

Somali multiple applicatives and the 'Possessor' argument

Goal:

This paper investigates the system of prepositional preverbs found in Somali and closely related East-Cushitic languages (usually called the Omo-Tana group),¹ and centers on the puzzling properties of the Somali indirect object clitics: these 'second object' clitics are morphophonologically identical to the possessive clitics in the nominal domain—a crosslinguistically well attested parallel suggesting that the part of the structure relevant for licensing the 'possessor' argument is the same in both cases.

- What is the right characterization of this parallelism universally, and what does it tell us about the general properties of the syntax-semantics interface in the verbal domain?
- Did the contemporary system of preverbs found in Omo-Tana languages evolve from a postpositional one (Biber 1984), or does it reflect an original East Cushitic (and Afroasiatic) system (Hetzron 1980)?

1 The Somali vP

1.1 'Lexical' vs. 'functional' prepositions

There is a traditional distinction between 'lexical' and 'functional' prepositions (and postpositions) (See e.g. Kayne 2000, 2003).

Somali (perhaps all of Omo-Tana) lacks postpositional phrases comparable to the ones found elsewhere in East Cushitic.

Place locatives (*under, above, below, behind, inside, outside*) take the form of a genitive constructions comprised of a nominal base and a 3rd person possessive clitic.²

- (1) *Place locatives (genitive construction):*

géed-ka hóos-tiisa
tree-detM under-detF.Poss3SM

under the tree

¹Arbore (Hayward 1984), Boni (Heine 1976), Rendille (Heine 1975, Pillinger 1989), Elmolo (Heine 1975-6), Dasenech (Sasse 1976).

²Key to Somali gloss: F = 'focus marker' (I analyze the *baa/waa* morpheme as the declarative root C complementizer; see Lecarme 1991, 1999), detF/M = definite feminine/masculine article, opt = optative, neg = negation, dir = directional particle. Pronominal clitics are identified by their person, number, and gender features (uppercases). Lowercases = agreement features.

The 'functional' preverbs *ú* 'to, for', *kú* 'at, with (instrumental)', *ká* 'from', *lá* 'with (comitative)' are usually referred to in the literature as 'case markers' (Biber 1984, Hetzron 1989) or 'adpositions' (Saeed 1999). They are *applicatives* (as I will make explicit here) in that the preposition in syntactic structure does not form a constituent with its object (cf. English prefixes *befriend*, *behead*).

(2) *Prepositional preverbs (applicative construction):*

- a. Ayáan baa **kú** timid Afgóoye
Ayan F to went Afgooye
Ayan went to Afgooye
- b. Nín baa **iigá** yimid Soomáaliya
man F 1S.to.from went Somalia
A man went from Somalia for me / to see me

1.2 The 'template'

In the Somali clause, all arguments are pronominal. Full DPs adjoined to CP or TP may 'double' or bind the pronominal arguments.

Preverbs and argument clitics occur preverbally in a fixed order.³ Impersonal subject and object (pro)clitics form a phonological word with the preverbs. The 'possessor' is a word of its own.

(3) *Order of preverbal elements* (based on Andrzejewski 1960, Zholkovskiy 1971)

| Person | NOM (('subject clitic')) | NOM (('impersonal')) | ACC (('object clitic')) | Preverbs | 'Possessor' | Other |
|--------|-----------------------------|-------------------------|----------------------------|---------------------|-------------|-------|
| 1S | aan | | i | ú kú ká lá | káy | ... |
| 2S | aad | | ku | | káa | |
| 3SM | uu(s) | | ∅ | | ∅ | |
| 3SF | ay | | ∅ | | ∅ | |
| 1Pexcl | aan(u) | | na | | kayó | |
| 1Pincl | aynu | | ina | | kéen | |
| 2P | aad | | idín | | kíin | |
| 3P | ay | | ∅ | | ∅ | |
| refl. | | is | | | | |

A 'templatic' view of preverbal elements is often tacitly assumed in the literature (e.g. Hyman 1981). According to Biber, the possessive pronoun 'strategy' is used 'for any oblique pronoun which occurs outside the one clitic slot' (Biber 1984:57).

Problems:

Inability of the templatic system to explain the syntactic basis of the arrangement of morphemes into slots.

What is the structural locus of the 'possessor' (or 'second object') argument?

→ *Analysis* is called for.

³Between the 'possessor' argument and the verb can also occur: the spatial elements *soo/sii* 'toward / away from' (the speaker); the adverbial elements *kala* 'separately' and *wada* 'together'; the place locative nominal roots *ág* 'near', *dhéx* 'inside', *hóos* 'under' *kór* 'above'.

2 Possible approaches

Incorporation:

Baker's influential view of valency alternations is based on syntactic incorporation (head-to-head movement). Bantu suffixal applicatives are analyzed as instances of P-to-V (Baker (1988) or V-to-V incorporation (Baker 1996).

Baker (1996) maintains the 'incorporated adposition' analysis for applicative *preverbs*: (i) a postpositional phrase complement to V moves in the Spec of AspP, (ii) P incorporates to Asp (iii) V incorporates into Asp (1996:439).

Problems:

- (i) Absence of postpositional phrases or obliquely case-marked phrases from which the preverb-verb structure can be derived. A preposition-based account also would prove inadequate on grounds of learnability (lack of positive evidence available to the child acquiring the relevant structures).
- (ii) Some verbs (e.g. *ká báq* 'be afraid of') may not occur without a preverb. Preverbs can occur in composition. There are compositional examples and idiomatic ones (4). 'Syntactic compounding' also occurs (5).

- (4) a. *magac-u-yáal* (m)
noun-for-stand
'pronoun'
- b. *is-ka-wax-u-qabsíd*(f)
refl-from-thing-for-seize.nominalizing suffix
'self-help'
- (5) *ku-ugaarsashá-da éy-ga*
with-hunting-detF dog-detM
hunting with dogs

- (iii) The Somali preverbs are not suffixes or prefixes, but independent, inherently accented words. The complex preverb-verb does not correspond to either a morphological or a phonological unit.
- (iv) The pronominal argument which is phonologically joined to the preverb (as a proclitic) can be the verb's thematic argument.

- (6) *Baabúur buu igú soo qaaday*
car F.3MS 1S.with dir. brought
He brought me by car

Applicative analysis:

- (i) Prepositions are not merged with what we think of as their objects. The relation between a preposition and its associated argument is not akin to the relation between a verb and a thematic argument, but rather to the relation between a head like *v* and an argument in its Spec (Marantz 1984, 1993, Kayne 2003).

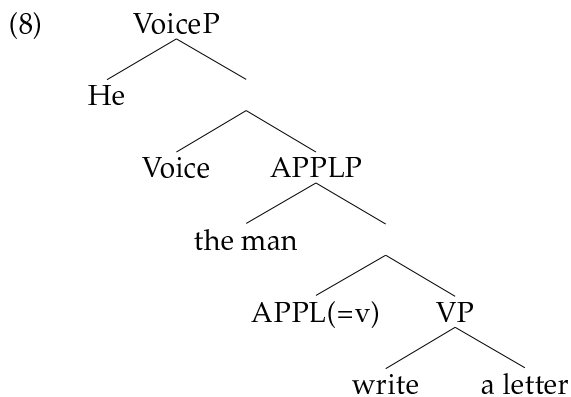
(ii) Marantz (1993): Bantu applicative constructions are examples of 'complex predicates' (Larson 1988), in which the APPL affix is treated as a verb that takes an event argument semantically (a VP complement syntactically). Double object constructions in languages like English (or Arabic) are 'hidden' applicatives in which the head of the higher VP shell is unpronounced.

- (7) a. kataba ila^y r-raḡuli maktu:ban
 he.wrote to the-man letter.Acc.
 He wrote a letter to the man
- b. ka:taba r-aḡul-a maktu:ban
 he.wrote.Appl the-man-Acc. letter.Acc
 He wrote the man a letter (Hetzron 1989:12)

An appropriately updated version can be assumed, in which both the applicative head APPL and the head Voice (Kratzer 1994) are functional elements above the VP.

The APPL head combines with the VP by event identification and relates an additional individual to the event described by the verb.

Voice adds the condition that the event has an agent.



→ Three syntactic/semantic domains in the vP:

Above Voice: agentive semantics

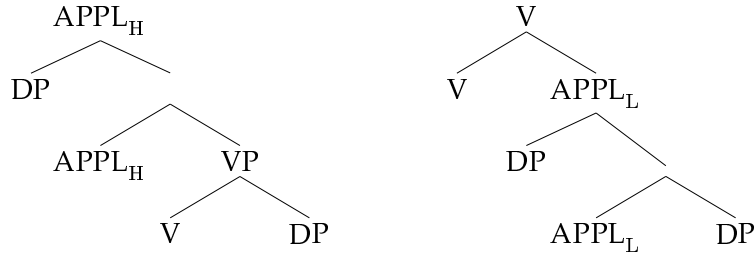
Above v: eventive semantics

Below v: no eventive semantics

Further distinctions (Pylkkänen 2002, McGinnis 2001):

- *High applicatives* merge with VP, and establish a semantic relation between an individual and an event.
 - *Low applicatives* merge with V, and establish a relationship between two individuals (such as a recipient and a theme, a source and a theme). Their semantics only expresses a transfer of possession relation between direct and indirect object.
- Low APPLs can appear only with verbs that take an internal argument. On the other hand, High APPLs can appear with both intransitive (including unergative) and transitive verbs.

(9) a. *High Applicative* (e.g. Chaga) b. *Low applicative* (e.g. English)



Note:

Languages are assumed to differ typologically in whether they illustrate the Low applicative type (English, Japanese), or the High applicative type (Chaga, Albanian).

Problem:

Clausal 'possessors'—covering traditional notions like (affected) source/goal, recipient, indirect object, dative experiencer—form a natural class of some sort. Their main semantic properties do not differ across languages: as Marantz (1993) observed, 'affected' goals or benefactives and alienable 'possessors' are semantically outside the event that affects the theme / patient (cf. *write John a letter* vs. *open the door with the key*).

Competing hypothesis:

Double object constructions involve an abstract CAUSE. The indirect object is licensed above the causative, as the subject of an abstract HAVE (Harley 2000 a. o.).

Problem:

The resultant state of a causative is always entailed. In double object constructions, this entailment fails in most cases (e.g. *Mary throw John the ball* does not entail a resultant state where *John has the ball*).

Properties of the present analysis:

- No recourse is made to the notion of 'low applicatives'. Following the central tenets of Marantz's (1993) proposals, I assume that double object constructions always involve two VP layers. The 'possessor' meaning involves two distinct subevents, holding at dissociated times on the time axis.
- The 'possessor' argument is licensed in an agreement relation with a category pertaining to the tense system ('little t' or outer aspect) (Brandt 2003). The extra temporal position explains the peculiar double temporal modification in double object constructions.
- The analysis extends the focus of inquiry beyond the verbal domain. Under the low applicative analysis, clausal 'possessors' are not related to genitive possessors in any way → the morpho-phonological identity of clausal indirect objects and nominal 'possessors' is unaccounted for. As in previous work (e.g. Lecarme 2004), I assume a functional parallelism between nominals and clauses, and explore the hypothesis that double object constructions and genitive constructions crosslinguistically derive from at least some of the same resources: (i) an argument introducing applicative head, (ii) a case licensing tense projection.

→ the present proposal can be viewed as a nonderivational alternative to raising or control analysis of possessor-dative constructions (Landau 1999, Guéron 1985).

3 Somali multiple applicatives

Somali applicatives are 'high' in that the transitivity of the verb is irrelevant, as demonstrated by their ability to merge with unergative or unaccusative / experiencing predicates.

- (10) a. *Unergative*
 Wúxuu ú shaqeyey dowlad-dii
 expl.F.3SM for worked government-detF.past
 He worked for the government
- b. *Unaccusative*
 (Nabi Ciíse) (inná-ga) Wuu inoó dhintey
 Jesus us-detM us(incl) F.3SM 1P(incl).for died
 (Jesus) (us (strong)) He died for us
- c. *Unaccusative experiencing construction*
 Túug-gii wuu igá baxsaday
 thief-detM.past F.3SM 1S.from escaped
 The gangster escaped me

A High applicative head can merge with a High ApplP, which also denotes an event.

- (11) a. *Dative and benefactive: (ú + ú → ugú)*
 Íí síi warqád-díi aabbáhay iigú káa soo dhiibey
 1s.to give(imp) letter-detF.past father.detM.Poss1S 1S.to.for Poss2S dir. handed
 Give me the letter which my father handed to you for me
- b. *Locative and dative (ú + kú → ugú)*
 Warqád baa Baariis kuugú soo diray
 letter F Paris 2S.to.at dir. sent
 I sent you a letter in Paris
- c. *Locative and benefactive (ú + kú → ugú)*
 Ayáan baa iigú timid Afgóoye
 Ayan F 1S.for.to f.went Afgooye
 Ayan went to Afgooye for me / to see me

(12) *Preverbs: complex forms*

| | | | | |
|-----------|------------|-------------|-------------|-------------|
| | ú | kú | ká | lá |
| ú | <i>ugú</i> | <i>ugú</i> | <i>ugá</i> | <i>ulá</i> |
| kú | | <i>kagá</i> | <i>kagá</i> | <i>kulá</i> |
| ká | | | <i>kagá</i> | <i>kalá</i> |
| lá | | | | |

Observation:

'Regular' phonology: intervocalic /k/ → /g/.

'Irregular' phonological outputs: *kú + kú* or *kú + ká* → *kagá*, etc. (see Tosco 1993)

→ the complex applicative heads cannot be the result of a purely syntactic process (incorporation).

(13) *Object clitics + preverbs combinations* (based on Andrzejewski 1960):

| | | | | | | | | | | | |
|-------------|--------------|---------------|---------------|---------------|--|----------------|----------------|----------------|-----------------|-----------------|-----------------|
| | ú | kú | ká | lá | | ugú | ugá | ulá | kagá | kulá | kalá |
| i | <i>ií</i> | <i>igú</i> | <i>igá</i> | <i>ilá</i> | | <i>iigú</i> | <i>iigá</i> | <i>iilá</i> | <i>igagá</i> | <i>igulá</i> | <i>igalá</i> |
| ku | <i>kuú</i> | <i>kugú</i> | <i>kaá</i> | <i>kulá</i> | | <i>kuugú</i> | <i>kaagá</i> | <i>kuulá</i> | <i>kaagá</i> | <i>kugulá</i> | <i>kaalá</i> |
| ina | <i>inoó</i> | <i>inagú</i> | <i>inagá</i> | <i>inalá</i> | | <i>inoogú</i> | <i>inoogá</i> | <i>inoolá</i> | <i>inagagá</i> | <i>inagulá</i> | <i>inagalá</i> |
| na | <i>noó</i> | <i>nagú</i> | <i>nagá</i> | <i>nalá</i> | | <i>noogú</i> | <i>noogá</i> | <i>noolá</i> | <i>nagagá</i> | <i>nagulá</i> | <i>nagalá</i> |
| idin | <i>idiín</i> | <i>idinkú</i> | <i>idinká</i> | <i>idinlá</i> | | <i>idiinkú</i> | <i>idiinká</i> | <i>idiinlá</i> | <i>idinkagá</i> | <i>idinkulá</i> | <i>idinkalá</i> |
| la | <i>loó</i> | <i>lagú</i> | <i>lagá</i> | <i>lalá</i> | | <i>loogú</i> | <i>loogá</i> | <i>loolá</i> | <i>lagagá</i> | <i>lagulá</i> | <i>lagalá</i> |
| is | <i>isú</i> | <i>iskú</i> | <i>iská</i> | <i>islá</i> | | <i>isugú</i> | <i>isugá</i> | <i>isulá</i> | <i>iskagá</i> | <i>iskulá</i> | <i>iskalá</i> |

Observation:

The complex form argument clitic + preverb(s) is phonologically more transparent than the complex preverb + preverb(s).

kú + kú → *kagá*

ku (2S) + kú → *kugú*

→ there is evidence that clitics are merged *after* the complex applicative head is formed.

Conclusion:

Learners do not learn these forms by adding a new item to a 'lexicon', but instead analyze these forms into argument clitic + preverbs. Syntactic and morphological operations jointly determine surface morpheme ordering.

→ we need a syntactically oriented theory of morpheme order.

4 Morphological realization

Background assumptions:

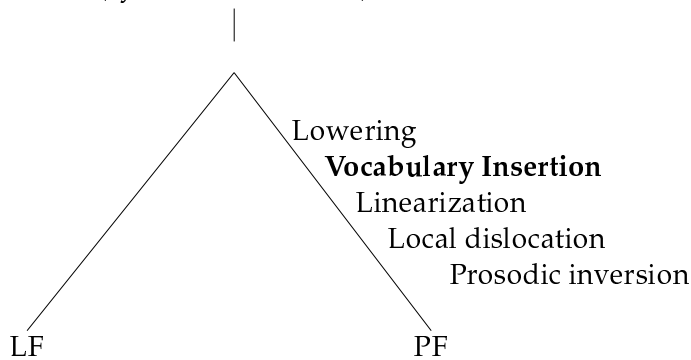
Syntactic structure is created incrementally, bottom-up, by the elementary operations Merge and Move (Chomsky 1995, 2004a,b).

Distributed Morphology (Halle & Marantz 1993, Marantz 1995, 1997 and subsequent work):

- (i) Syntactic structure is the only mode of structure building in natural language. Word formation is syntactic.

- (ii) Morphology (like phonology) is an interpretive component that relates an output of the computational system to PF = some hierarchically organized prosodic structure.
- (iii) Vocabulary insertion (VI) is assumed to occur phase by phase (Chomsky 2001, 2004a) and is argued to occur within a phase from root outward.
- (iv) In the default case, the morphological structure at PF is simply the syntactic structure. In more complex cases, additional processes may modify and elaborate syntactic structure in limited ways. One of these processes is Morphological Merger (Marantz 1984, Embick and Noyer 2001).

(14) *The PF branch of the grammar*
(syntactic derivation)



Merger before VI (= *Lowering*) operates in terms of hierarchical structures. It lowers a head to the head of its complement.

Merger after VI (= *Local dislocation*) operates in terms of linear adjacency.

Merger at PF (= *Prosodic inversion*) inverts prosodic categories (not morphological ones).

Special assumptions about Clitics:

- (ii) In the syntax, clitics are bundles of features attracted by T for case reasons (Kayne 1991). In Pesetsky and Torrego's terms, overt attraction of an unvalued T feature (*uT* on D) 'pied pipes' the whole bundle of syntactic features to a Spec position (Pesetsky and Torrego 2001, 2004a,b).
- (iii) Some occurrence of T in a transitive clause is responsible for licensing accusative case (Pesetsky and Torrego 2004).
 - There must be a dative/genitive case valuating functional head in the DP or the clause. As in earlier work, I assume that some occurrence of T is responsible for licensing genitive case in both the DP and the clause (Lecarme 2004).

Introducing the 'Possessor' argument

The most remarkable descriptive fact about the parallelism between genitive and double object structures is that the 'applied' genitive pronoun comes from the possessive pronoun paradigm (a feature also shared by other languages, e.g. the Balkan languages: see Pancheva 2004).

| | | |
|------|---------------------------------|-------------------------------------|
| (15) | a. <i>'Possessive' pronouns</i> | b. <i>'Applied' object pronouns</i> |
| | 1 (-t/k)-áy- 'my' | k-áy |
| | 2 (-t/k)-áa- 'your' | k-áa |
| | 3m (-t/k)-íis- 'his' | ∅ |
| | 3f (-t/k)-éed- 'her' | ∅ |
| | 1Pexcl. (-t/k)-ayó- 'our' | k-ayó |
| | 1Pincl. (-t/k)-éen- 'our' | k-éen |
| | 2P (-t/k)-íin- 'your' | k-íin |
| | 3P (-t/k)-óod- 'their' | ∅ |

→ What is the structural locus of the 'Possessor'?

→ In what terms can we think of the semantic relation between clausal indirect objects and nominal 'possessors'?

Note:

The 'possessor' is the last merged argument in the vP. The pattern of argument clitics is crucially sensitive to hierarchical relations among overt pronominals (Barss and Lasnik 1986). The surface order of objects (accusative-genitive) does not affect c-command relations: the genitive clitic asymmetrically c-commands the accusative clitic.

(16) *c-command properties*

a. Walaalayáal, máxaa **igú kíin** diray?

brothers, Q.expl.F 1S.to Poss2P sent

Brothers, why are you against me (lit. what sent you against me?)

b. Yuusán **iskú kéen** dírin!

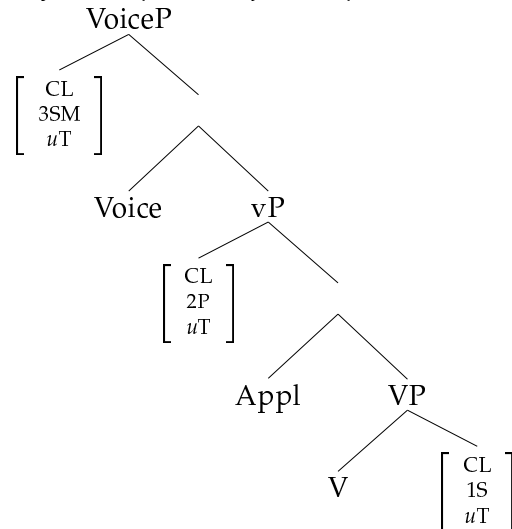
Opt.3SM.neg refl.to Poss1P(incl) send.inf

May he not cause dissension between us! (lit. may he not send us against ourselves)

→ My analysis of the facts are as follows.

- Clausal pronominal clitics in Somali are merged in the vP as arguments and subsequently move from the position of their initial Merge (position in the spirit of Kayne 1991 in that the spell-out position of the clitic is a derived position).

(17) *Syntactic position of clitics prior to movement (=16a)*



- On the vP cycle, the applicative heads are merged (Lowering) and form a complex applicative head. The string adjacent object clitics (bundles of features) are then merged (Local dislocation).

(18) *Lowering*

$[_{AppIP} \text{ Appl} \dots [_{AppIP'} \text{ Appl}' \dots]] \rightarrow [_{AppIP} \dots [_{AppIP'} \dots [_{AppI'} \text{ Appl}' + \text{Appl}] \dots]]$

(19) *Local dislocation*

$\text{CL } [_{AppI} \text{ Appl}] \rightarrow [_{AppI} \text{ CL } \text{Appl}]$

- On the CP cycle, object clitics are spelled out in Spec,Asp. After linearization and the assignment of prosodic domains, the clitic forms a prosodic word with Appl.

(20) *Building of prosodic domain*

$[\text{CL} = [_{AppI}]]_{\omega}]_{\omega}$

- There is no evidence that V moves higher than t/Asp in Somali (adverbs and full DPs can be merged between Spec,TP and the verb). I assume that V-v moves to t/Asp (outer aspect), and consequently is at the phase edge with the 'possessor' argument.
- At PF, the 'possessive' clitic, being an enclitic, needs a prosodic word on its left, and inverts with the following phonological word by Prosodic Inversion (Halpern 1995).

(21) *Local Dislocation + Prosodic inversion*

$=\text{CL } [_{AppI} \text{ CL} = \text{Appl}] \text{ V} \rightarrow [[[_{AppI} \text{ CL} = \text{Appl}]]_{\omega} =\text{CL}]_{\omega} \text{ V}$
 kīin [[igú] diray] → [[[igú] kīin] diray] (= 16a)

- Subject clitics are bundles of features introduced by Voice, and licensed in Spec,TP. As Vocabulary Items, they are second position clitics, i.e. *enclitic* to any constituent preceding them (negation, complementizer).

4.1 An interpretive puzzle

According to the analysis so far, each argument's theta role is determined in the position in which it is merged (= in the vP phase). A puzzling fact is that both (22a) and (22b) are ambiguous.

→ Why should 'double interpretations' arise in this way?

- (22) a. Mágan baa i \emptyset baray
 Magan F 1S \emptyset taught
 Magan introduced me to (him/her/them) / (him/her/them) to me
- b. Mágan baa i **káa** baray
 Magan F 1S Poss2S taught
 Magan introduced me to you / you to me
- (23) a. *Speaker A:*
 (Mágan) muu **i káa** baray?
 (Magan) Q.2SM 1S Poss2S taught
 (Magan) did he inform you about me? (lit. did he teach you me?)
- b. *Speaker B:*
 Háa, wuu **i káa** baray.
 yes F.3SM 1S Poss2S taught
 Yes, he informed me about you. (lit. he taught me you)
- c. *wuu **ku káy** baray
 F.3SM 2S Poss1S taught

→ sequences of clitics that correspond to well-formed syntactic structures are nevertheless ungrammatical.

Possible explanation:

- (i) Perlmutter (1971): There are language-specific 'output filters' which prevent certain sequences of clitics; such output conditions are defined in terms of person (e.g. 2nd person must precede 1st person in Spanish). The output condition for Somali pronouns would be that 1st person object clitics must precede 2nd person object clitics, and that both precede the (phonologically null) 3rd person object pronoun.

- (24) 'Output condition' on Somali pronouns
 1st person » 2nd person » 3rd person

→ ungrammaticality of sequences such as *ku káy, *ku kéen, *idin káy, *idin kéen.

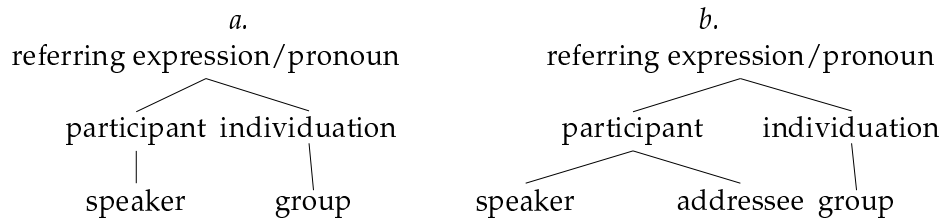
- (ii) Harley and Ritter (2002a,b): There are external conditions on the processing of pronominal features. Variation in pronoun and agreement systems can be derived from specification of features / nodes in a universal morphological feature geometry.

As shown in (25), Somali has both inclusive and exclusive forms. 1st person exclusive forms are represented by the feature Speaker without the Addressee node. Inclusive forms are the conjunction of a Speaker and an Addressee feature.

(25) *Somali 1st person exclusive / inclusive forms*

| | exclusive | inclusive |
|--------|-----------|-----------|
| strong | annága | innága |
| nom | aan | ayan |
| acc | na | ina |
| gen | kayó | kéen |

(26) *Geometries for Somali exclusive / inclusive forms*



In the absence of an exclusive / inclusive distinction, Speaker is the default person. Somali have inclusive pronouns → Speaker is fully specified.

Consequences:

I attribute the ungrammaticality of the sequences **ku kéen*, **idin kéen* to a constraint against the overlapping reference of 2nd person (excl) and the inclusive form: the inclusive person requires the activation of both Speaker and Addressee nodes (along the lines of Guéron's 1984:44 Nondistinctness Constraint.)

The theory predicts that inclusive *kéen* only occurs in a sequence with a reflexive clitic (*is kéen*), and that the sequences *ku kayó* (excl), *idin kayó* are acceptable sequences.

(27) *?(annága) Mágan baa idin kayó baray*
 us(excl) Magan F 2P 1P(excl) taught
 Magan informed you about us(excl)

5 Instead of a conclusion

A proto-Cushitic preverb system?

Two theories have been proposed for the origin of the Somali (Omo-Tana) preverb system.

- Biber (1984 ; see also Saeed 1993, Appleyard 1990): The preverb system actually results from the historical migration of adpositions to the verb in Omo-Tana.

(cf. Baker's synchronic analysis: since PPs come before the Verb in Verb-final languages, having a P turn into a prefix is a small historical step.)

Comparative evidence:

In Rendille, *ká* 'from' may be a verb prefix or a postposition (See Pillinger 1989). The Cushitic languages outside Omo-Tana use an obviously related set of morphemes as postpositions.

- Hetzron (1980): The preverb system must be considered an original feature of Proto-Cushitic.

Comparative evidence:

Remnants of a preverb system exist outside of Omo-Tana. The same morphemes can be used as prepositions (Yaaku, Iraqw) or postpositions (Oromo, Konso). Postpositions in Afar-Saho originate in an older preverb system.

Recapitulation:

- (i) No substantial evidence exists for the hypothesis that the Somali (and Omo-Tana) preverb system was preceded by a postpositional system.
- (ii) Remnants of a preverb system exist outside of Cushitic: Amharic (Hetzron 1970), Berber (Bendjaballah and Haider, to appear).
- (iii) The fact that Somali preverbs are inherently tonic (as they were in Ancient Greek) also suggests that the applicative preverbs originate as adverbial elements.

→ In view of all of the available evidence, we must conclude that the present systems of adnominal postpositions or prepositions in Cushitic is the result of late reorganizations, and that the preverb system must go back to a very old stage—Somali having preserved 'the most archaic, least adulterated situation' (Hetzron 1980:67).

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