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The syntactic structure of the Xhosa *e-* N *-ini* locatives

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Abstract:

This article aims at presenting arguments for a new analysis of locative expressions with the prefix *e* and the suffix *-ini* in Xhosa. This analysis views the most striking properties of these expressions as syntactic in nature and is based on arguments to the effect that a purely morphological analysis doesn't provide explanatory accounts of the relevant facts.

Keywords: *augments, locative prefixes, locative suffixes, Xhosa*

1. Background

In Xhosa and Zulu, locative expressions are formed from noun phrases by adding the prefix *e-* and, in the general case, the suffix *-ini* to the noun:[1]

(1) Ndi-fundisa e-si-kolwe-ni
I-teach E-7-school-INI
'I'm teaching at a/the school.'

There are restrictions, and there are also other ways of forming locative expressions. The focus of this paper, though, is on *e-* … *-ini* locatives, and I will only make sporadic remarks on *ku-* and other locative prefixes.

[1] The initial *i* of *-ini* affects the final vowel of its host in various ways and may itself fail to surface. In (1), for example, the host noun is *kolo* 'school'. For ease of exposition, my parses will only separate out *-ni* from the host, but it will be glossed as INI. Likewise, *e-* is glossed as E not to prejudice the analytical options.

A locative *e-* or *i-* is also found in Northeastern Bantu languages and some Northwestern languages.

1.1 Distribution

The locative prefix *e-* and the accompanying suffix *-ini* only go onto nouns, and only when the noun is initial in the noun phrase, e.g. not preceded by a demonstrative. Demonstratives use the locative prefix *ku-*, and pronouns use *ku-* or *ki-*.

According to Van der Spuy (2014), nouns in classes 1 and 2 also only use *ku-* in Zulu. This is not the case in Xhosa according to the native speakers I have consulted.

1.2 The relation between e- and -ini

With certain nouns, the locative prefix *e-* occurs without the suffix *-ini*:

(2) e-khaya
E-*home*
'at home'

Different ways of accommodating this fact are discussed in sections 2.1 and 3.2.3. Also, the suffix *-ini* only co-occurs with *e-*, never with the locative *ku-*.

1.3 The goal of this paper

My aim is to sketch a novel account of *e- … -ini* locatives based on the idea that an analysis treating these as complex syntactic structures can explain various properties that seem to remain mysterious on a purely morphological account.

I will only consider the properties of *e- … -ini* locatives in Xhosa, and I will not discuss how my account of Xhosa might be related to the analyses proposed for locatives in other Bantu languages. As will become apparent at various point, the *e- … -ini* locatives in Xhosa behave rather differently from superficially similar locatives of certain other Bantu languages, in particular those in which locative nouns trigger agreement on modifiers and predicates, i.e. those in which the locative prefixes have been taken to belong to special locative noun classes largely similar to other noun classes.[2] The empirical facts strongly suggest that this type of analysis cannot be extended to the Xhosa *e- … -ini* locatives (nor, for that matter, to the Xhosa locative *ku-*). To place an account of Xhosa in the proper comparative perspective, I believe it is first necessary to develop an in-depth account of the Xhosa facts as they are, which is what I will attempt to do.

I will also not have anything much to say about Xhosa locatives with the prefix *ku-* except as to point out relevant contrasts between these and the *e- … -ini* locatives.

1.4 A brief guide for readers unfamiliar with Xhosa

A nominal stem typically combines with two prefixed structural elements in Xhosa – a C(V)-shaped class prefix preceded by a V-shaped augment, as in *a – ba – ntu* 'people' (class 2).[3] The

[2] Bantuists have analyzed the locative-forming *e-* as the class prefix of a locative class variously numbered 23, 24 and 25; Maho (1999: 204). For a recent overview of locatives in Bantu languages, see Zeller (2019).

[3] Augmented nouns are glossed as X – X – noun where X is the number of the N's class. X – noun glosses an Aug-less noun.

augment (Aug) can be absent in certain syntactic environments, e.g. in the scope of negation.[4] The vowel spelling it out (*i, u* or *a*) is determined by agreement with the basic class prefix.

A noun as just described can be followed by a possessor phrase linked to it by *a* 'of'. The actual spell-out of the "linker" illustrates a phonological process which will become important in section 4.2. When *a* is followed by a noun whose Aug is *i*, *a* is replaced by *e* and the noun seems Aug-less, e.g. *a i-li-fu* 'of 5-5-cloud' becomes /*elifu*/, but when the Aug is *u*, the outcome is *o*, e.g. *a u-m-fazi* 'of 1-1-woman' becomes /*omfazi*/. When the Aug is *a*, we get a single *a*, as in *a a-ma-nzi* 'of 6-6-water' becoming /*amanzi*/.[5]

I will refer to this phonological process as "coalescence" following general Bantuist practice. Theoretically, it may be seen as the association of two sets of phonological features with a single V-slot, as in Element Theory (see Kaye et al. 1985 and much subsequent work). The reason coalescence becomes important in section 4.2., is that coalescence is also involved in the spell-out of the "relative concords", special agreement markers that appear right before the verb in relative clauses. These are spelled out as *a, e* or *o* depending on the class membership of the subject. Thus, they can be seen as the outcome of coalescence of *a* with the augment for the class the subject belongs to.

2. Van der Spuy (2014)

In order to motivate a purely syntactic analysis of the *e- … -ini* locatives, it is convenient to begin by commenting on Van der Spuy's (2014) thorough account of these constructs within the framework of Distributed Morphology (Halle & Marantz 1993).

2.1 Claims

Van der Spuy takes the *e-* to be a vocabulary item spelling out the Aug(ment) (notated D by Van der Spuy, but Aug here) of its host noun when the Aug bears the case feature [+loc]. So, the structure of *e-khaya* 'at home', for example, would be the one in (3):

(3) $[_{\text{AugP}}\ [_{\text{Aug}}\ \text{+D, +loc}][_{\text{NP}}\ \text{khaya}]]$

The entry in (4) (Van der Spuy's (19)d) warrants replacing $[_{\text{Aug}}$ +D, +loc] with *e*:

(4) [+loc, +D] ←→ *e*

This analysis has the advantage that it automatically explains why *e-* is never followed by the regular Aug of the host noun.

To explain the absence of a spatial preposition in *e- … -ini* locatives, Van der Spuy considers the [+loc] on the Aug to be sufficient to induce the locative interpretation all by itself.

Abbreviations:
SCX = the subject concord of class X
OCX = the object concord of class X
RCX = the relative concord of class X
RP = the recent past tense suffix
REL = a suffix that may appear on VP-final verbs in relative clauses.

[4] See Visser (2008) and Halpert (2016) for different views of the syntactic nature of Aug.

[5] When followed by an Aug-less noun, *a* remains unaffected.

It should be noted that the locative *ku-* (at least the one appearing on nouns in classes 1 and 2 in Zulu) is also taken to lexicalize an Aug with the feature [+loc] (see Van der Spuy's (19) b), but for reasons that will appear below, I don't think *ku-* is an Aug.

Likewise, the suffix *-ini* spells out [+loc], but not a [+loc] associated with the Aug. The relevant lexical entry (Van der Spuy's (21)) is (5):

(5) [+loc] ←→ /-ini/

The cases where *e-* occurs without *-ini* are accounted for by positing a zero morpheme with a lexical entry like (6) (Van der Spuy's (24)), where X is a variable over the nouns that allow *-ini* to be absent:

(6) [+loc] ←→ -Ø/ {class {1, 2}, X} _

2.2 Problems

I know turn to some problems that arise on the kind of account that Van der Spuy proposes.

2.2.1 Locative e- as an Aug

The claim that *e-* is an Aug is confirmed by the fact that unlike *ku-*, it may fall away in syntactic environments that license Aug-drop, e.g. in the scope of negation:

(7) A-ndi-fundisi si-kolwe-ni
not-I-teach 6-school-*ini*
'I'm not teaching at any school.'

But another fact may be incompatible with the idea that *e-* is the spell-out of the host N's Aug with [+loc] assigned to it. In Xhosa, the class 10 prefix *-zi-* drops on polysyllabic nouns when the class 10 Aug *i-* is added:[6]

(8) a. ii-ndlebe
10-ear
'(the) ears'
b. I-n-yoka a-yi-na-**zi**-ndlebe
9-9-snake not-SC9-with-10-ear
'A snake doesn't have ears.'

However, *-zi-* is retained when preceded by the locative *e-*:

(9) e-**zi**-ndlebe-ni
E-10-ear-INI
'in the ears'

[6] It may be that only the *z* of the prefix *-zi-* drops, and that the long *i* (*ii*) reflects coalescence between the augment and the *i* of *zi*. The exact analysis seems irrelevant to the point being made here.

If *zi-* drop is simply triggered by the presence of a vowel in the Aug-position, (9) entails that the locative *e-* is not sitting in the Aug-position of the host N, although one might postulate a more complex morpho-phonological rule of *zi*-drop making it inapplicable when the Aug carries the feature [+loc].

Notice that it is unlikely that *zi*-drop is induced by the phonological shape of the augment /*i*/ rather than its morphological status. In class 8, the augment is also /*i*/ and the class prefix is *zi*, but the *zi* never drops. This is not to deny that phonology plays a role. In fact prosody/syllabification is a factor, since the augment does not cause *zi* to fall away even on monosyllabic class 10 nouns like *i-zi-nja* 'dogs'. This may suggest that prosody/syllabification is determined by morpho-syntactic structure, and that the morpho-syntactic structure spanning *i-zi-*noun in class 10 is not quite the same as the one in class 8.

Yet another relevant fact is that *e-* is invariant across N-classes.[7] Presumably, the spell-out of the different Augs is conditioned by class-features inherited from the host N, and it would in principle be possible for these class-features to continue to condition the spell-out of Aug even when [+loc] has been added to it. In fact, the Aug with [+loc] added might be expected to be spelled out exactly like the same Aug without [+loc]. In Distributed Morphology, the insertion of vocabulary items (VIs) is governed by the Subset Principle and the Elsewhere Principle:

(10) The Subset Principle
A VI A with the lexical entry A↔ F (where F is a set of syntactic features) can replace a terminal T associated with the feature set G if and only if F is a subset of G.

(11) The Elsewhere Principle
Given a terminal T = F and lexical entries A ↔ G and B ↔ H with G and H both subsets of F, A wins if and only if G is a larger subset of F than H.

Suppose now that an Aug, as a morpho-syntactic object, is associated with a nontrivial set of features as determined by the class membership of the noun, e.g. {X, Y, ...} for some class Z. The spell-out of Aug on a noun in class Z would be determined by the Subset Principle and the Elsewhere Principle selecting the optimal candidate from among VIs with lexical entries like those in (12):

(12) a A ←→ {X, Y}
b B ←→ {X}

By the Elsewhere Principle, A would win.

To have *e-* invariant across the noun classes, the entry for *e* would have to ignore all the features that differentiate between Augs of different classes:

(13) e ←→{[+loc]}

Suppose now that [+loc] has been added to an Aug with the basic class features {X, Y, ...} giving {X, Y, [+loc], ...}. By the Elsewhere Principle, the A in (12)a would win, i.e. the spell-out of the Aug of a locativized noun would be the same as for the same noun without the feature [+loc]. From this perspective, it is striking that *e-* is in fact invariant.

[7] Except that *e-* is replaced by *o-* on class 11 nouns in Zulu according to Van der Spuy. The account to be presented below abstracts away from this. In the Xhosa spoken by my consultants, even class 11 nouns have *e-*.

2.2.2 Case

On Van der Spuys' analysis, the case-feature [+loc] on the Aug *e-* is not assigned by a preposition and suffices all by itself to induce the locative reading of the noun phrase. But cross-linguistically, it seems that synthetic locative case, i.e. locative case spelled out together with gender and number by a portmanteau morpheme, does not license a locative interpretation in the absence of a locative preposition (modulo special cases like the names of cities and smaller islands in Latin). This stands in contrast to some analytical languages, e.g. Turkish, in which the locative case affix does not fuse with gender or number and could be reanalyzed as a pure locative postposition. But Van der Spuy's analysis has [+loc] assigned to an Aug which also is associated with class/gender features as determined by the host noun and these features too must be taken to be spelled by *e-* together with [+loc]. In this sense, Zulu and Xhosa would be like the synthetic languages.

Hence, saying that adding [+loc] to Aug is sufficient in Xhosa and Zulu makes these languages look somewhat exceptional in a cross-linguistic perspective.

As for the locative prefix *ku-*, this too is taken to be the spell-out of fused [+loc] and D by Van der Spuy's context-sensitive insertion rule (19)b, which is designed to make *ku-* block *e-* in classes 1 and 2. One notes, however, that *ku-* is not likely to be an Aug, since, unlike *e-*, it cannot drop in the scope of negation. Also, taking *ku-* to spell out [+loc] fused with D seems somewhat implausible for the cases where it attaches to a pronoun or a prenominal demonstrative. In addition, it seems that *ku-*, unlike *e-*, sometimes allows the host noun to retain its usual Aug. In particular, a form like *kwieropleni* 'on the plane', with the class 9 noun *i-eropleni* 'airplane', presumably has the following structure:[8]

(14) ku-**i**-eropleni
on-9-airplane
'on the airplane'

Finally, setting up an insertion rule that makes *ku-* block *e-* is incompatible with the fact that Xhosa speakers often allow both *ku-* and *e-* to combine with the same noun.

In addition, unlike *e-*, *ku-*, as already mentioned, doesn't co-occur with the locative suffix *-ini*, which is surprising if *ku-* and *e-* are just different spell-outs of the same structural elements.

2.2.3 -ini

Van der Spuy's account of *-ini* inserted as in (5) seems to presuppose that the feature [+loc] associated with D is spelled out twice and in two different locations. The technical details of this proposal need to be clarified and the analysis must also account for the fact that *-ini* survives under Aug-drop, as in (7), where there is no D carrying [+loc].

To account for the cases where *-ini* is absent, the context-sensitive insertion rule in (6) posits a zero morpheme blocking *-ini* with a class of nouns including all the nouns in classes 1 and 2 (the nouns that must have *ku-* rather than *e-* in Zulu). However, this approach doesn't provide a way of explaining why the larger syntactic context seems to matter. In Xhosa, the

[8] If *kwi-* only appears on class 9 nouns, however, and not also on nouns in other classes with the Aug *i*, a different analysis suggests itself: The *i* in (14) might not be the Aug, but rather (part of) the class prefix as suggested by the fact that whereas attributive adjectives without a "relative concord" (RC) generally have a C(V)-shaped agreement marker matching the class prefix of the modified Aug-less noun, the agreement marker is *i-n-* rather than just *n-* when the modified noun is in class 9.

noun *i-khaya* 'home', for example, regularly occurs without *-ini*, as in Zulu, but not in the presence of a possessor phrase:

(15) e-khaye-ni lethu
E-home-INI our
'in our home'

3. An alternative proposal

I will now present an alternative analysis of *e- … ini* locatives aiming at eliminating the various problems discussed in the previous section.

3.1 Locative prepositions and locative nouns

To set the scene, I start with some discussion of the relationship between locative prepositions and locative nouns, i.e. nouns such as *place*.

3.1.1 Locative prepositions

According to much recent work on spatial adpositions, a preposition like *in* can be seen as corresponding to a syntactic head whose semantics is such that it applies to a noun phrase and returns a space associated with the thing that noun phrase refers to. I'll call this head Loc(ation). Further heads, e.g. heads denoting paths into/from the space picked out by Loc, can be added giving rise to prepositions like *into, from* etc. This, however, may have no place in Bantu where directionality seems to be encoded in the verb instead (as in Van der Spuy 2014).

From this perspective, a spatial P corresponding to Loc is needed to obtain a spatial expression by associating a space with the denotation of the noun phrase. However, there may be an exception to this.

3.1.2 Locative nouns

In various languages, nouns meaning 'place' are exceptional. Other nouns need a preposition to form a spatial expression, but not the nouns meaning 'place':

(16) a. Hun bor *(i) en by i Nord-Norge (Norwegian)
she lives *(in) a city in Northern Norway
'She is living in a city in Northern Norway.'
b. Hun bor (på) et sted/en plass i Nord-Norge
she lives (at) a place in Northern Norway
She is living some place in Northern Norway.'

Notice that *sted* and *plass* share all other distributional properties of nouns, e.g. they come with an indefinite article, unlike prepositions.[9]

[9] Likewise, certain nouns denoting places can function as locative expressions without locative affixes in certain Bantu languages (Zeller 2019: 11).

What's special about nouns meaning 'place' is presumably that they can denote a space all by themselves without the aid of a spatial preposition. This gives rise to the possibility (not realized in Norwegian) that a noun meaning 'place' might be associated syntactically with another noun and denote the space related to an entity denoted by that noun. In that case, no spatial preposition should be needed. In particular, if *e … ini* locatives contain a (silent) noun like *sted*, it follows that they don't also need a preposition.[10]

This proposal is reminiscent of Carstens (1997) and also of Bresnan and Mchombo (1995: 200), who analyze Chichewa locative prefixes such as the class 17 prefix *ku* as locative nouns. However, the analysis to be developed below will not identify the locative noun with the prefix *e-*, since, as we saw in section 2.2.1., *e-* behaves as an Aug, not as a N.

3.1.3 e- as the Aug of the locative N

Suppose that the noun meaning 'place' (N_{Loc}) is merged on top of an Aug-less host noun before Aug is added:

(17) [Aug [N_{Loc} [host-N]]]

Then, N_{Loc} is the head of the noun phrase embedded under Aug, and the Aug inherits its class features and spells out as *e-*.[11]

This immediately explains why *e-* is not affected by the class-membership of the host noun. It also explains why the class 10 prefix *-zi-* is retained after *e-*, since although *e-* is an Aug, it is not the Aug of the overt host noun.

We take the locative *ku-* not to be an Aug, since it cannot drop under negation, and there is no N_{Loc} in the structure underlying *ku*-locatives.

3.2 -ini as a locative N

On the background of the proposals just made, I now turn to the locative suffix *-ini*.

3.2.1 -ini spells out the locative N

From the perspective adopted here, it becomes possible to see the locative suffix *-ini* as the spell-out of N_{Loc}. Since *-ini* follows the host noun, this presupposes movement of the host noun across N_{Loc}:

(18) [Aug [N_{Loc} [host-N]]] → [Aug [[host-N] [N_{Loc}]]]

We must assume that N_{Loc} continues to act as the head of the complement of Aug even after this movement has taken place so as to guarantee that Aug agrees with it. This will follow

[10] The noun *i-n-dawo* 'place' occurs as a locative without *e- … -ini* in *n-dawo-ni* – 9-place-which = 'where' and *n-dawo-nye* – 9-place-one = 'together', but otherwise needs *e- … -ini* to form a locative expression (*e-n-dawe-ni*). Suggestions in Taraldsen (2017) as to why *sted* 'place' may also combine with a locative preposition as in (12) b might be relevant.

[11] This raises an issue to which I return in section 4: No other N can belong to the same class as N_{Loc} since no other N comes with the Aug *e-*.

if we take the moved NP in (18) to be become the specifier of the NP containing N_{Loc} and assume the analysis of specifiers in Kayne (1994) taking specifiers to be similar to adjuncts:

(19) $[_{NP2}\ N_{Loc}\ [_{NP1}$ host-N]] → $[_{NP2}\ [_{NP1}$ host-N] $[_{NP2}\ N_{Loc}]]$ = $[_{NP2}\ [_{NP1}$ host-N] $[_{NP2}$ *ini*]]

Then, Aug is merged on top of this structure, whose head is the head of NP_2, i.e. N_{Loc}.

Since the spatial interpretation comes from N_{Loc} = *-ini* and not from its Aug *e-*, it follows directly that the spatial interpretation is not lost when *e*-drops in the scope of negation.

Given that I assume that there is no N_{Loc} in the structure embedded under the locative *ku-*, it also follows that *ku-* never co-occurs with *-ini*.

3.2.2 Agreement

In several Bantu languages, modifiers of a noun with a locative class prefix, i.e. a prefix of class 16, 17 or 18, agree with the locative class prefix, but in Xhosa, agreement with a noun locativized by *e- ... -ini* is not affected by *e- ... -ini*. Instead, the modifier's agreement marker is in the basic class of the noun to which *e- ... -ini* is affixed:

(20) a. e-khaye-ni l-e-thu
E-5.house-INI 5-of-us
in our home'

b. i-khaya l-e-thu
5-house 5-of-us
'our house'

On the one hand, this suggests that the Xhosa *e-* is not a locative class prefix on a par with the locative class prefixes in many other Bantu languages. On the other hand, what we see in examples like (20) is perfectly consistent with the alternative analysis proposed in section 3.2.1., which allows us to say that the possessor phrase in (20)a modifies the host-N in (18), not the locative noun N_{Loc}:[12]

(18) [Aug [N_{Loc} [host-N]]] → [Aug [[host-N] [N_{Loc}]]]

(21) [e [ini [khaya [lethu]]]] → [e [[khaya] [ini [lethu]]]]

This assumption will play a key role in the proposal to be made in the following subsection. But in the context of that proposal, I will also be forced to assume an analysis of demonstratives, adnominal adjectives and relative clauses in which these modifiers don't form a constituent with the host-N to the exclusion of N_{Loc} and therefore, do not modify just the host-N. Instead, they are merged to the structure formed by (15):

(22) $[[_{NP2}\ [_{NP1}$ khaya]$[_{NP2}$ ini]][eli]]

[12] In some Bantu languages, a modifier can choose between agreement with the locative prefix and agreement with the noun hosting the prefix, e.g. in Shona. Myers (1987) assumes a structural analysis similar to mine for the case where agreement is with the host noun.

Then, one may say that modifiers agree with the highest NP in the structure they merge with. In both (21) and (22), that NP is NP_1, the noun hosting *e- … -ini*.

Notice that these agreement facts are difficult to account for, if we follow Van der Spuy and analyze *e-* as the Aug of the host N with a locative case feature added to it, and take Aug to be the head of Aug – prefix – N (as suggested by Van der Spuy's analysis of Aug as D). Then, we should expect the locative case feature to be carried over under agreement to the Aug of the modifiers that contain an Aug, since case-features are generally carried over under agreement. But then, the Aug of those modifiers should also be spelled out by *e-* for the same reason as the class prefix on the locativized noun. Demonstratives, for example do contain an Aug agreeing with the modified noun which coalesces with a preceding *a* 'of':

(23) a u-m-thi l-o = … [l [a [u]]]
3-3-tree this of 3
b. i-n-ja l-e = … [l [a [i]]]
9-9-dog this of 9
c. a-ma-nzi l-a = … [l [a [a]]]
6-6-water this of 6

Thus, taking *e-* to be the Aug of a locativized N modified by a demonstrative would incorrectly predict forms like (24)a rather than (24)b, since coalescence would produce *e* from *ae*:

(24) a. *e-ma-nzi-ni l-e = … [l [a [e]]]
6+loc-6-water-ini this of 6+loc
b. e-ma-nzi-ni la = … [l [a [a]]]
6+loc-6-water this of 6
'in this water'

As for agreement markers on verbs and predicative adjectives, one notes that nouns affixed with *e- … -ini* never occur as subjects or objects triggering agreement, be it with the locative noun or the noun hosting *e- … ini*. The question why that is seems orthogonal to the issues discussed here except that it is again reasonable to think that the answer will turn on not analyzing the Xhosa *e-* as a locative class prefix like those found in many other Bantu languages, e.g. *pa-* (class 16), *ku-* (class 17) and *m-* (class 18) in Chichewa, which do trigger subject agreement and, to a more limited extent, also object agreement.[13]

3.2.3 When -ini doesn't occur

Taylor (1996: 292, quoted by Van der Spuy) points out that the nouns that allow *e-* without *-ini* "denote entities which are, in some sense, already locative in character", like *i-khaya* 'home', although there are exceptions. This recalls Comrie and Polinsky's (1998) discussion of Tsez. In this language, a locative expression is generally formed from a noun phrase by adding the locative suffix *-x(o)*, but the locative suffix may be absent "after certain nouns with inherently locational semantics" (Comrie and Polinsky 1998: 104, cited in Caha 2017). For example, *idu* 'home' can mean 'at home' without a locative suffix. The same pattern is also seen in Malayalam.

[13] It has been proposed by various authors that locative prefixes that don't trigger agreement are prepositions, but while the Xhosa *ku-* is a plausible candidate for being a preposition, *e-* has the properties of an Aug, since it can drop in the scope of negation (unlike *ku-*).

Caha (2017) develops an account involving phrasal lexicalization positing lexical entries similar to (15), where A represents the head inducing the locational semantics:

(25) inherently locative noun ←→ [A [N]]

By the Superset Principle, this entry allows inherently locative nouns to spell out the locative feature A in addition to just the N-features going into the bare noun:[14]

(26) The Superset Principle
A morpheme A with the entry A ↔ T can lexicalize a syntactic structure S if and only if S is identical to a subtree of T.

Caha also points out that this approach correctly predicts that even inherently locative nouns in languages like Tsez must have the locative suffix when they are modified. The reason is that the presence of the modifier XP in (27) prevents the A and the N from forming a constituent matching a subtree of (25), and therefore, A must be lexicalized in isolation from N:

(27) [A [**XP** [N]]]

The fact that locative affix-drop is blocked by modifiers in Tsez is obviously reminiscent of the contrast between *e-khaya* 'at home' and (15) (repeated as (28)):

(28) e-khaye-ni lethu
E-home-INI our
'in our home'

This suggests that *ini*-drop too is a product of phrasal lexicalization. Then, every noun licensing *ini*-drop has an entry like (29) which allows it to also lexicalize N_{Loc}:

(29) khaya ←→ $[_{NP2}\ N_{Loc}\ [_{NP1}\ N]]$

If so, we have:

(30) $[_{NP2}\ N_{Loc}\ [_{NP1}\ N]]$ = $[_{NP2}$ khaya]

This may lead to an account for the fact that the possessor phrase prevents *-ini* from dropping in (28). In section 3.2.2., we suggested that a possessor phrase modifies the host N of *e-* ... *ini*, and therefore *e-khaye-ni lethu* 'in our home' has the structure in (22) (repeated as (31)):

(31) $[_{NP2}\ N_{Loc}\ [[_{NP1}\ N]$ [**lethu**]]]

But in (31), N and N_{Loc} don't form a constituent matching a subtree of (29). So, *khaya* only lexicalizes N, and N_{Loc} is lexicalized by *-ini*.

[14] The role of the Superset Principle in the nanosynactic approach to lexicalization is discussed in Starke (2009), Caha (2009) and much subsequent work.

As mentioned in section 3.2.2., this account of why *ini*-drop is blocked by possessives forces an analysis of postnominal demonstratives, adnominal adjectives and relative clauses that places these outside $[_{NP2}\ N_{Loc}\ [_{NP1}\ N]]$, since these modifiers do not block *ini*-drop:

(32) e-khaya eli
E-home 5-this

Notice that parsing only possessor phrases as forming a constituent with the modified N is consistent with the fact that possessor phrases generally precede all other postnominal modifiers.

4. Further prospects

In this section, I first take stock of where we are, and then, look at some reasons for developing the analysis further.

4.1 What we have so far

The main virtue of the approach sketched here is that it explains a number of properties of *e-* .. *-ini* locatives that strictly morphological accounts like Van der Spuy's cannot easily accommodate except by stipulation:

(33) a. *e-* is an Aug, but not the Aug of the host-N
b. *e-* is invariant across N-classes
c. the relation between *e-* and *-ini*
d. the locative interpretation in the absence of a preposition
e. the syntactic conditioning of *ini*-drop

The following is an intriguing issue I still haven't addressed:

(34) The analysis offered in section 3 says that *e-* is the Aug of a locative noun, N_{Loc}. But *e-* is not the Aug of any other noun. So, N_{Loc} must be the only member of its noun class.

I will now suggest a way of developing the analysis so that this awkward conclusion no longer follows.

4.2 e- as a relative concord

The direction this will take, is suggested by another observation:

(35) The locative *e-* is not a cardinal vowel like other augments (*a, u, i*), but looks like the coalescence product of *a* and *i*.

"Coalescence" is the phonological process mentioned in section 1.4. An *e-* produced by *a* coalescing with a following *i* occurs elsewhere, e.g. inside demonstratives as in (23)b and in possessive constructions when *a* 'of' precedes a possessor noun whose Aug is *i* (see section 1.4.). Likewise, as mentioned in section 1.4., the so-called relative concords (RCs) which generally

agree with the subject of a relative clause can be seen as the outcome of coalescence applying to an *a* followed by a vowel corresponding to the Aug of the same class as the SC:[15]

(36) a. i-n-yoka [**a**-ba-yi-bon-ile-yo **a**-ba-ntwana] = … [[*a* [***a***]] [*ba* …
9-9-snake RC2-SC2-OC9-see-RP-REL 2-2-child Aug2
'the snake that the children saw'

b. u-m-ntwana [**o**-bon-e-i-n-yoka] = … [[*a* [***u***]] […
1-1-child RC1-see-RP 9-9-snake Aug1
'the child who saw the snake'

c. i-n-yoka [**e**-yi-bon-ile-yo **i**-n-doda] = … [[*a* [***i***]] […
9-9-snake RC9-OC9-see-RP-REL 9-9-man Aug9
'the snake that the man saw'

In particular, the RC is *e-* whenever the subject of the relative clause belongs to a class whose Aug is *i*, i.e. one of the classes 4, 5, 7, 8, 9 and 10. So, if the locative *e-* really is a RC agreeing with N_{Loc}, N_{Loc} can belong to one of these classes rather than to a singleton class of its own.

This line of analysis is consistent with the fact that the locative *e-* drops in the scope of negation as we saw in (7) (repeated as (37)):

(37) A-ndi-fundisi si-kolwe-ni
not-I-teach 6-school-INI
'I'm not teaching at any school.'

This is because RCs, just like Augs, can drop in the scope of negation (for Xhosa, see Visser 2008):[16]

(38) A-ku-kho m-ntu **u**-bon-e i-n-yoka
not-SC15-there 1-person SC1-see-RP 9-9-snake
'There is no one who saw a snake'

Thus, we are led towards an analysis in which a locative expression like *e-si-kolwe-ni* 'at the/a school' is really a verb-less relative construction with a silent head noun meaning something like 'the place where the school is' or perhaps rather 'the place which is the place of the school' since a RC generally (but not always; see (42) below) is in the same class as the subject of the relative clause.

However, a number of details need to be worked out. For example, while a RC is normally directly followed by a SC, a subject agreement marker, there is no SC in the locative *e-* … *-ini* construction. This cannot be concluded directly from the cases where the *e-* does not drop, since N_{Loc} might be in class 9, and would therefore come with the SC9 *i*, which presumably coalesces with *a* (along with the corresponding Aug *i*) even in regular relatives like (39):

[15] In (36), *a* and the Aug with which it coalesces, are represented as a constituent because under RC-drop as in (38) below, the *a* and the Aug drop as a unit. It is as yet unclear exactly how the agreement relation between this Aug and the subject/SC is established.

[16] If there are varieties of Xhosa or Zulu in which RC-drop is impossible or highly constrained, the proposal in this section predicts that *e-*drop should also be impossible or highly constrained in these varieties, possibly in contrast with regular Aug-drop.

(39) i-n-tombi **e**-thetha i-si-ngesi = … [e [**i** [thetha … = [RC9 [**SC9** [thetha …
9-9-girl RC9-speak 7-7-English
'the girl who speaks English'

But when the RC drops, as in (40), the SC9 *i* becomes visible in regular relatives, but not so in *e-* … *-ini* locatives:

(40) A-nd-azi n-tombi **i**-thetha i-si-ngesi
not-I-know 9-girl SC9-speak 7-7-English
'I don't know any girl who speaks English.'

(41) a. U-hlala e-n-dlwi-ni
SC1-live E-9-house-INI
'She lives in a house.'
b. A-ka-hlali n-dlwi-ni
not-SC1-live 9-house-INI
'She doesn't live in any house.'

We can account for the contrast between (40) and (41)b by maintaining that *e- ... -ni* locatives do not contain a verbal element, hence no element that can host a SC.

The absence of a SC in *e- ... -ni* locatives would be worrisome if the Aug coalescing with *a* in a RC need to agree with a SC, but relatives like (42) show that this is not actually the case:

(42) I-n-tle i-n-to **e**-ku-funeka ndi-**y**-enze
9-9-nice 9-9-thing RC9-SC15-must I-OC9-do
'It is beautiful, the thing I have to do.'

The Aug connected with SC15 *ku-* is *u*, and the RC in (42) would have been *o*, if the Aug going into the RC must agree with a SC.[17] (42) also shows that the RC doesn't always match a subject.

On the view that *e-* … *-ni* locatives are relative constructions with a silent head noun, they are similar to head-less relatives like the one in (43):

(43) a-ba-sebenza-yo
RC2-SC2-work-REL
'the ones that work'

In these too, there is a silent relativized noun (assuming a "head-raising" analysis of relative constructions).

[17] Notice also that attributive adjectives have RCs, although the RC is followed by an adjectival agreement marker (AC) rather than a SC in this case: *u-m-ntwana o-**m**-hle* – 1-1-child RC1-**AC1**-beautiful – 'a beautiful child'.

4.3 -ini = i-ni = Aug-class prefix?

In section 3.2.1., *-ini* was taken to be the spell-out of N_{Loc}. In section 3.2.3., I suggested that *ini*-drop should be seen as the outcome of phrasal spell-out, i.e. nouns like *khaya* 'home' lexicalize the whole phrase containing N_{Loc}. A version of this analysis is still available even if *e-khaya* 'at home' has a structure corresponding to the meaning 'the place that is the place of the home' with two occurrences of N_{Loc}, one as a relativized subject and another one connected with the host noun in a kind of possessive construction, i.e. $[_{NP2}\ N_{Loc}[_{NP1}\ N]]$ with the possessum preceding the possessor phrase, as in the regular possessive constructions mentioned in 1.4., but without the linker *a* 'of'. But if N_{Loc}, as we have suggested, is a class 9 noun, a slightly different version of the proposal suggests itself.

If *-ini* corresponds to N_{Loc}, it should have an Aug and a class prefix like other nouns suggesting parsing *i-ni* with *i* as an Aug, in fact the class 9 augment. Then, *ni* might correspond to the usual class 9 prefix *-n-* rather than to N_{Loc} itself. This is consistent with a generalization about the relationship between the Aug and the following class prefix: In all classes with a CV_x-shaped prefix, the Aug is spelled out by V_x. This should not be seen as phonological copying, but rather as a reflex of the prefix containing two distinct syntactic constituents, one spelled out by a C and the second by V_x, and Aug is a higher occurrence of the same syntactic element as V_x and therefore is spelled out the same way (see Taraldsen 2020). This analysis extends to the cases where the class prefix is reduced to C (classes 1 and 3) or is absent on polysyllabic nouns (classes 5 and 11), since phonological processes are irrelevant, and the relation between the class 9 Aug *i* and the class 9 prefix *n* falls into the general pattern, if the prefix is really *ni* reduced to *n* when followed by an overt noun.

If *-ini* is really just Aug followed by the class 9 prefix of N_{Loc}, no overt element actually lexicalizes the second occurrence of N_{Loc} in *e- … -ini* locatives, and something must be added to explain why it is silent.[18]

Three possibilities come to mind. First, if the structure of *e*-N-*ini* contains two occurrences of N_{Loc} as in 'the place that is the school's place', we might say that the identity between the higher occurrence and the lower one warrants ellipsis of the lower N_{Loc} stranding its Aug and prefix.

Regardless of whether the structure contains two occurrences of N_{Loc} or just a single one as in 'the place that the school is at', we might also adopt Kayne (2006) and say that (the lower) N_{Loc} moves to a Specifier-position associated with its Aug *i* and therefore remains silent because the Specifier of the Aug is a phase edge position.

Finally, if there is just a single N_{Loc} as in 'the place that the school is at', we might claim that this N_{Loc} gets relativized stranding its Aug and class prefix, i.e. *i-ni*. Then, the question why the N_{Loc} connected with *i-ni-* is silent, reduces to the question how the relativized N_{Loc} can be silent – a question we already have to answer anyway, since free relatives like (43) have a silent relativized noun.

For the sake of concreteness, let us assume that an *e*-N-*ini* locative should be construed as "the place that is the N's place" corresponding to an initial structure with two occurrences of N_{Loc} where the first is the subject and the second a possessee with respect to N:

(44) $[\text{i-ni-}N_{Loc}\ [\text{i-ni-}N_{Loc}\ [N]]]$

[18] Also, the lexical entry for nouns like *khaya* in (29) must be changed so as to take in *i-ni-* on top of N_{Loc}

Normally, a possessee is linked to the possessor phrase by the *a*. The absence of the "linker" *a* in (44) may be due to subsequent movement of the possessor phrase across the possessee giving (45):[19]

(45) [i-ni-N_{Loc} [[N][i-ni-N_{Loc}]]]

At this point, the lower occurrence of N_{Loc} undergoes ellipsis under identity with the subject unless the host N is a noun like *khaya* 'home':

(46) [i-ni-N_{Loc} [[N][i-ni-~~N_{Loc}~~]]]

If N is a noun like *khaya* it has a lexical entry like (47), and the entire possessee *i-ni*-N_{Loc} is lexicalized together with the possessor:

(47) khaya ←→ [[N][i-ni-N_{Loc}]]

In (48), however, there is no constituent matching the structure in (43):

(48) [*i-ni*-N_{Loc} [[N lethu [*i-ni*-N_{Loc}]]]

Finally, the subject *i-ni*-N_{Loc} is relativized leading to the appearance of the RC *e-*. Notice that the selection of *e-* now falls in line with the fact that the RC generally agrees with the subject of the relative clause.

5. Conclusion

What I have primarily tried to do, is provide arguments for a specific type of syntactic analysis of the locative *e- … -ini* locatives in Xhosa. Even if many loose ends remain as to what the optimal implementation should be, I think the facts discussed in this paper clearly point towards an account of the sort I have proposed.

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[19] Possibly, the fact that the host N is Aug-less, is also related to this.

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