

Tense in Nominals

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1 Introduction¹

In recent work, Pesetsky and Torrego (2001; henceforth P&T) propose a new approach to the theory of abstract case. The key of this proposal is that nominative case on DP is actually an uninterpretable variant of a Tense feature (henceforth uT). An instance of D that bears uT (i.e. D that heads a structurally case marked DP) cannot be marked for uT deletion on the DP cycle: the DP is therefore attracted to Spec,TP by finite T, driven by uninterpretable ϕ -features on T. Since C takes TP as its complement, uT on C is deleted within the CP cycle (e.g. by raising a tensed auxiliary verb form to C). This hypothesis provides a unified explanation of many observed asymmetries between CPs and DPs in their distributional freedom. The proposal is also conceptually attractive, since it would eliminate the only example of a purely uninterpretable formal feature. Given the theory of movement and case assumed within the current version of the Minimalist Program (Chomsky 2000, 2001a, 2001b), structural case correlates with agreement, and is only indirectly ‘valued’ by the interpretable functional categories T and v^* . It is also not clear how structural genitive fits into the Case-Agree relation, that is, how D (or Num) is a ‘case checking’ head for genitive case, since the ϕ -features of the functional heads D/Num that combine with N in the Merge-Agree relation do not reflect the ϕ -features of the ‘possessor’ DP, but those of the noun itself, i.e. its ‘denotational’ argument.

The apparent problem with the uT -based approach to the nature of structural case is that common nouns clearly are interpretable temporally (Enç 1987, Musan 1995), a property that arguably rests on their inherent tense / event structure (Higginbotham 1985, 1987, Larson 1998). This assumption is forced on empirical grounds by the existence of languages that explicitly encode temporal information on noun phrases². In earlier work (Lecarme 1996, 1999a), I provided evidence that Somali DPs build the nominal equivalent of verbal ‘Tense chains’, a constructed interpretive device in the sense of Guéron & Hoekstra (1988, 1994). Assuming that the LF-external system of interpretation is essentially language-independent, ‘Tense chains’ must be available in all languages, not only those where such processes are visible - a conclusion that seems empirically well-grounded, given the existence of so-called aspectual or tenseless languages.

In this paper, I discuss the Somali facts in relation to P&T’s hypothesis and provide a detailed syntactic account of the relation between tense morphology and temporal interpretation. We begin with ‘tensed’ adjectival modification phenomena that furnish the first piece of evidence for the use of Tense as a feature of agreement in the Somali DP. I show that inflected adjectives in their attributive uses are the spelling of ‘little v ’, a defective head that does not project an external argument. Predicative nouns in modifier position, which agree for (uninterpretable) Tense and Definiteness, will be shown to be headed by a light verb inserted into the v node, so as to support uT , $u\phi$, and $uDef$. I will show that inflected adjectives and predicative modifiers both differ from relative clauses, whose temporal structure is independent from that of the modified DP.

The most obvious task is to explain the role of Tense in genitive constructions. Adopting the Distributed Morphology view that nouns and verbs are morphosyntactic categories created by the syntax, and that argument roles are mapped from ‘bottom to top’ according to the compositionality of event structure, I suggest that the ‘possessor’ argument is introduced by an applicative head APPL (some ‘inner’ version of ‘little v ’), like the benefactive / dative of English double object constructions (Marantz 1993, Pylkkänen 2000). This proposal is motivated by language-

¹This article is based on material presented at the International Workshop on the Syntax and Semantic Interface (MIT, May 1998) and the International Workshop on the Syntax of Tense and Aspect (Paris VII, November 2000). I wish to thank the participants in both events. I am most grateful to Jacqueline Guéron and Richard Larson for oral and written comments on this or earlier versions, important questions and suggestions, even though they would not agree with all my ideas.

²Nominal tense morphology is found not only throughout the East Cushitic languages, but also in totally unrelated languages, among them e.g. Nootka (Safir 1921), Kwakiult (Boas 1947), St’at’imcets (Demirdache 1997), Halkomelem (Burton 1997, Wiltschko 2001). I suspect that the phenomenon is much more widespread in Afroasiatic, and that the facts I have noted are just the tip of the iceberg.

internal evidence: in Somali applicative constructions, the ‘higher’ applied object argument (the pronominal argument that is linearly expressed closest to the verb) comes from the possessive pronoun paradigm. This analysis accounts for the fact that alienable possessors and inalienable possessors in Somali behave differently with regard to tense marking. If, as I will argue, structural genitive is contingent on the presence of *uT* on APPL, where APPL is interpreted as the θ relation that holds between its complement NP and its Specifier position, then we can explain the observed fact that this relation can be temporally located. Thus, the ‘applicative’ analysis approach to structural (and inherent) genitive case may provide further generalization of P&T’s overall proposal.

Assuming the hypothesis that D is endowed with an ‘unvalued’ tense feature (the syntactic reflex of the time-sensitivity of nominals), structural case is associated with an occurrence of T. This proposal has consequences for other phenomena outside the domain of facts investigated in P&T. Unlike English DPs, Somali DPs solve the ‘tense problem’ of D by attracting T in D, thus marking the *uT* feature of D for deletion internal to DP. As a consequence, Somali DPs and CPs have the same distribution. This accounts for the basic properties of the language, which falls under the ‘pronominal argument’ typology (Jelinek 1984). If this correlation were to hold crosslinguistically, then P&T’s hypothesis would provide a simple and elegant account of the configurational properties of languages.

2 Nominal tense: Overview

2.1 The Somali determiner system

Somali among Cushitic languages has a particularly rich and detailed system of spatial and temporal reference³. A striking feature of this system is that space and time are separately encoded. Besides the near/far demonstrative enclitics *án*, *-áas*, *éer*, *óo* (a four-way proximity contrast), a specific *-íi* morphology, which we will refer to as *past* morphology, is used to set up purely temporal oppositions. Both the demonstrative morphemes and the tense/case morphemes are preceded by the gender markers *-k-* (m) and *-t-* (f), which agree with the noun:

(1) *Demonstratives*:

- k/t-an ‘this, these’
- k/t-aas ‘that, those’
- a. -k/t-eer ‘that, those’(far away)
- k/t-oo ‘that, those’ (very far away) (cf. Andrzejewski 1964:119)

Descriptively, the tense endings are **u** and **a** in the present tense, **-ii** and **-íi** in the past tense⁴:

(2) *Tense*:

- | | | | |
|----|--------|---------|---------|
| | | [-past] | [+past] |
| a. | [+nom] | -k/t-u | k/t-ii |
| | [-nom] | -k/t-a | k/t-íi |

I shall assume here that the basic opposition is *a/i*, clearly reflecting the vowel alternation *a/i* for nonpast/past in Afroasiatic. I further assume that Somali D is \emptyset with gender agreement and tense incorporated to D (T-to-D). There is no indefinite article in the language. Indefinite articles then are \emptyset with covert gender agreement (which in some cases surfaces overtly, as we will see section

³This system seems to be found only in the East Cushitic languages closely related to Somali (see Heine 1978:27). Among the four demonstrative morphemes, only the two first ones can also be used in an abstract sense, as their English translations; *-éer* and *-óo* are used (in some parts of the Somali-speaking area) to encode far but visible distance. For phonological reasons that are not all well understood, /k/ may surface as /h/ or / \emptyset /, and /t/ may surface as /d/ or /sh/.

⁴The complex morpheme *-kii/tii* is referred to as the ‘definite article of the remote type’ (Andrzejewski 1964:119).

4.2).

The tense and demonstrative enclitics are in complementary distribution, but still cannot be considered as belonging to the same category. Tense morphemes can be used deictically (speaker-oriented visibility / invisibility, including invisible distance⁵, as in (3a)). Somali demonstratives *cannot* be used temporally (grammatical location in time) (3b):

- (3) a. gabdhí-hii aawéen
girls-detM[+past] where-are
Where are the girls?
b. tuulá-doo hore
village-detF.dem before
That village yonder

This is expected, given that a special, time-specific morpheme exists in the language. Besides this, near/far morphology is purely deictic, that is, is always interpretable. Although spatial morphology across languages can be used in the expression of time reference, it is well known that spatial features are not used in the computational system of grammar in the same way as tense features are. Demonstratives are purely referential categories, and have an invariant, indexical construal. Plainly, this is true neither of present or past.

2.2 Case versus Tense

Somali is a nominative/accusative language, in the sense that the subject of both transitive and intransitive verbs is marked [nominative] (the term ‘absolutive’ sometimes used in the literature is therefore avoided here). The relevant opposition is operative only in adjoined (and prosodically independent) positions. Morphological case is marked not on the Noun, not even on the DP, but at the end of a ‘nominal cluster’ (Andrzejewski 1960), in my terms, a DP or CP constituent⁶. Although both tense and case morphologies tabulated in (2) appear as suffixes, they do not have the same distribution. Tense is a c-commanding element in the DP: in genitive constructions, it appears only on the head noun (4d); morphological case is marked on the rightmost constituent⁷:

- (4) a. dhibaatá-da Khalíj-ku welí way taagán tahay
problem-detF Gulf-detM[+nom] still F.3S permanent is
The Crisis of the Gulf still persists
b. dhibaatá-dii Khalíj-ku wáy dhammaatay
problem-deF[+past] Gulf-detM[+nom] F.3S ended[+past]
The Crisis of the Gulf ended

2.3 Nominal versus verbal tense and agreement

Our intuition identifies the *-ii* morpheme as the locus of tense meaning, expressing the same [\pm past] opposition as verbal tense (there is no future tense in the language). Is this morpheme the nominal equivalent of a past tense morpheme? As I mentioned in the preceding paragraphs, the [\pm past] opposition in nominals clearly reflects the Afroasiatic *a/i* nonpast/past vowel alternation.

⁵In Cushitic as in other languages, there is a connection between the past tense and the category of evidentiality. In Lecarme, in preparation, I argue that the evidential character (nonvisible) is a particular instance of a modal use of the past tense.

⁶Other manifestations of nominative case include the *-i* morphology that appears as a suffix on indefinite nouns or larger ‘nominal clusters’, depending on their phonological shape. Prosodic factors also are relevant (see Andrzejewski 1964).

⁷Key to Somali gloss: F = ‘focus marker’ (I analyze the *baa/waa* morpheme as the declarative root C complementizer, cf. Lecarme 1991, 1999), detF/M = definite feminine / masculine article, dem = demonstrative, neg. = negation. Pronominal clitics are identified by their person, number, and gender features (upper cases). Low cases = agreement features. Referential 3rd person object pronouns are \emptyset in Somali.

Further parallels exist in the language between verbal and nominal morphology, as shown in (5). Here again, there is a parallelism between the gender morphology that agrees with the referent of the noun and the gender morphology that agrees with the subject of a verb (-*t*- in both cases), supporting the idea that the two are structurally parallel:

- (5) a. naág-t-ii magaalá-díi w-áy tag-t-ay
 woman-f-[+past] town-detF[+past] F-2FS go.to-f-[+past]
 The woman went to town
- b. naág-t-u gúri-ga w-áy joog-t-aa
 woman-f-[+nom] home-detM[+acc] F-2FS stay-f-[-past]
 The woman is at home

Assuming that both gender and tense are realized in D, nominal and verbal tense and agreement can be thought of in a parallel fashion: N incorporates to D, allowing the uninterpretable ϕ features in D to agree with the ‘subject’ of the NP predicate, i.e. its denotational argument.

2.4 Uninterpretable tense

Although clear morphosyntactic parallels can be drawn between nominal and verbal tense, the Somali evidence clearly shows that these domains are syntactically and semantically independent. Nominal tense need not ‘agree’ or even be compatible with the tense of the main (i.e. verbal) predicate; the tense of a relative clause need not coincide with the tense of its definite head (for detailed examples, see Lecarme 1996, 1999a). In languages that have temporal systems, tenses are well-known to behave sometimes as if they were not interpreted: [+past] does not always mean PAST, or does not contribute any meaning of anteriority. Likewise, in some of its uses, past tense in nominals is clearly uninterpretable, a fact that makes sense only if it is used as a formal feature of the computational system. The sharpest data from Somali involve the past tense used to ‘exclude’ a DP from the habitual or generic present tense interpretation in the clause. In (6a), in which the present tense locates the habit of eating, the past tense indicates that the DP that serves as a ‘topic time’ may not be interpreted as a specific reference time. A sentence such as (6b) can be paraphrased not as ‘it is generally true of children’, but ‘of a ‘familiar’ set of children that they play football a school every evening’. As for (6c), a generic sentence expressing a quantification over all men who want to do everything perfectly (excluding the interpretation ‘that man who presently wants...’), the past tense is used to place ‘the man’ outside the scope of the main predicate’s tense operator:

- (6) *Habitual / generic sentences:*
- a. (wéligay) dúhur-kii baan wax cunaa
 (always) noon-detM[+past] F.1S thing eat[-past]
 I (always) eat at noon
- b. galáb walba carrúur-tii kubbád-da cágta dúgsi-ga bey kú
 evening every children-detF[+past] ball-detF foot-detF school-detM F.3P at
 cayaaraan
 play[-past]
 Every evening the children play football at school
- c. nínkii wax wada qummán doonaa wax la’áan búu dhaxlaa
 man-detM[+past] thing all perfect wants[-past] thing lack F.3MS inherits[-past]
 The man who wants to do everything perfectly becomes a heir to nothing (proverb: Xi-VII)

In Lecarme, in preparation, I argue that all these ‘fake’ past morphologies that receive a nonpast interpretation are further examples of the interaction of the past tense with the modal domains (conditional, hypothetical clauses), for which we have wide crosslinguistic evidence (see Iatridou

1996).

To summarize: even though nominal tense, like verbal tense, can be associated with deixis, there are fairly solid grounds for assuming that a purely nominal temporal system is empirically attested. In a purely deictic system, all the features are interpretable: the interpretation of a [past] form ought have a constant value. This clearly is not the case in Somali, where tense is used as a feature of agreement in DP modification, as discussed in greater detail below.

3 The temporal structure of noun phrases

3.1 Explaining nominal tense: previous attempts

Most of the arguments in the literature for a referential vs. a quantificational approach to tense theory crucially involve the temporal interpretation of noun phrases. The ability of nominals to ‘float out of the scope’ of tense operators has led Enç (1987) to posit time variables inside nominal expressions. This has been used as evidence to support a system such as Kamp’s Discourse Representation Theory, in which the temporal interpretation of nominals is determined only by the context of utterance. It was clear at the outset that this formulation is oversimplified in crucial respects: the time of a nominal could be any time, so long as the interpretation is what the context wants. This is because the contextual approach is sensitive only to factors outside the syntax of the nominal phrase. In fact, as discussed by Musan (1995), Enç’s generalization only holds for noun phrases that can be restrictive (*some of the congressmen*). The temporal interpretation of cardinal NPs (*some congressmen left*) is in most cases dependent of the interpretation of the verb. In Musan’s theory, the freedom of interpretation of presuppositional noun phrases is explained as a consequence of determiner quantification being analyzed as quantification over stages of individuals (Kratzer 1988), rather than individuals in their whole temporal extendedness. This approach is taken by Demirdache (1997) in her analysis of nominal tense morphology in Salish.

Although the stage semantics approach is a significant move toward a more explicit account of the syntactic basis of the temporal interpretation of noun phrases, this approach, by itself, has nothing to say about the main empirical problem: given the undeniable existence of ‘nominal tensed’ languages, the postulation of a time variable in nominals is more than a kind of conceptual necessity. Although it is difficult to explain why languages have a productive use of nominal tense features, their existence is a fact. In Somali, tense is a feature of any (common) noun⁸, not only nouns that are said to include an event as part of their lexical semantics. Some occurrences of the past tense morpheme are semantically active, others are uninterpretable, mere agreement reflexes of other elements. These facts are of a syntactic nature, and cannot plausibly be determined by the semantic properties of the determiners. The problem of accounting for the distribution of tense morphology in some principled way remains open. We must then conclude that nominal tense, a universally available option of natural language, cannot be explained in the way that Enç and Musan have suggested.

3.2 A syntactic approach

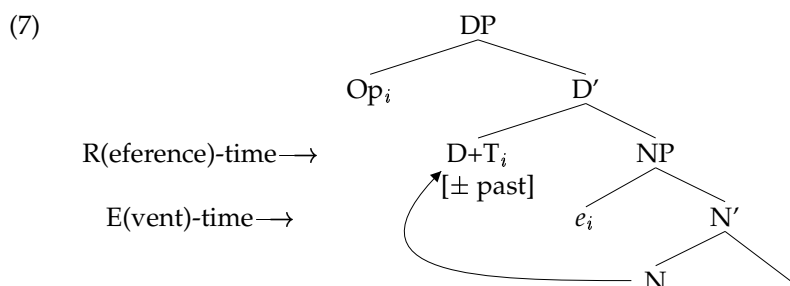
In recent work, I explicitly attempted to formulate an alternative to the standard semantic approaches, asking how nominal tense can be simultaneously grammatical (computational) and context sensitive. My proposal (Lecarme 1996, 1999a) was that the temporal structure of nominal phrases is strongly parallel to that of clauses, i.e. CPs, with a category D formally parallel to a C. This proposal includes the following (conventional or more controversial) assumptions:

- Determiners, like proper names or connectives, have the same extension at every point in time: it is then T, not D, that is the element responsible for the ‘time sensitivity’ of noun

⁸The tense system seems to exclude abstract nouns and names, as expected.

phrases.

- Time reference (C or D selecting T) is a universal property of language, independent of whether a given language has grammatical tense morphemes or not. Feature selection (a grammar selecting [T] as a formal feature for use in the computational system) is the locus of parametric variation.
- DPs can introduce tense operators. The temporal interpretation of noun phrases is syntactically construed as the creation of a 'Tense chain' (Guéron & Hoekstra 1994), in which a tense operator in Spec,DP binds the variable *e*-position⁹. I use *e* in (7) in the more general sense to cover the denotations of both (kinds of lexical) nominal and verbal 'entities':



The tense / event structure of nominals and clauses does not differ: a chain Op_i, T_i, e_i is the interpretive process which brings together C-T-V and D-T-N to form 'propositional' categories (like Event or Thing) at the semantic interface. There is, however, a real syntactic sense in which a nominal is smaller than a clause, with the latter including 'verbal environment' heads lacking in the former, e.g. the 'light verb' head of transitive constructions (Chomsky 2000) or the 'cause' head projecting syntactic agents (Marantz 1997).

3.3 Events and other entities in time

In the literature, the entities to which verbs refer are usually called events (Davidson 1967). As Higginbotham (1987) observes, an additional clause 'e occurred at t' is needed to link the entity with its time of occurrence. These variables cannot be introduced by the predicates, since there is no one-to-one correspondence between the 'Davidsonian' event arguments and the syntactic variables bound by Tense (obviously, there is no problem with temporally locating stative verbs or predicate adjectives). If Tense must bind a variable syntactically even when there is no 'Davidsonian' argument, then it is plausible to assume that the time variable is somehow introduced by T.

Intuitively, the system we use to describe events or objects in time should not differ: events can be located in time, but also individuated and counted, and we expect to find some grammatical reflection of this in the verbal domain too: this is the case in most Afroasiatic languages (including Somali) where the property of countability is realised in the verbal domain by similar morphological processes as with nominals (e.g. reduplication)¹⁰. On the other hand, nouns like verbs

⁹In Guéron & Hoekstra's analysis, the temporal interpretation of a finite clause is syntactically construed as the creation of an extended chain $[Op_i, T_i, V(e_i)]$, which links the T/V complex to the C domain. The e-time represented in T is fixed relative to the speech time, which is itself represented in the C-domain, for example in the form of a deictic operator. Following an initial suggestion by Guglielmo Cinque, I assume throughout this study that in Somali, T is syncretic with Det, that is, in the present framework, what is pronounced as *-kii/-tii* is T morphologically merged in D (D itself, I assume, is null in Somali).

¹⁰This phenomenon is known as 'pluractionality' (Newman 1990. See also Fassi Fehri, forthcoming). 'Pluractional' verbs in Somali (transitive and unergative), depending on their meaning, are ambiguous between an intensive, repetitive or inchoative reading (the 'plurality of event' reading), and a quantitative subject (or object) reading.

describe properties, events or states that can be truly predicated of individuals at certain times. If, as Rothstein (1999) has argued, temporal locatedness is a property of countable (and individuable) expressions in the verbal domain, then the semantic domains of nominal and verbal tense must be strongly parallel.

Larson (1983, 1995), Higginbotham (1985, 1987) appeal to event variables in nominals to allow for the temporal modification of common nouns. However, since nominal tense in Somali is a property of any DP (common nouns), not only nouns like ‘dancer’ or ‘president’, the time variable cannot be equated with the *e*-variable of those Nouns which include an event as part of their lexical semantics: there is a proper distinction between an event interpretation made available semantically from the noun’s meaning and the time interpretation constructed by the Noun. I will then assume that nouns (like verbs) denote or name pairs that consist of a time and an abstract position in the object denotation. In the following, that will be represented as $\langle e, x \rangle$ where *e* stands for the (time-sensitive) ‘entity’ variable (corresponding to Williams’ (1981) ‘R’ non theta argument), and *x* a place holder for the ϕ features of a noun. The time variable, as usual, will not be represented. In a system in which categorial features are eliminated from root (cf. Marantz 1997), the entity named by the noun is syntactically an nP, with n hosting the associated $[\phi]$ and $[uT]$ features.

I have been arguing that the verbal and nominal domains are parallel with respect to tense / event structure. In the following subsections, I want to look more closely at how exact this parallelism is.

3.4 Time modifiers

In Somali, a $[\pm\text{past}]$ nominal tense and a temporal modifier must not conflict. As seen in (8a) and (8b), lack of agreement leads to ungrammaticality:

- (8) a. *sánnad-ka/*-ii* *dambe*
 year-detM[-past]/*[+past] next
 next year
- b. *sánnad-kii/*-a* **hore**
 year-detM[+past]/*[-past] before
 last year
- c. *tulá-doo* *hore*
 village-detF.dem before
 That village yonder / # previously mentioned or former village

It might be objected¹¹ that in itself, (8b) does not show that the element *-ii* is tense. It is still possible that what we have here is ‘concord’ in deixis between a time adjective and what I call a tense morpheme. But as (3b), repeated here as (8c), clearly shows, the ‘attributive’ adjectives *dambé* / *horé* ‘before / after’ do not have intrinsic temporal value. I will thus assume that the temporal value comes from the tensed DP.

In a nominal T-chain as in a verbal T-chain, different positions are available for the attachment of temporal modifiers. Definite temporal adverbials *shálay*, ‘yesterday’ *usbúucii hore*, ‘last week’ provide ‘topic times’ to both nominal and verbal predicates: in such examples, the time of *e* must be interpreted with respect to the contextually determined R-time:

- (9) a. *qabqabasháadii* *shálay*
 arrests-detF[+past] yesterday
 Yesterday’s arrests

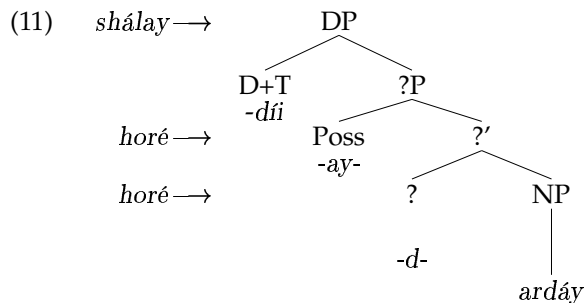
¹¹I owe this objection to Richard Larson.

- b. qabqabashá-dii usbúuc-ii hore
 arrests-detF[+past] week-detM[+past] before
 Last week's arrests
- c. bállan-k-ay-gii habeen hore
 promise-m-Poss1S-detM[+past] evening before
 My yesterday evening's promise

Possessive constructions supply a rich array of data that add crucial insight into the study of nominal tense (Lecarme 1996, 1999a). It is a well-known semantic fact (discussed most clearly, for example, by Larson 1998, Larson & Cho 1999) that the possession relation can be independently modified temporally. As the examples in (10) show, the time adjective *horé*, 'former, ex-' can modify either a noun (former student), or the possession relation (former student of mine). It must also be noted that 'my ex-student' (10c) has a narrower interpretation than 'the person who was a student / my student' (D-modification): the former, but not the latter, excludes the possibility of the individual still being a student / my student at the time of the utterance:

- (10) a. árdáy-gii hore, wasaarí-hii hore
 student-detM[+past] before, minister-detM[+past] before
 The former student, the former Prime Minister
- b. ardáy-d-ay-da dhammáan-t-ood (waa ilá soo xariiran)
 students-f-Poss1S-detF entirety-f-Poss3P (are in contact with me)
 All my students (are in contact with me)
- c. ardáy-d-ay-dii **hore** dhammáan-t-ood (waa ilá soo xariiran)
 students-f-Poss1S-detF[+past] before entirety-f-Poss3P (are in contact with me)
 All my ex-students (are in contact with me)

Three different positions, then, must be available in a nominal T-chain for the merging of temporal modifiers as N-modifiers, D-modifiers, and ?-modifiers, another time variable position available in between:



We put this aside temporarily, for ease of exposition, and leave further specification of the internal structure of DP to section 4.

3.5 Adjectives

Somali adjectives must agree with a definite head noun in gender and tense¹². Tense / agreement morphology can be attached to adjectives, contrary to English:

¹²Number agreement of the English or Romance type does not exist in Somali (see Lecarme 2002 for discussion). Reduplication in adjectives indicates agreement (concord) with plural subjects. This of course strongly recalls the 'pluractionality' facts mentioned in note 11. As adjectives typically are stative, no 'plurality of event' reading is available. A quantitative subject reading is therefore necessarily obtained.

- (12) a. xaashí yar oo cad
 paper small and white
 a small white sheet of paper
- b. xaashí-da yar ee cád (buu keénayaa)
 paper-detF small and white (he is.bringing)
 (He is bringing) The small white sheet of paper
- c. xaashí-dii yarayd ée caddayd (búu keenay)
 paper-detF[+past] small[+past].f and white[+past].f (he brought)
 (He brought) The small white sheet of paper

Because of these inflectional properties, adjectives are traditionally understood as subject relative clauses¹³. The most relevant descriptive fact is that all modification is postnominal in Somali. Since subject relative clauses, like adjectives, are expressed in postnominal position and do not have an overt complementizer or an overt subject either, adjectives and subject relative clauses look formally similar. Also, there is no positional difference between adjectival phrases, depending on whether they are used attributively or predicatively, as in English, where the postnominal adjective has an implicit relative reading (see e.g. Larson 2002). The relevant contrast is then not one of linear order, but relative closeness to the Noun: attributive adjectives occur between the noun and a genitive DP, contrary to relative clauses.

The idea that adjectives in Somali are verb-like is all the more intuitively plausible because of the well-known observation that they are inflected for tense. On the other hand, one may hardly claim that the class of spatio-temporal adjectives like *horé*, *dambé* are also underlying relatives, since they do not agree for tense or ϕ -features, and cannot be used in predicative environments¹⁴. Moreover, there are a number of well-known linguistic properties which distinguish adjectival predicates (white) from stative verbs (be white). A stative eventuality can be given a temporal location, while a state cannot be temporally located. Intuitively, adjectives in their attributive uses in (12) are direct Noun modifiers with an ‘individual-level’ flavour (the intrinsically small and white), and do not have inherent tense value: what is predicated of the noun is not a temporary, stage-level property, but a stable state of whiteness and smallness. If this is correct, then tense on attributive adjectives is uninterpretable (as bare APs cannot be temporally located), whereas (reduced) relative clauses are C-T configurations in which T has the properties of true Tense.

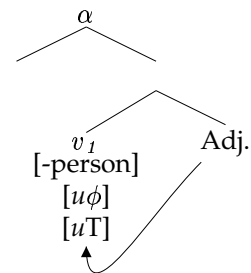
I will therefore assume that Somali inflected adjectives have both attributive and predicative uses, and that the ambiguity between direct modifier reading (‘small and white’) and implicit relative reading (‘who was small and white’) rests on a structural difference. The difference is subtle but clear when we compare inflected adjectives in their nominal vs. verbal environments. I assume that adjectives are the complement of ‘little *v*’, a defective (ϕ -incomplete) head that does not project an external argument. Inflected adjectives in their attributive uses can be represented as in (13): at the point in the derivation where the α subtree is pair-merged in the structure of the DP, the NP and Adj predicates compose under Agree, valuing the $u\phi$ on Adj. uT on Adj is eliminated by interpretable Tense on D:

¹³Adjectives have been called ‘hybrid verbs’ (Andrzejewski 1969) and are classed on a par with the verb ‘to be’ (root *-ah-*), a highly irregular Verb with which they share the same morphological tense endings. A most remarkable fact is that the tense vowels marking the nonpast/past alternation (*a/i*) are the so-called ‘polar opposites’ of the tense vowels of the other verbs (*i/a*). Since the phenomenon more generally concerns stative verbs (such as ‘remain’ and ‘know’), it would be interesting to relate the *a/i* vs. *i/a* ‘polarity’ to the tense/aspect system, as Hetzron has suggested (1980:106).

¹⁴Note, however, that this class of adjectives can be extraposed and syntactically conjoined with other adjectives, even though they are semantically nonintersective.

(13) *Inflected adjectives in a nominal environment:*

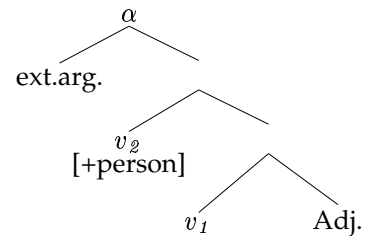
- a. árd_{ay}-ga wanaagsan
 student-detM good
 The good student
- b. árd_{ay}-gii wanaagsanaa
 student-detM[+past] pl-good[+past]
 The good student (went)



In their predicative uses, adjectives involve the structure (14) in which the functional head v_2 , a ϕ -complete functional head that projects an external argument and creates a verbal environment (cf. Kratzer 1994, Marantz 1997). The time variable of the adjective is bound in the C-T complex. The nominal (DP) tense and verbal (CP) tense domains then semantically ‘agree’ or concord:

(14) *Adjectives in a verbal environment:*

- a. árd_{ay}-gu wuu waanaagsán yahay
 student-detM[+nom] F.3MS good 3m.is
 The student is good
- b. árd_{ay}-gii wúu wanaagsan-aa
 student-detM[+past] F.3MS good-[+past]
 The student was good (on Monday)

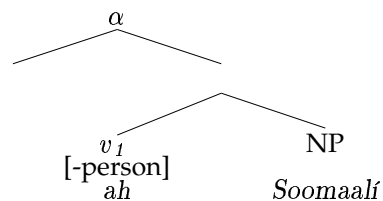


Thus, both predicative and attributive modification exists in Somali. Temporal adjectives like *horé*, *dambé*, which do not agree for either Tense or ϕ -features (and perhaps only have spatio-temporal features) have no little v (pure e -modification). They do not form a ‘small clause’ with an external argument, and never are intersectively interpreted. More data can be used as evidence to support these conclusions:

3.6 Tense and definiteness agreement

Let us now turn our attention to ‘definiteness’, another grammatical feature involved in Somali nominal modification. According to Vergnaud (1985:301), [definite] can function as a formal feature. As Borer (1996) has argued, some evidence that [definite] is indeed a feature in Semitic comes from the presence of definite concord on adjectives. Assuming that [Def] is a feature of D, predicative Nouns in modifier position in Somali must take a (semantically empty) definite article (u Def) iff the head Noun is (morphologically and semantically) definite. We can see both the tense and definiteness factors at work in (15) where, along the same line of analysis as in (14), a light verb (*-ah-* ‘be’, *leh* ‘have’, ...) is inserted into the v node, so as to support u T and $u\phi$:

- (15) a. ardayád soomaalí ah
 student.f Somali.f be
 A Somali student(f)
- b. ardayád-**da** soomaalí-**da** ah
 student.f-detF Somali-detF be
 The Somali student(f)
- c. ardayád-**dii** soomaalí-**da** ah**ayd**
 student.f-detF[+past] Somali-detF be[+past].f
 The Somali student(f) (who phoned you)



As shown in (16) and (17) as well as (15), these contrasts are grammatically robust with 'individual level' predicates such as 'Somali', 'famous', and even proper names:

- (16) *I-level predicates*
- a. nin cáan ah
 man fame be
 A famous man
- b. nin-**ka** cáan-**ka** ah
 man-detM fame-detM be
 The famous man
- c. nín-**kii** cáan-**ka** ah**aa**
 man-detM[+past] fame-detM be[+past]
 The famous man

- (17) *Proper names*
- a. dúq Warsáame
 old.man Warsame
 Old Warsame
- b. dúq-**ii** Warsamé ah**aa**
 old.man-detM[+past] Warsame be[+past]
 (all day long he looked for) The old Warsame

As Kratzer (1988) has noted, past tense exploiting individual level predicates, in contrast to stage level predicates, impose restrictions on the time-life of their subjects. Somali individual level predicates and proper names in the context of a past tense never trigger such effects, as they would if the past tense on the light verb were a true (i.e. semantic) tense ('the old man who was Warsame'). Idioms provide a further piece of evidence that definiteness and tense agreement are semantically empty: in fact, the paradigm illustrated in (18) can hardly be explained if this conclusion is not assumed, as idioms in general don't yield compositional meanings:

- (18) *Idioms*
- a. dád fará badan
 people fingers many
 Many people
- b. dád-**ka** fará-**ha** badan
 people-detM fingers-detM many
 The numerous people
- c. dád-**kii** fara-**ha** bad**naa**
 people-detM[+past] fingers-detM many[+past]
 The numerous people (# the people who had/were the numerous fingers)

Clearly, these structures are licenced by the syntax of the language, where definiteness and tense agreement consists of uninterpretable elements.

3.7 Relative clauses

As I argued in earlier work, there are further differences between inflected adjectives / predicative nouns and (reduced) relative clauses. Relative clauses are ‘closed’ temporal domains. The tense specification of a relative clause is independent of the (in)definite value of the head noun, as (19a-b) show. Past tense on attributive adjectives (19b) and predicative nouns in modifier position (20b), in contrast, is contingent on the presence of the head noun’s [past] definite article:

- (19) a. *dhibaatóoyin adag /*adk-aa [cpoo ká taagnaa Soomáaliya]*
 problems difficult /*difficult[+past] and from arose[+past] Somalia
 Serious problems that arose in (lit. from) Somalia
- b. *dhibaatóoyin-kii adk-aa [cpoe ká taagnaa Soomáaliya]*
 problems-detM[+past] difficult[+past] and from arose[+past] Somalia
 The serious problems that arose in Somalia
- (20) a. *ardayád soomaalí ah /*ah-aa [cpoo telefóon kúu soo dirtay]*
 student(f) Somali be /*be[+past] and telephone you-to towards sent.fs[+past]
 A Somali student who phoned you
- b. *ardayád-dii soomaalí-da ah-aa [cpoo telefóon kúu soo]*
 student-detF[+past] Somali-detF be[+past] and telephone you-to towards
dirtay]
 sent.fs[+past]
 The Somali student who phoned you

It must be noted that definiteness agreement extends to all subject relative clauses. As the contrast between (21a) and (21b) shows, the DP complement of V in a relative clause headed by an overtly definite DP must bear a (semantically vacuous) definite article:

- (21) a. *(wúxuu ahaa) nín gaaban/*gaabn-aa [cpoo ookiyaaló qabay]*
 expl.F.3MS was man small/*small[+past] and spectacles had[+past]
 (He was) a small man with spectacles
- b. *nín-kii gaabn-aa [cpoo ookiyaalá-ha/*ookiyaaló qabay]*
 man-detM[+past] small[+past] and spectacles-detM/*spectacles had[+past]
 The small man with (the) spectacles

I interpret these facts as evidence that syntactic definiteness and tense agreement are determined by independent mechanisms. The syntactic domain of [T] (interpretable Tense on D) includes the modifiers, but excludes the relative clause. The syntactic domain of [Def] includes the relative clause, as the feature content of D is crucially involved in how a relative clause is construed.

4 Genitive case

4.1 Tense and the ‘possessive’ relation

Given their tense properties, the Somali genitive constructions are an important source of insight into the nature of genitive case in general, and even more importantly, into the mechanisms introducing ‘additional’ arguments via functional heads in the syntax. I raised this theme tentatively in Lecarme (1996, 1999a). My discussion here is an elaboration of these remarks, and will lead to a new syntactic proposal that flows from the results reported in P&T.

Our starting point for the discussion will be a set of ‘structural’ genitive constructions (23)¹⁵.

¹⁵I will put aside the most clearly modifier-like genitives that occur in compounds: ‘inherent’ genitive case morphology is an invariable *-eed* (*aad/ood/∅*, depending on the noun stem). These non specific NPs cannot pluralize or be modified. Inherent genitive case does not depend on whether the head noun is definite or indefinite, and always occurs postnominally:

The first strategy is reminiscent of the ‘construct state’ found in the Semitic languages, in that it involves (linear) adjacency of two DPs without preposition or case¹⁶, but adjacency cannot be defined in prosodic terms: each DP is a prosodic word (22a). The licencing of a ‘possessor’ DP to the left of the head noun (absent in Semitic) is contingent upon the presence of an agreeing genitive pronoun (enclitic onto D). I assume that this pronoun is the ‘true’ argument in a genitive construction, conforming to the overall syntax of the language¹⁷. A genitive clitic can be interpreted anaphorically or referentially, depending on the presence of an A-binder in Spec,DP (22b):

(23) ‘Structural’ genitives

- a. búug-gii Máryan
 book-detM[+past] Mary
 The book of Mary
- b. (Máryan) búug-g-**eed-ii**
 Mary book-m-Poss3F-detM[+past]
 Maryan’s book / Her book

In both (22a) and (22b), tense is marked on the head of the construction: there is a syntactic rule that serves to delete the [past] tense morpheme on a locally dependent DP. This suggests that the genitive DP is licenced in the structure only when in the c-command domain of another occurrence of T, much as a CP headed by *that* in English is licenced in the c-command domain of another T. In fact, the tense properties of the DPs involved are the crucial factors that determine the distinctive properties of these constructions. (cf. Lecarme 1996, 1999a)¹⁸. Somali does not have PP constituents, as discussed in greater detail below¹⁹. As shown in (23a), restrictive modification is construed as overt asymmetric coordination²⁰:

- (24) a. búug-gii yaraa ee Máryan
 book-detM[+past] small[+past] and Mary

(22) ‘Inherent’ genitive case

- a. dhibaatoóyin farsamo iyo cilmiy-*eed*
 problems(m) economics(f) and culture(m)-*eed*
 Economical and cultural problems
- b. haléel-ka maskax-*eed*
 activity-detM brain(f)-*eed*
 The brain’s activity
- c. haleel maskax-*eed-ka*
 activity(m) brain(f)-*eed-detM*
 The cerebral activity

¹⁶As mentioned in section 2.2, the complex DP as a whole is independently marked for case, which may show up on the rightmost constituent.

¹⁷As I discussed elsewhere (e.g. Lecarme 1999b), Somali DPs are licenced either as A’ adjuncts, in positions where a binary morphological case system [\pm nominative] is operative, or as A-adjuncts in Spec,CP or Spec,DP, where they are marked uniformly with the ‘default’ accusative (nonnominative) case. There is further evidence in the language that the whole DP functions as a domain for pronoun and anaphor binding, e.g. a genitive pronoun may not c-command a coreferential DP in postnominal position.

¹⁸I assume here that the (right iterative) postnominal DP is a complement to N, much in the same way as a dependent CP is a complement to V. This assumption slightly departs from the proposals offered in the works cited, where postnominal genitive DPs were assumed to occupy a Spec,NP position. The fact that the complement of a noun may be a bare DP in Somali, in contrast to English, is directly explained as a consequence of the fact that the Somali DP is ‘self sufficient’ with respect to *uT* on D (cf. P&T, this volume). One argument for this view is that interrogative DPs, which do not host an instance of T in D, are not acceptable in postnominal construction (**búuggii qoraagée* ‘the book of which author?’ [qora-g-ée = author-m-Q]).

¹⁹The well-known exception is the preposition *ilaa* ‘until, as far as’ borrowed from Arabic. Place locatives like *above, below, inside, outside...*, as in many languages, are nominal expressions that take the form of a genitive construction.

²⁰I assume that both conjunctions *ee* [+def] / *oo* [-def] ‘and’ involve xP coordinate structures below ‘shared’ material (cf. Lin 2000), in particular, Tense. Another coordinating particle (*iyoo* ‘and’) is used for NP/DP constituents.

The small book of Mary

- b. Máryan waláal-k-eed búug-g-iis-ii yar-aa
Mary brother-detM-Poss3F book-m-Poss3M-detM[+past] small[+past]
Mary's brother's small book

As in any language, genitive case has a purely structural meaning: in the following example (a book's title), there is no possible reading yielding the interpretation that the Death enters into a possessive relation with the beach, presumably because *Geerída* 'the Death' does not satisfy the selectional restrictions for possession: crucially, the pronominal construction involving a possessive pronoun is not possible either:

- (25) a. Xeéb-tii Geerí-da
beach-detF[+past] death-detF
The Beach of Death (book's title)
b. *Geerí-da Xeéb-t-eed-ii
death-detF beach-f-Poss3F-detF[+past]
*The Death's Beach

The only possible reading, yielding the interpretation that the beach was the locus of some killing event in the past, needs some kind of contextual specification in order to make (24a) fully interpretable. Intuitively, the genitive DP here functions essentially as a temporal modifier: the 'possessor' plays the same role as the time adverbials in (9), that of temporally locating the genitive relation. The alternation (23) as well as 'nonpossessive' cases like (24) pose a number of related questions concerning the internal structure of the DP in similar examples across languages. One question concerns the source of case for the genitive DPs. Another concerns distribution contrasts between the 'possessive pronoun' variant and the DP DP variant. I believe that these questions can be answered only by investigating the role of temporal location in these constructions. What Somali does is to present the genitive relation from a temporal perspective. The crucial property which is added is that the temporal relations which take place covertly in constructions of the possessive meaning in other languages (or are 'metaphorically' expressed by means of a spatial feature) take place explicitly in the syntax.

What, then, is the relation between the morphology we see and the interpretation we get? The generalization I attempted to formulate in Lecarme (1999a) is that a genitive construction relates the individual referred to by the DP to another individual and a temporal location:

- (26) $the_{x,t}$ [book (x,t) & small (x,t) & R_t (x, Mary)]

What the structure in (25) is intended to capture is that, as we mentioned section 3.4, past tense on D can unambiguously locate the possession relation²¹. In the semantic representation, the contextually relevant 'R' relation (cf. Partee 1983, Higginbotham 1983) supplies a free time variable that must be interpreted in association with the [\pm past] tensed definite determiner.

Two problems arise with this proposal, though. First, if the time variable is introduced in the representation in association with the contextual 'R' relation, then its value must be provided by the context. We might, then, expect that the tense marked in Somali genitive constructions should be purely indexical. Yet, as I discuss in section 4.2.2, this is not always the case. A second, and more important, issue is that according to (25), the genitive relation is a modification relation, treating 'free R' possessives as (intersective) modifiers. What the representation shows is that genitives are very similar to adjectives in that the 'R' phrases are indeed the form of a reduced

²¹In Halkomelem, a Salishan language, the past tense morpheme attached on nominals may ambiguously locate either the nominal or the possession relation (see Burton 1997). The reason why we get the 'deceased', 'destroyed' and 'loss of possession' readings in Halkomelem but not in Somali might be that the Halkomelem *-lh* morpheme is not quite a tense morpheme (D-T), but rather some kind of adjectival / adverbial time word, with some inherent lexical semantics which allows it to apply naturally to either kind of entity, event/state or non-event individuals.

relative clause. This only provides the interpretation of ‘modifier’ genitives, including genitives with a non-possessive meaning, such as (24a), and does not offer an explanation for why (24b) is impossible. There must be a distinct syntactic source for ‘argument’ genitives; (25) leaves open the question of what it might be.

I am going to argue that there is a distinction to be made between argumental and modifier genitive constructions. In order to see this, we need first to look at some crucial properties of indefinite possessives, which are indeed construed as modifiers and reduced relative clauses:

4.2 ‘Possessive’ DPs vs. possessive sentences: indefinites

As noted earlier, Somali indefinite nouns have no (overt) article and no tense. Like definite phrases, they allow both postnominal and prenominal NP ‘possessors’ (26a-b):

- (27) a. waanó waayeel
advice wise.man
A piece of advice of a wise man
- b. *(waayeel) waaná-d-iis
wise.man advice-f-3MS
A wise man’s piece of advice
- c. (waayeel) waaná-d-iis-ii
wise.man advice-f-3MS-past
The piece of advice of a wise man / his piece of advice

Observe, however, that the prenominal NP in (26b), contrary to (26c), is not optional in the structure (compare also (22b)). The possessive morpheme in indefinite constructions therefore is not the possessive pronoun, but rather ‘agreement’ in that it cannot get independent reference. Assuming that the presence / absence of Tense makes the crucial difference, I take both constructions (26a-b) to involve inherent or, in terms of the present study, ‘tenseless’ genitive case²².

Crucially, only a definite noun can licence a ‘possessor’ DP. When a noun is indefinite, alienable possession can only be expressed in a relative clause that explicitly spells out the possession relation (root *leh* ‘have’):

- (28) a. búug arday-*eed*
book student-*eed*
a student book (= a textbook)
- b. *búug Máryan
book Mary
a book of Mary’s
- c. búug Máryan ∅ léedahay
book Mary (it) has
A book of Mary’s (lit: (a) book (that) Mary has)

This extends to other, non-possessive relations, such as partitive relations (28), or kinship relations (29):

- (29) a. cútub-ka saddexaad ee búug-gan
chapter-detM third and book-detM.dem
The third chapter of this book

²²See note 15. Whatever is the analysis of (26b), I assume that the syntactic structure is mediated by the ‘little n’ hosting the gender feature of a noun or stem (cf. Lecarme 2002).

- b. *cútub búug-gan
chapter book-detM.dem
A chapter of this book
cútub ká míd ah búug-gan
chapter from one 'be' book-detM.dem
A chapter of this book (lit. (a) chapter which is one from this book)
- (30) a. gabádh-dha yar ee Dírir
girl-detF small and Dirir
Dirir's small girl
- b. gabádh yar oo Dírir ∅ dhalay
girl small and Dirir (her) begat
A small girl of Dirir's (lit. (a) small girl and Dirir gave birth to (her))

Why should this be? The answer seems to lie in some properties of the Somali determiners. It is a well-known semantic fact that possessive nominals are definite descriptions (Barwise and Cooper 1981), and that structural genitive involves a 'strong' reading of the determiner (e.g. Milner 1978). Unlike French indefinites, however, Somali indefinites cannot get a 'strong' interpretation. The universal reading is not available for bare plurals, which must be interpreted existentially:

- (31) a. *maróodi-gu / *maroodiyáal waa naasléy
elephant-detM[+nom] / elephants(f) F mammal
The elephant is (a) mammal
- b. maróodi-gu waxaa ká míd yahay naasley-da
elephant-detM expl+F from one is mammal-detF
The elephant is a mammal (lit. is one from the mammal)

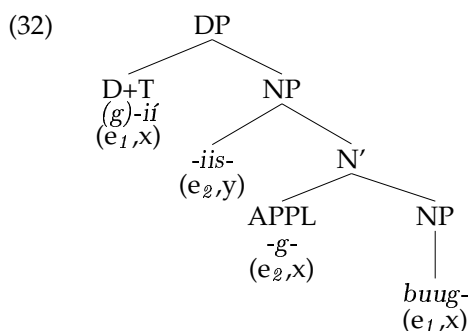
The answer I have suggested is that genitive constructions universally involve a form of quantification, but the conditions of use of quantified expressions vary among languages in the choice of the feature that are used by the computational system. Given the 'derivational' nature of pluralization in Somali, the [pl] feature plays virtually no role in the syntactic computation: there is no syntactic plural agreement in the DP, no determiner quantifiers, i.e. quantifiers that behave as determiners like *every*, *all* (D+Num). Tense morphology then plays the same role as number morphology in the functional domain of nominals.

Still, the contrast between (28b) and (28c) is sharp and needs to be explained. Intuitively, Somali indefinites have no structural possessor in their representations, because the rest of the structure (D+T) is lacking. What we have here is indeed a conjunction of predicates, a modification relation. Structural genitive on the other hand is a reflex of the D-T relation, just as nominative case, according to P&T, is a reflex of the C-T relation. But for this to be a solution of any interest, there must be a distinct representation for structural genitive. If it is not modification, what is it? If these questions have no answer, our suggested explanation is no more than an observation.

Clearly, we want to keep the idea that the 'possessor' is a purely structural role, with no inherent semantic value. At the same time, we do not want to abandon Benveniste's (1966) insight that possessive constructions contain a 'disguised' locative (i.e. *be* + locative preposition, see Guéron 1995). Kayne 1993, Larson & Cho 1999 among many others give a number of arguments in support of a derivational view of this relation, but I won't rehearse these analyses here. Instead, I want to suggest an alternative to it based on Marantz's (1993) analysis of double object constructions. The analysis explains the relevant facts, preserves DP as a non verbal (and non clausal) syntactic and semantic category, and also captures the 'uT on D' view of structural case in the nominal domain.

4.3 The APPLicative analysis

There is another way of thinking about the relation between nouns and their ‘possessors’. According to this other approach, the genitive is not a predicate (or an argument inside of a predicate phrase acting as an intersective modifier), but an ‘applied’ argument in a complex predicate construction (Larson 1988), like the higher object in English double object constructions (Marantz 1993 and much related recent work). On Marantz’s assumption that argument roles are mapped from ‘bottom to top’ according to the compositionality of event structure, such constructions are ‘hidden’ applicatives in which the benefactive / recipient is licenced in the Spec of the higher V, a null applicative morpheme. Likewise, possessive constructions can be viewed as the nominal equivalent of double objects constructions. Plainly, the genitive argument is not a ‘true’ argument of the Noun. The so-called ‘possessor’ is actually an ‘affected object’ introduced by an APPLicative head, interpreted as the θ -relation that holds between an individual that is merged in its specifier position and the individual described by its complement NP. In other words, a structure for possessive constructions may look like (32), where alienable ‘possessors’ are merged in Spec,APPL, and APPL semantically constructs e_2 by taking e_1 as complement in a complex predicate construction:



Marantz’s account of double object constructions relies on the idea that such structures are not derived (contrary to Larson 1988). Likewise, I assume that the possessor is introduced by Merge (contrary to Larson & Cho 1999, where obliques are converted into genitive case marked objects). This assumption is supported independently by the fact that Somali does not have PPs or obliquely case-marked constituents. Before turning to the more complicated facets of the Somali applicative system, I will mention briefly some tense properties of inalienable possession and predicative genitive constructions that bring converging evidence for the analysis just sketched.

4.3.1 Inalienable / alienable possession

As I noted in earlier work (Lecarme 1996), the distribution of tense morphemes in relational nouns (kinship terms, body part nouns, part-whole expressions) is restricted in a way not observed in other DPs. As (32a) shows, nouns like ‘mother’ never inflect for tense. A past tense marked on *habártood* ‘mother’ would trigger, not the so-called ‘deceased’ reading, but the same awkward interpretation as ‘ex-mother’, clearly indicating that the tense so marked unambiguously would locate the (atemporal) kinship relation²³. Likewise, inalienably possessed DPs never are marked with [past]. In (32b), the past tense marked on the inalienable possessor *cúnuggii* ‘the child’ matches that of the matrix verb (as nominal tense and verbal tense generally overlap or ‘concord’ in the unmarked case), but the inalienably possessed DP *gacánta* ‘the hand’ is obligatorily nonpast:

²³Somali marks a distinction according to the unicity / non unicity of the kinship relation. Tense on nouns like ‘son’ or ‘brother’ is possible, unambiguously locating the time of the individual.

- (33) a. macallimád-ood-íi iyo habár-tood/*-ii
 teacher.f-detF.poss3P[+past] and mother-detF.poss3P/*[+past]
 Their teacher (f) and their mother
- b. gacán-ta/*-ii ayaan cúnug-gii ká qabtay
 hand-detF/*[+past] F+1S child-detM[+past] from took[+past]
 I took the child by the hand

On Marantz's (1993) analysis of double object constructions, alienable possessors are compositionally outside the event e_1 constructed by the Verb. While the benefactive is always located in e_2 outside the event affecting the Theme, inalienable possession is taken to occur within the same e as that affecting the Theme. Transposing these relations in the noun phrase, the 'applied' possessor involves an individual e_2 separate from e_1 in the representation. The tense value assigned to the possessor and the tense value assigned to the inalienably possessed cannot differ, given that they cannot independently be located, i.e. the location of the former necessarily includes the location of the latter.

4.3.2 Predicative genitives

The distribution of tense morphology in Somali predicative genitives also provides evidence for the proposed analysis. In the context of nominal predication, and more generally in the present tense, predicate possessives exhibit an exceptional pattern in that the alienably possessed DP must be marked [+past], as evidenced by the following examples²⁴:

- (34) a. búug-gani waa búug-gíi Maryan
 book-detM.dem F book-detM[+past] Mary
 This book is Mary's book
- b. búug-gan waa búug-g-ay-g-ii / waa k-áy-gii
 book-detM.dem F book-m-Poss1S-m-[+past] / F m-Poss1S-detM[+past]
 This book is my book / is mine
- c. adí-gu xáas-k-ay-gíi baad tahay
 thou-detM[+nom] wife-m-Poss1S-detM[+past] F.2S fs.is
 You are my wife

Why must there be a [past] morphology on the DP predicate? A well known semantic fact is that the kind of possession involved here is not so-called inalienable, 'individual-level' possession, but temporary, 'stage-level' possession. There is reason to think that PAST does not bind e_1 : although the DP is definite, it lacks the discourse properties of definite DP arguments, as well as the uniqueness property of definite DP predicates. If 'free R' were involved in the interpretation of predicate possessives, then the time of the predicate possessive would be determined by context. We would not expect a past tense to obligatorily appear in these constructions. Thus, the only viable proposal is that is that PAST binds e_2 , conveying the interpretation that the possession relation holds before the time of utterance.

4.3.3 The Somali applicative constructions

The most remarkable descriptive fact about the parallelism between genitive and double object structures is that in the Somali applicative constructions, the 'applied' genitive pronoun²⁵ comes from the possessive pronoun paradigm (note that third person referential object pronouns are null morphemes in Somali):

²⁴Identity sentences such as (33a) and (33b), with both nominal referential, illustrate the use of *waa* as a copula, and lack all verbal morphology such as tense, aspect or voice (see Lecarme 1999b).

²⁵The term 'oblique object pronouns' is used in previous work of mine, 'second series object pronouns' in Saeed (1999:73). I take the initial element /k/ to represent [masculine] (that is, lack of [feminine]) realized in D, assuming that clitic pronominals can be formally defined as the tenseless (more generally, INFLess) version of a DP.

(35)	a. 'Possessive' pronouns	b. 'Applied' object pronouns	
	1	(-t/k)-áy-	k-áy
	2	(-t/k)-áa-	k-áa
	3m	(-t/k)-íis-	∅
	3f	(-t/k)-éed-	∅
	1Pexcl.	(-t/k)-ayó-	k-ayó
	1Pincl.	(-t/k)-éen-	k-éen
	2P	(-t/k)-íin-	k-íin
	3P	(-t/k)-óod-	∅

This morphological parallelism provides strong empirical evidence for the proposed analysis. To show this fully, it is necessary to describe the main properties of the Somali applicative constructions, concentrating on those that are of interest to the problem at hand.

Somali exhibits a particular type of the applicative constructions originally best known from Bantu languages, but now recognized in a number of languages after Marantz (1993) and much related recent work. As in Bantu, the Somali applicative constructions arise from an 'extended' verb form that introduces those arguments which in many languages are expressed as obliques (adpositions or semantic cases). The Somali 'applied' morphemes²⁶ indicate a wide range of semantic roles, depending on the meaning of the verb. Their more common meanings are *ú* = allative (dative)/ benefactive, *kú* = locative / instrumental, *ká* = ablative, *lá* = comitative. They do not have independent lexical content (e.g. *ú* may mark both the allative and the benefactive, *kú* may mark both the instrumental and the locative, and the two may co-occur in the same sentence). The applied form is the only grammatical means for adding these semantic arguments to the verb, as there are no prepositional or obliquely case-marked phrases in the language²⁷. Also, the 'applied' morpheme may appear as part of the lexical representation of the verb, as it also appears in compositions, and quite a number of 'applied' verbs do not exist as independent forms. This distribution is hardly consistent with a 'preposition based' account (e.g. Baker 1988) according to which the 'applied' morpheme must be adjoined material that starts out subordinate to the matrix Verb. This approach also would prove inadequate on grounds of learnability, given the lack of positive evidence available to the child acquiring the relevant structures.

Somali rather follows the Indo-European pattern of applicative constructions (the preverb + verb compositions indeed constitute a 'single semantic word' comparable to simple lexical verbs, yet they permit *tnesis*, or syntactic separation). While in Bantu languages the applied morpheme is incorporated into the verb, the Somali 'applied' morphemes *ú kú ká lá* are not suffixes or prefixes, but independent, inherently accented words (the complex preverb-verb does not correspond to either a morphological or phonological unit). Unlike affixes, the preverbs can be separated from the verb by a number of elements, including the sentence negation *má* and the enclitic conjunction *-na* 'and'. As seen in (35), the 'applied' genitive clitic also occurs in between, and appears adjacent to the verb (and must remain in the same phonological phrase as the verb). This gives rise to the linear organization of the preverbal elements in (35), where the dotted spaces can be filled by non clitic elements²⁸:

- (36) *Order of the preverbal elements in (36):*
 subject clitic ... object clitic + 'Appl.' preverbs²⁹ ... 'applied' object - verb

²⁶Other terms used for them include 'prepositional particles' (Andrzejewski 1960), 'preverbal case markers' (Hetzron 1980), 'adpositions' (Saeed 1999) 'prepositional preverbs' (Lecarme 1999b). Note that 'adposition' suggests that the preverb forms a syntactic and semantic unit with its complement, which clearly is not the case in Somali.

²⁷See note 17. The situation described here is peculiar to the subgroup of languages called Omo-Tana (Somali, Rendille, Boni, Dasenech...). A postpositional system is found elsewhere in Cushitic. See Hetzron (1980) for arguments from a comparative and historical perspective, showing that the preverb system must be considered an original feature of Proto-Cushitic.

²⁸See Saeed (1999: 164) for a more detailed description.

²⁹The preverbs must occur in the fixed order *ú kú ká lá* (Andrzejewski 1960), and the first three are able to occur twice.

Recall that the third person referential object pronoun is a null morpheme in Somali: only 1st and 2nd person pronouns (inherently associated with animacy) surface in a double object construction. The verbs that participate in these constructions fall into the same broad semantic class as the English double object construction verbs. Simple ditransitive verb roots also exist (e.g. *sii* ‘give’, *bar* ‘teach’): these will be assumed to involve a null applicative morpheme as in languages like English (cf. Marantz 1993, Pesetsky 1995). The double object construction can be illustrated by the examples below:

- (37) a. warqád ma iigú káa dhiibay?
 letter Q me.to.for Poss2S gave
 Did he give you a letter for me?
- b. is shéeg!
 refl. say
 Introduce yourself!
- c. is kú kay shéeg!
 refl. to Poss1S say
 Introduce you to me!
- d. waan is kíin baray
 F+1S refl. Poss2P teach
 I introduced you to each other (lit. I taught you(pl) you(refl.))

A ‘templatic’ view of the (summary description of the) distributional facts in (35) is generally assumed in the literature³⁰. On this view, there is no syntactic source for the genitive clitic, the possessive form resulting from some morphophonological ‘strategy’ (a non-third person object pronoun occupies the one clitic object slot, and prevents another non-third person object pronoun from occupying the same slot). But the ‘slots’ clearly are associated with the features (e.g. structural case) that are expressed by morphemes in those slots: crucially, the relative position of the nominative, accusative, and genitive clitics in Somali does not vary.

The analysis I am proposing does not contain any correlate to any notion of templates or slots. Instead, I assume that the pattern of argument clitics in (35) is isomorphic to the syntactic argument structure in a way easily capturable by Marantz’s theory of double object constructions. This pattern is crucially sensitive to hierarchical relations among overt pronominals. Even though many of the other possible symptoms of c-command are untestable for independent reasons (because full DPs do not surface in argument position), the language still shows the characteristic asymmetries of double object constructions identified by Barss & Lasnik (1986). On the assumption that the clitics are merged as arguments in a ‘stacked VP’ structure similar to that proposed by Larson (1988), the genitive clitic in a double object construction is in a structurally higher VP than the accusative clitic. The data in (36b,c) as in (36d), where the reflexive clitic *is* is bound by the subject or is bound by the genitive clitic, show that the relative surface order of accusative - genitive objects does not affect c-command relations: the genitive clitic still asymmetrically c-commands the accusative clitic position (36d).

They combine together to form a phonological unit, the proper domain of a particular set of phonological rules (e.g. an initial /k/ is realized as [g] by a general rule of intervocalic voicing), the rightmost preverb keeping its accent. Hetzron (1977:199) has summed up the essence of the entire system: (i) non-initial *ú* becomes /gu/, (ii) when two /k/-initial preverbs are combined, the result is always *kagá*. As a result, *ugú* may stand for /ú+ú/ or /ú+ku/, *kagá*/ for /kú+kú/, /kú+ká/ or /ká+ká/, *ugagá* for /ú/ + any of these combinations, *kaḡalá* for any of these + /lá/. More complex outputs are obtained when the impersonal subject *la* or the non-third person object (accusative) clitics are prefixed to the phonological unit (see Andrzejewski 1960).

³⁰see Hetzron (1977), where interesting parallels with the Romance languages are also to be found. As Hetzron observes, ‘functional ambiguity’ may arise in these constructions, with two possible readings (as in Spanish *te me presento* ‘he introduced you to me / me to you’). This suggests, in terms of the present analysis, that the linking patterns (i.e. the relation between the theta roles of a predicate’s arguments and their syntactic positions) is not fully predictable under the UTAH (Baker 1988:46).

Although the Somali facts are complex and of an unfamiliar type, the morphological parallelism shown in (34) is not as uncommon as one might think. There is also a morphosyntactic evidence for this parallelism in other languages (e.g. Hungarian, where the dative case suffix may mark not only the indirect object but also the possessor), suggesting that it does not hold in Somali only, but uniformly from a crosslinguistic perspective, and arguably in Romance as well (cf. Italian *loro*, French *leur*). Of course, a full discussion of the ‘applicative’ analysis of both genitive and double object construction is more complex than the discussion so far has indicated, and there is no space for further discussion of this here. The important point is that the Somali pattern of argument clitics provides a crucial clue to the problem of what correspondence actually exists between ‘external’ arguments in the nominal vs. verbal domain.

4.4 Structural genitive case on P&T’s approach: discussion

Assuming, following P&T, that uT on D is the proper characterization of structural case, how does structural genitive fit into the hypothesis? An important point has to be made here. It has been suggested by Baker (1996:260) that there is an analogy between nouns and unaccusative verbs, which do not assign structural case and have no ‘true’ external argument. Therefore, there is at most one structural case-assigning head in a nominal construction, which Baker assumes to be D, parallel to tensed Infl. On this account, possessors in DPs are essentially parallel to goals in unaccusative constructions, “where D corresponds to Infl, the R argument of N corresponds to the Theme argument of V, and the possessive argument of V corresponds to the goal argument of V”. If this is correct, how does the structural parallel obtain between structural genitive and double object constructions, which crucially involve transitive verbs?

I want to argue that precisely because nouns are not verbs, even unaccusative verbs, adding a structural ‘possessor’ in nouns is different from adding a goal argument. Crucially, the *ú*-dative/benefactive applicative constructions are possible with nouns in Somali (e.g. *waa noó dagáal* ‘it is war for us’ (*noó* = /na + *ú*/ ‘us-for’), and are not genitive case. What I want to suggest is that, even though nouns do not assign case, there exists some reflex of Burzio’s generalization in the realization of the structural genitive. The null APPL head actually has the Burzio property in that it merges with an ‘applied’ argument, and enters into an agree relation with a lower argument already merged in the structure, that is, the noun itself, corresponding to the Theme in a double object construction. If correct, this suggestion might help to solve a problem inherent to most accounts of genitive case, namely the fact that the ϕ -features in APPL (morphologically expressed in some languages, as it clearly appears from the overt gender feature in Somali in (11) and (31)) are the features of the head Noun, not the genitive argument³¹. This problem is also inherent to P&T’s account of genitive case: I shall address it briefly.

P&T assume a syntactic parallelism between C and D: C, like D, turns a proposition into something that can act as an argument (Szabolcsi 1987). On their account, English *that* is not C, but an instance of T that has moved to C. Likewise, *’s*, *the*, *a* are not the highest head of DP, but belong to the category R(‘article’). RP is the complement of D, which is null in English. On this account, the possessor is attracted to *’s* by some feature on *’s* with the EPP property. If uF were uT , P&T argue, uT on *’s* would be marked for deletion within DP by the raising of the possessor, then DP would not be able to be merged into a higher structure where uT on D can be deleted. The feature driving movement (or direct merger) of the possessor therefore is not uT , but uF , some other feature on *’s* with the EPP property:

(38) P&T 2001, (96a):

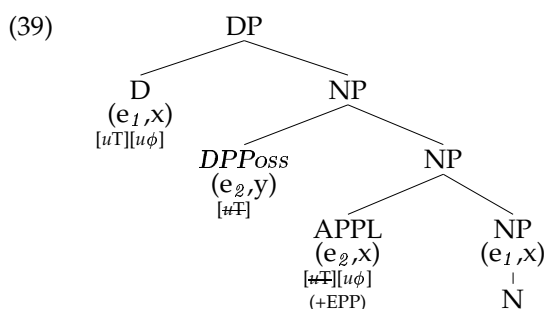
- a. $[_{DP} [_{D, uT}_{[-EPP]}, \phi] [_{RP} [_{DP} \text{Mary}, uT, F]_i [_{R} \text{’s}, uF_{[+EPP]}] [_{t_i} \text{criticism [of Sue]}]]]$

If we suppose that uF is $u\phi$, then $u\phi$ matches the interpretable ϕ of the possessor, not the larger DP. On a ‘bottom-to-top’ view of DP-building, *s’* agreeing with the possessor must not be merged

³¹Baker(1998:259) refers to this asymmetry as ‘Nichol’s problem’.

with NP. A second, and more important, issue is that genitive case is not captured in P&T's generalization, namely: structural case is uT on D.

In the analysis developed here, possessive 's does not belong to the same category as *the*, *a*: like *that* and *for*, *the* and *a* do not create a specifier and are introduced in the relation Merge-Agree (select). This accords with the fact that *the*, *a*, and 's are not in complementary distribution (*a children's book*). Suppose 's to be an instance of APPL, uT on Poss enters a relation with uT in APPL with an EPP property, and uT on D (structural genitive) is marked for deletion on the DP cycle. This can be represented as in (38), where the time-sensitive 'entity' variables correspond to uT , and x and y to the ϕ -features of the associated DPs:



The larger (English) DP still retains an instance of uT on D once the DP cycle is finished, and is able to be merged into a higher structure where uT on D can be deleted.

5 uT on D: Further consequences

On the basis of Somali facts, I have argued that structural case in the nominal domain involves a kind of applicative construction, that is, a temporally located domain of predication created by adding an 'applied' argument to the NP predicate. On this view, 'structural genitive' is the name for uT on D in the D-T environment. Inherent case might involve a 'lower' applicative construction, that is, a non-temporally located thematic relation between two individuals. This only distantly reflects the distinction between 'high' and 'low' applicatives (Pylkkänen 2000 and related works), for which I offer no explicit discussion here, as this distinction arose specifically to address aspects of asymmetries that cannot be tested in Somali for independent reasons. Interestingly, P&T's hypothesis leads us immediately to an understanding of the main configurational properties of the language. Somali is a 'pronominal argument language' in that only the pronominal clitics (universally uT -on-D categories) are in argument position and enter a syntactic relation with $u\phi$ on finite T. DPs and CPs (complement clauses introduced by *in*) are XP adjuncts and share the same syntactic distribution. Further properties of this kind of syntax follow: there is no 'case-driven' A-movement of DPs in the language (e.g. absence of syntactic passivization, absence of raising and control structures), properties also shared by the languages of the Salishan group (Jelinek 1984, Wiltschko 2001). It can also be observed that the distribution of nonreferential nominals (nonspecifics, quantified noun phrases such as *nobody*, *what book...*), which do not inflect for tense, is restricted in a way not observed with 'tensed' DPs. Such nominals must somehow enter a syntactic relation with a 'verbal' T-chain, that is, they must occur in Spec,CP or in strictly preverbal position. A telling example involves the implicit object *wax* 'thing' required in the intransitive use of 'indefinite object deletion verbs' (eat, write, cook...), since a zero third-person object pronoun is a discourse referent in Somali:

- (40) a. **wax** búu akhriyay
 thing F.3MS read
 (What did he do today?) He read (lit. he read thing)

- b. xeéb-ta báan **wax** kú soo akhrisánayaa
 beach-detF F.1S thing at (deict.) am.reading
 I am going to read on the beach (lit. read thing)

I conclude that beyond its role in explaining a wide range of other phenomena, P&T's hypothesis provides a general theory of the relation between Tense and the configurationality of languages into which the Somali data fall neatly.

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