Dissolving P: Categorial hybridity in Afrikaans (Part 2)
PSU Morpho-Syn Syndicate

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Overview

This is the sequel to our presentation in the Spring!

Continuing with this theme:

- We sketch out an analysis to account for *categorial hybridity* in the Afrikaans P domain
- We achieve this making use of *spans*, showing that notions like *categorial hybridity* and *prototypicality* are epiphenomenal in our account
- We make the case that the P domain does not represent a unified class in Afrikaans (and likely beyond)
Neo-constructivist perspective:

- Roots inherit their grammatical properties from which structural content in which they are merged.
- The ordering of functional heads is not arbitrary; often reflecting the ordering of particular domains or zones (Grohmann, 2003; Lundquist, 2009; Ramchand & Svenonius, 2014).
- **Guiding intuition:** "Syntax operates on individual features (and not on prefabricated bundles)" (Starke, 2018, 239).
- **Architectural consequence:** Syntax adheres to a One Head-One Feature architecture (Cinque & Rizzi, 2010; Kayne, 2005; Putnam, 2020).
- Late insertion/Realizational approach to morphology.
Architectural assumptions: Basic tenets

(1) **Span**: An n-tuple of heads $< X_n, ..., X_1 >$ is a span in a syntactic structure $S$, iff $X_{n-1}P$ is the complement of $X_n$ in $S$.

(2) **Exhaustive Lexicalization Principle**: All syntactic features present in the derivation must be matched exhaustively with lexical items (Fábregas, 2007).

(3) **Superset Principle**: In case a set of syntactic features does not have an identical match in the lexical repertoire, select a lexical form which contains a superset of the features present in the syntax (Fábregas & Putnam, 2020, 40).

- **Key point**: Lexicalization targets spans
Architectural assumptions: Spans

(4)

\[ F_3 P \]

\[ F_3 \quad F_2 P \]

\[ F_6 P \quad F'_2 \]

\[ F_6 \quad F_5 P \quad F_2 \quad F_1 P \]

\[ F_5 \quad F_4 \quad F_1 \quad \ldots \]
Lexicalization: At key points in the derivation,

- Syntactic structure (＝ ‘S-span’) sent to syntax-lexicon interface and ‘read’ by relevant interface mechanisms;
- S-span matched against ‘L-spans’ encoded on lexical items to determine a set of candidates for insertion;
- Superset Principle selects the ‘best match’ and inserts.
Roots have a special role in our system:

- Always merged last;
- Once merged, project a $\sqrt{P}$
- Since $\sqrt{P}$ is not a legitimate syntactic label, syntax sends the S-span to the S-L interface.

We assume that spatial P elements have roots

- This is not a new idea (see Terzi (2010, 196) for discussion).
### Architectural assumptions: Lexicalization

<table>
<thead>
<tr>
<th>S-span</th>
<th>L-span: Lexical items</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A)</td>
<td>( \sqrt{P} )</td>
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<tr>
<td></td>
<td>( \sqrt{F_1} )</td>
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<tr>
<td>(B)</td>
<td>( \sqrt{P} )</td>
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<td>( \sqrt{F_3 F_1} )</td>
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<td>( \sqrt{F_4 F_3} )</td>
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<td>( \sqrt{F_4 F_3 F_2} )</td>
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<td>( \sqrt{F_4 F_3} )</td>
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<td>LI₁</td>
<td>( F_4 F_3 F_2 F_1 )</td>
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<tr>
<td>LI₂</td>
<td>( F_7 F_6 F_5 F_4 F_3 )</td>
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<tr>
<td>LI₃</td>
<td>( F_7 F_6 F_5 F_4 F_3 )</td>
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<tr>
<td>LI₄</td>
<td>( F_3 F_2 F_1 )</td>
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</tbody>
</table>
Our claim: In addition to lexicalization, categorization happens at the S-L interface:

- Categorization exploits the very same mechanisms as lexicalization:
  - S-span is ‘read’ and matched against L-spans
  - Candidates for insertion determined by the Superset Principle
  - ‘Best match’ selected by the Superset Principle and inserted

- Bye-bye necessary and sufficient criteria and black & white categorization!
Architectural assumptions: Categorization

The idea that *categorization is an interface procedure* requires some additional assumptions:

- In addition to lexical items, lexicon serves as repository for **category labels** (listed separately from lexical items);
- Each category label is encoded with an L-span;
- Matching & insertion follows precisely the same procedure as lexicalization;
- Insertion of category labels targets $\sqrt{P}$
### Architectural assumptions: Categorization

<table>
<thead>
<tr>
<th>S-span</th>
<th>L-span: Category labels</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A) ( \sqrt{P} ) ( \sqrt{F_2} ) ( F_1 )</td>
<td>( C_1 \leftrightarrow ) ( F_5 ) ( F_3 ) ( F_2 ) ( F_1 )</td>
</tr>
<tr>
<td>(B) ( \sqrt{P} ) ( \sqrt{F_5} )</td>
<td>( C_2 \leftrightarrow ) ( F_5 ) ( F_4 ) ( F_3 ) ( F_2 ) ( F_1 )</td>
</tr>
<tr>
<td>(C) ( \sqrt{P} ) ( \sqrt{F_5} ) ( F_4 ) ( F_2 )</td>
<td>( C_3 \leftrightarrow ) ( F_4 ) ( F_3 ) ( F_2 )</td>
</tr>
</tbody>
</table>
Since Jackendoff (1983), path-adpositions are taken to be structurally complex (even when morphologically simplex). So (5) $\rightarrow$ (6)

(5)  
```
VP
   V be/go/get
   P on/onto DP GROUND the sofa
```

(6)  
```
VP
   V be/go/get
   pathP 'P zone'
   path to placeP place on DP GROUND the sofa
```

(7)  Place: Single location

(8)  Path: Series of locations
Svenonius (2006) introduces **axial parts**:

\[(9)\]

```plaintext
VP
   V
   be/go/get
   pathP ⇐ ‘P zone’
   placeP
   to
   path
   in
   place
   axpartP ⇐ ‘P/N zone’
   axpart
   front
   KP ⇐ ‘N zone’
   of
   K
   DP
   ... 
   the car
```

Svenonius (2006) introduces axial parts:
Structural preliminaries

(10) Horizontal axial space:

(11) Vertical axial space:

(12) AxPart + Place:

in front of the car
Ramchand (2008) decomposes the event domain:

\[ \text{(13)} \]

\[ \begin{align*}
\text{initP} & \leftarrow \text{'V zone'} \\
\text{procP} & \\
\text{resP} & \\
\text{pathP} & \leftarrow \text{'P zone'} \\
\text{placeP} & \\
\text{axpartP} & \leftarrow \text{'P/N zone'} \\
\text{KP} & \leftarrow \text{'N zone'} \\
\text{K of} \quad \text{DP} \quad \text{the car}
\end{align*} \]
The S-span that we’ll be working with:

\[(14)\]

In this presentation, we...

- Ignore \textit{init}(P)
- Collapse \textit{place}(P) & \textit{path}(P)
- Add \textit{dir}(P)
- Take \textit{N*}(P) to be an abbreviation for a span of nouny features
P element subclasses in Afrikaans

<table>
<thead>
<tr>
<th>Lexical Items</th>
<th>Features</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N*</td>
</tr>
<tr>
<td><strong>Class A</strong></td>
<td></td>
</tr>
<tr>
<td>binne (‘inside’)</td>
<td></td>
</tr>
<tr>
<td>bo (‘above’)</td>
<td></td>
</tr>
<tr>
<td><strong>Class B</strong></td>
<td></td>
</tr>
<tr>
<td>deur (‘through’)</td>
<td></td>
</tr>
<tr>
<td>oor (‘over’)</td>
<td></td>
</tr>
<tr>
<td><strong>Class C</strong></td>
<td></td>
</tr>
<tr>
<td>in (‘in/into’)</td>
<td></td>
</tr>
<tr>
<td>uit (‘out’)</td>
<td></td>
</tr>
</tbody>
</table>
Multifunctionality: Class A

(15) Wolke hang bo die water. clouds hangs above the water ‘Clouds hang above the water.’

(16) Die gaste is bo. the guests are above ‘The guests are upstairs.’

(17) Hy lê bo-op die bed. he lies top-on the bed ‘He lies on top of the bed.’
(18) Hy lê in die gras.
he lies in the grass
‘He lies in the grass.’

(19) Hy storm die kamer in.
he storms the room in
‘He storms into the room.’
Multifunctionality: Class C

(20) Ons het in-ge-klim.
we have in-PTCPL-climb
‘We climbed in.’

(21) Ons het die veld ge-in.
we have the veld PTCPL-in
‘We went into the veld.’
P elements (only a few exceptions) are highly multifunctional; but not all P elements exhibit the same **range of multifunctionality**:

- Different P elements have different morphosyntactic repertoires;
- Morphosyntactic properties are determined by the collection of features in the span that a lexical item spells out.
- A rich cartographic structure underlies expressions involving P elements.
- P elements can spell out different ‘swathes’ – *spans* – of the syntax.

**Q:** How can we explain different ranges of multifunctionality?

**A:** L-spans, lexicalization and the Superset Principle.
### Lexicalization

<table>
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<tr>
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<tr>
<td>(A) <img src="image" alt="S-span" /></td>
<td><img src="image" alt="L-span" /></td>
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<tr>
<td>(B) <img src="image" alt="S-span" /></td>
<td><img src="image" alt="L-span" /></td>
</tr>
<tr>
<td>(C) <img src="image" alt="S-span" /></td>
<td><img src="image" alt="L-span" /></td>
</tr>
</tbody>
</table>

**S-spans key:** (A) = Prototypical adposition; (B) = Locative adposition; (C) = Left-hand component of complex adposition; (D) = Postposition; (E) = V-particle; (F) = Lexical verb
Two kinds of categorial hybridity (Aarts, 2007, 97):

- **Subsective Gradience (SG)** is the phenomenon whereby a particular set of elements displays a categorial shading in prototypicality from a central core to a more peripheral boundary.
- **Intersective Gradience (IG)** whereas with SG elements from only one category are involved, with IG there are two categories on a cline.

How this plays out in the Afrikaans P domain:

(i) simplex prepositions are the ‘prototypical’ P elements,
(ii) complex adpositions and positions exhibit SG,
(iii) locative adpositions, V-particles, and P-based lexical verbs exhibit IG
‘Prototypical’ P elements:

(i) select a complement,
(ii) precede that complement,
(iii) are morphologically invariant, and
(iv) accept right-modification (Pullum & Huddleston, 2002).

(22) Jou trui lê (reg) op die stoel.
    your sweater lies right on the chair
    ‘Your sweater is (right) on the chair.’
Categorial hybridity

Complex adpositions and postpositions exhibit SG:

(23) Die hond spring toe bo-op die bank.
the dog jumps then above-on the couch
‘The dog then jumped on the couch.’

(24) Die seuntjie hardloop uit die kamer uit.
the boy runs out the room out
‘The little boy runs out of the room.’
Locative adpositions exhibit IG:

J. leaves his keys inside there in the kitchen
‘J. is leaving his keys inside / there / in the kitchen.

(26) \( \text{Adverb}_{\text{locative}} \) \\
    \hspace{1cm} \text{Preposition} \at \text{Noun Phrase} \\
    \hspace{1cm} \text{Definite} \text{Noun} \\
    \hspace{1cm} \text{the} \text{is/at} \text{pro} \\
    \hspace{1cm} \text{N*} \)

(Katz and Postal 1967, adapted from Pantcheva 2008, 307)
V-particles and P-based lexical verbs exhibit IG:

(27) Hulle het die bult uit-ge-klim.
    they have the hill out-PTCPL-climb
    ‘They went up the hill.’

(28) ’n ge-in en ge-uit.
    a PTCPL-in and PTCPL-out
    ‘an in and out.’

(29) Ons het toe die bult ge-uit.
    we have then the hill PTCPL-out
    ‘Then we went up the hill.’
Accounting for categorial hybridity

Key questions at this stage:

- **Q₁:** How can two or more elements that do not exhibit the same range of morphosyntactic properties receive the same category label?

- **Q₂:** How can one and the same P element receive different category labels in different contexts?

- **Our proposal:** This is an issue of categorization by the Superset Principle.
### Categorization

<table>
<thead>
<tr>
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<tr>
<td>(A)</td>
<td>P:</td>
</tr>
<tr>
<td>(\sqrt{P} )</td>
<td>DIR</td>
</tr>
<tr>
<td>(\sqrt{\text{PLACE/PATH}})</td>
<td>PLACE/PATH AXPART</td>
</tr>
<tr>
<td>(B)</td>
<td>N:</td>
</tr>
<tr>
<td>(\sqrt{P} )</td>
<td>AXPART</td>
</tr>
<tr>
<td>(\sqrt{\text{AXPART N*}})</td>
<td>RES PLACE/PATH</td>
</tr>
<tr>
<td>(C)</td>
<td>V:</td>
</tr>
<tr>
<td>(\sqrt{P} )</td>
<td>PROC</td>
</tr>
<tr>
<td>(\sqrt{\text{AXPART}})</td>
<td>RES DIR</td>
</tr>
<tr>
<td>(D)</td>
<td></td>
</tr>
<tr>
<td>(\sqrt{P} )</td>
<td></td>
</tr>
<tr>
<td>(\sqrt{\text{DIR PLACE/PATH}})</td>
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<tr>
<td>(E)</td>
<td></td>
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<tr>
<td>(\sqrt{P} )</td>
<td></td>
</tr>
<tr>
<td>(\sqrt{\text{RES PLACE/PATH}})</td>
<td></td>
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<tr>
<td>(F)</td>
<td></td>
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<tr>
<td>(\sqrt{P} )</td>
<td></td>
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<tr>
<td>(\sqrt{\text{PROC RES}})</td>
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Summary: Differentiating *lexicalization* & *categorization*

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</tr>
</thead>
</table>
| (A) \[\begin{array}{c}
\sqrt{P} \\
\sqrt{\text{PLACE/PATH}}
\end{array}\] | (D) \[\begin{array}{c}
\sqrt{P} \\
\sqrt{\text{DIR \ PLACE/PATH}}
\end{array}\] | Class A: \[\begin{array}{c}
\text{PLACE/PATH} \\
\text{AXPART} \\
\text{N}^*
\end{array}\] | P: \[\begin{array}{c}
\text{DIR} \\
\text{PLACE/PATH} \\
\text{AXPART}
\end{array}\] |
| (B) \[\begin{array}{c}
\sqrt{P} \\
\sqrt{\text{AXPART}} \\
\sqrt{\text{N}^*}
\end{array}\] | (E) \[\begin{array}{c}
\sqrt{P} \\
\sqrt{\text{RES \ PLACE/PATH}}
\end{array}\] | Class B: \[\begin{array}{c}
\text{PROC} \\
\text{RES} \\
\text{PLACE/PATH}
\end{array}\] | N: \[\begin{array}{c}
\text{AXPART} \\
\text{N}^*
\end{array}\] |
| (C) \[\begin{array}{c}
\sqrt{P} \\
\sqrt{\text{AXPART}}
\end{array}\] | (F) \[\begin{array}{c}
\sqrt{P} \\
\sqrt{\text{PROC \ RES}}
\end{array}\] | Class C: \[\begin{array}{c}
\text{PROC} \\
\text{RES} \\
\text{DIR \ PLACE/PATH}
\end{array}\] | V: \[\begin{array}{c}
\text{PROC} \\
\text{RES} \\
\text{DIR}
\end{array}\] |

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Where DM-style light heads fail

Q: Why can’t we just use DM-style light heads to model hybridity?

(30) Axial Parts

(31) Postpositions

2 serious issues:

- **Expansion problem:** Either we need expand the inventory of cat-heads (little-\textit{dir} or little-\textit{axpart}), or

- **Innovation problem:** The existing inventory must be utilized in an innovative way (cf. Mitrović and Panagiotidis (2020) and their treatment of little-a)
What about XS?

- Categories are referred to as *equivalence classes*, which are distributionally defined.
- Ex: A root becomes *noun-equivalent* in a particular context (e.g., *a walk*); that same root might be *verb equivalent* in another (e.g., *walked*).

XS achieves this in one of two ways:

- **C-functors**: (basically derivational affixes) These have an inherent categorial status (e.g., *-able* in *walkable*).
  - These can never be zero morphemes!

- **S-functors**: These are functional vocabulary items which identify roots (and their extended projections) with a particular equivalence class.

The burning question: Is P a C- or an S-functor? Serious problems exist with either option...
Conclusions

If we’re on the right track here....

- Features comprising this cartographic structure do not form discrete ‘zones’ that describe syntactic categories, and,
- There’s nothing inherent that connects a feature either to (i) a particular lexical item, or to (ii) a particular category.

**Logical conclusion:** Categorization does not take place in the Narrow Syntax.

**Burning questions remain:**

- **Q₁:** How do P domain swathes / spans interact with case?
- **Q₂:** Can we extend this treatment of the Afrikaans P domain to other domains (e.g., N, V, etc)?


