Templatic verb roots and stem allomorphy in Italian

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Introduction

(1) General

a. In this talk, I analyze a particular group of Italian irregular verbs, which are characterized by the insertion of /g/ between the root and the inflectional markers (henceforth g-verbs).

b. I assume the theoretical framework of Government Phonology (Kaye et al., 1990) in general; the CV-hypothesis (Lowenstamm, 1996) and the Theory of Elements in particular (Kaye et al., 1985).

<table>
<thead>
<tr>
<th></th>
<th>1S</th>
<th>2S</th>
<th>3S</th>
<th>1P</th>
<th>2P</th>
<th>3P</th>
</tr>
</thead>
<tbody>
<tr>
<td>pres</td>
<td>tàng-o</td>
<td>tièn-i</td>
<td>tièn-e</td>
<td>ten-iámo</td>
<td>ten-ète</td>
<td>tàng-ono</td>
</tr>
<tr>
<td>subj</td>
<td>tàng-a</td>
<td>tàng-a</td>
<td>tàng-a</td>
<td>ten-iámo</td>
<td>ten-iáte</td>
<td>tàng-ano</td>
</tr>
</tbody>
</table>

(2) Goals

a. Argue for the existence of a unique underlying form of the root of g-verbs.

b. Propose a synchronic explanation of the origin of velar insertion.

c. Show that surface-alternations are triggered by a fixed template in the root (in other words: stress plays no role, contra Burzio 1998).

1 Verbal roots and inflectional markers in Italian

It is generally assumed that:

(3) Italian roots

a. syllabified sequences of phonological segments

b. no limitations on the number of consonants and/or vowels (phonological constraints aside)

The facts in (3) have generally been related to the following assumption:

(4) Italian roots do not display templatic restrictions
In particular, verbs are organized as follows:

- Three conjugations (cf. Latin, four conjugations: -ere and -ēre\(^1\) verbs merged into 2nd conjugation)
- Root + Theme + Inflectional marker(s)
- A 3 person-distinction in both sg. and pl. (which is almost always visible)
- All the inflected verbal forms end in a vowel (usually unstressed)

<table>
<thead>
<tr>
<th>Table 1: 1st conjugation: amare ‘to love’</th>
</tr>
</thead>
<tbody>
<tr>
<td>1S 2S 3S 1P 2P 3P</td>
</tr>
<tr>
<td>pres ám-o ám-i ám-a am-iá-mo am-iá-te ám-a-no</td>
</tr>
<tr>
<td>subj ám-i ám-i ám-i am-iá-mo am-iá-te ám-i-no</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 2: 2nd conjugation: temere ‘to fear’</th>
</tr>
</thead>
<tbody>
<tr>
<td>1S 2S 3S 1P 2P 3P</td>
</tr>
<tr>
<td>pres tén-o tén-i tém-e tem-iá-mo tem-iá-te tén-o-no</td>
</tr>
<tr>
<td>subj tén-a tén-a tén-a tem-iá-mo tem-iá-te tén-a-no</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 3: 3rd conjugation: sentire ‘to hear’</th>
</tr>
</thead>
<tbody>
<tr>
<td>1S 2S 3S 1P 2P 3P</td>
</tr>
<tr>
<td>pres sén-t-o sén-t-i sén-t-e sén-t-iá-mo sén-t-iá-te sén-t-o-no</td>
</tr>
<tr>
<td>subj sén-t-a sén-t-a sén-t-a sén-t-iá-mo sén-t-iá-te sén-t-a-no</td>
</tr>
</tbody>
</table>

(5) General morpho-phonological facts:
- a. six distinct forms in the present indicative
- b. neutralization of sg forms in the present subjunctive
- c. identity of 1P forms of the present indicative and present subjunctive
- d. stress:
  - (i) falls on the suffix (1P and 2P)
  - (ii) 1S, 2S, 3S and 3P are rhyzotonic (exceptions are found in the preterit)

(6) Regular verbs are those displaying a unique form of the root in the whole paradigm. By contrast,

(7) **Irregular verbs** are those displaying more than one form of the roots (cf. Pirrelli & Battista 2000).

\(^1\)pérdere ‘to lose’ inflects exactly as temere ‘to fear’ shown in table 2.
2  G-verbs and templatic activity

Focus on a particular group of verbs:

Table 4: g-verbs

<table>
<thead>
<tr>
<th></th>
<th>1S</th>
<th>2S</th>
<th>3S</th>
<th>1P</th>
<th>2P</th>
<th>3P</th>
<th>INF</th>
</tr>
</thead>
<tbody>
<tr>
<td>1S</td>
<td>teng-o</td>
<td>tién-i</td>
<td>tién-e</td>
<td>ten-íamo</td>
<td>ten-éte</td>
<td>teng-ono</td>
<td>ten-íre</td>
</tr>
<tr>
<td>1P</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2P</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3P</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(8) Three alternating forms of the root

a. $\sqrt{\text{TEN}}, \sqrt{\text{VEN}}$

b. $\sqrt{\text{TIEN}}, \sqrt{\text{VIEN}}$

c. $\sqrt{\text{TENG}}, \sqrt{\text{VENG}}$

- Distribution of the allomorphy of the root:

Table 5: Allomorphy of g-verbs roots

<table>
<thead>
<tr>
<th>stress</th>
<th>on the root</th>
<th>on the suffix</th>
</tr>
</thead>
<tbody>
<tr>
<td>num/pers</td>
<td>1S, 3P</td>
<td>2S, 3S</td>
</tr>
<tr>
<td>context</td>
<td>/ [+back]</td>
<td>/ [-back]</td>
</tr>
<tr>
<td>allomorph</td>
<td>$\sqrt{\text{TENG}}$</td>
<td>$\sqrt{\text{TIEN}}$</td>
</tr>
</tbody>
</table>

- The allomorph $\sqrt{\text{TIEN}}$ is characterized by a falling diphthong, which is diachronically expected in stressed open syllables (bònum $\rightarrow$ buono ‘good'; pèdem $\rightarrow$ piede ‘foot’)

- The allomorph $\sqrt{\text{TENG}}$ is characterized by the insertion of an unetymological voiced velar stop.

**Question 1** What triggers the alternation of the allomorphs of the root?

**Question 2** Where does the velar stop originate from?

(9) A diachronic observation: In Italian, the following derivation of the 1S is expected: Teneo $\rightarrow$ Tenio $\rightarrow$ Tegno

(10) A synchronic observation: Why the sequence /ten+o/ $\rightarrow$ [téno] is excluded? Cf. tréno ‘train’, veléno ‘poison’, fiéno ‘hay’, etc..

---

2Cf. European Portuguese: tenho, tens, tem, temos, tendes, tém.
Compare the paradigms shown in table 6 to those below:

Table 6: G-VERBS³

<table>
<thead>
<tr>
<th>conj.</th>
<th>1S</th>
<th>2S</th>
<th>3S</th>
<th>1P</th>
<th>2P</th>
<th>3P</th>
<th>INF</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>sán-o</td>
<td>sán-i</td>
<td>sán-a</td>
<td>san-iámo</td>
<td>san-áte</td>
<td>sán-ano</td>
<td>san-áre</td>
</tr>
<tr>
<td>1st</td>
<td>mànk-o</td>
<td>mànk-i</td>
<td>mànk-a</td>
<td>mank-iámo</td>
<td>mank-áte</td>
<td>mànk-ano</td>
<td>mank-áre</td>
</tr>
<tr>
<td>1st</td>
<td>váng-o</td>
<td>váng-i</td>
<td>váng-a</td>
<td>vang-iámo</td>
<td>vang-áte</td>
<td>váng-ano</td>
<td>vang-áre</td>
</tr>
<tr>
<td>2nd</td>
<td>tém-o</td>
<td>tém-i</td>
<td>tém-e</td>
<td>tem-iámo</td>
<td>tem-éte</td>
<td>tém-ono</td>
<td>tem-ére</td>
</tr>
<tr>
<td>2nd</td>
<td>vínk-o</td>
<td>vínt-f-i</td>
<td>vínt-f-e</td>
<td>vínt-f-(i)ámo</td>
<td>vínt-f-éte</td>
<td>vínt-f-ono</td>
<td>vínt-f-ere</td>
</tr>
<tr>
<td>2nd</td>
<td>piáng-o</td>
<td>piánd-f-i</td>
<td>piánd-f-e</td>
<td>piánd-f-(i)ámo</td>
<td>piánd-f-éte</td>
<td>piáng-ono</td>
<td>piánd-f-ere</td>
</tr>
<tr>
<td>2nd⁴</td>
<td>siéd-o</td>
<td>siéd-i</td>
<td>siéd-e</td>
<td>sed-iámo</td>
<td>sed-éte</td>
<td>siéd-ono</td>
<td>sed-ére</td>
</tr>
</tbody>
</table>

(11) a. Roots ending in a nasal C (either /n/ or /m/) are attested in both the 1st and 2nd conjugation.
   b. [ŋk] and [ŋg] sequences are attested in the 1st conjugation: velars never palatalize in this case.
   c. [ŋk] and [ŋg] sequences are attested in the 2nd conjugation. However, both /k/ and /g/ palatalize when followed by either -i or -e.⁵
   d. Historically-predictable diphthongization occurs only in a few verbs, such as sedére (in contrast, cf. suonáre is a regular verb √swon).

Back to tenére and venírë.

(12) a. The sequence /ng/ is not allowed unless the suffix begins in a [+back] vowel.
   b. Diphthongization occurs only in 2S and 3S but it does not occur when the velar is inserted.
   c. 1P and 2P are the only two “regular” forms in the paradigm.

Observation 1:
If stress were responsible for the alternation of the root in G-VERBS, we’d expect only two allomorphs: one used in rhyzotonic forms (1S, 2S, 3S and 3P) and the other used in suffix-stressed forms (1P and 2P).⁶

⁴Cf. Spanish tenére ‘to have’, 1S téngo, 2S tiénes, etc.. In Spanish, diphthongization occurs both in open and closed syllables: focu > fuego ‘fire’ and ponte > puente ‘bridge’. Thus, why *tiengo is ungrammatical?

²Glosses from top to down: ‘to heal’, ‘to miss’, ‘to shovel’, ‘to fear’, ‘to win’, ‘to cry’ and ‘to sit’.

⁴To my knowledge, there is no verb from 3rd conjugation whose the root ends in a nasal followed by a velar which palatalizes when preceding -i and -e.

⁵3rd conjugation contains verbs such as cucére ‘to sew’ where the stem ends in a non-alternating palatal: /ʃ/.
Observation 2:
In CV framework, the allomorphs TENG and TIEN (CVCC and CGVC) have the same underlying syllabic structure: CVCVCV.

Hypothesis:
G-VERBS display allomorphy because their roots are templatic, i.d. they display a fixed syllabic structure.

3  A unique form of the root
• G-VERBS display a template made of three CV units: CVCVCV.
• The alternation of the root depends on the need to license the empty positions in the template.

(13) G-VERB roots: a unique representation

<table>
<thead>
<tr>
<th></th>
<th>a. Root</th>
<th>Template</th>
<th>tenére</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ten</td>
<td>C V C V C V</td>
<td></td>
</tr>
<tr>
<td>b. Root</td>
<td>ven</td>
<td>C V C V C V</td>
<td>veníre</td>
</tr>
</tbody>
</table>

The representations in (13) underly the whole paradigms of both tenére and veníre.

4  The representation of the inflected forms

4.1 Present Indicative 1S, 2S and Infinitive

(14) Present 1S:

<table>
<thead>
<tr>
<th>Th</th>
<th>I &gt; U</th>
<th>harmony /+[back]</th>
</tr>
</thead>
<tbody>
<tr>
<td>U &gt; w &gt; g</td>
<td>strong position</td>
<td></td>
</tr>
<tr>
<td>Root</td>
<td>t e n</td>
<td>ténge</td>
</tr>
<tr>
<td>Template</td>
<td>C V C V\textsuperscript{1} C V\textsuperscript{1}</td>
<td></td>
</tr>
</tbody>
</table>

• The Element /I/ marks the theme vowel, e.g. it represents both 2nd and 3rd conjugations.\textsuperscript{6}

• The inflectional markers come with no skeletal positions.

\textsuperscript{6}The difference between the second and the third conjugation is neutralized in a number of contexts: 3S of the present tense (tien-e ‘he holds’, vien-e ‘he comes’), past participle (ten-uto ‘held’, ven-uto ‘come’), subjunctive (teng-a ‘that I hold’, veng-a ‘that I come’), etc.
(15) /I/ surfaces as [g] (cf. Fanciullo 1998)
a. The vowel -o is [+back], thus it activates harmony: /I/ is velarized into /U/.
b. V₁ is properly governed only when the inflectional marker -o is inserted: /U/ can only be associated to the C position between V₁ and V₂. The Element /U/ turns into a glide /w/ (Kaye & Lowenstamm 1984).
c. The C position following a governed empty nucleus is a strong position (underlined in (14)): thus /w/ undergoes fortition and turns into [g] (Scheer & Ségéral 2001).

(16) Present 2S:
1S
Th  I               no harmony
Root  t e n
Template  C V C V₁ C V₂ tiéni

(17) No harmony, then diphthongization
a. The presence of a palatal vowel, -i, does not activate harmony.
b. The floating Element /I/ provokes diphthongization: it “needs” a position to land to.

(18) Infinitive:
Inf     A r e
Th  I               no harmony
Root  t e n
Template  C V C V₁ C V₂ tenére

(19) No harmony, no diphthongization, no velar-insertion
a. The whole template is satisfied, e.g. each position is associated to segmental material
b. Thus, there is no need for either diphthongization or velar insertion.

4.2 Present subjunctive 1S, 2S and 3S
• Present subjunctive is characterized by the neutralization of the singular forms: ténga 1S, 2S and 3S
• The suffixal vowel is -a- for both 2nd and 3rd conjugations (1st conj. has -i-).

(20) Subjunctive 1S, 2S (and 3S):
Subj
Th        I > U  harmony / [+back]
          U > w > g  strong position
Root  t e n
Template  C V C V₁ C V₂ ténga
(21) /I/ surfaces as [g]
a. As in present indicative, theme Element /I/ surfaces as a velar plosive, [g]
b. Suffixal -a triggers the phonological process turning /I/ into [g] (as explained in (15) above)

4.3 Pres and Subj. 1P and 2P

(22) 1P and 2P suffixes (indicative and subjunctive)

Table 7: 1P and 2P suffixes (indicative and subjunctive)

<table>
<thead>
<tr>
<th></th>
<th>1P</th>
<th>2P</th>
</tr>
</thead>
<tbody>
<tr>
<td>pres</td>
<td>íamo</td>
<td>áte / étte / íte</td>
</tr>
<tr>
<td>subj</td>
<td>íamo</td>
<td>iáte</td>
</tr>
</tbody>
</table>

(23) a. 1P and 2P form a particular inflectional class within the whole verbal paradigms (“a partition” in Thornton 2007 terms).
b. 1Ps are identical (both across conjugations and across moods)
c. 2Ps:
   (i) present indicative: Theme + /te/
   (ii) present subjunctive 2P are identical across conjugations
d. According to Rohlfs (1966, §530), 1P and 2P have been built analogically on subjunctive.

The vowel -i- appearing in 1P present indicative is an etymological. The normal course of events should have triggered the following suffix: Theme + /mo/.

a NB: in the Romansco variety, 1P has the following shapes in each conjugation: 1st [mañjámo] ‘we eat’, 2nd [tenémo] ‘we hold’ and 3rd [venémo] ‘we come’.

- 1P is a “regular” form and its marker is -amo (for the whole verbal system).
- The external template CVCV introduces the number [+pl].

(24) Inflectional markers:
a. 1P: /amo/
b. [+pl]: CVCV

(25) Present indicative 1P:

1P

Th

<table>
<thead>
<tr>
<th>a m o</th>
</tr>
</thead>
</table>

Root

<table>
<thead>
<tr>
<th>t e n</th>
</tr>
</thead>
</table>

Template

<table>
<thead>
<tr>
<th>C V C V i</th>
<th>C V i + C</th>
<th>C V C V</th>
</tr>
</thead>
</table>

tenjámo
(26) a. The Element /I/ is associated to the C position to the right of the stem, e.g. between V₁ and V₂.
b. /I/ is not adjacent to the vowel -a, hence it undergoes neither harmony nor fortition
c. The vowel -a- from the suffix, spreads onto V₂ in order to license the empty nucleus V₁ (open stressed syllables are long in Italian).

(27) Present subjunctive 1P:

Subj. a
1P a m o
Th I
Root t e n
Template C V C Vj C Vj + C V C V tenjàmo

(28) a. Subjunctive is marked by the vowel -a, as shown above in (20).
b. Subjunctive -a is “absorbed” by the one in the 1P suffix.

Nota bene:

Table 8: 2nd and 3rd conjugation: *dolere* ‘to ache’ and *dovere* ‘to have to’

<table>
<thead>
<tr>
<th></th>
<th>1S</th>
<th>2S</th>
<th>3S</th>
<th>1P</th>
<th>2P</th>
<th>3P</th>
</tr>
</thead>
<tbody>
<tr>
<td>pres</td>
<td>dól-g-o</td>
<td>dwól-i</td>
<td>dwól-e</td>
<td>doʎʎ-á-mo</td>
<td>dol-ète</td>
<td>dól-g-on-o</td>
</tr>
<tr>
<td>pres</td>
<td>dév-o / debb-o</td>
<td>dé-i</td>
<td>dé-v-e</td>
<td>dobb-ijà-mo</td>
<td>dov-ète</td>
<td>dev-on-o / debb-on-o</td>
</tr>
</tbody>
</table>

(29) Present indicative 1P *dogliamo*:

1P a m o
Th I
Root d o l
Template C V C Vj C Vj + C V C V tenjàmo

(30) General remarks on 1P:

a. The palatalized allomorph appears at the 1P
b. The sequence /llj/ surfaces as [ʎʎ]
c. In the case of *teére* and *venître*, 1P do display the palatalized allomorphs of the root: TEN+J and VEN+J, respectively.

7The lengthening of /a/ raises the question whether the form tenjàmo is built within one or more domains (or cycles, or phases). This question cannot be addressed here, cf. Kaye (1995), Lowenstamm (2010), Scheer (2011) for interesting discussions and proposals.
5 Conclusion and further remarks

(31) In this talk,
   a. I proposed that G-VERBS roots have a unique underlying form.
   b. I argued for a thematic origin of the inserted velar /g/
   c. I showed that surface alternations depend on the templatic nature of G-VERBS roots.

On a more general plan:

| **Observation:** templaticity means “irregular inflectional behavior” in verbs |
| **Hypothesis:** all irregular verbs are templatic |

(32) Further remarks:
   a. /n/ + o sequences are phonologically well-formed in Italian:⁸
      (i) Fanciullo (1998) claims that [g] is a de-palatalizing phonological item which appears before velar vowels.
      (ii) In the terms presented here, [g] arises as to the presence of etymologic /I/ and a phonological tier which must be activated: the template.
   b. Paradigmatic/Syntagmatic pressure?
      (i) Maiden (2001) argues for the “morphomic” paradigmatic pressure on G-VERBS.
      (iii) Burzio (2004) claims that both paradigmatic and syntagmatic pressure are at play in the verbal system.
      (iv) In my view, the alternation of the root depends on the need to license empty positions on the template.

⁸[señó] ‘sign’ and [mex̂̃o] ‘better’.
References

Luigi Burzio (1998). “Multiple Correspondence”. In: Lingua 103, pp. 79–109.


