0. The theoretical framework and some preliminary observations

This work adopts the theoretical assumptions about the nature of the morphological structure developed within the framework of the Distributed Morphology (DM) (Halle & Marantz 1993, 1994; Marantz 1997, 2008; Harley & Noyer 1999 among the most relevant ones), namely that Syntax manages word formation and inflection and that the merger between a root and a category-defining head creates nouns, verbs, etc..

But this work is built on another important theoretical assumption, whose nature is mostly phonologically relevant: following Lowenstamm 1996, I assume that there is a templatic tier CV in the representation of every word.

In particular, Embick & Noyer 2001 show that PF movement moves items after Syntax; this idea has then been put forth by Piggott & Newell 2006. Lowenstamm 2008 assumes that the templatic tier is manipulated by syntactic terminal nodes: in this work, I build my analysis on this idea.

I assume the following representation for a noun:

(1) Structure of a noun

\[
\text{DP} \quad \text{numP} \\
\text{num} \quad \text{nP} \\
\text{n} \quad \sqrt{\text{(CV)}} \quad \text{(CV)} \\
\text{CVCV..}
\]

The structure in (1) is the default one; other projections will be introduced or at least mentioned. DP isn’t within the scope of this study and thus won’t be treated for the moment.
1. The data and two general hypotheses

I show in (2) the Italian nominal paradigm (variable nouns):

(2)  sg.   gloss  gender   pl.  gloss  gender
      A.   B.  
  a.  lupo  wolf  M  lupi  wolves  M
  b.  rosa  rose  F  rose  roses  F
  c.  poeta  poet  M  poeti  poets  M
  d.  ala  wing  F  ali  wings  F
  e.  cane  dog  M  cani  dogs  M
  f.  nave  ship  F  navi  ships  F

• We focus on final vowels (henceforth Vfin).

• Some observations about Vfin:
  a. Vfin is always unstressed.
  b. Vfin can be [a], [e], [i] and [o]; only [u] is excluded from the phonological vocalic inventory in final unstressed syllables.
  c. For any given noun, Vfin is never the same in A and B.
  d. If the final vowel is stressed, then the noun is invariable in gender and number; no exceptions are observed:

     d. [obló] ‘porthole’  e. [virtú] ‘virtue’

➢ I aim to demonstrate that Vfin can only be accounted for in morpho-syntactic terms. I also aim to show that a pure phonological approach won’t give the correct answer to the behavior of Vfin.

• First hypothesis. Vfin enforces a phonological well-formedness requirement to the effect that no noun remain consonant-final. This is FALSE:
  a. Four vowels appear in Vfin position; if it were an epenthetic vowel, we’d expect just one.
  b. Some final-hiatus and final-diphthong words exist:
Second hypothesis. Vfin expresses morpho-syntactic structure:
  a. Vfin is a final vowel appearing on nouns (and on adjectives).
  b. Vfin seems to be mandatory in order to have inflectional morphology on nouns.
  c. Vfin seems to be necessary for a root to become a noun as *lup, *ros, *poet, etc.. are all bad-formed nominal forms.

The aim of this research is to propose an explanation about how Vfin works and why it is necessary in Italian.

2. The analysis

2.1 Significant complex vowels (Lampitelli & Faust 2008; Passino 2008)

I propose to decompose each Vfin building on Kaye, Lowenstamm & Vergnaud 1985, 1990’s Theory of Elements (henceforth KLV).

This gives the following results for each Italian unstressed vowel:

    d. [e] = /I.A/  e. [o] = /U.A/

(For further details on each operation, see the references above)

In Lampitelli & Faust 2008, we show that KLV’s Theory applies to both Italian and Hebrew vocalic system and that in both languages each Element has a specific morpho-syntactic function.

Passino 2008 explores a similar analytical path for nominal final vowels in Italian.

In what follows, I show the set of Vfin in the singular and in the plural, respectively:

(5) a. Vfin in the singular  b. Vfin in the plural
    i  e  o  e
    a
• Note that [u] is excluded from the set of possible Vfin in both singular and plural.
• A general lowering phenomenon is recognized by traditional linguistics to be responsible of the absence of high vowels in unstressed syllables in Italian. But then, why do we still have [i] in plurals?

The sets showed in (4), become clearer when decomposed into Elements:

\[(6)\]
\[
\begin{array}{ll}
\text{a. Vfin in the singular} & \text{b. Vfin in the plural} \\
\text{I} & \\
\text{A.I} & \text{A.I} \\
\text{A.U} & \text{A.I} \\
\text{A} & \\
\end{array}
\]

Some general observations
• Element A must always be present in the singular, otherwise the noun isn’t well formed.
• Element I must always be in the structure of the plural, otherwise the noun isn’t well formed.
• A and I can appear alone or in combination, but U can never appear alone (it can’t surface as [u], cf. above).

I assume that the basic Italian vocalic system before any morphological operation is the one showed below:

\[(7)\]
\[
\begin{array}{ll}
\text{I} & \text{U} \\
\text{A} & \\
\end{array}
\]

I then propose that:
• Each basic vocalic Element showed in (7) represents a group of roots, (each root selects one of these Elements or zero). I claim then that Italian has the following four groups of roots (further details below):

• The root merges with one of the basic vocalic Elements.
• Then, the Element A is inserted in all singular structures.

---

\(^1\) Guerssel & Lowenstamm 1993 propose a similar account for verbal root in Classical Arabic.
Hypothesis: Element A marks the singular or some nounness properties (I’ll elaborate on this point in what follows).

Hypothesis: Element I marks the plural (henceforth Ipl).

As a first approximation, I propose the following definition for Vfin:

\( \text{(8) Vfin nature: Vfin is a complex vowel, formed by at the most two Elements whose specific roles will be defined in what follows.} \)

I can now recast the data in (2) in light of the first generalizations about Vfin:

\( \text{(9) } \)

<table>
<thead>
<tr>
<th></th>
<th>sg. gender</th>
<th>examples</th>
<th>pl. gender</th>
<th>examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>A.(U) M</td>
<td>lupo</td>
<td>Ipl.(U) M</td>
<td>lupi</td>
</tr>
<tr>
<td>b.</td>
<td>A.(A_F) F</td>
<td>rosa</td>
<td>Ipl.(A) F</td>
<td>rose</td>
</tr>
<tr>
<td>c.</td>
<td>A.(Ø) M</td>
<td>poeta</td>
<td>Ipl.(Ø) M</td>
<td>poeti</td>
</tr>
<tr>
<td>d.</td>
<td>A.(I) M/F</td>
<td>cane, nave</td>
<td>Ipl.(I) M/F</td>
<td>cani, navi</td>
</tr>
</tbody>
</table>

• \(\text{\(A_F\)}\) marks the feminine gender; but it’s not the only way to mark the feminine. Its presence depends on the type of root (cf. above (7)).

• A is in complementary distribution with plural Ipl.

• The class in (9c) is the simplest one, as only one Element forms each Vfin.

2.2 Syntactic Structures in Italian nouns (Lampitelli 2008 & (In progress))

Building on the literature (Lowenstamm 2008, Embick & Noyer 2001 and Piggott & Newell 2006) and considering the data, the primary analysis above leads me to claim that:

Hypothesis: as Element A is in complementary distribution with Element Ipl, I propose that it marks the singular: A\(_{\text{sg}}\).

Hypothesis: Italian has two markers for number.

• I begin from \textit{poeta}-type nouns (9.c) where the simplest Vfin occurs.

\( \text{\(^2\)KLV’s Theory of Elements predicts that in a five-vowels language as Italian, front rounded vowels can’t exist (*[y], *[œ], *[ø], etc..): the combination /I.U/ should then result in [y]. I propose that only /I/ surfaces because of its plural marking specification. Cf. Passino 2008 and Lowenstamm P.C.} \)
In what follows, I show the structure for both the singular *poeta* and the plural *poeti*:

\[ (10) \quad \begin{align*}
\text{a. } & V\text{fin} = [a], \ M \text{ pl} \\
\text{b. } & V\text{fin} = [i], \ M \text{ pl}
\end{align*} \]

\[
\begin{array}{c}
\text{numP} \\
\text{num} \quad \text{n} \\
\text{CVCVCV} \\
\text{n} \\
\text{ empt} \\
\text{yp} \\
\text{p o e t} \\
\text{A} \ \text{sg} \\
\text{output: poet + A}_{\text{sg}} = [\text{poeta}]
\end{array}
\quad \begin{array}{c}
\text{numP} \\
\text{num} \quad \text{n} \\
\text{CVCVCV} \\
\text{n} \\
\text{ empt} \\
\text{yp} \\
\text{p o e t} \\
\text{I} \ \text{pl} \\
\text{output: poet + I}_{\text{pl}} = [\text{poeti}]
\end{array}
\]

- If it is true that this is the default case, we should expect that no feminine nouns appear in this group: this is actually the case.\(^3\)
- As we assumed that *poeta*-type is the default case, we now have to consider the other three groups:
  a. *lupo*-type nouns are all masculine (cf. Ferrari 2005 for some final-*o* feminines).
  b. *rosa*-type nouns are all feminine (and we’ve already noticed that).
  c. *cane* and *nave*-types don’t allow any prediction for gender.

- We notice that adjectives can be classed in two major classes:
  a. *bello/bella* ‘beautiful’ M/F
  b. *facile* ‘easy’ M/F

\[ Hypothesis: \text{the four root groups shown in (7) are organized as follows:} \]

\[
\begin{array}{cccccc}
\sqrt{\text{RE}} & \text{gen. class} & \text{Vfin} & \text{gloss} \\
\text{sing.} & \text{pl.} \\
\hline
\text{a. } & \text{ lup } & U & M & 1 & [o] & [i] & \text{‘wolf’} \\
\text{b. } & \text{ ros } & A_{F} & F & 1 & [a] & [e] & \text{‘rose’} \\
\text{c. } & \text{ can } & I & M & 2 & [e] & [i] & \text{‘dog’} \\
\text{d. } & \text{ nav } & I & F & 2 & [e] & [i] & \text{‘boat’} \\
\text{e. } & \text{poet } & \emptyset & M & \text{default} & [a] & [i] & \text{‘poet’}
\end{array}
\]

\[ (12) \quad \text{New definition for } V\text{fin: } V\text{fin is a complex vowel, formed by the combination of the number morpheme (A}_{\text{sg}} \text{ or I}_{\text{pl}} \text{ and the Root Element (henceforth RE) (}\ U, A_{F}, I \text{ or } \emptyset).} \]

\(^3\text{Only two nouns following the pattern } a-i \text{ are feminine: } \text{ala ‘wing’ and arma ‘weapon’ but they have a literary form ending in [e]. This type has been shown in (2) to show the inventory as more complete as possible.} \]
• nP is phonologically empty, but it hosts the gender feature (cf. Kihm 2002 and Lowenstamm 2008).
• Which projection hosts RE?

➢ Hypothesis: A functional projection VfinP is responsible for nominal inflection.

Why is VfinP necessary?
Let’s take the structure given for poeta-type and let’s try to create rose ‘roses’ and rosine ‘little roses’:
(13) a. rose ‘rose’, F pl. b. rosine ‘little rose’, F pl.

The structures in (13) can’t account for feminine plural diminutive. Moreover, how can little n know that the root √ros needs the RE $A_F$?

Some important issues
• Each root selects a type of RE: either $U/A_F$ or $I$.
• Building on KLV 1985, 1990, we can say that the difference between the pair $A/U$ on one hand and I on the other is the feature $\pm$BACK. If the root selects a $+$BACK RE, then it belongs to $A_F/U$-root classes; if it selects a $-$BACK RE, it belongs to $I$-root class.
• The general idea is that REs are lexical items somehow similar to theme vowels. They have no particular morphological role but they MUST be in the structure. The present analysis contrasts with Oltra-Massuet 2000 and Oltra-Massuet & Arregi 2005, where thematic vowels are generated in $v$ or in $n$ and any major category has one in Spanish and Catalan (in PF).
• In my account, REs are managed by an independent projection VfinP.
I also claim that REs represent some left-over from the Latin declensional system.

VfinP enables us to assert that, via an agreement operation with n, the right RE is spelled out by the structure.

I first show a possible way to represent *lupo* and *rosa*-type nouns with VfinP adjoined to √.

Before continuing our analysis, notice the following data:

<table>
<thead>
<tr>
<th>Singular</th>
<th>Plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal Forms</td>
<td>Diminutive Forms</td>
</tr>
</tbody>
</table>

- Diminutive forms always display [o] for masculine nouns and [a] for feminine ones.
- Diminutive replaces Vfin in A and B.
- Nouns in (15.C) (loan consonant-final words) don’t have an overt marker for the plural; nevertheless, they can have a diminutive form with the agreement vowel [o] or [a]. This is strange, as the template has a free V position (cf. above (17)).

I propose that:

- VfinP and DimP occupy the same position in the structure; this is why they can never appear together (cf. *dentine* ‘little tooth’).
They both bear a syllable CV.

- A major argument for a “low” dimP must be found in a very common phonological process: intervocalic /s/ voicing (in Northern varieties).
  a. /kas+a/ → [kaza] “home”  
  b. /kas+in+a/ → [kazina] “little house”  
  c. /sentire/ → [sentire] “hear”  
  d. /ri+sentire/ → [risentire] “feel”

Diminutive is merged in the same phase as the root.

In what follows, I show the structures of two diminutives:

\[(16)\]

a. **lupino** ‘little wolf’ M, sg  

```
numP
  num   nP
  [±sg] n √P
  [-f]  
  dimP
  dim
  √P
  A sg  empty
  CV
  in
  u p
```

output: [lupino]

b. **rosine** ‘little roses’ F, pl  

```
numP
  num   nP
  [±sg] n √P
  [+f]  
  dimP
  dim
  √P
  A f
  CV
  in
  r o s
```

output: [rozine]

It is still important to notice that *poeta* and *film* seem to have the same structure, without VfinP and with an empty n (poeta-type nouns are all masculine and loan nouns, too):

\[(17)\]

a. *poeta* ‘poet’, sg. M.  

```
numP
  num   nP
  CVCVCV
  A sg  empty
  poet
```

output: poet + Asg = [poeta]

b. *film* ‘movie’, sg. M.  

```
numP
  num   nP
  CVCVCV
  A sg  empty
  film
```

Asg can’t land on the free V  

film = [film] as *filmo*

Why is there this asymmetry? Before proposing a solution, we have to notice that:

- Neither *poeta* nor *film* seem to have the projection VfinP.
Poeta-type nouns have Greek roots, such as problema ‘problem’, eczema ‘eczema’, tema ‘theme’, etc., while film-type nouns are all loan words.

They both accept diminutive forms: poetino ‘a not so good poet’ and filmino ‘little movie’ with an expected masculine agreement [o].

Hypothesis:
- Poeta-type nouns do have the projection VfinP.
- VfinP bears a single CV unit and nothing else.
- This hypothesis implies that ANY noun having some number and/or gender morphology MUST have the projection VfinP.

I then assume the following principle:

(18) The only site of morphology for a noun is VfinP and its CV syllable.

3. Conclusion and further remarks

Why is the projection VfinP the best way to represent the situation?
- Verbs show a narrowly similar vowel between the root and inflectional morphology.
- If it were nP that manages Vfin, we couldn’t explain why the gender feature is spelled out in two different ways depending on some root properties.
- VfinP is in complementary distribution with DimP: they might be the same property, some nominalizing and necessary projections for Italian roots.
- The presence of both VfinP and DimP entails two big predictions:
  1) A language having a low DimP as Italian does will have many non-compositional diminutive suffixes.
  2) If a language has a low DimP, then it has diminutive suffixes close to the root. But DimP and VfinP are intimately linked: they’re presence entails a rich morphology on the noun, close to the root. Italian would act like Spanish and Hebrew, for example. French and English would act in the opposite way: no overt morphology on nouns and no synthetic diminutive forms neither.
• Other Italian nouns accounts didn’t distinguish between the position and the segment creating Vfin. Passino 2008 proposes a complex vowels based analysis, but she doesn’t implement her proposal with a syntactic tool.

• A syntactic based approach to Italian nouns enables us to manage Vfin as an external position (from the root). This position is the site of gender/number overt morphology.

I propose the general following organization for all Italian nouns, depending on their structural properties (cf. Lampitelli (In progress) for more details):

(19) a. with VfinP
    variable nouns  
     dente “tooth”
    abridged nouns  
     moto “motorbike”
    oxytone nouns   
     città “town”

b. without VfinP
    oxytone nouns   
     caffè “coffee”
    loan V# words   
     gorilla “gorilla”
    loan C# words   
     film “movie”
    invariable nouns 
     specie “type”

In what follow, I show the general organization of VfinP nouns:

(20) type  sg.  gender  pl.  gender  examples as in (1)

a. default  A_{sg}.Ø M  I_{pl}.Ø M  poeta
b. class 1  A_{sg}.U M  I_{pl}.U M  lupo
c. class 2  A_{sg}.A F F  I_{pl}.A F F  rosa
d. class 2  A_{sg}.I M/F  I_{pl}.I M/F  cane, nave

4. References

“Nounness, gender, class and syntactic structures in Italian nouns” Nicola Lampitelli (Paris 7)


