ← ɔ	u ← ʊ < o ← ɔ
	u	u ← ʊ	u u ← ʊ	u u ← ʊ
[+ATR]	i	i	i	i
	Λ	Λ	Λ	Λ
	u	u	u	u
	Root vowel	New [ATR] harmony	Old [ATR] alternation	New [ATR] harmony Old [ATR] alternation

Key: “←” indicates a change due to a phonological rule, and “<” indicates a diachronic development.

to [+ATR], then a change from mid [+ATR] to high [-ATR], and finally, again, a change from [-ATR] to [+ATR].

6. Comparative evidence: Mayak-Mabaan vowel correspondences

The hypothesis that pre-Mayak */e, o/ have changed to /i, u/ implies that Mayak /i/ is a merger of pre-Mayak */i/ and */e/, and that Mayak /u/ is a merger of pre-Mayak */u/ and */o/. Thus, the hypothesis predicts that Mayak /i/ and /u/ each exhibit regular correspondences with two different vowels in the other Western Nilotic languages, provided that the latter have not been exposed to the same merger.

In the following, this prediction will be tested by a comparison of Mayak with the closest of its relatives of which I have a sufficient knowledge, namely Mabaan. In Köhler's [1955] subgrouping of the Nilotic languages, Mabaan belongs to the Southern Burun branch of Burun and is thus assumed to be more closely related to Mayak than the Luo and the Nuer-Dinka languages are. As we shall see, a comparison of Mayak with Mabaan does indeed shed light on the vowel systems of both of these languages.

As mentioned in Andersen [1992:187f] and as documented in Andersen [in press a], Mabaan has 11 contrastive vowel qualities, including 7 monophthongs, /i, e, ε, a, Λ, ɔ, u/, and 4 diphthongs, /ie, iε, uΛ, ua/, and length is contrastive in all 11 vowel qualities. Unlike Mayak, Mabaan does not exhibit any vowel harmony, and the feature [ATR] is largely irrelevant to the description of its vowel system.

As demonstrated below, there are regular correspondences between the root vowels in Mayak and Mabaan. These correspondences are independent of vowel length, and a given root generally has the same vowel length in both languages.

Each vowel correspondence will be documented by means of six pairs of cognates. The examples have been selected in such a way that, as far as the attestation goes, half of the cited cognate pairs have a short root vowel and half of them a long root vowel. Note that I have chosen to write the long diphthongs in Mabaan with a double first component, so that for instance /ua/ is a short vowel and /uua/ a long vowel.

The cognate pairs cited below include nouns, verbs, and an adverb. Nouns are given in their citation form, and their morpheme boundaries are indicated. Plural noun forms are marked by “(pl.)” after their gloss. For verbs the form given is the root, and if the root does not occur on its own or has not been attested without a suffix, it is followed by a hyphen. That a given root is verbal is indicated by a specification of its transitivity after its gloss: “(tr.)” for transitive and “(intr.)” for intransitive.

Almost all of the cognate pairs also exhibit regular correspondences with respect to both the root-initial consonant and the root-final consonant, and exceptions are explicitly mentioned. Some root-initial consonants are the same in the two languages. The others exhibit the regular correspondences shown in (21), as seen from the point of view of Mayak. The root-final consonant correspondences are more complex, which is due to various phonological processes that are either synchronically operative or reflect earlier suffixes. An account of these correspondences is beyond the scope of the present article, but it should be mentioned that in noun roots a final obstruent in Mayak often corresponds to a homorganic nasal in the singular form of the noun in Mabaan.

(21)	Mayak	d	r	j	k	g
	Mabaan	d̥	j	ʃ, ɲ	k, c	g, ʃ

The presentation of the vowel correspondences takes the Mayak vowels as its point of departure. The non-high [-ATR] vowels will be examined first, then the [+ATR] vowels, and finally the high [-ATR] vowels. The low [-ATR] vowel /a/ corresponds to /a/ in Mabaan, as in (22). The mid [-ATR] vowels /e/ and /o/ cor-

(22)	Mayak	Mabaan	
a.	<i>maʃ</i>	<i>mar-</i>	‘suck’ (tr.)
b.	<i>pak-</i>	<i>pak-</i>	‘count’ (tr.)
c.	<i>bak-</i>	<i>bak-</i>	‘break’ (intr.)
d.	<i>jaaʃ</i>	<i>ʃâan-λ</i>	‘tree’
e.	<i>laak-ɲ</i>	<i>láak-k-λ</i>	‘urine’ (pl.)
f.	<i>?aak-an</i>	<i>?âak-ʃ-λ</i>	‘chicken’

respond to the diphthongs /ie/ and /ua/ in Mabaan, as in (23) and (24), respectively. The low [+ATR] vowel /ʌ/ mostly corresponds to /ʌ/ in Mabaan, as in (25).

	Mayak	Mabaan	
(23) a.	<i>gɛp</i>	<i>ʒiɛp-</i>	'beat' (tr.)
b.	<i>ʔɛl</i>	<i>ʔiél-ʌ</i>	'lower leg'
c.	<i>ʔɛʔ</i>	<i>ʔiét-ʌ</i>	'faeces' (pl.)
d.	<i>gɛɛl</i>	<i>ʒiiél-ʌ</i>	'lion'
e.	<i>bɛɛl-ɛʔ</i>	<i>biiiél-l-ʌ</i>	'cane'
f.	<i>nɛɛʔ</i>	<i>niiiét-</i>	'suck' (tr.)
(24) a.	<i>dɔk</i>	<i>qúʌŋ-ʌ</i>	'neck'
b.	<i>ʔɔŋ</i>	<i>ʔúʌŋ-ʌ</i>	'spear'
c.	<i>pɔʔ-</i>	<i>puʌʔ-</i>	'be good' (intr.)
d.	<i>gɔɔŋ</i>	<i>guuʌŋ-</i>	'scratch' (tr.)
e.	<i>dɔɔc</i>	<i>quuʌc-</i>	'put' (tr.)
f.	<i>ʔɔɔl-</i>	<i>ʔuuʌl-</i>	'sing' (intr.)
(25) a.	<i>ʔʌʔ</i>	<i>ʔʌn-ʌ</i>	'house'
b.	<i>ʔʌm</i>	<i>ʔʌm-ʌ</i>	'thigh'
c.	<i>wʌð-ʔ</i>	<i>wʌn-n-ʌ</i>	'buttock'
d.	<i>kʌʌl</i>	<i>kʌʌl-ʌ</i>	'hole (in the ground)'
e.	<i>ʒʌʌk</i>	<i>ʒʌʌk-ʌ</i>	'lice' (pl.)
f.	<i>mʌʌn</i>	<i>mʌʌn-g-ʌ</i>	'women' (pl.)

But in a few roots, /ʌ/ corresponds to /e/ in Mabaan, as in (26). This is the case when the root ends in an underlying /j/ in Mabaan, corresponding to /r/ in Mayak. In Mabaan, a root-final /j/ is deleted before a consonant-initial suffix, as in (26a-b), whereby a short root vowel is lengthened, as in (26a).

(26) a.	<i>wʌr-ʔ</i>	<i>wéɛ-n-ʌ</i>	'cow dung'
b.	<i>wʌʌr-in</i>	<i>wêɛ-n-ʌ</i>	'night'
c.	<i>bʌʌr-</i>	<i>be(e)j-</i>	'be long, be tall' (intr.) ¹⁶

The high [+ATR] vowels /i/ and /u/ correspond to the diphthongs /ie/ and /uʌ/ in Mabaan, as in (27) and (28), respectively.

¹⁶ It is not clear whether the root vowel of Mabaan *be(e)j-* is underlyingly short or long.

	Mayak	Mabaan	
(27) a.	<i>tɪd-ɬt</i>	<i>tjêṅ-n-λ</i>	‘witch-doctor’
b.	<i>wɪn-ɪc</i>	<i>wiêṅ-c-λ</i>	‘pot type’
c.	<i>tɪn-ɪt</i>	<i>tjén-n-λ</i>	‘breast’
d.	<i>riic</i>	<i>jiiê-k-λ</i>	‘rats’ (pl.)
e.	<i>riit</i>	<i>jiién-λ</i>	‘smoke’
f.	<i>pɪi</i>	<i>piiê-g-λ</i>	‘water’ (pl.)
(28) a.	<i>tuj-ɪc</i>	<i>tûɬɲ-ɲ-λ</i>	‘granary’
b.	<i>run</i>	<i>jûɬɲ-n-λ</i>	‘year’
c.	<i>ʔuŋ</i>	<i>ʔúɬŋ-λ</i>	‘knee’
d.	<i>puk-</i>	<i>puɬk-</i>	‘pour’ (tr.)
e.	<i>kul</i>	<i>kúɬɬ-λ</i>	‘wart-hog’
f.	<i>lum-anɪt</i>	<i>lûuɬm-λ</i>	‘grass’

Finally, we come to the high [-ATR] vowels /ɪ/ and /ʊ/ in *Mayak*. Both of these regularly correspond to two different vowels in *Mabaan*. The front vowel /ɪ/ in *Mayak* corresponds to the high and mid front monophthongs /i/ and /e/ in *Mabaan*, as in (29) and (30), respectively. Similarly, the back vowel /ʊ/ in *Mayak* corresponds to the high and mid back monophthongs /u/ and /ɔ/ in *Mabaan*, as in (31) and (32), respectively.¹⁷

	Mayak	Mabaan	
(29) a.	<i>rɪm-ɬt</i>	<i>ʃim-m-λ</i>	‘blood’
b.	<i>ʔɪc</i>	<i>ʔiɲ-λ</i>	‘penis’
c.	<i>bɪl</i>	<i>bíl-λ</i>	‘iron’
d.	<i>wɪl</i>	<i>wiil-λ</i>	‘tail’
e.	<i>dɪm-ɛt</i>	<i>qiiin-λ</i>	‘bird’
f.	<i>juɪt</i>	<i>ʃiin-λ</i>	‘scorpion’
(30) a.	<i>gɪm</i>	<i>gêṅ-g-λ</i>	‘cheeks’ (pl.)
b.	<i>wɪl-ɔl</i>	<i>wêl-l-λ</i>	‘guest’
c.	<i>ʔɪk</i>	<i>ʔêṅŋ-λ</i>	‘female’
d.	<i>kɪɪt</i>	<i>kêṅn-λ</i>	‘guinea-fowl’
e.	<i>ʔɪr</i>	<i>ʔêṅ-n-λ</i>	‘thief’
f.	<i>tɪm-ɔk</i>	<i>têṅn-ɔ</i>	‘yesterday’ (adv.)

¹⁷ The pairs of cognates for ‘thorn’ in (31d) and ‘my friend’ in (31f) are irregular with respect to the root-final consonant.

- (31) a. *tuk* *túk-á* ‘mouth’
 b. *ʔul-* *ʔul-* ‘be black’ (intr.)
 c. *kum-aʔ* *kûm-m-à* ‘egg’
 d. *kuuk* *kûu-n-à* ‘thorn’
 e. *kuuʔ* *kuuʔ-* ‘blow at’ (tr.)
 f. *muuʔ-a* *múu-k-ó* ‘my friend’
- (32) a. *buk* *bóŋ-ŋ-á* ‘arm’
 b. *ruk* *jɔk-* ‘kick’ (tr.)
 c. *pur* *pɔj-á* ‘path’
 d. *guuk* *gɔɔŋ-à* ‘dog’
 e. *ʔul-ε* *ʔɔɔl-é* ‘his/her/its child’
 f. *ruud-a* *jɔɔr-ó* ‘my grandfather’

Table 12 summarises the regular root vowel correspondences between cognates in Mayak and Mabaan as seen from the point of view of Mayak. Each vowel in Mabaan has one and only one counterpart in Mayak, but each of the Mayak vowels /i/, /u/, and /ʌ/ has two counterparts in Mabaan. All correspondences are independent of vowel length.

Table 12. Regular root vowel correspondences between Mayak and Mabaan.

	Mayak [-ATR]						Mayak [+ATR]				
Mayak	i	ε	a	ɔ	u		i	ʌ	u		
Mabaan	i	ε	iε	a	ua	u	ɔ	ie	ʌ	e	uʌ

The two Mabaan counterparts of Mayak /ʌ/ have complementary distribution and thus constitute a split. By contrast, the two Mabaan counterparts of Mayak /i/ have identical distribution, and so do the two Mabaan counterparts of Mayak /u/. Hence, the Mayak vowels /i/ and /ε/ must each go back to two different vowels, as also hypothesised on Mayak-internal grounds in section 5 above.

7. Vowel changes in Mabaan and Mayak

Although the vowel system of Mabaan is rather different from that of Mayak and does not use the feature [ATR], there is strong evidence that it goes back to a system in which [ATR] played a crucial role. In Andersen [in press a], the vowel system of Mabaan was compared with those of two other Western Nilotic languages belonging to different main branches of Western Nilotic, namely Pãri from the Luo branch and Dinka from the Nuer-Dinka branch. Based on facts of vowel quality alternation, it was argued that all three languages go back to a vowel system with

Table 13. Reconstructed Proto-Western Nilotic vowel system.

[-ATR]		[+ATR]	
short	long	short	long
ɪ	ɪɪ	i	ii
ɛ	ɛɛ	e	ee
a	aa	ʌ	ʌʌ
ɔ	ɔɔ	o	oo
ʊ	ʊʊ	u	uu

five [-ATR] and five [+ATR] monophthongs and two lengths. This vowel system, which by definition belonged to Proto-Western Nilotic (PWN), was completely symmetrical, as shown in Table 13.

The changes that were hypothesised to have occurred in Mabaan, taking it from the Proto-Western Nilotic stage to its present stage, are shown in (33). The chronological order of these four changes can be determined to the following extent: The diphthongization of */i, u/ antedates the raising of */ɪ, ʊ/, and the diphthongization of */e, ɔ/ antedates the lowering of */e, o/. Given this set of changes, the *Mayak*-Mabaan vowel correspondences summarised in Table 12 above can now be depicted from the point of view of Proto-Western Nilotic as in Table 14.

- (33) a. *i, *u > ie, uʌ Diphthongization of high [+ATR] vowels
 b. *ɛ, *ɔ > ie, ua Diphthongization of mid [-ATR] vowels
 c. *e, *o > ɛ, ɔ Lowering of mid [+ATR] vowels
 d. *ɪ, *ʊ > i, u Raising of high [-ATR] vowels

Table 14. Regular *Mayak*-Mabaan vowel correspondences seen from the point of view of Proto-Western Nilotic.

	PWN [-ATR]					PWN [+ATR]				
PWN	*ɪ	*ɛ	*a	*ɔ	*ʊ	*i	*e	*ʌ	*o	*u
<i>Mayak</i>	ɪ	ɛ	a	ɔ	ʊ	i	ɪ	ʌ	ʊ	u
Mabaan	i	ie	a	ua	u	ie	ɛ	ʌ, e	ɔ	uʌ

On the hypothesis embodied in Table 14, the Proto-Western Nilotic mid [+ATR] vowels */e, o/ have changed to /ɪ, ʊ/ in *Mayak*, exactly as hypothesised on *Mayak*-internal grounds in section 5 above, while the other Proto-Western Nilotic

vowels have remained unchanged in Mayak. Hence, the two vowels that merged into Mayak /i/ were [-ATR] */i/ and [+ATR] */e/, and the two vowels that merged into Mayak /u/ were [-ATR] */u/ and [+ATR] */o/.

As mentioned in section 2.3 above, the Mayak word *ḍooc* 'five' is aberrant in having the vowel quality /o/ in spite of its monosyllabicity. It is cognate with its Mabaan counterpart *ḍḥḥjḥ* 'five', and as indicated in (33) and in Table 14, the root vowel /ḥ/ of the latter goes back to */o/. So Mayak *ḍooc* 'five' escaped the regular sound change *o > u.

A proper demonstration that the Proto-Western Nilotic reconstructions are correct is beyond the scope of this article. But a preliminary demonstration can be made by providing examples of cognate words from all main branches of Western Nilotic. For this purpose, Pāri is taken as representative of the Luo languages, and the Agar dialect of Dinka is taken as representative of the Nuer-Dinka languages. Thus, Tables 15-16 show one set of cognate nouns in Mayak, Mabaan, Pāri, and Dinka for each of the twenty vowels reconstructed for Proto-Western Nilotic, five short and five long [-ATR] vowels and five short and five long [+ATR] vowels.¹⁸ These sets exhibit regular root vowel correspondences, but a valid demonstration of this regularity would have to take into account special developments in Dinka (cf. Andersen [1993]). Crucially, however, the vowels that have been reconstructed as [-ATR] vowels in Proto-Western Nilotic are [-ATR] in Pāri and [-breathy] in Dinka, and conversely, vowels that have been reconstructed as [+ATR] vowels in Proto-Western Nilotic are [+ATR] in Pāri and [+breathy] in Dinka. Pāri and Dinka words in brackets are irregular with respect to vowel height (Pāri *ʃḥ*) or vowel length (Dinka *ʃḥ*), but not with respect to the features [ATR] or [breathy].

8. Conclusion

Phonetically, Mayak has the same vowel inventory as that reconstructed for Proto-Western Nilotic, namely a 5 x 2 x 2 system, i.e., a system with five vowel positions, the binary feature [ATR], and two lengths. However, the [+ATR] qualities [e] and [o] in Mayak are conditional variants of the [-ATR] qualities /ε/ and /ɔ/, respectively; so phonemically, Mayak has only three [+ATR] qualities. Original, that is, Proto-Western Nilotic, */e/ and */o/ have merged with the high [-ATR] vowels /i/ and /u/, respectively.¹⁹

The change */e, o/ > /i, u/ appears to be an unusual one in languages with a vowel system with the feature [ATR]. In his overview of the Kwa languages, many of which also have vowel harmony based on [ATR], Stewart [1971: 198ff] found that when vowels are eliminated by merger, the first to be eliminated are

¹⁸ In the transcription of Pāri, [] is an extra low tone, [ˆ] is a tone falling from high to extra low, and [˘˘] is a tone falling from low to extra low.

¹⁹ It is also noteworthy that Mayak has retained the purely monophthongal system of Proto-Western Nilotic, while in the Luo languages and in Mabaan some original monophthongs have become diphthongs [cf. Andersen 1989 and in press a].

Table 15. Cognate sets exemplifying regular root vowel correspondences among four Western Nilotic languages and reflecting the ten [-ATR] vowels in Proto-Western Nilotic.

PWN	Mayak	Mabaan	Päri	Dinka	
*ɪ	<i>rim-at</i>	<i>ʃim-m-λ</i>	<i>rimó</i>	<i>rjéem</i>	‘blood’
*ɪɪ	<i>miiŋ</i>	<i>miiŋ-λ</i>	<i>miiŋ</i>	<i>m̄iiŋ</i>	‘deaf’
*ɛ	<i>ʔeɬ</i>	<i>ʔiét-λ</i>	<i>cèèɬ</i>	<i>cèɬ</i>	‘faeces’ (pl.)
*ɛɛ	<i>leec</i>	<i>liiêp-λ</i>	<i>lièc</i>	—	‘elephant’
*a	<i>kac</i>	<i>káj-λ</i>	<i>kwàc</i>	<i>kwác</i>	‘leopard’
*aa	<i>maac</i>	<i>mâap-λ</i>	<i>màac</i>	<i>m̄aac</i>	‘fire’
*ɔ	<i>tɔŋ</i>	<i>túap-λ</i>	<i>(tɔŋ)</i>	<i>t̄ɔŋ</i>	‘spear’
*ɔɔ	<i>ŋɔɔl</i>	<i>ŋúual-λ</i>	<i>ŋòɔl</i>	<i>ŋ̄ɔɔl</i>	‘limping’
*u	<i>tok</i>	<i>túk-λ</i>	<i>ɖók</i>	<i>t̄òk</i>	‘mouth’
*uu	<i>kuuk</i>	<i>kúu-n-λ</i>	<i>kúud-ò</i>	<i>koòow</i>	‘thorn’

Table 16. Cognate sets exemplifying regular root vowel correspondences among four Western Nilotic languages and reflecting the ten [+ATR] vowels in Proto-Western Nilotic.

PWN	Mayak	Mabaan	Päri	Dinka	
*i	<i>kic</i>	<i>cíep-λ</i>	<i>kíc</i>	<i>cjéec</i>	‘honey, bee’
*ii	<i>pii</i>	<i>píiê-g-λ</i>	<i>píi</i>	<i>p̄iiw</i>	‘water’ (pl.)
*e	<i>wil-ɔl</i>	<i>wêl-l-λ</i>	<i>wéel-ó</i>	—	‘guest’
*ee	<i>liij-in</i>	<i>líeeg-g-λ</i>	<i>liéc</i>	—	‘elephants’ (pl.)
*ʌ	<i>ŋʌc</i>	<i>ŋáj-λ</i>	<i>ŋʌc</i>	—	‘back’
*ʌʌ	<i>mʌʌn</i>	<i>mʌʌn-g-λ</i>	<i>mʌʌn</i>	—	‘women’ (pl.)
*o	—	<i>ʒól-λ</i>	—	<i>ról</i>	‘gullet’
*oo	<i>gouk</i>	<i>gôɔŋ-λ</i>	<i>guòk</i>	<i>(ʒo)</i>	‘dog’
*u	<i>ʒum</i>	<i>ʒúʌm-m-λ</i>	<i>ʒúm</i>	<i>w̄um</i>	‘nose’; ‘nostril’ (Mab.)
*uu	<i>ʒuud-u</i>	—	<i>ʒùud-ò</i>	<i>w̄uuf</i>	‘ostrich’

normally the low [+ATR] vowel, which he symbolised [ɜ], and the high [-ATR] vowels [ɪ] and [ʊ]. For the latter, Stewart suggested that there are three common ways of elimination: [ɪ] and [ʊ] merge with either (i) the corresponding [+ATR] vowels [i] and [u], (ii) the mid [-ATR] vowels [ɛ] and [ɔ], or (iii) the mid [+ATR]

vowels [e] and [o].²⁰ The change */e, o/ > /i, u/ in Mayak does not conform to these tendencies, since it is the reverse of the third possibility mentioned by Stewart. But Stewart [1971: 205] also mentioned an example of this change in a Kwa language, namely in the Asante dialect of Akan. Moreover, a merger of */e/ with /i/ has also taken place in the Central Sudanic language Lendu, as demonstrated by Kutsch Lojenga [1989]. So the change */e, o/ > /i, u/ in Mayak is not unparalleled in other language families.

The elimination of /e, o/ rather than /i, u/ is also found in the Moru-Madi subfamily of Central Sudanic. The Moru-Madi languages must originally have had a system similar to that of Proto-Western Nilotic, except that there was no length contrast (cf. Andersen [1986c]). [e] and [o] still have full phonemic status in Madi (cf. Andersen [1986b]) and in Lulubo (cf. Andersen [1987]), but in Moru their phonemic status is marginal (cf. Andersen [1986a]), and in Lugbara they are totally non-phonemic, being allophones of /ɛ/ and /ɔ/, just like in Mayak. But in Lugbara, as demonstrated in Andersen [1986c], */e, o/ merged with /ɛ, ɔ/, so here */e, o/ took a different path than in Mayak.

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²⁰ Cf. also Hall and Creider's [1998] overview of changes in the Nilotic family.

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IS THERE A PASSIVE IN DHOLUO?

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This article presents an analysis of a particular passive-like syntactic construction in Dholuo, a Nilotic language spoken in parts of Kenya, Uganda, and Tanzania. While the construction analyzed resembles the passive construction in English in which the fronted patient/theme is the subject NP, the analysis shows that this construction is not a true passive in Dholuo, but rather a pseudo-passive. The peculiarity of the Dholuo pseudo-passive is that the fronted patient is not the NP subject of the construction; rather, it is a preposed object that is adjoined to IP. What distinguishes this construction from “classic” passive constructions is that the preposed object does not control subject verb agreement.

1. Introduction

Dholuo, also known as Luo, is a Western Nilotic language spoken by approximately three million people in south-western Kenya and north central Tanzania east of Lake Victoria. The particular dialect discussed in this paper is spoken in Nyanza Province, Kenya. Closely related languages include Acholi and Lango, spoken in Uganda. Dholuo is one of the four largest languages in Kenya and is the only non-Bantu language among them.

This paper presents an analysis of a particular syntactic construction in Dholuo that looks superficially like a passive. In (1a), for example, *Chàlí*, the patient, precedes the verb, and *Dòrínà*, the agent, follows the verb in a prepositional phrase, *gi Dòrínà* ‘by Dorina’. However, I propose that this construction is not a true passive.

- (1) a. *Chàlí n-ò-gò gi Dòrínà.*
Chali PST-EXPL-beat by Dorina
‘Chali was beaten by Dorina.’
- b. [IPChàlíj [IP pro_i n-òigò t_j gi Dòrínà]]

In the analysis developed here, I argue that the patient *Chàlí* in (1) is not a subject, but a preposed object that is adjoined to IP, following the X-bar conventions of the Government and Binding framework [Chomsky 1995]. The fact that the fronted NP is adjoined to the Specifier of IP, and not to COMP or Specifier of CP, and remains within the highest IP, gives this construction its passive-like flavor and contributes to the surface similarity of this pseudo-passive with real passives. That is, the fronted NP appears to remain within IP, a property of subject NPs. It remains to the left of other moved elements, such as topicalized or clefted constructions.

Under the analysis presented here, in which (1a) is bracketed as in (1b), there must be a null pronominal subject coindexed with the subject agreement prefix on the verb. The passive agent must be base-generated as an adjoined PP. The preposed patient in this construction does not occur in subject position; that is, it does not move into an empty NP position in Specifier of IP. Evidence for this analysis comes from subject-verb agreement, object cliticization, case and tone assignment in Dholuo.

The paper is organized into the following sections. Section 2 illustrates some basic facts about Luo. Section 3 considers case assignment in Dholuo as compared to English passive sentences. Section 4 gives evidence from object clitics that supports the claim for a pseudo-passive construction in Dholuo. Section 5 shows the interaction of topicalization and NP objects with object clitics, providing further evidence that supports the analysis that the fronted NP in examples like (1) remains within the IP. The final section concludes; Dholuo has a pseudo-passive in which the fronted NP is not the subject of the sentence.

2. Word order in active and pseudo-passive sentences

In Dholuo, word order in active sentences is typically SVO, as shown in (2). Examples (2a) and (2c) illustrate active sentences with both agent and patient present; in both, the agent *Dòrínà* precedes the verb and the patient, *Chàlí*, follows. In (2b), there is a null pronominal subject coindexed with agreement morphology on the verb, which shows that Dholuo is a null subject language. In (2c) the object is one of a set of pronouns. Such pronouns are clitics; that is, they must immediately follow the verb. Although there is a *gi*-phrase in (2d) and (2e), only an active reading is possible. And although the *gi*-phrase ('with X') must be interpreted as an instrument (not an agent), an instrumental interpretation is not possible for (2d) for pragmatic and semantic reasons. Rather, it can mean that Chali was beaten alongside Dorina because the agreement on the verb in (2d) and (2e) is the same as the agreement in (2a-c); the null subject is coindexed with the third person singular prefix *ó*. Example (2f) shows that a prepositional phrase (here *kòd Dòrínà*) can occur after the verb. Such a PP is interpreted as a comitative; that is, it is treated as if conjoined to

the preceding object, including a pronoun clitic. Note that in (2d-f) the pronominal clitics *yà/yì* ‘me/you’ would also be possible in place of *yè*.

- (2) a. *Dórinà n-ó-gò Chàlí.*
Dorina PST-3S-beat Chali
‘Dorina beat Chali.’
- b. *n-ó-gò Chàlí.*
PST-3S-beat Chàlí
‘s/he beat Chali.’
- c. *Dórinà n-ó-gò (*nyoro) yè.*
Dorina PST-beat (yesterday) 3S
‘Dorina beat him/her (*yesterday).’
- d. *n-ó-gò Chàlí/yè gi Dórinà.*
PST-3S-beat Chàlí/him with Dòrinà
*S/he beat Chali//him/her with Dorina [instrumental reading]
‘S/he beat Chali//him/her with Dorina.’ [comitative reading]
- e. *n-ó-gò Chàlí/yè gi kédè.*
PST-3S-beat Chali/him/her with stick
‘S/he beat Chali//him/her with a stick’
- f. *n-ó-gò Chàlí/yè kòd Dórinà.*
PST-3S-beat Chali//him/her and Dòrinà
‘S/he beat Chali//him/her and Dorina.’

As noted in the introduction, the focus of this paper is the superficially passive construction shown in (1) and repeated below in (3a). However, close examination suggests that it is not, in fact, a true passive, but rather what I refer to throughout the rest of the paper as a pseudo-passive. This pseudo-passive construction comprises a thematic patient, and, optionally, an agent in an adjunct PP (*gi Dòrinà*).¹ The thematic patient is an NP (*Chàlí* in (3a-b, d)). While the thematic patient precedes the verb in (3a), as in a proto-typical passive, it follows the verb in (3b) and (3d). That is, the order of constituents in (3d-e) is *V-O-by Agent*. When the patient is a pronominal clitic, the sentence can still have a passive reading, as in (3c) and (3e), and can occur with an agent in a *gi*-phrase, as in (3e). In all of these examples, the agreement prefix on the verb is

¹ See Dubinsky & Nzwanga’s [1994] argument on impersonal transitives in a Bantu language spoken in Zaire.

glossed as EXPL (for expletive agreement). This agreement pattern is discussed below.

- (3) a. *Chàlí n-ò-gò* *gi Dòrínà.*
 Chali PST-EXPL-beat by Dorina
 ‘Chali was beaten by Dorina.’
- b. *n-ò-gò* *Chàlí.*
 PST-EXPL-beat Chali
 ‘Chali was beaten.’
- c. *n-ò-gò* *yè.*
 PST-EXPL-beat s/he
 ‘S.he/me/you were beaten.’
- d. *n-ò-gò* *Chàlí gi Dòrínà.*
 PST-EXPL-beat Chali by Dorina
 ‘Chali was beaten by Dorina.’
- e. *n-ò-gò* *yè gi Dòrínà.*
 PST-EXPL-beat s/he by Dorina
 ‘S/he was beaten by Dorina.’

A comparison of (2a-c) with (3a-c) shows that when the sentence has a passive reading, the agreement prefix on the verb has a low tone, *ò*, not a high tone, *ó*. This feature of agreement is significant in the analysis of the pseudo-passive construction in Dholuo because it determines the interpretation of voice (as active or passive). I refer to this form of agreement on the verb as “expletive” agreement because the form of the agreement does not vary with respect to the subject/agent (or the object/patient). This interaction of tone and INFL is discussed more in the next section.

3. Comparing Dholuo and English: Subject-verb agreement and tone

At first glance, (3a) resembles the English-type passive construction in which the fronted patient/theme is the subject NP, as in (4). Within GB-analyses, case assignment motivates movement in English. The English passive verb neither assigns an external theta-role to an agent NP nor accusative case to its object NPs [see Burzio 1986, Chomsky 1981, Chomsky and Lasnik 1977, Goodall 1993, Emonds 1970, Aoun 1979, Grieve and Wales 1973, Baltin 1978, Belletti 1988, Belletti, and Rizzi 1981, and Rothstein 1992]. For example, in (4a) the passive verb *beaten* fails to assign accusative case to its internal argument *Chàlí*;

rather, *Chàlí* is assigned nominative case by INFL after movement. In addition to receiving nominative Case from INFL, passive subjects in English-type languages also control agreement on finite verbs in INFL. For example, in (4b) *were* agrees with *the men*.

- (4) a. *Chali was beaten by Dorina.*
 [IP Chali_i [I-bar was_i beaten e_i [pp by Dorina]]
 [*Chali*_i ← Case_{NOM} INFL...*beaten* θ-role → e_i
 [by θ-role/Case_{OBJ} → **Dorina**]]
- b. *The men were beaten by Dorina.*
 [IP The men_i [I-bar were_i beaten e_i [pp by Dorina]]
 [*the men*_i ← Case_{NOM} INFL...*beaten* θ-role → e_i
 [by θ-role/Case_{OBJ} → **Dorina**]]

Evidence from how subject-verb agreement in Dholuo interacts with tone shows that the construction in question involves object fronting rather than passivization. First, in active transitive sentences, the subject-verb agreement prefix has a high tone, as pointed out previously in the discussion of (2), not the low tone expletive prefix of the construction illustrated in (3). If the tone on the agreement morpheme in a sentence intended to be interpreted as active is low, the sentence is ungrammatical. Compare (5), in which the verb prefix has a high tone as in an active sentence, with (6), in which the verb prefix is a low tone.

- (5) *Chàlí n-ó-gò Dòrínà.*
 Chali PST-3S-beat Dorina
 ‘Chali hit Dorina.’
- (6) **Chàlí n-ò-gò Dòrínà*
 Chàlí PST-EXPL-beat Dorina
 (Chali beat Dorina; Chali, Dorina was beaten)

In motivating passive in English-type languages, thematic role assignment also interacts with case assignment. In the analysis of the English passive, Baker, Johnson, and Roberts [1989] claim that the morpheme *-en*, as in (4) above, is an argument that is base generated under INFL and is in a theta-marked position at D-structure (see also the discussion in Dryer [1985]). Others (cf. Goodall [1993] and Grimshaw [1990, 1979]) have shown that it is not possible to assign an appropriate thematic role to an NP following the verb. Example (6) above shows post-verbal *Dòrínà* cannot receive a thematic role if an NP precedes a verb—here *Chàlí*—with a low tone agreement prefix. This means that verbs with expletive agreement prefixes no longer assign an agent thematic role; as in

English, the agent receives both thematic role and case from the preposition *gi* 'by'.

Similar facts obtain for impersonal passives with fronted plural NPs (as in (7a)), in which the verb also occurs with the low-toned agreement marker like the pseudo-passive. Compare the active (7b) with passive (7a); a high tone occurs on the verb agreement prefix in (7b). In addition, if the agent is non-third person, as in (7c), the verb agrees with the agent in the active reading. In (7c), the verb agrees with a null first person singular pronoun. Compare (7c) with its pseudo-passive counterpart in (7d). In such examples, the verb does not agree with the non-third person agent, which occurs in a *gi* phrase. Note that an agent NP in a *gi*-phrase (here *an* 'me') cannot control agreement on the verb, illustrated by the ungrammatical example in (7e). This means that the pseudo-passive construction in Dholuo cannot be argued to be an active construction with simple object fronting.

- (7) a. *Chúò n-ò-gò* (gi *Dòrínà*).
 men PST-EXPL-beat (by Dorina)
 'The men were beaten (by Dorina).'
- b. *Dòrínà n-ó-gò* *Chúò*.
Dòrínà PST-3S-beat men
 'Dorina beat the men.'
- c. *n-á-gò* *Dòrínà*.
 PST-1S-beat Dorina
 'I beat Dorina.'
- d. *Dòrínà n-ò-gò* *gi àn*.
 Dorina PST-EXPL-beat by me
 'Dorina was beaten by me.'
- e. **Dòrínà n-á-gò* *gi àn*
 Dorina PST-1S-beat by me
 'Dorina, I beat by me'

Thus, evidence from subject-verb agreement shows that the when a low-toned *-ò-* prefix occurs on the verb, no overt NP controls agreement, neither the proposed NP nor the NP in the *gi* phrase. Additional evidence that the construction in question is not a grammatical relation-changing passive in which an NP moves into an Argument-position and that it is an impersonal passive also comes from the interaction of subject-verb agreement with pronominal object cliticization, the subject of the next section.

4. Object Clitics

Object clitics also support a fronting and adjunction analysis versus a passive analysis for the Dholuo pseudo-passive construction. Active transitive verbs occur with pronominal object clitics immediately following the verb, as noted previously and as illustrated in (8b). In active sentences, a post-verbal object clitic—for example *-yè*, *-yì*, or *-yà* ‘him/her, you, me’, respectively—can occur in place of an NP such as *Chàlí* (8a), as shown in (8b).

- (8) a. *Dòrínà n-ó-gò Chàlí.*
 Dorina PST-3S-beat Chali
 ‘Dorina beat Chali.’
- b. *Dòrínà n-ó-gò-yè/yì/yà.*
 Dorina PST-3S-beat-3S/2S/1S
 ‘Dorina beat him/her/it//you//me.’

Post-verbal clitics expressing the internal object (patients/themes) of verbs also occur in the impersonal passive construction in Dholuo. The patient controls object cliticization, as in (9b). Examples (9b-c) illustrate that subject NPs only control subject verb agreement, not object cliticization; in these examples a non-third person subject controls agreement. This contrasts with the “passive” reading of the sentence in (9a); the sentences in (9b) and (9c) with non-third person subject-verb agreement have only active readings (with generic objects). That is, the grammatical subject is an agent NP, not a patient. In (9a), however, the NP interpreted as the patient controls object cliticization, and not subject-verb agreement.

- (9) a. *n-ò-gò-yè/yì/yà.*
 PST-3S-beat-3S/2S/1S
 ‘She/he/it//you//I was/were beaten.’
- b. *n-á-gó chò.*
 PST-1S-beat something
 ‘I was beating/beat (something).’
- c. *n-í-gó chò.*
 PST-2S-beat something
 ‘You were beating/beat (something).’

The examples in (8) and (9) also illustrate a second aspect of Dholuo morpho-syntax already noted; that is, Dholuo is a null pronominal language. The object clitic co-occurs with a null patient (compare (8b) and (9a)) and the

subject agreement prefix can co-occur with a null agent (compare (9b) and (9c)). In addition to clitic and agreement-licensed null pronominals, Dholuo also has overt pronouns. These are emphatic pronouns which can co-occur with clitic pronominals. The distribution of fronted pronominals, clitics, and subject-verb agreement provides additional evidence for the fronting analysis of the impersonal passive in Dholuo.

4.1 Clitics vs. pronouns. In Dholuo, post-verbal pronominal objects only occur as clitics, not free-standing pronouns. Compare the grammatical (10a) with the ungrammatical (10b). In (10a), a first person object clitic *-yà* ‘me’ occurs alone. In the ungrammatical (10b), the free-standing pronoun *àn* ‘me, myself’ occurs. The free-standing pronoun *àn* cannot occur in post-verbal position, even if it co-occurs with an agreeing object clitic (*-yà*), as in (10c). This means that object clitics and post-verbal pronouns are in complementary distribution. Likewise, post-verbal NPs cannot occur with an object clitic, as illustrated in (10d), where *Chàlí* co-occurs with the third person singular object clitic *-yè*.

- (10) a. *Dòrínà n-ó-gó-yà*.
Dorina PST-3S-beat-1S
‘Dorina beat me.’
- b. **Dòrínà n-ó-gó àn*
Dorina PST-3S-beat 1S
(??‘Dorina beat myself’)
- c. **Dòrínà n-ó-gó-yà_i àn_i*
Dorina PST-3S-beat 1S
(??‘Dorina beat myself’)
- d. **Dòrínà n-ó-gó-yè_i Chálij*
Dorina PST-3S-beat-3S Chali
(‘Dorina beat him_i Chali_i’)

Although independent, free pronouns cannot occur post-verbally, such pronouns can occur pre-verbally. In (11), for example, an optional first person pronoun occurs before the verb. In this example, the pronoun agrees with the subject-agreement on the verb. Note that the tone on the verb agreement morpheme is high; this is an active sentence, with an emphatic subject reading.

- (11) (*ân*) *n-á-gó-yè*.
 1S PST-1S-beat-3S
 ‘Me, I beat him.’

Example (11) contrasts with (12a), in which *ân* ‘I, me’ is pre-verbal, but it fails to control subject verb agreement. However, in this example, it does control obligatory object cliticization of *-yà* on the verb. Compare the grammatical (12a) with the ungrammatical (12b) and (12c). In (12b), the independent pronoun *an* occurs preverbally without the object agreement clitic *-ya*, and in (12c), the object clitic *-yè* ‘s/he’ which occurs does not agree with the preverbal pronoun *ân* ‘me’.

- (12) a. *ân n-ò-gò-yà* (*gi Dòrínà*).
 I/me PST-EXPL-beat-1S (by Dorina)
 ‘I was beaten (by Dorina).’
- b. **ân n-ò-gò* (*gi Dòrínà*)
 I/me PST-EXPL-beat-1S (by Dorina)
 (‘I was beaten (by Dorina)’)’
- c. **ân n-ò-gò-yè*
 I/me PST-EXPL-beat-3S
 (‘I was beaten him/her’)

These facts regarding restrictions on the distribution of pronouns suggest that pronominals in Dholuo are emphatic. They are restricted to discourse-emphatic positions—for example, Topic position—and are adjoined to the beginning of the sentence. In turn, the co-occurrence restrictions of these emphatic pronominals, subject-verb agreement, and object clitics again suggest that the fronted NP in pseudo-passives is not a subject and the construction in question is not a true passive.

4.2 Object clitics with coreferential pronouns vs. NP fronting. As noted above, a pre-verbal pronoun can occur with a coreferential subject agreement prefix, as in (11), or a post-verbal object clitic, as in (12a). The ability of object clitics to occur with fronted pronominals contrasts with their inability to occur with fronted NPs, as shown in (13a), in which a fronted nominal *Châlí* cannot co-occur with postverbal clitic *yè*. However, if a fronted nominal *Châlí* also occurs with a preverbal discourse emphatic pronominal *en*, as in (13b), it can also occur with a post-verbal clitic *yè*, as in (13b). Compare (13a) and (13b). In both of these examples, the agreement prefix is the low-toned expletive marker. Note that if the tone were high in (13c), it would be

ungrammatical because *Chàlí* would be assigned both the patient role (agreeing with the post-verbal clitic *yè*) and agent role (agreeing with the high-toned subject prefix *ó*).

- (13) a. **Chàlí n-ò-gò-yè* (*gi Dòrínà*)
 Chali PST-EXPL-beat-3S (by Dorina)
 ‘Chali was beaten by Dorina’
- b. *Chàlí en n-ó-gó-yè* (*gi Dòrínà*).
 Chali he PST-EXPL-beat-3S (by Dorina)
 ‘Chali, he was beaten by Dorina.’
- c. **Chàlí (en) n-ò-gò-yè* *gi Dòrínà*
 Chali (he) PST-3S-beat-3S by Dorina
 ‘Chali (he) beat him by Dorina’

In sum, the facts regarding object cliticization and overt pronominals support the fronting versus passive analysis. Object clitics may occur by themselves or they may co-occur with overt pronouns. When overt pronouns co-occur with object clitics, they may not control subject-verb agreement. Overt pronouns occur only preverbally, not postverbally.

5. Identifying the fronted NP

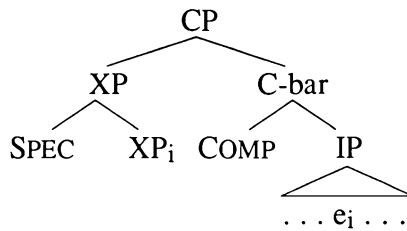
So what is the Dholuo pseudo-passive construction? While it resembles an indefinite subject construction, it is not one. First, the agent can be provided in a PP as has been illustrated throughout this paper. Second, the pseudo-passive construction occurs alongside a clear indefinite subject construction in Dholuo in which the implied subject is always third person plural *gi*. Compare the indefinite subject construction illustrated in (14a) with the comparable pseudo-passive in (14b-c). Only in (14b-c) is a PP with an agent possible. In addition, in (14b-c), the verb does not agree with *ràbúòndé* ‘potatoes’ (or the agent PP *gi mòn* ‘by the women’).

- (14) a. *Né-gí-tédò ràbúòndè kàmà* (**gi mòn*).
 PST-3P-cook potatoes like this (*by women)
 ‘They cooked potatoes like this (*by the women).’
- b. *Ràbúòndè n-ò-tèdí kàmà* (*gi mòn*).
 potatoes PST-EXPL-cook like this (by women)
 ‘The potatoes were cooked like this (by the women).’

- c. *n-ò-tèdí ràbúòndè kàmà (gi mòn).*
 PST-EXPL-cook potatoes like this (by women)
 ‘the potatoes were cooked like this (by the women).’

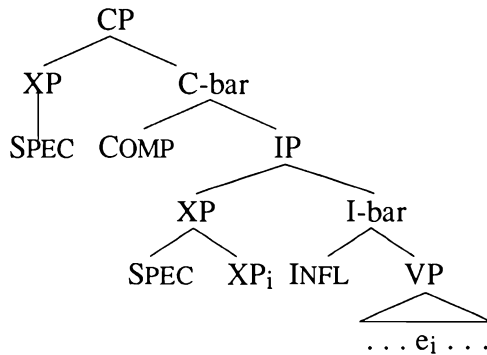
Thus far I have demonstrated that the pseudo-passive construction is not a true passive. The fronted NP does not control subject-verb agreement. If the fronted NP is a pronoun, it must co-occur with an object clitic on the verb. While the verb has agreement morphology in INFL, the form is different from other agreement prefixes. If this construction is neither a real passive nor an impersonal active construction, as in (14a), what is it? One possible analysis is that the construction in question involves topicalization. The simplest analysis would be a fronted NP outside of IP and adjoined to COMP, as in Figure 1.

Figure 1. XP Adjoined to Specifier of COMP
 (Topicalization, WH-movement)



[CP [XP ... XP_i] [C-bar [COMP] [IP ... e_i ...] C-bar] CP]

Figure 2. XP Adjoined to Specifier of INFL (Pseudo-Passive)



[CP [XP] [C-bar [COMP] [IP [XP ... XP_i] [I-bar [INFL] [VP ... e_i ...] I-bar] IP] C-bar] CP]

However, I propose that the NP fronting in constructions like (2a) is not like other movement to Specifier of COMP, such as Topicalization and WH-movement (see Takami and Kamio [1996]). Instead, I propose that the fronted NP is still within IP, as in Figure 2, and is adjoined to Specifier of INFL. Evidence from topicalization and WH-movement support this analysis.

5.1 Evidence from topicalization. What is the evidence that the moved NP is within the IP and not adjoined to Specifier of CP? Some evidence comes from topicalization. In topicalized intransitive constructions, an overt pronoun co-occurs with the subject NP. Both the overt nominal NP and pronominal agree with the verb, as in (15) in which *Chàlí* controls subject-verb agreement and can co-occur with the emphatic pronoun *en*.

- (15) *Chàlí (èn) n-ó-bírò.*
 Chali him PST-3S-come
 ‘Chali, him, he came.’

Emphatic, topicalized object NPs may not co-occur with an object clitic, as shown in (16a) in which *Dorina* and the object clitic agree, but in which *Chàlí* controls subject-verb agreement. However, a preverbal pronominal may occur, as in (16b), in which *Dorina* and *en* both precede the verb and agree with the object clitic *ye*. One unique feature of topicalization of non-subjects in Dholuo is that the tense can be separated from the rest of the verb by an intervening subject NP. See also (16c), in which tense (*ne*) precedes the subject *Chàlí*.²

- (16) a. **Dòrínà Chàlí n-ó-gó-yè*
 Dorina Chali PST-3S-beat-3S
 (‘Dorina, Chali beat her’)
- b. *Dòrínà én Chàlí n-ó-gó-yè.*
 Dorina s/he Chali PST-3S-beat-3S
 ‘Dorina, Chali beat her.’
- c. *Dòrínà né Chàlí ó-gó-yò.*
 Dorina PST Chali 3S-beat-3S
 ‘Dorina, Chali beat her.’

² In this construction, the object suffix no longer harmonizes with the tense prefix and occurs as *yo* rather than as *ye*.

Topicalized NPs can also be emphasized in a cleft construction in which the tense occurs with the clefting structure, instead of with the verb, as in (17).³ The tense prefix *né* precedes the subject *Chàlí*. The form of the object suffix also changes in a clefted structure (from *ye* to *yo*).

- (17) *Dòrínà é-mà né Chàlí ó-gó-yò.*
 Dorina 3S-EQ PST Chali 3S-beat-3S
 ‘It was Dorina who Chali beat.’

Note that in (16) and (17), the tone on the subject-agreement prefix is high, not low, as in the pseudo-passive construction under consideration. Also, in (16), the subject NP *Chàlí* is pre-verbal. In contrast, the agent of the pseudo-passive is optional and occurs in a *gi*-phrase. In addition, in topicalized and clefted constructions, the overt nominal preposed object NP *Dòrínà* co-occurs with the object clitic *yò* without the occurrence of an preverbal discourse pronoun *en*. Recall that in the pseudo-passive construction under analysis, only if the fronted NP is a pronominal or co-occurs with a pronoun, can it co-occur with an object clitic. In sum, evidence from topicalization and cleft constructions supports the analysis in which pseudo-passive in Dholuo is not an instance of fronting and adjunction to COMP or Specifier of COMP. This suggests that the pseudo-passive construction does not always have the function of emphasizing the object NP, as would topicalization of an object.

5.2 More evidence from topicalization. Additional evidence from topicalization indicates that the moved NP in the pseudo-passive stays within IP. Recall (16c) in which tense occurs between the topicalized NP and the rest of the IP. This is “visible” because of the intervening subject *Chàlí*. Additional examples illustrating topicalization are given in (18). In (18a) an object NP, *ràbùòndé* ‘potatoes’, is topicalized; in (18b) an adverb *nyórò* ‘yesterday’ is topicalized. In both of these examples, the past tense morpheme *nyé* has been fronted before the subject NP *Dòrínà*. The examples in (18c-d) show how topicalization interacts with the pseudo-passive construction under consideration. In (18c), an adverb *nyoro* occurs before past tense *nyé* and the fronted object *ràbùòndé* ‘potatoes’ occurs preverbally. The agent *Dòrínà* occurs in a post-verbal *gi*-phrase. In contrast, if the object *ràbùòndé* precedes past tense *nyé*, the adverb cannot be fronted by the pseudo-passive; hence, (18d) is ungrammatical.

³ The equative/copular morpheme *ma* of the cleft structure is also used for adjective constructions. The clefted NP controls agreement on *ma*.

- (18) a. *Ràbúòndè nyé Dòrínà ó-tèdò nyórò.*
 potatoes PST.TOP Dorina 3S-cook yesterday
 ‘Potatoes, Dorina cooked (them) yesterday.’
 [Compare *Dòrínà n-ó-tèdò ràbúòndè nyórò*]
- b. *Nyórò nyé Dòrínà ó-tèdò ràbúòndè.*
 yesterday PST.TOP Dorina 3S-cook potatoes
 ‘Yesterday, Dòrínà cooked potatoes.’
- c. *Nyórò nyé ràbúòndè ò-tèdí gi Dòrínà.*
 Yesterday, PST-TOP potatoes EXPL-cook by Dorina
 ‘Yesterday, potatoes were cooked by Dorina.’
- d. **Ràbúòndè nyé nyórò ò-tèdí gi Dòrínà*
 potatoes PST.TOP yesterday EXPL-cook by Dorina
 ‘Potatoes, Dorina cooked (them) yesterday.’
 (Compare *Dòrínà n-ó-tèdò ràbúòndè nyórò*)

This interaction of topicalization and pseudo-passive illustrated in (18c) provides another reason for the passive-like flavor of the pseudo-passive in Dholuo. The fronted NP clearly remains within IP; it cannot occur outside of the scope of elements outside of Tense, as in (18d). That is, the interaction of these two movement rules indicates that while topicalization moves an element outside of IP, the pseudo-passive does not. In fact, this interaction tells us where the NP of the pseudo-passive moves to: if we assume that Tense-P (TP) under INFL raises to COMP, under head-to-head movement, then topicalization (as illustrated in (18a-c) moves an element into Specifier of COMP, and pseudo-passive fronts an NP to the right of COMP. (See the discussion of head-movement in Chomsky [1995]). The fronted NP must be adjoined to Specifier of INFL (see the schema in (19)). The Topicalized NP (Top NP_k) is coindexed with a trace left in the IP. The Tense Phrase (TP_t) is coindexed with a trace in INFL. The fronted NP (NP_i) is coindexed with a direct object trace. A null NP occurs in Specifier of IP as the dummy subject, and it is coindexed with agreement (AP_a) in INFL.

- (19) [CP [SPEC_{Top} NP_k[C-BAR [COMP TP_t] [IP [XP NP_i] [SPEC Ø_a]
 [I-BAR [INFL e_t AgrP_a] ... V e_i ... e_k]

Additional evidence that the fronted NP does not move outside of IP, as in topicalization or WH-movement, is that tense cannot move along with the fronted NP; the full form of the past marker should occur, not just the contracted form with the expletive agreement inflection, *nò*. But in the construction

in question, tense cannot occur separated from AGR. Compare the ungrammatical (20a) and (20b) with (18a-c).

- (20) a. **né Dòrínà ò-gó* (gi Chàlì)
 PST Dorina EXPL-beat (by Chali)
 ('Dorina was beaten by Chali')
- b. **Dòrína né-ò-gó* (gi Chàlì)
 Dorina PST-EXPL-beat (by Chali)
 ('Dorina was beaten by Chali')

6. Conclusion

Although Burzio's [1996] generalization regarding the role of case assignment motivating NP-movement in passives works for languages such as English, the characterization of passive constructions in terms of linear order, case marking, and verbal morphology relates more to language-specific tendencies than to universal grammar. This is consistent with the claims of Perlmutter [1983] (see also Perlmutter & Postal [1993]). The analysis and evidence presented in this paper show that, while the pseudo-passive construction appears superficially to be a passive construction, NP movement in this construction is not motivated by case assignment—instead, the fronted NP receives accusative case—and therefore cannot be termed a true passive in the terms of Burzio [1986].

If not a true passive, what, then, are the properties of what I have called the pseudo-passive construction? First, we have seen that a pronominal object is fronted and the fronted NP co-occurs with an object clitic on the verb. Because the fronted NP is coindexed with either an object clitic or a null marker in object position, it inherits accusative case from the right most member of its chain [Aoun 1979]. Second, the fronted NP moves to a different place from a topicalized or WH-moved element—hence, the construction is not a case of topicalization—because, in these constructions, the tense can occur before the subject. Under head-to-head movement, we can assume that the fronted tense moves under COMP. If the fronted NP moves outside of IP, as a topicalized NP or WH-moved NP does, tense should be able to move along with it and the full form of the past marker should occur, not just the contracted form with the expletive agreement inflection, *n-ò* (PST-EXPL). But this does not happen. (Recall the ungrammatical (20).) These facts suggest that the fronted NP in the Dholuo pseudo-passive remains within the IP, and adjoins to Specifier of IP position, and that the Specifier position itself is filled by the base-generated non-thematic null pronominal, controlling subject-verb agreement. However, the fronted NP is not base-generated because it can also occur post-verbally (recall and compare (3a) and (3b)). The patient NP need not be fronted.

So, is there a passive in Dholuo? Not as a relation-changing movement rule. But there is the pseudo-passive construction in which a fronted NP has very interesting properties. Through the use of a null subject construction, a patient NP can be emphasized. Moreover, movement of the patient is an optional additional focusing property of the construction, since the “passive” reading obtains even without the fronting of the patient. In addition, Dholuo exhibits at least four distinctions of terms of identification of agency. In the active, the agent is clearly identified. In the pseudo-passive, the agent may be optionally identified, but without being focused. Moreover, in this pseudo-passive, the agent can also be omitted. Finally, in the generic subject construction, the agent is marked as understood by context, but it is neither suppressed nor less focused than the passive agent in a *gi*-phrase.

In sum, the analysis presented in this paper reveals two interesting features of the Dholuo pseudo-passive. First, it shows that unlike languages such as English, the only difference between the Dholuo pseudo-passive and its counterpart active construction is tone placement on the verbal morphology. More interestingly, evidence presented in this paper shows that the Dholuo pseudo-passive has more properties in common with a true passive in English than pseudo-passives in other languages (e.g., the impersonal passives in Lingala). For instance, the *gi* ‘by’ phrase in the PP position in the Dholuo pseudo-passive is a common characteristic of a true passive in languages such as English. Moreover, the NP movement illustrated in the Dholuo pseudo-passive is another characteristic of a true passive. These peculiar properties of the Dholuo pseudo-passive present an interesting phenomenon for further grammatical investigation.

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**HEAD-INITIAL MEETS HEAD-FINAL:
NOMINAL SUFFIXES IN EASTERN AND SOUTHERN BANTU
FROM A HISTORICAL PERSPECTIVE***

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Bantu languages in eastern and southern Africa possess nominal suffixes which serve to express locative relations or derive nominal stems. As these grammemes are final to their noun hosts, they are markedly distinct from canonic prefix morphology in Bantu nouns. Moreover, nominal syntagms are head-initial and canonic grammaticalization in this domain can be expected to yield prefixes. The elements under discussion are suffixes, yet they developed in Bantu from inherited nominal lexemes. Thus, they are unusual from a morphotactic viewpoint and cannot easily be accounted for by exclusively language-internal developments. For this reason, it is plausible to investigate the hypothesis that the nominal suffixes emerged due to interference from languages having a different grammatical structure. For this purpose, a sample of non-Bantu languages from the relevant geographic area in Africa is established and analyzed in order to test whether there are languages or entire groups with head-final and suffixing patterns that could have influenced the process of suffix emergence in Bantu.

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1. Introduction

The Bantu family is, in spite of its vast geographic region and enormous number of member languages, a typologically homogeneous genetic unit. This also holds for its clause structure: Wherever a constituent is semanto-syntactically dependent on another unit it is consistently postposed. Such an order of endo-centric nucleus-satellite relations, surfacing mostly in the noun phrase, is often called head-initial. In a concrete language structure, this organization is reflected on the syntactic level by the postposition of modifiers. Research in grammaticalization processes has shown that a head-initial organization of the noun phrase frequently leaves its imprint in morphological structure: Such a language predominantly develops prefixes. This is indeed the case for Bantu on an overall family level.

In view of this situation, it is all the more striking that certain grammatical phenomena in southern and eastern Bantu languages do not conform to the above-mentioned pattern. A widely known characteristic, presented in section 2, is a set of suffixes encoding such categories as locative, diminutive, and feminine/augmentative. The development of these grammemes must have occurred in a relatively late stage of Bantu dispersion, as is indicated, firstly, by their fairly limited distribution and, secondly, by the fact that all of the morphemes seem to be, with high probability, derivable from still existing lexical items.

Starting from the assumption that the suffixes are the results of canonic language-internal grammaticalization processes, one would have to explain at least some of these suffixes as having developed out of head-final nominal syntagms. However, section 3 will demonstrate that this is not a tenable explanation for Bantu.

Although an alternative explanation invoking contact of southern Bantu languages with South African Khoisan has already been considered by various scholars (see section 5.1), the whole problem has not yet been tackled systematically. This paper will offer a first attempt in this direction, discussing the noun suffix phenomenon for the Bantu family as a whole and evaluating the possibility of contact with languages in a larger geographic area. For this purpose a sample of non-Bantu languages is set up and evaluated in section 4 with regard to the hypothesis of a contact-induced emergence of the Bantu suffixes. Section 5 discusses the evidence for this contact explanation. It explores, on the one hand, positive arguments for the Khoisan hypothesis, on the other, various aspects of the problem which point to the possibility that the emergence of nominal suffixes in Bantu is a more global phenomenon in the family, connected with its spread into eastern and southern Africa and with its recurrent encounter of head-final languages in general. Some questions for future research conclude the paper.

2. Nominal suffixes in eastern and southern Bantu

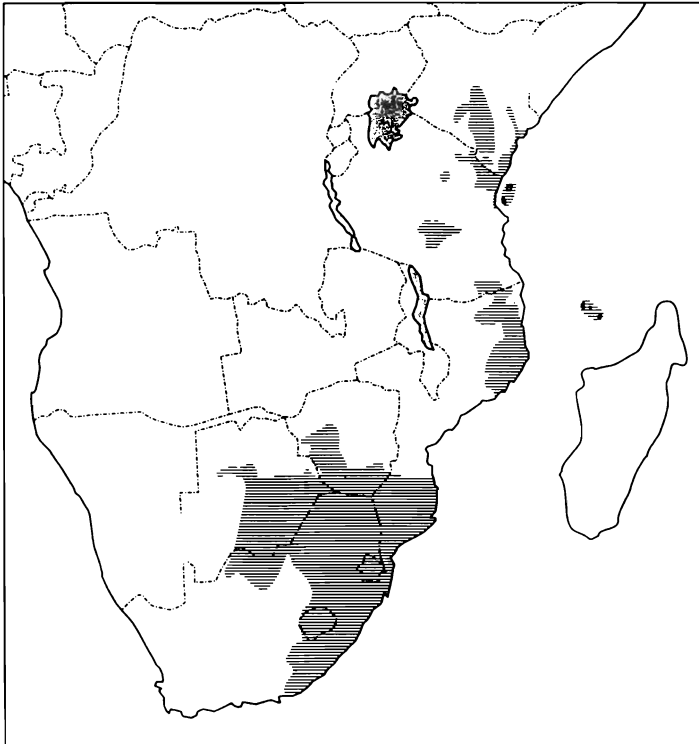
The nominal suffixes found in Bantu languages of eastern and southern Africa belong to two different functional domains and will thus be presented in two separate sections. They serve, on the one hand, to express locative relations and,

on the other hand, to derive nouns with respect to features like size and natural sex.

2.1. The locative suffixes

2.1.1. The inessive/locative suffix from **-jini* ‘liver’. Only one of the suffixes to be treated has a relatively wide geographic distribution (see Map 1 in comparison with Map 6 of the appendix showing the zonal affiliation of the affected languages). It was reconstructed by Guthrie [1967-71] as a Common Bantu form **-jini* (CS.2272). Růžička [1959/60] and Grégoire [1975] provide surveys of this locative suffix across the Bantu family. Samson and Schadeberg [1994] have convincingly shown that it has emerged via grammaticalization from a nominal lexeme meaning ‘liver’. This explanation has invalidated the hypothesis by Meinhof [1941/2], who viewed **-jini* as being derived from the class concord **mu* of the inherited inessive noun class 18. The questions involved will not be discussed here as they are conveniently laid out in the cited sources.

Map 1: Distribution of the inessive/locative suffix from **-jini* ‘liver’



The grammatical importance of the suffix differs from language to language. Sometimes the inherited locative classes have been retained and may cooccur with the locative suffix as, for example, in Lomwe (P32), as shown in (1).¹

(1) Lomwe P32 [Bawman 1949:17]

<i>vemachani</i>	<	<i>va-i-macha-ni</i>
'nos jardins (hortas)'		16-10-garden-LOC
('in the vegetable/fruit gardens')		

In those languages which have lost the class prefixes as a productive means to mark locative relations and use *-ini* as their dominant locative marker, the latter has sometimes entered other functional domains. This indicates that it has become entrenched in the language more deeply. Compare the examples from Pokomo (E71) and Tswana (S31) where the suffix is used in tense-aspect marking and relative clauses, respectively:

(2) Pokomo E71 [Geider 1990:432, 441]

a. <i>nyumba-ni</i>	b. <i>kw-a-haala-ni</i>
9.house-LOC	2S-?-take-LOC
'in das Haus [into the house]'	'du bist am nehmen [you are taking]'

(3) Tswana S31 [Cole 1955:343, 178]

a. <i>thabêng</i>	<	<i>thaba-ing</i>
'on/at the mountain'		mountain-LOC
b. <i>di-kgômo tsê-di-fula-ng</i>		
10-cattle 10.REL-10-graze.PRES-LOC		
'the cattle which are grazing'		

The suffix *-ini* was originally a marker of inessive relations and only subsequently developed into a general locative. In addition to the arguments brought forward by Samson and Schadeberg [1994], this claim can be

¹ Abbreviations:

ABL	ablative	D	dual	MA	manner
ADE	adessive	DEM	demonstrative	MPO	multi-purpose oblique
ALL	allative	DIM	diminutive	P	plural
ASS	associative	F	feminine gender	PRES	present
ATTR	attributor	FEM	feminine derivation	RED	reduplication
AUG	augmentative	INE	inessive	REL	relative
C	common gender	INF	infinitive	S	singular
COM	comitative	LOC	locative	SUPE	suppressive
COP	copula	M	masculine gender		

Arabic numbers indicate noun classes, except if directly followed by the gloss S, where a personal category is meant. The source is given in brackets in the translation line.

convincingly supported by cases where the suffix today interacts paradigmatically with another postposed locative marker.

2.1.2. The superessive/locative suffix from **-gudu/-judu* ‘sky’, ‘top’. Růžička [1959/60:648f] was the first to treat a locative suffix other than **-jini* from a comparative viewpoint. At this stage, only Ngazija (G44a) was known to have a second locative suffix *-ju* with a superessive meaning. Later, Rombi [1983] gave an attestation of this marker in another Comorian language, Maore (G44b), where it has a superessive or a more general adessive function. She derived it etymologically from a noun appearing in Guthrie [1967-71] as the starred forms **-gudu/-judu* ‘sky’, ‘top’ (C.S. 880, 881, 886, 959).²

Rombi also mentions a semantic contrast between this locative marker and the suffix **-jini*, shedding light on the more concrete meaning of the two items in the past. It supports the idea that the latter was originally an inessive marker, as in (4).

(4) Maore G44b [Rombi 1983:81]

<i>mu-ri-ni</i>	vs.	<i>mu-ri-žu</i>
3-tree-INE		3-tree-SUPE
‘dans l’arbre’		‘au-dessus de l’arbre’

So far, the existence of the superessive marker appeared to be an isolated feature of Comorian Bantu. However, taking data from Tonga-Inhambane (S62) into account, the possibility arises that this may not have always been the case in the past. This language has, in addition to inherited locative prefixes, a reflex of **-jini* and another locative suffix *-tunu*:

(5) Tonga-Inhambane S62 [Lanham 1955:209]

<i>nyumba-ni</i>	vs.	<i>nyumba-tunu</i>
house-INE		house-LOC
‘in the house’		‘at the house’ (implying the vicinity thereof, e.g., in the garden)

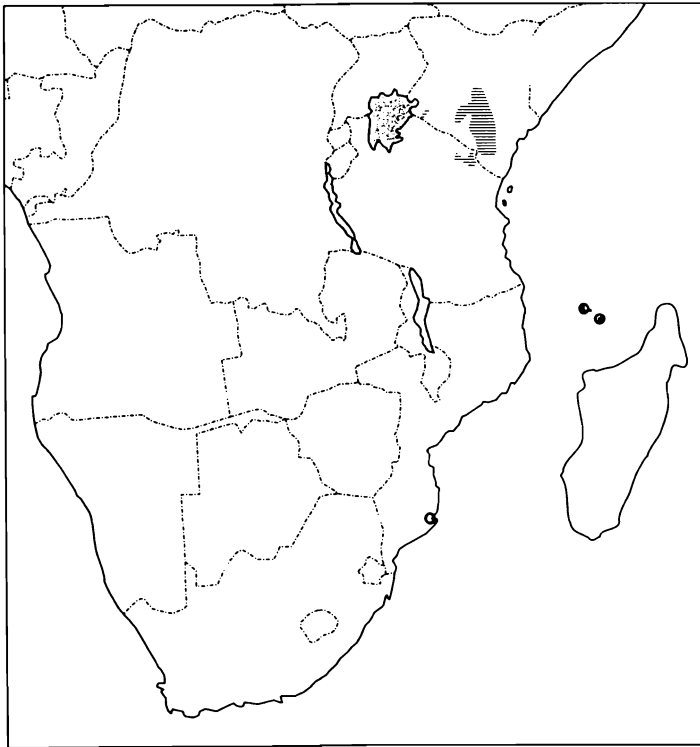
² Interestingly, toponyms that are obviously or possibly parallel to the grammatical pattern noun-SUPE occasionally appear all over the Swahili culture area. This was partly observed already by Rombi [1983:81]. Compare the following place names:

Maore (G44b)	<i>Momo-žu</i>	[Rombi 1983:82]
Ngazija (G44a)	<i>Manga-juu</i>	[Aujas 1920:55]
Rural Zanzibar (G43c)	<i>Bwe-juu</i>	(according to oral traditions founded by Comorians) [R. Krieglér, p.c.]
Vumba (G43e)	? <i>Pungutia-yu</i>	[Hollis 1900:PlateXXXVIII]
Siyu-Pate-Amu (G42a)	? <i>Si-yu</i>	
Mwiini (G41)	<i>Kis(i)ma-yu</i>	[Rombi 1983:81], <i>Kiwa-yu</i> (? < <i>Kisiwa-yu</i>)

It cannot be discussed here how the onomastic and the grammatical phenomenon are related to each other, let alone what historical interpretations possible answers would foster.

At first glance, Tonga-Inhambane *-tunu* and Maore superessive *-žu* do not seem to have much in common. Yet, if one considers that the two languages share the inessive/locative suffix and that they show a regular sound correspondence between /t/ and /ž/, a possible relation between the seemingly isolated suffixes emerges. Given the possibility that the /n/ in *-tunu* could be a reflex of *d,³ the Tonga-Inhambane suffix even seems to be fairly close in sound shape to its possible source **-gudu/-judu* ‘sky’, ‘top’ in that it would not have dropped the second syllable. From a semantic viewpoint, however, *-tunu* would be further away from its lexical source because it is not a superessive marker but has a more general locative meaning. Note that the opposition between the suffixes exemplified in (5) above reveals again the bias of **-jini* toward an inessive meaning. Map 2 gives the location of the three languages with an assumed reflex of the superessive suffix.

Map 2: Distribution of the superessive/locative suffix **-gudu/-judu* ‘sky; top’ (circles) and other host-final locative markers (hatching)



³ I owe this observation to R. Bailey and R. Botne who both suggested it independently.

2.1.3. Other host-final locative markers. There exist a few other cases of locative markers postposed on the noun in East African Bantu languages whose geographic position is also given in Map 2. Interestingly, they refer to the same spatial relations of inessive and superessive that are assumed to have been the original functions of the two grammatical suffixes and partly employ even the same linguistic material. This seems to indicate that both the functions and their lexical sources are particularly prone to grammaticalization.

I cannot discuss these cases in any detail. I only mention them here and will briefly return to them in section 5.3. They are a superessive suffix *i(h)u* in Chaga varieties (E60) and an inessive postposition *imi* in Gusii (E42) (see Grégoire [1975:186f]). Furthermore, Bantu languages of central Kenya like Kikuyu (E51) and Kamba (E55) can place a restricted number of relational nouns behind the host noun to render a locative expression. In Kikuyu, for example, this behavior is confined to the three relational nouns *igūrū* ‘top’, *gatagafī* ‘middle’, *thīinī* ‘inside’. Thus, they can serve both as a postposition and as the initial head of an associative construction, illustrated in (6).

(6) Kikuyu E51 [Barlow 1951:200ff]

- | | |
|-------------------------|---------------------------|
| a. <i>mū-ŭi igūrū</i> | b. <i>igūrū rīa mī-ŭi</i> |
| 3-tree 5.top | 5.top 5.ASS 4-tree |
| ‘from [above] the tree’ | ‘above the trees’ |

Postposing relational nouns is not only atypical from an overall genetic viewpoint, but also exceptional language-internally. The Kamba postpositions, for example, do not belong to the phrasal tone unit of their nominal hosts [D. Odden, p.c.].

2.2. The derivational suffixes

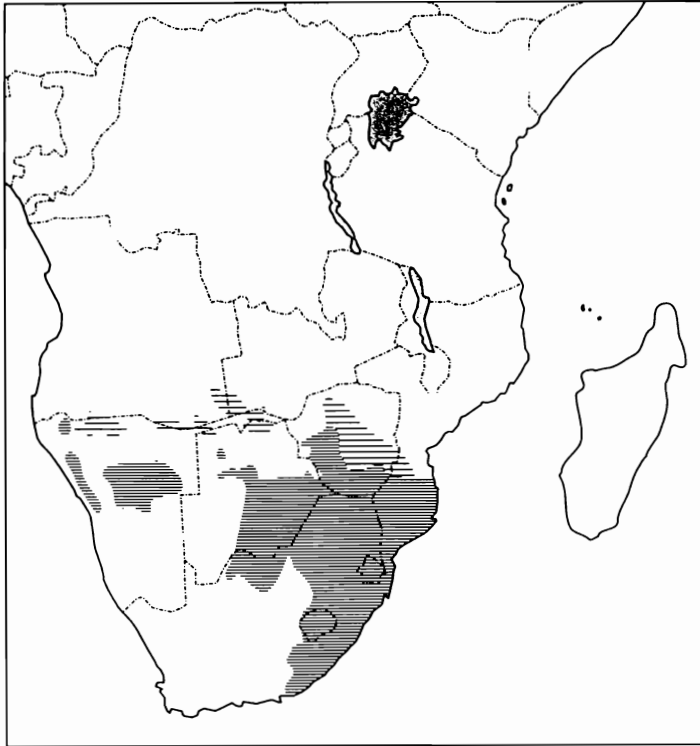
2.2.1. The diminutive suffix from **-yana* ‘child’. Many southern Bantu languages have a diminutive suffix typically of the form *-ana*. The origin of this element in the lexeme **-yana* ‘child’ (Guthrie’s C.S.1922) is straightforward and extensively discussed in Poulos [1986:288ff]. In contrast to the locative suffix **-jini*, the geographic distribution of the diminutive suffix is far more restricted. It is confined to southern languages, mainly of zone R and S.

Parallel to the behavior of the locative suffixes, the diminutive suffix can intimately interact semantically with inherited diminutive prefixes. Compare two examples from Herero (R31) and Venda (S20), respectively. In other languages it occurs without any diminutive prefix as in Tonga-Inhambane (S62).

(7) Herero R31 [Engelbrecht 1925:96]

- | | | |
|------------------------|---|-------------------------------------|
| <i>om-bahu</i> | > | <i>oka-pahona</i> |
| 9-locust | | 13:DIM-locust.DIM |
| ‘Heuschrecke [locust]’ | | ‘kleine Heuschrecke [small locust]’ |

Map 3: Distribution of the diminutive suffix from *-yana 'child'
(narrow hatching: increased productivity)



(8) Venda S20 [Poulos 1990:87]

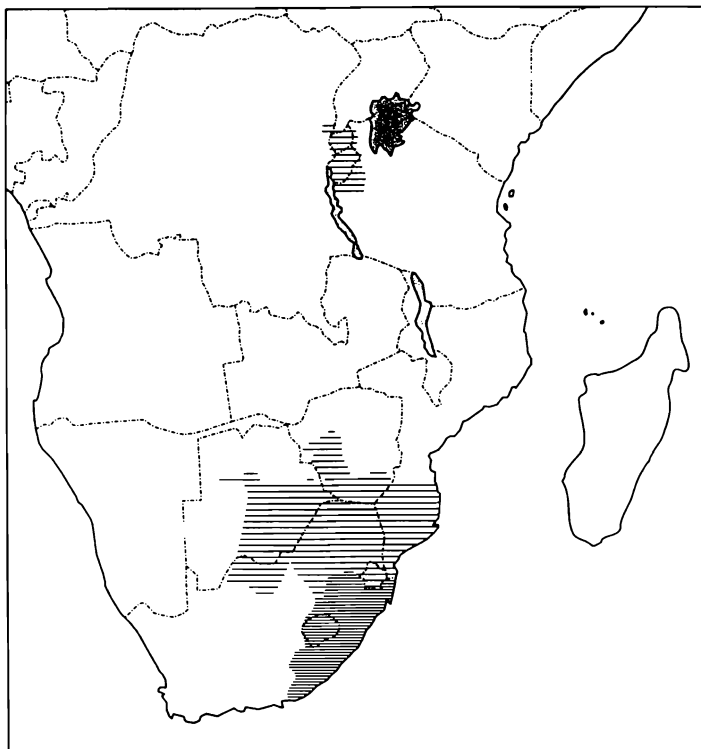
<i>tshi-kali</i>	>	<i>tshi-kalana</i>
7:DIM-clay pot		7:DIM-claypot.DIM
'small clay pot'		'very small clay pot'
(somewhat broadish)		

(9) Tonga-Inhambane S62 [Lanham 1955:107]

<i>yim-bwa</i>	>	<i>yim-bwana</i>
9-dog		9-dog.DIM
'dog'		'puppy'

2.2.2. The feminine/augmentative suffix from *-kadj 'wife', 'woman', 'female'. The feminine derivation suffix apparently originated in a Common Bantu root *-kadj 'wife', 'woman', 'female' (compare Guthrie's C.S.986). Map 4 shows that it is also geographically restricted in being confined basically to languages of zone S.

Map 4: Distribution of the feminine/augmentative suffix from *-kadj ‘wife; woman; female’ (narrow hatching: increased productivity)



Moreover, in the majority of languages, it applies to a very a limited set of lexical items. Here follow some relevant comments regarding this derivational device in various languages of this zone: Cole [1955:110] for Tswana (S31)—originally ‘rare’, Ziervogel and Mabuza [1976:39] for Swati (S43)—‘have become stereotyped’, Ribeiro [1965:478] for Tonga-Shangaan (S53a)—‘algumas palavras importadas do zulu’ [some loan words from Zulu], and Lanham [1955:108] for Tonga-Inhambane (S62)—‘restricted group of personal nouns only’. This characterization also holds for its isolated occurrence in zone J languages. The following examples are from Hunde (J51) and Tsonga (S53b), respectively:

(10) Hunde J51 [Mateene 1992:121]

a. *mu-tambo-katsi*
1-chief-FEM
‘cheftaine’

b. *mu-twá-katsi*
1-pygmy-FEM
‘femme pygmée’

c. *im-bwá-katsi*
9-dog-FEM
‘chienne’

(11) Tsonga S53b [Baumbach 1987:182]

<i>m-hala</i>	>	<i>m-hala-kati</i>
9-impala		9-impala-FEM
'impala'		'impala ewe'

*-*kadi* occurs as a fairly productive suffix only in Xhosa (S41) and Zulu (S42), henceforth, Southern Nguni, and Sotho (S33). In these languages, it quite regularly derives the feminine counterpart of an animate noun. It can also convey an augmentative or derogatory connotation and thus behave occasionally in opposition to the diminutive suffix. Compare the examples from Sotho (S33).

Sotho S33 [Guma 1971:71, 72]

- | | | | |
|------|---------------|---|--------------------|
| (12) | <i>mo-roa</i> | > | <i>mo-roa-hali</i> |
| | 1-bushman | | 1-bushman-FEM |
| | 'Bushman' | | 'Bushwoman' |
-
- | | | | |
|---------|---------------------|----|--------------------|
| (13) a. | <i>mo-lomo-hali</i> | b. | <i>mo-nna-hali</i> |
| | 3-mouth-AUG | | 1-man-AUG |
| | 'big mouth' | | 'big, huge man' |

3. Canonic Bantu structure

It can be observed above that the existence of nominal suffixes is a fairly restricted feature geographically within Bantu. It appears to be even more exceptional if one considers the fact that the normal morphotactic pattern in this language family is not suffixing but prefixing. It will be shown now that Bantu languages usually have quite different means at their disposal for expressing the above functions and that their inherited grammatical structure cannot, for the most part, be held responsible for the grammaticalization development of the above suffixes from their assumed lexical sources.

3.1. Locative relations. With regard to details about locative marking in Bantu, we confine our discussion here to some very basic information. More extensive treatments can be found in Růžička [1959/60], Ziervogel [1971], and Grégoire [1975].

Locative concepts are partially accounted for by the inherited noun class system. Four such locative classes with their respective noun prefixes have been reconstructed for Bantu: the adessive class 16 **pa-*, the general locative class 17 **ku-*, the inessive class 18 **mu-*, and the far less widespread locative class 25 **e-*. Semantically, more specific locative relations are regularly expressed by prepositional phrases, which are based on a relational locative noun in an associative or occasionally comitative construction. This strategy, sometimes with the same lexical items that developed into suffixes, is also present in those languages which

have lost the locative noun classes. The following example from Maore (G44b) should be compared with (4) above.

(14) Maore G44b [Rombi 1983:86]

sembea la užu na ilatabu
 5:knife 5:COP above COM table
 'le couteau est sur la table'

3.2. Derivational categories

3.2.1. Diminutive/augmentative. The majority of Bantu languages possess also one or more noun classes which, exclusively or inter alia, bear a diminutive or augmentative connotation, although there is considerable variation across the family as to which particular class serves this function. Noun classes frequently used in the expression of diminutives are the class pair 7 **ki*-/ 8 **bi*-, the class pair 12 **ka*-/ 13 **tu*-, and class 19 **pi*-. There is good evidence that the last prefix is related to a nominal root 'child' widely attested in Niger-Congo (compare Kähler-Meyer [1971]). This indicates that the emergence of prefix morphology via grammaticalization of former syntactic heads is a Bantu feature that can be traced back to its higher order genetic unit.

The source construction, where a compound or associative syntagm with a head noun 'child' expresses a diminutive meaning, is still evident today in Bantoid languages like Tikar [Stanley 1991:432f] or Tiv [Jockers 1991:43], and also in Rainforest Bantu. The host-initial derivational elements of these languages are cognate with the stem that developed into a diminutive suffix in southern Bantu. Consider Londo (A11a).

(15) Londo A11a [Kuperus 1985:228]

a. <i>nw-áná-mù-ínà</i>	b. <i>nw-áná-mò-kòrí</i>
1-child-1-male	1-child-3-hill
'boy'	'small hill'

3.2.2. Natural sex. The expression of natural sex is, vis-à-vis previous functions, structurally partly different. One distinction is that it cannot be accounted for by features of the noun class system.

The most frequently found strategy, apart from the restricted role of lexical suppletion, is an associative phrase where—as a second difference—a host-final modifier conveys the meaning 'female'/'male'. Consider an example from Lwena (K14).

(16) Lwena K14 [Horton 1949:62]

a. <i>mw-ana wa-lunga</i>	b. <i>ngombe wa-ci-pwevo</i>
1-child 1.ASS-male	1.cattle 1.ASS-7:MA-female
'a male child'	'cow'

Two strategies, though of restricted importance, are structurally more reminiscent of locative and diminutive marking as presented above. First, associative phrases can also have the head noun bearing the semantic feature of natural sex, as in Tsonga (S53b).

(17) Tsonga S53b [Baumbach 1987:181]

- | | |
|--|--|
| a. <i>n-kati wa nghala</i>
1-female 1.ASS lion
'lioness' | b. <i>matsune wa nghala</i>
1: male 1.ASS lion
'male lion' |
|--|--|

In some languages like Lwena (K14), there exist nominal prefixes which are historically derived from former head nouns with semantically inherent natural sex. However, these are often lexically restricted and always express a more specific semantic notion than just sex.

(18) Lwena K14 [Horton 1949:62]

- | | |
|--|--|
| a. <i>sa-ku-waha</i>
father-INF-be nice
'man of pleasing appearance' | b. <i>nya-kaswa</i>
mother-termite
'queen termite' |
|--|--|

3.2.3. Lexically restricted strategies. There is additional data that must be considered in a comparison between the derivational suffixes in southern Bantu and canonic Bantu expressions.

First, a comparative study by Knappert [1965] shows that Bantu has a widespread pattern of nominal compounding whereby an initial head noun and another modifying item are simply juxtaposed. The modifiers can pertain to different lexical categories such as nouns, adjectives, adverbs, or infinitives. What is important is that the initial and the final constituent can serve as a variable to form a kind of compound series. Consider Unguja-Swahili (G42d).

Unguja Swahili G42d [Knappert 1965: 213, 214]

- | | | |
|--|---|---|
| (19) a. <i>mw-ana-soka</i>
1-child-9:soccer
'footballer' | b. <i>mw-ana-n-chi</i>
1-child-9-country
'native' | c. <i>mw-ana-soko-ni</i>
1-child-9:market-LOC
'market vendor' |
| (20) a. <i>ma-ji-m-oto</i>
6-water-3-fire
'hot water' | b. <i>siku-m-oto</i>
9:day-3-fire
'hot day' | c. <i>kazi-m-oto</i>
9:work-3-fire
'hot work' |

Given a situation such as that in (20), it can be imagined that one and the same nominal modifier may become attached to a greater set of nouns in a more regular fashion. Then, an apparent parallel to a derivational suffix emerges, even if such a modifier as *moto* in (20) still bears a noun prefix while *-yana* and *-kadji* do not.

Another relevant fact is that a few terms of kin and social relations across the family show *inter alia* the very suffixes that have become diminutive and feminine-augmentative markers in southern Bantu—here, without any structural difference to the latter. This lexical phenomenon was treated extensively by Angenot-Bastin [1971]. Examples are given here from Luba-Katanga (L33) and Herero (R31).

(21) Luba-Katanga L33 [Angenot-Bastin 1971:25f]

- | | |
|---|---|
| a. <i>-kazi-ana</i>
-woman-X
'jeune fille, jeune femme' | b. <i>-lumi-ana</i>
-male-X
'un garçon fort pour son âge' |
|---|---|

(22) Herero R31 [Angenot-Bastin 1971:10]

- kulu-kazi*
-aged-X
'vieille femme'

3.3. Canonic Bantu structure as an insufficient explanation for noun suffix evolution. There is a considerable debate as to whether there exists a historically interpretable correlation between phrasal word order and word-internal morpheme order. The answer to this question is important for the general research on grammaticalization. Controversial arguments on this topic can be found, for example, in Givón [1971], Comrie [1980], Haspelmath [1992], and Harris and Campbell [1995:199ff]. I cannot discuss here this issue in detail. Suffice it to say that there are innumerable attested cases where the synchronic morphotactic pattern does conform to an earlier syntactic one. Compared to this, the available counterexamples are few and may turn out to be restricted to special morphological domains. Thus, a positive answer to the above question is always a useful working hypothesis, while coming to firmer conclusions in a particular case is, to a large extent, an empirical issue. With regard to Bantu as a family, my experience is that it has, diachronically and synchronically, features typical of a consistent head-initial language, and cases where a non-correlation between inherited syntax and today's morphotaxis is discernible should be subjected to a more careful examination. Bearing this in mind, one must ask the following question: How do Bantu-typical structural means expressing locative relations and derivational noun categories relate historically to the suffixes under discussion? While answering this question two factors must be taken into account.

With regard to the structural issue, one needs to determine what kind of grammatical input should be assumed for the emergence of the grammaticalized suffixes. In this respect, one must consider basically the following three parameters: noun phrase syntax + word formation processes, the word category of the lexical source items, and the morphotactic feature of the resulting grammemes.

If the source structure at the beginning of the grammaticalization process is assumed to have been an endocentric associative or compound phrase whereby the nominal head developed into a grammeme, neither of the suffixes could be the outcome of Bantu internal processes. There is no evidence that there has ever

existed a productive head-final nominal syntagm in the Bantu family. On the contrary, the syntactic basis for relevant grammatical and lexical strategies is a head-initial noun phrase. This is in accordance with the attested creation in Bantu of nominal prefixes through the grammaticalization of earlier noun heads.

Assuming, alternatively, that the suffixes developed out of modifiers in associative or compound-like structures, the above conclusion still holds for the locative suffixes, as the lexical source items in question must have been structural heads. This is not the case for the derivational suffixes. The lexeme *-kadj* 'wife', 'female' and perhaps also *-yana* 'child' in the initial stage of grammaticalization can be viewed alternatively as canonically postposed modifiers. For this model of suffix evolution, one finds Bantu-internal structure templates. First, there are the compound noun pattern and the lexicalized suffixes *-yana* and *-kadj* with human nouns, as described in 3.2.3. Second, one could imagine a process of contraction of the attested associative phrase with a sex-denoting modifier, exemplified in 3.2.2. However, the latter data lose their explanatory power for suffix emergence if the second, functional aspect is considered. The mere existence of these structures is a sufficient, but not a necessary, condition for suffix evolution. In other words, it must also be evaluated as to whether a relevant structure is, vis-à-vis the function of a modern suffix, prominent enough in a canonic Bantu language to plausibly qualify as the exclusive source of grammaticalization. My answer is: Neither of the candidates is. An associative phrase with a sex-denoting modifier, though a recurrent construction type across Bantu, appears to be an analytical ad-hoc formation without showing a notable tendency to undergo phonetic concatenation toward a morphological word formation pattern. So far, I have not found any real case for such a scenario.

With respect to the second relevant structure—the noun suffixes described by Angenot-Bastin [1971]—all of them, including *-yana* and *-kadj*, occur with a very restricted set of items and are thus a phenomenon in the lexicon. They must be kept distinct in qualitative terms from the same suffixes as productive grammatical items in southern Bantu, especially Nguni and Sotho.

One might still be inclined to disregard these considerations and view family-internal strategies as the ultimate source of grammaticalization. However, it must be borne in mind that this approach falls short of answering an important question: Why should southern Bantu as a group cease to make use of inherited expressions with host-initial marking and activate instead a construction which, in the first case, does not seem to be particularly prone to grammaticalization and, in the second, was originally very restricted.

To sum up, although all nominal suffixes have a transparent lexical source within Bantu regarding both meaning and word category, there is no plausible family-internal scenario for the development of locative suffixes. The few derivational Bantu patterns resembling a presumable source structure may have fostered the overall grammaticalization process, but were hardly its only cause. Consequently, it appears untenable to explain the genesis of the suffixes in terms of a complete, functionally motivated grammaticalization cycle from a syntactic construction toward a polymorphemic word form, that is, Givón's concept of 'today's morphology is yesterday's syntax'.

4. Genetic and structural profile of the test language sample

If the inherited structural features of Bantu cannot account satisfyingly for the emergence of the suffixal noun morphology, an attractive explanation would be to assume external linguistic influence by non-Bantu languages with head-final and suffixing features that could have served for Bantu as templates for structural calquing (compare inter alia Harris & Campbell [1995:199ff]). This could have occurred in a situation of sociolinguistic contact and resulting interference prevailing at the time when Bantu languages successively expanded into their present eastern and southern areas of distribution. In the following section, I outline principled and some not so principled circumstances that led to the establishment of a test language sample for investigating such an alternative historical explanation and discuss the results obtained in this survey.

4.1. Principles of choice and classification of test languages. The following ideas stand behind the design of the sample. From the fact that the noun-suffix phenomenon is relatively widespread in eastern and southern Bantu languages, I conclude that its development is not a local and recent innovation, but a fairly old and global process in this area with the possibility of subsequent Bantu internal diffusion. This makes it necessary to include in the necessary time depth all still extant genetic lineages that could have been present in a probable contact area. Whether or not a lineage meets these criteria was determined in accord with its assumed historical range of influence and/or in accord with the present distribution of its extant member languages. This is to insure that the genetic and structural variation encountered by the southward expanding Bantu family is sufficiently represented. I also tried to include members from all still extant branches of a chosen lineage in order to cover its synchronic and thus its possible diachronic structural variation.

These general principles preclude certain restrictions on the choice of an individual test language as the synchronic representative of a genetic lineage to be included. Thus, a test language itself need not be located in a probable contact region. I included, for example, geographically quite remote Cushitic languages like Awngi and Oromo because this family as a lineage has a long historical standing in eastern Africa, shows considerable internal branching, and is, according to Allen [1993], assumed to have played a role in the origin of Swahili culture. Also, a test language need not have more than a geographically restricted importance. For example, the fact that Comorian Bantu possesses an almost genuine locative suffix is sufficient reason to include Malagasy in the sample, although the latter can so far not be shown to have been in contact with Bantu languages on the mainland. In general, it is not implied that an individual test language has itself ever been in contact with a Bantu language.

Of course, the genetic exhaustiveness to be aimed at can only be a relative one because of an important, but uncontrollable factor. One must make the principal reservation that any sample can only reflect the synchronic situation of a given geographic area. However, the possibility should not be underestimated that whole non-Bantu lineages or at least important branches of still extant ones, which would

have to be included according to the above principles, were completely obliterated in the course of time.

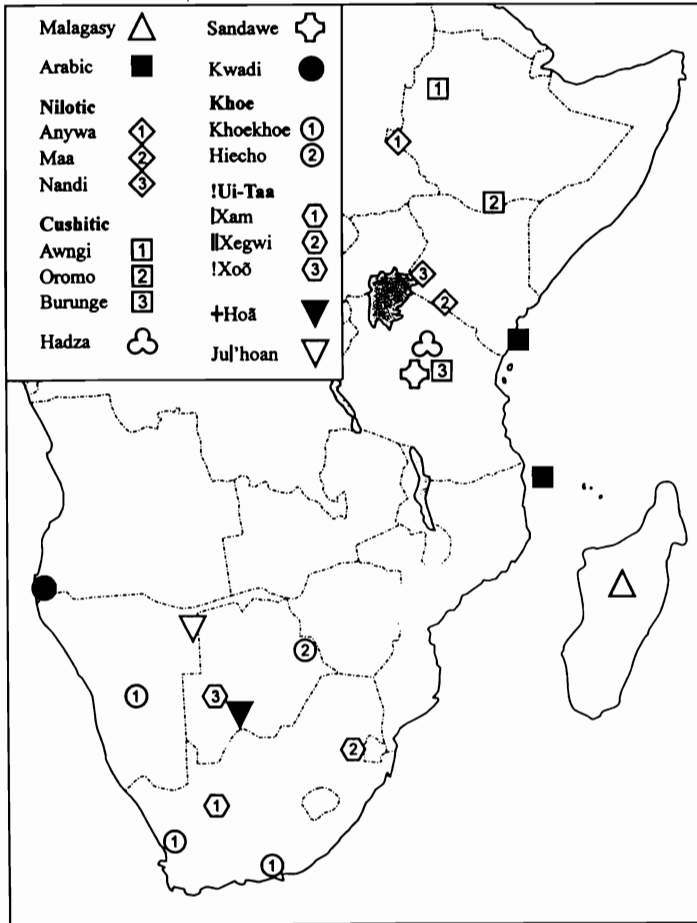
All the above reasons led me to include Arabic and Malagasy from among the candidates not indigenous to Africa. I did not consider Portuguese, English, or—if at all applicable—Persian and various Indian languages because of ill-fitting time depths and/or sociolinguistic contact patterns. African lineages of the survey are Nilotic, Cushitic, and all those subsumed under the label Khoisan. Table 1 lists the test languages, their assumed genetic affiliation and the sources providing the data. Map 5 shows their rough geographic position.

With regard to the genetic classification, only those units are accepted that are or obviously could be established in the present state of research via standard comparative methodology. Therefore, Khoisan is, counter the common Africanist tradition, not treated as a genetic unit, and the various subgroups are provisionally viewed as isolates or isolate families. The terms Khoisan and South African Khoisan (henceforth SAK) are used, but only with the meaning of non-genetic sets of click languages not related to another genetic lineage. In a parallel fashion, the term Non-Khoe is a preliminary, non-genetic cover term that distinguishes a typologically closer group of SAK languages from the Khoe family and Kwadi (compare Güldemann [1998] and Güldemann & Voßen [forthcoming] for some discussion).

Table 1: Sample of test languages

	<i>Family</i>	<i>Branch</i>	<i>Language</i>	<i>Data source(s)</i>
1	Barito	—	Malagasy	Malzac [1926]
2	Semitic	—	Arabic	Fischer [1972]
3	Nilotic	West	Anywa	Reh [1997, p.c.]
4	Nilotic	East	Maa	Tucker & Mpaayei [1955]
5	Nilotic	South	Nandi	Hollis [1909], Creider & Creider [1989]
6	Cushitic	Central	Awngi	Hetzron [1978]
7	Cushitic	East	Oromo	Stroomer [1995]
8	Cushitic	South	Burunge	Kießling [1994, p.c.]
9	Isolate	—	Hadza	Bleek [1931], Voogt [1992], B. Sands [p.c.]
10	Isolate	—	Sandawe	Dempwolff [1916], Kagaya [1993] E. Elderkin [p.c.]
11	Isolate	—	Kwadi	Westphal [1971, field notes]
12	Khoe	Khoekhoe	Nama, !Ora	Meinhof [1930], Hagman [1977], Haacke [1995]
13	Khoe	Kalahari	Hiecho	Dorman [1917]
14	!Ui-Taa	West !Ui	!Xam	Meriggi [1928/9], Bleek [1928-30]
15	!Ui-Taa	East !Ui	!Xegui	Ziervogel [1955], Lanham & Hallows [1956a,b]
16	!Ui-Taa	Taa	!Xoõ	Dickens & Traill [1977], Traill [1994]
17	Isolate	—	≠Hoã	Gruber [1973, 1975], C. Collins [p.c.]
18	Ju	—	Jul'hoan	Snyman [1970], Dickens [n.d.]

Map 5. Distribution of test languages



4.2. From test language to possible contact language. Every test language was investigated in two respects. Firstly, possible source structures in relevant grammatical domains, that is, nominal attribution and compounding, were checked. Secondly, a survey was conducted of how the functions covered by the Bantu suffixes, i.e., locative relations, diminutives, and natural sex, are expressed in a given test language. An additional distinction was made here between grammatical and lexical strategies.

Regarding the comparability of data, it has to be kept in mind that the available sources are highly divergent both in quantity and quality. Moreover, there still exists a considerable lack of data on various test languages, in particular languages currently classified as Khoisan, although some of the lacunae could be filled with the help of specialists.

Table 2 contains the information that is necessary to evaluate whether a linguistic expression in a test language makes a good candidate to be a possible interference pattern in the assumed contact-induced development of noun suffixes in Bantu. It is not possible here to discuss every piece of data as this would go far beyond the space of this article. I must refer the reader to the sources given in Table 1 in order to compare whether my classificatory interpretations do justice to the facts as presented there.

The above theoretical considerations allow a fairly precise analysis as to whether an expression in a given test language is, with regard to the achieved target pattern, a good candidate for a source pattern or not. This will be demonstrated by way of representative examples from the data of the test language sample. The following distinctions are made: If a respective marker conveying a relevant function is initial vis-a-vis the nominal host, the construction was viewed as negative. Compare the following examples from Burunge, Oromo, and Kwadi, with proposed marking of location, sex, and size, respectively.

(23) Burunge [Kießling 1994:194]

cina da 'ong-e
 top:F F:ATTR mountain-ALL
 'auf dem Berg [on (top of) the mountain]'

(24) Oromo [Stroemer 1995:39]

korma lukuu
 male chicken:ATTR
 'cock (lit.: a male of chicken)'

(25) Kwadi [Westphal n.d.]

a. <i>ŋ/wiʃi ya-de</i> small.? thing-M:S '(one) small thing'	b. <i>lá kyè.nà 'i-wà</i> two big egg-M:D 'two big eggs'
--	--

A neutral pattern, though in general rare, is a construction where the respective marker is detached from the nominal host. This is the case with a serial verb construction, which in Non-Khoe languages like !Xam (26) appears to be a major expression for locative relations.

(26) !Xam [Bleek 1928-30:97]

hiŋ le: s'o lneiŋ
 they enter sit house
 'they sat in the house'

Cases where the position of the marker conforms to the morphotactic feature of the Bantu noun suffixes, that is, when it is final vis-à-vis its host, are considered to be positive. This holds, for example, for the suffixes marking location in Hadza, size (and sex-gender) in Namibian Khoekhoe, and sex-gender in Sandawe.

(27) Hadza [Voogt 1992: 13]

maku-nina
pot-in
'in the pot'

(28) Khoekhoe [Hagman 1977:26f]

a. *tátá-ró-p*
father-DIM-M:S
'the little father'

b. *'om-kàra-s*
house-AUG-F:S
'the enormous house'

(29) Sandawe [Dempwolff 1916:27]

!'ane
parent in law
'Schwiegevater'
[father-in-law]

vs.

!'ane-su
parent in law-F
'Schwiegermutter'
[mother-in-law]

Among positive patterns, one can further determine a subset that meets the criteria for a susceptible source to an even higher degree. A pattern is a more likely source the more it has phonetic integrity (regular shape, less fused with its host, etc.), semantic specificity, or even lexical transparency—in other, though admittedly simplistic, words—the lower its degree of grammaticalization. The first two of the following examples demonstrate postposed relational nouns in Awngi and Jul'hoan, respectively. The last two examples show that Hiecho derives diminutives by means of the postposed noun 'child' and that !Xoõ expresses natural sex through the postposed nouns 'father'/'mother'.

(30) Awngi [Hetzron 1978:125ff]

a. *X-ampá-da*
X-top-LOC
'on, onto X'

b. *X-aya-des*
X-interior-ABL
'from inside X'

(31) Jul'hoan [Dickens n.d.:48,49]

a. *sì g!hòóá dà'á tzi*
they sit fire outside
'They are sitting around the fire.'

b. *ha hoa gòqrú kò n!om din*
he find lizard MPO stone buttock
'He found the lizard under the stone.'

(32) Hiecho [Dornan 1917:99, 97, 93]

a. *ju lkwa*
sheep child
'a lamb'

b. *hi lkwa*
tree child
'a bush or shrub'

c. *l!gaiehe lkwa*
chief child
'prince'

(33) !Xoõ [Traill 1994:154, 174]

a. <i>tâa</i>	<i>àa</i>	b. <i>tâa</i>	<i>qáe</i>	c. <i>gùmi</i>	<i>àa</i>	d. <i>gúmi</i>	<i>qáe</i>
person	father	person	mother	cattle	father	cattle	mother
'man'		'woman'		'ox'		'cow'	

These evaluation principles, when applied to the data of Table 2, yield the simplified presentation in Table 3. Its interpretation will be obvious: The more positive symbols a test language has, the higher it ranks on a scale of theoretically probable candidates with structural input for a contact induced change in Bantu, and vice versa. Provided a test language is a good representative of its lineage, one would have a first preliminary means for delimiting the range of genetic units to which the assumed contact languages belonged.

According to this line of reasoning, it will become apparent that certain groups can be excluded from a more qualitatively oriented evaluation. All languages considered not indigenous to Africa, i.e., Arabic and Malagasy, and the whole of Nilotic, show a very low degree of structural similarity with a language design that can explain the suffix emergence within a contact explanation. However, Cushitic, except for its southern branch, and the various Khoisan lineages conform to a considerable degree to the theoretically determined structure of a probable contact language. In the light of the above findings, the remaining part of this article discusses the already available contact hypothesis concerning SAK and outlines some additional ideas and tasks for future research.

5. Contact interference as an explanation for noun suffix evolution

5.1. Previous research on South African Khoisan interference in southern Bantu. Presently, Khoisan languages are characterized by very low social prestige and any linguistic impact they have on Bantu languages can at best be a local phenomenon. However, it is safe to assume that this situation was different in the past, especially at the time when the first Bantu speakers immigrated in small groups into southern Africa. It has been common ground for a long time in both linguistic and non-linguistic research that the peoples speaking southern Bantu and SAK languages interacted intimately. The wealth of archaeological, historical, ethnographical, biological, and linguistic evidence will not be repeated here. Suffice it to say that sociolinguistic contacts were so extensive and varied that both borrowing and interference through shift (compare Thomason & Kaufman [1991:35ff]) must be viewed as relevant for early influence of Khoisan on Bantu.

In the linguistic literature, this idea has been entertained on a fairly profound empirical basis in terms of contacts between Khoekhoe and the whole of Southern Nguni, despite the fact that actual interaction is historically attested only for Xhosa. Studies considering Khoisan languages other than Khoekhoe were deficient in various respects. On the one hand, scholars had to rely until very recently on insufficient or unsystematically presented data. On the other hand, an explicit or implicit assumption of an unproven genetic unity of Khoisan in general and/or a structural homogeneity of languages subsumed under the linguistically vacuous

Table 3. Test languages and evaluation of their linguistic structures as possible borrowing templates

	ATTR	COMP	LOC		DIM		NS	
			GR	LEX	GR	LEX	GR	LEX
Malagasy	-	-	-	-	-	-		(+)
Arabic	-	-	-				(+)	
Anywa	-	-	-	-	(-)	(+)	-	-/(+)
Maa	-	-	-	-	-		-	
Nandi	-	-/+	-	-/+	-		-	
Awngi	+	+	+	+	+		+	
Oromo	-	-	+	+	+		(+)	-/(+)
Burunge	-	-	+	-	(-)	(+)	(+)	(-)
Hadza	-		+/-		+/(+)		(+)	
Sandawe	+	+	+	+		+/(+)	+	(-)
Kwadi	+	+	+			(-)	+	(-)
Khoekhoe	+	+	+	+	+		+	(-)
Hiecho	+	+	+	+		+		(+)/(+)
!Xam	+	+	(-)	+		+		+
!Xegwi	+/-	+	(-)	+		+		+
!Xoõ	+	+	(-)	+		+		+
‡Hoã	+	+	(-)	+	+		(+)	
Jul'hoan	+	+	(-)	+		+		+

Note: boldly framed columns mark the expression types more apt to borrowing

+ positive [FH/(FM)/PO/EC/SF]
 blank neutral [RED/IF/D/-] or no info [?]
 - negative [IH/(IM)/PR/PF]

(...) uncertain information or a characteristic of the source pattern weakening its possible positive or negative impact

term “Bushman” languages often biased the conclusions.

The bulk of previous work, such as Meinhof [1905], Bourquin [1951], Lanham [1962], Louw [1974, 1976, 1977a,b,c, 1979, 1986], Argyle [1986a,b], Herbert [1990], Sommer and Voßen [1992], and Voßen [1997], is primarily oriented towards direct borrowing on the part of Bantu in phonology, morphology, and the lexicon. Lickey [1985] is one of the very few that explicitly tried to find evidence for the plausible assumption that the great influence of SAK in southern Bantu languages, especially in their phonology, should be accompanied by interference in

the grammatical domain. She concluded, however, that her prediction was not borne out by the empirical facts considered in her analysis.

In general, the outcome of previous linguistic research presents, on the one hand, the established notion of an important linguistic impact of Khoekhoe on Nguni via direct borrowing, but, on the other hand, a quite vague picture about inter-lineage interference for the rest of SAK and southern Bantu. The available research results will now be combined with the findings of this investigation regarding nominal suffixes in Bantu.

5.2. Derivational suffixes with special reference to South African Khoisan.

For reasons which will become apparent below, the derivational suffixes will be discussed apart from the locative ones. Here, the work by Engelbrecht [1925] must be mentioned separately, as it is exceptional when compared to the treatments listed in 5.1, which mostly deal with borrowing of linguistic substance. Engelbrecht's article discusses extensively the suffixes *-kadj* and *-yana* in view of the attested language contact with Khoekhoe varieties and attributes their existence to what in modern terms would be called a process of structural calquing. This idea was briefly entertained again by Bill [1974:75f].

Engelbrecht's argument that the development of derivational suffixes in Bantu is closely tied to the historical interaction with SAK languages will now be substantiated and completed. The following observations are drawn mostly from the results of the present investigation.

1. The geographic distribution of the derivational suffixes given in Maps 3 and 4 can be characterized as the southern periphery of the Bantu speaking area. This region is almost coextensive with a region that can safely be said to have been inhabited prior to the Bantu spread by populations speaking languages related to synchronically attested SAK lineages like Khoe, Kwadi, !Ui-Taa, Ju, and †Hoã. In this sense, the geographic distribution of the structures to be explained via family-external interference coincides nicely with the area where the sociolinguistic contact with the assumed linguistic substratum could, and in sufficiently many cases has been proved to, have taken place.

2. The simple fact that regular devices to express natural sex with animates and diminutives have been described in SAK languages since the first short grammar sketches were published is remarkable. In view of the extremely restricted knowledge we possess even today for great parts of their linguistic structure, one wonders why early scholars so often commented upon these features. Admittedly, the concentration of early comparative work in this area on grammatical gender and alternative expressions for natural sex certainly plays a role. However, this is unlikely to be the only factor. There is at least one other point to be considered: Khoisan peoples in southern Africa have in common that breeding of livestock and/or hunting play a central role in their economic subsistence. This conceptual orientation toward animals suggests that such closely associated features as sex and size are prone to be expressed linguistically. Their regular and semantically transparent encoding, in turn, would make them probable targets for contact interference in southern Bantu languages, even more so, as their speakers share at least

an important cultural component of pastoralism with some of their Khoisan neighbors.

3. Another clear parallel between SAK as a whole and the affected Bantu languages is the largely identical morphotaxis in the relevant domain: the markers have mostly a host-final position, irrespective of whether they are grammaticalized suffixes or lexically transparent noun stems. The homogeneity within Khoisan can be seen as a reflex of the general preference for head-final noun phrase organization in the domain of associative constructions and related derivational patterns—and this irrespective of the word order characteristics in other grammatical domains. It has been observed already by Heine [1976:56] that this qualifies as an areal feature of this linguistic region prior to the Bantu spread. That precisely those Bantu languages that entered this area have developed derivational suffixes strongly suggests that this is partly the result of continuous structural pressure from the SAK substratum toward host-final marking devices on nouns.

4. The lexical sources of the respective derivational elements are also identical for Bantu and SAK as far as they are still discernible (compare the relevant columns in Table 2 and examples in 4.2; only Khoekhoe and \neq Hoã have lexically opaque diminutive suffixes and the Khoe family and Kwadi possess sex-sensitive gender suffixes). Even if universal principles of grammaticalization play an important role, the fact remains that, in all other SAK languages and southern Bantu, a noun meaning 'child' yields a diminutive while a nominal lexeme with the meaning component 'female' yields a feminine marker. Additional examples from !Xam for both functions are given in (34)-(35).

!Xam [Bleek 1928-30: 95f, 96]

(34) a.	<i>!ho Opwa</i> bag child 'little bag'	b.	<i>!ho!ho-ka !kaukən</i> bag.P-ATTR children 'little bags'
---------	--	----	--

(35) a.	<i>toi laiti</i> ostrich woman 'female ostrich'	b.	<i>toi-ta !ka:gən</i> ostrich-ATTR wives 'female ostriches'
---------	---	----	---

5. If one determines the strongest impact of derivational suffixes in a language or subgroup of southern Bantu, other significant observations regarding the SAK hypothesis can be made. The following parameters can serve to evaluate this impact: a) degree of loss of Bantu-typical structural means to express respective functions; b) number of derivational suffixes; c) degree of their grammaticalization (inter alia defined by productivity, cooccurrence, paradigmaticity, and agreement); and d) direction of their further functional expansion. An analysis of these parameters does not yield a homogeneous picture across southern Bantu. Instead, a geographically even more marginal center of suffix importance can be identified with the most southerly varieties of Southern Nguni and Sotho, whereby the former clearly shows the highest affectedness. Moreover, the way these suffixes

are integrated in their grammar is highly reminiscent of the use of parallel markers in SAK.

The following facts lead to this generalization: First, in contrast to such southern Bantu languages as, for example, Herero and Venda (compare (7) and (8) in 2.2.1 above), Southern Nguni and Sotho no longer have recourse to the inherited diminutive marking by means of prefixes. Furthermore they are the only languages that have the feminine suffix as well as the diminutive suffix as a fairly productive derivational device. Another piece of evidence for claiming that these suffixes are more deeply entrenched in the grammar of these languages is that they can combine to a limited extent in a compound suffix, as in Zulu (36)

(36) Zulu [Doke 1992:§210]

isi-bhuz-azana
7-goat-FEM.DIM
'young female goat not yet kidded'

In Nguni, there are still stronger signs of grammaticalization of these suffixes. First, both can be used not only with nouns, but also with adjectives and so-called relative stems, as in (37). This fact is parallel to the use of diminutive suffixes with predicates and nominal attributes as attested at least in !Ui and Khoekhoe, illustrated by the examples from !Xam and Nama (38-39).

(37) Zulu [Doke 1992: §199, 283]

- | | |
|---|---|
| a. <i>umu-ntu om-khulu-kazi</i>
1-person REL:1-big-AUG
'a very big man' | b. <i>len-kabi e-bomvana</i>
DEM.9-ox REL:9-red.DIM
'this reddish ox' |
|---|---|

(38) !Xam [Meriggi 1928/9:146]

!kwǎ ǎ #ěńni-Opǔǎ
child REL small-DIM
'ein kleines Kind [a small child]'

(39) Nama [Hagman 1977: 33, 74]

- | | |
|---|---|
| a. <i>!óm-ró tào-p</i>
difficult-DIM path-M:S
'the slightly difficult road' | b. <i>!hóá-ró</i>
converse-DIM
'converse a bit' |
|---|---|

With the possibility in Nguni of attaching a derivational suffix to an adjective, even an incipient suffix agreement between the head noun and its modifier has emerged, as illustrated in (40). Moreover, there is possible reduplication of the diminutive marker, as shown in (41).

Zulu [Doke 1992: §273, 274; §208]

- (40) a. *imi-shana emi-bilana* b. *um-fazi om-de-kazi*
 4-tree.DIM REL.4-two.DIM 1-woman REL: 1-tall-FEM
 'two little trees' 'a tall woman'
- (41) a. *in-ja* b. *in-jana* c. *in-janyana* d. *in-janyanyana*
 9-dog 9-dog.DIM 9-dog.RED.DIM 9-dog.RED.DIM
 'dog' 'little dog' 'very little dog' 'exceedingly tiny dog'

The implication of these data from the most southerly languages, and Nguni in particular, for the hypothesis of SAK interference in the development of derivational suffixes is clear: The fact that, and the way, these suffixes gain in grammatical importance the more languages have geographically encroached upon areas previously populated by SAK peoples can be motivated by the plausible assumption that such languages had the greatest chance of acquiring linguistic features of the languages they were presumably in contact with.

This conclusion is also borne out when the functional expansion of the derivational suffixes in Nguni and Sotho is considered. One finds again clear parallels to the grammatical characteristics of the assumed linguistic adstratum. For example, paucality with mass and non-count nouns is expressed with the help of a diminutive marker both in Southern Nguni and at least some Khoe languages, for example, Khoekhoe and presumably also Hiecho. Again, Zulu and Nama provide illustrative examples.

(42) Zulu [Doke 1992:§200]

ama-zwi > *ama-zwana*
 6-word 6-word.DIM
 'words' 'a few words'

(43) Nama [Hagman 1977:26]

||amí-ró-'i
 water-DIM-C:S
 'a little bit of water'

Admittedly, phenomena of this kind are surely universal tendencies, as Jurafsky [1996] has shown that the use of a diminutive marker with adjectives and verbs, or in the expression of paucality, can be frequently observed cross-linguistically. However, "universal tendency" in grammaticalization does not mean "necessary development". After all, inherited diminutive prefixes of Bantu did not undergo such processes. Moreover, apparent similarities between southern Bantu and Khoisan languages in the functional load of derivational devices cannot always be attributed to universal trends. Recall in this respect that the feminine suffix in Nguni and Sotho can have an augmentative and/or derogatory connotation, as shown in (44) in two further examples from Zulu.

(44) Zulu [Doke 1992: §199]

- | | | | |
|----|---|----|---|
| a. | <i>um-thi-kazi</i>
3-tree-AUG
'a huge tree' | b. | <i>um-fazi-kazi</i>
1-woman-AUG
'a great hulk of a woman' |
|----|---|----|---|

This is certainly not universal. On the contrary, the association of feminine sex with small size appears to be the cross-linguistically more frequent pattern. Languages of the test sample like Awngi, Oromo, and presumably also Hadza belong here and this makes them, in connection with the problem mentioned, less likely contact candidates. The typologically infrequent behavior of the feminine marker in the respective Bantu languages has, however, parallels in SAK.

A possibly relevant case may be found in Khoe. The manipulation of sex genders for semantic and pragmatic purposes is a general phenomenon of this family, observed, for example, in Kxoe [Köhler 1981:515] and Naro [Westphal 1962:41]. Hagman [1977:23f] describes the process of exchanging the unmarked gender of a noun by its opposite with more precision in Namibian Khoekhoe. Although, according to W. Haacke [p.c.], the data may not be valid for all varieties, it throws light on the general conceptual nature of grammatical gender in Khoe. Hagman [ibid.] writes:

“... gender replacement conveys the meaning “largeness of size with derogation” when largeness is an undesirable characteristic of the referent of the noun stem, it conveys simply “largeness of size” when largeness is neither desirable nor undesirable, and it may even convey the meaning “smallness of size” if smallness is undesirable.”

(45) Nama [Hagman 1977:23]

- | | | | |
|----|--|---|--|
| a. | <i>'om-s</i>
house-F:S
'the house' | > | <i>'om -i</i>
house-M:S
'the big house' |
| b. | <i>pén-i</i>
pen-M:S
'the pen' | > | <i>pén-s</i>
pen-F:S
'the unusually fat pen' |

Important for the present discussion is the fact that not only each member of the gender opposition, but also the switch between them is associated with a function, that is, in the majority of cases augmentation and derogation. In the Bantu languages Nguni and Sotho, such a manipulation of a marker of sex would be possible in only one direction, that is, replacing the unmarked form without a suffix by its marked feminine counterpart. The possible effect of the feminine marker in these Bantu languages on the meaning of the noun, that is, augmentation and derogation, is identical to Hagman's characterization of gender replacement. Considering the fact that with the suffix *-yana* these languages also have a means at their disposal to derive diminutives, it is conceivable that an

exclusive association between the feminine marker and an augmentative reading may have come into being.

Yet, there is even a clearer case of a conceptual connection between feminine sex and large size in SAK. Traill [1994:177] observes in !Xóǝ, a !Ui-Taa language, that the stem *qáe* meaning ‘mother’, ‘female’ (compare (33) in 4.2 above) has, in addition to its use as a feminine marker, the following derivational meaning:

“When suffixed to plant names it signifies a broader-leaved more substantial variety; with certain other objects it signifies more substantial size, weight.”

The fact that a relatively rare semantic phenomenon is shared by languages of both southern Bantu and SAK strongly suggests that there is a historical connection between the feminine suffix in the two compared groups.

6. A final argument is that there exists evidence according to which some of the Bantu languages discussed above have borrowed directly from Khoe languages in the relevant functional domain of noun derivation and compounding. The conclusion is clear: If borrowing is attested, it can safely be assumed that the contact situation provided for structural calquing, too. According to Louw [1976:90f], the suffix *-s(h)e* used to derive female proper names in Southern Nguni and, in Xhosa only, some other human nouns, has its most probable origin in the 3rd person feminine singular suffix *-s* of Khoekhoe. Another Xhosa suffix *-rha* used to derive nominals with a similitive, approximative, or derogatory connotation Louw [1976:92f] relates to the Khoekhoe adjective suffix *-xa*. Note that both elements are features of Khoe in general: The gender suffix is reconstructed by Voßen [1997b:342] as Proto-Khoe *-sa*; the suffix *-xa* exists at least in Kxoe, a Khoe language of the Kalahari branch (see Köhler [1981:511]). Thus, the ultimate origin of the Nguni borrowings cannot yet be tied conclusively to the historically most recent contact with varieties of the Khoekhoe branch.

Engelbrecht [1925:99f] demonstrated that Herero has also been influenced by Namibian Khoekhoe in a structural domain relevant for the discussion. He lists a considerable number of obvious loan-translations from Khoekhoe compound nouns which are structurally distinct from the Bantu-typical head-initial pattern. In light of contact between Herero and non-Bantu languages, it would be interesting to investigate whether the very marked phenomenon of head-internal subject relatives in Herero (see Haacke [1985]) could receive at least partial motivation because a parallel to non-Bantu head-final structures is apparent.

All the above arguments taken together strongly suggest that the SAK hypothesis is relevant when trying to account for the emergence of the derivational suffixes in southern Bantu. The following provisions should be made relating to this general conclusion: Unquestionable Khoisan interference in the relevant domain can be observed in Southern Nguni and Herero and can be attributed in part to their historically attested contact with Khoekhoe varieties. However, the Khoisan source should not be restricted to one genetic lineage only. Already, previous studies had observed that non-Bantu features in southern Bantu cannot be related completely to modern Khoekhoe sources. In fact, most directly bor-

rowed lexical items in Southern Nguni do not have counterparts in this subfamily of Khoe and sociolinguistic contact between Zulu and Khoekhoe varieties could only be inferred from linguistic facts.

This observation is also valid for the discussion of the emergence of nominal suffixes. Recall that a head-final noun phrase and its resulting structure templates are not restricted to Khoekhoe but represent an areal feature of pre-Bantu southern Africa. Other Khoe and Non-Khoe languages with their often lexically transparent constructions may also have played an important role in this process. Also, some Bantu languages, especially Nguni and Sotho, may have been secondary sources for the proliferation of derivational suffixes in southern Bantu because ethnic groups speaking these languages were particularly involved in the historical events of the Mfecane in the last century that affected the whole of southern Africa and even places much further north.

It is unclear so far whether there is any direct relation between the use of the feminine suffix **-kadi* in some zone J languages and its grammatical function in Nguni and Sotho. Apparently, the phenomenon in zone J cannot be accounted for by invoking Khoisan contact and must remain unexplained. If at all relevant for the question in southern Bantu, one should consider it in line with the ideas brought forward in 3.3 above to be an internal feature, which, at best, may have fostered grammaticalization but was hardly its trigger.

5.3. The locative suffixes in relation to the derivational suffixes. That the Khoisan hypothesis in its above form is not a tenable explanation for the emergence of locative suffixes will become clear from their geographic distribution also in areas far outside the historically attested range of SAK languages (see Map 1 and 2).

One possible solution to this problem is to follow the implicit thinking prevailing up to now - implicit in the sense that the suffixes have only rarely been discussed in terms of the specific historical circumstances of their emergence, so that this approach is rather a non-approach. Up to now, no association whatsoever was made between the development of derivational suffixes on the one hand and locative suffixes on the other. The derivational grammemes **-yana* and **-kadi* are viewed in accordance with the findings in 5.2 as markers that presumably came into being in southern Bantu. While the superessive/locative suffix has not yet been discussed at all from this perspective, the origin of inessive/locative **-ini* is placed according to the most explicit account by Samson & Schadeberg [1994] in the northeastern hemisphere of the family.

Support from the above empirical findings for the hypothesis regarding **-ini* is twofold. First, as mentioned in 2.1.3, this locative suffix is not an isolated phenomenon in northeastern Bantu. Instead one observes another concentration of host-final, though usually less grammaticalized locative markers in various languages of zone E, which are loosely distributed along the border between Tanzania and Kenya. It is significant in this respect that in the same area at least the South Nilotic language Nandi also shows a family-atypical behavior with respect to locative marking. Like Bantu, Nilotic as a family has a consistent head-initial noun phrase (compare Table 2). Nandi, however, besides making use of canonical

prepositions and preposed relational nouns, possesses compound-like locative structures that have the relational noun final to the nominal host (compare, *inter alia*, Creider & Creider 1989:70]. Thus, reflexes of a head-final noun phrase structure not being easily explained by family-internal development is found in a relatively confined area in languages of two genetically unrelated families. A suggestive historical hypothesis for this kind of host-final locative marking is to assume that the affected languages of Bantu and Nilotic have an external linguistic adstratum in common. As these two families were presumably the latest to enter this geographic area, this source was almost certainly a substratal one (see Ehret [1971, 1974] and Heine [1979] for overviews and more details on the early linguistic history in eastern Africa).

With regard to such a substratum, the second consideration comes into play. The data in Table 3 reveal that other attested lineages in eastern Africa partially possess structural features in locative constructions that could have served as possible sources for calquing. A plausible candidate in particular, besides such isolated remnant languages as Sandawe and partly Hadza, are Cushitic languages. Note that a similar concept of an early Cushitic substratum in eastern Africa called Proto-Baz and assigned to its eastern branch is invoked by Heine et al. [1979].

Speech forms structurally close to modern South Cushitic are, however, an unlikely source for host-final locative marking, as this group has synchronically, for whatever reasons, a fairly consistent head-initial noun phrase order. The fact that relational nouns in many languages of Central and East Cushitic are host-final indicates that modern South Cushitic might not be very representative as far as noun phrase syntax of early Cushitic is concerned. Thus, consider example (30) from Awngi (repeated below) and example (46) from Oromo.

[(30)] Awngi

- | | |
|--|--|
| a. <i>X-ampá-da</i>
X-top-LOC
'on, onto X' | b. <i>X-aya-des</i>
X-interior-ABL
'from inside X' |
|--|--|

(46) Oromo [Stroomer 1995: 99, 52, 100]

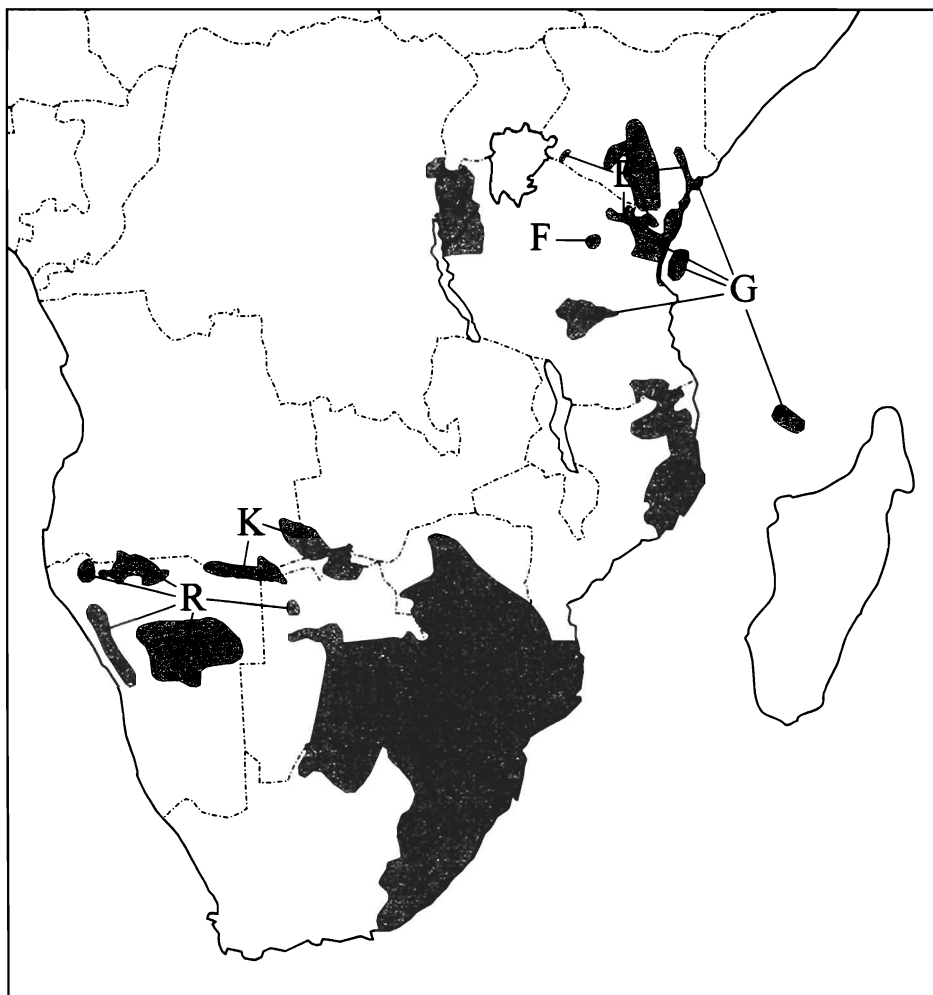
- | | |
|--|---|
| a. <i>mina keesa</i>
house in
'in the house' | b. <i>farda irraa</i>
horse on.ABL
'from the horse' |
|--|---|

The above considerations support an origin of locative **-jini* that is geographically independent of external Bantu contacts in southern Africa. However, the assumption that the emergence of derivational and locative suffixes is spatially and/or temporally unrelated also has disadvantages. An empirical problem is that the hypothesis of a separate northern origin of the suffix **-jini* falls short of explaining why Bantu zone S—as the center of derivational suffixes—is also the most compact distribution area of this locative suffix with no peripheral coastal bias as found in the northern area (see Map 1). Moreover, with Tonga-Inhambane, this

of locative **-jini* found as far north as southwestern Tanzania originated in Nguni varieties situated at the extreme southern end of the Bantu area. In general, there is ample room left for scientific imagination that addresses the still too rarely entertained concept of Bantu as a group of languages that emerged and continuously changed in a specific areal setting and which can thus not be sufficiently explained historically in terms of unilinear divergence processes.

APPENDIX

Map 6. Bantu speaking areas with nominal suffixes and other host-final markers according to reference zones



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THE NOUN CLASSES AND CONCORD OF CONGO COPPERBELT SWAHILI*

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This paper reconsiders claims that the Swahili of the Congo Copperbelt area has a limited noun class system and an inconsistent system of agreement. It shows that there are, operating side-by-side with the simple system generally presented by scholars, a noun class and concord system of the original Bantu type, and that the prefixes of the latter are in free variation with those of their simplified versions. This free variation is discussed from grammatical, socio-linguistic, and stylistic perspectives. The conclusion reached is that by spreading change in its lexicon and morphosyntax, Congo Copperbelt Swahili has developed a system of singular/plural prefixes that will eventually replace the traditional class system.

1. Introduction

The noun class and concord system of what is generally called Lubumbashi Swahili, but is here designated Congo Copperbelt Swahili (hereafter CCS), has received a lot of attention from scholars. The prevailing argument in the literature is that this language has a limited number of noun class prefixes and an inconsistent system of agreement [Polomé 1968, 1971, 1982, 1983; Bokamba 1977; Gilman 1985; Rossé 1977]. This characterisation of the CCS noun class and concord system is generally taken for granted and quoted particularly by scholars who, like Ohly [1988], are interested in other areas of CCS than syntax.

I show two basic things in what follows: (1) that CCS has a range of prefix shapes and a concord system that corresponds in general outline to that found in East African Swahili and other Bantu languages; and (2) that part of this system of noun classification and related concord operates side-by-side with the sim-

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plified system which other scholars have identified and emphasised to the point of overlooking the former. I further try to explain the noted variation in terms of syntactic environment, and sociolinguistic and stylistic variables. Before doing all this, I first discuss the source of the data supporting the analysis.

2. Source of data

The present analysis is based primarily on empirical data obtained from various sources. These include:

- recordings of spontaneously delivered conversations and accounts of elicited talk such as narratives;
- a recording of talk at a dowry ceremony;
- a perusal of letters, 20 genuine and 10 elicited; and
- consultation sessions during which informants were asked to decide whether or not they felt that the 20 genuine letters submitted to them were written by competent CCS speakers. Informants were invited to rewrite letters with dubious expressions in what they regarded as 'acceptable' CCS.

To take part in these activities, one needed to have been born in Lubumbashi or in another urban centre of the CCS domain and not to have lived in a speech community with another variety of Swahili.

The data thus collected were backed up by tests of grammaticality and acceptability judgements conducted with fellow native speakers of CCS. These were carried out in the form of interviews on the topics of noun class and concord. The informants were presented with items which, based on my own intuition as a native speaker of CCS, I considered inadequately described in previous work. It was the informant's duty to decide whether in his or her view the structure of those items was acceptable and grammatical by CCS standards or not. Provision was also made for the informant to offer alternative constructions in cases of dissatisfaction.

In an effort to rely on empirical data as much as possible, I have refrained from using made-up sentences (or parts thereof) to illustrate matters in the analysis. Preference is given to constructions that actually occurred in the data.

3. CCS Noun Prefixes, Classes, and Concord

3.1. The common Bantu pattern. The data show that, like all other Bantu languages, CCS has a large number of noun prefixes commanding alliterative concord. Evidence of this is provided in (1) where the noun prefixes and the other members of concord sets are underlined.¹

- (1) a. Batoto ba-mingi b-a iki ki-pande ba-li-kwa-ka-po
 2-children 2-many 2-CON DEM.7 7-piece 2-PST-be-ASP-LOC
 'Many children from this area were there.'

¹ Abbreviations: ASP = aspect, CON = Connective, DEM = demonstrative, LOC = Locative, NEG = negative, PST = past, PR = present. Numbers in examples correspond to noun classes.

- b. *Idi di-cafu di-ote di-li-kwa di-a ku-vimba.*
DEM.5 5-cheek 5-all 5-PST-be 5-CON 15-swell
'This whole cheek was swollen.'
- c. *Iki ki-bambashi ky-ote, ba-lisha ku-ki-pomona.*
DEM.7 7-wall 7-all 2-ASP 15-7-destroy
'This entire wall has been destroyed.'
- d. *Bi-le bi-ntu bi-ote bi-li-kwa-ka mw-a Kalumbu bi-l-ingia*
8-DEM 8-thing 8-all 8-PST-be-ASP 18-CON Kalumbu 8-PST-enter
umu mu-nyumba.
DEM.18 18-9.house
'All the stuff that was in Kalumbu's (house) was transferred into this house.'
- e. *Lu-pi lu-le ba-li-mu-pika kuko Charles njo lu-li-mu-vimbisha*
11-slap 11-DEM 2-PST-1-hit by Charles it.is 11-PST-1-make swell
di-cafu.
5-cheek
'The slap he was given by Charles is what made his cheek swollen.'
- f. *Mi-shi-ya-shikia-ka m-ambo y-a vile ku-ka-bila ata*
1S-NEG-ASP-hear-ASP 6-matter 6-CON that way 17-12-tribe even
ka-moya k-a umu mw-etu.
12-one 12-CON DEM.6 6-our
'I have never heard of such things in any of our tribes.'
- g. *Tu-putula tw-ake t-ote tu-lisha ku-ya tu-loko-tu-loko.*
13-short 13-POSS 13-all 13-ASP 15-be 13-small-13-small
'All his pairs of shorts have become smaller.'
- h. *Tu-li-kombana bu-komvi bu-moya bw-a n-guvu sana.*
1P-PST-fight 14-fight 14-one 14-CON 9-strength very'
'We fought a very hard fight.'
- i. *Ku-le ku-lamukiana kw-a i-le saa mi-shi-kw-icike.*
15-DEM 15-greet each other 15-CON 9-DEM 9.time 1S-NEG-15-accept
'I don't believe in greeting people at that time.'

These examples clearly testify to the existence in CCS of the noun classes generally identified with the following prefixes, respectively: class 2 (*ba-*), class 5 (*di-*), class 7 (*ki-*), class 8 (*bi-*), class 11 (*lu-*), class 12 (*ka-*), class 13 (*tu-*), class 14 (*bu-*), and class 15 (*ku-*). To these can be added the three locative classes. These, too, have alliterative concord as indicated by the examples in (2) which

represent classes 16 (*pa-*), 17(*ku-*), and 18 (*mu-*), respectively. The fact that these locative prefixes are attached to full-fledged nouns (i.e., to nouns made up of a stem and the appropriate prefix) is not peculiar to CCS; the phenomenon is widespread in Bantu languages.

- (2) a. *A-li-sema a-li-shikia sa pa-ma-lata pa-li-kwa mu-ntu.*
 1-PST-say 1-PST-hear as if 16-6-roof 16-PST-be 1-man
 'He said he had the impression that there was someone on the roof.'
- b. *Ku-n-sumishi k-ote ku-li-kwa ma-lamu.*
 17-9-shirt 17-all 17-PST-be 6-blood
 'There was blood all over the shirt.'
- c. *Umu mu-ny-umba a-mu-ku-kuwa-ke ki-ci ata ki-moya.*
 DEM-18 18-9-house NEG-18-15-be-ASP 7-chair even 7-one
 'There was even not a single chair in this house.'

The noun classes thus far identified have in common the fact that the agreement marker is the same in form as the noun prefix. With the other classes, exemplified in (3) below, this is not the case. Nevertheless, there is a specific agreement pattern that identifies each class, thus complying with the view that a noun class is "made up of those words that have similar prefixes, which in turn form part of a set of concord elements operating a distinct pattern of agreement" [Guthrie 1956:545].

- (3) a. *Uyu mu-kubwa a-na mu-ntu w-a ku-wekea ro.*
 1.DEM 1-elder 1-NEG.be 1-man 1-CON 15-put heart'
 'This our elder brother is not someone to trust.'
- b. *Sasa a-n-ekala-ka paka ku-mu-kongo mu i-le mu-m-pando*
 now 1-PR-sit-ASP only 17-3-back 18 9-DEM 18-9-reclining chair
mu-lefu i-le i-li-kuwa-ka y-a baba.
 18-long 9-DEM 9-PST-be-ASP 9-CON father
 'Now, he only sits behind the house in that long reclining chair that used to belong to dad.'
- c. *Ba-li-mu-pika ju y-a mi-fano y-ake mi-baya.*
 2-PST-1-beat because 9-CON 4-habit 4-3S.POSS 4-bad
 'He was beaten up because of his bad habits.'
- d. *Ma-co na-yo i-li-kwa y-a ku-vimba.*
 6-eye and-6 6-PST-be 6-CON 15-swell
 'The eyes, too, were swollen.'

The situation is not straightforward with the traditional classes 9 and 10, as can be seen from the examples in (4) and (5) below. Nouns like those in (4) and

(5) are undifferentiated for singular (a) and plural (b), operating with the same concord set. Hence, there is no basis for justifying a class 9 different from class 10 in present day CCS. The two classes have obviously collapsed and their nouns can justifiably be lumped together into one class, which we can label as 9.

- (4) a. *Shi-pende m-pango moya uku, i-ngine kule.*
 NEG-PR-like 9(sg)-plot.of.land 9.one here 9-other there
 'I don't want one plot of land here, another one there.'
- b. *Mi-na-taka m-pango m-bidi mu-nene sa iyi.*
 1S-PR-want 9(pl)-plot of.land 9-two 9-large like 9-DEM
 'I want two plots of land this large.'
- (5) a. *M-pete y-a pa-di-beka, ata kama i-ko moya tu,*
 9(sg)-stripe 9-CON16-5-shoulder even if 9-be 9.one only
 'Even one stripe on the shoulder'
- b. *i-na-pita m-pete ata ngapi y-a pa-mu-kono.*
 9-PR-surpass 9(pl)-stripe even how.many 9-CON 16-3-arm
 is superior to however many stripes on the arm.'

The table in (6) summarizes the information thus far provided with respect to noun class and concordial prefixes. The information in the chart is clearly at variance with previous scholars' views. For Polomé [1968], classes 12 and 13 do not exist in CCS, while classes 11 and 14 are said to have collapsed. Bokamba [1977] considers classes 12 through 15 to be non-existent. For his part, Rossé [1977] makes no mention of classes 3, 4, 11, and 15.

With respect to concord, it is interesting to realise that the nine classes which in Proto-Bantu operated with alliterative concord are also attested in CCS. These are the classes whose nouns have non-nasal CV prefixes and whose concord is, in fact, a copy of that CV. With the exception of class 1, as can be seen in (7), all classes with N(V)-prefixes follow the same agreement pattern for demonstratives (*i-*), pronouns (*i-* or *-yo*), and verbs (*i-*); class 4 differs from the others only in its agreement with adjectives. This sharing of agreement set is not peculiar to CCS. Ruund, a language of zone K, uses the same concord pattern (with /*yi-*/ throughout) for both classes 4 and 8.

Since these findings are based on a careful study of data produced by native speakers, it can be surmised that the main fault with previous work is inadequate or inappropriate data. Moreover, researchers seem to have failed to realise that the simplified system which they describe is no more than one aspect of an inflection/derivation-motivated system operating alongside the purely formal system presented above. This alternative system is discussed in a more detail in 3.2.

(6) Noun class prefixes and associated concord sets

CL	Pfx	Demon.	Concordial Affixes		
			Adjectives	Pronouns	Verbs
1	mu-	u-	mu-	u- / -ye	a-
2	ba-	ba-	ba-	ba- / -bo	ba-
3	mu-	i-	mu-	i- / -yo	i-
4	mi-	i-	mi-	i- / -yo	i-
5	di-	di-	di-	di- / -dio	di-
6	ma-	i-	mu-	i- / -yo	i-
7	ki-	ki-	ki-	ki- / -kyo	ki-
8	bi-	bi-	bi-	bi- / -kyo	bi-
9	n-	i-	mu-	i- / -yo	i-
11	lu-	lu-	lu-	lu- / -lo	lu-
12	ka-	ka-	ka-	ka- / -ko	ka-
13	tu-	tu-	tu-	tu- / -to	tu-
14	bu-	bu-	bu-	bu- / -bo	bu-
15	ku-	ku-	ku-	ku- / -ko	ku-

(7) Prefixes of the N(V) type with associated concord sets

CL	Pfx	Demon.	Concordial affixes		
			Adjectives	Pronouns	Verbs
1	mu-	u-	mu-	u- / -ye	a-
3	mu-	i-	mu-	i- / -yo	i-
4	mi-	i-	mi-	i- / -yo	i-
6	ma-	i-	mu-	i- / -yo	i-
9	n-	i-	mu-	i- / -yo	i-

3.2. The alternative pattern. There is evidence that CCS has another way of classifying nouns and determining concord. In this alternative system, nouns that are already marked with a prefix are allocated an additional prefix to mark the singular/plural distinction or a variety of derivationally obtained meanings. It will be seen from the appropriate examples that in such cases, agreement is triggered by the additional, leftmost prefix. Probably the most interesting characteristic of this system is the overriding role played by the prefixes /*ba-*/ and /*ma-*/ as pluralisers for any animate and inanimate nouns, respectively. In the following sets of examples, the underlined noun normally forms its plural as in the (a) examples. However, the form in the (b) examples is also grammatical in CCS.

- (8) a. *Lumba a-li-bamba mi-longe mi-nene y-a mingi.*
 Lumba 1-PST-catch 4-herring 4-big 4-CON many
- b. *Lumba alibamba ba-mi-longe ba-nene b-a mingi.*
 2-4-herring 2-big 2-CON
 ‘Lumba caught many big herring.’
- (9) a. *Mbuya a-na-fundishaka bi-pofu.*
 Mbuya 1-PR-teach 8-blind
- b. *Mbuya anafundishaka ba-bi-pofu.*
 2-8-blind
 ‘Mbuya teaches the blind.’
- (10) a. *Ba-ntu a-ba-pende ma-tafwadi y-a ivi.*
 2-people NEG-2-like 6-bricks 6-CON like.this
- b. *Bantu abapende ma-ma-tafwadi ya ivi.*
 6-6-bricks 6-CON
 ‘People don’t like bricks of this sort.’
- (11) a. *Tu-congola tu-ko wapi?*
 13-sharpener 13-are where
- b. *Ma-tu-congola iko wapi?*
 6-13-sharpener
 ‘Where are the sharpeners?’

Evidence also exists which shows that CCS allows all singular inanimate nouns, on the one hand, to take the class 6 agreement marker, and all singular animate nouns, on the other, to take the class 1 agreement marker irrespective of their inherent noun class prefixes. Examples in (12) and (13) illustrate this for animate nouns. This alternation in agreement pattern—that is, between inherent class marker and the animate marker—is not applicable in east coast Swahili where human nouns with prefixes other than that of class 1 only permit the class 1 agreement pattern.

- (12) a. *Ki-le ki-pofu ki-na-fundaka kule.*
 7-that 7-blind person 7-PR-study there
- b. *U-le ki-pofu a-na-fundaka kule.*
 1-that 7-blind person 1-PR-study there
 ‘That blind person studies there.’

- (13) a. *Nani a-na-sabu ka-le ka-comona k-a ma-shiku y-ote?*
 who 1-PR-forget 12-that 12-pickpocket 12-CON 6-days 6-all
- b. *Nani anasabu u-le ka-comona w-a mashiku yote?*
 1-that 12-pickpocket 1-CON
 ‘Who doesn’t know that pickpocket of all days?’

What seems to be unique to CCS, and not found in other languages that have shifted to an animate/inanimate basis for determining agreement, is the selection of the N(V) class 6 agreement for all singular inanimate nouns, as (14) illustrates.

- (14) a. *Idi di-sashi ni di-a FM. Nani a-li-teta-dyo / a-li-di-leta?*
 this.5 5-bullet is 5-CON FM who 1-PST-bring-5 / 1-PST-5-bring
- b. *Iyi disashi ni y-a FM. Nani a-li-teta-yo / a-li-i-leta?*
 6.this 6-CON 1-PST-bring-6 / 1-PST-6-bring
 ‘This is an FM bullet. Who brought it?’

It appears that CCS, in this alternative noun agreement system outlined in (15), has developed special concord patterns marking only singular/plural distinctions based on an animate/inanimate distinction. The noun prefixes and associated agreement patterns in this schema can, in compliance with restrictions imposed by certain syntactic environments, substitute for their homologues in (6) above.

(15) Simplified noun classification and related concord

Gender	Number	N Pfx	Con cord			
			Dem	Adj	Pro	Verb
Animate	Singular	Ø	u-	u-	u- / -ye	a-
	Plural	ba-	ba-	ba-	ba- / -bo	ba-
Inanimate	Singular	Ø	i-	i-	i- / -yo	i-
	Plural	ma-	i-	i-	i- / -yo	i-

Details of the syntactic restrictions mentioned above are given in section 4 below. Before considering those restrictions, let us look at the derivational use of prefixes in CCS.

CCS exploits the resource of derivation via noun prefixes in basically the same way as all other Bantu languages. It selects particular prefixes, notably /ka-/, /ki-/, /lu-/, /bu-/ and their plural counterparts (where applicable) to mark the notions of diminution, augmentation, deprecation, and status/quality, respectively. What is typical in this respect is the strong tendency for these prefixes to be added, not to the noun stems, but to the full noun—class prefix plus stem—as was the case with the pluralisers /ba-/ and /ma-/. Taking the noun stems *-todilo* (3/4, flute) and *-fwebe* (7/8, masquerade) for illustration, we find the forms given in (16)–(17).

	Singular	Plural	Gloss
(16) a.	<i>mutodilo</i>	<i>mitodilo</i>	'flute(s)'
b.	<i>kamutodilo</i>	<i>tumitodilo</i>	'small flute(s)'
c.	<i>kimutodilo</i>	<i>bimitodilo</i>	'big flute(s)'
(17) a.	<i>kifwebe</i>	<i>bifwebe</i>	'masquerade actor(s)'
b.	<i>kakifwebe</i>	<i>tubifwebe</i>	'small masquerade actor(s)'
c.	<i>kikifwebe</i>	<i>bibifwebe</i>	'big masquerade actor(s)'
d.	<i>lukifwebe</i>		'repulsive masquerade actor'
e.	<i>bukifwebe</i>		'masquerade actor status'

Since derivational prefixes occupy the leftmost position in the noun structure, they take precedence over the strictly inflectional ones when it comes to triggering agreement. The same goes for locative prefixes as illustrated previously by the examples in (2).

That locative prefixes are added to nouns already bearing a class prefix is not unusual for a Bantu language. But that the other derivational prefixes and the pluralisers /*ba-*/ and /*ma-*/ also behave in this way suggests that the behaviour of prefixes in this alternative, simplified grammar may have been modelled on the locative prefixes. The situation seems to be one where, in addition to developing a generalised inanimate concord by analogy with animacy agreement, CCS is extending the syntactic behaviour of locative prefixes to other prefixes selected for marking number and derivational distinctions.

4. Concordial and prefixal free variation

It has been pointed out that the prefixes and concord sets of both the simplified and the conventional Bantu type of system share distribution throughout the CCS speech community. Close inspection of the linguistic contexts open to this variation reveals nonetheless that things are not as simple as they seem to be. Certainly contexts exist in which it does not matter which variant is used. But there also exist environments where the tendency is for variants of one system to supplant those of the other. And in still other environments, free variation is blocked altogether.

Concordial free variation is disallowed in at least two types of construction: those in which the noun commanding agreement has a derivational prefix in its morphology and those involving some re-ordering or disruption of the canonical SVO order of sentence constituents in CCS. The only concord type applicable in such contexts is that outlined in the conventional Bantu system given earlier in (6) above and exemplified in (18) and (19). This will, for convenience, be referred to as "strong concord"; concord in the simplified system will be referred to as "weak concord".

- (18) a. *Tu-bi-vidingo tw-a ndani tu-na-pita bu-loko.*
 13-8-circle 13-CON inside 13-PR-surpass 14-smallness
 b. **Tubividingo y-a ndani i-na-pita buloko.*
 13-8-circle 6-CON 6-PR-surpass
 'The inner circles are too small.'
- (19) a. *Ka-lu-sambo ka-na-toka-mo.*
 12-11-wire 12-PR-get out-LOC
 b. **Ka-lu-sambo i-na-toka-mo.*
 6-PR-get out-LOC
 'The fuse has come off.'

Matters are further clarified when these facts are contrasted with the examples in (20) and (21), respectively, where the same nouns can trigger either concord freely because they are devoid of derivational prefixes.

- (20) a. *Bi-vidingo by-a ndani bi-na-pita bu-loko.*
 8-circle 13-CON inside 13-PR-surpass 14-smallness
 b. *Bividingo y-a ndani i-na-pita buloko.*
 6-CON 6-PR-surpass
 'The inner circles are too small.'
- (21) a. *Lu-sambo lu-na-toka-mo.*
 11-wire 11-PR-get out-LOC
 b. *Lu-sambo i-na-toka-mo.*
 6-PR-get out-LOC
 'The fuse has come off.'

With (22) and (23), we have cases of obligatory use of strong concord when there is a marked word order.

- (22) a. *Ki-le mi-li-taka ki-na-onokana.*
 7-that 1S.PST-want 7-PR-reveal self
 b. **Kile militaka i-na-onokana*
 6-PR-reveal self
 'What I wanted has materialised.'
- (23) a. *Bi-fu u-ta-katulula-byo kama bi-na-lekea.*
 8-tripe 2S-FUT-slice.up-8 if 8-PR-become soft
 b. **Bifu utakatulula-yo kama i-na-lekea*
 -6 6-PR-become soft
 'The tripe you will slice up when soft.'

Thus, concordial free variation in CCS is only open to unmarked environments, marked ones being exclusively reserved for strong concord. In effect, by starting with an object constituent where the basic word order is normally subject initial, pseudo-cleft sentences and constructions with topicalised constituents as illustrated by the latter two examples are marked and, consequently, do not allow weak concord. The same applies to heads and their dependents in relative clauses, cleft sentences, and sentences with dislocated constituents. For their part, nouns with derivational prefixes are considered marked by virtue of their semantic and morphological loads as compared to nouns with inflectional prefixes only.

The conclusion arising from these observations is that only strong concord is possible in marked environments; concordial free variation is only allowed in unmarked ones. Syntactic environments where only weak concord is applicable have not been identified. Those where it supplants strong concord are not much attested in the data either, despite informants' tendencies to accept them during consultations on acceptability and grammaticality. To have a clearer idea of the low frequency of weak concord in actual speech, note that this concord was only realised 26 times in a selected sample of conversations and narratives with 354 nouns capable of governing concord (which represents only 7% of cases in the selected range). Also interesting is the observation that the majority of cases forming this total of 7% are expounded within NPs, especially by possessive and connective markers. So, on the whole, we note that strong concord prevails both in marked and in unmarked environments while weak forms of agreement tend to be favoured on strictly grammatical (as opposed to lexical) formatives occurring NP internally, a point calling for further research and explanation.

An attempt to study the data from a sociolinguistic perspective shows that speakers alternate between the two concord types almost inadvertently. There thus does not seem to be any basis for associating strong or weak concord with clearly specifiable sociolinguistic variables. The random character of concordial free variation in unmarked syntactic environments in spontaneously delivered speech is borne out by (24). In this example, MW (a minimally literate lady of 28) and KS (a male teacher of 35), carry on a conversation focussed on the theme *-diyo* (7/8, mourning) and give rise to a stretch of discourse where variants of the two concord types are clustered in probably the most ideal way. Markers of strong concord are underlined twice while those of weak concord have single underlining. The passage shows how each conversant freely goes from one concord type to the other.

- (24) MW: *Alisema uko muntu mubaya ju ya nini?*
 KS: *Ju mishikukwende ku kidiyo kya kwabo.*
 MW: *Beko na kidiyo kingine kya nani tena?*
 KS: *Kidiyo kingine kya wapi! Shi paka ile kidiyo ya bab'abo. Mili-
 mwambia asema miye, tulisha kufwanya kidiyo kwa Paul. Je ne
 vois pas pourquoi il faut kufwanyulula ile kidiyo. Mitenda paka
 kama ni kidiyo kingine, kya muntu wingine anakufwa.*

MW: *Eh eh! Beko nafwania kidiyo ya bab'abo mala ya pili! Uko na raison lwako.*

KS: *Oui, oui. Pour moi kidiyo kinesha kwisha.*

[MW: Why did he say you are a bad person?

KS: Because I did not attend the mourning gathering in memory of their father.

MW: Who are they mourning again?

KS: Who else if not their father! I told him that as far as I'm concerned, the mourning gathering took place at Paul's. I don't see why it must be done again. I shall only go when someone else dies.

MW: So they are holding another mourning gathering in memory of their father! You are dead right.

KS: Yes. Yes. As far as I'm concerned, the mourning is over.]

An explanation of a stylistic nature comes with epistolary data. A perusal of the ten elicited letters revealed the exclusive use of strong concord in all contexts where agreement is required. Out of 480 such contexts identified in the 20 genuine letters, only three cases of weak concord were attested. As was the case with weak concord in spoken data, here too, the three intriguing situations involved the possessive clitics *-ake* 'his/hers' and *-abo* 'theirs', as (25)–(27) show.

(25) *Mi-li-pata barua y-ako i-le u-li-tuma na mw-alimu y-ako.*²
1S-PST-get 9.letter 9-your 9-that 2S-PST-send with 1-teacher 6-your
'I received the letter that you sent with your teacher.'

(26) *Paka mu-yomba y-enu njo eko nagonjwa.*
only 1-uncle your (pl) it.is is PR-be ill
'Only your uncle is ill.'

(27) *Salimia bwana' ko.*
greet husband your
Extend my greetings to your husband.'

These three cases were rephrased as in (28)–(30) during the consultations on acceptability and grammaticality.

(28) *Milipata barua yako ile ulituma na mwalimu wako.*

(29) *Paka muyomba wenu njo eko nagonjwa.*

(30) *Salimia bwana wako.*

Also noteworthy is the realisation of the possessive clitic in (27), which suggests that the writer, feeling inadequate with the realisation *bwana yako*

² There is a growing tendency in CCS to use class 6 agreement interchangeably with the relevant strong concord variant in possessive determiners, hence, *yako* or *wako*.

which he probably resorts to in speech, prefers an alternative that masks weak concord in writing.

The reason for eschewing weak concord in favour of strong concord in writing seems simple: unlike spoken language which operates via the pragmatic mode of discourse [Givón 1979; Ochs 1979] and allows for little language monitoring before speech delivery, written language involves some syntactic tightening following the availability in this medium of more time for pre-planning and reformulation. The requirement of strong concord in the written data can thus be associated with the careful end of the careful-to-casual speech style continuum.

The same explanation can be extended to the previously identified marked syntactic environments involving dislocation, topicalisation, clefting, and relativisation as they emerge through syntactic elaboration of structures of the pragmatic mode [Givón 1979:222]. There is nothing inadequate with stating that free variation is blocked in favour of strong concord in constructions with displaced constituents or disrupted word order. But much is gained explanatorily by correlating strong concord, which occurs in marked environments, with careful style in which more attention is accorded the morphosyntax of constructions.

This stylistic explanation also works with respect to the choice of plural prefixes. Those of the simplified system were unattested in the written data. Even in speech, the plural prefixes of the original Bantu type supplant those of the simplified grammar. A ratio of 2 in 10 was observed in a sample of spoken discourse with 120 environments theoretically open to prefixal free variation. What is worth noting is that the pluralisers of the simplified system have proven to have a privilege of occurrence at hesitation points, which are typical of casual speech. This is illustrated in (31) and (32) where it is possible to replace the underlined words by *bici* 'chairs' and *bitoyo* 'salted fish', respectively.

(31) *Jules ye eko nadidia ni fwashi.*

Jules 1 PR-be PR-cry is space

Ana na mambo na nani...na mabici ya Nsamba.

NEG-be with 6-matter with what with 6-8-chair 6-CON Nsamba

'As for Jules, he is dying for space. He's got nothing to do with Nsamba's chairs.'

(32) *Banauzishaka bitumbula, mikate na manani...mabitoyo na mafuta.*

2-PR-sell-ASP 8-pancake 4-bread with 6-what 6-8-salted with 6-oil

They sell pancakes, bread, and what-d'you-call-it, salted fish and oil.

As in the case of concordial free variation, attempts at discovering socio-linguistic variables behind the selection of prefix variants were inconclusive.

On the whole, then, it seems that even though areas of overlap exist, the prefixes and concord sets of the conventional Bantu type of system are most appropriate in careful speech while their homologues from the simplified system are best fit for the casual end of the speech style continuum. As to the question of why analytic preference should be given to a continuum rather than to a discrete,

diglossic analysis, one must note that there does not exist throughout the CCS speech community two distinct varieties of Swahili operating side-by-side, each with a definite social function.

With respect to so-called Standard Swahili, which advocates of a diaglossic analysis [Polomé 1968; Rossé 1977] would regard as the H(igh) variety, the majority of CCS speakers have no clear conception. It appears both from informants' pronouncements and the genuine letters in the data that what they call Standard Swahili is no more than a set of stereotypical items in the direction of which, to borrow Le Page and Tabouret-Keller's [1985:180] expression, a few gestures are made from time to time. Fabian [1984:181] remarks that despite all the effort for its promotion, "the refined, literary variety modelled on descriptions of east coast Swahili has always failed to develop into a vital linguistic medium."

5. Conclusion

The above discussion demonstrates that CCS has, in fact, a formal conventional set of noun class prefixes and related concord sets, the existence of which has been ignored in previous work. In addition to describing this system of purely formal concord classes and showing that the prefix shapes in this system correspond in general outline to those found in east coast Swahili, the paper has also shown that an alternative, simplified system also exists. In the latter, a limited number of original Bantu markers have been selected to express certain inflectional and derivational distinctions. The simpler system, involving agreement based on animacy of the noun, has developed inanimate as well as animate concord.

On the issue of prefixal and concordial free variation, one key point was made: forms of the original Bantu type of system are the only ones permitted in careful speech style while they share distribution with their homologues from the simplified system towards the casual end of the careful-to-casual speech continuum. Strong concord occurs exclusively in marked syntactic contexts including those where nouns embody a derivational prefix and those which involve movement rules such as topicalisation and clefting.

Given the pervasive character of the original Bantu type of noun class and concord variants, there is every reason to believe that the simplified noun classification and agreement organisation form part of innovations the language is undergoing. The fact that new pluralisers are being introduced and that the prefixes and concord of the original Bantu type are excluding, as it were, their simplified counterparts from marked linguistic contexts seems to suggest that the language is developing a tendency to go away from a class system towards a system of singular/plural prefixes where the singular is unmarked and the plural marked.

Overall, it seems that, instead of putting back Bantu features into its reputedly pidginised grammar, as maintained by advocates of rebantuisation theory [Heine 1979; Polomé 1983], CCS is reverting to some sort of pidginisation by simplifying its noun class and agreement organisation. Note that such a course of development is not peculiar to CCS. It was followed by Kituba [Stucky 1978] and

is operative in the urban Lingala of Kinshasa. Maybe the fact is that Bantu *linguae francae* are prone to this kind of change where a standard form is non-existent or where attempts at institutionalising one have failed.

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PUBLICATIONS RECEIVED

Capen, Carole A. *Bilingual Dholuo—English Dictionary*. Tucson, AZ: Self-published. 1998. Pp. x, 322. Pbk. \$15.00

The dictionary consists of a brief introduction describing the structure of lexical entries, the main Dholuo-English and English-Dholuo Dictionaries, eight appendices providing specialized lists of flora and fauna, baskets and pots, concluding with a short bibliography of other work on Dholuo. The Dholuo-English Dictionary contains approximately 6,000 head entries, the English-Dholuo Dictionary approximately 5,000 head entries. Tone is not indicated; vowel length is given in a few instances. Approximately 100 illustrations of tools, household utensils, animals, and plants are included.

[Copies may be purchased from Mrs. Shelley Bertelsen, 4617 Skylark Way, El Paso, TX 79922 prior to December 1999, from Robert Capen, 63715 E. Posada St., Tucson, AZ 85739 after December 1, 1999].

Ayunjam, Funwi F. *A Reference Grammar of Mbili*. 1998. Lanham, MD, New York, and Oxford: University Press of America, Inc. pp. xxxiii, 444. \$69.00 (cloth), \$45.00 (pbk.)

Mbili is a Grassfields Bantu language of the Ngemba sub-group of Mbam-Nkam having approximately 15,000 speakers living in the village of Bambili. The grammar touches on all aspects of the language, presented in a non-theoretical descriptive format that makes it readily accessible to all linguists.

Following the introduction, which provides a brief overview of the history and situation of the language in Cameroon, Chapters One and Two lay out the segmental and suprasegmental phonology of the language. Of particular interest is the extensive discussion of tonal behavior. Chapter Three focuses on noun morphology, including discussion of the class system, compounding, reduplication, derivation from other parts of speech. This chapter also includes discussion of noun modifiers—adjectives, determiners, and numbers—as well as ideophones and interrogative elements. Chapter Four is devoted to verb morphology, providing examples and discussion of all tenses, aspects, and moods. Chapter Five addresses syntax, including agreement phenomena, nominal clauses, interrogatives, apposition, subordination, and adverbial clauses. The appendices include five texts—translated but not glossed—and an Mbili-English Lexicon.

Nougayrol, Pierre. *Les parlers gula, Centrafrique, Soudan, Tchad: Grammaire et lexique*. 1999. Paris: CNRS Editions. pp. 382.

This volume provides a descriptive account of Gula, a Central Sudanic language spoken primarily in the northern part of the Central African Republic near the Chad and Sudan borders. The author divides Gula into three major dialects: Koto, Mere, and Sara. The grammatical description and lexicon address differences among these dialects.

The introduction gives an extensive description of the historical, social, geographic, and linguistic situation of Gula speakers. Following this, the book is divided into four sections. The

first section describes the phonology of the language. The second section consists of five chapters describing the grammar. The first chapter in this section describes the structure of simple and complex sentences. The second chapter describes the noun and noun phrase, the third pronouns. The morphology and structure of the verb phrase are described in chapter six. Subordination and coordination are discussed in chapter seven. An appendix to this section gives a text in Gula-Sara. The third section focuses on historical changes—primarily phonetic and lexical—among the three main dialects. The fourth, and final, section is a lexicon of words common to the three dialects, accompanied by a French-Gula index. The volume contains numerous examples which make this a valuable reference work.

Kirsch, Beverley, and Silvia Skorge, with Sindiwe Magona. *Teach Yourself Xhosa*. 1999. Lincolnwood, IL: NTC/Contemporary Publishing and London: Hodder Headline Plc. pp. 320. £14.99 (Pbk.), £14.99 (cassette tapes), £29.99 (combined book and cassette tapes)

This book is another in the Teach Yourself series. It comprises 16 lessons aimed primarily at adult beginners. Lessons contain dialogues, grammar and culture notes, exercises, and guides to pronunciation. Translations of dialogues and keys to the exercises appear at the end. A small Xhosa-English vocabulary is included.

Blanchon, Jean Alain. *Douze études sur les langues du Gabon et du Congo-Brazzaville*. 1999. Munich: Lincom Europa. pp. ~200. \$58.00.

Weniger, Stefan. *Gə'əz (Classical Ethiopic)*, 2nd edition. 1999. Munich: Lincom Europa. pp. ~60. \$31.50.

Ratcliffe, Robert R.. *The "Broken" Plural Problem in Arabic and Comparative Semitic*. 1998. Amsterdam: John Benjamins Publishing. pp. xii, 261. NLG 168.00.

UPCOMING MEETINGS
ON AFRICAN LANGUAGES/LINGUISTICS

1999

July 2-5

ANNUAL CONFERENCE ON AFRICAN LINGUISTICS (ACAL), 30TH. University of Illinois, Champaign, Illinois. Held in conjunction with the 60th Summer Institute of the Linguistic Society of America. (Contact: Prof. Eyamba G. Bokamba, Dept. of Linguistics, 4088 Foreign Languages Building, 707 South Mathews Street, University of Illinois, Urbana, IL 61801; Tel: (217) 333-3563/244-3051; Fax: (217) 333-3466; e-mail: bokamba@uiuc.edu)

July 7-9

INTERNATIONAL BIENNIAL CONFERENCE OF THE AFRICAN LANGUAGE ASSOCIATION OF SOUTH AFRICA, 10TH. University of South Africa. (Contact: Sonja Bosch; e-mail: boschse@alpha.unisa.ac.za; website: www.unisa.ac.za/alasa/index.html)

August 30 - September 1

COLLOQUIUM ON AFRICAN LANGUAGES AND LINGUISTICS (CALL), 29TH. Leiden University, The Netherlands. (Contact: The Organizers, CALL 29, Afrikaanse Taalkunde, Rijksuniversiteit te Leiden, P.O. Box 9515, 2300 RA Leiden, The Netherlands; Tel: +31-71-527-2245; e-mail: schaberg@rulcri.leidenuniv.nl)

September 7-11

INTERNATIONAL CONFERENCE ON THE LANGUAGES OF THE FAR EAST, SOUTHEAST ASIA AND WEST AFRICA, 5TH. St. Petersburg, Russia. (Contact: Prof. Dr. Rudolf Yanson, Chair, Department of China, SEA, and Korea, University of St. Petersburg, Russia; Fax: +7-812-328-7861; e-mail: yanson@RY1703.spb.edu)

2000

March 2-5

ANNUAL CONFERENCE ON AFRICAN LINGUISTICS (ACAL), 31ST. Boston University, Boston, Massachusetts. (Contact: ACAL 2000 organizers, African Studies Center, 270 Bay State Road, Boston, MA 02215; fax: 617-353-4975; e-mail: acal2000@bu.edu)

June

CONFERENCE ON AFRO-ASIATIC LANGUAGES, 5TH. Paris.

August 15-19

WEST AFRICAN LANGUAGES CONFERENCE, 22ND. The University of Ghana, Legon, Ghana. (Contact: The Organizing Committee, 22nd WALC, Linguistics Department, University of Ghana, Legon, Ghana; e-mail: medakubu@ug.edu.gh)

August 21-26

WORLD CONGRESS OF AFRICAN LINGUISTICS, 3RD. Université du Bénin, Lomé, Togo. (Contact: Kezie Lebigaza, Comité d'Organisation du 3ème Congrès Mondial de Linguistique Africaine, Département des Sciences du Langage et de la Communication, Université du Bénin, P. B. 1515, Lomé, Togo; e-mail: lebigaza@syfed.tg.refer.org)