Afrikaans Axials: Complex Adpositions from a (Non-) Projective Perspective

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Introduction

This talk seeks to highlight a syntactic (sub-)categorial distinction that seems not to have been noted as far as Afrikaans (and closely related West-Germanic languages) are concerned.

(a) Daar is ’n gogga op / bo / bo-op jou kop.
   “There is a bug on above top-on your head.”

It will be argued that bo- and op-type elements belong to distinct syntactic categories, and that this distinction helps to derive complex adpositions like bo-op.

Overveiw

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1. (Non-) Projective Adpositions

Both bo-type and op-type elements seem to head locative PPs (1).

(1)  
(a) Daar is ’n gogga op jou kop.  
there is a bug on your head  
“There is a bug on your head.”

(b) Daar is ’n gogga bo jou kop.  
there is a bug above your head  
“There is a bug above your head.”

These elements (and others like them) frequently exhibit distinct morpho-syntactic properties. E.g. bo-types may substitute an entire locative PP (2a); this is not possible for op-types (2b).

(2)  
Jan speel in die solder.  
Jan plays in the attic  
“Jan is playing in the attic / upstairs.”

(a) Jan speel [bo].  
Jan plays above  
“Jan is playing upstairs.”

(b) *Jan speel [op].  
Jan plays on

Bo-types accept the superlative adjectival suffix -ste, and the op-type don’t.  

(3)  
(a) bo-n-ste ("topmost")  
top-/-N/-est
binne-ste ("innermost")  
in(-/-ste)
inside-est
buiten-ste ("outermost")  
uit(-/-ste)
outside-/-N/-est
voor-ste ("frontmost")  
aan (-/-ste)
front-est
agter-ste ("backmost")  
by(-/-ste)
back-est

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3 Most speakers can say inste or uitste in the context of expressions like (i), but I argue that such uses derive from the verbal particles in and uit in expressions like Hy het die bal (heeltemal) in/uit geslaan (lit.: he has the ball (completely) in/out hit, “he hit the ball (completely) in/out”); that is, through the attributive use of the passive participle forms. Evidence for this comes from the fact that expressions like (ii), where there is no conceptual evidence for motion/direction (aspects of meaning that are typically associated with V-particles), are terrible. Contrast the badness of (ii) with (iii), which is fine in any context.

(i) Dit was die inste /uitste bal wat hy nog geslaan het.  
that was the in/outermost ball that he yet hit has  
“That was the best/worst shot he has played thus far.”

(ii) *Ek wil die inste / uitste bal hé.  
I want the in/outermost ball have

(iii) Ek wil die binneste / buitenste bal hé.  
I want the innermost/outermost ball have  
“I want the innermost/outermost ball.”
Bo-types are compatible with measure modification; op-types are not:

(4) (a) Die gogga is twee sentimenter bo jou kop.
      the bug is two centimeters above your head
      “The bug is two centimeters above your head.”

(b) *Die gogga is twee sentimenter op jou kop.
      the bug is two centimeters on your head

Semantically, bo (“above”) -types = projective adpositions and
op (“on”) -types = non-projective adpositions


(5) (a) Projective adpositions:
    bo (“above”)
    buite (“outside”)
    binne (“inside”)
    voor (“front”)
    agter (“back”)
    onder (“under”)
    langs (“beside”)

(b) Non-projective adpositions:
    op (“on”)
    uit (“out”)
    in (“in”)
    aan (“on/to”)
    by (“at”)
    oor (“over”)
    om (“around”)

Syntactically, bo- and op-types are typically regarded as categorially equivalent (=P LOC):
[pp P op|bo [op jou kop]] – cf. equivalent distributions in (1) above.

So the projective/non-projective distinction is not generally reflected in syntax and the distinction
is taken to be conceptual/semantic.

Some tests for category status suggest they do belong to the same category.

(6) Q: Waar is daai gogga nou?!
    where is that bug now
A:   (a) [pp Op jou kop]!
      on your head
      “On your head!”

(b) [pp Bo jou kop]!
      above your head
      “Above your head!”

P-stranding pattern with op:

(7) (a) Jan het sy sleutels op die boekrak gesit.
      Jan has his keys on the bookshelf put
      “Jan put his keys on the bookshelf.”
(b) [Op die boekrak], is [waar,] Jan sy sleutels t, gesit het.
  on the bookshelf is where Jan his keys put has
  “On the bookshelf is where Jan put his keys.”

(c) [Die boekrak], is [waar,-op], Jan sy sleutels t, gesit het.
  the bookshelf is where-on Jan his keys put has
  “The bookshelf is whereon Jan put his keys.”

(d) [Die boekrak], is [waar/wat], Jan sy sleutels op t, gesit het.
  the bookshelf is where/what Jan his keys on put has
  “The bookshelf is what Jan put his keys on.”

In the stranding construction (7d), the pronominal complement of op can surface as either the strong pronoun wat or the R-pronoun waar.4,5

P-stranding pattern with bo:

(8)  (a) Jan het sy sleutels bo die boekrak gesit.
     Jan has his keys above the bookshelf gesit
     “Jan put his keys hang above the bookshelf.”

(b) [Bo die boekrak], is [waar,] Jan sy sleutels t, gesit het.
     above the bookshelf is where Jan his keys put has
     “Above the bookshelf is where Jan put his keys.”

(c) [Die boekrak], is [waar,-bo], Jan sy sleutels t, gesit het.
     the bookshelf is where-above Jan his keys put has
     “The bookshelf is where above Jan put his keys.”

4 R-pronouns, or R-words, are so named for the phonological /-r/ ending of the members of this class, i.e. hier (“here”), daar (“there”), and waar (“where”). Van Riemsdijk (1978) describes such elements in Dutch as pronominal complements of P that must always surface to its left, even when that P is otherwise exclusively prepositional. Cf. Van Riemsdijk (1978), Koopman (2000), and Den Dikken (2010) for discussion, where R-pronouns are argued to occupy spec-P. Pronominal complements of P in Afrikaans can surface either as R-pronouns (e.g. waar – (i)) or as strong in situ pronouns (e.g. wat – (ii)).

(i)    [PP Waar P op DP tj], het Jan sy sleutels gesit tj?
     where -on has Jan his keys put
     “On what did Jan put his keys?”

(ii)   [PP Op wat], het Jan sy sleutels gesit tj?
     on what has Jan his keys put
     “On what did Jan put his keys?”

5 In (7c), though, the relative pronoun cannot alternate between the R-pronoun incorporating waarop and the strong pronoun incorporating op wat. The presence of strong pronouns in expressions like (iii), and (ii) in note 4 (which are treated in Du Plessis (1977) and Den Besten (2010)), suggests that adposition can be pied piped with strong pronouns in wh-movement operations. By contrast, it appears the pronominal component of relative pronouns must move through spec-P for the adposition to be felicitously pied piped.

(iii)  [Vir wat], dink julle werk ons tj?
     for what think you work we
     “What do you think we are working for?”
(d) [Die boekrak], is [waar/ wat], Jan sy sleutels bo t gesit het
the bookshelf is where/what Jan his keys above put has
“The bookshelf is what Jan put his keys above.”

2. Vector Space vs. Points in Space

Conceptually, adpositions cannot denote points in space:
Many adpositions accept measure modification (cf. (4) above and (9) below), which operates on depth and distance:

(9) ...2cm bo jou kop / 10m agter die kerk / 1km onder die grond
2cm above your head / 10m behind the church / 1km under the ground

Points in space do not define depth and distance
So, adpositions should be conceptualized as vector spaces


(10) The keyboard is 2cm behind the coffee.

(11) The coffee’s vector universe:

(12) Vectors selected by behind:

(13) Vectors selected by 2cm:

Not all adpositions need to be characterised as denoting vector space

I propose that projective adpositions denote vector space and non-projective adpositions points in space
(14) (a) Die poskantoor is twee kilometer binne/buite die dorp.
the post-office is two kilometers inside/outside the town
“The post office is two kilometers into/out of town.”
PROJECTIVE, VECTOR SPACE
(b) *Die poskantoor is twee kilometer in/uit die dorp.
the post-office is two kilometers in/out the town
NON-PROJECTIVE, POINT IN SPACE

How can the distinction be modelled structurally while allowing projective and non-projective adpositions to belong to the same syntactic category?

3. Axial Parts

“Axial Part” emerged as a concept related to the visual-neurological processing of objects in the work of Marr (1982). Jackendoff (1996) connects this concept with the language that is used in denoting spaces occupied by objects. Svenonius (2006) argues that AXPART is a grammatically active node (not merely a conceptual/cognitive category) – i.e. a projecting head.

The “axial parts” of an object – its top, bottom, front, back, sides and ends – behave grammatically like parts of the object, but, unlike standard parts such as a handle or a leg, they have no distinctive shape. Rather, they are regions of the object (or its boundary) determined by their relation to the object’s axes. The up-down axis determines top and bottom, the front-back axis determines front and back, and a complex set of criteria distinguishing horizontal axes determines sides and ends.

(Jackendoff 1996:14)

(15) (a) There was a kangaroo in (*the) front of the car.
(b) *There was a kangaroo on front of the car. AXPART

(16) (a) There was a kangaroo in *(the) front of the car.
(b) There was a kangaroo on the front of the car.
NOUN

(17) (a) There were kangaroos in the fronts of the cars.
(b) *There were kangaroos in fronts of the cars
NOUN AXPART

(18) (a) There was a kangaroo in the smashed-up front of the car.
(b) *There was a kangaroo in smashed-up front of the car
NOUN AXPART

(19) (a) The kangaroo was in [the front of the car], but the koala wasn’t in it.
(b) The kangaroo was in [front of the car], but the koala wasn’t in it.
NOUN AXPART

(Svenonius 2006:50-51)
(20) (a) */??[Which car], did the kangaroo sit in the front of t? NOUN
(b) [Which car], did the kangaroo stand in front of t? AXPART

**NB**: Axials accept measure modification:
(21) (a) *There was a kangaroo sixty feet in the front of the car. NOUN
(b) There was a kangaroo sixty feet in front of the car. AXPART

(Svenonius 2006:51)

Svenonius’ (2006) analysis: \[PP \text{ in } [\text{AXPART AXPART front } [\text{KP of } [\text{DP the car}]]]]

Assuming AXPART to be the singular structural locus of vector space, projective adpositions are by hypothesis lexicalising this node and non-projective adpositions are not:

(22) (a) Non-projective adpositions

\[
\begin{array}{c}
\text{PP} \\
\text{P} \\
\text{DP} \\
\text{op} \\
\text{jou kop}
\end{array}
\]

(b) Projective adpositions

\[
\begin{array}{c}
\text{PP} \\
\text{AXPART P} \\
\text{AXPART} \\
\text{DP} \\
\text{bo} \\
\text{jou kop}
\end{array}
\]

On an analysis like (22), projective and non-projective adpositions are categorially equivalent, and there is a structural distinction between the projective and non-projective types. Since projective adpositions have AXPART in their featural makeup, they denote vector space; non-projective adpositions, since they lack AXPART in their featural makeup, do denote simple points in space.\(^6\)

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\(^6\) An analysis like (22b) obviously requires some notion of multiple terminal spellout (where one morpheme lexicalises more than one terminal node). There are various methods by which this could be implemented, including mainstream a notion like Head Movement, and less/non-mainstream notions like Fusion (cf. e.g. Marantz (1988); Halle & Marantz (1994); Harley & Noyer (1999); Bobaljik (2011)), Phrasal Spellout (cf. e.g. Starke (2009); Caha (2009; 2010; 2011); Dekany (2011); De Clerq 2013)), and Spanning (cf. e.g. Ramchand (2008); Taraldsen (2010); Svenonius (2012; 2016). Though, in this paper, I am not strongly committed to any particular approach, the representations sometimes resemble Head Movement (i.e. with complex adpositions in Section 4 below) and sometimes resemble Spanning (i.e. with simplex adpositions like bo in (22b)). Here, I thus take these approaches to multiple terminal spellout to be notational variants; but cf. Ramchand (2008), Svenonius (2016) and Svenonius & Bentzen (2016) for argumentation against treating Head Movement and Spanning as notational variants.

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\(^7\) Some of my other theoretical assumptions made here are (i) the Superset Principle (to qualify for insertion, a lexical entry must contain a superset of the syntactic features that are up for lexicalisation; this matching mechanism resembles but differs crucially the Subset Principle of Distributed Morphology which requires entries to be specified only for a subset of features – cf. Caha (2007) for discussion); I also assume (ii) an Exhaustive Lexicalisation principle (all syntactic nodes must receive morphological expression – cf. Fábregas (2007a; 2007b).
4. Complex Adpositions

Complex adpositions in Afrikaans consist of two morphemes, each of which is capable of functioning as an adposition on its own – e.g. **bo-op** (lit.: top-on, “on top”).

Afrikaans incorporates a large set of “official” (= listed in dictionaries) complex adpositions:

- **naby** (lit.: near-at, “near”), **binne-in** (lit.: inside-in, “inside/into”), **bo-oor** (lit.: top-over, “over (the top)”), **tussendeur** (lit.: between-through, “in between”), **onderdeur** (lit.: under-through, “(through) underneath”), amongst others.

(Listed in *Die Afrikaanse Woordelys en Spelreëls* (2009))

In addition, there are many combinations that are not listed as orthographic words but which I give the same treatment as listed complexes because they behave the same syntactically.

- **bo in** (lit.: top in, “in the top”), **buite om** (lit.: outside around, “around the outside”), **na aan** (lit.: near on, “near”), and **voor verby** (lit.: front past, “past in front”).

Complex locative adpositions have the same basic distribution as simplex locatives:

(23) *Daar is 'n gogga [PP bo-op [DP jou kop]].
   There is a bug top on your head
   “There is a bug on top of your head.”

P-stranding and pronominalisation:

(24) (a) Jan het sy sleutels bo-op die boekrak gesit.
      Jan has his keys top-on the bookshelf put
      “Jan put his keys on top of the bookshelf.”

(b) *[Bo-op die boekrak], is [waar], Jan sy sleutels t, gesit het.
    top-on the bookshelf is where Jan his keys put has
    “On top of the bookshelf is where Jan put his keys.”

(c) *[Die boekrak], is [waar, / wat], Jan sy sleutels bo-op t, gesit het.
    the bookshelf is where what Jan his keys top-on put has
    “The bookshelf is what Jan put his keys on top of.”

(d) *[Bo die boekrak], is [waar, -<op>], Jan sy sleutels t, <op> gesit het.
    top the bookshelf is where Jan his keys on put has

(e) *[Die boekrak], is [waar, -<bo>], Jan sy sleutels op t, gesit het.
    the bookshelf is where Jan his keys on put has

(24d-e) shows that the components of a complex adposition cannot be separated.

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8 The complex **bo-op**, unlike simplex adpositions, must be stranded when forming part of a relative pronoun. To see this, contrast (i) with (12-13c) above.

(i) ??/**[Die boekrak], is [waar,-bo-op], Jan sy sleutels t, gesit het.
    the bookshelf is where-top-on Jan his keys gesit has
    “The bookshelf is where top on Jan put his keys.”
On closer inspection, complex adpositions pattern with non-projective simplex adpositions (like \textit{op}) rather than with projective ones (like \textit{bo})

\begin{equation}
\begin{aligned}
\text{(25)} & \quad \text{Jan speel } [_{PP} \text{ in die solder}]. \\
& \quad \text{Jan plays } \text{ in the attic} \\
& \quad "\text{Jan is playing in the attic / upstairs.}" \\
\end{aligned}
\end{equation}

\begin{itemize}
\item[(a)] \text{Jan speel [bo].} \quad \text{Jan plays above} \\
\quad "\text{Jan is playing upstairs."} \quad (=2a)
\item[(b)] \text{*Jan speel [op].} \quad \text{Jan plays on } \\
\item[(c)] \text{*Jan speel [bo-op]}. \\
\quad \text{Jan plays top-on}
\end{itemize}

\begin{equation}
\begin{aligned}
\text{(26)} & \quad \text{bo-n-ste ("topmost") \quad op(*-ste) } \\
& \quad \text{top-/N/-est \quad on -est} \quad (=3)
\end{aligned}
\end{equation}

\begin{equation}
\begin{aligned}
\text{(27)} & \quad \text{Die gogga is twee sentimeter bo jou kop.} \\
& \quad \text{the bug is two centimeters above your head} \\
& \quad "\text{The bug is two centimeters above your head."} \quad (=4a)
\end{aligned}
\end{equation}

\begin{equation}
\begin{aligned}
\text{(b)} & \quad \text{*Die gogga is twee sentimeter op jou kop.} \\
& \quad \text{the bug is two centimeters on your head} \quad (=4b)
\end{aligned}
\end{equation}

\begin{equation}
\begin{aligned}
\text{(c)} & \quad \text{*Die gogga is twee sentimeter bo-op jou kop.} \\
& \quad \text{the bug is two centimeters top-on your head}
\end{aligned}
\end{equation}

Before trying to account for the facts in (25-27), let us take a closer look at the morphological composition of complex adpositions.

The order in which the elements combine is rigid:

\begin{equation}
\begin{aligned}
\text{(28)} & \quad \text{*Daar is ’n gogga op-bo jou kop.} \\
& \quad \text{there is a bug on top your head}
\end{aligned}
\end{equation}

The initial element is usually projective, and the final element is never projective.

Afrikaans’ adposition inventory is split perfectly in half: there are those Ps that occur in the morphologically initial position in complex adpositions, and those that occur finally.

Though the split does not occur along a strict (non-)projective dichotomy, there do not seem to be any examples of a P that can occur as either the initial or final component (cf. 30).
These facts suggest two important things:

(i) The inventory “split” is not conceptual/semantic
(ii) P elements are specified for complementary parts of the structure underlying these complex adpositions

§ This combination does in fact exist, not as a spatial adposition, but as a degree adverb:

(i) Hulle het die koekies byna opgeëet.
     they have the cookies at-near up-eaten
     “They’ve pretty much finished the cookies.”
As we have seen, not only projective adpositions (strictly speaking, those simplex locative adpositions that accept measure modification) occur as the morphologically initial element of complex adpositions. It is the morphologically initial forms that I argue belong to the category Axial Part (31a). The analyses in (31) suggest that complex adpositions (31c) transparently realise the very same structure as projective simplex adpositions (31b), so we expect complex adpositions to pattern with projective simplex adpositions and not with non-projective simplex adpositions in (25-27), as they do.

What (25-27) suggest is that complex compositions are categorially equivalent to non-projective simplex adpositions, and that projective simplex adpositions are somehow distinct from the former two types of adposition.

Rather:

Let us consider more closely what type of analysis is suggested by the measure modification facts in (27) above.
5. Measure (and Degree) Modification

I propose to analyse the measure modification facts in (27) – repeated in (32) – as in (33).

(32 = 27)  
(a) Die gogga is twee sentimeter bo jou kop.  
the bug is two centimeters above your head  
“The bug is two centimeters above your head.”

(b) *Die gogga is twee sentimeter op jou kop.  
the bug is two centimeters on your head  

(c) *Die gogga is twee sentimeter bo-op jou kop.  
the bug is two centimeters top-on your head  

(33)

A configuration like (33) accounts for the fact that measure modification is infelicitous with complex and non-projective adpositions: if the functional projection introducing the modifier doesn’t scope over both components of the complex adposition, the result is infelicitous. Since F doesn’t scope over P, non-projective adpositions are infelicitous with measure modification.

In contrast to measure modification all locative adpositions accept degree modification:

(34)  
(a) Daar is ’n gogga reg bo jou kop.  
there is a bug right above your head  
“There is a bug right above your head.”

(b) Daar is ’n gogga reg op jou kop.  
there is a bug right on your head  
“There is a bug right on your head.”

(c) Daar is ’n gogga reg bo-op jou kop.  
there is a bug right top-on your head  
“There is a bug right on top of your head.”
There is another functional head above P that introduces degree adverbs like *reg* in its specifier. The functional projection above *AXPART* is thus argued to be a MEAS(ure) head, and that above P a DEG(ree) head:

(35)  
(a) Measure modification with projective adpositions

(b) Degree modification with (non-)projective and complex adpositions

(35a) clearly shows that projective adpositions like *bo* which are modified by measure phrases cannot be giving expression to the P node, as first suggested in (22b), because just like with complex adpositions, the modifier would not scope over both components of such an adposition.

If projective adpositions like *bo* in (35a) are expressing only *AXPART* (and not P), we are forced to conclude that such adpositions never express P, and always express only *AXPART*.

Thus, what at first appears to be a single syntactic category – namely, locative adposition (P) – in fact constitutes two separate categories: one corresponding to P (simplex, non-projective adpositions), and another corresponding to Axial Part (simplex (usually) projective adpositions).

**NB regarding Axial Parts:** they differ from P in forming the morphologically initial element of complex adpositions.
6. Directionals

Directional simplex adpositions accept measure modification:

(36)  (a) Die man hardloop tien meter deur /om /verby die huis.  
      the man runs ten meters through / around / past the house  
      “The man is running ten meters through/around/past the house.”

      (b) Die perd spring ’n meter oor die hek.  
          the horse jumps a meter over the gate  
          “The horse is jumping a meter over the gate.”

Directional complex adpositions are compatible with measure modification

(37)  (a) Die boom se wortels het 2m onderdeur die muur gegroei  
       the tree pos roots have 2m under-through the waal grown  
       “The tree’s roots grew two meters into the other side of the wall.”

      (b) Die man het die bal 10m voor verby die huis geskop.  
          the man has the ball 10m before past the house kicked  
          “The man kicked the ball ten meters past the front of the house.”

The data in (36-37) further support the idea that complex adpositions are complex heads that obey Williams’ (1981) Right-hand Head Rule (RHR).

In keeping with what is now the general assumption, I take directional adpositions to comprise two structural layers (P\textsubscript{LOC} (=locative) and P\textsubscript{DIR} (=directional)), as indicated in (38).\textsuperscript{10} Complex directional adpositions thus have the structure in (39).

\textsuperscript{10} Since Jackendoff’s (1983) proposal, it has become uncontroversially accepted that the structure underlying directional PPs crosslinguistically consists of two layers (cf. e.g. Koopman 2000, Van Riemsdijk & Huybregts 2002, Helmantel 2002, Biberauer & Folli 2004, Svenonius 2004; 2007a, Den Dikken 2010). Conceptually, the idea that direction embeds location can be understood in terms of paths being “constructed out of… nested sets or sequences of places” (Zwarts 2005:348; cf. also Bierwisch 1988 and Verkuyl & Zwarts 1992). Direct evidence comes from languages in which a morphological “nesting” can be observed in directional PPs:

(i)    | Location                        | Direction                      |
---    | --------------------------------|-------------------------------|
(a)    | English: in the city             | into the city                  |
(b)    | Norwegian: i byen in city-DEF   | inn i byen into in city-DEF    |

(From Zwarts 2010:983)

(ii)   |                               |
(a)    | Macedonian                     |
      | Kaj parkot sum.                | “I am at the park”             |
      | at park.def be.1sg             | (Location)                     |
(b)    | Odam na-kaj parkot.            | “I am going to the park”       |
      | go.1sg to -at park             | (Direction)                    |

(From Pantcheva 2011:36-37)
Section 5 showed that measure modifiers with locative adpositions scope over \textsc{axpart} and under \textsc{p} (what is now \textsc{p}_{\text{loc}}). If we take the same projection to be introducing the measure modification in (37), the predication – which is not bourned out – is that complex directionals – like complex locatives – should not accept measure modification.

There is thus another functional projection, scoping over \textsc{p}_{\text{dir}}, introducing the modifiers in expressions like (37):

An analysis like (40) is supported by the fact that in (37\textsubscript{a}), the measure phrase can only modify the length of the path \textit{deur} (i.e. how far through/past the wall the roots grew) and cannot modify \textit{onder} (suggesting that the axial element is inaccessible to the modifier, which supports the complex head analysis and Williams' RHR).

Likewise, the only reading available for (37\textsubscript{b}) is one in which the ball is kicked a distance of ten meters, not where the distance between the ball and the house is ten meters (i.e. modifying \textit{verby} and not \textit{voor}) – again, only \textsc{p}_{\text{dir}} is visible to the modifier, not \textsc{axpart}.

So, the fact that the measure phrases in felicitously (37) co-occur with complex Ps, in addition to the fact that only the path-related reading is available on such modification, suggests that the measure phrases in these expressions are not hosted in a projection above \textsc{axpart}, but in a projection that scopes over \textsc{p}_{\text{dir}}, and that \textsc{axpart} is not visible to the modifier.
7. Concluding Remarks

This talk started out with the typical assumption that all simplex locative adpositions are categorially equivalent.

It was shown, though, that the semantic distinction between projective (=vector spaces defining) and non-projective (=point in space defining) locative adpositions has syntactic validity too. This is particularly apparent with complex locative adpositions, which pattern with non-projective locative adpositions in many diagnostics. Among these diagnostics is an element’s felicity with measure modification.

Axial Part (AXPART) was taken to be the structural locus of vector space, and also shown to be node corresponding to the morphologically initial element in complex adpositions (with the morphologically final one corresponding either to P LOC (=locative adpositions) or to P LOC•P DIR (=directional adpositions).

Since complex adpositions and projective adpositions do not pattern together (despite the fact that both are AXPART-incorporating elements) ultimately suggests that projective and non-projective simplex adpositions are not categorially equivalent – the projective ones are Axial Parts, whereas the non-projective ones are locative Adpositions, in the traditional sense.

One remaining question is the fact that the morphologically initial elements of complex adpositions (which have been argued to lexicalise AXPART) are not always projective (and AXPART is argued to be the locus of vector space). We do not expect the conceptual and formal properties of all lexical elements to always align, so it could simply be that not all elements that are formally specified for AXPART align with the conceptual requirements for measurable vector space.

References

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