

Verbal Inflectional Suffixes in the West Rift group of Southern Cushitic¹

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The aim of this paper is to offer a few suggestions concerning the reconstruction of part of the West Rift inflectional system with respect to suffixes on the verbal stem and the interaction of morphemes from different slots, such as subject markers and aspectual morphemes and to establish a link to the Eastern Cushitic languages.

1. The system of verbal suffixes

In West Rift several grammatical categories are marked by verbal suffixes, and these suffixes are arranged in four functional slots at least. The stem comes first, what follows is a set of morphemes for the subject's person, morphemes for aspect and mood, followed again by suffixes for the subject's number, and the whole complex terminating in morphemes for negation or rhetorical shading, something that could be called modality of the sentence.

(1a)	' ugu	háa	dooslidíibasli ²	Didn't you cultivate?
	'ugu	ha-áa	doosl-id-i-basli-HL	
	2sgm	S.1/2-PAST	cultivate-2sg-PF-NEG-Q ³	
(1b)	' ugu	háa	dooslidiiba	You didn't cultivate.
	'ugu	ha-áa	doosl-id-i-basli-!	
	2sgm	S.1/2-PAST	cultivate-2sg-PF-NEG-DECL	

Example (1a) is from Burunge and illustrates the array of these morphemes: the form **dooslidíibasli** consists of five morphemes, **doosl** being the verbal stem for *cultivate*, **-id** the suffix for 2sg, **-i** the suffix for perfective aspect, **-basli** being the negative suffix, and on the segments there is a falling intonation contour, a succession of high tone plus low tone in the end of the verb, which is optional for the interrogative of yes/no questions.⁴ In (1b) we get the same sentence in the declarative which is distinguished from the interrogative version by a subtractive morpheme (indicated by the exclamation mark !) that reduces the final negative suffix **-basli** by one syllable to **-ba**. We shall return to this point later on.

¹ The present article is part of a project entitled "West Rift Morphology: Synchronic Inventories and Reconstruction". For critical remarks and suggestions I would like to express my gratitude to Maarten Mous and Giorgio Banti.

² A note on the transcription: **hh** is a voiceless pharyngeal fricative **h**, **sl** is a voiceless lateral fricative **ʃ**, **tl** is an ejective affricate with lateral release **tʃ'**, **c** is a palato-alveolar ejective affricate **tʃ'**, **ʕ** is a voiced pharyngeal fricative **ʕ**, **'** is a glottal stop **ʔ**; raised vowel signs **a**, **i**, **u** represent whispered vowels. High tone is **´**, low tone is left unmarked.

³ Abbreviations used in the gloss line: AFF affirmative, DECL declarative, DUR durative, I imperfective aspect, NEG negative marker, PAST past tense, PF perfective aspect, PRO progressive, Q interrogative, RHET.Q rhetorical interrogative.

⁴ The intonation pattern is indeed optional, it may be absent, so that the morphosyntactic opposition of declarative vs. interrogative is upheld by the voice opposition in the final vowels of the finite verb: whispered vowels indicating the declarative, fully voiced ones for the interrogative.

1.1. Person marking

In Southern Cushitic subject marking on the verb extends on two different syntactic categories, to be precise, and comes close to circumfixation. There are suffixes to the verbal stem for the subject's person, and at the same time you get another set of subject indicating morphemes on a preverbal auxiliary complex, known as selector or indicator particle or preverbal clitic cluster, that is a morphosyntactic melting-pot of several morphemes of different origin and various functions. In (1a) and (1b) it is represented by the constituent **háa** which is composed of two morphemes: **-áa** for past tense and **ha** that shows that the subject is a participant, i.e. either first or second person. Now suffix **-id** in the verbal complex makes sure that 2sg is meant and not 1sg. So subject specification is a result of the interaction of morphemes to both sides of the verb: subject markers within the preverbal clitic cluster⁵ on the one hand, and verbal suffixes on the other hand.

The main characteristics of subject marking in Southern Cushitic, with regard to the suffixes, is, first of all, a trait that Tucker (1967: 657) called interlocking pattern, i.e. the homophony of 2sg and 3sgf, and the block pattern as far as number marking is concerned, i.e. the plural forms, at least 2pl and 3pl, are built on the respective singulars by additional suffixation, so these plural forms consist of three morphemes at least.

(2a) Internal reconstruction of the suffix complex on the verbal stem for Burunge:

Person	Aspect/Mood	Number	Negative	Modality
-0, -u 1sg	-a Imperfective	-0 SG	-0 AFF	-! DECL
-t, -id 2sg, 3sgf	-i Perfective	-i PL Imperfective	-basli NEG	-0 (HL) Q
-i, -n! 3sgm	-ee Subjunctive	-ri PL Perfective		
-an, -in, -n! 1pl				

Two or three morphemes in one line represent different allomorphs with their distribution being determined phonologically or morphologically. We have zero and **-u** as exponents for 1sg; **-id** and **-t** for 2sg and 3sgf, **-i** and **n!** for 3sgm, and **-an, -in** or just **-n!** for 1pl⁶. You find these morphemes illustrated in a pattern of the verb **doosl** *to cultivate* in (3a).

The situation in Iraqw is somewhat different because person marking on the verb is done by morphophonological alternations in the quantity and in the tone of the final vowel of the verb stem mainly. (3b) shows that 1sg of **doosl** in Iraqw takes a long vowel plus high tone, 2sg and 3sgf takes a short vowel plus high tone, and 3sgm has a long vowel and non-high tone. With another group of verbs still, vowel quantity variation goes along with lenition of verb final voiced obstruent to sonorants⁷.

In fact these alternations should be analysed as morphophonological traces of personal suffixes that were present once in Pre-Iraqw and which were deleted later on after having

⁵ For details on the preverbal morphemes like **ha** and their complicated morphosyntax cf. Kießling (1994: 133ff.). They are not dealt with here, because they don't present any morphophonological problems with respect to merging with the verbal stem.

⁶ The exclamation mark is an abbreviation for the morphophonological information that the suffix has a certain effect on the verb stem: It reduces long vowel to short ones. For morphophonological and distributional details cf. Kießling (1994: 123ff.).

⁷ Cf. Whiteley (1958: 28-30), Nordbustad (1988: 111-128), Elderkin (1988: 80-82), Mous (1993: 155-161).

triggered assimilations on the verb stem regressively (cf. Elderkin 1988). Now if you take all the evidence together you end up with an internal reconstruction for Iraqw personal suffixes⁸ as listed in table (2b), and with the result that Iraqw - compared to Burunge - must have undergone several morphophonological revolutions here.

(2b) Internal reconstruction of the suffix complex on the verbal stem for Iraqw⁹:

Person	Tense	Number	Negative	Modality	Rhetoric
-0* +H 1sg	-a NON-PAST	-0 SG	-0! AFF	-0! DECL	-ke HL RHET.Q
-t +H 2sg, 3sgf	-i ~ -e PAST	-', +H PL	-ká NEG	-0 HL Q	
-ì* 3sgm				-hee HL NEG.Q	
-áan* 1pl					

(3a) Paradigm of **doosl** to cultivate in Burunge:

	Burunge			
	Imperfective		Perfective	
Affirmative:	Declarative	Interrogative	Declarative	Interrogative
1sg	doosl^a	dóosla	doosl^ì	dóosli
2sg, 3sgf	dooslid^a	dóoslida	dooslid^ì	dóoslidi
3sgm	doosl^ì	dóosliya	doosl^ì	dóosli
1pl	dooslan^a	dóoslana	dooslan^ì	dóoslani
2pl	doosliday	dóoslida'i	dooslidir^ì	dóoslidiri
3pl	doosliyay	dóosliya'i	dooslir^ì	dóosliri
Negative:				
1sg	dooslaaba	doosláabasli	doosliiba	dooslíibasli
2sg, 3sgf	dooslidaaba	dooslidáabasli	dooslidiiba	dooslidíibasli
3sgm	doosliyaaba	doosliyáabasli	doosliiba	dooslíibasli
1pl	dooslanaaba	dooslanáabasli	dooslaniiba	dooslaníibasli
2pl	dooslida'iiba	dooslida'íibasli	dooslidiriiba	dooslidiríibasli
3pl	doosliya'iiba	doosliya'íibasli	doosliriiba	doosliríibasli

⁸ The lengthening effect on vowels in 1sg and 3sgm together with the lenition effect on voiced obstruents is due to the influence of vowel suffixes. And the reducing effect on the vowel in 2sg and 3sgf is due to a consonant suffix. Its original quality as a dental or alveolar stop can be seen from the group of **h**-final stems where **t** surfaces as the exponent of 2sg and 3sgf (cf. Elderkin 1988: 83ff.).

⁹ * indicates lenition of preceding voiced obstruents; ! indicates reducing effect on preceding vowels.

(3b) Paradigm of **doosl** to cultivate in Iraqw:

Iraqw				
	Non-Past		Past	
Affirmative:	Declarative	Interrogative	Declarative	Interrogative
1sg	dóosl	dóosla	dóosl	dóosli
2sg, 3sgf	dósl	dósla	dósl	dósl
3sgm	doosl	dóosli	dóosl	dóosli
1pl	doosláan	dooslána	doosláan	doosláni
2pl	doslá'	doslá'a	doslé'	doslí'i
3pl	doosliyá'	doosliyá'a	doosliyé'	dooslí'i
Negative:				
1sg	dooslaaká	dooslaakáhee	doosliiká	doosliikáhee
2sg, 3sgf	doslaká	doslakáhee	dosliká	doslikáhee
3sgm	doosliiká	doosliikáhee	doosliiká	doosliikáhee
1pl	dooslanaaká	dooslanaakáhee	dooslaniiká	dooslaniikáhee
2pl	dosla'aaká	dosla'aakáhee	dosli'iiká	dosli'iikáhee
3pl	doosli'aaká	doosli'aakáhee	doosli'iiká	doosli'iikáhee

1.2. Number of Subject

In Burunge and Iraqw 1pl, in general, is treated as an additional fourth person and is not subject to Tucker's block pattern. Instead a special suffix, **-an** in Burunge and **-áan** in Iraqw, builds 1pl directly on the stem, 1pl being composed of two morphemes in its form in general, and not of three.

2pl and 3pl, however, are built on the respective singular forms by addition of common plural suffixes, in accordance with Tucker's block pattern. These plural suffixes seem to be aspect sensitive for both Iraqw and Burunge, in fact, if you have a closer look, they contain aspect markers. And if we strip them off those aspectual elements (**a/i**, and **a/e**), we are left with the morphemes shown in table (2a) and (2b) under the heading Number, which is a glottal stop for plural in Iraqw and with the allomorphs **-i** and **-ri** for plural in Burunge, where the allomorphy is conditioned by aspect¹⁰.

1.3. Aspect

In Burunge each finite verb terminates in a vowel that, in most cases, carries an aspectual or modal information. The system operates on the basis of a three-way vowel opposition that is shown in column 2 for aspect and mood in Table (2a) in the handout, with **-a** for the imperfective, **-i** for the perfective and **-ee** for the subjunctive.

¹⁰ The morpheme **-ri** that is observed in Burunge as a generalized marker for 2pl and 3pl restricted to the perfective paradigm, being in complementary distribution with **-i** which is for the imperfective aspect and the subjunctive mood, occurs as a marginal plural morpheme in Iraqw, too. It is highly restricted here as an alternative plural suffix **-ír** which is conditioned by person (3pl only) and by the phonological shape of the verb: it is compatible with Nordbustad's (1988: 121f.) two-tier verbs, with groups 4, 5, 6, 7 of Elderkin (1988: 81f.), and with groups IIIa-e of Mous (1993: 159).

In Iraqw the situation is somewhat different and more complicated. In the simple affirmative declarative there is no way of distinguishing perfective and imperfective aspect. There is no such thing as aspect opposition, because there are no final vowels in finite verbs. But as we leave the affirmative declarative and turn to the negative paradigm, for example, which is characterized by the negative suffix **-ká**, then all of a sudden we find vowels popping up in between this negative marker and the verbal stem that is inflected for person. These vowels are **-a** and **-i** and they go together with preverbal tense marking in Iraqw, **-a** shows up with present and future tense and **-i** shows up in the past tense:

(4a) **dooslaaká**

doosl	-0	-a	-ká
cultivate	-1sg	-NONPAST	-NEG

(4b) **doosliiká**

doosl	-0	-i	-ká
cultivate	-1sg	-PAST	-NEG

Obviously these suffixes **-a** and **-i** are the Iraqw cognates for the aspectual vowels of Burunge. But it seems as if there is no real aspectual function in these vowels in Iraqw any more, they are dependent on the preverbal tense markers, **-i** being an indicator for past, **-a** for the non-past. So we have to conclude that the system of aspect vowels broke down in Iraqw, leaving some relics that are restricted to certain grammatical environments such as the negative or the interrogative. But is it really totally absent from the simple affirmative declarative paradigm?

If you have a close look at the Iraqw forms in 2pl and 3pl there is a similar opposition that marks the crucial tenses past and non-past (that were Pre-Iraqw aspects) on the basis of the phonological opposition of palatal versus non-palatal vowels, namely **a** versus **e**, compare for example **doosliyá'** 3pl non-past and **doosliyé'** 3pl for the past.

Why do we find this strange distribution now? A system of aspectual and modal vowels, as it is found in Burunge, why should it have been lost in Iraqw, or say: why was the aspect-dichotomy neutralized in most of the declarative paradigm in Iraqw? And why did some relics survive in certain recesses of the inflectional system, in paradigms like the interrogative and negative? Why did they just survive in paradigms like these, and why were they deleted elsewhere in the simple affirmative declarative?

2. Peripheral erosion in West Rift

If we try to tackle this question Burunge offers a key to the explanation, because there has been (diachronically) and there still is (synchronically) a peripheral erosion gnawing at the end of the finite verbs, deleting segments and even whole syllables. This process might cause the loss of a whole morpheme in its extreme. In Burunge it is established as a synchronic morphophonological mechanism.

The aspectual morphemes, as we have seen, consist of one vocalic segment only. Nevertheless synchronic erosion in Burunge does not delete them totally. Instead peripheral feature erosion establishes a new set of whispered vowel phonemes. The syntactic opposition of declarative versus interrogative is shifted to the phonological contrast of fully voiced aspectual vowels versus whispered ones in verb final position, as is shown in the minimal pair in (5a-b):

(5a)	tlubay	yáa	tlubiibina	Was it raining?
	tlubay	hi-áa	tlubiibim-n!-a-HL	
	rain	S.3-PAST	rain<DUR><PRO>-3sgm-I-Q	
(5a)	tlubay	yáa	tlubiibin^a	It was raining.
	tlubay	hi-áa	tlubiibim-n!-a-!	
	rain	S.3-PAST	rain<DUR><PRO>-3sgm-I-DECL	

So the interrogative paradigm retains the fully voiced vowels, whereas the declarative applies peripheral erosion and turns them into whispered vowels. Table (3a) shows that this feature erosion in Burunge goes from 1sg straight down to 1pl. Only in 3sgm the aspectual vowel opposition is neutralized by the personal suffix **-i**, but it undergoes feature erosion as well.¹¹

What is most interesting now, is that in 2pl and 3pl it is not the aspectual vowels, but the final number suffix which is affected by peripheral erosion: **-ri** in the perfective aspect becomes **-rⁱ**, and **-i** in the imperfective aspect becomes **-ⁱ** which is further changed to **-y**. Now we can draw the conclusion that peripheral erosion of aspectual vowels is blocked, if they don't occur in the final position of the finite verb, and if different suffixes simply prevent them from being eroded. Thus, the aspectual vowels of Burunge do not undergo whisper-transformation in the declarative when followed by the negative suffix **-basli**, but instead **-basli** is syllable-eroded to **-ba** in the declarative.

Compared to Burunge, Iraqw has taken one step further still: deleting the aspectual vowels in the declarative paradigm on the whole, except for 2pl and 3pl where there was a suffix following. And what emerges is the same pattern as in Burunge: that the retention of the aspectual vowels is due to their position with respect to the word border (open juncture) from where peripheral erosion started. They were retained in non-final position, where there are suffixes following, so they have been saved from peripheral erosion that has deleted them anywhere else in the declarative paradigm.

3. Implications for reconstructing West Rift

To sum up these findings in a diachronic framework now, West Rift must have had a full fledged system of aspectual and modal vowels in complementary distribution, with a three-way distinction as it is found today in Burunge still: with **-i** for the perfective, **-a** for the imperfective, and **-ee** for the subjunctive. In Iraqw the formal distinctions of this system were preserved in some recesses of the grammar only. Even the subjunctive suffix **-ee** is preserved as an archaism¹² in the poetic register of Iraqw.

The factor involved in the degrading of this system is peripheral erosion. In Burunge this type of erosion is grammaticalized as a synchronic mechanism to distinguish the interrogative from the declarative. A similar process may have worked on a diachronic scale in West Rift, too. And this is taken to be the reason why aspectual vowels were deleted in Iraqw where they

¹¹ Quite regularly in Burunge and in Iraqw in 3sgm and in 3pl the personal suffix **-i** overruns the imperfective suffix **-a**. But at least in the interrogative imperfective of Burunge the imperfective **-a** shows up again: **doosliya** *does he cultivate?*

¹² Even the subjunctive suffix ***-ee** is preserved in scattered rudiments in Iraqw. Mous (1993: 162) comments on it as an archaic variant in the subjunctive 1pl **dooslane** *let us cultivate*, a form that is found today in the poetic genre of the **slufay**, a traditional thanksgiving song, only. Besides it shows up in marginal imperative forms: **tlawsé'** *let's go!*, **ti gwangwar'andé'** *roll yourself (pl)!*

occured verb-finally, but why they were retained wherever there was additional suffix material following, e.g. in 2pl and 3pl with the number suffix -' (which seems to be an eroded variant form of the original suffix *-'i that is reflected in the Burunge cognate -'i), and in the negative with the negation suffix -ká. The interrogative may have preserved the vowels as phonological support or vehicle for the interrogative tone pattern HL, so that the tones could settle on two different syllables, which would have been problematic with monosyllabic stems.

Now we end up with a relative chronology of the aspect/mood marking system in West Rift in roughly three stages:

1. In the first stage we have a fully-fledged system of suffix-vowels -i for perfective aspect, -a for imperfective aspect, and -ee for subjunctive mood;
2. In a second step the whole system of aspectual and modal vowels becomes dependent on other grammatical categories such as the declarative-interrogative opposition. This stage is reached in Burunge (and probably in Alagwa too) where the subtractive declarative morpheme reduces aspectual vowels to whispered vowels in terminal position.
3. Finally the loss of whispered vowels leads to the collapse of the aspectual and modal vowel system, with traces being left in grammatical recesses and corners where the vowels were screened off from peripheral erosion by succeeding morphemes. Iraqw and Gorwaa have taken this step and have reinterpreted these relics of aspect vowels as tense markers.

4. Link to Eastern Cushitic

If we now turn onto Cushitic in general, we find a neat isomorph that connects West Rift to Eastern Cushitic: the well-known vowels for aspect that are described as constituting a tense distinction of past versus non-past in some languages (Hetzron 1980: 40ff., 72ff.; Zaborski 1975: 151ff., 164; Sasse 1980: 207). But with the SJN we find a West Rift innovation in -ee where Eastern Cushitic languages have -o ~ -u:

	West Rift	Eastern Cushitic
Imperfective	*-a	*-a
Perfective	*-i	*-i ~ *-e
Subjunctive	*-ee ¹³	*-u ~ *-o

5. Summary

The main point of this paper was to illustrate the mechanism of peripheral erosion in West Rift and to show how it gnaws at the end of finite verbs, reducing and deleting morphological material in verb final position. In Burunge it is grammaticalised on a synchronic level as a morphosyntactic mechanism to distinguish the interrogative from the declarative. In Iraqw the

¹³ I am grateful for Giorgio Banti's remark that in the jussive/optative paradigm of Somali in 2pl and 3pl there is an elsewhere unaccounted formative -ee (cf. Saeed 1987: 87f.) which could be cognate with the West Rift subjunctive suffix -ee. Another Somali parallel could be found in the potential formative -ee for all persons (cf. Saeed 1987: 88f.).

same mechanism is responsible for the breakdown of the original West Rift vowel-based aspect system by deletion of the aspect vowel suffixes, with their sporadic retention in recesses of the grammar where they were screened off from erosion by additional suffixes following. The factor of peripheral erosion must be taken into account if we try to reconstruct the inflectional system of West Rift and Southern Cushitic. Unfortunately, Iraqw, by far the best known Southern Cushitic language, proves to be very innovative in this respect. Thus, in order to work out reliable reconstructions for West Rift and Southern Cushitic we must turn onto more archaic West Rift languages such as Burunge and Alagwa which are much more on the conservative side.

6. References

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