Morphological Causatives and Verbal Argument Structure in Somali*

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November 1989

1. Introduction

This paper is a preliminary report on a study of verbal derivational affixes in Somali; in particular on the implications of these affixes for the lexical representation of verbs. The present paper is concerned with causitive affixes in the version of Standard Somali spoken in Northern Somalia.

Though the morphology of these affixes has been described (see for example Andrzejewski 1968, Puglielli 1984, Saeed 1987), much remains to be investigated at the levels of syntax and semantics. There remain general questions of the range of morphological causative affixes versus periphrastic (or analytic) causatives and lexical causatives; the relative productivity of the different affixes; and most relevant for this paper, the effect on verbal argument structure of these affixes. How, for example, can we best represent the changes in syntactic and semantic relations between a verb and its arguments which result from the use of these affixes?

We will concentrate here on the two causative affixes in (1) and (2) below, where the causative (b) sentences correspond to the non-causative (a) sentences:

(1) (a) Maxamed ayaa aakhray [FOOTNOTE 1]
Mohamed FOC was-late
'Mohamed was late'

(b) anaa aakhriyey Maxamed
I+FOC late+CAUSE Mohamed
'I caused Mohamed to be late'

(2) (a) ilmuhu naaska wuu jaqay
child+the breast+the CL+he sucked
'The child sucked the breast'

(b) ilmihii way jaqsiisey naaskii
child+the CL+she suck+CAUSE breast+the
'She caused the child to suck the breast'
i.e. 'She suckled the child at her breast'

These affixes show considerable morpho-phonological variation. We can however assign to the causative affix in (1b) a reference form **-in**, and that in (2b) **-siin**, following Andrzejewski (1968).[FOOTNOTE 2] The causative affix **-siin** is called a 'strong' causative in Saeed (1987), mainly for purposes of distinction. There is a third affix, often classified as causative, **-ayn**, which we will not be concerned with here. It is exemplified in (3) below:

(3) Xasan cuntadii wuu ciideeyey
Hasan food+the CL+he soil+CAUSE+past
'Hasan be-soiled the food',' Hasan put soil/sand in the food'
cf. ciid noun (F) 'earth, soil, sand'

As in example (3) the affix **-ayn** creates verbs from nouns and adjectives with the general meaning, for an adjective A: to make something A; and for a noun N: to add N to something. See Andrzejewski (1968), Bruno (1984) and Saeed (1987) for details. This affix seems morphologically and semantically related to the causatives in (1) and (2) - for one thing, **-in** can also be used to derive causative verbs from adjectives and nouns, as in (4) below:

(4) Faadumo caanaha ayay qaboojisay
Fatima milk+the FOC+she cold+CAUSE+past
'Fatima caused the milk to be cold', 'Fatima chilled the milk'
cf. qabow ADJ 'cold'

However we leave the study of **-ayn** aside for now since our present focus is changes in verbal argument structure. We concentrate therefore on correspondences between non-causative and their related causative verbs. We begin by comparing morphological causatives with other causative strategies, then narrow the scope of the discussion to the effects of causative affixes on verbal argument structure.

2. Morphological versus other causatives

While most attention has been paid to morphological causatives it is clear that, like most languages, Somali has in addition both periphrastic or bi-clausal causative constructions and lexical causatives. Their relative range and the factors governing the choice of one strategy over another remain to be described. We can perhaps most clearly introduce the lexical causatives by a comparison with English causatives. In the following examples we find Somali sentences employing lexical rather than morphological causatives. In each example (a) is a non-causative and (b) is a possible corresponding causative:

(5) (a) roobku wuu da'ay
rain+the CL+it fell
'The rain fell', 'It rained'

(b) Ilaah baa roobka shubay
God FOC rain+the poured
'God made the rain fall', literally: 'God poured the rain'

(6) (a) wiilkiisii macallin buu noqday
son+his teacher FOC+he became
'His son became a teacher'

(b) wiilkiisa isaga ayaa macallin ka dhigay
son+his he FOC teacher of made
'He caused his son to become a teacher',
'He made a teacher of his son'

(7) (a) hadhuudhku wuu baxay sannadkan
sorghum+the CL+it grew year+this
'The sorghum grew this year'

(b) waxaanu beernay hadhuudhka sannadkan
what+we grew sorghum+the year+this
'It was sorghum we grew this year'

In these examples the causative/non-causative semantic differentiation is marked by a contrast between morphologically unrelated verbs, i.e. verbs which would be given independent lexical entries. The contrasts are thus:

(8) a. da' [intrans] 'to fall' (of rain etc.)
versus
shub [trans] 'to pour', 'cause to fall' (of liquids)
b. nogo [trans] 'to become'
versus
ka dhig [trans] 'to cause to become', 'make something of someone'
c. bax [intrans] 'to grow, come out'
versus
beer [trans] 'to grow, cultivate, farm'

In addition to morphological causatives and lexical causatives like those above, there is of course a third strategy: periphrastic or bi-clausal causatives as in (9b) below:

(9) (a) waraaq buu goray
letter FOC+he wrote
'He wrote a letter'

(b) Aniga ayaa u sabab ahaa inuu waraaq goro
I FOC for reason was that+he letter wrote
'I caused him to write the letter', i.e.
'I was the reason he wrote the letter'

In this example the matrix verb is the copula **yahay**, 'to be', with **sabab** 'reason' as complement. Other matrix verbs allow a full range of semantic causatives, e.g.

(10) waxaanu u oggolaanay inuu tago
what+we to permitted that+he go
'We permitted him to go'

(11) waxaanu ku kallifnay inuu tago
what+we to caused that+he go
'We caused/induced him to go'

(12) waxaanu ku qasabnay inuu tago
what+we to forced that+he go
'We forced him to go'

These periphrastic causatives interact with the other types in ways that are not yet clear. For example: we can go in Somali from **jab**, 'to break [intrans]', to **jebi**, 'to cause to break','to break [trans]',by a morphological causative, e.g.

(13) (a) koobkii baa jabay
cup+the FOC broke
'The cup broke'

(b) Faadumaa koobkii jebisay
Fatima+FOC cup+the broke
'Fatima caused the cup to break', 'Fatima broke the cup'

but to add another level of causation requires a periphrastic causative:

(14) Cali ayaa u sabab ahaa inay Faadumo koobka jebiso
Ali FOC for reason was that+she F. cup+the broke
'Ali caused Fatima to cause the cup to break'

From (14) it seems that one use of these periphrastic causatives is to fill in any gaps in the productivity of morphological causatives. So for example we find the non-causatives (15) & (16):

(15) Cali wuu taagdaranyahay
Ali CL+he weak+is
'Ali is weak'

(16) Cali wuu taagdareeyey
Ali CL+he became-weak
'Ali became weak'

but there is no **-siin** causative for this root, so that we find (17) but not (18):

(17) xanuunka darteed ayuu Cali u taagdareeyey
disease+the result+its FOC A. of became-weak
'Ali became weak as a result of the disease'

(18) *xanuunku wuu (ka) taagdareysiisey Cali
'The disease caused Ali to become weak'

Sentence (18) is the predicted but (for my informants) non-occurring **-siin** morphological causative.

Note that in addition to merely filling in gaps in productivity, examples like (18) may reveal semantic constraints on causative afixes. It seems, for example, that there is a tendency for **-siin** causatives to be used with human, or at least animate, causers. So for example we find the paradigm in (19) below:

(19) (a) Cali wuu cadhaysnaa
Ali CL+he angry+was
'Ali was angry'

(b) Cali wuu cadhooday
Ali CL+he became-angry
'Ali became angry'

(c) Faadumo Cali way ka cadheysiisay
Fatima Ali CL+she from angry+CAUSE+past
'Fatima caused Ali to be angry', 'Fatima angered Ali'

but speakers show a marked preference for (20b) rather than (20a):

(20) (a) ?dagaalku wuu ka cadheysiiyey Cali
war+the CL+it from angry+CAUSE+past Ali
'The war angered Ali'

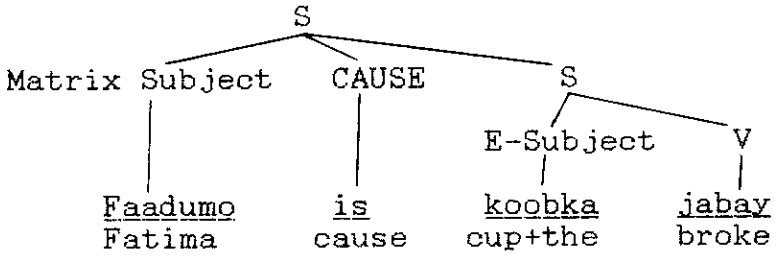
(b) Cali dagaalka ayuu ka cadhooday
Ali war+the FOC+he became-angry
'Ali grew angry at the war'

and indeed most **-siin** causatives occur with people as the causer argument.

3. Representing Verbal Argument Structure

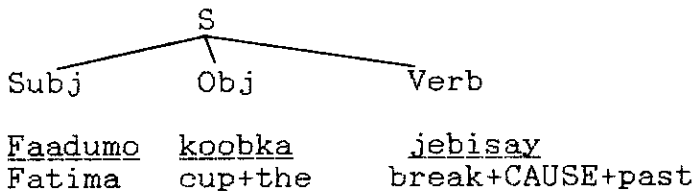
There is a strong tradition in syntactic theory of deriving morphological causatives from abstract underlying sentences containing two clauses: a matrix or higher clause (M -Clause) with a CAUSE predicator and a lower or embedded clause (E-Clause) containing the simple non-causative root. So a simplified structure (ignoring inflection, focus etc.) corresponding to (13b) earlier would be something like (21) below:

(21)



and some fusing rule (as in Comrie 1976) or verb incorporation (as in Baker 1988) would apply to collapse the two clauses into the monoclausal (22):

(22)



We would like to remain agnostic here about such a bi-clausal derivation but to continue to talk about the relation between non-causative and causative pairs like jab and jebi as a derivational one. Thus we will assume that jebi is derived from jab whether by quasi-syntactic

rules of clausal collapsing or, for example, by grammatical function changing rules in the lexicon.

We can see causative verb formation as both adding an extra argument to a verb's argument structure and altering the roles of the base verb's arguments. Both these effects have a syntactic and a semantic aspect. We will assume that independent of any particular technical proposals, we would need to represent at least three types of information about a verb's syntactic and semantic argument structure, i.e.

a) the number and syntactic type of the verb's arguments;
b) the grammatical relations these arguments take;
c) the semantic (or thematic) roles a verb assigns to its arguments

Each of these is affected by causativisation. To take our simple example (13), changing jab 'break' to jebi 'cause to break' has the following effects:

a) adds an extra NP argument to the verb; thus making a transitive verb from an intransitive one
b) the new NP Faadumo is subject; the 'old' subject koobka becomes an object
c) the new argument is semantically an AGENT; the second argument remains THEME.

In this paper we will be concerned with the effects in (a) and (b) above associated with the causative affixes -siin and -in, leaving aside for future work the semantic/thematic implications. To describe these effects, we will assume a threefold division of arguments into subjects (SUBJ), object (OBJ), and oblique (OBL) arguments. The division is marked by both morphological and syntactic means:

(23) **SUBJ**: subjects are tonally and affixally marked (Andrzejewski 1964, 1979, Saeed 1987) and govern agreement on their verb.
OBJ: objects are tonally and affixally marked as distinct from subjects (op.cit.) and occur as 'bare' NPs governed by the verb. There is, of course, no verbal agreement.
OBL: obliques are inflectionally undistinguished from objects, i.e. occur in non-subject case, but must be governed semantically by a pre-verbal prepositional clitic, called here prepositional particles, after Andrzejewski (1960).

So, for example, we will want to describe the argument structure of jab in (13a) earlier as (24):

(24) jab: V <SUBJ>

i.e. that the verb jab takes one argument which is assigned the grammatical role of subject. The structure of a cun 'eat' in (25) would be (26);

(25) hilib baan cunay
meat FOC+I ate
'I ate some meat'

(26) cun: V <SUBJ, OBJ>

And the structure of bax in (27) will be represented as (28):

(27) makhsin buu ka baxay
room FOC+he out came
'He came out of a room'

(28) bax: V <SUBJ, OBL>

If the type of prepositional particle needs to be referred to, the schema can be given as:

(29) bax: V <SUBJ, OBL[ka]>

Given a form of representation like this, we could go on to compare the effect of causative affixes merely by juxtaposing the related verb argument structure, i.e.

(30) jab: V <SUBJ>
jebi: V <SUBJ, OBJ>

but this fails to reflect the fact that the referent of the SUBJ argument with jab will become the OBJ argument in a corresponding jebi sentence. To show this we will adopt a system of indices to identify argument referents, i.e.

(31) jab: V <SUBJi>
jebi: V <SUBJk, OBJi>

or in a rule format:

(32) V <SUBJi> --> V <SUBJk, OBJi> [FOOTNOTE 3]

We can roughly interpret (32) as 'add a new subject; demote the old subject to object'.

4. The affix -siin

Let us examine the effects of these causative affixes on argument structure, beginning with -siin. We find two different argument structure effects. The first is exemplified in (33-35) below, where again (a) is the non-causative form and (b) the corresponding causative:

(33) (a) Maxamed wuu hindhisay
Mohamed CL+he sneezed
'Mohamed sneezed'
(b) siigada ayaa ka hindhisiisay Maxamed
dust+the FOC PREP sneeze+CAUSE+past M.
'The dust caused Mohamed to sneeze'

(34) (a) Cali wuu qufacay
Ali CL+he coughed
'Ali coughed'
(b) siigada ayaa ka qufacsiisay Cali
dust+the FOC PREP cough+CAUSE+past A.
'The dust caused Ali to cough'

(35) (a) Cali wuu fekerayay
Ali CL+he was-thinking
'Ali was thinking'
(b) Way ka fekersiisay Cali
CL+she PREP think+CAUSE+past Ali
'She caused Ali to think', 'She made Ali think'

The effect of the causative affix in examples like these is to add an extra argument to the intransitive verb: this becomes subject, and the original subject is demoted to an oblique NP governed by the prepositional particle ka, i.e.

(36) V <SUBJi> --> V <SUBJk, OBLi>

The second argument structure effect is shown by examples (37-40) below:

(37) (a) ardadii darsigii way fahameen
students+the lesson+the CL+they understood
'The students understood the lesson'
(b) macallinka ayaa ardadii fahamsiiyey darsigii
teacher+the FOC students+the understand+CAUSE
+past lesson+the
'The teacher caused/made the students
(to) understand the lesson'

(38) (a) cuntada ayaa Burco gaadhay
food+the FOC Burao reached
'The food reached Burao'
(b) Cali baa cuntadii gaadhsiiyey Burco
Ali FOC food+the reach+CAUSE+past B.
'Ali caused the food to reach Burao'

(39) (a) ilmuhu wuu cabbay biyaha
child+the CL+he drank water+the
'The child drank the water'
(b) ilmaha cabsii biyaha !
child+the CAUSE+drink+imp water+the
'Make the child drink the water!'

(40) (a) carruurtu way cuneen bariiska
children+the CL+they ate rice+the
'The children ate the rice'
(b) Faadumo ayaa carrurtii cunsiisay bariiska
Fatima FOC children+the eat+CAUSE+past rice+the
'Fatima caused the children to eat the rice'

The effect of the affix in these cases is to add an extra argument to the transitive verb's argument structure. The extra argument becomes subject, demoting the original subject to a second object NP, i.e.

(41) V <SUBJi, OBJj> --> <SUBJk, OBJi, OBJj>

Or, again roughly: 'add a new subject; demote the old subject to second object'.

A first attempt to explain these two distinct effects of adding -siin might be to relate them to a basic division of verbs into intransitive and transitive, allowing a rule like (42):

(42) (a) If V is intransitive, the old (or embedded) subject is demoted to an oblique NP.
(b) If V is transitive, the old (or embedded) subject is demoted to an object NP.

This would be to claim that -siin does not affect the basic value of an inherent feature [+/-transitive].

However there are a number of counterexamples to the rule in (42). We have encountered no counterexamples to (42b) i.e. no occurrences of transitive verbs whose embedded subject becomes oblique. But there are some intransitive verbs for which the embedded subject becomes an object rather than oblique, e.g.

(43) (a) Cali wuu sabrayaa
Ali CL+he patient+pres.prog
'Ali is being patient'
(b) Cali waan sabarsiiyey
Ali CL+I patient+CAUSE+past
'I caused Ali to be patient', 'I appeased Ali'

(44) (a) wuu qadeynayaa
CL+he lunch+pres.prog
'He is eating lunch', (lit.: He is lunching)
(b) wuu qadaysiinayaa Maxamed
CL+he lunch+CAUSE+pres.prog Mohamed
'He is giving lunch to Mohamed'
(lit. He is lunching Mohamed)

(45) (a) inamadii way tartameen
boys+the CL+they competed
'The boys competed'
(b) inamadii waan tartansiiyey
boys+the CL+I compete+CAUSE+past
'I caused the boys to compete'

In these examples the effect of the -siin affix is:

(46) V <SUBJi> --> V <SUBJk, OBJi>

i.e., informally, 'add a new subject; demote the old (embedded) subject to object'.

We thus find two distinct effects of -siin on the argument structure of intransitive verbs. At the moment there seems no convincing explanation of this division; and we must fall back on the rather unsatisfactory identification of two lexical classes of intransitives

with respect to the process of causativization. Thus we must amend (42) above to (47) & (48) for the moment:

(47) **-siin** Causativisation of Transitives
If V is transitive, the old (or embedded) subject is demoted to a second object NP.

(48) **-siin** Causativisation of Intransitives
If V is intransitive then:
Type A: the old (or embedded) subject is demoted to an oblique NP.
Type B: the old (or embedded) subject is demoted to an object NP.

5. The affix -in

This affix is more common and productive than **-siin**, and is thus better covered in the gramatical literature. It seems to be free of the tendency we recognize for **-siin** for both causer and causee to be human, though as will be clear from the examples we have chosen, **-in** may occur with either or both causer and causee as human beings.

With **-in** we find that intransitive verbs show the same two distinct argument structure effects as for **-siin**. Examples (49) & (50) show the original subject of an intransitive being demoted to oblique:

(49) (a) ilmihii wuu ooyay
child+the CL+he cried
'The child cried'
(b) ilmaha ka oohi!
child+the PREP Cry+CAUSE+imp
'Cause the child to cry!'
(c) ilmaha waa laga oohiyey
child+the CL one+PREP cry+CAUSE+past
'(Some)one made the baby cry'

(50) (a) ardadii way qosleen
students+the CL+they laughed
(b) macallinku ardadii wuu ka qosliyay
teacher+the students+the CL+he PREP laugh+CAUSE+past
'The teacher caused the students to laugh'

In the (b) examples above the argument corresponding to the base verb's subject occurs as an oblique NP governed by the prepositional particle **ka**. Examples (51)-(53) below, on the other hand, show the original subject of other intransitive verbs being demoted to an object:

(51) (a) ilmuhu wuu aammusay
child+the CL+he was-silent
'The child was silent'
(b) ilmaha aammuusi!
child+the silent+CAUSE+imp
'Make the child silent!', 'Silence the child!'

(52) (a) Maxamed wuu aakhray
Mohamed CL+he was-late
'Mohamed was late'

(b) anaa aakhriyey Maxamed
I+FOC be-late+CAUSE+past Mohamed
'I caused Mohamed to be late'

(53) (a) waan toosay
CL+I awoke
'I awakened', 'I woke up'

(b) wuu i toosiyey
CL+he me awake+CAUSE+past
'He caused me to awaken' 'He woke me up

Thus the verbs in (49) & (50) correspond to rule (48)'s Type A causativisation; and those in (51-53) correspond to (48)'s Type B causativisation. [FOOTNOTE 4]

It seems from our data that transitive verbs are much less commonly causativised with **-in** than intransitives, and the causative connection often shows evidence of semantic shift, e.g.

(54)

dhal 'beget'	-->	dhali 'originate'
tir 'cancel'	-->	tiri 'enumerate'
maal 'milk'	-->	maali 'lend (a milch animal) to someone'

However, for now, we will continue to identify pairs like those in (54) as related by a rule of causativisation; in which case, the argument structure change is as for **-siin** transitives, i.e. subject demoted to object.

6. Comparison with Universals

Even from these preliminary observations it seems that these causative processes impact on universal claims about morphological causatives. In Comrie (1976, 1981), for example, there is the claim that when subjects of base verb forms are demoted under causativisation, their new grammatical relation is largely predictable, cross linguistically, by an implicational hierarchy. It is claimed that for causativisation, grammatical relations form an implicational chain, as in (55);

(55) subject> direct object > indirect object> oblique object
(Comrie 1981: 169)

The proposal is that the causer becomes subject, while the causee (original subject) occupies the leftmost or highest position on the hierarchy that is unfilled. This predicts that for intransitives the demoted subject should become direct object, while for transitives it should become indirect object or oblique.

In this paper we assume no distinction in Somali between indirect object and oblique, but the divergence of **-siin** and **-in** causatives from this predicted pattern is clear.

In Somali we find that while some intransitive verbs demote their subject to direct object as predicted by (55), others demote to oblique. Similarly transitive verbs demote their subject not to oblique as suggested by (55), but to a second object role indistinguishable morphologically from the original object. So Somali transitive verbs 'double' on object. This is not strictly ruled out in this approach but is considered unusual:

(56) "doubling on direct objects is attested, but restricted." (Comrie 1981:171)

In the generative tradition there have also been attempts to establish universals in this area, as in Gibson (1980), Marantz (1984) and Baker (1988). Gibson argues for two types of causative rule universally:

(57) **Type 1** (adapted from Gibson 1980 & Baker 1988)

ORIGINAL ROLE	DERIVED ROLE
ergative	oblique (IO)
absolutive	direct object

where ergative = subject of a transitive verb; absolutive = object of a transitive verb and subject of an intransitive verb.

This rule would predict that:
a) intransitives demote subject to direct object
b) transitives demote subject to oblique
Baker (1988) claims that Chichewa, Turkish, French and Malayalam have this type of causative.

(58) **Type 2** (adapted from Gibson 1980 & Baker 1988)

ORIGINAL ROLE	DERIVED ROLE
subject	object
object	2nd object

This rule predicts:
a) intransitives demote subject to object
b) transitives demote subject to a second object
Baker (1988) reports that Chamarro, Cebuano, Choctaw, Chimwiini and some dialects of Chichewa have this pattern.

It is clear that the Somali causative affixes we have briefly discussed do not fit into either Type 1 or Type 2. The behaviour of intransitives which (either with **-siin** or **-in**) demote their subjects to oblique is not covered by either type. These aside, Type 1 is uncharacteristic of transitives in Somali too, since no transitives seem to demote to oblique. Type 2 fits Somali transitives and my type B intransitives (see 48 earlier).

7. Summary

As mentioned in the introduction, this paper is merely a first note from a study of causative affixes in Somali, itself part of wider questions about verbal lexical affixes. We have concentrated on the changes in verbal

argument structure associated with the causative affixes **-siin** and **-in**. Along the way we have made a few observations about the relationship between the various causative strategies in Somali, and clearly this is an area that calls out out for further study.

Having identified two separate argument structure effects for both affixes, it is clear that the causativisation rule will have to be lexically governed. It would be nice to establish some correlation between the verbal classes in this respect and some natural semantic classes. However this seems too ambitious for the present; although such a task might be considerably more feasible as a result of the data associated with the Italo-Somali dictionary projects (see, for example Agostini et al 1985).

We can though take a quick peek at this task: if we take **-in**, for example; the intransitives which demote subject to object (type B) includes a wide range of inchoatives and statives, including those in (59), where we use the base form as a reference:

(59)	(a)	jab	'break'
		korodh	'grow'
		kar	'boil'
		ba'	'fall in ruin'
		toos	'awake'
		jilic	'soften'
	(b)	raag	'be late'
		aakhir	'be late'
		aammus	'be silent'

Those intransitives whose causatives demote subject to oblique (type A) include examples like those in (60):

(60)	ooy	'cry'
	qosol	'laugh'
	yaab	'marvel'

These might seem to be likely candidates for a semantic class, especially when we look at examples of the corresponding **-siin** type A intransitives (i.e. those which also demote to oblique):

(61)	qayli	'shout'
	hadal	'talk'
	gabay	'compose poetry'
	feker	'think'
	alalad	'dream'
	qufac	'cough'
	hindhis	'sneeze'

But before we can start to speculate about, for example, cognitive and verbal semantic classes, we need to have access to a lot more descriptive semantics of Somali.

FOOTNOTES

* I would like to thank my informants Maxamed Faarax and Dr Maxamed Cali for their help, tolerance and good humour. I am also indebted to the Faculty of Arts (Letters), Trinity College, Dublin for support for travel.

1. The abbreviations used in the examples are:

   CL: classifier
   FOC: focus word
   CAUSE: causative affix
   PREP: prepositional particle
   pres.prog: present progressive
   past.prog: past progressive
   imper: imperative
   past: simple past tense

   The symbol '+' represents the analysis of a morpheme boundary, often obscured by coalescence rules. The symbol '-' is used when several English words correspond to a single Somali word.

   The word-for-word glosses are for guidance only: various types of morphological information may be omitted for clarity.

2. Note that the corresponding reference forms in Puglielli (ed.) 1984 are **-is** for **-in** and **-ays** for **-ayn**; and therefore presumably **-siis** for **-siin**. This makes a lot of sense when discussing nominal derivation as opposed to the internal morphology of the verb system; and is probably useful too for comparative work. The choice makes no difference to the present area of study.

3. Note that this schema is not a representation of the word order of the verb and its arguments.

4. There is the third pattern, as expected, where a verb of the form (1) below is causativised as in (2):

   (1) V <SUBJ, OBL>
   (2) V <SUBJi, OBLj> --> V <SUBJk, OBJi, OBLj>

   i.e. where the original subject is demoted to become the only object. An example of this would be **ka yaxyax** 'be embarrassed' --> **ka yaxyaxi** 'cause to be embarrassed'. This can be seen as a subtype corresponding to the Type B causatives in (48).

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