# Grammaticization and Paradigm Formation in Afroasiatic: Verbal Negation in Cushitic

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[This article is a survey of various solutions elaborated by individual Cushitic languages and language-family sub-branches to the problem of forming negative tense paradigms. In the course of a survey of verbal negation in Cushitic, I point out how the path of radical simplification of negated verb structure, while always possible, was generally avoided, and attempt to show how an inherited affirmative-negative assymetry maintained itself in the context of a sweeping process of grammaticization and paradigm formation which resulted in the partial or total replacement of verbal paradigms based on prefixed (or more accurately circumfixed) subject markers by verbal paradigms based exclusively on suffixing.]

**Keywords**: Cushitic, negative paradigms, grammaticalization, suffixing.

In the context of Afroasiatic grammaticization, this investigation is concerned with the paradigmatization, or re-paradigmatization in Cushitic of: (1) person-number-gender (henceforth PNG) and tense-aspect-mood (henceforth TAM) on the one hand, and (2) polarity (i.e. the morphosyntactic expression of affirmative and negative) on the other[1].

## 1. Paradigm formation and negative in Cushitic and Afroasiatic

The starting point and background of this investigation is what is often taken as a classic case of grammaticalization in Cushitic, namely the process outlined in (1):

1. Appendix 1 gives list of the language groups and languages used in this survey. The data itself (cf. sources listed in the bibliography) have been collected in the context of a currently ongoing Cushitic-Omotic Morphological Archive project. This project, which I hope to report on at some future point, is in a sense a digital updating of the pioneering and indispensable print survey of Cushitic verb morphology compiled in Zaborski 1975.

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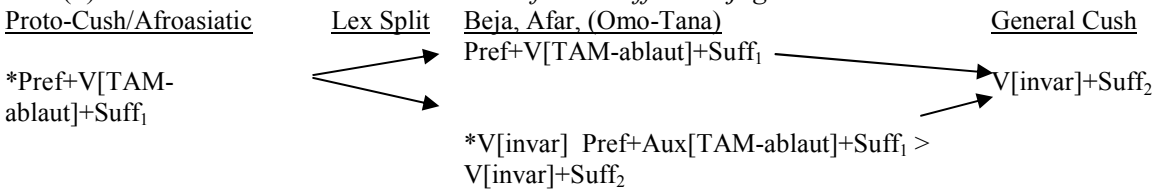
(1) *Grammaticalization in Cushitic: Prefix an Suffix Conjugations*




where: Pref marks PG, $Suff_1$ marks NG, $Suff_2$ marks PNG+TAM

This diagrams the consensus view, often termed the "Praetorius hypothesis" (but, as Banti 2001 has pointed out, actually first observed by Reinisch), on how the Cushitic suffixing conjugation arose out of the Afroasiatic prefixing-ablaut (with secondary suffixation for number and gender) conjugation system by the familiar succession of processes of periphrasis by auxiliation, then cliticization, and finally morphologization or paradigmatization. Two factors distinguish Cushitic from a partially comparable development of suffix conjugations in Semitic. One is that the cliticized element would have been a fully conjugated auxiliary (BE or the like), rather than a pronominal. An intuitively striking illustration of this is available in the contrast of the Beja prefixing and suffixing conjugations. Compare in (2) the PNG affixes, highlighted in bold, in the prefix and suffix conjugation present and past tense.

(2) *Prefix and Suffix Conjugation in Beja*

| | | | | prefix conjugation | suffix conjugation |
|---|---|---|---|---|---|
| pres | sg | 1 | | *?a-dangì* | *tam-á-ní* |
| | | 2 | m | *dangii- `a* | *tam-tí-nii-a* |
| | | | f | *dangii- `* | *tam-tí-nii* |
| | | 3 | m | *dangì* | *tam-íi-ní* |
| | | | f | *dangì* | *tam-tí-ní* |
| | pl | 1 | | *ni-dèeg* | *tám-n-ay* |
| | | 2 | | *ti-deeg- `na* | *tám-t-ee-na* |
| | | 3 | | *?i-deeg- `na* | *tám-ee-n* |
| past | sg | 1 | | *?a-dgì* | *tám-a-n* |
| | | 2 | m | *ti-dgii- `a* | *tám-t-aa* |
| | | | f | *ti-dgii- `* | *tám-t-aa-y* |
| | | 3 | m | *?i-dgì* | *tám-y-a* |
| | | | f | *ti-dgì* | *tám-t-a* |
| | pl | 1 | | *ni-dgì* | *tám-n-a* |
| | | 2 | | *ti-dgii- `na* | *tám-t-aa-na* |
| | | 3 | | *?i-dgiil- `na* | *tám-y-aa-n* |

The other distinguishing factor is that the principle of spread was not functional differentiation (new perfective/past out of old stative, as in Semitic), but lexical diffusion, whereby an individual verbal lexeme conjugates either exclusively prefixally or exclusively suffixally, with the leading edge of evolution favoring suffixation – resulting in a present state of affairs in which the prefixing conjugation holds its own in Beja and Saho-Afar (perhaps one third of the verbal vocabulary), exists perhaps marginally in one

variety of Agaw (Awngi), is reduced to 4 to 12 lexical items in the languages of the Omo-Tana group (but actually none in Bayso and in some dialects of Somali), and disappears completely in the rest of Cushitic.[2]

A partial view of the end-point can be seen in the 2ps main past, present, and subordinate present of Oromo or in the past, present, and purposive of Afar in (cf. fuller paradigms in (9) and (10)).

(3) *2 sg suffix conjugation tenses in Oromo. (adeem- 'go') and Afar (fak- 'open')*

| | Oromo | Afar |
|---|---|---|
| Past | adeem-te | Fak-teh |
| Present | adeem-ta | Fak-tah |
| subordinate/purposive | adeem-tu | Fàk-tuh |

where person is marked by a single consonant (here -t- for 2 sg) and TAM is marked by a simple vowel alternation in the suffix.

The larger context of this investigation is the study of the further development of compound tenses and reduction of complement-governing verbs to auxiliaries, with particular attention to the way in which negated auxiliaries, or even negative polarity verbal lexical items as such, come to fill the negation slots in a number of verbal paradigms.[3] For this investigation auxiliary constructions are left aside, given the difficulty of distinguishing true auxiliaries from verb-complement constructions in languages with at best only partially explored syntaxes. In fact, as we will see, simple negation itself is already far from straightforward in this area of Afroasiatic. As opposed to the simple and sweeping transformation involving the categories of PNG and TAM for affirmative paradigm formation outlined in (1), the integration of negation into thse transformed paradigm has not been that simple.

As an Afroasiatic background I sould point out that Cushitic negative-affirmative morphological asymmetry is not unique within the superfamily. The asymmetry exists, if to a limited extent, in Semitic (for example the Arabic opposition *qatala ~ lam yaqtul*), and in Egyptian one could point out the marked complexity of the rules governing clausal and verbal negation in Egyptian (surveyed by Loprieno 1992). More to the point is the well-known affirmative-negative assymetry in Berber verbal morphology, whereby each Berber verb is conjugated according to five or six independent principal parts, one or more of which is usually negative, and whose diverse forms underly dozens of inflectional classes in each Berber language, and where there is a complex distribution of positive and negative stems in the formation of negative tenses. (4) outlines the situation in Figuig Berber, as described by Kossmann (2007), with the lexeme 'steal' in (4a) illustrating one of the many different patterns of stem formation, and the distribution of stems amongst tenses in (4b) showing: 1) tense neutralization in the negative (no negative narrative tense), and 2) complete contrast of stems in the negative and affirmative – even though an affirmative stem is used in at least one negative tense (imperative), in no case does the negative tense use the same stem as the affirmative.

2. Note that Banti 2001 disputes this analysis and suggests that Cushitic suffix conjugation comes from an older Afroasiatic suffix system (a solution, incidentally sometimes suggested for Semitic). Even if this were the case, however, it only puts off to a different level the question of its origin, and there remain the problems of the lexical diffusion of this differentiation , and the integration into it of the negative conjugations.

3. This is a process especially prominent in Omotic, but occurs also in Beja, cf. Hamid Ahmed & Vanhove 2002.

(4a) *Berber (Figuig) Stems*

| Stems | 'steal' |
|---|---|
| *1. aor* | ašər |
| *2. pret* | ušər |
| *3. intensAor* | ttašər |
| *4. negPret* | Ušir |
| *5. negIntensiveAor* | ttišər |

(4b) *Affirmative-Negative Stem-Tense Correlations in Berber (Figuig)*

| **Tense** | **Affirmative Stem** | **Negative Stem** |
|---|---|---|
| imperative | *aor* | ul+*intensAor* |
| narrative | *aor* | --- |
| preterite | *pret* | ul+*negPret* |
| 'future' | ad+*aor* | ul+*negIntensAor* |
| habitative | *intensAor* | ul+*negIntensAor* |

This state of affairs which can already be compared with that of the seven Beja verb principal parts, illustrated for two classes (CCC *dbl* 'collect' and CCY *dgy* 'hear') , and their role in tense formation illustrated in (6a) and (6b) below.

What follows is a survey of how language groups and individual languages within Cushitic dealt with a problem which arises on the morphological periphery of the sweeping grammaticalization and paradigm formation diagramed in (1) – a survey of various solutions to the problem of forming negative tense paradigms in Cushitic. The total amount of data in itself is overwhelming, to say the least, and deserves monographic treatment. What is presented here are basically row and column extracts from larger paradigms, where in each paradigm extract we are focusing on a single element or dimension, the negation marker, which is always embedded in a more complex structure determined by the other dimensions of the paradigm. It is thus a kind of Cook's Tour of the data, will simply attempt to touch on enough data to convey a sense of the problem and indicate some of the parameters of an eventual explanation/clarification.

Fortunately a first step has been taken in Appleyard's 1984 overview of Agaw, summarized in (7). The remainder of the article (paradigms excerpts (5)-(6) and (8)-(16)) briefly summarizes the principal data from some of the better attested languages in the family. A final overview in (17) precedes a very tentative synthesis.

## 2. A SURVEY OF VERBAL NEGATION IN CUSHITIC

### 2.1 VERBAL NEGATION IN BEJA[4]

(5) *shows some of the principal affirmative and negative tenses of Beja:*

4. The Beja variety cited here is that described by R. Hudson 1976, as conveniently presented by Appleyard 2007.

(5) *Negation in Beja* (d-g-y ‘hear’, d-b-l ‘collect’, tam- ‘eat’)

| tense | | p | g | aff | Neg | | Aff |
|---|---|---|---|---|---|---|---|
| | | | | | Main | aux (-k-y- ‘be’) | |
| Pres | sg | 1 | | *?a-dangì* | *k-aà-dgì* | | *tam-á-ní* |
| | | 2 | m | *dangii- `a* | *kí-t-dgii- `a* | | *tam-tí-nii-a* |
| | | | f | *dangii- `* | *kí-t-dgii- `* | | *tam-tí-nii* |
| | | 3 | m | *dangì* | *k-iì-dgì* | | *tam-íi-ní* |
| | | | f | *dangì* | *kí-t-dgì* | | *tam-tí-ní* |
| | pl | 1 | | *ni-dèeg* | *kí-n-dgì* | | *tám-n-ay* |
| | | 2 | | *ti-deeg- `na* | *kí-t-dgii- `na* | | *tám-t-ee-na* |
| | | 3 | | *?i-deeg- `na* | *k-iì-dgii- `na* | | *tám-ee-n* |
| Past | sg | 1 | | *?a-dgì* | *digy-aa-`b/t* | *Kaàkè* | *tám-a-n* |
| | | 2 | m | *ti-dgii- `a* | *digy-aa-`b/t* | *kíttà [ < kí-t-kaa-` a]* | *tám-t-aa* |
| | | | f | *ti-dgii- `* | *digy-aa-`b/t* | *kíttaày [ < kí-t-kaa- `i]* | *tám-t-aa-y* |
| | | 3 | m | *?i-dgì* | *digy-aa-`b/t* | *Kiìkè* | *tám-y-a* |
| | | | f | *ti-dgì* | *digy-aa-`b/t* | *kíttè [ < kí-t-kè]* | *tám-t-a* |
| | pl | 1 | | *ni-dgì* | *digy-aa-`b/t* | *Kínkè* | *tám-n-a* |
| | | 2 | | *ti-dgii- `na* | *digy-aa-`b/t* | *kítteèna [<kí-t-kee-`na]* | *tám-t-aa-na* |
| | | 3 | | *?i-dgiil- `na* | *digy-aa-`b/t* | *Kiìkeèn* | *tám-y-aa-n* |
| Aor | sg | 1 | | *?a-dìig, ?i-dìig* | | | *tam-ì* |
| | | 2 | m | *ti-diig- `a* | | | *tam-tii- `a* |
| | | | f | *ti-diig- `i* | | | *tam-tii- `* |
| | | 3 | m | *?i-dìig* | | | *tam-ì* |
| | | | f | *ti-dìig* | | | *tam-tì* |
| | pl | 1 | | *ni-dìig* | | | *tam-nì* |
| | | 2 | | *ti-diig- `na* | | | *tam-tiìna* |
| | | 3 | | *?i-diig- `na* | | | *tam-iìn* |
| Juss | sg | 1 | | *bá-?a-dàag* | *b-aa-dagì* | | *bá-tam-ì* |
| | | 2 | m | *bá-ti-daag- `a* | *bi-t-dagii- `a* | | *bá-tam-tii- `a* |
| | | | f | *bá-ti-daag- `i* | *bi-t-dagii- `* | | *bà-tam-tii- `* |
| | | 3 | m | *bá-?i-dàag* | *b-ii-dagì* | | *bá-tam-ì* |
| | | | f | *bá-ti-dàag* | *bi-t-dagì* | | *bá-tam-tì* |
| | pl | 1 | | *bá-ni-dàag* | *bi-n-dagì* | | *bá-tam-nì* |
| | | 2 | | *bá-ti-daag- `na* | *bi-t-dagii- `na* | | *bá-tam-tiìna* |
| | | 3 | | *bá-?i-daag- `na* | *b-ii-dagii- `na* | | *bá-tam-iìn* |
| imptv | sg | 2 | m | *digii- `a* | *b-áa-dagii- `a* | | *tam-àa* |
| | | | f | *digii- `* | *b-íi-dagii- `* | | *tam-ìi* |
| | pl | 2 | | *digii- `na* | *b-áa-dagii- `na* | | *tam-aa- `na* |
| ptcpl | | | | | *baa-dagì* | | |
| | Pres | | | *digy-èe* | | | *tam-èe* |
| | Past | | | *digy-aá* | | | *tam-aá* |
| | Bound | | | digii-tií | | | tam-eetì |

In a not-unexpected distinction, there are two negative markers, prefix *k-* for the indicative and *b-* for the imperative-jussive. This paradigm affords one more instance of the well-known Afroasiatic polarity switch: the negative present is formed by prefixing *k-* to the *affirmative* past, and the negative past is

formed by putting the main verb in the accusative past participle form, and adding the *k-* prefixed form of the defective auxiliary verb *-k-y-* 'be'..

Neutralization of polarity is common in Cushitic, that is, we find affirmative tenses which have no negative counterpart (especially frequent in this respect are future tenses, and perfective, where these are systematically distinguished from an imperfective aspect); in Beja the mainly-past tense referred to here as "aorist" falls into this category. Note that the jussive, imperative, and participle forms, each of which has a distinct affirmative stem, are all formed in the negative with the distinct negative stem (and the negative prefix *b-*). In the prefix conjugation (i.e., the verbal lexicons that are conjugated according to the inherited Afroasiatic prefix-ablaut inflection) the end result of this distribution of stems among tense forms is shown in (6a/b). (6a) shows the seven distinct stems of the prefix conjugation, identified by conventional names, and illustrated for two root classes, CCC (*dbl* 'collect') and CCY (*dgy* 'hear'). (6b) shows the distribution of these stems for some of the principal tenses. Note that although affirmative stems are used in the formation of some negative tenses, for no tense do the affirmative and negative use the same stem – an affirmative-negative assymetry even more marked than that of Berber in (4a/b).

(6a) *Beja Prefix Conjugation Stems*

| **Stems** | **CCC** | **CCY** |
|---|---|---|
| *1. presSg* | -danbiil- | -dangii- |
| *2. presPl* | -ee-dbil- | -deeg- |
| *3. past* | -dbil- | -dgii- |
| *4. aor* | -ii-dbil- | -diig- |
| *5. modal* | -ii-dbil- | -daag- |
| *6. ptcpl* | dibl- | Digy- |
| *7. neg* | -dabiil- | -dagii- |

(6b) *Beja Stem-Tense Correlations*

| **Tense** | **Affirmative Stem** | **Negative Stem** |
|---|---|---|
| present | *presSg/Pl* | k(í)+*past* |
| past | *Past* | *ptcpl*+aa k(i)+-k-y-[tns] |
| aorist | *Aor* | -- |
| imperative | *Past* | Baa/ii+*neg* |
| jussive | bá+*modal* | b+*neg* |
| participle | *Ptcpl* | Baa+*neg* |

Instructive also is a comparison of prefix and suffix conjugation forms in (5), where the affirmative-negative assymetry observed in the prefix conjugation is maintained: the suffix conjugation negative present is formed by prefixing *ká-* to the present tense form, and the negative past is formed periphrastically. Note that the affirmative jussive is built on the aorist stem, since the aorist and modal stems are homophonous everywhere but in the prefixing final-weak root classes (as in the final-weak dgy illustrated in (4) – cf. in (5) the homophony of the aorist and modal in the prefixing CCC root *dbl*). This I take to be already an indication that the basic structure of the negative tenses was established in a prefixing conjugation context, and carried over secondarily to the suffix conjugation. Even more striking is the fact that in the jussive-imperative the PG distinctions are carried by prefixes (along with the GN suffixes) instead of suffixes.

## 2.2 VERBAL NEGATION IN AGAW

As I have mentioned (7) gives an overview, following Appleyard 1984, of the considerably less transparent situation in Agaw. In the first place there are three negative markers distributed variously in the four principal varieties of Agaw: *l-* (an indicative main clause negative in all four), *t-* (not present in Bilin, an imperative marker in Kemant-Khamtanga, and an imperative, subjunctive and imperfective main marker in Awngi), *g-* (a relative and subordinate clause negator in Bilin, Kemant, and, absent in Awngi [but cf. below]). While in Beja all negative tenses make the same PNG distinctions as the corresponding affirmatives, Agaw, and most Cushitic languages from here on, display a pattern of neutralization of some or all PNG distinctions in some, but usually not all, negative tenses. In Bilin l- negatives PG distinctions are neutralized in the main present singular, but not in the plural; while PNG distinctions are maintained in the main past. Awngi follows a similar pattern, but these distinctions are neutralized in the main present singular and 2-3 plural, and kept only in the 1 pl of that tense. This Awngi neutralization pattern shows up in the *t-* negatives, with the additional refinement that in the imperfective, but not subunctive, the person marker comes before the negative *-ti-*, but the number marker comes after.

The most striking structural facet of the Agaw negative occurs in the *g-* neg, where the negative *g-* marker always precedes the PNG marker. The lower right-hand cell of (7) gives the paradigm of the Bilin Subject-Relative by way of illustration, where you can clearly see a reflex of the Afroasiatic *ʔ-t-y-t-n-t(Vn)-y* personal prefix pattern (with merger of 1sg *ʔ* and 3sg/pl *y*, and 3fsg and 2sg *t* > *r*)[5].

(7) *Negation Patterns in Agaw (after Appleyard 1984).*

| Neg | Lang | Pattern | Tenses | Exx. |
|---|---|---|---|---|
| L | Bilin | V[sg]+Ø+Tns+lí/lá | Main Pres | 1-3 gäb+ Ø+ä+la |
| | | V[pl]+PN+Tns+lí/lá | | 1-2 gäb+n+ä+li, gäb+dän+(l)i |
| | | V+PN+Tns+lí/lá | Main Past | 3mf, 1p gäblá, gäbəlla, gäbənní |
| | Kem/Kham | V+PN+Tns+li/la | Main Pres,Past | 3mf, 1p wasäla, wasyäla, wasnäli |
| | Awngi | V[sg, pl2/3] +Ø+Tns+la | Main Pres | 1-3s, 2-3p desála |
| | | V[pl,1]+PN+Tns+la | | 1p desnála |
| | | V+PN+Tns+la>ya | Main Past, RelSubj/Comp Perf, Protasis Perf, Apodosis Indef | 3mf,1p desaya, destaya, desnaya |

5. I believe Appleyard is entirely correct in surmising that this structure in one way or another reflects a encliticization and reduction of a negative (*g-/k-*) prefixed auxiliary on to a participial verb, as we say in (4) in Beja. This analysis becomes all the more convincing when we consider, as pointed out by Appleyard, that although the *g-* negative does not exist in Awngi, that language does have a negative copula *ga-*, with optional redundant negegative *ti* (and note also the affirmative copula gaga in Kemant, which seems to consist of a negated negative copula!).

| | | | | |
|---|---|---|---|---|
| T | Bilin | N.A. | | |
| | Kem/Kham | V+t(i)+N+a | Imprtv | was+t+Ø+a, was+t+(ə)n+a |
| | Awngi | V[sg, pl2/3]+Ø+Tns+tí+N+Sub | Subjunctive | 1-3s des+Ø+á+tí+Ø+ta<br>2-3p des+Ø+á+tí+n+ta |
| | | V[pl 1]+P+Tne+tí+Ø+Sub | | 1p des+n+á+tí+Ø+ta |
| | | V[sg, pl 2-3]+Ø+Tns+tí+N+Sub | Imperf Def, RelSubj/Comp Imperf, Terminative, Apodosis Def | 1-3s des+Ø+á+tí+Ø+Rel<br>2-3p des+Ø+á+tí+n+Rel |
| | | V[pl 1]+P+Tns+tí+N+Sub | | 1p des+n+á+tí+N+Rel |
| | | V+PN+tí+Sub | Imprtv, Protasis Imperf | 1-2s des |
| G | Bilin | V+Tns+g+PN+Sub | RelSubj past, pres; 10 pdgms of subordinate verbs | (Bilin Subject Relative)<br>1s gab+ä+g+Ø+a+Rel<br>2s gab+ä+g+r+a+Rel<br>3m gab+ä+g+ Ø +a+Rel<br>3f gab+ä+g+r+a+Rel<br>1p gab+ä+g+n+a+Rel<br>2p gab+ä+g+dän+a+Rel<br>3p gab+ä+g+ Ø +a+Rel |
| | Kem-Quara | | RelSubj | |
| | Kem/Kham | | RelSubj. Main | |
| | Awngi | N.A. | | |

(gäb- ‘refuse’, was- ‘hear’, des- ‘study’. NB: Awngi negative cop: gawí~gatíwí ‘he is not’; Kemant affirmative cop: gaga ‘he is’, gagənir ‘we are’)

### 2.3 VERBAL NEGATION IN HIGHLAND EAST CUSHITIC (HEC)

The details of HEC (8) are less intricate than Agaw:

(8) *Negation in Highland East Cushitic*

| Language | Main | Sub | Affirmative Exx. | Negative Exx. |
|---|---|---|---|---|
| Burji | V# > ay | | waar-enda ‘you told’ | waar-enday? |
| Gedeo | Infix ba/bo | | ha?w-aanno ‘I drink’<br>ha?w-tatto ‘you drink’ | ha?w-a+bo+?no<br>ha?wi-ta+bo+tto |
| Hadiyya | -yyo | -b | ga?m-ummo ‘I bit’<br>(iitt-ommo ‘I like’) | ga?m-ummo-yyo<br>iitt-ombe (negative Rel) |
| Alaaba | -ba | -ti<br>-ka | korj-inóom ‘I jump’<br>?orróo?(i) ‘run!’<br>?orroo?ún(i) ‘may he run’ | korj-i-nóom-ba<br>?orroottóot(i)<br>?orroo?unká |
| Sidaama | di- | -kki | kul-oomo ‘I told’ | di-kul-oomo<br>kul-oomo-kki |

There is a full inventory of negative formatives: *y-* in Burji and Hadiyya main, a *b-* in Gedeo (Darasa), Hadiyya subordinate and Alaaba (Kembata) main, a *k-* in modal and subordinate Alaaba and Sidaama, and finally an imperative *-t* in Alaaba.

But there are still a couple of structural surprises. One is that in Gedeo the negative suffix is infixed into the middle of the typically “heavy” (i.e. extended or augmented) bisyllabic HEC PNG marker, arising undoubtedly from the fusion of an earlier general-Cushitic monosyllabic PNG+TAM (compare Oromo and Afar suffixes in (9) and (10)) with a further agreement-tense-mood formative complex (as has been

pointed out by Hetzron, end-products of a similar extension process can be seen in parts of the Agaw suffix system). The natural explanation for this structure is that the negative suffix has remained where it was before the suffix extension, instead of being re-suffixed (analogously) to the extended suffix. The other structural surprise is the appearance in Sidama of the *di-* negative formative, which apparently can attach to any major consitutent, in main clause negations exclusively in word-initial position, where it is simply prefixed to the corresponding affirmative form. Although the subordinating negative formative *-k-* is suffixed, it also is simply attached to the corresponding affirmative form. There is thus in Sidaama a complete leveling of negative morphology, which is reduced to the simple affixation to the verb of a negative morpheme.

### 2.4 VERBAL NEGATION IN OROMO

Oromo (9), the widest spread, and in many senses most morphologically leveled of the Cushitic languages, maintains a typically Cushitic profile, but with a thorough-going regularization. The simplicity of the affirmative PNG+TAM suffix system has already been pointed out. The present tense main clause negative is simply identical to the subordinate clause present – effectively making the main-clause negative into a subordinate clause (leaving open interesting possibilities, which I will not explore here, of an abstract syntactic-semantic interpretation of the negative clause as complement of an abstract, "higher" negative verb.) For the rest there is a sweepingly simple neutralization of PNG marking in main clause past and all subordinate clause negatives. The *n-* formative of this neutralized form appears also in the negative imperative.

(9) *Negation in Oromo.* (adeem- 'go')

| clause | tense | PN | Aff | Neg |
|---|---|---|---|---|
| Main | pres | 1sg | Adeem-a | (h)in-adeem-u |
| | | 2sg | Adeem-ta | (h)in-adeem-tu |
| | past | 1sg | Adeem-e | (h)in-adeem-ne |
| | | 2sg | Adeem-te | |
| Sub | pres | 1sg | Adeem-u | |
| | | 2sg | Adeem-tu | |
| | past | 1sg | Adeem-e | |
| | | 2sg | Adeem-te | |
| | imprtv | sg | Adeem-i | adeem-in-i |
| | | pl | Adeem-aa | adeem-in-aa |

### 2.5 VERBAL NEGATION IN AFAR

Afar (10), has a genuinely complex tense system, with multiple tense, aspect, and mood distinctions carried by an extensive system of auxiliaries, clitics, and particles. Nevertheless negation fits into this complex system in a relatively straightforward manner, with regular and predictable correspondences between affirmative and negative forms. The general negative marker is ma (as in Omo-Tana), with a suffix conjugation negative polarity auxiliary *way-* in the jussive, taking the affirmative infinitive as complement. In the negative past we find a typical negative-prefixed form with an additional suffix *-in*, as in Oromo. However instead of the complete PNG neutralization we see in Oromo and elsewhere, there is cliticized (with *n+l>nn*) a suffix-conjugated "special" verb leh-. There is also a similar construction in the affirmative 'future', which likewise consists, for both prefixing and suffixing conjugation, of an infinitive

complement with encliticized *leh-*. Note also the neutralization of the negative in this tense: there is no special negative form corresponding to the future, which is suppleted in the standard analysis by the negative present.

(10) *Afar Negation* (2ps -duur- 'return', fak- 'open')

| Tense | Pref Conj | | Suff Conj | |
|---|---|---|---|---|
| | Aff | Neg | Aff | Neg |
| Perf | tuduureh | maàduurinnito | fakteh | màfakinnito |
| Pres | taduureh | màtaduura | faktah | màfakta |
| Fut | aduurè-lito | | fakè-lito | |
| Imprtv | uduur | maàduurin | fàk | màfakin |
| | uduùra | maàduurina | fàka | màfakina |
| Juss | taduùray | aduurè wàytay | fàktay | fakè wàytay |
| Purp | taduùruh | aduurè wàytu(h) | fàktuh | fakè wàytu(h) |

## 2.6 VERBAL NEGATION IN THE OMO-TANA LANGUAGES

Omo-Tana (11) shows a number of features already seen either in Oromo or Afar. The general negative formative is a prefixed, or pre-positioned *m(V)* (*haab-* in Boni present). The main clause past tense (and Rendile past and present subordinate) is generally a PNG-neutralized *n*-suffixed form (the final *-n* is missing in Arbore and Elmolo, which maintain a generalized *y-* prefix in the prefix-conjugation verbs). Two Omo-Tana outliers, Dhaasanac at the western periphery, and Bayso, surrounded by HEC at the north-western periphery show deviant features. In Dhaasanac there are only two conjugated person forms: A – forms with initial V desinences in Cushitic suffix conjugations (1sg, 3msg, 3pl); B – forms with Cushitic suffix conjugation initial C (2sg, 3fsg, 1pl, 2pl)[6]. Prefix conjugation verbs align with suffix conjugation and simply prefix *y-* to A-forms and t->c- to B-forms. In the negative the usual Omo-Tana negative past pattern, PNG neutralized ma-prefixed and n-suffixed is extended to the present, yielding a single form for all persons of both tenses in the suffix conjugation. Unexpectedly however prefix conjugation verbs maintain a y-pre/infixed A form versus a c-pre/infixed B form.

(11) *Negation in the Omo-Tana Languages*

| | | Pref Conj | | Suff Conj | |
|---|---|---|---|---|---|
| Lang | Tense | Aff | Neg | Aff | Neg |
| Somali | past | yimi(d) | ma imán | sugay | ma súgéyn |
| | | timi(d) | | sugtay | Súgéyn |
| | pres | yimaaddaa | ma yimaaddó | sugaa | ma sugó |
| | | timaaddaa | ma timaaddó | sugtaa | ma sugtó |
| Boni | past | wə́-j-igis | mí-'igaay-ne | wá-kor-ə | mə́-kor-ne |
| | | wə́-t-igis | | wá-kor-tə | |
| | pres | wə́-j-igaas-a | hááb-j-igaas | wá-kor-a | hááb-kor-ə |
| | | wə́-t-igaas-a | hááb-t-igaas | wá-kor-ta | hááb-kor-tə |

6. Suffix conjugation verbs show simply a base stem form, while prefix conjugation verbs showing a stem form with final consonant mutations arising from what were originally C+n/t clusters, plus vowel changes arising from closed syllable.

| | | | | | |
|---|---|---|---|---|---|
| Rendille | pastM | Yimiy | má imaatan | fure | má furin |
| | | Timiy | | furte | |
| | presM | Yamiit | má yamiit | fura | má furo |
| | | Tamiit | má tamiit | furta | má furto |
| | pastS | Yimiy | má imaatan | fure | má furin |
| | | Timiy | | furte | |
| | presS | Yamiit | | furo | |
| | | Tamiit | | furto | |
| Elmolo | past | in'í y- ekis | má y'- ékis-i | in'í ap -e | m'á áp -i |
| | | in'í t- ekis | | in'í ap -te | |
| | pres | í y- 'ékas –a | má y'- ákas | é 'áp –a | m'á áp -o |
| | | í t- 'ékas –a | má t'- ákas | é 'áp -ta | m'á áp -to |
| Arbore | past | yeɲbite | ma yéɲḍétí | rafe | Maráfi |
| | | teɲbite | | rafte | |
| | pres | yéɲḍet[e] | ma yéɲḍeto | ráfa | ma ráfo |
| | | téɲḍet[e] | ma téɲḍeto | ráft | ma ráfto |
| Dhaasan | past | Yes | mayésiŋ | *fuori* | *mafúoriŋ* |
| | | Ces | macésiŋ | *fuoδδi* | |
| | pres | Yegese | máyegesiŋ | *fooro* | |
| | | Cegese | mácegesiŋ | *fooδδo* | |
| Bayso | past | | | dubé | lákko dubé |
| | | | | dubté | lákko dubté |
| | pres | | | dubá | lákko dubá |
| | | | | dubtá | lákko dubtá |

Som: yimi(d) 'come'
Sug- 'wait for'
Boni: igis- 'kill'
kor- 'climb'
Ren: yimiy- 'come'
fur- 'untie'
Elm: ekis- 'kill'
ap- 'have'
Arb: ʔinbit- 'tread on'
raf- 'sleep'
Dhas: eges- 'kill'
fuor- 'take out animals'
Bay: dub- ''

The other outlier, Bayso, on the contrary, in addition to having lost the prefix conjugation inflection class, has also completely regularized its negative verb morphology (like its HEC neighbor, Sidaama), with a preposed invariant negative particle *lákko* (perhaps composed of the *l-* and *k-* formatives we have already seen?).

## 2.7 VERBAL NEGATION IN PERIPHERAL EAST CUSHITIC: TSAMAKKO, YAAKU, DAHALO[7]

Tsamakko (12) has modified the affirmative PNG markers, but forms the corresponding negative forms via simple affixation of *-kka* to the affirmative , *-u* in the jussive, with negative preposed innu. Note the unusual negative future, which is formed by *-kka* suffixation to a subordinate future form not shown here.

(12) *Negation in Tsamakko* (ʕúg- 'drink')

| Tense | PNG | Aff | Neg |
|---|---|---|---|
| Aor | 3m | ʕúg-a | ʕúgg-á-kka |
| | 3f | ʕúg-ay | ʕúgg-á-kka |
| Imperf | 3m | ʕúg-ánki | ʕúgg-ánkí-kka |
| | 3f | ʕúg-í | ʕúg-í-kka |
| | 1p | ʕúg-dí | ʕúg-dí-kka |
| Fut | 3m | ʕúg-na | ʕug-ní-kka |
| | 3f | ʕúg-nay | ʕug-íntí-kka |
| Juss | 3m | ʕug-á | (ʔínnu) ʕúg-ú |
| | 3f | ʕug-ítá | (ʔínnu) ʕúg-ú |
| | 1p | ʕug-ná | (ʔínnu) ʕúg-únkí |

Yaaku (13) as far as the stem is concerned follows in part a familiar neutralization scenario, with *ŋ-* (< *n-* or <*m-*?) prefix and - n suffix; however it makes a distinction in all tenses between a singular and plural form. Moreover the *ŋ*-formative is prefixed, not to the verb stem itself but to a type of verb-proclitic particle sequence common in common in Cushitic languages from Somali south. The content of these particle sequences, which are often referred to as "selectors", varies from language to language, and often utterance to utterance within a language, but become longer and more regulated as one proceeds from north to south. Most often they contain polarity, modal, subject, object, and dimensional-orientation formatives. In Yaaku they contain information about the person (1, 2 or 3) of the verb, but not number or gender. For the affirmative verb, which continues the recognizable Cushitic suffix conjugation much of this PN (and also G) information is contained in the verb stem (P redundantly). In the negative verb, however the verb-stem PG neutralization has had the effect of neatly isolating P in the selector and N in the stem, in the manner outlined in (13).

(13) *Negation in Yaaku* (wax- 'see')

| | | Aff | | | Neg | | |
|---|---|---|---|---|---|---|---|
| Asp | Tns | PNG | Selector | Stem | Pers | Selector | Stem |
| Indef | pres | 3m<br>3f<br>1p | Ø-<br>Ø-<br>ŋ- | waxai'<br>waxat<br>waxan | 1<br>2<br>3 | ŋénen-<br>ŋána-<br>ŋéne- | |
| wáxan [sg]<br>wáxne | pres | 3m<br>3f<br>1p | a-<br>a-<br>na- | w'áxe'<br>wáxát<br>wáxan | | | |

7. "Peripheral" is not a genetic subgrouping, but only a term of convenience to group together a number of fairly disparate languages at the southern extremity of the East Cushitic area (note that Dahalo is sometimes classified as South Cushitic). For most of the paradigm excerpts in this section, the relevant formal information can be given citing just the 3sg m/f and 1pl forms.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| n [pl] | past | 3m<br>3f<br>1p | aa-<br>aa-<br>aáná- | wáxe'<br>wáxát<br>wáxan | 1<br>2-3 | ŋááná-<br>ŋáa- | wáxan [sg]<br>wáxnen [pl] |
| | perf | 3m<br>3f<br>1p | ná-<br>ná-<br>náa- | wáxe'<br>wáxat<br>wáxán | 1-3 | n'ala- | wáxan [sg]<br>wáxnen [pl] |

Our last stop in East Cushitic is Dahalo (14), where the obligatory negative marker at the beginning of the selector sequence in all negative forms is *b'a*, which may or may not, according to tense, be followed by *ka*, which can also appear without *b'a* in certain non-negative "irrealis" forms. As in the last groups of languages, the main negative present is invariable, in fact an infinitive form. However in this tense only the selector obligatorily contains the subject (or topic) PNG in the form of a pronominal form infixed between the negative *b'á* and the past tense marker *va*. (I have included the paradigm of this form so that you could admire the archaic 1st and 2nd person forms (with 2nd person gender distinctions in both the singular and plural – an unicum in Cushitic!). Otherwise, the usual PNG suffixes occur not only in the main and subordinate present, but also in the subordinate past! A final unique trait here is the creation of a new distinct jussive, both in the imperfective (where negatives are common) and the perfective, where negative counterparts to affirmative verb forms are systematically missing in languages which make a real perfective/imperfective distinction.

(14) *Negation in Dahalo* (lub- 'hit')

| Tense | Clause | PNG | Aff | Neg |
|---|---|---|---|---|
| Pres | main | 3m | Lúbbi | b'a+ka lúbbi |
| | | 3f | Lúbuto | b'a+ka lúbuto |
| | | 1p | Lúbuno | b'a+ka lúbuno |
| | sub | 3m | Luba | b'a+ka luba |
| | | 3f | Lúbuta | b'a+ka lúbuta |
| | | 1p | Lúbuna | b'a+ka lúbuna |
| Past | Main | 1s | Lubo | b'á+i+va lube |
| | | 2sm | Lubúto | b'á+ku+va lube |
| | | 2sf | | b'á+ki+va lube |
| | | 3sm | Lubbi | b'á+ Ø+va lube |
| | | 3sf | Lubúto | b'á+ Ø+va lube |
| | | 1p | Lubúno | b'á+ni+va lube |
| | | 2pm | Lubúten | b'a+kúnna+va lube |
| | | 2pf | | b'a+kínna+va lube |
| | | 3p | lubben | b'á+Ø+va lube |
| | sub | 3m | Lúbbe | b'á+va lúbbe |
| | | 3f | Lúbute | b'á+va lúbute |
| | | 1p | Lúbune | b'á+va lúbune |
| past | hab | 3m | Lúbba | b'a+ka+va+ji lúbba |
| | | 3f | Lúbuta | b'a+ka+va+ji lúbuta |
| | | 1p | Lúbuna | b'a+ka+va+ji lúbuna |

| | | | | |
|---|---|---|---|---|
| juss | imperf | 3m | Lúbbe | b'a+ka lubba |
| | | 3f | Lúbute | b'a+ka lubúta |
| | | 1p | Lúbune | b'a+ka lubúna |
| | perf | 3m | Lubbe | b'a+ka lúbba |
| | | 3f | Lubúte | b'a+ka lúbuta |
| | | 1p | Lubúne | b'a+ka lúbuna |
| imprtv | | 2s | Lúbi | b'a+ka lúbute |
| | | 2p | Lube | b'a+ka lúbuteene |

## 2.8 VERBAL NEGATION IN SOUTH CUSHITIC

Finally from the southern-most "primary" extension of Afroasiatic I give paradigm excerpts from two neighboring languages, Iraqw (15) and Burunge (16), which both show recognizable reflexes of the common Cushitic suffix conjugation – Burunge more obviously than Iraqw. They use distinct primary negator suffixes, *-ká* in Iraqw and *-ba* (+ *sli* < *li*?, dropped in verb-final position; Iraqw also has the indefinite/negative particle *m-* in the selector sequence). However they show an identical structure of (main-clause) past and present negatives – namely the use of a subordinating particle (*-i-* in Burunge, *-a-* ~*-i-* in Iraqw) suffixed to the full affirmative inflected form, before the negative suffix, essentially turning the negative into a subordinate clause '(it is) not that I cultivate/cultivated'. This is essentially the same strategy we saw used in the Oromo present negative – however here this strategy is extended to the past tense, where there is no PNG neutralization.

(15) *Negation in Iraqw* (doohl- 'cultivate')

| | | Aff | | Neg | |
|---|---|---|---|---|---|
| Tense | PNG | Sel | Vb | Sel | Vb |
| past | 3m | aa | dóohl | aa | dóohl+i+ká > doohliiká |
| | 3f | aa | Dóhl | aa | dóhl+i+ká > dohlká |
| | 1p | aga | doohláan | aga | Doohláan+i+ká > doohlaaniiká |
| pres | 3m | i | doohl | i | doohl+i+ká > doohliiká |
| | 3f | i | dóhl | i | dóhl+i+ká > dohlká |
| | 1p | a | doohláan | a | doohláan+a+ká > doohlaanaaká |
| imprtv | 2s | | dóohl | m-Sel | doohlaar |
| | 2p | | doohlé' | m-Sel | doohlara' |

| | | | | |
|---|---|---|---|---|
| subord particl | pres | 1-2 | -a | |
| | | 3 | -i | |
| | past | | -i | |

(16) *Negation in Burunge* (dosl- 'cultivate')

| Tense | PNG | Vb | Vb |
|---|---|---|---|
| past | 3m | dosl-i-a > doosl[i] | dosl-i-a-basli > doosliiba |
| | 3f | dosl-id-a > dooslid[a] | dosl-id-a-basli > dooslidaaba |
| | 1p | dosl-an-a-'I > dooslan[a] | dosl-an-a-'i-basli > ha dooslanaaba |
| pres | 3m | dosl-i-i > doosl[i] | dosl-i-i-basli > yáa doosliiba |
| | 3f | dosl-id-i > dooslid[i] | dosl-id-i-basli > yáa dooslidiiba |
| | 1p | dosl-an-i > dooslan[i] | dosl-an-i-basli > háa dooslaniiba |

## 3. VERBAL NEGATION IN CUSHITIC – OVERVIEW AND A HYPOTHETICAL NARRATIVE

An overview of the territory covered is given in (17). The first seven columns show a plethora of negative morphemes, most of which are distributed over the whole area (a possible exception being the **t* apparently common only to Agaw and neighboring HEC. The **k* and **b* seem to be most characteristically Cushitic, while the **l, *n, *m, *w/y* all have clear Afroasiatic antecedents. The "Negation Patterns and Strategies" recapitulative column, summarizing the neutralizations and assymetries attested in each group, show individual variations around a common theme.

(17) *Morphological Negation in Cushitic: Overview*

| | Negation Markers | | | | | | | Negation Patterns and Strategies |
|---|---|---|---|---|---|---|---|---|
| | *k | *b | *t | *l | *n | *m | *w/y | |
| Beja | k- | b- | | | | | | Asymmetry of negative and affirmative forms. Negative present from affirmative past; negative past < participle + negated aux. Prefixing conj for all jussive and imperative. |
| Agaw | -g- | | -t | -l | | | | Complex PNG neutralization in Awngi and Bilin. Infixation of g-neg. |
| Bur<br>HEC<br>Sid | <br>-k<br>-k | -b | <br>-ti<br>di- | | | | -(a)y<br>-y | Diversity of negative markers in closely related langs. "Infixation" of negative in Gedeo. Simple affixation of negative marker to affirmative form in Sidaama (no negative morphology). |
| Orm | | | | | n-<br>-n | | | Main present negative = subordinate present affirmative; PNG neutralization in negative main past and negative subordinate present and past. |
| Afr | | | | | -n | ma- | way | PNG neutralization in negative main past but with suffix conjugation clitic; jussive = infinitive + auxiliary. |
| **O-T** | | | | | -n | ma- | | PNG neutralization in main past. |
| Tsm | -k | | | | | | -u | Indicative negative = affirmative+NEG; special fut negative < subordinate negative. |
| Yaak | | | | -l(?) | ŋ-<br>-n | | | Negative and person marked in selector; number marked on otherwise invariable lexical verb in negative. |
| Dah | ka- | ba- | | | | | | Generally: negative selector with affirmative form; main past, lexical verb in infinitive,"archaic" pronominal PNG in selector. creation of new imperfect and perfect negative paradigm. |
| Irq<br>Brng | -k | <br>-b | | <br>-<br>sl(?) | | m- | | Negative = negated subordinate version of main clause. |

Much more work will be necessary to reconstruct the development of polarity morphology in Cushitic, but, jumping over some gaps, and provisionally filling in others, I would like to conclude by

spinning a kind of provisional, hypothetical narrative, whose two threads are integration of negative markers and a "founder-effect" affirmative-negative assymetry.

In this narrative, I would propose that Beja retains in fact a number of traits of the original situation – its most extreme assymetry would be what Hetzron termed archaic heterogeneity. From this starting point a radical analytic simplification, by simply turning the negative into an affirmative form with a negative affix or clitic, as is done in Sidaama and Bayso, is always possible. But clearly most languages have not taken that solution. As for the negative markers themselves, from the compilation in (17) it is clear that the prefixes *b-* and *k-*, although not both present in all languages, are firmly anchored in the family, from Beja in the north to Dahalo, Iraqw, and Burunge in the south. Agaw, to fit into a new suffixing mode, incorporates a new *la-*, but the structure of *g-<k-* negative, as noted by Appleyard, is remarkably close to the Participle+*k*+Aux negative past of Beja. In Agaw also we see the PNG reductions which, whatever their syntactic, semantic, or discourse pragmatic underpinnings may have been, have the effect, in the absence of ablaut, of maintain a striking formal difference between affirmative and negative.

In Afar and Omo-Tana a new preposed, perhaps originally clause-level, negative marker, *ma/mV*, with easily recognizable Afroasiatic antecedents is introduced, but the TAM/PNG reduction in the past (supplemented by a cliticized special suffix verb in Afar) is maintained. Afar, Somali, and Arbore have a main present with clear affinities to subordinate/non-indicative conjugations – and both of these tendencies reach their neatest and most unambiguous synthesis in Oromo. South Cushitic gives up the special neutralized past, and forms both past and present on the basis of the affirmative – but explicitly casts them in subordinate clause form. The past PNG neutralization is maintained in the Dahalo verbal stem of the present, but a new negative asymmetry is intorduced in two new distinctly negative jussive. A similar differentiation is found in Tsamakko negative future (< a subordinate future), and in the negative jussive. Finally in the Yaaku negative there is the curiously neat division of labor between P marking, along with TAM, in the selector, with N marked on the lexical verb stem (as opposed to the partial TAM and PNG redundancy between selector and suffix-conjugation lexical verb in the affirmative). In general, while negative neutralization and reduction seems to be a common, and thus perhaps "primitive" feature of Cushitic verbal systems, each language goes about it in its own way. Inheriting a simple reparadigmatization of the affirmative verb, each language continues to elaborate negation independently.

This narrative is certainly not fact – but it is probably not pure fiction either. It will certainly take a lot of hard work to determine which is which.

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APPENDIX: CUSHITIC LANGUAGES CITED

| Groups | Sub-Groups | Languages |
|---|---|---|
| Beja (North) | | (various dialects) |
| Agaw (Central) | | Bilin (N), Kemant (W), Khamtanga (Cen), Awngi (S) |
| East | Highland | Burji, Gedeo, Hadiyya, Alaaba (Kembata), Sidaama |
| | Saho-Afar | Afar |
| | 'Oromoid' | Oromo |
| | Omo-Tana | Somali, Boni, Rendille, Elmolo, Arbore, Dhaasanac, Bayso |
| | "Peripheral" | Tsamakko |
| | | Yaaku |
| | | Dahalo |
| South | | Iraqw, Burunge |

Geographically the Cushitic Languages stretch from Beja in the North (Sudan, Eritrea) through Ethiopia, Jibouti, Somalia, Kenya, to southern outliers in Northern Tanzania. More precise information about the location and relative sizes of these languages can be found in the maps and statistics provided at: http://www.ethnologue.com