

Thus: *sīqs-* 'move something' (< *sīq-*), *jigs-* 'destroy something' (< *jig-*), *hīmsīs-* 'cause someone to tell something' (< *hīm-*), *dabs-* 'bend something' (< *dab-*) etc.

Are we to set up another, phonologically unrelated, stem extension allomorph *-s* for such forms as these? It seems preferable not to. The distribution of *-is* is a phonologically determined matter, ie. (i) with all verbs in which the preceding stem-final is a non-liquid coronal consonant (*t, t̥, d, d̥, j, ɕ, y*), and (ii) with all transitive de-adjectival and causativized attributive verbs — both of which groups of verbs appear to have a vowel stem-finally¹⁶. In view of this predictability and of the basic shared sibilant feature in *-s* and *-is*, it seems more plausible to set up one underlying causative stem extension in Oromo, {*-is*}, and to account for the *-s* by means of a rule of elision.

REFERENCES

- Hodson A. W. and Walker C. H., 1922. *An Elementary and Practical Grammar of the Galla or Oromo Language*, London.
 Moreno M. M., 1939. *Grammatica teorico-practica della lingua galla*, Roma.
 Moreno M. M., 1955. *Il somalo della Somalia*, Roma.

¹⁶ Note however, that the morphophonology of the attributive verbs which often appear to have a final *ā* can only be accounted for by postulating the presence of a stem extension with a final *w*. I hope to consider this question in a future study.

LOREN F. BLIESE

PROPORTIONAL RELATIONS AND SYNCHRONIC DEVELOPMENTS IN 'AFAR MORPHOLOGY

The intent of this paper is to analyze proportional relations in synchronic 'Afar morphology and try to relate the results to the processes of historical change hypothesized by Jerzy Kuryłowicz in *La Nature de Procès dits „Analogiques”* (Acta Linguistica V, 1945—9), and in *Inflectional Categories in Indo-European*, Chap. 1: General Prerequisites (1964).

'AFAR NOUN PROPORTIONS

'Afar case markings are extant in the masculine noun class which has a suffix *-i* in vowel-final forms for the Nominative-Genitive case as over against the Class form which is found in clitic positions and citation form. Class is predictable as *i, u* or *a* according to rules of vowel harmony for consonant-final forms¹.

A comparison of these two forms of the masculine noun class shows a relation of „constellation” according to Hjelmslev's terminology in that the Class form is only predictable from the Nominative-Genitive in consonant-final forms while the Nom-Gen marker *i* is only predictable from the Class forms in vowel-final nouns. This lack of predictability on the basis of functional classes can be illustrated by the following examples:

¹ Loren F. Bliese, *Selected Problems in Noun Morphology in the Aussa Dialect of 'Afar* (unpublished MA Thesis, The University of Texas, Austin, 1967), pp. 31—34.

Nom-Gen	Class	Gloss
(C group)		
<i>maláb</i>	<i>malába</i>	honey
<i>mutúk</i>	<i>mutúku</i>	butter
<i>rusás</i>	<i>rusása</i>	bullet

(i group)

<i>agánsi</i>	<i>agánsa</i>	comb
<i>álfi</i>	<i>álfi</i>	10,000
<i>álsí</i>	<i>álsa</i>	moon
<i>baqí</i>	<i>bágu</i>	abdomen
<i>barí</i>	<i>bára</i>	evening

The Nom-Gen case forms the base for the consonant-final nouns in that the Class vowel is predicted from the first preceeding vowel as follows:

<i>u</i> after <i>u</i> or <i>o</i>
Class → <i>i</i> after <i>i</i> or <i>e</i>
<i>a</i> after <i>a</i>

However, the *i* group follows no rule of harmony as is seen with *álfi*, *álsa* and *bágu* above. So no determination of Nom-Gen to Class can be posited.

More predictability is possible from Class to Nom-Gen except that words of the *i* class sometimes also happen to meet the vowel harmony specification. For example *agánsa*, *álsa* and *bára* are all of the Nom-Gen *i* class and yet follow the same vowel pattern of *malába* which is consonant-final in the Nom-Gen case. So it is not possible to have determination from Class to Nom-Gen. Functionally a case of constellation exists in masculine nouns. Feminine nouns have no distinction in case at all (the marker for feminine nouns is a final stressed vowel which assimilates the short vowel case suffixes).

A group of exceptions to the masculine Class marker presents a possible area of analogical change. Thirty words from the consonant-final group are listed on page 54 of my thesis which do not have the expected Class marker (the *u*, *i*, or *a* suffix) in the objective and citation form. (The Class marker occurs regularly

before postpositions). Attempts to find some phonological explanation for these exceptions were only minimally successful (p. 55). However, if one treats these as relics of a period when all the consonant-final nouns had no case differences, one can posit that the vowel-final masculine noun class with case differences analogically influenced the consonant-final forms in adding case markers. If this is the case, it represents an example of Kurylowicz's first law which describes the normal pattern of complex or more clearly distinguished forms expanding at the expense of simple forms.

	Nom-Gen	Class	Gloss
(Consonant final relic group)	<i>aráh</i>	<i>aráh</i>	(object) place
	<i>rób</i>	<i>rób</i>	(object) rain

(Consonant final group changed by analogy with vowel final masculine nouns)

<i>lák</i>	<i>láká</i>	thigh
<i>marúb</i>	<i>marúbu</i>	ram

NOUN PLURALS

Feminine nouns are regular in that the rules of dissimilation make it possible to have one group (with only a few exceptions) derived from a common plural affix of a reduplicated last consonant and stressed *á*¹. The rules are regular enough to have „interdependence” in Hjelmslev's terminology since the Class form is also predictable from the plural. The exceptions listed on pages 58—59 of my thesis do not show much in common, as the various suggestions for individual words show on page 60. The most obvious cases of analogical change are suffixless forms or apocopated forms which follow all or part of the dissimilation rules on the pattern of the regular plurals. *kababá* 'frying pan', for example, should add another *ba* syllable which would dissimilate to **ka-babōbí* on the analogy of the nouns listed on pages 75—76 of the thesis such as *adagá* 'market', *adagōgí* 'markets'. However, the dissimilation is formed directly on the stem vowels (probably because of the repetition of the *ba* in the stem) giving the apocopated *kabōbí* by analogy. A similar example is *saró* 'cloth' which

should have been **sarōrá* in the plural but has apparently lost the *rō* syllable to form *sará* and further dissimilated this to *sarí* as a variant form along the analogy of the examples in my thesis pages 74—75 such as *abesá* 'viper', *abesāsi* 'vipers'. The forms *kallá* 'mud', *kalló* pl., and *lā* 'cow', *lō* 'cows', also follow a pattern of dissimilation for the plural. The masculine plurals also have *aCa* dissimilation which has extended by analogy to *vCa*, for example, with *setan* 'Satan' *setōnwá* pl., instead of **setanwá*. In *musána* 'shawl', *musonitté* pl., instead of **musanitté*, the dissimilation has extended to the *itté* suffix which has no *a* to meet the structural description. The form *lakbá* 'shoulder blade' has a variant irregular masculine plural *lakōbú* which shows an extension of dissimilation before *u*. These various exceptions can be explained in terms of Kuryłowicz's first law in the sense that the phonological dissimilation rule has been identified with the plural which basically is suffixation or reduplication. This resulted in a bipartite identification of plural. The marker of vowel changes by dissimilation has then been extended also to plural forms where the structural description of consecutive *a* vowels was not met.

Masculine nouns have a proportional relation of determination from plural to Class (or Nom-Gen) because of the different masculine plural suffixes. Unlike the feminine variations, no phonological rules have been found to describe all the differences. The only clear division is between the *itté* suffix of the *i* or vowel final class and the $((\bar{o})w)á$ variants of the consonant final class (thesis pp. 27—31). The various $((\bar{o})w)á$ plurals can only partially be predicted from the stem.

The relation of constellation between the *i* group and *C* group, which was noted in regard to Class versus Nom-Gen, can explain some of the mixture and duplication of plurals between the *itté* and $((\bar{o})w)á$ suffixes. The following nouns are listed (thesis p. 52) among the seven taking both kinds of suffixes.

Class	Plural	Gloss
<i>sána</i>	<i>sanitté</i> — <i>sanowá</i>	nose
<i>kontómu</i>	<i>kontomitté</i> — <i>kontomwá</i>	fifty
<i>silingi</i>	<i>silingitté</i> — <i>silingá</i>	shilling
<i>kilími</i>	<i>kilimitté</i> — <i>kilimá</i>	tick

Each of these forms may be explained on the basis that the Class form meets the specification of the consonant final $((\bar{o})w)á$ plural group according to the vowel assimilation rule above, as well as having the final vowel of Class and thereby belonging to the *i* Nom-Gen and *itté* plural group. If the words were lexicalized according to the *i* group by their Class form, they would also agree with the *C* group Class form by assimilation. Since the plural varieties are also related to stem groups the ambiguity carried over into both Class and plural formations. Both *kilími* (vowel-final) and *kilim* (consonant-final) Class forms are attested, indicating two lexicalizations for 'tick' with the expected plurals. The other three forms in the thesis with both kinds of plurals do not meet the *C* group assimilation rule so possibly are in transition from older or defective (as *sabatá* 'Saturday') stems which have begun to relexicalize as *i* group stems. Kuryłowicz's first rule of analogy in terms of more complex forms predominating over simple forms can be mentioned in the sense that the *itté* suffix is more complex than the $((\bar{o})w)á$ suffix which is usually realized as only a single syllable $(w)á$.

NOUN SINGULAR

Besides case and plural relations, a third functional category of 'Afar nouns in which proportion can be observed is singular. Some examples are found on pages 85—87 of my thesis, such as:

Class	Gend	Singular	Gend	Gloss
<i>hutúk</i>	m	<i>hutúkta</i>	m	star
<i>biró</i>	f	<i>biróyta</i>	m	flower
<i>dummú</i>	f	<i>dummúta</i>	m	cat
		<i>dummutá</i>	f	cat
<i>wakáli</i>	m	<i>wakaliyta</i>	m	companion
		<i>wakaliytó</i>	f	companion

As illustrated above, the singular has generic rather than grammatical gender. The singular is only used to specify an individual so the Class form is much more frequent. The vowel and glide alternations are analyzed on page 39 of my thesis.

Although many exceptions can be found here also, the Class form determines the singular since the forms *biróyta* and *wakaliyta* do not indicate whether they are derived from a masculine *wakáli* or a feminine *biró* stem with different vowel length and accent patterns.

Jerzy Kuryłowicz in *Inflectional Categories in Indo-European* described a normal pattern of historical change in that an inflectional category representing two functions often „is replaced in its secondary function by a derivational morph.” (p. 11). The Class versus Singular categories of 'Afar offer several illustrations of this phenomenon. For example *amó* 'head' presumably had a secondary meaning 'ruler' which has been taken over by the singular *amóyta*. Several utensils and characterization nouns for persons, etc. take only the singular having no Class form.

Hypothetical Class	Singular	Gend.	Gloss
* <i>arka</i>	<i>arkaytó</i>	f	bed
* <i>birilé</i>	<i>biriléyta</i>	m	drinking cup
* <i>duskúm</i>	<i>duskúnta</i>	m	bracelet
* <i>habten</i>	<i>habtentó</i>	f	divorcee
* <i>idal</i>	<i>idáltu</i>	m	elder
	<i>idaltó</i>	f	old woman
* <i>makabán</i>	<i>makabántu</i>	m	chief
* <i>toboko</i>	<i>tobokóyta</i>	m	brother
* <i>silá</i>	<i>siláytu</i>	m	wind
* <i>ka'a</i>	<i>ka'áytu</i>	m	fly

The same pattern noted with 'head' can be seen with 'divorcee' and 'elder'. The root *habé* means 'to leave' which has become specialized in the singular noun to mean 'the woman who left', 'divorcee'. Although no Class form for *idáltu* 'elder' was found, a plural form *idóla* is used. Both of these derived forms agree with the reconstruction of **idal* as the stem. The feminine singular *idaltó* 'old woman' carries the original meaning 'old' which is also found in a derived verb *idolité* 'be old'. The masculine 'elder' has the derived special meaning applied to 'the old man who heads the clan.' The other examples can be posited as analogical formations on the basis of Kuryłowicz's first rule in that the complex

(y) *tu* singular suffix has invaded the functional category of the simpler Class suffix with only a single vowel as its marker. In the above list this process has resulted in the complete loss of the Class stem. Evidence that this development is in process is that several words were found where the plural was formed on the singular form rather than on the Class stem.

Stem + Sing.	+ Plural	Gloss
<i>amó + yta</i>	<i>amoytitté</i>	rulers
<i>anáy + tu</i>	<i>anaytitté</i>	locusts
<i>antrú + ta</i>	<i>antutitté</i>	rats
	<i>antutwá</i>	rats
<i>silá + ytu</i>	<i>silaytitté</i>	winds
<i>makabán + tu</i>	<i>makabantitté</i>	chiefs
<i>arka + ytó</i>	<i>arkaytótá</i>	beds
<i>nammay*(tu)</i>	<i>namaytitté</i>	twos

VERBS FORMED ON NOUNS

A derived verbal form gives evidence of being a recent formation in that it takes the later suffix forms rather than prefixes with non-low vowel initial verbs. A noun is applied to a person by means of the benefactive suffix *-ite*:

<i>bakár</i>	thirst	<i>bakarité</i>	be thirsty
<i>biák</i>	pain	<i>biakité</i>	be sick
<i>'asó</i>	malaria	<i>'asité</i>	have fever or malaria
<i>ayró</i>	sun	<i>ayrité</i>	to be warmed by the sun
<i>arrogá</i>	diarrhea	<i>arroguté</i>	have diarrhea
<i>idóla</i>	elders	<i>idolité</i>	be old

A semantic explanation why the benefactive rather than indicative form developed for this class is that the personal application of something to oneself is basic to the meaning of benefactive. However, Kuryłowicz's first law also fits in that the more complex *ité* suffix has spread instead of the indicative with only person marker suffixes.

A look at some of the examples shows more illustrations of the secondary function going to the derived form as was noted

with the singular above. 'asó 'malaria' becomes the specialized 'have fever', *ayró* 'sun' becomes the specialized 'be warmed by the sun'.

'AFAR VERB PROPORTIONS

'Afar verbs divide into two classes according to whether they are consonant or a initial and take suffixes, or non-low vowel initial and take prefixes.

<i>'ammalté</i>	'you waited'	(<i>té</i> suffix)
<i>alifté</i>	'you closed'	(<i>té</i> suffix)
<i>tōbbé</i>	'you heard'	(<i>t</i> prefix)

Although the *C, a* class has a coordinate relation between the perfect and imperfect aspects, the *V* group can only be predicted from perfect to imperfect. The reason is that the sign of the imperfect is a lowering of the vowel connected with the pronominal affix to *a*, which makes it impossible to tell whether it was *i*, *u*, *e* or *o* in the perfect stem. The jussive also has the same proportional relations with the perfect since it also changes *V* to a.

Perfect	Imperfect	Jussive	Gloss
<i>irgi'é</i>	<i>argi'é</i>	<i>argá'ay</i>	cut down
<i>usgudé</i>	<i>asgudé</i>	<i>asgáday</i>	slaughter
<i>ōbbé</i>	<i>ābbé</i>	<i>ābbay</i>	hear
<i>erré</i>	<i>arré</i>	<i>árray</i>	load

A historical development in the various languages of Eastern Cushitic is the shift of all verbal affixes except negative *m* from prefixes to suffixes. One result of the shift is that the stem vowels are kept intact, which would be a gain in comprehension. An example is the verbal discussed earlier *idolité* 'be old' which would lose its characteristic initial *i* in the imperfect and jussive if it conjugated as a regular *V* initial. This drift toward stem stability might possibly be related to Kurylowicz's fifth law that marginal differences are sacrificed for central differences. Whatever the reason for the drift, one thing is clear, the derived stems are definitely moving more rapidly toward suffixes than the basic

forms. This can be illustrated in the causative, benefactive and passive forms which are presently in a relation of determination from derived to basic form because of the unpredictable affixes in *V* initial verbs. Many words have gone over to suffixes while others have not. A few have both prefixation and suffixation on the same word giving redundancy to the derivational marks. Some causative examples follow.

Perfect	Causative	Gloss
<i>erré</i>	<i>cyserré</i> (prefix)	load
<i>igilé</i>	<i>igilsisé</i> (suffix)	break
<i>ewe'é</i>	<i>eyye'sisé</i> (both)	go out

Benefactive examples *t*:

Perfect	Benefactive	Gloss
<i>irgi'é</i>	<i>irgi'ité</i> (suffix)	cut down
<i>okomé</i>	<i>okomité</i> (suffix)	ate
<i>ēdegé</i>	<i>ettedegite</i> (both)	know

Causative prefix, benefactive suffix:

<i>usūlé</i>	<i>ussūluté</i> (both)	laugh
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Passive examples *m*:

<i>ōge'é</i>	<i>omoge'é</i> (prefix)	bury
<i>elēmé</i>	<i>elemimé</i> (suffix)	sell
<i>ibbidé</i>	<i>intibidimé</i> (both)	catch

The above samples show the state of flux with derived verbal forms. Although prefixes in the *V* group are still common and obligatory for many derived verbs, a definite drift toward suffixes on the analogy of the *C, a* group is in process. This process if completed should result in a coordinate proportion between stem and derived forms such as now exists both for the gerund with a suffixed *m* after the personal endings (*geḏám* 'I to go'), and for the participle with a suffixed *h* (*geḏéh* 'I having gone'). However, at this stage no rule predicting *V* group derived verbs from the stem is possible without marking all the verbs which have wholly or partially gone over to the suffix group.

CONCLUSION

Although the historical reconstructions suggested in this paper are only hypothetical, the synchronic proportional relations discussed have been able to show several directions of change in 'Afar which exemplify the hypotheses set forth by Kuryłowicz. The value of considering general trends in linguistic change as explanations for exceptions to rules in a synchronic description is obviously shaky, but hopefully can contribute to a better understanding of the history of the language studied.

¹ Loren F. Bliese, 'Afar Vowel Dissimilation: A Problem in Rule Ordering, *Anthropological Linguistics*: 17, 3 (1975), pp. 102—106; also see Bliese's chapter on 'Afar in *The Non-Semitic Languages of Ethiopia*, M. Lionel Bender, ed. (forthcoming).

ERNEST T. ABDEL-MASSIH

ON THE SUBJECT OF AFFILIATED LEXICONS:
A STUDY OF MOROCCAN ARABIC AND BERBER

INTRODUCTION

I.1 Berber and Arabic

The three major Berber dialects spoken in Morocco are (a) *Tamazight*, also referred to as *Taberberit*, a dialect of the Middle Atlas and the eastern half of the High Atlas Mountains in central Morocco; (b) *Tachelhit* or *Shilha*, dialect of the High and Anti-Atlas Mountains, and the Sous Valley in southern Morocco; (c) *Tarifit* or *Rifian*, dialect of the Riff Mountains in northern and northeastern Morocco.

The use of the term „Berber” is limited here to the Tamazight dialect in general, as well as to the variety of Tamazight spoken by the tribes of Ayt Ayache and Ayt Seghronchen. Ayt Ayache (A.A. hereafter) is a tribe composed of twenty-two villages located along the Ansegrim River at the foot of the Ayachi Mountain, about thirty kilometers west of the town of Midelt. Ayt Seghronchen (A.S. hereafter) is a much larger tribe than Ayt Ayache, and is divided into three major sub-tribes. Its boundaries extend from about thirty kilometers south of the city of Fez to the limits of the towns of Midelt and Sefrou. Ayt Seghronchen Tamazight is mutually intelligible with that of Ayt Ayache and the neighboring tribes.

The term „Arabic” as used here refers to Moroccan Arabic, the variety of Arabic spoken in Morocco, also referred to as *Colloquial Moroccan Arabic* or *Moroccan Dialect of Arabic*.