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Two Cushitic Systems: Somali and Oromo Nouns*

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In the mid thirties Armstrong (1934) showed that Somali, one of the major East Cushitic languages, had several instances of tone alternations within words. Later on, in the late forties and mid fifties several authors (eg. Klingenberg, 1949; Andrzejewski, 1956; Vycichl, 1956) discussed the nature of these alternations and their relationship with stress in this language. As a result of this debate the suprasegmental patterns of Somali were described subsequently in great detail by Andrzejewski (eg. 1956, 1964, 1979), who used the phonemic concept of "Accentual Unit", i.e. a fixed set of alternations of tone and stress. For instance, his Accentual Unit 1 has high tone (H-tone) and "Even Strong Stress (i.e. a strong stress of equal intensity throughout the syllable)" (Andrzejewski, 1956, p.104) in the position $\underline{\sigma}$, but mid tone and secondary stress in the position $\underline{\# \#}$. It appeared thus that Somali was a tone language, even though it was a language where tone was somehow closely related to stress.

It was also Andrzejewski who first described a number of tonal patterns for a dialect of Oromo, which is the Cushitic language with the highest number of speakers, estimated from a low of 8 millions to a high of 18 millions for Ethiopia only, cf. Gragg (1982, p.xiii). Indeed, Andrzejewski (1957, 1970) argued in two pioneering papers that his variety of Oromo was "a tonal language with grammatical, though not lexical tone" (Andrzejewski, 1970, p.89).

In recent years it was discovered that several other Cushitic languages had tonal alternations. For instance, Sasse (1981, p.205) claims that "almost all Cushitic languages are tone languages", and points out that "Cushitic tone is determined primarily morphosyntactically". Pitch contrasts may for instance be connected with the following categories:

(1) a. Grammatical gender:

Re.	áram	m.	'husband'
	arám	f.	'wife'
Ar.	náág	m.	'boy'
	naag	f.	'girl'

b. Case:

So.	<i>dúmar</i>	Absolutive	'women'
	<i>dumár</i>	Genitive	
	<i>dumar</i>	Nominative	

c. Number:

Da.	<i>mór</i>	sg.	<i>mor</i>	pl.	'leopard'
	<i>gáás</i>	sg.	<i>gaassu</i>	pl.	'horn'
	<i>kiíziny</i>	sg.	<i>kiiziny</i>	pl.	'fly'

d. Verbal mode or tense:

Ar.	<i>ma ráfí</i>	'he didn't sleep'
	<i>má rafí</i>	'don't sleep!'
So.	<i>má keenín</i>	'he didn't bring it'
	<i>ha keénin</i>	'don't bring it!'

e. Focus:

Di.	<i>ít tooyí</i>	'look at her (ít)!'
	<i>ít tóóy^e</i>	'he looked at HER (ít)'

However, with the important exception of Hyman (1981), even the most detailed analyses of a Cushitic tonal system, such as Owen's (1980, 1982) papers on the Boorana dialect of Oromo - the same dialect Andrzejewski studied - are mainly data-oriented empirical accounts rather than formal, principled treatments of the set of phenomena they refer to.

In this paper, I will thus discuss and try to compare to each other a set of tonal behaviours, namely the case morphology of nouns in two of the best known Cushitic languages: Somali and Oromo¹. I will generally assume an autosegmental theory of the form described in Clements and Goldsmith (1984b), and try to analyse within this theoretical framework the properties of the inflectional systems of Somali and Oromo. I hope that in this manner it shall be possible to identify clearly the similarities and differences between these two languages, and to gain a better understanding of the tonal typology of Cushitic, which differs in several significant aspects from better known tonal systems such as those described for Bantu languages.

2. The Somali system

2.1 General features of Somali tone

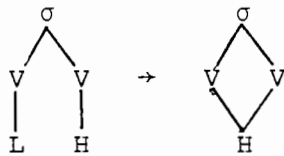
Hyman (1981) showed how the multiple pitch levels that are heard phonetically in Somali can be reduced to a binary opposition of high (\acute{V}) vs. low or non-high

(V) tones, by recognizing downdrift within phrase boundaries (%). For instance, the (b) sentences in (2) can be regarded as the phonemic counterparts of the (a) sentences, where the different pitch levels are indicated by means of integers from 1 (the highest level) to 4.

- (2)
- i. a. $\begin{matrix} 13 & & 3 & 1 & & 2 & 4 & 3 \\ \text{wiil} & - & \text{ka} & \text{ma} & & \text{dilayo} \\ \text{boy} & & \text{ART} & \text{not} & & \text{I-won't-hit} \\ & & & & & \text{'I won't hit the boy'} \end{matrix}$
 - b. % *wiilka* % *má dilayó* %
 - ii. a. $\begin{matrix} 22 & 1 & & 33 & 2 & & 4 & 3 \\ \text{waa} & \text{nin} & \text{sheeko} & & \text{badan} \\ \text{FOC} & \text{man} & \text{tale} & & \text{that-abounds-in} \\ & & & & \text{'he is a man who knows/tells many tales'} \end{matrix}$
 - b. % *waa nín sheekó badán* %

On short syllables the contrast can be between high and low tones only, while on long syllables the contrast is threefold: high tone vs. falling tone vs. low tone. Interestingly, long H-toned syllables often oscillate between level H-tone and rising tone; eg. 'place' can be realised both as $\overset{11}{m\acute{e}el}$ and as $\overset{21}{m\acute{e}el}$. By positing an optional rule of rising tone simplification, whose operation can be described as in (3) for the time being, we remain with a contrast between rising, falling, and low tones on long syllables:

(3) Rising tone simplification



This makes it possible to argue that the units bearing tones in Somali are not the syllables but rather the moras. The reason why contour tones occur only on long syllables is that they are actually sequences of two tones associated with two bearing units (BUs). A confirmation of this can be seen in sets of forms such as those shown in (4):

- (4) a. Genitive of D1 nouns: 2, 3,
- áfar díbí* 'four bulls' (*díbi* m.)
 - áfar wííl* 'four boys' (*wííl* m.)
 - áfar nín* 'four men' (*nín* m.)

b. Imperative sg. of root verbs:	
árag	'look!'
kéen	'bring!'
súg	'wait!'

If moras are seen as BUs for tones in Somali, the sets *dibí/wíil/nín* and *árag/kéen/súg* can be seen as realisations of two tonal patterns, L-H and H-L respectively, which characterise these two morphological categories. Interestingly, monomoraic words such as *nín* and *súg* cannot bear contour tones, and only the H-tone surfaces.

Hyman (1981) already proposed that the Somali prosodic system should involve rules assigning and modifying accents (stars, i.e. *) at an abstract level. Each accent is assigned a H-tone at a later level, while each unaccented mora is assigned a L-tone. With some minor modifications this analysis, which posits an accentual component that feeds into the tonal component, will be followed for Somali also here.

2.2 The inflectional categories of Somali nouns

2.2.1 The case system

Four main cases are distinguished in Somali: the absolutive (Abs), the genitive (Gen), the nominative (Nom), and the vocative (Voc).

The absolutive is the unmarked case, and is used for non-subjects, for focussed NPs, for citation, and generally when the other case marks do not apply.

The genitive is the case of items which are dependent on the headword of a NP, such as phrases which would be marked in English by the possessive suffix 's or by the preposition *of* (cf. 5.a), nouns with numerals (cf. 5.b), and so on. The genitive is overtly marked only on bare nouns and a few other categories, not on nouns with suffixed definitives, i.e. with articles, demonstratives, possessives, etc. Since the genitive inflection is borne only by the last element in the genitive phrase, even if this phrase consists in a sequence of nouns that depend on one another, as shown in (5d), this can be viewed as meaning that definitives lack an overt genitive marking. In other words, while *Axméd* in *Cúmar Núux Axméd* has an overt Gen-marking, *ka* in *wíil-ka* lacks it even though it is morphologically and syntactically a genitive. The other constituents of these two genitive phrases, namely *Cúmar* and *Núux* and, respectively, *wíil* are in the absolutive because they are not the last elements in their phrases. (The morphological structure of complex proper names like *Cúmar Núux Axméd*, which normally identify a person genealogically, has been kindly pointed out to me by B.W. Andrzejewski).

nominative case, and in some cases of nouns
Kui's yields a separate

- (5)
- a. hádal wíil
talk boy
'a boy's (wíil, Gen of wíil) talk'
 - b. áfar wíil
four
'four boys (lit. 'four of boy')'
 - c. hádal - ka wíil - ka
talk ART boy ART
'the talk of the boy (wíilka 'of the boy' not distinguished
from wíilka 'the boy')'
 - d. hádal - ka Cúmar Núux Axméð
'the talk of Cumar (son) of Nuux (son) of Axmed (Axméð, Gen of
Áxmed)'

The nominative characterises non-focussed subjects (cf. 6a vs. 6.b) and is marked only on the last element of the phrase (cf. 6.c and 6.d), like the genitive. Genitives can be reinflected for the nominative-of-genitive (Nom-of-Gen) form; e.g. 'hyaena', a D3 noun, has Abs waraábe alternating with waraabé, Gen waraabé, Nom waraábe, but Nom-of-Gen waraabe. A phrase like cí waraabé 'a hyaena's cry' with the genitive form waraabé is thus used as object phrase, while as non-focussed subject phrase it is necessary to use cí waraabe with the Nom-of-Gen form waraabe. (See also Banti, 1984, for other aspects of the problem of the nominative case in Somali).

- (6)
- a. nín báa naagi aragtay
man FOC woman she-saw
'a woman (naagi Nom of naág) saw a MAN'
 - b. naág báa nín aragtáy
woman FOC man she-saw
'a WOMAN (naág Abs) saw (aragtáy with final H-tone because
the subject is focussed) a man'
 - c. nín báa naág - tu aragtay
ART
'the woman (naág Abs, -tu Nom of the f. article -ta) saw
a MAN'
 - d. hádal - ka naág - tu wáa macaán - yahay
talk ART FOC sweet is
'the talk of the woman (hádalka naágtu rather than
*hadalku naágta!) is sweet'

The vocative occurs with nouns "used as forms of direct address or invocation to a person or personified being" (Andrzejewski, 1979, p.34), when they are not followed by vocative suffixes particles such as -ow or -yohow.

2.2.2 The five main declensions

Five sets of inflectional behaviours,⁴ have to be distinguished in Somali nouns. They are termed here first, second, third, fourth and fifth declension (respectively D1, D2, D3, D4 and D5). It is important to realise that the concept of declension is not used here in its classical sense as a class of nouns. Rather, it refers primarily to a set of inflectional behaviours; in this manner it often happens that the singular of a given noun follows one declension, and its plural another declension. For instance, the m. D1 noun *díbi* 'ox' has the f. D2 plural *dibí*, the f. D2 noun *hál* 'she-camel' the m. D4 plural *haló*, the f. D3 noun *hooyó* 'mother' the m. D1 plural *hooyoóyin*, the m. D3 noun *dukaánle* 'shopkeeper' the f. D4 plural *dukaanlayaál*, and so on.

2.2.2.1 *The first declension.* It is followed by sg. and collective m. nouns such as *rág* 'males, real men', *xáas* 'family (wife and children)', *órgi* 'billy-goat', *beénlow* (in some areas *beenlóow*) 'liar', by pl. m. nouns such as *hooyoóyin* 'mothers', and by a group of sg. and collective f. nouns such as *haweéney* 'woman', *sábtí* 'saturday', *biyoóley* 'female water-seller' or 'water-sellers' (in general). These feminine nouns may optionally inflect as D5 nouns.

The typical features of this declension are the absolute with penultimate H-tone, ultimate H-tone in the genitive, L-tones throughout in the nominative, and initial H-tone in the vocative. Monomoraic words such as *rág* distinguish only H-toned absolute and genitive from L-toned nominative (cf. 2.1).

(7) First declension

Abs	Gen	Nom	Voc		
<i>rág</i>	<i>rág</i>	<i>rag</i>	-	m. co.	'males'
<i>xáas</i>	<i>xaás</i>	<i>xaas</i>	-	m. co.	'family'
<i>órgi</i>	<i>orgí</i>	<i>orgi</i>	<i>órgi</i>	m. sg.	'billy-goat'
<i>hooyoóyin</i>	<i>hooyooyín</i>	<i>hooyooyin</i>	<i>hóoyooyin</i>	m. pl.	'mothers'

2.2.2.2 *The second declension.* Feminine sg. and collective nouns like *ló* 'cattle', *hál* 'she-camel', *goól* 'lioness', *inán* 'girl, daughter', *carruúr* 'children' and *mindí* 'knife', as well as f. plural nouns (more properly sub-plurals, because f. singular verbal forms may agree with them, cf. Puglielli and Ciise, 1984, p.81 f.) like *baabuúr* 'trucks' and *dibí* 'oxen' are inflected according to this declension. It is characterised by ultimate H-tones in the absolute and genitive, the ending *-i* and L-tone in the nominative, and initial H-tone in the vocative. Note that singular nouns of this declension use their D2 genitive forms, eg., with the quantifiers *nús* 'half' or *hál* 'one', while with other quantifiers they must use their plural D4 genitive forms in *-oód*

or -aád; e.g. *hál gabár* 'one girl' vs. *dháwr gabdhoód* 'several girls', *toban gabdhoód* 'ten girls'.

(8) Second declension

Abs	Gen	Nom	Voc		
<i>hál</i>	<i>hál</i>	<i>hali</i>	-	f. sg.	'she-camel'
<i>goól</i>	<i>goól</i>	<i>gooli</i>	-	f. sg.	'lioness'
<i>carruūr</i>	<i>carruūr</i>	<i>carruuri</i>	<i>cárruur</i>	f. co.	'children'
<i>dibí</i>	<i>dibí</i>	<i>dibiyi</i>	-	f. pl.	'oxen'

2.2.2.3 *The third declension.* Masculine sg. and collective nouns in -e like *túke* 'crow' or *dukaánle* 'shopkeeper', and f. sg. and collective nouns in -o like *hooyo* 'mother' or *socoto* 'travellers' are inflected according to this declension. Their absolute forms have ultimate H-tone, but when they occur before a pause - and consequently in their citation forms - or are followed by the focus particle *áa*, before which their final vowel is dropped, their H-tone shifts to their penultimate mora. Before the focus particle *ayáa*, as well as before the fuller form *báa* of *áa*, instead, the H-tone remains on the ultimate mora. As shown in (9.i.a), (9.i.b) and (9.i.d), the final e- and o-vowels of these nouns change into -a when they are followed by a suffixed morpheme or, in fast speech, by another word. (This rule also applies to final o's in D4 nouns).

(9) i. Ultimate H-tone

a. *hooyá - da*
mother ART
'the mother'

b. *waa dukaanlá aan i aqoon*
FOC shopkeeper not me knows-not
'he is a shopkeeper who doesn't know me'

c. *sháley b - uu tuké arkey*
yesterday FOC he crow
'yesterday he saw a crow'

d. *tuká ay-áan arkey*
FOC I
'I saw a crow'

ii. Penultimate H-tone

a. *sháley b - uu arkey túke*
'yesterday he saw a crow'

b. *túk- áan arkey*
FOC - I
'I saw a crow'

The genitive always has ultimate H-tone, the nominative penultimate H-tone, and the vocative initial H-tone:

(10) Third declension

Abs	Gen	Nom	Voc	
{ <i>dukaanlé</i> <i>dukaánle</i> }	<i>dukaanlé</i>	<i>dukaánle</i>	<i>dúkaanle</i>	m. sg. 'shopkeeper'
{ <i>socotó</i> <i>socôto</i> }	<i>socotó</i>	<i>socôto</i>	<i>sócoto</i>	f. co. 'travellers'

2.2.2.4 *The fourth declension.* The following groups of nouns inflect according to this declension: (i) m. plurals in *-ó* like *haló* 'she-camels', *gabdhó* 'girls', or *biyó* 'water' (a *plurale tantum*); (ii) the m. partially reduplicated plurals like *nimán* 'men', *afáf* 'languages', or *ceelál* 'wells'; (iii) f. plurals in *-ó* like *magacyó* 'nouns' or *Gaalkacyó*, a place name; (iv) plurals in *-aál* like *odayaál* 'old men', or *dukaanlayaál* 'shopkeepers', which are feminine in most varieties, but m. in some speakers; (v) m. sg. and collective nouns like *haweén* 'women', *ratí* 'he-camel', *qaallí* 'judge'. or *walaál* 'brother'.

In the absolutive these nouns have always ultimate H-tone before pause or the focus particle *ayáa*, but can optionally be L-toned before the focus particle *(b)áa*, the particle *bá* and in the context X ___ (Z)V, ie. when they precede the verb and are not focussed. This behaviour is shown in (11) below:

- (11)
- a. *waa* {*gabdhó*
**gabdho*}
- FOC girls
'they are girls'
- b. {*ratí*
**rati*} *ayáa lumáy*
he-camel FOC was-lost
'a he-camel was lost'
- c. {*ratí*
rati} *báa lumáy*
FOC
'a he-camel was lost' (same meaning as 11.b)
- d. {*gabdhá - bá*
gabdha - bá} *má arág*
girls *bá* not didn't-see
'I didn't see any girls'

- e. $\begin{Bmatrix} gabdhó \\ gabdho \end{Bmatrix}$ má arkeen?
 INT they-saw
 'did they see some girls?' (yet cf. also example 12.1)

The genitive has final H-tone, but for the m. plurals in -ó which have the suffixes -oód or -aád, whose distribution is governed lexically: *gabdho* 'girls', *mindiyó* 'knives' and most other nouns have -oód; *haló* 'she-camels', *riyó* 'goats' and a few other nouns of domestic animals have instead *halaád*, *riyaád*, etc.⁵

The nominative can have final H-tone or be L-toned in all contexts, as shown in (12.a) and (12.b). As an exception to what was stated in section 2.2.1, D4 nouns can optionally be L-toned when a nominative long possessive is suffixed to them. (But they always have final H-tone when the long possessive is in the absolutive case).⁶

- (12) a. $\begin{Bmatrix} gabdhó \\ gabdho \end{Bmatrix}$ má arkeen?
 'did some girls see him?' (cf. also example 11.e:
 the sentence is ambiguous)
- b. *sháley* b - éey yimaadeen $\begin{Bmatrix} hawéén \\ haween \end{Bmatrix}$
 yesterday FOC they came women
 'some women came yesterday'
- c. *sháley* b-éey $\begin{Bmatrix} halá - héeeygu \\ hala - héeeygu \end{Bmatrix}$ lumeen
 she-camels my were-lost
 'yesterday my she-camels were lost'

The vocative has initial H-tone, as shown in (13) below:

(13) Fourth declension

Abs	Gen	Nom	Voc	
$\begin{Bmatrix} gabdhó \\ gabdho \end{Bmatrix}$	<i>gabdhoód</i>	$\begin{Bmatrix} gabdhó \\ gabdho \end{Bmatrix}$	<i>gábdho</i>	m. pl. 'girls'
$\begin{Bmatrix} odayaál \\ odayaal \end{Bmatrix}$	<i>odayaál</i>	$\begin{Bmatrix} odayaál \\ odayaal \end{Bmatrix}$	<i>odayaal</i>	f. pl. 'elders'
$\begin{Bmatrix} qaallí \\ qaalli \end{Bmatrix}$	<i>qaallí</i>	$\begin{Bmatrix} qaallí \\ qaalli \end{Bmatrix}$	<i>qáalli</i>	m. sg. 'judge'

2.2.2.5 *The fifth declension.* Some m. singular nouns like *gabyáa* 'poet' and, optionally, *dukaánle* 'shopkeeper' (which otherwise is a D3 noun), and several feminine sg. and collective nouns like *gélley* or *gelléey* 'corn' and, optionally,

the D1 feminines like *haweéney* 'woman', *bīyoóley* 'female water-seller' or 'water sellers' (in general), etc., are inflected according to the fifth declension. Its characteristic features are penultimate H-tone on the absolutive and nominative, ultimate H-tone in the genitive, and initial H-tone in the vocative.

(14) Fifth declension

Abs	Gen	Nom	Voc	
<i>gabyáa</i>	<i>gabyaá</i>	<i>gabyáa</i>	<i>gábyaa</i>	m. sg. 'poet'
<i>haweéney</i>	<i>haweenéy</i>	<i>haweéney</i>	<i>háweeney</i>	f. sg. 'woman'

2.3 Analysis of the system

2.3.1 The absolutive

As I already stated in section 2.1., I will maintain here in its broad outlines Hyman's (1981) autosegmental analysis of the Somali prosodic system, which posits a set of accent rules feeding into a tonal component.

It is convenient to regard a form similar to the absolutive as the primary form from which the other inflected forms are derived. In the case of D3 and D4 nouns, which have two forms for their absolutive, the more general form - ie. the form with the less specific distribution - will be regarded as primary. In this manner, all classes of nouns lack inflectional suffixes in this form. However, D2, D3 and D4 nouns have ultimate H-tone, while D1 and D5 nouns have penultimate H-tone. Monomoraic D1 nouns such as *rág* 'males' or *dhúl* 'earth' are a sort of borderline case, because they lack a penultimate mora. The simplest solution, then, is to treat ultimate H-tone as the general case, which includes also monomoraic D1 nouns, and penultimate H-tone as the special case that applies only to polymoraic D1 and D5 nouns. Since we already stated that H-tones correspond to underlying accents (ie. stars) in the framework that is being adopted here, we have the following pattern:

(15)	a.	<i>xáas</i>	(D1)	b.	<i>rág</i>	(D1)
		<i>hooyooyim</i>	(D1)		<i>há</i>	(D2)
		<i>gabyaa</i>	(D5)		<i>gool</i>	(D2)
					<i>socoto</i>	(D3)
					<i>gabdho</i>	(D4)

We can now state that in (15.a) there is the accent pattern (AP)^{*0} on the last two moras, while in (15.b) there is the AP^{*} on the last mora. We introduce in this manner objects called accent patterns, which consist of accents (stars) and

empty accent slots (⁰-signs), and occur on the rightmost moras of nouns. It is now possible to write the following accent association convention:

(16) Accent Association Convention (AAC):

An accent pattern AP is assigned from right to left starting from the last mora, one accentual item to each mora.

Having introduced the AAC, the forms in (15) can be described in the following manner:

- (17) a. / $\overset{*}{X}$ /
 b. / $\overset{*}{X}^0$ /, if D1 polymoraic and D5 noun

Note that (17.a) and (17.b) apply disjunctively, and since (17.b) is the special case, it takes precedence over the more general (17.a). Some version of Kiparsky's (eg. 1982) Elsewhere Condition can account for this. As we will see later, there are some reasons for regarding the distributional rules (17) as pertaining to the lexical entries, since they may be needed as inputs for some inflectional rules. The absolutive rule will thus have simply to specify that there are no inflectional suffixes, and that in the general case the lexical AP does not change:

(18) Absolutive case

/ X /

The following two context-sensitive rules are needed, however, in order to account for the special forms of D3 and D4 absolutives in some contexts:

- (19) a. $* \rightarrow *^0 / _ \left\{ \begin{array}{c} \# \# \\ \hat{a}a \end{array} \right\}$, if D3 noun
 b. $* \rightarrow o / _ \left\{ \begin{array}{c} b\hat{a}a \\ b\hat{a} \\ (Y)V \end{array} \right\}$, optionally in D4 nouns

Rule (19.a) accounts for the behaviour observed in (9.ii), rule (19.b) for (11.c-e).⁷

Let us turn now to the derivation of actually occurring forms, like the following citation forms: [xáas], [hoóyo] ~ [hóoyo] (in other contexts the absolutive

would be [hooyó], cf. 2.2.2.3), and [gabdhó]. We have already seen that the lexical entries would be $xáas^*$, $hooyó^*$ and, respectively, $gabdhó^*$. Being citation forms, ie. words used in isolation in the context # # __ # #, they require the absolutive case. Rule (18) applies thus, and the representations don't change. In the case of the D3 noun # # $hooyó^*$ # #, however, rule (19.a) applies and the AP is changed into *0 . The AAC, ie. (16), now applies and we remain with the representation $hooyó^*$.

In Banti (1984) I claimed that there were tone-accent melodies (TA-melodies) such as $\overset{*}{H}L$, $L\overset{*}{H}$, LL , etc. in Somali. Even if this was descriptively accurate, I think that a simpler solution can be developed by elaborating Hyman's (1981) original suggestion. Indeed, it is sufficient to posit only the melody $\overset{*}{H}$, which will associate to the starred BU according to principle (20), commonly accepted in autosegmental analyses of accent systems (cf. eg. Clements and Goldsmith, 1984b, p.13):

$$(20) \quad \begin{array}{c} * \\ t \\ | \\ * \\ T \end{array}$$

In addition to principle (20), however, two more specific operations are needed. Firstly, H-tones which are associated with a given mora by applying (20) do not spread to contiguous moras, except in the case of the optional process already described in (3). Secondly, unassociated moras are assigned L-tones. All this can be expressed by means of the following two rules. Notice that (21.a), which is a revised version of (3), must apply before (21.b):

$$(21) \quad \text{a.} \quad \begin{array}{c} \sigma \\ / \quad \backslash \\ V \quad \overset{*}{V} \\ | \quad | \\ \quad \overset{*}{V} \\ | \\ \quad H \end{array} \quad \rightarrow \quad \begin{array}{c} \sigma \\ / \quad \backslash \\ V \quad \overset{*}{V} \\ \backslash \quad | \\ \quad \overset{*}{V} \\ | \\ \quad H \end{array}, \text{ optionally}$$

b. Moras not associated with a H-tone are assigned L-tones.

The derivation of the surface citation forms [xáas], [hoóyo] ~ [hóoyo], and [gabdhó] can now be described in the following manner:

<p>(22) *⁰ # # xaas # #</p> <p style="margin-left: 40px;">*⁰ xaas</p> <p style="margin-left: 40px;">*⁰ xaas</p> <p style="margin-left: 40px;"> *</p> <p style="margin-left: 40px;">H</p>	<p style="text-align: center;">*</p> <p># # hooyo # #</p> <p style="margin-left: 40px;">*⁰ hooyo</p> <p style="margin-left: 40px;">*⁰ hooyo</p> <p style="margin-left: 40px;">*⁰ hooyo</p> <p style="margin-left: 40px;"> *</p> <p style="margin-left: 40px;">H</p> <p style="margin-left: 40px;">*⁰ hooyo</p> <p style="margin-left: 40px;"> *</p> <p style="margin-left: 40px;">H</p> <p style="margin-left: 40px;">*⁰ hooyo</p> <p style="margin-left: 40px;"> *</p> <p style="margin-left: 40px;">H L</p>	<p style="text-align: center;">*</p> <p># # gabdho # #</p> <p style="margin-left: 40px;">gabdho*</p> <p style="margin-left: 40px;">gabdho*</p> <p style="margin-left: 40px;"> *</p> <p style="margin-left: 40px;">H</p> <p style="margin-left: 40px;">gabdho*</p> <p style="margin-left: 40px;"> *</p> <p style="margin-left: 40px;">L H</p>
	<p>(19.a)</p> <p>(16)</p> <p>(20)</p>	
	<p>(21.a)</p>	
	<p>(21.b)</p>	

If rule (21.a) fails to apply, we have the following variant derivation:

(23)	<p style="margin-left: 20px;">*⁰ hooyo</p> <p style="margin-left: 20px;"> *</p> <p style="margin-left: 20px;">H</p>	→	<p style="margin-left: 20px;">*⁰ hooyo</p> <p style="margin-left: 20px;"> * * *</p> <p style="margin-left: 20px;">LH L</p>
------	---	---	--

2.3.2 The genitive

In accordance with the model which has been developed so far, the genitive forms can be viewed as a specific accentual profile which is imposed on the word. The only exceptions are D4 m. plurals in *-ó*, which add also the suffixes *-oód* or *-aád*, eg., *gabdhoód* and *halaád* from *gabdho* 'girls' and, respectively, *haló* 'she-camels', cf. 2.2.2.4. The rule is thus the following one:

- (24) Genitive case
- a. / X^{*} /
- b. / X + *<sub>{^{ood}
aad}</sub> /, if m. D4 pl. in *-ó*

Before the /ood/ and /aad/ suffixes a final vowel is elided according to a general rule which is needed also in other areas of the morphology of Somali (cf. section 2.2.2.3, as well as Banti, 1984; eg. *labi* Nom of 'two' from /laba + i/, *tukiyo libáax* 'a crow and a lion' from /tuké iyo libáax/, *ma abeésáa?* 'is it a snake?' from /ma abeésó áa/, etc.).

In D2, D3 and D4 nouns not included in (24.b) the genitive is identical to the absolutive - but never undergoes either of (19.a) or (19.b) -, whereas in D1 nouns, in D4 nouns with genitives in *-oód* or *-aád*, and in D5 nouns it is different. Indeed, the inputs of rules (24) are respectively /hooyo⁰o⁰yin/, /gabdho^{*}/,

and /haweēney/ in these cases, while the AP that surfaces is only the pattern specified in rule (24). This means that before the application of AAC the original APs are deleted. This can be captured through rule (25):

(25) When a new AP is assigned to a word, the old one is deleted.

Notice that since the inflectional rule of the absolutive case, ie. rule (18), does not contain any specification about a new AP, rule (25) does not apply and the forms retain their lexical AP.

2.3.3 The nominative

This case has a wider range of forms than the two cases discussed till now. Indeed, four separate sub-rules have to be distinguished:

(26) Nominative case

- | | | |
|----|--------------------------|--|
| a. | / $\overset{\circ}{x}$ / | i. in D1 nouns and, optionally, in D4 nouns;
ii. in genitives;
iii. in the context [__ Poss];
iv. optionally in D4 nouns in the context [__ Poss Def] |
| b. | / x / | in D4 nouns optionally, and in D5 nouns |
| c. | / x° + i / | in D2 nouns |
| d. | / $^*x^{\circ}$ / | in D3 nouns |

It should be pointed out that (26.a.ii) accounts for the nominative-of-genitive forms mentioned in section 2.2.1, eg. *waraabe* from *waraabé* 'a hyaena's', or *gabdhoođ* from *gabdhoóđ* 'of girls', *carruur* from *carruúr* 'of children', etc. On the other hand, (26.a.iii) and (26.a.iv) describe the facts of note 6 and (12.c). The cases of D4 nouns that optionally have final H-tone in all contexts, and of D5 nouns with penultimate H-tone are treated in (26.b) as instances of / x /, ie. of an inflectional rule that doesn't specify any AP and consequently lets through the word's lexical AP.

2.3.4 The vocative

All the vocative forms listed in 2.2.2.1-5 uniformly have a H-tone on their first mora, and L-tones on their other moras. This contrasts with what has been seen to happen till now, ie. with the fact that the APs we encountered involved only the last moras of words. It is necessary, then, to posit a separate type of AP, which applies from left to right rather than from right to left, and can be

distinguished by means of a superscript arrow (ie. $\vec{*}$). Convention (16) has now to be integrated with a second part in the following manner:

- (27) Accent Association Convention (AAC), revised:
- i. An AP is assigned from right to left starting from the last mora, one accentual item to each mora.
 - ii. A left-to-right AP (eg. $\vec{*}$) is assigned from left to right starting from the first mora, one accentual item to each mora.

The rule for the vocative case will then be (28.a), and an illustration of its operation is provided in (28.b).

- (28) a. Vocative case

$$\begin{array}{c} \vec{*} \\ * \\ / X / \end{array}$$

- b.
- | | |
|-------------------|---------|
| $* \circ$ | |
| hooyooyin | |
| $* \circ \vec{*}$ | |
| hooyooyin | (28.a) |
| $\vec{*}$ | |
| hooyooyin | (25) |
| $\vec{*}$ | |
| hooyooyin | (27.ii) |
| $\vec{*}$ | |
| hooyooyin | (20) |
| | |
| * | |
| H | |
| | |
| $\vec{*}$ | |
| * | |
| hooyooyin | (21.b) |
| | |
| * | |
| HL LL L | |

3. The Oromo System

3.1 General features of Oromo tone

Andrzejewski (1957, 1970) and Owens (1980, 1982) recognise three tones in Boorana Oromo: high, low and high-low falling tone, both on long and on short vowels. In all the cases I could check with Abdulhaliim and with other informants who spoke varieties of Eastern Oromo, however, I often found H-tones rather than falling tones. For instance, Boorana *inní nām* 'he is a person' (Owens, 1980, p.146) or *worāan^a* 'spear' (Andrzejewski, 1970, p.92; actually 'it is a spear',

because Andrzejewski often uses predicative forms as citation forms, cf. also Owens, 1980, p.181)⁸ were realised as *inní* (or *inní*) *nâma* and, respectively, *warâana* by my informants. In the few cases where I actually heard falling tones, there was no evidence for their having a phonemic status. For instance, the imperative form *lâali* 'look at!' could be realised either with a level H-tone or with a HL-tone on its first syllable in a sentence like *gurbâa lâali~lâali* 'look at the boy!'. Since imperatives of this class of verbs distinctly have a H-tone on their first syllable if the vowel is short (eg. *dhúgi* 'drink!' or *bíti* 'buy!') and usually a H-tone also when it is long (eg. *fúudhi* 'take!' or *yâami* 'call!'), it is plausible to think that in these varieties the alternants *lâali* and *lâali* are only two realisations of a single phonemic *lâali*.

However, if in Arsii and Eastern Oromo there is a contrast between H-tones and L-tones both on short and on long vowels, with no evidence of tonal units that occur only on long vowels, and in Boorana Oromo falling tones occur both on short and on long vowels (cf. the above forms *nâm* and *worâan^a*), it is possible to think that the units that bear tones (and accents) in Oromo are not moras as in Somali, but rather syllables. It will be seen indeed that there is never any real need to distinguish short vs. long vowels even at an abstract level in this language, as far as accentual and tonal phenomena are concerned.

3.2 The inflectional categories of Oromo nouns

3.2.1 The case system

The Oromo nominal inflectional system is more complex than the Somali system, since it involves a higher number of cases and of categories liable to inflection. A good survey of the system, at least as far as Boorana is concerned, can be found in Owens (1980, 1982). Therefore, only its broad outlines will be sketched here, yet with some modifications.

As in Somali and most other East Cushitic languages, an absolutive (Abs) case has to be distinguished. It is the case form which was termed "forma assoluta" by Moreno (1939, p.33), and "simple case" by Owens (1980, p.148; but already "absolutive" in Owens, 1982 p.45). Its range of functions doesn't differ greatly from Somali. Since in the absolutive all the classes of nouns are fully distinguished from one another, we follow here Owen's (1980) practice of using the absolutive form for citation, even though Oromo speakers usually use the positive predicative for citing nouns. Since there are often complex processes of tone sandhi, whose behaviour has not been fully investigated yet, I use for citation the absolutive forms that occur before imperative or negative verb forms, which have invariable tone (cf. Owens, 1980, p.170 ff.) and don't trigger

tone sandhi in the nouns that precede them.

There is a genitive (Gen) that marks only the last word in a genitive phrase. As in Somali (cf. example 5.d), if the genitive phrase contains more than one word, its other words have the form they have in unmarked contexts, ie. the absolutive. For instance, in examples (29.a) and (29.b) only the last words of the genitive phrases *niitíttíi qáldhó'óo* 'of the skinny woman' and *sá'á obboléetti isáa* 'of the cow of his sister' are in the genitive case, while *niitíttíi*, *sá'á* and *obboléetti* are in the absolutive.

- (29) a. *mana niitíttíi qáldhó'óo láali*
house woman skinny look
'look at the house of the skinny woman'
- b. *aanán sá'á obboléetti isáa dhúgi*
milk cow sister his drink
'drink the milk of his sister's cow'

The nominative (Nom) marks only non-focussed subjects also in Oromo. Focussed subjects have a special subject-focus form (cf. 30.a vs. 30.b).⁹ While genitive and other cases are marked only on the last word in their phrase, nominative inflections occur on all the sister words of the head noun of the subject phrase. For instance, in example (30.a) *intáltí*, *baréeddúun* and *tun* are all nominatives, their absolutive forms being *intala*, *baréeddúu* and, respectively, *tana*.

- (30) a. *intáltí baréeddúun tun isá in - jáalanne*
girl beautiful this him not loved-not
'this beautiful girl didn't love him'
- b. *intala baréeddúu taná-tu isá in - jáalanne*
this FOC
'it was this beautiful girl who didn't love him'
- c. *éegéen jaldeysáa dhértuu*
tail monkey long
'the tail (*éegéen*, Nom of *éegée*) of the monkey (*jaldeysáa*, Gen of *jaldeysa*) is long'

There are, however, no nominative-of-genitive forms as in Somali, and the genitive which depends from a nominative subject is inflected like a normal genitive, as shown in example (30.c).

In copular clauses not marked for tense there is no verb, and the predicate phrase has a special morphology. As shown in examples (31), its last word is in what I suggest calling the (positive) predicative case. It is marked only tonally

in most nouns and adjectives, but also segmentally in the interrogative word *máal* 'what?' (that has *máali* 'what is it?') and, optionally, in genitives. If the predicate phrase contains more than one word, the first one is L-toned, while the intermediate words have their unmarked absolutive shape.¹⁰ (See also note 9 for similar behaviour in focussed subject phrases).

- (31) a. *kun máali?*
 this what
 'what is this?'
- b. *kun gurbaa gádhee*
 this boy wicked
 'this is a wicked (Abs *gádhée*) boy (Abs *gurbáa*)'
- c. *kun billawa eysúmá isáati*
 this knife uncle his
 'this is the knife (Abs *billáwá*) of his (*isáati*, Pred of the Gen *isáa*, Abs *isá*) uncle (Abs *eysúmá*)'

The negative counterparts of copular clauses such as those in examples (31.b) and (31.c) contain the invariable particles *mití* or *mii*, while the word that precedes them has a special negative predicative (Neg Pred) form:

- (32) a. *kun gurbaa gádhé'ée* {*mití*/*mii*}
 'this is not a wicked boy'
- b. *kun billawa eysúmá isáatíi* {*mití*/*mii*}
 'this is not his uncle's knife'

The L-toned forms *gurbaa* and *billawa* in (32.a) and, respectively, (32.b) show that the first word in the negative predicative phrase must be L-toned as in positive predicative phrases and focussed subject phrases; see also notes 9 and 10.

There is a case which marks only the last word in its phrase, and is called 'dative' in Owens (1980, 1982). Yet it is conceded already in Owens (1982, p.57) that it may indicate a 'locative source' in addition to a 'direct beneficiary'. Gragg (1976, p.184) includes its suffix among the ablatives and assigns it the meaning 'from', as in *mana dhufe* 'he came from the house' or *mana nama^atíi dhufe* 'he came from the man's house' (tones are not indicated here because Gragg doesn't mark them). It appears thus that the label dative-ablative (DAb) may be more appropriate for this case. In (33) there are two more examples of it.

- (33) a. *inní karáa dhéera'aa in - dhúfne*
 he way long not came-not
 'he didn't come a long (Abs *dhéeráa*) way (Abs *karáa*)'
- b. *aanán sárée xíqqo'oo kénni*
 milk dog small bring
 'bring milk for the small (Abs *xíqqóo*) dog (Abs *sárée*)'

There are several other oblique cases in Oromo, which are discussed, eg., in Gragg (1976, p.183 f.), and especially in Owens (1980, 1982). They will not be taken into account here for lack of space. Suffice it to remember the instrumental *-y* and the dative *-f* (an identical morpheme is used in some varieties also for conjoining NPs), which suffix to forms whose tonal pattern and segmental shape are similar to the dative-ablative, *-Vttí* 'to, in, at', etc.

3.2.2 The main noun classes

Several categories can be inflected for case in Oromo: (i) nouns; (ii) adjectives; (iii) modifiers like *bír* 'other' and *dúr* 'former' (which have the variant shapes *biráa* and *duráa*, formally genitives of the related forms *bira* and *dura*); (iv) personal pronouns; (v) numerals from 1 to 10 (the other numerals are adjectives); (vi) the demonstrative *san* 'that'; (vii) definitives, which are a semantically heterogeneous group of morphemes characterised by the alternance *k-* *m.* vs. *t-* *f.* (cf. the Somali definitives, eg. articles, possessives and demonstratives), such as *kana* ~ *tana* 'this', *kiyya* ~ *tiyya* 'my' and other first and second person possessives, *káan* ~ *táan* 'other', *kám* ~ *tám* 'which?', *ká* ~ *tá* that provides dummy heads in several types of NPs; (viii) genitives; (ix) dependent verbal forms (cf. *in-argatíníiti*, predicative of the genitive of *in-argatín* '(who) didn't receive', in examples i.a and i.b in note 10). Only the behaviour of nouns will be taken into account here, because it can be more directly compared with the inflectional behaviour of Somali.

Owens (1980, p.149 ff.) and Voigt (1985) list respectively five and four morphological classes of nouns, based upon the tonal patterns and the number of syllables. However, the inflectional behaviour of nouns is distinctly linked with their final phonemes, as Andrzejewski (1970, p.89 f.) already observed. The tonal patterns, indeed, only distinguish two subtypes in two of the main inflectional classes, while the number of syllables doesn't influence the morphological behaviour in any way (with the only exception of monosyllabic nouns, of section 3.3.4).

In my opinion, it is not necessary to distinguish more than three main inflectional classes of nouns on this basis. They correspond to the classification

suggested by Andrzejewski (1970, p.89 ff.), with the only difference that I prefer to collapse his first and second classes into my first declension (D1), because they differ only in their nominative forms, which change according to gender. His Class 3 is my D2, while his Class 4 is my D3.

3.2.2.1 *The first declension.* All the nouns that end in short -a inflect according to the first declension. They can be either masculine or feminine, and are L-toned throughout (D1a), or have H-tones on their last two syllables (D1b), like *nama* m. 'man', *arba* m. 'elephant', *hilleysa* m. 'rabbit', *intala* f. 'girl', *haadha* f. 'mother', *adda* f. 'forehead, front' - all D1a nouns -, or *ganamá* m. 'morning', *billáwá* m. 'knife', *nagáyá* m. 'peace', *heerúmá* f. 'peace' - all D1b nouns. Also plurals in -óotá like *nam-óotá* from *nama* 'man' follow this declension.

Their genitive always has long H-toned -áa. The nominative has H-tones on the last two syllables in the variety examined here. Segmentally there is the suffix -í if there are two consonants before the stem-formative -a in the absolute, but -ní or -tí in masculine and, respectively, feminine nouns with just a single consonant before -a. The regular forms are thus the following ones:¹¹

(35)	Nom D1a	D1b	
	<i>árbí</i>	<i>arba</i>	m. 'elephant'
	<i>áddí</i>	<i>adda</i>	f. 'forehead'
	<i>buddéenní</i>	<i>buddéená</i>	m. 'injera bread'
	<i>intáltí</i>	<i>intala</i>	f. 'girl'

The predicative has no segmental change, but the tonal pattern is of the type *intala* in D1a nouns, and *buddéena* in D1b nouns. The negative predicative is identical with the genitive in D1b nouns, but is H-toned throughout in D1a nouns. The dative-ablative, finally, has final long -aa in both D1a and D1b nouns, but the tonal patterns change, as shown in (35) below:

(35)	D1a		D1b
	Abs	<i>intala</i> f. 'girl'	<i>buddéená</i> m. 'injera bread'
	Gen	<i>intaláa</i>	<i>buddéenáa</i>
	Nom	<i>intáltí</i>	<i>buddéenní</i>
	Pred	<i>íntala</i>	<i>buddéena</i>
	Neg Pred	<i>íntaláa</i>	<i>buddéenáa</i>
	DAb	<i>íntalaa</i>	<i>buddéenaa</i>

3.2.2.2 *The second declension.* D2 nouns all end in a H-toned long vowel; some of them also have a H-tone on their penultimate syllable. It is thus possible to

distinguish D2a nouns like *gurbāa* m. 'boy', *ijoollée* f. 'children', *dubbii* f. 'word' or *oogrúu* f. 'field', from D2b nouns like *daráarāa* m. 'flower', *hárrée* m. 'donkey', *ilíllíi* f. 'flower', or *akáakóo* m. 'grand-father'. Also several types of plurals are D2, like *muc-óolii* from *mucāa* 'child', *soor-eeyyii* from *sooreysa* 'rich', etc.

All D2 nouns end in -V'VV where D1 nouns have inflectional endings in -aa. The genitive of *gurbāa* is thus *gurba'āa*, of *ilíllíi*, *ilíllí'íi*, etc. The nominative has always -n after the long vowel, while the tonal pattern is similar to the absolutive. In the predicative, negative predicative and dative-ablative, apart from the -V'VV ending the tonal pattern of D2a nouns parallels D1a nouns, while D2b nouns are similar to D1b nouns.

(36)		D2a		D2b	
	Abs	<i>gurbāa</i>	m. 'boy'	<i>ilíllíi</i>	f. 'flower'
	Gen	<i>gurba'āa</i>		<i>ilíllí'íi</i>	
	Nom	<i>gurbāan</i>		<i>ilíllíin</i>	
	Pred	<i>gúrbaa</i>		<i>ilíllii</i>	
	Neg Pred	<i>gúrbá'āa</i>		<i>ilíllí'íi</i>	
	DAb	<i>gurba'aa</i>		<i>ilíllii'ii</i>	

3.2.2.3 *The third declension.* All the nouns ending in -n are inflected according to this declension. They are partly old *pluralia tantum* containing the stem-formative -āan ~ -án like *bishāan* 'water' or *aanān* 'milk'. (In *fóon* 'meat' and *lóon* 'cattle' the stem-formative coalesced with the root vowel, cf. So. *só* 'meat' and *ló* 'cattle'). Also ~~has~~ plurals like *mukk-éen* from *muka* 'tree', *ilm-āan* from *ilma* 'son', or *saa-wān* from ~~sāa~~ 'cow' follow this declension.

The nominative of D3 nouns is identical with the absolutive, while in their other inflected forms they add -ii when D1 and D2 nouns end in long vowels.

(37)	D3	
	Abs	<i>bishāan</i> m./pl. 'water'
	Gen	<i>bishaanii</i>
	Nom	<i>bishāan</i>
	Pred	<i>bishaan</i>
	Neg Pred	<i>bishāanii</i>
	DAb	<i>bishaanii</i>

I did not find D3 nouns with a H-tone on their stem parallel to D1b and D2b nouns. Further research is needed, however, especially as far as plurals are concerned.

3.2.2.4 *Reinflected genitives*. It has been stated in 3.2.2 that genitive forms can be reinflected for other cases. In section 3.2.1 (cf. example 30.c) we saw that this does not happen when the genitive depends on a nominative head noun. Even in predicative phrases a genitive may remain unchanged, although there is often the enclitic L-toned particle *-ti*. For instance, in example (31.c) the predicative phrase can be *billawa eysúamá isáa* rather than *billawa eysúamá isáati*. In negative predicative and dative-ablative phrases, however, genitives are always reinflected. The stems of these reinflected genitives don't end in *-VV* like the simple genitives, but in *-VVt*, to which *-ii* is added as in D3 nouns. The tonal patterns have few peculiarities, as shown in (38) below. Examples of reinflected genitives are, beside *isáati* in (31.c), *isáatii* in (32.b) and *in-argatíníiti* in examples (i.a) and (i.b) under note 10.

(38)	<i>intaláa</i>	<i>ilíllí'íi</i>
	Gen of <i>intala</i> (D1a)	Gen of <i>ilíllíi</i> (D2b)
Pred	{ <i>intaláa</i> <i>intaláati</i> }	{ <i>ilíllí'íi</i> <i>ilíllí'íiti</i> }
Neg Pred	<i>intaláatii</i>	<i>ilíllí'íitíi</i>
DAb	<i>intalaatii</i>	<i>ilíllí'íitii</i>

It should be pointed out that, in a historical perspective, *ilíllí'íiti* is probably not to be analysed as *ilíllí'íi-ti*, as we suggested above, but rather as *ilíllí'íit-i*, just like *ilíllí'íit-íi* and *ilíllí'íit-ii*. (For final *-i*, cf. *máal-i*, Pred of *máal* 'what?'). The tonal behaviour shows that there has been a morphological reanalysis, and that *-ti* is synchronically a separate - even though an enclitic - word. Otherwise the tonal pattern would be **ilíllí'íití*, as in the negative predicative form.

3.3 Analysis of the system

3.3.1 The absolutive

Oromo noun forms always contain a stem (St), which consists of a root at least - ie., when it doesn't contain also derivational suffixes -, and a stem-formative (For), cf. Gragg (1976, p.194).¹² Stems can be accented or accentless: D1a and D2a stems are accentless (*intal*, *gurb*), while D1b and D2b stems are accented (*buddeén*, *ilíll*). Stem-formatives also can be accentless like *a* or accented like **VV* - ie. **aa*, **ee*, **ii*, **oo*, **uu* -, **aan*, etc. Since stems can be accented on their last syllable only, there will be but one lexical AP, namely (17.a), associated from right to left as in Somali, yet only in D1b and D1a, D2a and D3 nouns have no lexical AP. (Alternatively, they have null lexical AP, ie. ⁰).

D2b nouns,)

The units that bear the accents in Oromo, however, are syllables and not moras as in Somali. As a consequence, our AAC will have to be revised as in (39), which applies cyclically at each morphological level.

- (39) Accent Association Convention (AAC), revised (first part only):
 An AP is assigned from right to left starting from the last BU, one accentual item to each BU.

We thus have the following derivations:

- (40) a. D1a D1b
 intal a *buddeen a*
 intal a *buddeen a* stem level, (39)
- b. D2a D2b D3
 gurb aa *ilill ii* *bish aan*
 gurb aa *ilill ii* *bish aan* stem level, (39)
 gurb aa *ilill ii* *bish aan* word level, (39)

If we let apart D2b nouns like *ilillii* for the time being, the absolute forms can be derived quite straightforwardly by positing for this case a rule like (41), which states that the absolute is marked by the tone-melody $\overset{*}{H}$.

- (41) Absolute case
 / X /
 *
 H

If it applies to D2a and D3 nouns, rule (41) associates a H-tone with the starred final syllable. The other syllables remain unassociated and rule (42) will apply. (Notice that 42 is rule 21.b expressed in a manner that can apply both to Somali and Oromo).

- (42) BUs not associated with any tone are assigned L-tones.

Rule (42) can also account for D1a nouns like *intala*. Since they contain no accents, the melody $\overset{*}{H}$ of rule (41) cannot be assigned to any BU, and consequently rule (42) must assign L-tones to every syllable. D1b nouns like *buddéenā* show that tone spread applies rightwards across syllable boundaries in Oromo. This can be captured through rule (43), which is a fairly general case in tone langu-

ages, but does not exist in Somali.

- (43) If there are more BUs than tones, the last tone in the melody spreads rightwards to unassociated BUs.

D2b nouns like *ilillii* have two underlying accents according to (40.b). This may be a problem because rule (41) is formulated so as to entail that the melody ^{*}H applies to the whole word and not to each of its underlying accents. In the next section we will see that a simple solution is to delete any accent that occurs on the right of a given accent. After such a rule applied, D2b nouns can be treated like D1b nouns.

3.3.2 The genitive

Genitive forms end distinctively in a H-toned long vowel. Within the framework developed here this can be captured by stating that the rule for (not-reinflected) genitives is the following one:

- (44) Genitive case

$$/ X + VV /$$

$$\begin{array}{c} * \\ H \end{array}$$

The AAC (39) associates the accent with the last syllable of the form.

Rule (44) presupposes that also segmental phonemes can be treated as auto-segments (for an overview of such an approach see, eg., Van der Hulst and Smith, 1982b). In particular, it is necessary to posit a rule of vowel spread very similar to (43). The well-known Well Formedness Condition (WFC), in so far as it prohibits association lines to cross (cf. eg. Clements and Goldsmith, 1984b, p.10), will ensure that a vowel doesn't spread to empty vowel slots across consonants. As a consequence, the VV slots remain empty in D3 nouns.

- (45) If there are more V-slots than vowels, a vowel spreads rightwards to unassociated V-slots.

The V-slots that remain empty after the application of (45) are assigned the vowel *i*. This is a sort of default case which parallels rule (42):

- (46) V-slots that cannot be associated with other vowels are assigned the vowel *i*.

We can thus have the following derivations:

- (47) D1a D2b D3
- | | | | |
|--|--|--|------|
| $\begin{array}{c} \textit{intala} \\ \text{ } \\ \text{VCCVCV VV} \end{array}$ | $\begin{array}{c} \textit{ilil i} \\ \text{ \ \ \ /} \\ \text{VCVCCV VV} \end{array}$ | $\begin{array}{c} \textit{bi sh a n} \\ \text{ \ \ /} \\ \text{CV C VVC VV} \end{array}$ | |
| $\begin{array}{c} \textit{intala} \\ \text{ } \\ \text{VCCVCV VV} \end{array}$ | $\begin{array}{c} \textit{ilil i} \\ \text{ \ \ \ /} \\ \text{VCVCCV VV} \end{array}$ | $\begin{array}{c} \textit{bi sh a n} \\ \text{ \ \ /} \\ \text{CV C VVC VV} \end{array}$ | (45) |
| | | $\begin{array}{c} \textit{bi sh a n i} \\ \text{ \ \ / \ /} \\ \text{CV C VVC VV} \end{array}$ | (46) |

Two minor rules are necessary in order to get the surface forms of D1 and D2 nouns. Rule (48.a) deletes one vowel before a suffix that consists of a long vowel, while rule (48.b) inserts a glottal stop between a vowel that remains after the operation of (48.a) and a VV-suffix:¹³

- (48) a. $v \rightarrow \emptyset / \text{ ___ } [v\bar{v}]_{\text{Suf}}$
 b. $\emptyset \rightarrow ' / v \text{ ___ } [v\bar{v}]_{\text{Suf}}$

Rule (48.a) applies to D1 and D2 nouns yielding *intal aa* and, respectively, *ililli ii*. Rule (48.b) applies only to D2 nouns, yielding *ililli'ii* from *ililli ii*.

D2a and D3 nouns clearly show that the accent of the formative is deleted before the genitive suffix. This can be stated through rule (49). (See section 3.3.6 for a revision of this rule).

- (49) $\overset{*}{\text{ ___ }} \rightarrow \overset{\circ}{\text{ ___ }} / \overline{\text{For Suf}}_{\text{Gen}}$

In D1b and D2b nouns, even after rule (49) applied to the last ones, we are left with two underlying stars: *buddeena**^{*} and *ililli'ii**^{*}. This creates a problem in our framework, just as the absolutive of D2b nouns did (cf. section 3.3.1). Indeed, since in Oromo we meet with at least two tonal melodies, ie. $\overset{*}{\text{H}}$ and $\overset{*}{\text{HL}}$ (see sections 3.3.4 and 3.3.6 for the second one), the tonal melodies we found in rules (41) and (44) cannot be treated as basic tone melodies that are associated whenever a star is met within the domain of a word. Rather, they apply only once in such a domain, and accent rules must ensure that their context is proper-

ly specified. A simple solution is to posit a rule like (50), that deletes any accent to the right of a given accent in a word.

(50) $* \rightarrow \overset{0}{} / * \text{ Y } \underline{\quad}$

Rule (50) must be ordered after rule (49), otherwise its output would remove all the possible inputs of rule (49). This can be obtained if (50) is regarded as a basic accentuation rule (BAR), which applies after the operation of the accentual rules at each level. In this manner, we can have the following derivations:

(51)	D1a		D1b		
	<i>intal</i> a VV	*	<i>buddeen</i> a VV	*	
	<i>intal</i> a VV	*	<i>buddeen</i> a VV	*	stem level and inflected word level, (39)
			<i>buddeen</i> a VV	*	(50)
	<i>intal</i> aa	*	<i>buddeen</i> aa	*	segmental rules
	D2a		D2b		D3
	<i>gurb</i> aa VV	*	<i>ilill</i> ii VV	*	<i>bish</i> aan VV
	<i>gurb</i> aa VV	*	<i>ilill</i> ii VV	*	stem level, (39)
	<i>gurb</i> aa VV	*	<i>ilill</i> ii VV	*	lexical word level, (39)
	<i>gurb</i> aa VV	*	<i>ilill</i> ii VV	*	(50)
	<i>gurb</i> aa VV	*	<i>ilill</i> ii VV	*	inflected word level, (39)
	<i>gurb</i> aa VV	*	<i>ilill</i> ii VV	*	(49)
	<i>gurb</i> a' aa	*	<i>ilill</i> i' ii	*	(50)
			<i>ilill</i> ii VV	*	
			<i>ilill</i> i' ii	*	segmental rules

Tone association and tone spread apply subsequently to the intermediate representations *intalaa**, *buddeenaa**, *ililli'ii**, etc., as we already saw in section 3.3.1, and yield *intalaa*, *buddéenaá*, *ilillí'íi*, etc.

3.3.3 The nominative

It has been shown in sections 3.2.1-3 that nominative forms vary considerably according to the inflectional class of the noun. D2 nouns add a final *-n* but have the same tonal patterns as their absolutes, while D3 nouns don't change at all. This can be captured through rule (52).

- (52) Nominative case (i)
 a. / X + n /, if D2 noun

*
H

- b. / X /, if D3 noun

*
H

D1 nouns, instead, have a more complex behaviour. There are three suffixes, ie. *-i*, *-ni* and *-ti*,¹⁴ whose distribution is governed by the phonological context and by gender. They are not added to the full lexical form, but replace the D1 stem-formative *-a*. In addition to this, the tonal pattern is different from the absolutive in D1a nouns: while this is always L-toned, their nominative has H-tones on the two final syllables. It is not difficult to derive the surface forms if we regard the D1 nominatives as characterised by an AP ** or *0. Since BAR (50) reduces anyhow an AP ** to *0, and there is no positive evidence to discriminate between these two APs, the second one will be chosen here, because of its similarity with the AP of Somali D3 nominatives. Our accent association convention (39) ensures that this AP associates with the last two syllables in the form. (See section 4. for the possibility of treating the AP *0 as a pre-accent). In D1b nouns it is reasonable to postulate that the accent of the AP *0 reassociates vacuously with the already starred penultimate syllable.

If now we remember that we indicated with the symbol St in section 3.3.1 the part of a noun that precedes the stem-formative, ie. that we regard any singular or plural noun as consisting of [St For]_N, the rule for the nominative of D1 nouns can be represented as follows:

- (53) Nominative case (ii)
 a. / St + ^{*}i /, if D1 noun with stem in -CC

*
H

- b. / St + ^{*}ni /, if m. D1 noun with stem in -C

*
H

- c. / St + ^{*}ti /, if f. D1 noun with stem in -C

*
H

3.3.4 The predicative

The final L-tones in the predicative forms of D1b and D2b nouns, ie. in the types *buddéena* and *ilillii*, show that we have here a different tonal melody than in their absolutes *buddéena'* and *ilillii*. The most obvious candidate is the tonal melody $\overset{*}{\text{HL}}$.

The predicative forms of D1a, D2a and D3 nouns, which all have accentless stems, have a H-tone on their first syllable. If the predicative tonal melody is $\overset{*}{\text{HL}}$, these forms must have an accent on their initial syllable. As in Somali vocatives, this must be an accent that associates from left to right rather than from right to left. We can thus describe the predicative forms with the following statements:

(54) Predicative case

a. $\overset{\rightarrow}{*}$
/ X /, if the stem is accentless

$\overset{*}{\text{HL}}$

b. / X /

$\overset{*}{\text{HL}}$

Just as the first part of our AAC was reworded in (39) by replacing 'mora' with 'bearing unit' (BU) in order to accommodate also the Oromo facts, the second part of the AAC, when properly reworded, can provide for the left-to-right association of the AP $\overset{\rightarrow}{*}$ to D1a, D2a and D3 nouns. In D2a and D3 nouns such as *gurbáa* and *bisháan* the output of (54) has two underlying accents: $\overset{*}{\text{gurbáa}}$ and $\overset{*}{\text{bisháan}}$ respectively. The BAR (50) ensures that only the first accent survives. Genitives must be excluded from both (54.a) and (54.b), otherwise we would have forms like $\overset{*}{\text{íntalaa}}$ or $\overset{*}{\text{ilillii'ii}}$. We thus need a further statement like (55), where the brackets show the optional character of *ti*.

(55) Predicative case

/ X (ti) /, if X = genitive noun form

The predicative forms of monosyllabic D3 words like *fóon* 'meat' and *lóon* 'cattle', which are identical to their absolute forms, show that if there are more tones than BUs in Oromo, the tones that cannot be associated are deleted. This can be captured through the following statement:

- (56) If there are more tones than BUs, the tones that cannot be associated are deleted.

In other words, when the predicative tone melody $\overset{*}{HL}$ is associated, eg., with $\overset{*}{foon}$ only the H-tone can associate, while the L-tone is deleted.

3.3.5 The negative predicative

The framework that has been developed so far suffices to describe the negative predicative forms through rule (57):

- (57) Negative predicative case

- a. / X + $\overset{\rightarrow}{*}{VV}$ /, if the stem is accentless and if X \neq genitive noun form
 $\overset{*}{H}$
- b. / X + $\overset{*}{H}{VV}$ /

The segmental rules (45), (46) and (48), which were developed for the genitive forms, account for the processing of the underlying suffix *VV* until it reaches its surface form. The proviso in (57.a) had to be added because the accent pattern $\overset{\rightarrow}{*}$ does not occur with reinflected genitives of D1a, D2a or D3 nouns, which are respectively *intaláatíi*, *gurba'áatíi* and *bishaanítíi* rather than **intáláatíi*, **gúrbá'áatíi* or **bishāanítíi*.

The internal *-t-* in the reinflected genitives shows that rule (44) is not enough, but has to be integrated with (58):

- (58) Genitive case (continued)

/ X + $\overset{*}{VVt}$ /, in the context ____ Suf

Rule (58) lacks any indication of the tone melody, because this is provided by the final case rule, eg. for negative predicative forms by rule (57.b).

3.3.6 The dative-ablative

D1b and D2b forms like *buddéena* and, respectively, *ilílli'ii* show that there is a *VV*-suffix also in this case, like in the genitive and negative predicative, while the tonal melody is $\overset{*}{HL}$. In D1a nouns there is no underlying accent, and the tonal melody $\overset{*}{HL}$ cannot be associated. The default rule (42) will then apply, and correctly produce L-toned forms like *intalaa*.

However, D2a and D3 forms like *gurba'aa* or *bishaanii*, as well as reinflected genitives like *intalaatii* or *ililli'iitii* show that there is something more involved in these forms. Indeed, what happens is that any accent on a stem-formative or on the genitive suffix is deleted before the dative-ablative suffix. This means that a rule like (59) applies in these forms:

(59) * → 0 / Stem \bar{X} Suf

It is easy to see that rule (59) is just a more general formulation of rule (49), which applies in genitive forms. Suppose then that we call all the inflectional suffixes that trigger rule (59) deaccenting suffixes (Suf). The dative-ablative case can thus be described as in (60), while (61) is a revised formulation of the genitive rules (44) and (58).

(60) Dative-ablative case

$$\begin{array}{c} / X + \underline{\underline{VV}} / \\ * \\ \text{HL} \end{array}$$

(61) Genitive case (revised)

a.
$$\begin{array}{c} / X + \underline{\underline{VV}} / \\ * \\ \text{H} \end{array}$$

b.
$$/ X + \underline{\underline{Vt}} / , \text{ in the context } _ \text{ Suf}$$

4. Conclusions

In discussing the Somali and Oromo systems in sections 2.3 and, respectively, 3.3, we saw that these two languages have very simple sets of tone rules which involve the Basic Tone Melody \bar{H} for Somali, and the two tone melodies \bar{H} and \bar{HL} for Oromo. The actually occurring surface forms can be easily derived with the help of general association principles and rules that have often been found to operate in tone languages. In this respect the main difference between Somali and Oromo lies in the fact that Somali lacks tone spread across syllables - the only kind of tone spread observed in Somali involved H-tones spreading leftwards within syllable boundaries, under one possible interpretation of rule (21.a)-,

while in Oromo tones associate freely rightwards. This makes the Somali system similar, at least superficially, to typical pitch accent systems such as those of Indo-European languages like Ancient Greek or Lithuanian. Interestingly, however, the Somali facts can also be accounted for by positing a Basic Tone Melody *HL , with the L-tone freely associating with BUs to its right, provided that a rule like (56) deletes L-tones that would remain unassociated in forms with the H-tone on their final mora. In a synchronic description of Somali this is unnecessary, since if tones cannot spread across syllable boundaries, a default rule like (21.b) or (42), which is independently necessary, can account for all the forms with L-tones that occur to the right of the H-toned mora. It is clear, however, that diachronically it is not difficult for the one system to change into the other.

A more elaborate system of rules is required in both languages in order to account for the 'binding-site' of the tonal melodies, ie. for the choice of the BU the H-tone in the melody associates with. To this end we have designated one of the tones in the melody as accented, and invoked the general principle (20) that associates accented tones with underlying accents, indicated by means of an asterisk as usual, cf. eg. Clements and Goldsmith (1984b, pp.13 ff.). In addition to this, four kinds of accent patterns were posited, which associate to their bearing units (BUs) with the help of an accent association convention, formulated in (27) for Somali and partly revised in (39) in order to accommodate also the Oromo facts (cf. section 3.3.4 as well). In this manner, accent patterns are treated as autosegments that bind to their BUs from right to left in both languages, with the exception of AP $\vec{*}$, which binds from left to right. The APs that were found to occur in both Somali and Oromo are (i) $*$, (ii) $\vec{*}$, (iii) $*o$, and (iv) o , ie. the lack of any accent. The third AP, which occurs lexically in polymoraic D1 and D5 nouns, and in the absolutive - in some contexts only, however - and nominative of D3 nouns in Somali, and in the nominative of D1 nouns in our variety of Oromo, is the only AP that involves two accentual items. Since its result is that an accent is placed immediately to the left of a designated BU, it is identical to a pre-accent, ie. to an accent that shifts to the BU that precedes it. Goldsmith (1984, p.26) introduced the symbol \rightarrow for the opposite notion of post-accent in Tonga, a Bantu language, and consequently a pre-accent could be represented as \leftarrow , associated with its designated BU by the AAC. The two representations, namely $*o$ and \leftarrow , are in my opinion almost equivalent, and I choose here the first one simply because this does not involve an additional symbol.

Accent patterns are assigned lexically to nouns in both Somali and Oromo.

In Somali the two APs * and *⁰ associate to whole words, AP * being the more general case, cf. (17). In Oromo, instead, the AP * is assigned both to stems and to stem-formatives, but some stems and stem-formatives are accentless. If a word has lexically two underlying accents, the second one is deleted by the Basic Accentuation Rule (50), a sort of mopping-up rule that applies after the other accentual rules of each level or cycle applied.

The Somali and Oromo systems of case inflections involve both segmental suffixes and accents. In Oromo also tone melodies have to be specified for each case. The general format that was used here for case inflections is not transformational, but simply describes the relevant features of a given case form. Typical instances are (18) and (26.c) for Somali, and (41) and (53.a) for Oromo, repeated here in (62):

(62) a. Somali absolutive case (= 18)

/ X /

b. Nominative case in Somali D2 nouns (= 26.c)

/ X +⁰ i /

c. Oromo absolutive case (= 41)

/ X /

*
H

d. Nominative case in Oromo D1 nouns with stem in -CC (= 53.a)

/St +⁰ i /

*
H

Rule (18) states that the absolutive case in Somali does not require special affixes or APs; as a consequence, a noun will retain its lexical AP. Also in Oromo the absolutive case (cf. 41 = 62.c) does not require special affixes or APs. Yet, it is characterised by the tonal melody $\overset{*}{H}$, which binds with the lexically accented BU. (In D1a nouns the tonal melody $\overset{*}{H}$ cannot associate with any BU because there are no underlying accents. The default rule then applies and the form surfaces as L-toned).

In the nominative of Somali D2 nouns like *goɔl* 'lioness', an *-i* is added to the lexical form of the word, and the AP ⁰ is imposed on the form. The lexical AP * is then deleted according to the basic accentuation principle (25), which we found necessary to posit for Somali but *not* for Oromo. This null AP can

then be associated with the last BU by the AAC, and the form will surface as L-toned, ie. *gool-i*. Rule (53.a = 62.d), instead, states that in the nominative case form of this class of Oromo nouns the suffix *-i* is added not to the lexical form of the word, but rather to its stem only. The AP *o is then associated by the AAC yielding forms like *ibidd-i*^o from D1a *ibidd-a* m. 'fire' or *jabeeny-i*^o from D1b *jabeeny-a* m. 'strength' (realised as [jabéenyá]). When the melody H̄ is associated and the tone rules apply, the H-tone spreads to the last syllable and the final forms are respectively *ibíddí* and *jabéenyí*.

It should be pointed out, however, that rule (18 = 62.a) cannot account for all the absolutive forms of Somali nouns. In a few contexts, in fact, D3 nouns and- optionally - D4 nouns undergo special rules that change their APs from * into *o and, respectively, o, as stated in (19.a) and (19.b). In note 7 it was already observed that there are parallels to the occurrence of plural D4 nouns with AP o in the context ____ (Y)V in Arbore, a language that belongs to the same sub-group as Somali within East Cushitic. Accordingly, at least part of the special rule (19.b) may be a relic of an older stage of the language. It often happens, indeed, that synchronically idiosyncratic and anti-systemic behaviours are reflexes of systems that were fully operative in the past. It is thus possible that also rule (19.a) should be explained diachronically.

Finally, it is necessary to remember that we found a peculiar accentual behaviour in the Oromo genitive and dative-ablative forms, which we preferred to regard not as the reflex of a different AP, but as the output of rule (59). This rule deletes an accent on the morphemes that occur between the stem and any of these two suffixes, which were therefore called deaccenting suffixes.

I hope that the data discussed in this paper may shed some light on the typology of the prosodic systems of East Cushitic languages. Even though several of the facts we dealt with can be analysed along different lines, it seems to be clear that both Somali and Oromo have prosodic systems that involve a somewhat elaborate set of accent rules and a very simple set of tone rules.

NOTES

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The following abbreviations should be explained:

Ar. Arbore, Omo-Tana, East Cushitic;
 Da. Dasenech, Omo-Tana, East Cushitic;
 Di. Dirayta, Oromoid, East Cushitic;
 Or. Oromo, Oromoid, East Cushitic;
 Re. Rendille, Omo-Tana, East Cushitic;
 So. Somali, Omo-Tana, East Cushitic.

ART article
 FOC focus particle
 INT interrogative particle.

1. The Somali data are based mainly on the variety spoken by Dr. Cabdinaasir M. Abuukar, an educated Somali born in Gaalkacyo (Mudug) like Hyman's (1981) main informant. However, reference is made also to the more Southern varieties spoken by Prof. Ciise M. Siyaad, born in Ceel Buur (Galguduud), and Prof. Maxamed Muuse Axmed. Broadly speaking, it can thus be claimed that these data fairly represent central varieties of Standard Somali as it is spoken by educated speakers.

The Oromo data are instead based mainly on the speech of Abdulhaliim Mohammed Sheekh Abdisalaam, who was born in the Bale province of Ethiopia in an area inhabited mainly by Arsii (Arusi) Oromos, and has now been several years one of the speakers in the Oromo programs of radio Mogadishu. His variety is thus different both from Boorana, upon which Andrzejewski's (1957, 1970) and Owens's (1980, 1982) analyses are based, and from the Mecca (Mecha) and Tuulama (Tulema) varieties spoken in Gojjam, Wellegga, Ilubabor, Kefa, Shewa and Wello, which were described eg. by Moreno (1939) and Gragg (1976, 1982), and are the main basis for literary varieties of Oromo as a result of several factors ranging from the traditionally high level of literacy among Western, ie. Mecca, Oromos to the fact that most of the Oromo speakers of Radio Addis Ababa are from Mecca and Tuulama areas. Data on Eastern varieties of Oromo, however, are from Abdulhaamid Ahmed and Amiin Rashaad, both born in Dire Dawa.

2. For an explanation of the term 'D1 noun' see section 2.2.2.
3. Somali is transcribed here according to the Somali national orthography. Its main peculiarities are:

' is a glottal stop, [ʔ];
 c is a voiced pharyngeal fricative, [ʕ];
 dh is a voiced retroflex stop, [ɖ];
 kh is a voiceless velar or uvular fricative, [x] or [χ];
 x is a voiceless pharyngeal fricative, [ħ].

Somali tones are indicated throughout according to Hyman's (1981) analysis, for which see section 2.1.

4. A number of minor types such as *lāba* 'two' (Abs *lāba* ~ *labā*, Gen *labā*, Nom *lāba* ~ *labi*), etc., are not taken into account here, for obvious reasons of space.

It should be pointed out that Hyman (1981), who was able to collapse a number of types that Andrzejewski (1964, 1979) had been forced to keep apart, oversimplified the system. Indeed, he put together in his first declension (D1) Andrzejewski's first three declensions (all masculine) and his fourth declension (all feminine), which have very different inflectional behaviours. I prefer instead to split Hyman's first declension into a D1 (the type Abs *ōrgi*, Gen *orgí*, Nom *orgi* 'billy-goat') and a D2 (the type Abs *mindí*, Gen *mindí*, Nom *mindiyi* 'knife'). While D2 is followed only by

feminine nouns, D1 includes several masculine nouns as well as a group of feminines (*haweéney* 'woman', *sábtí* 'Saturday', *mídig* 'right side', etc.). Optionally, however, these feminine D1 nouns have a different behaviour, in so far as they may follow the fifth declension.

5. Some *pluralia tantum* of this group may have a genitive without *-oód* when they have a semantically singular meaning. For instance, *caanó* 'milk' can have the genitive *caanó* with the numeral *hál* 'one' in the phrase *hál caanó* 'one cup of milk'.
6. There are short possessive suffixes in Somali, eg. 1s. *-káy*, 2s. *-kaá*, etc., which are used mainly with terms referring to close relatives (*aábbe* 'father', *hoóyo* 'mother', *walaál* 'brother', etc.) or to God. Otherwise the possessive suffixes also contain an article or demonstrative and are then called 'long possessives', eg. *ratí-gáa-ga* 'your camel', *ratí-gáa-gán* 'this camel of yours', etc. With short possessives a noun is always L-toned in the nominative. There are thus Abs D3 *aabbá-haá* 'your father', D4 *walaál-kaá* 'your brother' vs. Nom *aabba-háa*, *walaal-káa*. With long possessives, instead, the behaviours diverge: Abs D3 *furá-háa-ga* 'your key', D4 *halá-háa-ga* 'your she-camel' vs. D3 *furá-háa-gu* but D4 *halá-háa-gu* ~ *hala-háa-gu* (cf. also 12.c).
7. Andrzejewski posits for D4 nouns (his sixth declension) a special accentual unit, ie. AU5, which is realised before a pause like his AU1 in this position (ie. mid tone with secondary stress), but before another syllable like his AU3 in this position (ie. mid tone with absence of stress). Since his AU1 corresponds to Hyman's and my accent and H-tone, and his AU3 to our lack of accent and L-tone, Andrzejewski's claim about this class of nouns is that they are accented only before a pause, but are unaccented elsewhere. Hyman (1981, p.119), however, already observed that D4 nouns can optionally be accented or unaccented when they occur as non-focussed objects, ie. in the absolutive in the context illustrated by (11.e). Since this optional lack of accent also occurs before the particles *báa* and *bá* independently from an intervening pause, I think that the most proper treatment should not be positing a separate accentual unit or toneme, but rather invoking an optional accent deletion rule like (19.b).

Interestingly, at least for the context ___ (Y) V this rule that deletes the final accent and the H-tone in D4 nouns may derive from an older stage of the language. Indeed, in Arbore, a related language spoken in Southern Ethiopia between Lake Stephanie and the River Omo, plural nouns in *-ó*, *-á*, and *-é* like *kobó* 'sandals' (So. *kabó*), *ilkó* 'teeth' (So. *ilkó*), *ind'á* 'eyes' (So. *indhó*), *bicé* 'water' (So. *biyó*), etc., lose their final H-tone in exactly this position, as shown in example (i) below, drawn from Hayward (1984, p.158). (The spelling is adapted to the general system suggested by Sasse, 1982, for East Cushitic languages; c stands in Arbore forms for [t]).

- (i) *bice mé kaŋ wárbata?*
 water what with you-draw
 'what is it you draw water (Abs *bicé*) with?'

8. Raised vowels such as ^a in *worāan^a* indicate 'vowel coloured breaths', ie. final voiceless vowels, in Oromo studies starting from Andrzejewski (1957). They are retained here mainly for Boorana forms. In all other respects, however, I use the 'new Oromo script' which has been developed in recent years by several groups of Oromos who are publishing books and journals in their mother-tongue with Latin characters. It is similar to the Somali system in so far as it doesn't use diacritics and can be typed

with any standard keyboard. Its main peculiarities are the following ones:

- (i) ' is a glottal stop, [ʔ];
 c is a voiceless ejective alveolar affricate, [tʃ'];
 ch is a voiceless alveolar affricate, [tʃ];
 dh is a voiced implosive alveolar stop, [d'];
 kh is a voiceless velar fricative, [x];
 ny is a palatal nasal, [ɲ];
 ph is a voiceless ejective bilabial stop, [p'];
 q is a voiceless ejective velar or uvular stop, [k'] or [q'];
 x is a voiceless ejective alveolar stop, [t'].

Tones are indicated according to Andrzejewski's and Owens's system, ie. \acute{V} or $\acute{V}\acute{V}$ for H-tones, V or $V\acute{V}$ for L-tones, and \hat{V} or $\hat{V}\acute{V}$ for falling tones (in Boorana). Notice that in this manner $\acute{V}\acute{V}$ indicates a level H-tone in Oromo, but a falling tone in Somali!

9. Subject focus inflections occur only on the last word in the subject phrase, while its first word has to be L-toned. Intermediate words are in the absolutive:

- (i) a. *mucaa dhéeráa isi'íit - tu aanán dhuge*
 child tall her FOC milk drank
 'it was her (*isi'íit-tu*, subject focus form of Gen *isi'íi*)
 tall (Abs *dhéeráa*) child (Abs *mucáa*) who drank the milk'
- b. *qaallu káná - tt dánsa*
 priest this FOC good
 'THIS PRIEST is good' (from Owens, 1982, p.56)

10. There is often a pause after the first and even after the second word of a long predicate phrase in a slow and accurate style. A word with (at least) a H-tone in its absolutive shows up in its absolutive form in such cases, while a L-toned word has all its syllables raised to H, as shown in the examples below:

- (i) a. *tun obboléettii ## námtichá ## gooda isáa in - argatíníiti*
 this sister man share his not received-not
 'this is the sister (Abs *obboléettii*) of the man (Abs *namticha*)
 who didn't receive his share'
- b. *kun óbbóléysá ## námtichá ## gooda isáa in - argatíníiti*
 this brother
 'this is the brother (Abs *obboleysa*) of the man who didn't
 receive his share'

Generally speaking, it emerges from Owens (1980) and from my data as well that there are heavy restrictions upon the occurrence of L-toned words in a number of contexts, and that there are different kinds of processes that create H-tones in such cases. One of them is illustrated in (i.a) and (i.b) above. The Alternating Tone Rule described by Owens (1980, pp.171 ff.) can be viewed in this perspective, if its action is limited to creating a H-tone on the first syllable of some classes of basically L-toned words. Anyhow, this is a field which deserves further investigation.

The last word of predicative phrases is marked only tonally also in other Southern varieties of Oromo; eg. for Boorana see Owens (1980, p.178 ff.; 1982, p.48 f.). In Eastern varieties this is true only for words in short -a, eg. *tuni íntala* 'this is a girl'. D2 nouns add -*dha* like several Northern varieties, eg., *inní jábaadha* 'he is strong (Abs *jábáa*)', *kun*

gurbaa gādheedha 'this is a bad boy'. Instead, D3 nouns add *-i*, like *māali* 'what is it?' (Abs *māal* 'what?') in Abdulhaliim's variety, eg. *kuni bishaani* 'this is water'.

11. Several sandhi processes often involve the final phonemes of the stem and the initial *n* or *t* of the nominative endings. For instance, final *d* and *t* assimilate to *n*: *aréenní* from *aréedā* 'beard', *namōonní* from *namōotā* 'men', *x* with following *n* yields either of *fīixní*, *fīindhí*, or *fīin'í* from *fīixá* 'top, point'; *ay* with *n* yields either *nagéyní* or *nagéenyí* from *nagáyá* 'peace' in Abdulhaliim's variety, etc.

It should also be pointed out that while the nominative D2 and D3 forms are generally the same in all varieties of Oromo, D1 nominatives change considerably. For instance, Boorana generalises *-í* to all the D1 masculines (*-ní* is retained only in forms like *nageenni* from *nagā* 'peace', where the stem had a final *y*, cf. *nagáyá* in other varieties), and *-tí* to all the D1 feminines, introducing it also in cases like *addítí* from *add^a* 'forehead' (cf. *áddí* in Arsii, *addí* in Eastern Oromo, etc.). Waata, the Southernmost Oromo variety described by Heine (1981), has *-fin* and *-tíin* with the same distribution as *-í* and *-tí* in Boorana, eg. *mukíin* from *muk^a* 'tree' (elsewhere *múkní*, *mukní*), *hintaltíin* from *hintal^a* 'girl', etc. Mecca Oromo, instead, generalises the masculine forms in *-ni* to most of the words that have *-tí* in Arsii and Eastern Oromo, and retains the old feminine ending only in *haati* from *haadha* 'mother' and, optionally, in a few other nouns like *lafa* 'ground, earth'. (Mecca forms lack tone marks because no tones are marked in the sources).

12. No Oromo noun can ^{consonant} exist in its bare root. Yet the actual distribution and functions of the different stem-formatives, as well as their relationship with the derivational suffixes, have still to be worked out. X
13. Rules (48.a) and (48.b) are specific to some Arsii varieties. Eastern varieties spoken, eg., in the Dire Dawa area, and more Southern ones like Boorana behave differently and require different rules, as shown in (i) below. (The Boorana data are from Owens, 1980, pp.156, 161).

(i)	D1	D2	
Abs	<i>nama</i>	<i>gurbāa</i>	
Gen	<i>namāa</i>	<i>gurba'āa</i>	Arsii
DAb	<i>namaa</i>	<i>gurba'aa</i>	
Abs	<i>nama</i>	<i>gurbāa</i>	
Gen	<i>namāa</i>	<i>gurbaadhāa</i> ~ <i>gurbāa</i>	Eastern
DAb	<i>namaa</i>	<i>gurbaadhaa</i> ~ <i>gurbaa</i>	
Abs	<i>nām^a</i>	<i>gurbā</i>	
Gen	<i>namā</i>	<i>gurbāa</i>	Boorana
DAb	<i>nama</i>	<i>gurbaa</i>	

14. Gragg (1976, p.183) regards *-i* as derived from *-ni* after a consonant cluster, eg. *harkni* → *harki* from *harka* 'hand'. This, however, requires an *ad hoc* phonological rule for nouns, because the normal treatment in other areas of the morphology of this language is *i*-epenthesis, eg. *argita* and *argina* from /arg + ta/ and, respectively, /arg + na/, 2s. and 1p. of the present tense of *ārg-ūu* 'to see'. Also Boorana forms like *addítí* from *add^a* 'forehead' (cf. note 11) vs. Arsii *áddí* may show *i*-epenthesis from underlying /add + tí/. As a consequence, I prefer to treat synchronically forms like m. *árbí* and f. *áddí* as containing a separate suffix *-í*, which occurs only after geminate consonants or consonant clusters.

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