Introducing Arguments above the Agent: the Case of Zulu Locative Applicatives[*]

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1. Locative arguments and DP objects in Zulu

This paper will address interesting differences between constructions in Zulu in which the locative applicative argument appears as a PP, as in (1), and constructions in which it appears as a DP, as in (2), which I will term "locative-to-subject raising":[1]

(1) PP locative

A- bantwana ba- fund- el- a [e- sikole- ni.]$_{PP}$
2- 2.child   2.sbj- study- appl- fv   loc:7- 7.school- loc

"The children study at the school."

(2) DP locative

[I- sikole]$_{DP}$ si- fund- el- a a- bantwana.
  7- 7.school   7.sbj- study- appl- fv 2- 2.child

Lit. "The school studies at the children."
(≈ "The children study at school.")

It will be demonstrated that where the locative is a DP, as in (2), the locative has certain subject properties while the agent has certain object properties. It will be shown that these facts are most easily accounted for in an analysis in which the locative in such sentences is merged above the agent.

The unmarked word order in Zulu, a Bantu language spoken in South Africa, is SVO:

1.   A subtype of the (2) sentence is perhaps first mentioned in Nkabinde (1988).

(3)   Neutral word order: S V O

    A- bantwana ba-   fund- a i- siZulu.
    2- 2.child   2.sbj- study- fv 7- 7.Zulu

    "The children study Zulu."

The applicative suffix *-el* is a valency-increasing head which allows an additional argument to be added to the verb. The applicative suffix *-el* on the verb is dependent upon an applicative argument, as shown in (4b):

(4) a.   Plain (with optional PP adjunct)

    Ngi- thand- a u- ku- cul- a (e-   sikole- ni).
    1s.sbj- love-   fv 15- 15- sing- fv   loc:7- 7.school- loc

    "I like to sing (at school)."

   b.   Applicative

    Ngi- thand- a u- ku- cul- el- a *(e-   sikole- ni).
    1s.sbj- love-   fv 15- 15- sing- appl- fv   loc:7- 7.school- loc

    "I like to sing (at school)."

There is usually no readily perceivable difference in meaning between a plain verb with a PP adjunct as in (4a) and a locative applicative as in (4b), but as these two sentences show, there are clear syntactic asymmetries between them.

DP objects: patients, beneficiaries, and reasons.   DP objects in Zulu (patients, beneficiaries, and reasons) share certain properties. They cannot raise to preverbal subject position in the presence of an agent, while they can raise to preverbal subject position under passivization. These facts are demonstrated in (5), (6), and (7). The fact that subject/object reversal is not available, as shown by the (b) sentences, is not trivial, since such a construction is attested in several Bantu languages, such as Swahili (Barrett Keach, 1985) and Rwanda (Kimenyi, 1978), where it also goes by the name of "quasipassive".

(5)   Patients

   a.   Neutral word order: S V Patient

    U- mfana u-   zo- fund- a i- ncwadi.
    1- 1.boy   1.sbj- fut- study- fv 9- 9.book

    "The boy will study the book."

b. Subject/object reversal impossible: Patient V S

* I- ncwadi i-   zo- fund- a u- mfana.
   9- 9.book 9.sbj- fut- study- fv 1- 1.boy

Lit. "The book will study the boy."
(≈ "The book will be studied by the boy.")

c. Passivization possible: Patient V-psv

I- ncwadi i-   zo- fund- w- a (ng- u- mfana).
9- 9.book 9.sbj- fut- study- psv- fv   by- 1- 1.boy

"The book will be studied by the boy."

(6) Reason applicative objects

a. Neutral word order: S V ReasO

A- bantu   ba- zo- jabul- el- a i- mali.
2- 2.person 2.sbj- fut- rejoice- appl- fv 9- 9.money

"People will rejoice over the money."

b. Subject/object reversal impossible: ReasO V S

* I- mali   i-   zo- jabul- el- a a- bantu.
   9- 9.money 9.sbj- fut- rejoice- appl- fv 2- 2.person

Lit. "The money will rejoice over people."
(≈ "The money will be rejoiced over by people.")

c. Passivization possible: ReasO V-psv

I- mali   i-   zo- jabul- el- w- a (ng- a- bantu   ).
9- 9.money 9.sbj- fut- rejoice- appl- psv- fv   by- 2- 2.person

"The money will be rejoiced over (by people)."

(7) Benefactive applicative objects

a. Neutral order: S V BenO (DO)

Ngi- lahl-   el- a u- Thandi u- doti.
1s.sbj- dispose.of- appl- fv 1- 1.Thandi 1- 1.trash

"I'm taking out the trash for Thandi."

b. Subject/object reversal impossible: BenO V S (DO)

* U- Thandi u-   lahl-   el- a mina (u- doti   ).
   1- 1.Thandi 1.sbj- dispose.of- appl- fv me   1- 1.trash
Lit. "Thandi's taking out me the trash."
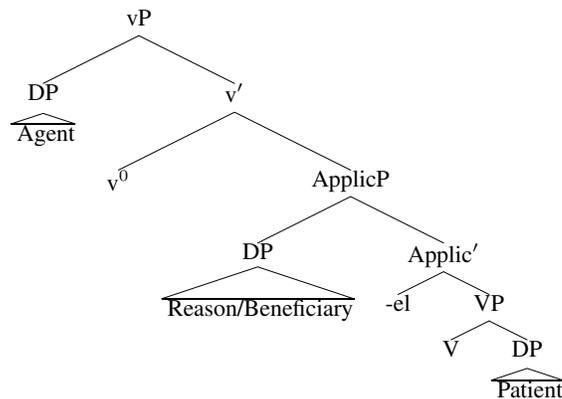(≈ "Thandi's being taken out the trash for by me.")

c. Passivization possible: BenO V-psv

U- Thandi u-   lahl-   el- w- a u- doti.
1- 1.Thandi 1s.sbj- dispose.of- appl- psv- fv 1- 1.trash

"Thandi is being taken out the trash (for)."

The fact that these three types of objects behave similarly is partially a consequence of the fact that both patients and reason and benefactive applicative objects are merged below the agent (Ngonyani, 1996; Pylkkänen, 2002),[2] as in this tree:

(8)   Objects merged below the agent

```
                    vP
                  /    \
               DP        v′
              /‾‾\      /    \
            Agent    v⁰      ApplicP
                           /       \
                        DP           Applic′
                      /‾‾‾\         /   \
              Reason/Beneficiary  -el    VP
                                       /   \
                                      V     DP
                                          /‾‾\
                                        Patient
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2. Low subjects

It will be relevant that, in addition to preverbal subjects, two types of postverbal subjects are also possible in Zulu, illustrated in (9):

(9) a.   Low subject (always postverbal)

Ku-   zo- cul- a *(a- bantwana.)
17.sbj- fut- sing- fv   2- 2.child

b.   Preverbal high subject

A- bantwana ba-   zo- cul- a.
2- 2.child   2.sbj- fut- sing- fv

c.   Right-dislocated high subject

Ba-   zo- cul- a, a- bantwana.
2.sbj- fut- sing- fv 2- 2.child

"The children will sing."

d.   Implicit high subject

pro_i Ba$_i$- zo- cul- a.
            2.sbj- fut- sing- fv

"They will sing."

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2.   For a different view, see Brandt (2003, page 2).

The postverbal subject which will concern us is the low variety, so-termed because it has not raised to an agreement projection. In Zulu, a tensed clause with a low subject bears class 17 agreement, which (among other diagnostics) distinguishes it from a right-dislocated subject, which requires normal subject agreement on the verb. As shown in the contrast between (9a) and (9d), a high subject can be implicit, while a low subject cannot.

Having examined how non-locative objects and postverbal subjects behave in Zulu, we are now ready to consider PP and DP locative arguments.

3. PP locative applicatives in Zulu

The Zulu locative applicative argument in postverbal position must appear as a PP:

(10) a. A- bantwana ba-   fund- el- a [e-   sikole- ni.]$_{PP}$
         2- 2.child   2.sbj- study- appl- fv   loc:7- 7.school- loc

    b. * A- bantwana ba-   fund- el- a [i- sikole.]$_{DP}$
           2- 2.child   2.sbj- study- appl- fv   7- 7.school

        "The children study at the school."

We will now see that PP locative applicative arguments behave similarly to patients, beneficiaries, and reasons with respect to passivization and subject/object reversal, thus supporting the null hypothesis that this type of applicative argument, just like the benefactive and reason type, is also merged below the agent.

Passivization.   A locative applicative PP can raise to preverbal subject position under passivization:

(11) [E-   sikole- ni]$_{PP}$ ku-   zo- fund- el- w- a (nga-
        loc:7- 7.school- loc   17.sbj- fut- study- appl- psv- fv   by:2-
      bantwana).
      2.child

      "The school will be studied at (by children)."

It would seem that in (11) the locative PP *esikoleni* is truly in subject position and that this is not a PP topic of an impersonal passive,[3] since although Zulu does have impersonal passives, they are incompatible with *by*-phrases:

3.   The potential for two different analyses stems from the fact that noun class 17 in Zulu serves as both a locative class and as a sort of default agreement class. As examples of the latter, noun class 17 agreement can be used as subject agreement with certain types of conjoined subjects, with copular predicates, and with verbs like *be evident* which take a single clausal argument. Thus, in sentences such as (11), it is not immediately obvious whether the verb agrees with a locative subject or whether it merely bears default (dummy) agreement.

(12) Ku-   zo- fund- w- a (* nga- bantwana).
        17.sbj- fut- study- psv- fv   by:2- 2.child

   "There will be studying going on (by children)."

No subject/object reversal.   Three potential instances of subject/object reversal have been shown to be ungrammatical—with a direct object in (5b), with a reason applicative in (6b), and with a benefactive applicative in (7b).[4] Sentence (13a) is not necessarily a counterexample to our suggestion that Zulu has no subject/object reversal, since the locative phrase can be taken to be a topic. That a locative applicative can be topicalized is demonstrated in (13b).[5]

(13) a. (E-   sikole- ni)$_i$ ku-   zo- fund- el-   a *(a- bantwana) t_i.
             loc:7- 7.school- loc   17.sbj- fut- study- appl- fv   2- 2.child

     b. (E-   sikole- ni,)$_i$ a- bantwana ba-   zo- fund- el-   a t_i.
             loc:7- 7.school- loc   2- 2.child   2.sbj- fut- study- appl- fv

     "(At the school), children will study."

No implicit low subject.   As shown in (13a), the postverbal agent cannot be made implicit when the PP locative applicative argument is raised to preverbal position. This is to be expected if this postverbal agent is a subject, since low postverbal subjects have already been shown in (9a) to be obligatorily overt.

Subject and object properties with PP locatives.   In (1), and in other sentences where the locative is a PP, the agent has subject properties: it can raise to preverbal subject position and trigger subject agreement on the verb, it cannot be implicit in postverbal position in active voice, and under passive voice it is either suppressed or appears in a *by*-phrase. In contrast, the PP locative has the object property of being able to raise to preverbal subject position under passivization. This falls out from the uncontroversial assumption that PP locatives merge in a position below the agent, just as the reason and benefactive objects in (8):

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4.   The benefactive under subject/object reversal would be expected to be ungrammatical even if it were grammatical for the other two cases, due to animacy hierarchy issues which we cannot go into here.
5.   If (13a) were shown to be an instance of genuine subject/object reversal, we could account for it by appealing to Relativized Minimality—the locative can raise over the agent by virtue of the former being a PP while the latter is a DP.

(14)   Locative PP merged under the agent

```
                         vP
                ┌─────────┴─────────┐
               DP                   v′
              ───              ┌─────┴─────┐
             Agent            v⁰         ApplicP
                                   ┌───────┴───────┐
                                  PP            Applic′
                                 ───        ┌─────┴─────┐
                               Locative    -el         VP
                                                    ┌────┴────┐
                                                    V        DP
                                                            ───
                                                          Patient
```
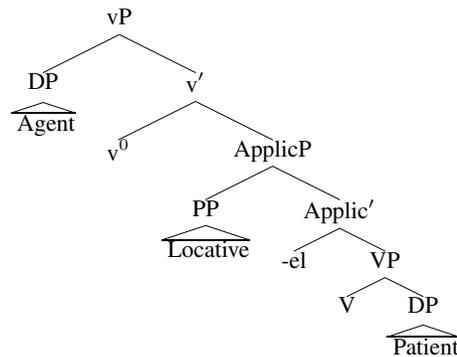
4. DP applicative locatives and locative-to-subject raising

The DP locative applicative argument can raise to preverbal position in a construction I have termed "locative-to-subject raising", as shown in (1), repeated here as (15):

(15)   DP locative raised to preverbal subject position

  I- sikole   si-   zo- fund- el- a a- bantwana.
  7- 7.school 7.sbj- fut- study- appl- fv 2- 2.child

  Lit. "The school will study at (children)."
  ($\approx$ "The school will be studied at (by children).")

We will now see that the DP locative in (15) has subject properties, while the agent has certain object properties.

The locative DP in (15) appears to be a subject. It is in preverbal position, it triggers subject agreement, and there is no resumptive pronoun corresponding to it in the VP. Furthermore, the DP locative can bind into an agent:

(16)   I- sikole   ngasinye$_i$ si-   fund- el- a a- bantwana ba- so$_i$.
        7- 7.school 7.each   7.sbj- study- appl- fv 2- 2.child   2.of- 7.it
        Lit. "Each$_i$ school studies at its$_i$ children."
        ($\approx$ "Each$_i$ school is studied at by its$_i$ children.")

Implicit agents.   The agent may be implicit in locative-to-subject raising, as
shown in (17). The agent receives an arbitrary (non-referential) interpretation.

(17)   Implicit agents in locative-to-subject raising

   I- sikole   si-   zo- fund- el-   a t_i e_{agent}.
   7- 7.school 7.sbj- fut- study- appl- fv

   Lit. "The school will study at."
   ($\approx$ "The school will be studied at (by someone).")

This is surprising, because, as shown above in (9a), low postverbal subjects
cannot generally be implicit.
    Now note the contrast between (18a) and (18b):

(18) a.   I- sikole$_i$ si-   zo- fund- el-   a t_i e_{agent}.
          7- 7.school 7.sbj- fut- study- appl- fv

          Lit. "The school will study at."
          ($\approx$ "The school will be studied at.")

   b.   * [E-   sikole- ni$_i$]$_{Top}$ ku-   zo- fund- el-   a t_i e_{agent}.
          loc:7- 7.school- loc   17.sbj- fut- study- appl- fv

          Lit. "At the school will study at."
          ($\approx$ "The school will be studied at.")

If the locative PP in (18b) is a topic, its ungrammaticality is reduced to the
case of (9a)—a subject may not be implicit in postverbal position. This con-
trast supports the idea that the DP *isikole* in (18a) is a subject.
    The locative-to-subject raising sentence in (17) also stands in contrast
with classic subject/object reversal, exemplified here by Swahili, where the
agent cannot be omitted:

(19)   No implicit agent in classic subject/object reversal (Swahili)

   Kitabu ki-   na-   soma *(watoto).
   7.book 7.sbj- pres- study   2.child

   Lit. "The book studies (the children)."
   ($\approx$ "The book is studied (by the children).")

    The ability to be implicit in postverbal position is taken to be an object-
like property, as exemplified by the two sentences in (20):

(20)   Implicit postverbal arguments

    a.   Object can be implicit

        Ngi- zo- fund- is- a.
        1s.sbj- fut- study- caus- fv

        "I will teach (someone)."

    b.   Subject cannot be implicit

        * Ku-   zo- lal-   a.
         17.sbj- fut- sleep- fv

        "Someone will sleep."

No passivization.   A DP locative applicative argument cannot raise to subject position under passivization.

(21)   * I- sikole   si-   zo- fund- el-   w- a.
       7- 7.school 7.sbj- fut- study- appl- psv- fv

   "The school will be studied at."

The inability of the DP locative to passivize is expected if it is in some sense a subject in sub-IP position.

    In summary, data employing locative-to-subject raising shows that the DP locative applicative argument behaves like a subject, while the agent behaves like an object. This situation stands in clear contrast with the PP locative applicatives shown in the previous section.

Summary of DP locatives.   In contrast to the PP locative in (1), the DP locative in (2) is a subject by these criteria:

(22) a.   It appears in preverbal position and triggers subject agreement.

    b.   It can bind into the postverbal agent.

    c.   There is no resumptive pronoun or object clitic referring to it in the VP.

In the same construction, the agent has a certain object-like property, namely that it can be implicit in postverbal position.[6]

    These facts will be taken to follow from the fact that in a sub-IP position, the locative DP will be in a position above the agent, the specifier of a projection which I will temporarily label ?P.

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6.   This is not to say that the agent has *all* typical object properties. Notably, unlike a direct, beneficiary, or reason DP object, an agent cannot be object-cliticized under locative-to-subject raising. This fact distinguishes this construction from the causative, which also subordinates an agent under a higher argument.

(23)   Locative DP merged or moved above the agent

```
                        IP
              ┌─────────┴─────────┐
            DP_i                  I′
          ┌──┴──┐          ┌──────┴──────┐
         Locative          I            ?P
                                   ┌─────┴─────┐
                                  t_i          ?′
                                         ┌─────┴─────┐
                                       (-el)         vP
                                              ┌──────┴──────┐
                                             DP             v′
                                          ┌──┴──┐      ┌─────┴─────┐
                                         Agent       v^0          VP
                                                              ┌───┴───┐
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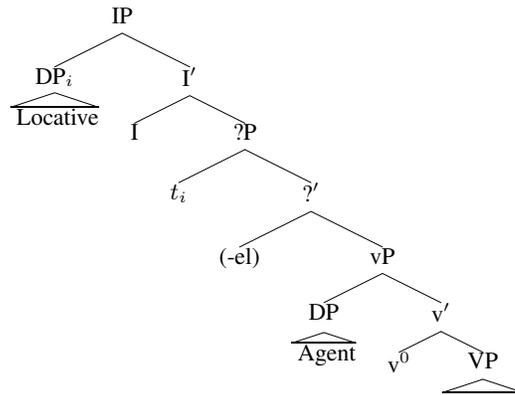
5. Towards a more precise analysis of DP locatives

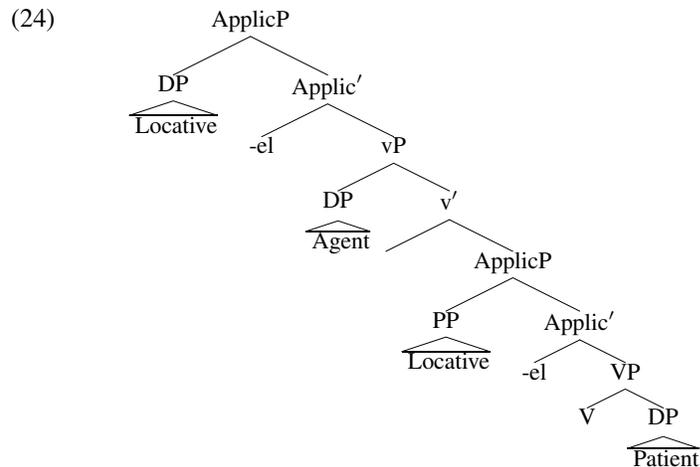Now we will consider the nature of what I have labelled ?P in (23). Given that in locative-to-subject raising the DP locative has subject properties while the agent has object properties, the natural analysis is that the DP locative must raise to preverbal subject position from a postverbal position above the subject. This can be conceived in two distinct ways:

Analysis A—high applicative merge. A DP locative merges above the agent. A PP locative merges below the agent, as in (24):

(24)

```
                    ApplicP
            ┌─────────┴─────────┐
           DP                 Applic′
         ┌──┴──┐         ┌──────┴──────┐
        Locative        -el            vP
                                 ┌──────┴──────┐
                                DP             v′
                              ┌──┴──┐     ┌─────┴──────┐
                             Agent           ApplicP
                                        ┌───────┴───────┐
                                       PP             Applic′
                                     ┌──┴──┐      ┌─────┴─────┐
                                    Locative     -el          VP
                                                         ┌─────┴─────┐
                                                         V           DP
                                                               ┌─────┴─────┐
                                                                  Patient
```

Analysis B—movement.   The locative applicative argument is always merged in the same position, but Zulu has a locative voice. The locative DP moves to VoiceP before it moves to preverbal subject position, as in (25):

(25)

```
                        VoiceP
                   ┌──────┴──────┐
                 DPᵢ            Voice′
                ┌──┐         ┌────┴────┐
              Locative               vP
                          ┌──────────┴──────┐
                        DP                  v′
                       ┌──┐          ┌───────┴───────┐
                     Agent                         ApplicP
                                          ┌───────────┴────┐
                                         tᵢ              Applic′
                                                   ┌───────┴───────┐
                                                 -el               VP
                                                          ┌─────────┴───┐
                                                         V              DP
                                                                       ┌──┐
                                                                     Patient
```
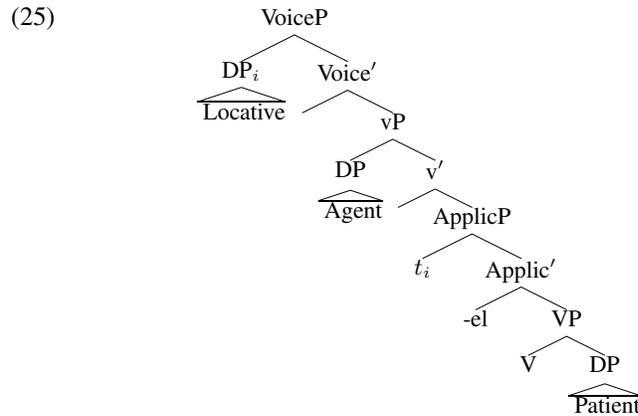
   How shall we choose between these two analyses? Evidence from quantifier stranding suggests that the locative applicative is merged above the agent, as in (24).

Quantifier stranding.   The present tense in Zulu has a focus distinction which can be used as a diagnostic for whether material follows the verb within a certain low constituent (van der Spuy, 1993), which I shall label XP. In loose terms, the absence of the prefix *ya-* always indicates that at least the next word lies within the constituent XP, as illustrated in (26) and (27):

(26) a.   Subject inside XP

   Ku-   cul- a a- bantwana]$_\text{XP}$.
   17.sbj- sing- fv 2- 2.child

   b.   Subject outside XP

   Ba-   **ya-** cul- a]$_\text{XP}$ a- bantwana.
   2.sbj- foc- sing- fv   2- 2.child

   "Children are singing."

(27) a.   Object inside XP

    A- bantwana ba-   cul- a i-   zingoma]$_{XP}$.
    2- 2.child   2.sbj- sing- fv 10- 10.song

    b.   Object outside XP

    A- bantwana ba-   **ya-** zi-   cul- a]$_{XP}$ i-   zingoma.
    2- 2.child   2.sbj- foc- 10.obj- sing- fv   10- 10.song

    "The children are singing the songs."

    Quantifiers can be stranded within the XP constituent:

(28) a.   Subject quantifier stranded inside XP

    A- bantwana ba-   cul- a bonke.]$_{XP}$
    2- 2.child   2.sbj- sing- fv 2.all

    "The children are all singing."

    b.   Object quantifier stranded inside XP

    I-   zingoma, a- bantwana ba-   zi-   cul- a zonke.]$_{XP}$
    10- 10.song   2- 2.child   2.sbj- 10.obj- sing- fv 10.all

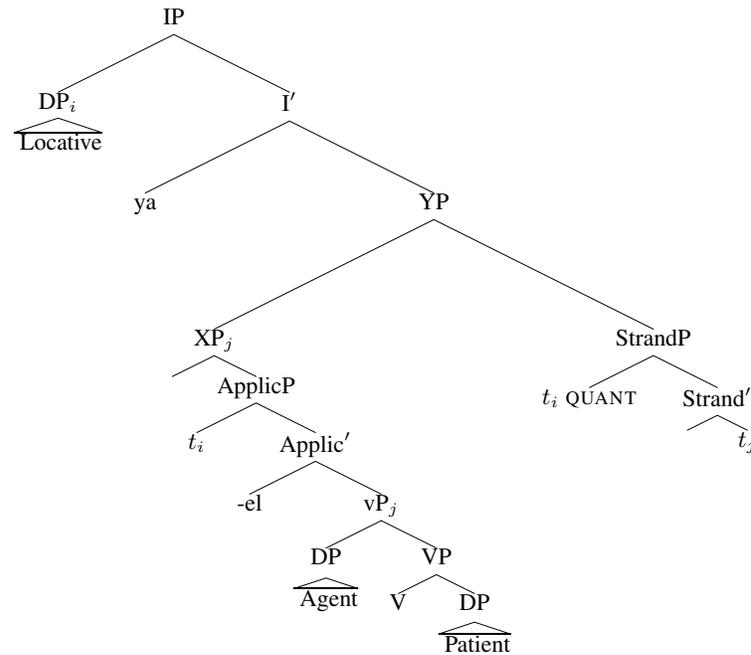   "The songs, the children are singing them all."

Curiously, however, a quantifier associated with a raised DP locative cannot be stranded inside XP:

(29) a.   I- zikole   zi-   ya- fund- el- a]$_{XP}$ zonke.
    8- 8.school 8.sbj- foc- study- appl- fv   8.all

    b.   * I- zikole   zi-   fund- el- a zonke.]$_{XP}$
    8- 8.school 8.sbj- study- appl- fv 8.all

    "The schools are all studied at."

This fact seems difficult to account for under an analysis where the DP locative merges under the agent in the same position as a PP locative. But under the high applicative merge analysis, these facts can be accounted for in the following way. The structure of XP is rich enough to provide positions in which agents and objects can strand quantifiers, but the cut-off point for XP is too low to provide such a position for a locative DP, as shown in the following tree, where StrandP represents the lowest projection in which a DP locative quantifier can be stranded:

(30)   Stranding the DP locative quantifier

```
                          IP
                 ┌────────┴────────┐
               DP_i               I′
              Locative      ┌──────┴──────┐
                           ya            YP
                                 ┌────────┴────────┐
                              XP_j               StrandP
                            ┌───┴───┐         ┌─────┴─────┐
                         ApplicP          t_i QUANT    Strand′
                       ┌────┴────┐                        t_j
                      t_i     Applic′
                           ┌────┴────┐
                          -el       vP_j
                                 ┌───┴───┐
                                DP      VP
                              Agent  ┌──┴──┐
                                     V    DP
                                        Patient
```

6. Conclusion

   I have shown that DP locative applicative arguments behave quite unlike
other non-agent arguments in Zulu—beneficiaries, reasons, and even PP loca-
tive applicatives. It was argued that these asymmetries could be explained by
assuming that the DP locative was higher than the agent in a sub-IP position.
Data involving quantifier stranding was taken to suggest that the DP locative
is merged in a position above the agent rather than moved to such a posi-
tion. While such a conclusion may seem somewhat unusual, it should not be
entirely surprising, given that we are already familiar with another valency-
increasing head which is merged above an agent, namely the causative head
Caus°.
   Assuming that the analysis proposed here with a locative applicative DP
merged above the agent is on the right track, certain questions arise:

a. In the interests of maintaining UTAH (Universal Theta Assignment Hy-
   pothesis), it would be desirable to find semantic distinctions between the
   high DP locative and the low PP locative. Do any such distinctions exist?

b. If the locative DP truly is above the agent in a sub-IP position before raising
    to preverbal position, why is a DP applicative locative precluded as a low
    postverbal subject?

These questions must addressed in further research.

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