

THE ALSEA NOUN PHRASE

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0. Introduction

This paper examines the structure of the noun phrase in Alsea, an extinct language of the Oregon coast, with particular attention to the behavior of a clitic occurring in second position within the NP. I will first present the basic facts and then consider an appropriate formal analysis. Since this analysis is based on incomplete data limited by the contents of the available texts, there are certain issues which cannot be resolved definitively. The basic facts, however, are clear and interesting enough to warrant an attempt at a formal treatment.¹

1. The noun phrase

The Alsea noun phrase has the following basic structure, where [t] and [s] are elements which will be explained later:

- (a) DETERMINER modifier-[t] [s]-noun

The determiner further has the following composition:

- (b) DEICTIC-REFERENTIAL

In addition, the entire phrase may be preceded by an ergative case marker. These elements will be discussed in the sections below.

1.1. The referential [s] and the deictics

A noun can occur by itself; generally this is in a nonreferential, generic use:

- (1) p=*suwít* †-uwátx-ayu'-sx-am
2plS=wind TRL-become-TRL-REFL-INTR
'Turn into winds!' (34.1)

By far the most common case, however, is to have both a deictic and the referential present. There are three deictic prefixes relevant here, of the forms [a], [ku], and [ta, tə]. They indicate the position of the noun in physical space but also seem to serve discourse functions as well; since their precise meaning is not important for the present purpose, they will all be glossed DEI. Following the deictic element is the referential [s]. Together they form a determiner which precedes the noun:

- (2) †əʔáys-x *ku-s* cu'táys
see-CMPL DEI-REF salmon
'He saw a salmon.' (106.10)

- (3) *ta-s cí:cik' †-ti'wít'hwan-†n-x*
 DEI-REF arrow TR-make-PASS-CMPL
 'Arrows were made.' (40.22)

Occasionally a noun is found without the referential [s] but with a deictic marker. Often these examples are in quoted speech and refer to characters in a story. It is assumed that this omission serves some pragmatic function, since under normal circumstances an object must be referential in order for its location in space to be specified:

- (4) *†ə-ʔí†-ax=an ku ma'lí:ct*
 TR-refuse-CMPL=1sgS DEI sea.otter
 'I refuse (to marry) that sea otter!' (92.15)

There are also a few examples of the referential [s] without a deictic. This may at times be a reduction of [as], but in some cases such as [s=lahwí:] 'the world, the earth' the vowel is nearly always omitted and the entire phrase may be lexicalized. In this particular case it seems reasonable to omit the deictic since 'the earth' is always in the same place.

Deictics can also be added directly to emphatic pronouns, though this use is not common since the position of, say, the speaker is generally obvious:

- (5) *k=in q'ám-aw-tx-am tə-q'ún*
 FUT=1sgS behind-DUR-HAB-INTR DEI-1sg
 'I'll walk behind.' (158.21)

In this context the deictic is probably motivated by the emphasis of the speaker on his physical location.

1.2. The possessive pronouns

In all of the examples above, the referential [s] can be replaced by a first- or second-person possessive pronoun. The possessive pronoun and the referential never cooccur, presumably because for a thing to be possessed it must be referential (i.e. the NP must have a specific referent). In other words, the possessive pronouns are really more specific variants of the referential:

- (6) *á-†in cá's-tuxs*
 DEI-1plP win-COLL
 'our winnings' (26.17)
- (7) *kú-†in qá'sint*
 DEI-2plP younger.sister
 'your younger sister' (22.10)

Often the possessive pronoun occurs without any deictic, probably because the indication of the possessor is usually sufficient to identify the referent without specifying its location:

- (8) *sin si'yaʔ*
 1sgP leg
 'my leg' (72.31)

1.3. The third-person possessive

The remarks above with regard to the first- and second-person possessive pronouns are largely true of the third-person possessive circumfix [c...k]. The initial element [c] appears prefixed to the noun, while the final [k] appears suffixed to the noun. Most frequently there is no deictic:

- (9) *c-háy-k*
 POSS-mind-POSS
 'his mind' (86.15)

It appears that historically the initial [c] may come from the deictic-referential [tas], but synchronically this [c] is simply required in order to mark a noun as possessed by a third person. Interestingly, though, it seems to have retained its referential meaning and is thus parallel to the possessive pronouns: no referential [s] cooccurs with either of them. Thus one finds the simple deictic, including the possible cognate [tə], attached directly to [c]:

- (10) *ku=c-tá-k*
 DEI=POSS-father-POSS
 'his father' (70.14)

- (11) *tə=c-tú-k-ik*
 DEI=POSS-head-POSS
 'his head' (120.25)

If a noun indicating the possessor is present, then it generally occurs before the possessed noun (which is marked with the circumfix). In this case the referential [s] does appear at the beginning of the NP, but it seems to refer to the possessor and not the entire NP. This is because the head of the NP is already marked as referential by [c]:

- (12) [[*a-s* *xámni*] [*c-taqúsin-k*]]
 DEI-REF whale POSS-skin-POSS
 'the whale's skin' (80.8)

Evidence that the initial deictic and referential refer only to the adjacent noun and not the whole NP comes from structures where the possessor appears after the possessed noun, in which case it is possible (but not necessary) to get deictic markers on both nouns:

- (13) [*c-hi'lk'áys-k*] [*ku-s* *ckátina*]
 POSS-actions-POSS DEI-REF crane
 'the crane's actions' (72.36)

- (14) [*a=c-məta'nástiyu-k=iɬx*] [*a-s* *təyá'cit*]
 DEI=POSS-chief-POSS=PL DEI-REF villager
 'the chief of these villagers' (228.6)

The correct generalization seems to be that if the possessor precedes the head, then the NP as a whole is not marked with a deictic; if the possessor follows, then the head (and therefore the whole NP) can be marked. This restriction may be related to the proposed origin of [c] as a deictic and referential determiner. Note the similarity to the possessive pronouns, which also

generally occur without a deictic; the same explanation, that they are subtypes of the referential, plays a part with the third-person possessive as well.

With multiple possession the head comes to the right of its complement in each case:

- (15) [[[*ku-s* *s'ú·ku*] [*c-q'á·n-k*]] [*c-tú·k-ik*]]
 DEI-REF Suku POSS-son-POSS POSS-head-POSS
 'Suku's son's head' (72.21)

Here again the determiner [*ku*] seems to refer just to the dependent noun [*s'ú·ku*] and not to either of the possessed nouns. Unmodified nouns (including proper names) have a general requirement for a determiner, while nouns with [*c...k*] are already determined; thus the [*ku*] must refer to Suku, and must *not* refer to the other nouns. Compare the following example, where the possessive pronoun 'my' clearly must refer only to the first instance of 'father', because the second (the head of the NP) is possessed by the first:

- (16) *sin* *ta?* *c-tá·-k*
 1sgP father POSS-father-POSS
 'my father's father' (j66.38)

Since the referential and the possessive pronoun are in parallel structures in all ways examined so far, it seems reasonable to argue that in (12) and (15) as well the two are parallel and both modify the immediately adjacent N, not the higher argument NP.

1.4. The ergative

Nouns which serve as the subject of a transitive verb are preceded by the ergative marker [*qa*, *xa*]. This proclitic can occur with or without a deictic, but when it is used with a nonpronominal it (like deictics themselves) always seems to combine with the referential [*s*] or one of its possessive substitutes:

- (17) *xa=ku-sín* *‡ámxad-u·*
 ERG=DEI-1sgP child-PL
 'my children' (86.17)

- (18) *qa=kú-s* *‡aqúsin*
 ERG=DEI-REF skin
 'the skin' (80.14)

Like a deictic, the ergative can be added directly to a pronoun, possessive [*c*], possessive pronoun, and referential [*s*]:

- (19) *xa=sín* *qúmhat*
 ERG=1sgP brother-in-law
 'my brother-in-law' (118.31)

- (20) *qa=c-máhac-k*
 ERG=POSS-boy-POSS
 'her son' (214.10)

- (21) *qa=ni'x*
 ERG=2sg
 'you' (48.29)
- (22) *qa=s hi'tslam*
 ERG=REF person
 '(you) people' (46.13)

It may be correct to say that the ergative always occurs with a deictic, since instances of [qa] are phonologically ambiguous between the simple ergative on the one hand and the ergative and an elided deictic [a] on the other. Not enough is understood of the use of the deictics to give direct contextual evidence for or against the underlying presence of the [a] in such cases.

The ergative comes at the beginning of the NP and not before the head, though of course ergativity is the property of an argument and thus of the head, not some dependent noun:

- (23) *xa=s klámclam c=ʔámxad-u'-k*
 ERG=REF earth.people POSS=child-PL-POSS
 'the children of the earth people' (104.18)
- (24) *qa=s xám'-ət s-k'wi'?*
 ERG=REF one-ADJ CSTR-canoe
 'a certain canoe' (166.10)

In (23) the ergative [xa] refers to the entire NP, which is the subject of the sentence, while it seems best to say that the referential [s] refers to the immediately following noun, as discussed above. In fact, the underlying structure may be /xa=a-s/, where the /a-s/ refers to 'earth people' and /xa/, which is procliticized on the entire phrase, refers to the argument NP 'children of the earth people'.

1.5. Modifiers

The label 'modifier' given at the beginning of this paper refers to adjectives and numerals and occasionally nouns. The numerals (which seem to be a subclass of adjective) are always followed by the adjectival suffix [-t] when in attributive position. Adjectives used attributively generally also take this suffix but not always; the conditions determining its occurrence are not entirely clear to me, but it appears to be a lexical property of the adjective itself.

In addition to the adjectival [t] which is suffixed to the modifier, there is a formative [s] which appears prefixed to the following noun. This [s] can be found even when the [t] is absent. It is homophonous with the referential marker, and may historically be related to it, but since the two can cooccur, and are found in different places, it seems unreasonable to call them the same morpheme. Note, however, that a modified noun often occurs without a determiner, a fact which may be a result of this historical origin (more on this in section 3):

- (25) *xám'-ət s-hítslam yá'c-x*
 one-ADJ CSTR-person live-CMPL
 'There once lived a certain person.' (j72.19)
- (26) *ku-s xítḱ-it s-məháyt-u*
 DEI-REF two-ADJ CSTR-old.man-PL
 'the two old men' (72.22)
- (27) *a-s kú'ku-t s-ḱílu*
 DEI-REF ocean-ADJ CSTR-water
 'the ocean water'

The last example shows a noun used as a modifier; this is much less common than the adjectives exemplified in (25) and (26). I have glossed the [s] as CSTR for construct, since its function is similar to that of the Semitic construct state, which marks a noun as being 'in construct with' a dependent noun. The Alsea morpheme indicates that the head noun is modified by the preceding word - whether adjective or noun.

Although in nearly every example this [s] occurs before a noun, this may be an accidental result of the fact that all the nouns have just one modifier. The one example I found of a noun with two attributive adjectives shows a somewhat different situation:

- (28) *qáwx-at s-məʔaʔqayt-it s-hítslam*
 high-ADJ CSTR-rich-ADJ CSTR-person
 'a rich person living in the sky' (228.27)

It seems here that the clitic [s] is related to the adjective preceding it rather than to the word following it, which can be either a noun or another adjective. This notion receives support from the fact that certain modifiers (i.e. quantifiers) do not occur with this [s], though they do occur with the referential [s] found with deictics:

- (29) *məqamín-t hí'tslam*
 many-ADJ person
 'many people' (j66.2)
- (30) *hamstiʔ-t=əx inḱí's*
 all-ADJ=2sgS thing
 'You [have seen] everything' (182.21)
- (31) *qa=s hamstiʔ hí'tslam*
 ERG=REF all person
 'all the people' (54.20)

The modifier [s] might thus be argued to be the type of clitic described by Klavans (1985) which is syntactically dependent on the previous word but phonologically dependent on the following. I will claim later, however, that the construct analysis is correct.

The modifier of the noun is considered a separate constituent for the placement of a second-position sentential clitic, such as those marking the

subject. That is, these clitics occur after the first word of the sentence, even if this involves splitting an argument:

- (32) xám'-t=əʃ s-milhu:dáys
 one-ADJ=we CSTR=tribe
 'We are one tribe.' (204.29)
- (33) qa=s xítk-ət=awx s-hít'slam
 ERG=REF two-ADJ=3duS CSTR=person
 'two people [kept hitting the grass]' (46.7)

See also (30). Examples such as these, as well as the fact that they do not always cooccur, motivate the separation of [t] and [s] into different formatives, even though both are present due to the preceding modifier.

The possessive prefix [c] patterns with the construct [s] in that it is prefixed to the noun; for this reason modifiers precede it. Note that when the prefix [c] is present the construct [s] is absent:

- (34) i's xám'-ət c-ačkáys-k
 in one-ADJ POSS-sleeping-POSS
 'during one of his naps' (174.23)
- (35) qalpáyxat-it c-káxkati's-k
 next-ADJ POSS-meeting-POSS
 'their next meeting' (108.32)

This situation is parallel to the referential [s] which also cannot directly precede the possessive prefix.

Due to the limitations of the data available for Alsea, there is no good evidence for deciding whether the first and second-person possessive pronouns belong to the same pattern as the construct [s] and possessive [c]. That is, it is impossible to say for sure whether an adjective would precede or follow the possessive pronoun. In his field notes at the Smithsonian, Frachtenberg gives the following contrast (the parse is mine):

- (36) qan-í'-sal sin ta?
 die-INCH-DSTR 1sgP father
 'My father is dead.'
- (37) qaní'st-it sin ta?
 dead-ADJ 1sgP father
 'my dead father'

The first example, (36), I would translate 'My father died (long ago)', since the distributive suffix /sal/ is used to mark the remote past and the perfect aspect (Buckley 1986). At any rate this is definitely a verb-subject construction. In (37) the situation is not so clear. I am confident that the first word is an adjective, but it is not clear that this is a noun phrase. Frachtenberg puts a question mark next to these two sentences as though he is not sure of the translations. Since there is no copula in Alsea, the adjective could easily be predicative rather than attributive, in which case (37) would be a sentence

meaning 'My father is dead.' Thus it is difficult to be certain whether (37) is even relevant to the present discussion.

In the published texts, there is no clear example of an attributive modifier and possessive pronoun cooccurring, except for the quantifier 'all' which is free to float outside the NP anyway:

- (38) hamsti? *sin* hí'tslam
 all 1sgP person
 'all my people' (214.10)

While in (31) above the quantifier follows the determiner as would a normal adjective, the opposite order is equally possible:

- (39) hamsti? *qa=s* hí'tslam
 all ERG=REF person
 'all the people' (54.17)

Given this ability to float, the position of the quantifier in (38) does not tell us anything definitive about the possessive pronoun.

One other construction might be interpreted as evidence that the possessive pronoun follows modifiers:

- (40) i's yúxwi's *tin* k̄iná'xayt'
 to own 1plP neighbor
 'towards our own neighbors' (184.13)

- (41) yúxwi's *sin* k̄iná'xayt'
 own 1sgP neighbor
 'my own neighbors' (184.15)

Here the element [yúxwi's] precedes the possessive pronoun. But again, the significance of this fact is unclear since [yúxwi's] is not a typical modifier: it takes no [t] suffix here, and has the internal morphology of a noun. I have also found no examples of [yúxwi's] serving as a modifier of a noun with a deictic-referential determiner, with which (40) and (41) could be compared.

One fact argues in the opposite direction, that the possessive pronouns pattern like the referential [s] and should precede modifiers: the transcription that Frachtenberg uses. He writes both the possessive prefix [c] and the construct [s] as part of the word that follows - consistent with the common syntactic patterning described above - but the deictic-referential determiner and the possessive pronouns as separate words, suggesting that perhaps they pattern together as well. Since they are also found with (secondary?) stress as in (17) they are unlikely to be prefixes on the noun; I think they are probably clitics which occur at the beginning of their noun phrase. It may be that there are other examples in Frachtenberg's notes which bear on this issue, but for the time being I will assume that the possessive pronouns pattern with the referential.

2. The dative [ks]

There is a dative morpheme [ks], most often indicating motion towards the noun ('allative'), which, in an unmodified noun phrase, occurs directly after the noun. Note that this is the situation whether there is just a noun, or a noun with a determiner:

- (42) níx=a_{ks}
2sg=DAT
'for you' (174.2)
- (43) t̥əyá:cit=ə_{ks}
village=DAT
'to a village' (34.24)
- (44) sin i:cáys=i_{ks}
1sgP house=DAT
'home, to my house' (220.1)
- (45) a-s pút=i_{ks}
DEI-REF boat=DAT
'into the boat' (220.21)

One might conclude from such examples that [ks] appears at the end of the NP and is a postposition. When a modifier is present, however, the dative occurs after that modifier instead of after the noun:

- (46) kis ay-áy-m ... [cá:ms-t=i_{ks} s-milhu:dáys]
RES go-INCH-INTR different-ADJ=DAT CSTR-tribe
'so he would go to different tribes' (34.15)
- (47) kis ay-áy-m [qahál=_{ks} s-t̥əyá:cit]
RES go-INCH-INTR different=DAT CSTR-village
'so he would go to a different village' (34.22)
- (48) xám'-t=i_{ks} lahwí:
one-ADJ=DAT place
'to one place' (46.11)

In an NP where the head noun is preceded by a possessor NP, the dative comes after the possessor:

- (49) ku-hám tá'=ks=i_{ks}íx² c-qá:nu'-k
DEI-your father=DAT=PL POSS-sweathouse-POSS
'to your fathers' sweathouse' (150.29)

Note that in (49) the movement is toward the sweathouse, not 'your fathers', even though the dative comes after the latter element.

There is no example of a modified noun with both a determiner and the dative present. This is not terribly surprising since neither the determiner nor the dative is found very frequently with a modified noun in the first place. Still, due to this gap in the data we cannot be absolutely certain that in an example such as (26) the dative would come after the adjective instead of

after the determiner or even somewhere else. But given the behavior of the dative in (45) and (49), where the determiners are ignored for the definition of 'second position', it seems safe to suppose that the dative would in fact come after the adjective in (26). I will make this assumption in my analysis.

2.1. Adverbs

It is not clear what role adverbs play in the noun phrase. The dative has not been found together with an adverb in attributive position before a noun; the few examples available are with locative adverbials. There the adverb [cá:ma] 'very (much)' seems to be ignored for the placement of [ks]:

- (50) hí:ka [cá:ma ní:sk=i:ks] ay-áy
 just very far=DAT go-INCH
 'he went very far' (168.9)

But [cá:ma] is also found completely separated from the phrase it modifies, making it unclear where it should be positioned in the structure:

- (51) ní:sk=i:ks hí:ka cá:ma ay-áy
 far=DAT just very go-INCH
 'he went very far' (168.15)

The same facts relative to [ks] seem true of another adverbial modifier, [xú:si:] 'a little':

- (52) xú:si: qawxán=ks
 a.little above=DAT
 'he moved] a little higher' (76.35)

Since the adverb in many cases occurs rather freely separated from what it seems to modify (similar to the quantifiers), and since these examples are adverbial and not nominal, I will not attempt to incorporate them into my analysis. A phrase such as 'to the very big house' would be necessary to determine with any certainty the behavior of these adverbs.

2.2. Another second-position noun-phrase clitic

There is a common clitic [aw:k] 'in, inside' which seems to have several possible domains: S, V, and NP. Although it is clearly attested in only one example, it appears that [aw:k] can behave like [ks] when it is prepositional:

- (53) xám'-t=aw:k s-wulí:s
 one-ADJ=in CSTR-year
 'for one year' (120.26)

This clitic shows up in the same position as the dative, and can be analyzed in the same way.

3. Analysis

I will now offer a formal analysis of the data discussed above. Unfortunately it cannot be pursued with complete thoroughness because the data necessary to check the validity of certain predictions are simply not

available in the existing corpus. Still, it should be useful to try to formalize what has been described.

3.1. Klavans' parameters

In the typology of clitics in Klavans (1985), it is possible to specify the behavior of a clitic with three parameters:

- P1) *Dominance* - whether the clitic is positioned relative to the initial or final constituent within its domain;
- P2) *Precedence* - whether the clitic is positioned before or after that constituent; and
- P3) *Phonological Liaison* - whether the clitic attaches phonologically to the preceding or following word (i.e. whether it is an enclitic or proclitic).

Klavans allows the specification of the domain of the clitic (the constituent to which P1 makes reference), including S, V, and N', but does not explicitly integrate this option into her set of parameters; the domain should perhaps be thought of as a fourth parameter, different from the others since it is not a binary choice. Among the eight clitic types possible given the three binary parameters, the dative [ks] is a Type 3 clitic: it encliticizes (P3) after (P2) the initial element of its phrase (P1). Unlike the common second-position clitics which occur in this position under S, however, the Alsea clitic occurs under NP.

There is a potential problem in this description of the placement of [ks]: where do the determiners fit in? Recall from (44) and (45) that they are ignored for the purposes of determining the initial constituent of the NP. If we consider the determiners to be clitics themselves, then they could automatically be ignored by whatever rule places [ks] after the first (nonclitic) constituent of the NP. Note that the determiners would be Type 2 clitics, which procliticize before the first element of the phrase. There is some independent evidence that the determiners are in fact clitics. For example, both the deictics and the referential are found as part of the same stress group as the following full word. The only time stress is marked on a determiner is when it is more than one syllable, in which case it probably reflects the relative stress on the two syllables of the determiner itself - a secondary level of stress which is subordinate to the primary stress of the word to which the determiner clitic attaches.³ There is no direct evidence for this stress being secondary, but note that while unusual it is not impossible for a clitic to receive stress (Wanner 1978).

The Klavans typology is not completely satisfying as an analysis because it simply describes the position of the clitics without offering a formal explanation of how they got there. I will now propose an analysis which accounts for the behavior of the clitics as well as the overall structure of the noun phrase as described above. Although it is not central to the analysis, I will assume Government-Binding Theory (Chomsky 1981).

3.2. The basic structure of the noun phrase

The deictics, the referential [s], and the possessive pronouns are base-generated in specifier position in the NP. They are created from their

component parts, e.g. [ku] and [s], by the morphology. These determiners are lexically specified as proclitics, so that they must combine with a full word at some point in the derivation.⁴

Adjectives are adjoined to the noun that they modify. This allows for the iteration found in example (28). The adjectival [t] and construct [s] are generated by a structure-sensitive rule similar to that which generates the English genitive: an adjective or noun adjoined to an N takes the suffix [t], and the adjoined-to noun takes the prefix [s]:

$$(54) \quad \begin{array}{c} N \\ / \quad \backslash \\ A \quad N \end{array} \rightarrow \begin{array}{c} N \\ / \quad \backslash \\ A-t \quad s-N \end{array}$$

Exception must be allowed for those modifiers (such as quantifiers) which allow the omission of one of the affixes.

There is a slight complication due to the fact that when a noun already has the possessive prefix [c] it does not take the construct [s] or referential [s] in addition. This exclusion can be explained naturally by treating [c] as carrying the features [+referential, +construct], thus making either [s] redundant. These features are semantically motivated since a possessed noun is necessarily referential, and is in construct with its possessor (whether phonetically realized as a separate NP or not).

Note that under this analysis all nouns, including those consisting internally of an adjunction structure, must be marked with the construct prefix:

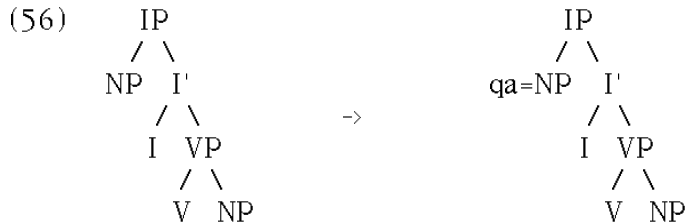
$$(55) \quad \begin{array}{c} N \\ / \quad \backslash \\ A-t \quad s-N \\ \quad \quad / \quad \backslash \\ \quad \quad A-t \quad s-N \end{array}$$

This structure reflects the data given in (28), where the terminal string comes out as A-t s-[A-t s-N]. Since the rightmost adjective-noun combination is itself a noun, we are not required to say that the first construct [s] is prefixed to an adjective.

As mentioned earlier, one might want to argue for an analysis which equates the referential and construct [s]. For example, there is often no referential [s] before a modifier-noun combination, as in (29), so there is some motivation for saying that the [s] preceding the noun is actually the referential. This is problematic, however, because it is possible to have more than one construct [s] when more than one modifier precedes the noun. If this construct is really the referential then the second instance is redundant - it seems in fact more structural (construct) than meaningful (referential). In addition, the familiar deictic-referential combination appears when a deictic is present, e.g. (26), and this does not affect the presence of the construct. Thus there would have to be some ad hoc rule stating that a deictic preceding a modifier-noun combination takes a redundant referential suffix - even though such a redundant suffix is not used before the possessive [c]. Of course, under my construct analysis it is still necessary to say that

referentiality is not explicitly marked unless a determiner is present, though this is not too unnatural since a modified noun is typically referential anyway. The complexity of the situation is likely due to the origin of the construct [s] as a referential determiner which has been reanalyzed as a simple structural element, with the residual effect that a noun in construct is assumed to be referential.

The ergative proclitic is inserted by a structural rule such as the following (the node IP 'inflection phrase' is equivalent to S):

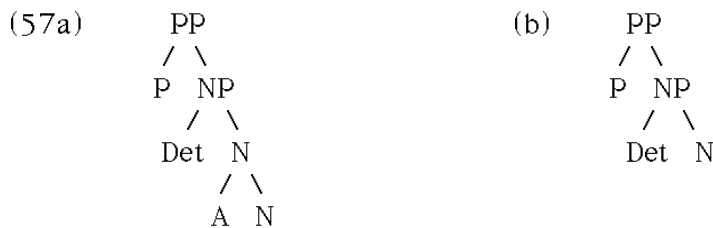


The internal structure of the subject NP is irrelevant to this rule, which always places the [qa] clitic at the beginning of the NP.

Independent pronouns are base-generated in N. They are inherently [+referential] so that if they take a determiner, there will be no referential [s] included (similar to possessed nouns). Like other nouns, they are lexical categories and serve as the head of a clitic group (see below). When a deictic is present it procliticizes, e.g. (5), and the preposition [ks] encliticizes, as in (42).

3.3. The clitics

The dative [ks] is the head of a preposition phrase; this is desirable because it functions semantically like any other preposition and the parallel structure avoids potential problems in interpretation. This preposition, however, is lexically marked as enclitic, so it must at some point attach to the end of a word. The following structures are posited for modified and unmodified nouns:

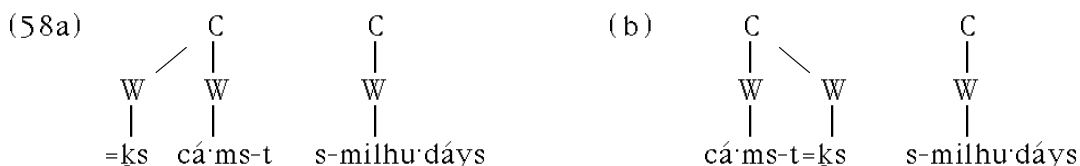


I am adopting from Hayes (1984) the notion of a clitic group, which is defined as a content word (V, N, A) along with the clitics which attach to it. In the simplest and most common case, a clitic attaches to the content word to its left or right with which it shares membership in the greatest number of syntactic categories - i.e. the word which is dominated by the greatest number of nodes which also dominate the clitic. Thus the determiners in (57) will attach to the following A or N, because they share membership in the category NP which is not shared by whatever word may precede the PP in the

sentence. The same is true of the prepositions in (57), which share membership in PP with the following A or N.

The attachment of the determiner to the following word is straightforward; since the determiner is base-generated in front of its chosen host, it need not even be marked lexically as a proclitic. The preposition [k̄s], on the other hand, must be marked as an enclitic, and this specification must be satisfied at the level of Phonetic Form. The preposition chooses its host word in the normal way: according to maximal shared category membership. At PF, however, it moves to the end of the clitic group to satisfy the feature [+after], to use Klavans' term for the precedence parameter.⁵

In the illustration below, W refers to a phonological word, the smallest unit to which the prosodic hierarchy can refer. Each C is a clitic group; every lexical category is automatically the head (host) of a C. Higher levels discussed by Hayes will be ignored here. The preposition [k̄s] is associated with the following C by the principle of maximal shared categories (58a):



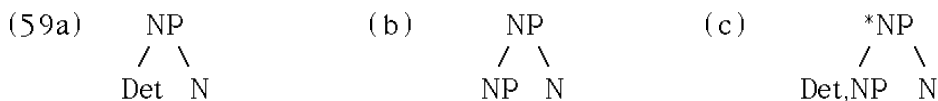
At PF the preposition moves from the left side of the clitic group to the right side, not changing its association but merely its position relative to the host (58b). Note that this movement does not result in crossed association lines since the clitic and its host are associated with the same C node, not adjacent ones. The [i] vowel in the output (46) is inserted by a postlexical rule of epenthesis whose domain is the clitic group.

The movement of the clitic is forced by the [+after] feature. If one wants to have free movement at PF, as in the syntax, then the determiners and similar clitics would have to be lexically marked as [+before] to prevent them from undergoing the same movement. If movement is allowed only when necessary to satisfy feature requirements, then no lexical marking is needed for the simple cases. This same explanation of the behavior of [k̄s] can be applied to the clitic [aw̄k] in (53).

Although this is not an issue in Alsea, Klavans discusses a number of examples of clitics which have divided loyalties: the word which is relevant for the positioning of the clitic (also the one with which it shares the most category membership) is different from the word to which it attaches phonologically. In other words, Hayes' rule of clitic attachment is violated. In Kwakwala, for example, case markers occur before the noun they mark but attach phonologically to whatever word precedes them. I assume that clitics like these (which are fairly uncommon cross-linguistically) are lexically marked as exceptions to the normal method of clitic attachment. For example, the Kwakwala case markers can be specified as always associating with the preceding clitic group, or [+enclitic] in Klavans' phonological liaison parameter. Note that this [enclitic/proclitic] feature is substantively different from the [before/after] feature discussed above; the first marks an

exception to the general rule of clitic attachment, while the second is completely consistent with it and in fact depends on it crucially.

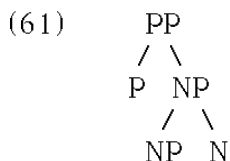
Normally the Alesia determiner is base-generated as the specifier of the NP (59a). I will assume that when a possessor noun precedes the noun it possesses (as in 12), then it occurs as the specifier as well (59b). This explains the apparent lack of cases where the dependent noun and determiner cooccur before the head noun, since the specifier cannot be doubly filled (59c).



When the possessor noun follows the possessed, perhaps as a postposed specifier (60a) or in an adjunction structure (60b), then the determiner of the head is free to occur and both nouns can be determined (as in 14).



The movement of the preposition [ks] to a position after the possessor noun in (49) works in exactly the same way as for the adjective described above, although the syntactic structure is slightly different:



The dependent possessor NP is chosen as host by maximal shared categories, and the clitic undergoes the movement illustrated in (58).⁶

4. Conclusion

I have examined the structure of the Alesia noun phrase and proposed an analysis to account for the behavior of the clitic [ks] while treating it as a preposition. The dative is lexically marked with the feature [+after] so that, due to the effect of the rule of clitic assignment at the level of PF, the preposition is forced to move to the end of the clitic group. The determiner clitics are also easily accounted for in this framework.

NOTES

1 I am grateful to Outi Bat-El, David Cline, and Jack Martin for discussion of the ideas in this paper. All errors are of course my own. Data are from Frachtenberg; numbers in parentheses indicate the page and line from which the example is taken: those preceded by a 'j' are from Frachtenberg (1917), otherwise (1920). The transcription has been partially phonemicized according to the conclusions in Buckley (1989). This paper is based on work supported under a National Science Foundation Graduate Fellowship. A portion of this paper was presented at the LSA annual meeting in New Orleans on December 30, 1988. The following abbreviations are used here:

ADJ	adjectival	INCH	inchoative
CMPL	completive	INTR	intransitive
COLL	collective	PASS	passive
CSTR	construct	PL	plural
DAT	dative	POSS	possessive
DEI	deictic	REF	referential
DSTR	distributive	REFL	reflexive
ERG	ergative	RES	resultative
FUT	future	TR	transitive
HAB	habitual	TRL	transitional

For pronouns:

1,2,3	first, second, third person
sg,du,pl	singular, dual, plural
S,O,P	subject, object, possessive

2 The plural clitic [ɬx] is a second-position sentential clitic, normally marking the subject 'they', which here marks the plurality of the word 'father'. Its location outside the dative clitic is apparently due to its origin outside the noun phrase.

3 Frachtenberg often marks stress on monosyllabic words belonging to a major lexical category, so the lack of stress on most determiners cannot be attributed simply to their having only one syllable.

4 I have written the determiners as separate words for the sake of clarity and also consistency with Frachtenberg. Phonologically, however, they are clitics.

5 The term 'enclitic' would perhaps be more standard here but since Klavans uses that for the phonological liaison parameter I have kept her terminology to avoid confusion.

6 After the presentation of this paper at LSA, Steve Anderson referred me to his description of determiners in Kwakwaka'wakw which occur in second position in the NP (Anderson 1984). It was also pointed out that the ancient Indo-European languages have such clitics, as seen in the Latin *magna cum laude*. See also Radanović-Kocić (1988) for a discussion of the possessive dative in Serbo-Croatian, and Leslau (1967) for the definite article in Amharic.

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