

# **Accorciamenti, Hypocoristics, and Foot Structure: Against the Ternary Foot in Italian**

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## *Abstract*

*This paper challenges the ternary foot as a possible foot type in Italian. This is contrary to the foot inventories proposed by a number of authors including Marotta (1997), Bafile (1996), Thornton (1996), and Nespor (1993). Within an Optimality Theoretic framework, it is shown that Foot-Binarity must be an undominated constraint in the language in order to account for both the limited distribution of the dactyl and optional secondary stress after antepenultimate main stress (as reported by Camilli 1965, Malagoli 1968, Lepschy & Lepschy 1988, and Lepschy 1992). It is argued that the dactylic effect is a result of final syllable extrametricality as suggested in analyses by Den Os & Kager (1986), Sluyters (1990), Jacobs (1994), and D'Imperio & Rosenthal (1999). The second half of the paper refutes the most compelling evidence for the ternary foot, namely tri-syllabic hypocoristic forms (Thornton 1996). All Italian truncation is shown to be consistent with undominated Foot-Binarity. It is furthermore argued that Spanish hypocoristic formation (Lipski 1995 and Piñeros 2000a, b) differs from its Italian counterpart in that in the former, Contiguity-BT is low-ranked while in the latter it is undominated.*

## **1. Introduction**

The foot structure of Modern Italian has been much discussed in recent works. However, an undisputed foot inventory has yet to emerge. Some authors (Marotta 1997, Bafile 1996, Thornton 1996, and Nespor 1993) suggest that Italian possesses ternary feet. Under these analyses, footing is exhaustive or in Optimality-Theoretic terms (McCarthy & Prince 1993), Parse- $\sigma$  is undominated. Secondary evidence for the dactyl as a foot type comes from Thornton's (1996) study of Italian hypocoristics: antepenultimately stressed names have no hypocoristic form if they are tri-syllabic or leave a tri-syllabic nickname if they are longer than three syllables. Similar truncation phenomena in Spanish (as described in Lipski 1995 and Piñeros 2000a) always result in a bi-syllabic form, leading one to conclude that ternary footing is allowed in Italian but prohibited in Spanish. Those in favor of a more restricted foot inventory propose maximally binary feet, appealing to either lexical (Den Os & Kager 1986, Sluyters 1990, Jacobs 1994) or regular extrametricality (D'Imperio & Rosenthal 1999) to account for antepenultimately stressed words. Extrametricality or in O.T. terms Non-Finality must be respected to the detriment of exhaustive footing. Additional evidence for this view can be found in the form of optional secondary stress on the ultimate syllable *after* antepenultimate main stress, a pattern reported by Camilli (1965), Malagoli (1968), Lepschy & Lepschy (1988), and Lepschy (1992). Such a phenomenon can be seen as the domination of a constraint in favor of foot binarity over both Non-Finality and Parse- $\sigma$ . In the spirit of Hayes (1995), we will argue for this second more restricted view of the Italian foot inventory. We not

only show formally why Foot-Binarity must be undominated in the language but also account for Thornton's (1996) hypocoristic evidence in light of our proposed constraint hierarchy. Finally, we will establish the parametric difference between Spanish and Italian in terms of the relative ranking of Contiguity-BT, a Base-Truncatum (Benua 1995) constraint in favor of maintaining a contiguous string of segments from one output form to another.

The paper is organized as follows. In §2, we discuss briefly the less restricted view of Italian prosodic structure and foot inventory. Although very diverse views on foot structure are given, this paper will only address the view that there is evidence for ternary feet in Italian. In §3, we present the Italian hypocoristic data as found primarily in Thornton (1996). In §4, we give special attention to Thornton's (1996) argument in favor of tri-syllabic feet based on hypocoristic formation. In §5, we argue against the ternary foot in Italian. In §6, we present an O.T. analysis of Italian hypocoristics as **Base-Truncatum** (BT) Correspondence (Benua 1995). In §7, we demonstrate that with an undominated **Foot-Binarity** constraint, we are able to account not only for Thornton's (1996) data but also for the parametric difference distinguishing Italian and Spanish hypocoristics. In §8, we conclude the paper.

## 2. Recent Views of Italian Foot Structure

In this section, we review less restrictive proposals for the Italian foot inventory as described by Marotta (1997), Bafle (1996), and Nespor (1993).

Nespor (1993) proposes that in order to account for ultimate, penultimate, and antepenultimate stress patterns, Italian must allow for at least three types of feet: degenerate monosyllabic, bi-syllabic, and tri-syllabic<sup>1</sup>. Each of these has stress which falls on the leftmost syllable of the foot. Examples of the footing follow:

(1)

|     |                                      |                 |                            |
|-----|--------------------------------------|-----------------|----------------------------|
| (a) | (in.fe.)(li.tfi.) ( <b>tá</b> )      | 'unhappiness'   | <i>degenerate foot</i>     |
| (b) | (áp.pa.)(rèn.te) ( <b>mén.te</b> )   | 'apparently'    | <i>bi-syllabic trochee</i> |
| (c) | (ir.re.)(cù.pe.) ( <b>rá.bi.le</b> ) | 'unrecoverable' | <i>ternary foot</i>        |

Bafle (1996) also admits ternary feet in Italian in order to account for very frequently used antepenultimately stressed forms, for example in the third person plural indicative below:

(2)

|     |             |             |
|-----|-------------|-------------|
| (a) | (kán.ta.no) | 'they sing' |
| (b) | (lá.va.no)  | 'they wash' |

Marotta (1997) offers a more varied view of Italian foot structure. In her analysis, Italian feet can be trochaic, iambic, or dactylic. The latter two are illustrated below:

<sup>1</sup> Nespor (1993) also mentions several derived forms for which there appears to be 'quartultimate' stress such as in [te.lé.fo.na.no], [te.lé.fo.ni.no], [pré.di.ka.no], [pré.di.ki.no]. However, she does not hypothesize about the foot structure of these words.

(3)

|     |            |           |               |
|-----|------------|-----------|---------------|
| (a) | (vir.tú)   | 'virture' | <i>iamb</i>   |
| (b) | (tá.vo.lo) | 'table'   | <i>dactyl</i> |

None of these analyses presents direct evidence for the existence of tri-syllabic feet. Rather, these authors assume exhaustive foot parsing and do not allow extrametricality. However, Thornton (1996) provides a clearer argument for the ternary foot in Italian in her analysis of Italian truncation processes.

### 3. Italian *Accorciamenti* and Hypocoristics<sup>2</sup>

Italian *accorciamenti* or clippings and hypocoristics can be divided into two groups: *accorciamenti*/Type-A hypocoristics and Type-B hypocoristics. The data are given in (4) and (5):

#### (4) *Accorciamenti*/ Type-A Hypocoristics

|     | <b>Lexical item<sup>3</sup></b> | <b>Accorciamento</b> |                |
|-----|---------------------------------|----------------------|----------------|
| (a) | am.pli.f i.ka.tó.re             | ám.pli               | 'amplifier'    |
| (b) | frí.go.rí.fe.ro                 | frí.go               | 'refrigerator' |
| (c) | po.me.ríd.dʒo                   | pó.me                | 'afternoon'    |
| (d) | te.le.vi.zjó.ne                 | té.le                | 'television'   |
| (e) | mo.to.tʃi.klét.ta               | mó.to                | 'motorcycle'   |
| (f) | bi.bljo.té.ka                   | bí.bljo              | 'library'      |
|     | <b>Name</b>                     | <b>Hypocoristic</b>  |                |
| (g) | a.les.sán.dro                   | á.le                 |                |
| (h) | e.mí.lja                        | é.mi                 |                |
| (i) | en.rí.ko                        | én.ri                |                |
| (j) | pa.trí.tsja                     | pá.tri               |                |
| (k) | bɛ.a.trí.tʃe                    | bé.a                 |                |
| (l) | dʒan.lúk.ka                     | dʒán.lu              |                |
| (m) | vir.dʒí.nja                     | vír.dʒi              |                |
| (n) | sal.va.tó.re                    | sál.va               |                |
| (o) | mar.tí.na                       | már.ti               |                |
| (p) | ni.kó.la                        | ní.ko                |                |
| (q) | mar.ge.rí.ta                    | már.ge               |                |
| (r) | más.si.mo <sup>4</sup>          | más.si               |                |

<sup>2</sup> All data, unless otherwise indicated, are taken from Thornton (1996)

<sup>3</sup> The following transcriptions do not indicate vowel length, which according to Nespor (1993) is entirely predictable: stressed vowels in open syllables are lengthened unless at the end of a word.

<sup>4</sup> The example in (4r) is taken from Marotta (1997).

In all of the data in (4), truncation ignores position of primary stress. Thus, both penultimately and antepenultimately stressed names and lexical items are reduced to a single bi-syllabic foot corresponding to the two leftmost syllables of the original word.

The second type of truncation applies *only* to hypocoristic formation. Some examples of Type-B hypocoristics are found below:

#### (5) Type-B Hypocoristics

|     | <b>Name</b>   | <b>Hypocoristic</b> |
|-----|---------------|---------------------|
| (a) | sal.va.tó.re  | tó.re               |
| (b) | ni.kó.la      | kó.la               |
| (c) | ro.bér.to     | bér.to              |
| (d) | mar.ge.rí.ta  | rí.ta               |
| (e) | a.les.sán.dro | sán.dro             |
| (f) | ka.te.rí.na   | rí.na               |
| (g) | dʒo.ván.ni    | ván.ni              |
|     |               |                     |
| (h) | ip.pó.li.to   | pó.li.to            |
| (i) | do.mé.ni.ko   | mé.ni.ko            |
| (j) | kris.tó.fa.no | tó.fa.no            |
| (k) | an.ní.ba.le   | ní.ba.le            |
|     |               |                     |
| (l) | á.ga.ta       | *gá.ta              |
| (m) | án.dʒe.lo     | *dʒé.lo             |
| (n) | bár.ba.ra     | *bá.ra              |
| (o) | sté.fa.no     | *fá.no              |
| (p) | más.si.mo     | *sí.mo              |

Type-B Hypocoristics differ from Type-A in three ways. First, while Type-A hypocoristics could be said to be anchored to the left edge of the original word, Type-B forms are anchored to the left-edge of the main-stressed syllable. Therefore, one could accurately describe these truncated forms as corresponding to all the phonological material from the left edge of the main stressed syllable to the end of the original word. This leads us to the second difference: Type-B hypocoristics are not limited to bi-syllabic trochees but rather can appear as strings of three syllables as seen in (5h-k). This follows from our first generalization about Type-B forms since all of the base words for examples (5h-k) are antepenultimately stressed. Lastly, as shown by (5 l-p), tri-syllabic base words with antepenultimate stress lack a Type-B hypocoristic form. Indeed, while many Italian names have both Type-A and Type-B truncated forms (for example, compare (4n) and (5a)), the set in (5 l-p) can *only* have Type-A hypocoristics as seen by comparing (4r) and (5p). We will not examine Type-A hypocoristics in this paper as they do not involve surface tri-syllabic forms. However, this preference for bi-syllabic truncated forms in Type-A *does* hint at the maximal foot size of the language.

#### 4.0 Truncation as Evidence for Tri-syllabic Footing

Thornton (1996) treats Type-B hypocoristics serially as an example of prosodic circumscription (McCarthy and Prince 1990). She claims that the rightmost foot of the original form always corresponds to the truncated form. To create a Type-B hypocoristic, one simply circumscribes the rightmost foot of the word without restoring the residue. Words containing antepenultimate stress are originally footed with a final ternary foot, so that the circumscription process produces a tri-syllabic output which must also be a foot. In fact, if the original footing did not allow for ternary feet, prosodic circumscription would generate ungrammatical forms:

|                               |     |               |     |                |
|-------------------------------|-----|---------------|-----|----------------|
| (6)                           | (a) | ip.(pó.li.to) | (b) | ip. (pó.li.)to |
| <i>Circumscribe R-Ft</i>      |     | (pó.li.to)    |     | (pó.li.)       |
| <i>Do not restore residue</i> |     | (pó.li.to)    |     | (pó.li.)       |
| <i>Output</i>                 |     | [pó.li.to]    |     | *[pó.li]       |

If the forms in (5 l-p) did not originally contain a tri-syllabic foot, then a Type-B hypocoristic should be possible.

#### 5. Arguments Against Ternary Footing

Within the O.T. framework the proponent of the ternary foot could argue that a low-ranking Foot-Binarity constraint is responsible for the surfacing of the ternary foot in Italian. Yet, there exists at least some evidence that Foot-Binarity is active in alleged cases of ternary footing. Camilli (1965), Malagoli (1968), Lepschy & Lepschy (1988), and Lepschy (1992) report that secondary stress can be post-antepenultimate, falling on the ultimate syllable. Since such a distribution is not reported everywhere and is disputed by at least one work (Vogel & Scalise 1982), we shall assume that secondary stress is only optionally available following main stress on the antepenultimate syllable.

Secondly, proponents of ternary footing miss a very important generalization about the metrical system of Italian, namely that tri-syllabic feet are not iterative, normally occurring once in a word and then usually at the right or left edge of the word<sup>5</sup>. Indeed, if the ternary foot were an actual foot type, we would expect to see Italian stress patterns such as the rare [ (ḡḡḡ)(ḡḡḡ) ] or nearly non-existent \*[ (ḡḡḡ)(ḡḡḡ)(ḡḡḡ) ] instead of the actually occurring [ (ḡḡ)(ḡḡ)(ḡḡ) ], [ ḡḡ(ḡḡ)(ḡḡḡ) ], [ (ḡḡ)(ḡḡ)(ḡḡ)(ḡḡ) ], or [ (ḡḡḡ)(ḡḡ)(ḡḡ)(ḡḡ) ].

Main stress in Italian is found generally on the penultimate or antepenultimate syllable and minimal pairs can differ only in main stress. Therefore, we will assume that any main stress other than penultimate needs to be marked in the input. Generally, secondary stress precedes or (at least optionally) follows main stress by an interval of one syllable. As Vogel & Scalise (1982) point out, most words begin with secondary stress, but we will assume that a high-ranked Align-L (Prwd, stress) dominated by \*CLASH is responsible for this phenomenon. Lastly, prominence falls on the leftmost syllable of a foot, suggesting the syllabic trochee as the most common foot type.

<sup>5</sup> To borrow Vogel & Scalise's (1982) word internal dactyl: (mà.te).(màtica).(ménte)

Taken together, post-antepenultimate secondary stress and the limited distribution of the dactyl pose serious problems for the tri-syllabic foot analysis. First, let us consider the pertinent constraints in such an analysis:

- (i) **Ft-Bin**: Feet are maximally binary under moraic or syllabic analysis<sup>6</sup>;
- (ii) **Parse-σ**: Every syllable must be parsed into a foot;
- (iii) **All-Ft-R**: The right edge of every foot must be aligned with the right edge of the prosodic word (violations are counted by number of syllables away from the right edge of the prosodic word);
- (v) **All-Ft-L**: The left edge of every foot must be aligned with the left edge of the prosodic word;
- (vi) **Non-Fin**: No foot is final in a prosodic word.

Given that penultimate main stress surfaces most often, All-Ft-R must dominate All-Ft-L. Following Den Os & Kager (1986), Sluyters (1990), Jacobs (1994), and D'Imperio & Rosenthal (1999), we propose that antepenultimate stress in Italian reflects the extrametricality of a final syllable. However, since this stress pattern is the exception rather than the rule, stress must be lexically marked and subject to a faithfulness constraint, MAX-IO-σ. Since stress does not shift in our data, this faithfulness constraint is undominated in our analysis.

For the proponent of the ternary foot, Parse-σ must dominate Ft-Bin, creating a tri-syllabic foot when stress is lexically determined to fall on the antepenultimate syllable. Optional post-antepenultimate secondary stress must result from the ranking given below:

*Tableau 1*

| I: /σσ'σσσ/   | Parse-σ | Ft-Bin | All-Ft-R |
|---------------|---------|--------|----------|
| a. σσσ        | *! **   |        |          |
| ☞ b. (σ'σσ)   |         | *!     |          |
| c. (σσ) σ     | *!      |        | *        |
| ☞ d. (σσ) (σ) |         |        | *!       |

Candidates (a) and (c) leave some syllables unfooted and are thus ruled out. To account for variability, the constraints Ft-Bin and All-Ft-R are crucially unranked with respect to each other. When Ft-Bin outranks All-Ft-R, candidate (d) wins because it has a binary foot and a degenerate foot. When All-Ft-R dominates Ft-Bin, the ternary foot of candidate (b) wins since it is more important to parse every syllable and minimize the number of feet in a prosodic word than it is to respect foot binarity.

The difficulty for the tri-syllabic foot analysis lies in restricting the ternary foot to non-iterative ness:

<sup>6</sup> This constraint is defined as in Kager (1999).

Tableau 2 Non-lexically marked stress for proponents of the ternary foot

| I: /σσσσσσσσσ/        | Parse-σ | Ft-Bin | All-Ft-R          |
|-----------------------|---------|--------|-------------------|
| a. σσσσσσσσσ          | *!****  |        |                   |
| ☞ b. (σσ)(σσ)(σσ)     |         | **!*   | ***,*****         |
| ☞ c. (σσ)(σσ)(σσ)(σσ) |         | *      | **,*****,*****    |
| d. (σσ)(σσ)(σσ)(σσ)   |         | *      | ***,*****,*****!* |
| e. (σσ)(σσ)(σσ)(σσ) σ | *!      |        | *,***,*****,***** |

Candidates (a) and (e) fail because they have at least one syllable unfooted. In fact, given our ranking, it is always better to have a completely footed candidate than an unfooted one. When Ft-Bin outranks All-Ft-R, candidate (c) wins because its largest foot is at the left edge of the word. Initial dactyls are attested in Italian, so this does not pose a particular problem. However, when All-Ft-R dominates Ft-Bin, candidate (b), which in reality never surfaces, wins because it has the least number of feet. Working with just these constraints, the correct candidate can only surface as the winner by reversing the ranking between Ft-Bin and Parse-σ. Such a reversal *eliminates* the ternary foot from the surfacing foot inventory. We posit that this ranking accurately predicts the stress pattern of Italian. The optional post-antepenultimate secondary stress described above results from the interaction of Parse-σ and Non-Fin, both dominated by Ft-Bin and crucially unranked with respect to each other as shown in the tableau below:

Tableau 3

| I: /σσσ/      | Ft-Bin | Parse-σ | Non-Fin | All-Ft-R |
|---------------|--------|---------|---------|----------|
| a. σσσ        |        | **!*    |         |          |
| ☞ b. (σσ) σ   |        | *!      |         | *        |
| ☞ c. (σσ) (σ) |        |         | *!      | *        |
| d. (σσσ)      | *!     |         | *       |          |

When Parse-σ dominates Non-Fin, candidate (c) wins while when the reverse ranking is true, candidate (c) is eliminated for its violation of Non-Fin. Candidate (a) is likewise ruled out for an extra violation of Parse-σ. Thus, when Non-Fin dominates Parse-σ, candidate (b) wins. In either ranking, candidate (d) is eliminated for its violation of Ft-Bin.

## 6. An O.T. Analysis of Italian *Accorciamenti* and Hypocoristics

We turn now to the claim that tri-syllabic hypocoristics support the existence of ternary feet in Italian. Before addressing the antepenultimate stress at issue, however, we need to develop an analysis of the hypocoristic formation itself.

Benua (1995) argues that truncation should be analyzed within O.T. as another type of correspondence relation (McCarthy & Prince 1995), namely **Base-Truncatum**

(BT) Correspondence. This relation has been adopted by many authors dealing with word shortening phenomena (for example, in Romance alone, see Alderete 1995, Nelson 1998, 2000, Piñeros 2000a, 2000b, and many others). The BT model is outlined below:

(7)

/roberto/

*IO-Faith*     $\updownarrow$

[ro (bér.to)]             $\leftrightarrow$             [bér.to]  
                                          *BT-Identity*

Within the BT-model, clippings and hypocoristics result from ranking prosodic alignment and markedness constraints ("prosodic word restrictors" following Piñeros 2000a) between IO- and BT-faithfulness constraints as shown below:

(8)    MAX-IO >> "prosodic word restrictors" >> MAX-BT

In this paper, Ft-Bin is undominated in order to show that a restricted foot inventory for Italian is consistent with tri-syllabic hypocoristic forms. The pertinent constraints are as follows:

- (vii)    **MAX-IO**: Every segment in the INPUT has an OUTPUT correspondent;
- (viii)    **MAX-BT**: Every segment in the BASE has a TRUNCATUM correspondent;

In Italian, the following ranking holds:

(9)    Ft-Bin, MAX-IO >> "prosodic word restrictors" >> MAX-BT

Certain of the constraint rankings can be established independent of the BT-Correspondence relation. For example, the previous discussion of stress assignment in §5 establishes that All-Ft-R dominates All-Ft-L. Furthermore, Parse- $\sigma$  is crucially unranked with Non-Fin to account for variable ultimate stress. Finally, All-Ft-L must dominate MAX-BT as a 'prosodic word restrictor'. So far, then, we have the following ranking:

(10) Ft-Bin, MAX-IO >> Parse- $\sigma$ , Non-Fin >> All-Ft-R >> All-Ft-L >> MAX-BT

Two more constraints compete for the left edge of the truncated form in Type-B hypocoristics:

- (x)    **Anchor-L- $\acute{\sigma}$** : Every correspondent of a stressed-syllable-initial segment is initial in a stressed syllable;
- (xi)    **Anchor-L (PrWd)**: Every correspondent of a prosodic-word-initial segment is initial in a prosodic word.



The tableau below assumes that Parse- $\sigma$ , All-Ft-R and All-Ft-L are active in allowing only a truncated form to surface in the BT-Correspondence relation:

**Tableau 4**      **Base:** [ni.kó.la]      **Truncatum:** [kó.la]

| <b>Base:</b><br>[ni.kó.la] | <b>Anchor-L-<math>\acute{\sigma}</math></b> | <b>Anchor-L (PrWd)</b> | <b>MAX-BT</b> |
|----------------------------|---------------------------------------------|------------------------|---------------|
| ☞ a. (kó.la)               |                                             | *                      | **            |
| b. (ní.ko)                 | *!                                          |                        |               |

The winning candidate (a) shows that it is more important to anchor the left edge of the Base main-stressed syllable than it is to anchor the left edge of the Base prosodic word (b). The ranking between Anchor-L (PrWd) and MAX-BT cannot be established, but we have shown that Anchor-L- $\acute{\sigma}$  dominates both of these constraints. An additional constraint is needed to determine the winner in the cases of antepenultimately stressed words:

- (xii) **Anchor-R (PrWd):** Every correspondent of a prosodic-word-final segment is final in a prosodic word.

Truncation takes place in every case except those listed in (51-p). Crucially, these antepenultimate forms are only three-syllables long:

**Tableau 5**      **Base:** [(sté.fa).no]      **Output:** none

| <b>Base:</b><br>(sté.fa).no | <b>Ft-Bin</b> | <b>Anchor<br/>-L-<math>\acute{\sigma}</math></b> | <b>Anchor<br/>-R<br/>(PrWd)</b> | <b>Parse-<math>\sigma</math></b> | <b>All-Ft-<br/>R</b> | <b>All-Ft-<br/>L</b> | <b>MAX-<br/>BT</b> |
|-----------------------------|---------------|--------------------------------------------------|---------------------------------|----------------------------------|----------------------|----------------------|--------------------|
| ☞ a. (sté.fa).no            |               |                                                  |                                 | *!                               | *                    | *                    |                    |
| b. (sté.fa)                 |               |                                                  | *!                              |                                  |                      |                      | **                 |
| c. (fá.no)                  |               | *!                                               |                                 |                                  |                      |                      | **                 |
| d. (nó)                     |               | *!                                               |                                 |                                  |                      |                      | *****              |

Above, we see that anchoring constraints can cause there to be no possible shortened winner in the truncation process. Candidates (c) and (d) fail because they are not faithful to the stressed syllable in the base. Candidate (b) does not maintain the same right edge of the word in BT-Correspondence. Candidate (a), in fact, wins. The grammar has produced a truncated form for the base, but this form is *identical* to the base form. In four-syllable antepenultimate words, some material can be deleted, thus respecting both the All-Ft-X and the anchoring constraints:

**Tableau 6**      **Base:** [ip.(pó.li).to]      **Truncatum:** [(pó.li).to]

| <b>Base:</b><br>ip.(pó.li).to | <b>Ft-Bin</b> | <b>Anchor</b><br><b>-L-σ</b> | <b>Anchor</b><br><b>-R</b><br><b>(PrWd)</b> | <b>Parse-σ</b> | <b>All-Ft-</b><br><b>R</b> | <b>All-Ft-</b><br><b>L</b> | <b>MAX-</b><br><b>BT</b> |
|-------------------------------|---------------|------------------------------|---------------------------------------------|----------------|----------------------------|----------------------------|--------------------------|
| a. ip.(pó.li).to              |               |                              |                                             | *              | *                          | *!                         | ****                     |
| ☞ b. (pó.li).to               |               |                              |                                             | *              | *                          |                            | **                       |
| c. (pó.li)                    |               |                              | *!                                          |                |                            |                            | ****                     |
| d. (lí.to)                    |               | *!                           |                                             |                |                            |                            | **                       |

Candidates (c-d) do not respect proper anchoring. Candidate (a) is like the "winner" in three-syllable antepenultimate words but loses to candidate (b) because in a four-syllable antepenultimately stressed word, the first syllable can be deleted. For penultimately stressed words, the same ranking holds true:

**Tableau 7**      **Base:** [ni.kó.la]      **Truncatum:** [kó.la]

| <b>Base:</b><br>ni.(kó.la) | <b>Ft-Bin</b> | <b>Anchor</b><br><b>-L-σ</b> | <b>Anchor</b><br><b>-R</b><br><b>(PrWd)</b> | <b>Parse-σ</b> | <b>All-Ft-</b><br><b>R</b> | <b>All-Ft-</b><br><b>L</b> | <b>MAX-</b><br><b>BT</b> |
|----------------------------|---------------|------------------------------|---------------------------------------------|----------------|----------------------------|----------------------------|--------------------------|
| a. ni.(kó.la)              |               |                              |                                             | *!             | *                          | *                          |                          |
| ☞ b. (kó.la)               |               |                              |                                             |                |                            |                            | **                       |
| c. (ní.ko)                 |               | *!                           |                                             |                |                            |                            |                          |

To summarize, the following rankings have been established so far:

- (11) Ft-Bin, MAX-IO>>Anchor-L-σ>>Anchor-R (PrWd)>> Parse-σ, Non-Fin>>  
All-Ft-R>>All-Ft-L>>Anchor-L(PrWd), MAX-BT

## 7. Spanish and Italian Type-B hypocoristics: A *Real* Difference in Foot Inventory?

Spanish Type-B hypocoristics as described by Lipski (1995) and Piñeros (2000a)<sup>7</sup> and Italian Type-B hypocoristics prove very similar. The Base forms are nearly alike, and the shape of the Truncata for penultimately stressed forms is identical in the two languages. However, when it comes to antepenultimately stressed forms, the results differ dramatically:

(12)

### Spanish Type-B

- (a) [a.ris.tó.βu.lo]→[tó.βo]  
(b) [kri.sós.to.mo]→[tʃó.to]  
(c) [kán.di.ða]→[kán.da]

### Italian Type-B

- no equivalent available*  
[kris.tó.fá.no]→[tó.fá.no]  
[kán.di.do]→*no Type-B form*

<sup>7</sup> For O.T. accounts of Spanish Type-A hypocoristics, see Colina (1996) or Piñeros (2000b).

In Type-B Spanish forms, the shortened forms incorporate the entire stressed syllable, the onset of the penultimate syllable, and the nucleus of the ultimate syllable. The result is *always* a bi-syllabic trochaic foot. In Italian, as we have already seen, base words with antepenultimate stress similar to those found in Spanish either have no Type-B hypocoristic form (if the base is only three syllables long) or have a hypocoristic form that is tri-syllabic. The simplest way to analyze Spanish and Italian is to claim that Spanish adheres to strict foot binarity while Italian allows ternary footing.

The question now arises as to the difference between Italian Type-B hypocoristics and Spanish Type-B hypocoristics with antepenultimate stress. Antepenultimate stress in Spanish has likewise been suggested to result from the extrametricality of the final syllable (Den Os & Kager 1986, Roca 1992, Harris 1992, Hayes 1995, and Alderete 1995 among others)<sup>8</sup>. Assuming that the ranking in *Tableau 7* is true of Spanish hypocoristics, an antepenultimately stressed name such as [a.ris.tó.βu.lo] should be shortened to \*[tó.βu.lo] instead of the actually occurring [tó.βo]. Piñeros' (2000a) analysis crucially relies on Anchor-R (PrWd), but of course, this constraint does not suffice to distinguish these two patterns. The real difference between Italian and Spanish nicknames is that Italian does not allow material to be skipped in antepenultimately stressed forms while Spanish does. The high-ranked constraint militating against skipping is defined below:

- (xiii) **Contiguity-BT**: The portion of the BASE standing in correspondence forms a contiguous string, as does the correspondent portion of the BASE in the TRUNCATUM (skipping is prohibited in the Truncatum).<sup>9</sup>

Taking into account the free ranking of Non-Fin and Parse-σ, the effects of Contiguity-BT and Anchor-R (PrWd) in Italian are seen below:

*Tableau 8*      **Base:** [ip.(pó.li).to]      **Truncatum:** [(pó.li).to]

| <b>Base:</b><br>ip.(pó.li).to | <b>Ft-Bin</b> | <b>Cont-BT</b> | <b>Anchor-L-σ</b> | <b>Anchor-R (PrWd)</b> | <b>Parse-σ</b> | <b>All-Ft-R</b> | <b>All-Ft-L</b> | <b>MAX-BT</b> |
|-------------------------------|---------------|----------------|-------------------|------------------------|----------------|-----------------|-----------------|---------------|
| a. ip.(pó.li).to              |               |                |                   |                        | *              | *               | *!              | ****          |
| ☞ b. (pó.li).to               |               |                |                   |                        | *              | *               |                 | **            |
| c. (pó.li)                    |               |                |                   | *!                     |                |                 |                 | ****          |
| d. (lí.to)                    |               |                | *!                |                        |                |                 |                 | **            |
| e. (pó.lo)                    |               | *!             |                   |                        |                |                 |                 | ****          |

The Spanish-type candidate in (e) loses in Italian because of the undominated contiguity constraint. However, in Spanish, Contiguity-BT must be dominated by Parse-σ to allow for winning forms such as in candidate (e) of *Tableau 9*:

<sup>8</sup> See D'Introno *et al.* (1995) for a view of ternary footing in Spanish.

<sup>9</sup> See Kager (1999).

Tableau 9      **Base:** [(a.ris).(tó.βu).lo]      **Truncatum:** [(tó.βo)]

| <b>Base:</b><br>(a.ris).(tó.βu).lo | <b>Ft-Bin</b> | <b>Anchor-</b><br><b>L-σ</b> | <b>Anchor-</b><br><b>R</b><br>(PrWd) | <b>Parse</b><br><b>-σ</b> | <b>Cont-</b><br><b>BT</b> | <b>All-Ft-</b><br><b>R</b> | <b>All-Ft-</b><br><b>L</b> | <b>MAX-</b><br><b>BT</b> |
|------------------------------------|---------------|------------------------------|--------------------------------------|---------------------------|---------------------------|----------------------------|----------------------------|--------------------------|
| a.<br>(a.ris).(tó.βu).lo           |               |                              |                                      | *!                        |                           | *,***                      | **                         |                          |
| b. (tó.βu).lo                      |               |                              |                                      | *!                        |                           |                            |                            | ****                     |
| c. (tó.βu)                         |               |                              | *!                                   |                           |                           |                            |                            | *****                    |
| d. (βú.lo)                         |               | *!                           |                                      |                           |                           |                            |                            | *****                    |
| e. (tó.βo)                         |               |                              |                                      |                           | *                         |                            |                            | *****                    |

## 8. Conclusion

In this paper, we have argued against the positing of the ternary foot in Italian. Such a foot inventory fails to explain both placement of secondary stress and the limited distribution of the tri-syllabic foot. The majority of this paper has been devoted to re-analyzing Italian hypocoristic data that has been used to argue for the ternary foot under derivational analyses. It has been shown that in an O.T. framework, Italian hypocoristic forms do *not* violate the constraint of Foot Binarity. Rather, tri-syllabic truncata result from undominated contiguity and anchoring constraints.

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## References

- Alderete, John (1995). Faithfulness to Prosodic Heads. Ms., University of Massachusetts, Amherst.
- Bafile, Laura (1996). Sulla rappresentazione delle strutture metriche ternarie. *Quaderni del Dipartimento di Linguistica dell'Università di Firenze* 7: 45-67.
- Benua, Laura (1995). Identity Effects in Morphological Truncation. In *Papers in Optimality Theory*, Jill Beckman, Laura Walsh Dickey and Suzanne Urbanczyk (eds.), 71-136. Amherst, MA: GLSA.
- Camilli, Amerindo (1965). *Pronuncia e grafia dell'italiano*. 3rd Edition. Florence: Sansoni.
- Colina, Sonia (1996). Spanish truncation processes: the emergence of the unmarked. *Linguistics* 34: 1199-1218.
- Den Os, Els and René Kager (1986). Extrametricality and stress in Spanish and Italian. *Lingua* 69: 23-48.
- D'Imperio, Mariapaola and Sam Rosenthal (1999). Phonetics and phonology of main stress in Italian. *Phonology* 16: 1-28.
- D'Introno, Francesco, Enrique Del Teso, and Rosemary Weston (1995). *Fonética y fonología actual del español*. Madrid: Cátedra.
- Harris, James W. (1992). *Spanish Stress: the extrametricality issue*. Bloomington, IN: IULC.
- Hayes, Bruce (1995). *Metrical Stress Theory: Principles and Case Studies*. Chicago:

- University of Chicago Press.
- Jacobs, Haike (1994). How optimal is Italian stress? In *Linguistics in the Netherlands*, Reineke Bok-Bennema and Crit Cremers (eds.), 61-70. Philadelphia: John Benjamins.
- Kager, René (1999). *Optimality Theory*. Cambridge, UK: Cambridge University Press.
- Lepschy, Anna Laura and Giulio Lepschy (1988) *The Italian Language Today*. 2<sup>nd</sup> Edition. New York: Routledge.
- Lepschy, Giulio (1992). Proposte per l'accento secondario. *The Italianist* 12: 117-128.
- Lipski, John M. (1995). Spanish Hypocoristics: Towards a Unified Prosodic Analysis. *Hispanic Linguistics* 6/7: 387-434.
- Malagoli, Giuseppe (1968). *L'Accentazione italiana*. 2nd Edition. Florence: Sansoni.
- Marotta, Giovanna (1997). *Degenerate Feet* nella fonologia metrica dell'italiano. In *Fonologia e morfologia dell'italiano e dei dialetti d'Italia*, Nicoletta Penello (ed.), 97-116. Rome: Bulzoni.
- McCarthy, John J. and Alan M. Prince (1990). Foot and word in prosodic morphology: the Arabic brokenplural. *Natural Language and Linguistic Theory* 8: 209-283.
- (1993). Prosodic Morphology I: Constraint Interaction and Satisfaction. Ms., University of Massachusetts, Amherst and Rutgers University.
- (1995). Faithfulness and reduplicative identity. In *Papers in Optimality Theory*, Jill Beckman, Laura Walsh Dickey and Suzanne Urbanczyk (eds.), 249-384. Amherst, MA: GLSA.
- Nelson, Nicole (1998). Right Anchor, Aweigh. Ms., Rutgers University.
- (2000). Arguments for Stressed Rhyme Faithfulness: A Case Study of Nancowry. In *West Coast Conference of Formal Linguistics Proceedings* 19, Billerey and Lillehaugen (eds.), 329-342. Somerville, MA: Cascadilla Press.
- Nespor, Marina (1993). *Fonologia*. Bologna: Il Mulino.
- Núñez Cedeño, Rafael A. and Alfonso Morales-Front (1999). *Fonología generativa contemporánea de la lengua española*. Washington, D.C: Georgetown University Press.
- Piñeros, Carlos-Eduardo (2000a). Foot-sensitive word minimization in Spanish. *Probus* 12: 291-324.
- (2000b). Prosodic and segmental unmarkedness in Spanish truncation. *Linguistics* 38(1): 63-98.
- Roca, Iggy (1992). On the sources of word prosody. *Phonology* 9: 267-287.
- Sluyters, Willebrord (1990). Length and stress revisited: A metrical account of diphthongization, vowel lengthening, consonant gemination and word-final vowel epenthesis in modern Italian. *Probus* 2.1: 65-102.
- Thornton, Anna M. (1996). On some phenomena of prosodic morphology in Italian: accorciamenti, Hypocoristics, and prosodic delimitation. *Probus* 8: 81-112.
- Vogel, Irene and Sergio Scalise (1982). Secondary stress in Italian. *Lingua* 58: 213-242.