Variable morphotactics in a nutshell: the case of French pronominal affixes

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Paris HPSG Workshop — November, 2014
The goal of this talk

- Noncanonical morphotactics (Stump, 1993; Bonami and Stump, forthcoming; Crysmann and Bonami, 2012):
  - Positional disambiguation (Swahili)
  - Conditioned reordering (Fula)
  - Free reordering (Chintang)
  - Mobile stems (Italian)
  - Wackernagel affixes (Sorani Kurdish)
- Bonami and Crysmann (2013) presents an information-based theory of realizational morphology which aims at:
  - Limiting the amount of structure in morphological derivations
  - Accounting for the typology of deviations by taking seriously the idea of a template of positions.
- Main focus: conjugation of contemporary informal Parisian French.
- We show how the theory readily accounts for multiple deviations in a single system, by simple accumulation of constraints.
Noncanonical morphotactic phenomena
Misaligned exponence

- In the canonical situation, exponents for different values of the same feature appear in the same position.
- However exceptions to this are common. For instance in Nepali (Bonami and Boyé, 2008):

<table>
<thead>
<tr>
<th></th>
<th>PRESENT</th>
<th>FUTURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>birsā-ṭʃʰa-aũ</td>
<td>birse-aũ-lā</td>
</tr>
<tr>
<td>2.LOW</td>
<td>birsā-ṭʃʰa-s</td>
<td>birse-lā-s</td>
</tr>
<tr>
<td>2.MID</td>
<td>birsā-ṭʃʰa</td>
<td>birse-lā</td>
</tr>
<tr>
<td>3.LOW</td>
<td>birsā-ṭʃʰa-au</td>
<td>birse-au-lā</td>
</tr>
<tr>
<td>3.MID</td>
<td>birsā-ṭʃʰa-n</td>
<td>birse-lā-n</td>
</tr>
</tbody>
</table>

Table: Masculine singular forms of the Nepali verb BĪRSANU ‘forget’
Misaligned exponence

- If we assume 4 linear positions for tense and person, then each affix can be assigned to a fixed position.

![Diagram of exponence]

<table>
<thead>
<tr>
<th>Stem</th>
<th>PAST</th>
<th>1</th>
<th>3.LOW</th>
<th>FUT</th>
<th>2.LOW</th>
<th>3.MID</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>2</td>
<td></td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

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<thead>
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</tr>
<tr>
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<td>birse-lā-s</td>
</tr>
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</tr>
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<td>birse-lā-n</td>
</tr>
</tbody>
</table>

**Table:** Masculine singular forms of the Nepali verb बिरसानु ‘forget’
Free placement

- Chintang verb prefixes (Bickel et al., 2007)
  - can be freely permuted
  - prefixes encode subject and object agreement, as well as negation
  - Suffixes in Chintang, however, are strictly ordered in position classes

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>u</td>
<td>kha</td>
<td>ma</td>
<td>cop</td>
<td>yokt</td>
<td>e ‘They didn’t see us.’</td>
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<td>e ‘They didn’t see us.’</td>
</tr>
</tbody>
</table>
Accounting for the Chintang data

<table>
<thead>
<tr>
<th>Morphology</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>u kha ma cop yokte</td>
<td>‘They didn’t see us.’</td>
</tr>
<tr>
<td>u ma kha cop yokte</td>
<td>‘They didn’t see us.’</td>
</tr>
<tr>
<td>kha u ma cop yokte</td>
<td>‘They didn’t see us.’</td>
</tr>
<tr>
<td>kha ma u cop yokte</td>
<td>‘They didn’t see us.’</td>
</tr>
<tr>
<td>ma u kha cop yokte</td>
<td>‘They didn’t see us.’</td>
</tr>
<tr>
<td>ma kha u cop yokte</td>
<td>‘They didn’t see us.’</td>
</tr>
</tbody>
</table>

- We allow some morphs to underspecify their position classes:
  - Here, three series of morphs are specified as prefixal but do not select for a specific position.
Misaligned exponence+Free placement

- Order of possessive and case markers in Mari (Luutonen, 1997)
  - Some case markers obligatorily follow the possessive marker (ACC)
  - Some case markers obligatorily precede the possessive marker (LAT)
  - Some cases (like DAT) permute freely with possessive marker

<table>
<thead>
<tr>
<th></th>
<th>NOPOSS</th>
<th>1PL.POSS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>POSS &lt; CASE</td>
<td>CASE &lt; POSS</td>
</tr>
<tr>
<td>NOM</td>
<td>pört</td>
<td>pört-na</td>
</tr>
<tr>
<td>ACC</td>
<td>pört-əm</td>
<td>pört-na-m</td>
</tr>
<tr>
<td>DAT</td>
<td>pört-lan</td>
<td>pört-na-lan</td>
</tr>
<tr>
<td>LAT</td>
<td>pört-eš</td>
<td>*</td>
</tr>
</tbody>
</table>
Accounting for the Mari situation

- We can redeploy the analytic tools used for misaligned exponence and free placement:
  - The stem goes in position 1
  - The LAT marker goes in position 2
  - The ACC marker goes in position 3
  - Possessive markers are underspecified for position
  - The dative marker is likewise underspecified

<table>
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<th>1PL.POSS</th>
</tr>
</thead>
<tbody>
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<td></td>
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</tr>
<tr>
<td>NOM</td>
<td>pört</td>
<td>pört-na</td>
</tr>
</tbody>
</table>
| ACC        | pört-əm | pört-na-m | *
| DAT        | pört-lan | pört-na-lan | pört-lan-na |
| LAT        | pört-eš | *         | pört-eš-na |

Diagram:

- Stem: 1
- LAT: 2
- DAT: 3
- ACC: POSS

Diagram showing the positions and markers.
Conditional placement

- Swahili relative agreement markers are found in two positions, but the choice of the position is conditional (Stump, 1993):

(1) Tensed:
   a. *a-na-ye-soma*
      \[ M/WA.S-PROG-M/WA.REL-read \]
      ‘(person) who is reading’
   b. *a-na-cho-ki-soma*
      \[ M/WA.S-PROG-KI/VI.REL-KI/VI.O-read \]
      ‘(book) which he is reading’

(2) Untensed:
   a. *a-soma-ye*
      \[ M/WA.S-read--M/WA.REL \]
      ‘(person) who reads’
   b. *a-ki-soma-cho*
      \[ M/WA.S-read-ki/VI.o-KI/VI.REL \]
      ‘(book) which he reads’

- Schematically:

\[
\begin{array}{cccccc}
1 & 2 & 3 & 4 & 5 & 6 & 7 \\
\text{NEG} & \text{SUBJ} & \text{TAM} & \text{OBJ} & \text{stem} & \text{IMP} & \text{PART} \\
\end{array}
\]

if affirmative and untensed

otherwise
Absolute and relative placement: Italian

- Italian pronominal affixes (Monachesi, 1999):
  - Occur in a fixed order of 6 positions

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>[obj,1sg]:</td>
<td>[loc]:</td>
<td>[obj, 3, refl]:</td>
<td>[d-obj,3sg,m]:</td>
<td>[obj, imp]:</td>
<td>[part]:</td>
</tr>
<tr>
<td>mi</td>
<td>ci</td>
<td>si</td>
<td>lo</td>
<td>si</td>
<td>ne</td>
</tr>
</tbody>
</table>

- Occur on either side of the stem depending on context
- Order within the cluster is the same on either side of the stem
- Other affixes (TAM and agreement) are always suffixed to the stem

```
me  lo  da  -te               ‘You give it to me.’
da  -te  me  lo!             ‘Give it to me!’
*   da  -te  lo  me!
*   lo  me  da  -te
```

```
*   te-  da  me  lo!
*   me  lo  te-  da.
```
Accounting for relative placement

- We submit that this is best accounted for by distinguishing two separate position indexing schemes:
  - *Absolute positioning* in named positions
  - *Relative positioning* at a specific distance from the stem
- The stem itself is then the element whose position varies in Italian.
The morphotactics of French pronominal affixes
French pronominal affixes

- Cf. Morin (1979a,b, 1981); Stump (1981); Miller (1992); Auger (1995); Miller and Sag (1997); Abeillé et al. (1998); Bonami and Boyé (2007)
- Subject pronominal affixes:
  - Preverbal by default
  - Postverbal in an arbitrary collection of constructions, including:
    - Matrix interrogatives
    - Clauses starting with a handful of sentence adverbs (jamais ‘never’, probablement ‘probably’, encore ‘still’, etc.)
    - Quotative clauses
- Complement pronominal affixes:
  - Preverbal by default
  - Postverbal in the imperative in the absence of preverbal negative marker *ne

<table>
<thead>
<tr>
<th></th>
<th>*Elle prend le.</th>
<th>‘She takes it.’</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Le prends!</td>
<td>Prends-le!</td>
<td>‘Take it!’</td>
</tr>
<tr>
<td>Ne le prends pas.</td>
<td>*Ne prends-le pas</td>
<td>‘Do not take it!’</td>
</tr>
<tr>
<td>Le prends pas</td>
<td>Prends-le pas.</td>
<td></td>
</tr>
</tbody>
</table>

14
French pronominal affixes: prefixal use

- In prefixal position, French pronominal affixes are organized in strictly ordered position classes:

<table>
<thead>
<tr>
<th>Present Indicative</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>il me les donne</td>
<td>*il les me donne</td>
</tr>
<tr>
<td></td>
<td>‘He gives them to me.’</td>
</tr>
<tr>
<td>il m’en donne</td>
<td>*il en me donne</td>
</tr>
<tr>
<td></td>
<td>‘He gives me some.’</td>
</tr>
<tr>
<td>il m’y envoie</td>
<td>*il y m’envoie</td>
</tr>
<tr>
<td></td>
<td>‘He sends me there.’</td>
</tr>
<tr>
<td>il les leur donne</td>
<td>*il leur les donne</td>
</tr>
<tr>
<td></td>
<td>‘He gives them to them.’</td>
</tr>
<tr>
<td>il les en blâme</td>
<td>*il en les blâme</td>
</tr>
<tr>
<td></td>
<td>‘He blames them for it.’</td>
</tr>
<tr>
<td>il les y envoie</td>
<td>*il y les envoie</td>
</tr>
<tr>
<td></td>
<td>‘He sends them there.’</td>
</tr>
<tr>
<td>il leur en parle</td>
<td>*il en leur parle</td>
</tr>
<tr>
<td></td>
<td>‘He talks to them about it.’</td>
</tr>
<tr>
<td>il leur y parle</td>
<td>*il y leur parle</td>
</tr>
<tr>
<td></td>
<td>‘He talks to them there.’</td>
</tr>
<tr>
<td>il y en mange</td>
<td>*il en y mange</td>
</tr>
<tr>
<td></td>
<td>(int.) ‘He eats some there.’</td>
</tr>
</tbody>
</table>
Positional analysis

- This is standardly analyzed by positing 7 slots:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>subj</td>
<td>NE</td>
<td>1/2/refl</td>
<td>3.doobj</td>
<td>3.iobj</td>
<td>LOC</td>
<td>DE-X</td>
</tr>
<tr>
<td>je</td>
<td>tu</td>
<td>il</td>
<td>elle</td>
<td>on</td>
<td>ne</td>
<td>me</td>
</tr>
<tr>
<td>elle</td>
<td>on</td>
<td>ce</td>
<td>ne</td>
<td>se</td>
<td>nous</td>
<td>se</td>
</tr>
<tr>
<td>nous</td>
<td>vous</td>
<td>vous</td>
<td>le</td>
<td>lui</td>
<td>leurs</td>
<td>y</td>
</tr>
<tr>
<td>vous</td>
<td>ils</td>
<td>elles</td>
<td>la</td>
<td>en</td>
<td>en</td>
<td>en</td>
</tr>
</tbody>
</table>
**French pronominal affixes: suffixal use**

Pedagogical and prescriptive grammars give the following distribution for suffixal use (in the imperative):

<table>
<thead>
<tr>
<th>Present Indicative</th>
<th>Positive Imperative</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>il me les donne</em></td>
<td>donne-les-moi</td>
<td>‘Give them to me.’</td>
</tr>
<tr>
<td><em>il m’en donne</em></td>
<td>donne-m’en</td>
<td>‘Give me some.’</td>
</tr>
<tr>
<td><em>il m’y envoie</em></td>
<td>envoie-m’y</td>
<td>‘Send me there.’</td>
</tr>
<tr>
<td><em>il les leur donne</em></td>
<td>donne-les-leur</td>
<td>‘Give them to them.’</td>
</tr>
<tr>
<td><em>il les en blâme</em></td>
<td>blâme-les-en</td>
<td>‘Blame them for it.’</td>
</tr>
<tr>
<td><em>il les y envoie</em></td>
<td>envoie-les-y</td>
<td>‘Send them there.’</td>
</tr>
<tr>
<td><em>il leur en parle</em></td>
<td>parle-leur-en</td>
<td>‘Talk to them about it.’</td>
</tr>
<tr>
<td><em>il leur y parle</em></td>
<td>parle-leur-y</td>
<td>‘Talk to them there.’</td>
</tr>
<tr>
<td><em>il y en mange</em></td>
<td>manges-y-en</td>
<td>‘Eat some there.’</td>
</tr>
</tbody>
</table>

Notice that there is no evidence for any mirroring effect: in the only case of a reversed order, the shapes are actually not the same.
The conservative French system

But actually, morphotactic variation in this area is documented since the 17th century.

In contemporary informal French, clear corpus evidence for variability, despite prescriptive pressures.
Suffixed use in informal Parisian French

- In contemporary informal Parisian French, there is clear overabundance.
  - Reduced 1sg and 2sg forms *me, te* are not used.
  - For most combinations of affixes, both orders are possible.
  - In some cases there is a perceivable sociolinguistic preference.
  - Only one combination is excluded.

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</tr>
<tr>
<td>il m’ en donne</td>
<td>Donne-<em>m’ en/-moi-z-en</em></td>
<td><em>Give me some.</em></td>
</tr>
<tr>
<td>il m’ y envoie</td>
<td>Envoie-<em>m’ y/-moi-z-y</em></td>
<td><em>Send me there.</em></td>
</tr>
<tr>
<td>il les leur donne</td>
<td>Donne-<em>les-leur</em></td>
<td><em>Give them to them.</em></td>
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<td>il les en blâme</td>
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<td>il les y envoie</td>
<td>Envoie-<em>les-y</em></td>
<td><em>Send them there.</em></td>
</tr>
<tr>
<td>il leur en parle</td>
<td>Parle leur-<em>z-en</em></td>
<td><em>Talk to them about it.</em></td>
</tr>
<tr>
<td>il leur y parle</td>
<td>Parle leur-<em>z-y</em></td>
<td><em>Talk to them there.</em></td>
</tr>
<tr>
<td>il y en mange</td>
<td>??manges-<em>y-z-en</em></td>
<td>(int.) ‘Eat some there.’</td>
</tr>
</tbody>
</table>
The informal Parisian French system

In nonimperative or \textit{ne+} contexts:

\begin{center}
\begin{tabular}{cccc}
\text{stem} & \text{TAM} & \text{RTYPE} & \text{AGR} \\
n & n + 1 & n + 2 & n + 3 \\
\end{tabular}
\end{center}

\begin{center}
\begin{tabular}{c}
1 \\
2 \\
3 \\
4 \\
5 \\
6 \\
7 \\
8 \\
9 \\
10 \\
11 \\
12 \\
13 \\
14 \\
\end{tabular}
\end{center}

\begin{center}
\begin{tabular}{c}
NE \\
1/2/REFL \\
3.DOBJ \\
3.IOBJ \\
LOC \\
de-XP \\
\end{tabular}
\end{center}

\textit{elswhere}

\begin{center}
\begin{tabular}{c}
SUBJ \\
\end{tabular}
\end{center}

In inversion contexts:

\begin{center}
\begin{tabular}{c}
\textit{elswhere} \\
\end{tabular}
\end{center}

In imperative \textit{ne–} contexts:

\begin{center}
\begin{tabular}{ccc}
\text{stem} & \text{TAM} & \text{RTYPE} & \text{AGR} \\
n & n + 1 & n + 2 & n + 3 \\
\end{tabular}
\end{center}

\begin{center}
\begin{tabular}{c}
1 \\
2 \\
3 \\
4 \\
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6 \\
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8 \\
9 \\
10 \\
11 \\
12 \\
13 \\
14 \\
\end{tabular}
\end{center}

\begin{center}
\begin{tabular}{c}
1/2.OBJ \\
LOC \\
de-XP \\
\end{tabular}
\end{center}

\begin{center}
\begin{tabular}{c}
3.DOBJ \\
3.IOBJ \\
\end{tabular}
\end{center}
The informal Parisian French system

- This intricate system can be derived by redeploying previously used strategies:

  Misaligned exponence (Nepali)  
  Free placement (Chintang)  
  Conditioned placement (Swahili)  
  Relative indexing  

Mari  

Italian  

French
An HPSG approach to variable morphotactics
Taking the template seriously

- We have described different types of morphotactics in templatic terms.

- This is rather unusual: most generative approaches to morphology rely on stem-centric composition.

- If the template is a good descriptive tool, why should we forget about it when we write grammars?

- The following is an attempt to take the template seriously as a theoretical construct.
Realizational, template-based morphology

- We pursue the detailed formalization of a template-based approach.
- Crucial addition: possible underspecification of positions.
- Formalized in HPSG:
  - Easy to formulate precise claims on the morphology-syntax interface
  - Relaxation of strict ordering by underspecification of positions
  - Realization rules are organized in inheritance hierarchies, allowing for the expression of generalizations over positions, shapes, or combinations of positions and shapes.
- No extrinsic ordering of rules: the only order is the surface order of exponents.
- The approach is otherwise very similar to Paradigm Function Morphology (Stump, 2001)
  - Fully lexicalist
  - Inferential and realisational
  - No ordering of morphosyntactic features
  - Conflict between rules resolved by Pāṇini’s Principle
Realisation rules

- Realisation rules are triplets of
  - a description of a set of morphs
  - the Morphosyntax Under Discussion (MUD), i.e. the morphosyntactic properties realized by the rule
  - a full description of morphosyntactic property set, including a specification of lexeme identity (lid)

A single rule may introduce more than one morph

The MUD/MORSYN distinction implements an opposition between realizing and being conditioned by a feature (Carstairs, 1987)
A simple example

**PHON**

\(<\text{ləli<k}>\)

**MORPHS**

\[
\{ [\text{PH} \ <\text{l}> \ \text{PC} \ 6], [\text{PH} \ <\text{l}> \ \text{PC} \ 10], [\text{PH} \ <\text{k}> \ \text{PC} \ 11], [\text{PH} \ <\text{ɔ̃}> \ \text{PC} \ 13] \}
\]

**RULES**

\[
\{ [\text{MPH} \ a], [\text{MPH} \ b], [\text{MPH} \ c], [\text{MPH} \ d], [\text{MUD} \ e], [\text{MUD} \ f], [\text{MUD} \ g], [\text{MUD} \ h] \}
\]

**MORSYN**

\[
\{ [\text{dobj} \ t \ \text{PER} \ 3 \ \text{GEN} \ m \ \text{NUM} \ sg \ \text{REFL} \ -], [\text{PER} \ 1 \ \text{NUM} \ pl], [\text{lis} \ \text{shape} \ <\text{l}>], [\text{subj} \ t], [\text{u} \ \text{fut}, [\text{w} \ \text{PER} \ 1 \ \text{NUM} \ pl] \}
\]

**SYNSEM**

\[
\text{CAT} \ \{ [\text{head} \ \text{lid} \ \text{lire}], [\text{tns} \ \text{fut}]\}
\]

\[
\text{ARG-ST} \ \langle \text{NP}_{1\text{pl}}, \text{NP}_{3\text{sg.pro}} \rangle
\]
A word is well-formed only if the set of rules licensing it exhausts its morphosyntactic description.

\[
\text{word} \rightarrow \begin{bmatrix}
\text{MORPHS} & e_1 \cup \cdots \cup e_n \\
\text{RULES} & \left\{ \begin{bmatrix}
\text{MORPH} & e_1 \\
\text{MUD} & m_1 \\
\text{MORSYN} & 0
\end{bmatrix}, \ldots, \begin{bmatrix}
\text{MORPH} & e_n \\
\text{MUD} & m_n \\
\text{MORSYN} & 0
\end{bmatrix} \right\} \\
\text{MORSYN} & 0 \left( [m_1 \cup \cdots \cup m_n] \right)
\end{bmatrix}
\]

The phonology of the word is the concatenation of the phonology of its morphs, respecting positional specifications.

\[
\text{word} \rightarrow \begin{bmatrix}
\text{PHON} & p_1 + p_2 + \cdots + p_n \\
\text{MORPHS} & \left\{ \begin{bmatrix}
\text{PH} & p_1 \\
\text{PC} & i_1
\end{bmatrix}, \ldots, \begin{bmatrix}
\text{PH} & p_n \\
\text{PC} & i_n
\end{bmatrix} \right\} \\
\text{where } [i_1 < i_2 < \cdots < i_n]
\end{bmatrix}
\]
Inheritance hierarchy of rules

- Realization rules are organized in an inheritance hierarchy
  - Captures commonalities between rules
  - Avoidance of redundancy
Conditional placement

- Multiple rules (organized in a hierarchy) account for the conditional placement of the stem.
Relative placement

- We introduce a feature on morphs recording the position of the stem.

\[(6) \quad \text{word} \rightarrow \begin{bmatrix} \text{MORPHS} & \left\{ \left[ \text{STM } [S] \right], \left[ \text{STM } [S] \right], \ldots, \left[ \text{STM } [S] \right] \right\} \end{bmatrix} \]

- Rules may then place their morphs relative to this distinguished position.

realization-rule

\[
\begin{array}{c}
\text{MUD} \\
\left\{ \left[ \text{agr} \right] \right\} \\
\text{MORPHS} \\
\left\{ \left[ \text{STM } [S] \right], \left[ \text{PC } [S + 3] \right] \right\}
\end{array}
\]

\[
\begin{array}{c}
\text{MUD} \\
\left\{ \left[ \text{PER } 1 \right] \right\} \\
\text{MORPHS} \\
\left\{ \left[ \text{PH } \langle\ddash\rangle \right] \right\}
\end{array}
\]

\[
\begin{array}{c}
\text{MUD} \\
\left\{ \left[ \text{PER } 2 \right] \right\} \\
\text{MORPHS} \\
\left\{ \left[ \text{PH } \langle e \rangle \right] \right\}
\end{array}
\]

\[
\begin{array}{c}
\ldots
\end{array}
\]
Free placement

- Free placement of morphs simply amounts to underspecified placement
  - Here: any position strictly higher than 4
Conclusion
Conclusion

- Main empirical claim: deviations from canonical morphotactics combine in a cumulative fashion
  - Mari: misaligned exponence + free placement
  - Italian: conditioned ordering + relative indexing
  - French: Italian + Mari

- Two theoretical constructs are crucial to our formal account:
  - Template with possible positional underspecification of morphs
  - Realization rules organized in an inheritance hierarchy

- Jointly these capture the conjunctive nature of constraint interaction in morphotactic systems.
References I


Does the conservative system exist?

▶ In fact it is unclear that the conservative system is anything but a prescriptive artefact.

▶ Sequences such as *donne-m’en, envoie-m’y* have been debated since the 17th century, and are seldom used outside of edited text.

*Il faut dire, menez y moy, & non pas, menez m’y, & au fingulier auffi, menes-y moy, & non pas, mene-m’y. Et cela à cause du mauvais & ridicule fon que fait, menez-m’y, & mene-m’y [...]*  
(Vaugelas, 1647, 95)

▶ Sequences such as *donne-moi-le*, although they have an informal character, have always been an alternative to *donne-le-moi*

*Si le monde nous le refuse, donnons-nous-le à nous-mêmes.*  
Bossuet, *Premier sermon pour le dimanche des rameaux*, 1660

*Pass un nom dans l’assistance qui ne fût notoire à quelque titre, et quant à celui de l’auteur, acclamé et fêté par nous, rappellez-vous-le pour l’applaudir un jour sur la dernière scène fidèle à la poésie.*  
S. Mallarmé, *La dernière mode*, 7e livraison, 12/6/1874
Suffixal use: the evidence

- Establishing the data is quite hard:
  - Strong prescriptive urge not to accept the dispreferred order
  - Imperatives with two pronouns are seldom found in corpora: hands-on interactions between the speakers are needed.
  - The only large enough relevant corpus (New and Spinelli, 2013) exhibits a 100:1 ratio between the two orders
  - This suggests that even elicitation in an ecological setting will only provide very few relevant examples

- Given this we may conclude that:
  - The positive grammaticality judgements above are not disputable, confirmed by hundreds of examples in various corpora.
  - The negative judgements are less firmly established
    - Documented as such in (Morin, 1979b; Auger, 1995); no evidence given to the contrary anywhere in the literature.
    - Not attested in available corpora, but the amount of relevant data precludes a firm conclusion
    - Congruent with the impressionistic judgements of various speakers of the relevant variety, but not tested systematically.
Comparision with a-morphous approaches

- In the present theory:
  - Position class templates are modeled directly
  - Morphs are represented explicitly in morphological derivations
  - Realization rules are morph licensing statements: they don’t modify an input string.
  - Realization rules are not ordered: an unstructured set of rules jointly licenses a word under a condition of informational completeness.
  - Under strong lexicalist assumptions, syntactic rules have no access to morphological structure either.

- Thus arguably, although the theory uses reified morphs:
  - It presupposes less structure in morphological derivations than stem-centric approaches (no derivation tree).
  - It makes exactly the same predictions as a-morphous approaches on the inaccessibility of morphological boundaries to both inflection rules and syntax.
  - It avoids the use of empirically undermotivated theoretical devices such as rule blocks.
Impossible combinations

- A single feature cooccurrence restriction accounts for the impossibility of

(7)  
  a.  * Il me lui présente.  ‘He introduces me to her.’
  b.  * Il me te présente.  ‘He introduces me to you.’
  c.  * Présente moi lui.  ‘Introduce me to her’.
  d.  * Présente moi toi.  ‘Introduce yourself to me’.

(8)  
  \[
  \begin{align*}
  &\text{MORSYN } \{\{\text{dat}, \ldots\}\} \rightarrow \neg \text{MORSYN } \left\{\left[\begin{array}{c}
  \text{acc} \\
  1 \lor 2 \lor \text{refl}
  \end{array}\right], \ldots\right\}
  \end{align*}
  \]

- This is exactly as stipulative as placing the relevant exponents in the same rule block

- In any case, this is only a placeholder for an analysis taking into account periphrastic alternatives

(9)  
  a.  Il lui présente Paul  ‘He introduces Paul to her.’
  b.  * Il présente Paul à elle
Morphs with phonologically constrained distribution

- Well-known observations:
  - Suffixal *me* and *te* are licensed only when immediately followed by *y* or *en*.
  - Pronouns *y* and *en* take different shapes depending on whether or not they are preceded by a vowel-final morph in the same word.
  - Pronoun *les* takes a special shape when followed by a vowel-initial morph in the same word.

- All these observations can easily be modeled within the assumptions of contextualized declarative phonology (Walther, 1999; Crysmann, 2002)

\[
\text{word} \rightarrow \left[ \text{PHON} \left[ \begin{array}{c}
\text{PREV} & \# \\
\text{SELF} & 1 \\
\text{NEXT} & 2 \\
\text{PREV} & 1 \\
\text{SELF} & 2 \\
\text{NEXT} & 3 \\
\text{PREV} & n-1 \\
\text{SELF} & n \\
\text{NEXT} & \# \\
\end{array} \right] \right]
\]
Morphs with phonologically constrained distribution

- **Suffixal me vs. moi:**

  \[
  \begin{align*}
  &\left[ \text{STM} \begin{bmatrix} S \end{bmatrix}, \text{PC} \begin{bmatrix} S + 3 + n \end{bmatrix} \right] \\
  &\left[ \text{PH} \begin{bmatrix} \text{SELF} \ m \ \text{NEXT} \ \text{vow} \end{bmatrix} \right]
  \end{align*}
  \]
  vs.
  \[
  \begin{align*}
  &\left[ \text{STM} \begin{bmatrix} S \end{bmatrix}, \text{PC} \begin{bmatrix} S + 3 + n \end{bmatrix} \right] \\
  &\left[ \text{PH} \begin{bmatrix} \text{SELF} \ m, \text{SELF} \ w, \text{SELF} \ a \end{bmatrix} \right]
  \end{align*}
  \]

- **y vs. z-y:**

  \[
  \begin{align*}
  &\left[ \text{PH} \begin{bmatrix} \text{SELF} \ y \ \text{PREV} \ \neg \text{vow} \end{bmatrix} \right]
  \end{align*}
  \]
  vs.
  \[
  \begin{align*}
  &\left[ \text{PH} \begin{bmatrix} \text{SELF} \ z \ \text{PREV} \ \text{vow} \end{bmatrix}, \text{SELF} \ y \end{bmatrix} \right]
  \end{align*}
  \]

- This predicts correctly *envoies-y-moi, envoie-m’y, envoie-moi-z-y, *envoie-m-z-y, *envoie-moi-y
When plural markers are taken into account, surprising ordering possibilities arise.

<table>
<thead>
<tr>
<th></th>
<th>ABSOLUTE</th>
<th>1SG POSS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SG</td>
<td>PL</td>
</tr>
<tr>
<td>NOM</td>
<td>pört</td>
<td>pört-ðlak</td>
</tr>
<tr>
<td>ACC</td>
<td>pört-əm</td>
<td>pört-ðlak-əm</td>
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<tr>
<td>DAT</td>
<td>pört-lan</td>
<td>pört-ðlak-lan</td>
</tr>
<tr>
<td>LAT</td>
<td>pört-eš</td>
<td>pört-ðlak-eš</td>
</tr>
</tbody>
</table>
The full Mari data: Analysis

- This situation can be modeled easily if one assumes a position for poss to the left of the plural marker that is unavailable in the singular.
- All the right ordering possibilities then follow without further stipulation.