An Exploration of Truncation in Italian

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1. Introduction

Italian displays a rich variety of truncation patterns and therefore forms an ideal testing ground for the constraint interaction determining truncation in general. The goal of this paper is to describe the various truncation patterns of Italian and to define a set of constraints which, in their interaction, can capture the individual patterns.

I will focus my attention on name truncation, which in Italian mostly generates hypocoristics (but see the Southern Italian vocatives below). Truncation of common nouns is also attested (cf. Thornton 1996, 2004, Montermini 2002), but seems to be somewhat less productive.

2. Data

The following data, if not otherwise noted, was collected together with Sabine Arndt-Lappe in 2002, from students participating at an introductory course in linguistics at the University of Verona. All students were speakers of Northern varieties of Italian. The students were asked to write down all the nicknames, together with the corresponding base names, that came into their mind. The patterns that emerged from the 280 tokens that we collected confirm the truncation patterns described in Thornton (1996, 2004), Montermini (2002) and

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 Rutgers Working Papers in Linguistics vol. 3: 1-30, ed. P. Staroverov, D. Altshuler, A. Braver, C. Fasola, and S. Murray. New Brunswick, NJ: LGSA.

Krämer (2009) and reveal some new patterns, as well (see also Alber 2007, for a summary).

Probably the most productive pattern of hypocoristics that we can find in Italian is bisyllabic truncation. There are two bisyllabic patterns which preserve material at the left edge of the base name. Following the recent literature on reduplication and truncation (cf. McCarthy&Prince 1995 et seq.) I will call this property of preserving material from the left edge of the base 'anchoring to the left edge'. The first of the bisyllabic, left-anchored patterns preserves base material from the first segment of the base up to the second vowel (1a), in the second one the second vowel is replaced with a default [i] (1b). There are two bisyllabic patterns which preserve the stressed vowel of the base, hence we will speak of them as 'stress-anchored'. The first of these patterns, (1c), preserves a bisyllabic sequence beginning with the stressed syllable of the base. The second, (1d), differs slightly from the first one in that it replaces the onset consonant of the stressed syllable of the base by reduplicating the consonant of the following syllable:[1]

(1) Bisyllabic truncations:

a. Anchoring to the left edge of the base name
   Fránce - Francésca
   Vále - Valentína, Valentíno
   Ále - Alessándra, Alessándro
   Ándre - Andréa
   Símo - Simóna
   Mánu - Manuéla

b. Anchoring to the left edge - final [i]
   Francy - Francesca
   Andri - Andrea
   Steffi - Stefania

[1]Acute accents in the examples below indicate main stress and do not correspond to the orthographic norms of Italian accent graphemes.

c. Anchoring to the stressed syllable of the base name
   Césca - Francésca
   Bérto - Robérto
   Nóra - Eleonóra
   Méni - Doménico[2]
   Stófo - Cristóforo
   Níba - Anníbale

d. Anchoring to the stressed syllable plus reduplication of the onset following the stressed syllable of the base:
   Píppo - Filíppo
   Péppe – Giuséppe
   Gígi - Luígi
   Léle - Élena

Besides bisyllabic truncation patterns we also find some patterns where the truncation morpheme (TRUNC, for short) consists of a single syllable. This can be a single open syllable anchoring to the left edge of the base name (2a) or a single open syllable preserving the stressed syllable of the base (2b). In the latter case, the TRUNC morpheme is always reduplicated (cf. also the discussion of these patterns in Section 4.2). The pattern in (2a) might be typical for younger Northern Italian speakers, since it has not been so far mentioned in the literature, but emerged clearly in the name truncations we collected among the Veronese students. (2b) is typical for Southern Italian varieties. The examples for this pattern have been collected from the novels of the Sicilian writer Andrea Camilleri and the Internet:

[2]I have searched for and found the forms *Méni - Doménico, Stófo-Cristóforo, Níba-Anníbale* on the internet. They illustrate that stress-anchored truncations do not simply preserve base material from the stressed syllable to the end of the word (cf. Thornton 1996, Halicki 2008), but indeed obey a bisyllabic template. The same point is illustrated by the form *Léle - Élena* in (1d), which has to be considered as stress-anchored, since it exhibits the typical reduplication pattern only found in stress-anchored truncations. The existence of a bisyllabic, stress-anchored pattern does not per se exclude the existence of an additional pattern where anchoring to the right edge does play a role, as suggested by Thornton's (1996) examples *Ménico - Doménico, Níbale - Anníbale, Tófano - Cristófano, Pólito - Ippólito.*

(2) Monosyllabic truncations:

a. Anchoring to left edge of the base name
Fra - Francesca
Cri - Cristina
Lu - Lu.i.sa
Ste - Stefania

b. Anchoring to stressed syllable plus reduplication:
Totó - António, Salvatore
Sasá - Rosário
Fofó - Alfónso
Loló – Calógero

A very interesting pattern is that of atemplatic truncation patterns, which can vary in their length. We find them in the productive pattern of Southern Italian vocatives, which preserves the string from the first segment up to the stressed vowel of the base name. Patterns of this type seem to be attested also in Corsican (Patrik Bye, p.c.) and Algherese (a Catalan variety spoken in Sardinia; see Cabré and Vanrell, in press, and sources quoted therein). The data presented here was collected by myself from folk songs from Naples and through observation of several speakers in Rome: [3]

(3) Atemplatic truncations: from the left edge to the stressed vowel of the base: Southern Italian Vocatives
Bá - Bárbara
Pá - Pá.o.la
Má - Mário
Vá - Válentin
Francé - Francésca
Carmé - Carméla
Robé - Robérto
Salvató - Salvatóre
Antoné - Antonélla

[3]Though associated with Southern varieties of Italian, this pattern seems to be common also in some central Italian regions, at least as far North as Rome. That it is productive can be seen in the example *Vá - Válentin*, where a German name is truncated according to the vocative pattern.

The patterns we find in Italian truncations reflect very well what we find in general, among the world's languages (Alber and Arndt-Lappe, 2007-2009, to appear): truncation morphemes typically make use of a bisyllabic or a monosyllabic template and they typically anchor either to the first or to the stressed syllable of the base. Southern Italian Vocatives are an interesting exception in that they do not obey any template but anchor to the first *as well* as to the stressed syllable of the base. As we will see, the interaction of the proposed constraints predicts that patterns of exactly this type should exist.

All the attested truncation patterns are vowel final. This is not surprising, if we consider that native Italian lexical words are all vowel final (function words, loan words or acronyms may also end in a consonant). I will therefore assume that the part of the grammar responsible for word-final coda restrictions is preserved and not contradicted by the partial grammar generating truncation patterns.

3. Constraints

Similar to truncation patterns in other languages, Italian truncations are characterized by the following properties:

- anchoring: all patterns are anchored to the left edge or to the stressed syllable or to both;
- templatic form: most patterns are bi- or monosyllabic;
- maximality: in the limits of template restrictions, anchoring requirements and coda-restrictions, copying of base material is maximal.

The last property mentioned here requires some clarification. In languages like English it is clear that the generation of a TRUNC morpheme involves a maximality effect. Thus, the name *Marvin* is truncated to *Marv*, not to *Mar* (or even *Ma*). In other words, the monosyllabic template is filled maximally with base material. In Italian, due to its restriction on word-final codas, the maximality effect is not so easily observed: the TRUNC morpheme always ends in a vowel, hence no maximal copying of base material can take place at the right edge of it. However, we

can see a maximality effect on the *left* edge of truncation morphemes. Consider the truncations *Stó.fo* for *Cris.tó.fo.ro* and *Stí.no* for *A.gos.tí.no* (both found on the internet). There are good reasons to believe that in word-internal [s]-consonant clusters the [s] is syllabified as a coda, in Italian (cf. Nespor 1993 who observes the absence of open syllable vowel lengthening in these cases). Nevertheless, in the examples above [s] is preserved in the truncation morpheme, even though it is not part of the stressed syllable in the base. Thus, the truncation morpheme is 'stretched' as far to the left as possible, within the limits of template satisfaction and anchoring restrictions.

I will now consider the properties of anchoring, templatic shape and maximality in turn and propose a set of constraints that target these properties.

The property of anchoring in reduplication and truncation has been described since McCarthy and Prince (1995) with specific anchoring constraints. In the literature, these constraints have sometimes been defined as alignment constraints, sometimes as faithfulness constraints. I will follow joint work with Sabine Arndt-Lappe (Alber and Arndt-Lappe 2007-2009, to appear) and suggest that ANCHOR-L, the constraint responsible for anchoring the truncation morpheme to the left edge of the base, is best defined as an alignment constraint while ANCHOR-STRESS, the constraint responsible for anchoring to the stressed syllable of the base, should be defined as a faithfulness constraint.

The reason to consider ANCHOR-L an alignment constraint is that there are truncation patterns in Czech and Russian,[4] where alignment effects are visible at the left edge. Thus, in many Czech truncations targeting a vowel-initial base name, the first syllable is skipped for anchoring and the TRUNC morpheme is anchored to the second syllable, instead. Thus, *Ántonin* is shortened to *Tónda, Álex* to *Léxa* and *Álois* to *Lójza.* This means that the initial syllable (which, consistently, is also the stressed syllable) is skipped in favor of the second syllable, arguably to avoid an ONSET violation in the truncation morpheme. The second syllable is chosen as the location for anchoring, because

[4]Thanks to V. Dvořák and to P. Staroverov for help with the Czech and Russian data, respectively.

this is as close as possible (hence as well-aligned as possible) as we can get to the left edge. In Russian, there are short names like *Ljóša* for *Alekséj* or *Tónja* for *Antonína,* where, similarly to Czech, a vowel initial syllable is skipped for anchoring and TRUNC is anchored to the second syllable. Unlike Czech, stress is not necessarily initial in Russian. Thus, if anchoring to the left edge fails, the second syllable of the base is chosen for anchoring even though in principle the stressed syllable could be targeted. This is not what we would expect if we interpreted ANCHOR-L as a 'categorical' constraint. Under a 'categorical' definition of ANCHOR-L, whenever anchoring to the left edge failed, the decision would be passed on to lower constraints. This means that whenever anchoring to the left edge is not an option, we would expect the anchor location to hop to another prominent position, e.g. the stressed syllable. The resulting pattern would be one where truncation is anchored to the left edge in consonant-initial bases, but to the stressed syllable in vowel-initial bases. Since this 'hopping effect' does not take place I will assume that ANCHOR-L is an alignment constraint. However, since the base word and the truncation morpheme are two independent words, it is not straightforward which representation of the truncation morpheme should align with the base. I will adopt the following definition:

(4) **ANCHOR-LEFT:**[5]
Align the left edge of the *correspondent of TRUNC in the base* with the left edge of the base.

In the following tableau illustrating an example of truncation of a vowel-initial base in Russian we see that ANCHOR-LEFT correctly chooses candidate b., which anchors to the second syllable of the base, even though this candidate is neither completely left-aligned nor anchored to the stressed syllable.

[5]Thanks to A. Prince for suggesting the possibility of this definition.

Tableau 1: ANCHOR-LEFT as alignment:

Base: Antonína	ONSET	ANCHOR-L (ALIGN)	ANCHOR-STRESS
a. [{Ant}onína] | | | Ánt-ja	*!		*
☞ b. [An{ton}ína] | | Ton-ja		an	*
c. [Anto{nín}a] | | | Nín-ja		anto!	

Unlike ANCHOR-L, ANCHOR-STRESS will be defined as a faithfulness constraint requiring the stressed vowel of the base to be stressed also in the truncation morpheme. The reason to define ANCHOR-STRESS as a faithfulness constraint is that among the 91 truncation patterns investigated in Alber and Arndt-Lappe (2007-2009) we did not observe any alignment effects in stress-anchored patterns and that, furthermore, in all cases where the TRUNC morpheme was stress-anchored, the stressed vowel was preserved *as a stressed vowel.* In other words, when a truncation morpheme is stress-anchored it is not enough that the stressed vowel of the base is preserved in the truncation morpheme, but it is always the case that the stressed vowel is preserved as stressed. This is also true for the Italian truncation patterns (1c,d), (2b) and (3) above. Preservation of the stressed vowel of the base as stressed is particularly striking in pattern (3), where all TRUNCs turn out to bear final stress, which does not conform to the default penultimate stress pattern of Italian. In left-anchored truncation patterns, as e.g. (1a), the location of stress is shifted freely in the TRUNC morpheme, with respect to the base name.

The observation that stress-anchored truncations *preserve* the stress of the base is reminiscent of the phenomenon of stress-preservation under morphological affixation, where a morphologically complex form inherits the location of stress

from a morphologically simpler form (cf. among others Kenstowicz 1995, Pater 1995, Benua 1997, Alber 1998, Kager 1999, 2000 for OT analyses of the phenomenon). We will therefore define the constraint ANCHOR-STRESS in a way similar to the stress-preservation constraints in the literature:

(5) **ANCHOR-STRESS:**
Let α be a segment in the Base and β be its correspondent in TRUNC
If α is the stress peak of the Base, then β is the stress peak of TRUNC
(adapted from Kager 2000)

Turning now to the second property of truncation patterns, we have to consider which constraints are responsible for generating the templatic shape characteristic of truncation morphemes.

Under Generalized Template Theory, bisyllabic and monosyllabic templates have been interpreted as the result of an "Emergence of the Unmarked Ranking", where one or more markedness constraints dominate a constraint favoring maximal copying of base material. Following Spaelti (1997), I will call these template shaping constraints the "size restrictor constraints" and assume that they can be identified as follows, for the bisyllabic and the monosyllabic template, respectively:

(6) a. SRCσσ: ALL-FT-L, PARSE-σ, FT-BIN
(McCarthy and Prince 1994)
b. SRCσ: COINCIDE-σ_1
(Alber 2001, Lappe, 2003, 2005, 2007)

The SRCs determining the bisyllabic template are familiar from McCarthy and Prince's 1994 analysis of the bisyllabic template in Diyari reduplication. ALL-FT-L guarantees that the template consists of a single foot, since only a single foot can be perfectly aligned to the left edge, PARSE-σ makes sure that the template

consists of a single foot without additional unparsed syllables and FT-BIN prohibits any foot that exceeds two syllables.[6]

The SRC proposed here for the monosyllabic template is inspired by the prominence maximization constraints in Beckman (1998) and the constraint format of COINCIDE constraints proposed in Zoll (1996, 1998). It is defined as follows:

(7) COINCIDE-σ_1: every segment of the output is in the first syllable of some morpheme

COINCIDE-σ_1 is an extension of Beckman's prominence maximization constraints which capture her observation that prominent positions such as the first syllable of a morpheme tend to be maximized. The extension consists in the fact that COINCIDE-σ_1 is defined on the *output* and therefore can have a radical truncatory effect. The only way to satisfy COINCIDE-σ_1 completely is to cut down the morpheme to a single syllable, deleting all segments that would find themselves outside of this prominent position. What remains is, so to speak, pure prominence – the initial syllable and nothing else (for a constraint with a similar definition see MORPH-SYLL: 'Each morpheme contains exactly one syllable' in Downing 2006: 120; but cf. discussion below, for the different effects of the two constraints)

There are other proposals in the literature for how to derive the monosyllabic template, like RED=σ (e.g. McCarthy and Prince 1993), ALL-σ-LEFT (Mester and Padgett 1994, Spaelti 1997), *STRUC-σ (Zoll 1993, 1996; Urbanczyk 1999, 2006, Walker 2000, 2002, Riggle 2006), OO-DEP (Gouskova 2003), which cannot be discussed here in any detail for reasons of space. Note however, that COINCIDE-σ_1, unlike some of the constraints in the literature, such as RED=σ or OO-DEP, does not generate any backcopying effect of the templatic form (a problem known as the Kager-Hamilton-conundrum; cf.

[6]In principle, FT-BIN can also rule out templates which consist of a single light syllable. But these templates will independently be disfavored by the constraint requiring maximal copying of base material (see below).

McCarthy and Prince 1999, Riggle 2006, Gouskova 2007, among others, for discussion). Unlike ALL-σ-LEFT and *STRUC-σ it does not choose one-segment-reduplication or no structure at all, as the default template (see Alber and Arndt-Lappe 2007-2009 for discussion). Furthermore, as opposed to RED=σ or non-gradient versions of MORPH-SYLL, it allows for the derivation of atemplatic truncation patterns (see discussion below).

The maximality effect often observed in truncation (as well as in reduplication) has been attributed in the recent literature (McCarthy and Prince 1994, 1999 and seq.) to the faithfulness constraint MAXBT, requiring the base to be realized faithfully in the truncation morpheme. Under this view, the ranking responsible for a truncation process looks like this,

(8) GTT-ranking for truncation:
MAXIO >> SRC >> MAXBT

where the relevant faithfulness constraints are defined as

(9) MAXIO: every segment in the input has a correspondent in the output
MAXBT: every segment in the base has a correspondent in TRUNC

Under this ranking, the SRCs can exert their truncatory power only in the realm of truncation, through domination of MAXBT, while inputs not subject to the Base-Truncation correspondence relation are protected by MAXIO. However, MAXBT has a maximizing effect even when dominated, in the limits of the templates allowed by the SRCs. There will be truncation, triggered by the SRCs, but the TRUNCs will copy as much material from the base as possible, due to MAXBT.

I will adopt here the basic idea that truncation processes are the result of some SRC dominating a constraint requiring maximal realization of base material. However, in line with Alber and Arndt-Lappe (2007-2009, to appear), I will propose that maximality is not brought about by the constraint MAXBT, but by the constraint ANCHOR-RIGHT, defined in the same way as ANCHOR-LEFT, as an alignment constraint:

(10) **ANCHOR-RIGHT:**
align the right edge of the *correspondent of TRUNC in the base* with the right edge of the base.

The reason for replacing MAXBT with ANCHOR-R is that MAXBT makes unwelcome predictions when we consider its interaction with the family of ANCHOR constraints. Consider the following ranking, where MAX-BT dominates the ANCHOR constraints ANCHOR-LEFT and ANCHOR-STRESS:

(11) Maximal copying at the cost of Anchoring:
SRCS >> MAX-BT >> ANCHOR-L, ANCHOR-STRESS

This ranking describes a truncation process, since some SRC dominates MAX-BT. However, since MAX-BT dominates the ANCHOR constraints, preserving as many segments as possible from the base is more important than good anchoring. We will therefore sacrifice good anchoring in order to allow the TRUNC morpheme to preserve the biggest possible number of base segments. The resulting system has some bizarre properties. Take e.g. a hypothetical language where TRUNC is left-anchored, in principle (hence ANCHOR-L >> ANCHOR-STRESS), and the relevant SRC favors a monosyllabic template. Under the ranking in (11), the syllable-sized portion of the base will be preserved which contains most segments, regardless of anchoring. Hence, as becomes clear in the following tableau, *Carmela* would be shortened to *Carm*, because this way we can preserve four segments of the base vs. the three segments of candidate b., *Mel.* On the other hand, the hypothetical base name *Petrosilla* will be shortened to *Tros*, simply because by cutting out the syllable *Tros* we manage to preserve more base material than by cutting out any other syllable-sized chunk of the base name. In other words, the locus of anchoring shifts in this language according to where a maximum of segments can be preserved.

Tableau 2: Hypothetical language: anchoring is sacrificed in order to maximize satisfaction of MAX-BT

	SRCσ	MAX-BT	ANCHOR-L
hyp. Base: Car.mé.la			
☞ a. Carm		ela	
b. Mel		ca, la!	car
hyp. Base: Pe.tro.síl.la			
a. Pet		rosilla!	
☞ b. Tros		pe illa	pe

It seems unlikely that such a language should exist, where, so to speak, we scan from left to right and cut out the biggest possible syllable of the base. Nothing similar is found among the 91 languages investigated in Alber and Arndt-Lappe (2007-2009).

By integrating the constraint ANCHOR-RIGHT into our grammar, on the other hand, we do not incur problems of this sort. ANCHOR-RIGHT will allow us to preserve the maximality effect, but it will not lead to the unwelcome predictions triggered by MAX-BT. Take again our hypothetical case above, a language with a left-anchored, monosyllabic TRUNC template. In such a language, ANCHOR-LEFT will necessarily dominate ANCHOR-RIGHT, in order to guarantee left-anchoring. Furthermore, SRCσ will dominate at least ANCHOR-RIGHT as well, in order for truncation to take place at all. Let us consider the output of *Carmela* and *Petrosilla* under such a ranking:

Tableau 3: Hypothetical language: maximality effect generated by ANCHOR-R

	SRCσ	ANCHOR-L	ANCHOR-R
hyp. Base: Car.mé.la			
a. Car			mela!
☞ b. Carm			ela
c. Me		car!	la
hyp. Base: Pe.tro.síl.la			
☞ a. Pet			rosilla
b. Tros		Pet!	illa

In the evaluation of *Carmela* we see that ANCHOR-LEFT favors candidates a. and b., since they preserve material from the left edge of the base. However, the distinction between candidates a. and b. is made by ANCHOR-RIGHT. This constraint favors candidate b. over candidate a. since the right edge of the correspondents of b. in the base are closer to the right edge of the base. ANCHOR-RIGHT thus has a 'stretching' effect on the TRUNC morpheme, which corresponds to the maximality effects triggered by MAXBT. In the evaluation of *Petrosilla* we see that candidate b. cannot win any more. There is no constraint MAXBT which could favor this candidate and although ANCHOR-RIGHT would prefer candidate b. over candidate a., it cannot exert its influence freely because it is ranked below ANCHOR-LEFT. Reversing the order of the two anchor constraints would simply mean that the TRUNC morpheme is then right-anchored, but again, we would have a stretching effect to the *left*, but not the pathological effect of sacrificing a good anchor location to the search of the heaviest possible syllable.[7]

[7] Note that ANCHOR-LEFT, ANCHOR-RIGHT and some SRC can be satisfied simultaneously at the cost of violations of the conastraint I-CONTIGUITY disfavoring word-internal deletion (McCarthy&Prince 1995). There are in fact single cases of truncated names in Italian where the edges of the base word are preserved, but intermediate material is deleted, as e.g. in the TRUNCs *Batta,* in *Gio Batta - Giovanni Battísta, Robo-Robérto, Bice-Beatríce* or in *benza-benzína* 'gasoline' (see Thornton 1996, Alber 2007). The fact that patterns of

Replacing MAXBT with ANCHOR-RIGHT means changing the basic ranking architecture responsible for truncation. Truncation, under this view, is not seen as a phenomenon establishing a particular faithulness relationship (expressed through MAXBT) between a base and a TRUNC morpheme, but rather as establishing a particular alignment relationship (expressed through ANCHOR-RIGHT) between TRUNC and the base. This means that we will not have any truncation specific faithfulness constraints such as MAXBT, but rather ANCHOR constraints indexed for a particular truncation morpheme. In this sense, TRUNC morphemes turn out to be more similar to 'normal' affixes. Affixes as well have a particular alignment relationship with respect to the stems they attach to, which makes them surface either as prefixes or as suffixes.

ANCHOR-RIGHT does not play a crucial role in the generation of Italian truncation patterns since, as mentioned above, maximality effects are visible in Italian at the left edge, but not at the right edge of TRUNCs, due to the strong word-final coda restrictions of the language. Nevertheless, we will integrate ANCHOR-RIGHT in our constraint set since it seems clear that this constraint plays an important role in the generation of truncation patterns in general and hence its position in the hierarchy proposed for Italian truncations has to be established.

To summarize, we have now a set of constraints, which target the three properties playing a crucial role in generating truncation patterns:

- a set of ANCHOR-constraints determining both the location of anchoring and the maximality effect: ANCHOR-LEFT, ANCHOR-RIGHT and ANCHOR-STRESS;
- a set of SRCs, determining the size of the truncation template:
  SRCσσ: ALL-FT-L, PARSE-σ, FT-BIN
  SRCσ: COINCIDE-σ_1

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this type are not productive means that I-CONTIGUITY must generally be high-ranked in the grammar of Italian truncations.

In the next section we will see how the various patterns of Italian truncation can be analyzed with the help of this set of constraints (for more discussion of the typology created by the proposed constraint set see Alber and Arndt-Lappe 2007-2009).

4. Analysis

4.1. Bisyllabic truncation patterns

In order for truncation to take place at all, some SRC has to dominate at least one of either ANCHOR-LEFT or ANCHOR-RIGHT. When the ranking is the opposite, i.e. when both ANCHOR-LEFT and ANCHOR-RIGHT dominate all SRCs, we will anchor both to the left and to the right edge of the base and therefore truncation will not take place, barring violations of CONTIGUITY.

In the case of bisyllabic truncation patterns as those in (1) (*France-Francesca, Vale-Valentina*), the relevant SRCs are ALL-FT-L, PARSE-σ and FT-BIN. They will guarantee that the base is truncated down to a single foot. Furthermore, the minimizing force of the SRC responsible for monosyllabic truncation, COINCIDE-σ_1, has to be kept at bay. This is achieved by ordering COINCIDE-σ_1 below ANCHOR-RIGHT, hence below the constraint responsible for the maximality effect in left- or stress-anchored truncations.

Bisyllabic truncations in Italian can be either left- or stress-anchored. This means that in left-anchoring patterns ANCHOR-LEFT will dominate ANCHOR-STRESS and ANCHOR-RIGHT, while in stress-anchoring patterns ANCHOR-STRESS will dominate the other ANCHOR constraints.

The bisyllabic left-anchored patterns in (1a,b) therefore can be analyzed with the following ranking:

(12) Ranking generating bisyllabic, left-anchored truncation patterns
   a. Partial ranking responsible for the bisyllabic template:
      MAXIO >> ALL-FT-L, PARSE-σ, FT-BIN >> ANCHOR-R >> COINCIDE-σ_1
   b. Partial ranking responsible for left-anchoring
      ANCHOR-L >> ANCHOR-STRESS, ANCHOR-R

The following partial rankings are responsible for the described properties:

(13) a. MAXIO >> ....
Truncation is limited to Base-TRUNC relations[8]

b. ALL-FT-L, PARSE-σ, FT-BIN >> ANCHOR-R
TRUNC consists of a single foot

c. ANCHOR-L >> ANCHOR-STRESS, ANCHOR-R
TRUNC is left-anchored

d. ANCHOR-R >> COINCIDE-σ_1
TRUNC is not monosyllabic

The following tableau illustrates how competing candidates are evaluated by the ranking:

[8]Under domination of MAXIO by some SRC we predict truncation to be operative in the IO phonology as well, generating a language with size restrictions on its lexicon (see Alber 2001 for an analysis of German native roots, in these terms).

Tableau 4: Bisyllabic, left-anchored truncations

Base: Francésca	ALL-FT-L PARSE-σ FT-BIN	ANCHOR-L	ANCHOR-S	ANCHOR-R	COINCIDE-σ_1
☞ a. (Frán.ce)			*	sca	ce
b. (Frá)	*!		*	ncesca	
c. Fran(cés.ca)	* *!				cesca
d. (Fran.cés.ca)	*!				cesca
e. (Cés.ca)		Fran!			ca

The comparison between the first four candidates shows us how ALL-FT-L, PARSE-σ and FT-BIN settle for a single bisyllabic foot satisfying all three of them, while candidate b. violates FT-BIN, candidate c. violates ALL-FT-L as well as PARSE-σ and candidate d. violates again FT-BIN. Candidate e. illustrates the preference of left-anchoring over stress-anchoring and right-anchoring.[9]

I have ignored here two potentially interesting candidates, *Fran* and *Francé. Frán* would be an interesting candidate because as a heavy monosyllable it could in principle satisfy all of ALL-FT-L, PARSE-σ and FT-BIN. It would still be eliminated by ANCHOR-RIGHT since it is worse right-aligned than the candidate *France.* I have not inserted it in the tableau because I am assuming that consonant final truncations, as indeed lexical words in general, are impossible in Italian (cf. discussion above). This means that there is a coda restriction targeting the word-final context which shows its effect in the whole lexicon and not just in the partial ranking considered for truncation. I will therefore continue also in the remainder of the paper to ignore consonant-final candidates. *Francé* would be an

[9]Note that if we exclude ternary feet from the inventory of possible feet, the constraint FT-BIN can be eliminated from the set of constraints responsible for bisyllabic truncation. The only other candidate eliminated by FT-BIN, besides the ternary-foot candidate d., is candidate b. But this candidate would be ruled out anyway because of its suboptimal performance on ANCHOR-RIGHT.

interesting candidate because it allows us to anchor to the left edge as well as to preserve the stressed syllable of the base as stressed. Thus, in principle, it should be preferred over candidate a., which satisfies only ANCHOR-LEFT. I will assume that the metrical default constraints (e.g. TROCHEE) of the language eliminate *Francé*, since the default stress for a bisyllabic word in Italian is to parse it as a trochee, with penultimate stress.

A TRUNC morphemes such as *France* is interpreted here as a single, bisyllabic foot of the form (HL), taking into account that its first syllable may count as heavy. Truncations such as *Vale* (from *Valentína*) on the other hand, would be interpreted as (LL) feet. Krämer (2009: 166) offers an interesting alternative approach to this analysis of bisyllabic TRUNCs. He proposes to analyze bisyllabic truncations in general as parsing an (H)<L> structure, i.e. a foot consisting of a heavy syllable followed by an extrametrical syllable. His proposal is based on the observation that also in TRUNCs such as *Vale* the first vowel is lengthened, as it is in general in Italian lexical words with penultimate stress on an open syllable. This lengthening could be interpreted as a strategy to create a heavy penultimate syllable and thus to allow the final syllable to be parsed as extrametrical. The validity of Krämer's approach is tied to the interpretation we have to give to penultimate vowel lengthening. Vowel length is not distinctive in Italian, it cannot be taken for granted that lengthening a vowel creates a heavy syllable. However, the fact that vowel length is not distinctive does not per se preclude that a lengthening process might interact with the metrical structure of words. I conclude that further research is needed in order to establish whether penultimate lengthening has to be considered a purely phonetic process or whether it is phonological in nature and has consequences on the metrical structure of the language. Note that the assumption that Italian TRUNCs have an (H)<L> structure has important consequences on the analysis of the truncation patterns. Assuming that there is some constraint driving TRUNCs to preserve as much material as possible from the base we would expect to find trisyllabic (LL)<L> truncations as well since structures of this type preserve more base material than bisyllabic structures, allow to parse an extrametrical syllable and do not need the process of vowel lengthening to apply. The

only alternative would then be to interpret bisyllabic truncations as striving to obey a *monosyllabic* template (under the influence of the constraint COINCIDE) and to settle for a bisyllable under the influence of NONFINALITY, which requires the extrametrical syllable.

Bisyllabic stress-anchored truncation patterns as in (1c,d) differ from bisyllabic left-anchored truncation patterns only in the ranking of the ANCHOR constraints, with ANCHOR-STRESS taking the position of the dominant ANCHOR constraint (see also Halicki 2008 for an OT-analysis of stress-anchored truncation patterns in Italian):

(14) Ranking generating bisyllabic, stress-anchored truncation patterns
   a. Partial ranking responsible for the bisyllabic template:
      MAXIO >> ALL-FT-L, PARSE-σ, FT-BIN >> ANCHOR-R >> COINCIDE-σ_1
   b. Partial ranking responsible for stress-anchoring
      ANCHOR-STRESS >> ANCHOR-L, ANCHOR-R

The following tableau illustrates how, among the candidates satisfying the SRCs, the stress-preserving candidate e. is chosen:

Tableau 5: Bisyllabic, stress-anchored truncations

Base: Francésca	ALL-FT-L PARSE-σ FT-BIN	ANCHOR-S	ANCHOR-L	ANCHOR-R	COINCIDE-σ_1
a. (Frán.ce)		*!		sca	ce
b. (Frá)	*!	*!		ncesca	
c. Fran(cés.ca)	* *!				cesca
d. (Fran.cés.ca)	*!				
☞ e. (Cés.ca)			Fran		ca

4.2. Monosyllabic truncation patterns

Monosyllabic truncation patterns as in (2) are characterized by the prominent position of the SRC COINCIDE-σ_1. To generate monosyllabic templates, this constraint has to dominate at least one of ANCHOR-LEFT or ANCHOR-RIGHT, since these are the constraints that drive the maximality effect. In Italian, due to its word-final coda restrictions and the absence of distinctive vowel-length, the monosyllabic template will correspond to a light syllable, hence a degenerate foot. For this reason, COINCIDE-σ_1 has to also dominate FT-BIN, which would eliminate a light-syllable-foot. The ranking of ALL-FT-L and PARSE-σ, on the other hand, is irrelevant, since the foot favored by COINCIDE-σ_1 satisfies these two constraints as well by being perfectly left-aligned and exhaustively parsed. I will therefore ignore them in the following ranking proposed for the monosyllabic, left-anchored truncation pattern in (2a):

(15) Ranking generating monosyllabic, left-anchored truncation patterns
   a. Partial ranking responsible for the monosyllabic template:
      MAXIO >> COINCIDE-σ_1 >> FT-BIN, ANCHOR-R
   b. Partial ranking responsible for left-anchoring
      ANCHOR-L >> ANCHOR-STRESS, ANCHOR-R

We can extract the relevant ranking relations as we did above:

(16) COINCIDE-σ_1 >> FT-BIN, ANCHOR-R
TRUNC is monosyllabic

ANCHOR-L >> ANCHOR-STRESS, ANCHOR-R
TRUNC is left-anchored

Tableau 6: Monosyllabic, left-anchored truncations

Base: Francésca	COINCIDE-σ_1	FT-BIN	ANCHOR-L	ANCHOR-S	ANCHOR-R
☞ a. (Frá)		*		*	ncesca
b. (Frán.ce)	ce!			*	sca
c. (Cé)		*	Fran!		sca
d. (Scá)		*	France!	*	

The tableau shows that polysyllabic candidates such as b. stand no chance since they violate COINCIDE-σ_1: not all segments are part of the first syllable of the morpheme. Among the monosyllabic candidates, a. is chosen because of its left-anchoring properties, while the stress-anchoring candidate c. and the right-anchoring candidate d. are discarded.

The monosyllabic pattern in (2b) (e.g. *Totó - Salvatóre*) is clearly stress-anchored, since the stressed syllable of the base is preserved. A peculiar characteristic of the pattern is that it is reduplicated. In principle, there are at least two ways of analyzing a reduplicated pattern of this type: either we analyze the structure as total reduplication of the TRUNC morpheme or we interpret it as a case of reduplication with templatic backcopying, where a base has been truncated down to the same size as the reduplicant.[10] In the former case, a base is truncated to a syllable and then affixed with a totally reduplicating prefix: [$_{\text{Red}}$ *To*] [$_{\text{TRUNC}}$ *tó*]. In the latter case, we are not contemplating a classical case of truncation, but rather a structure where a base is cut down to a syllable and prefixed with a syllable-sized reduplicant *because of* the templatic requirements on the reduplicant (e.g. [$_{\text{Red}}$ *To*] [$_{\text{Base}}$ *tó*]). The existence of templatic backcopying is still debated in the literature (cf. for instance

[10]That the latter possibility cannot be excluded has been brought to my attention by S. Arndt-Lappe.

Downing 2000 and Riggle 2006, Caballero 2006). Analyzing the Italian patterns in (2b) in such a way would mean to analyze them as reduplication patterns rather than truncations. Since all other hypocoristics or vocatives in Italian involve some process of truncation, I will not pursue this path of analysis, but instead consider the patterns under discussion as truncations with total reduplication of the TRUNC morpheme.

The truncation morpheme [$_{\text{TRUNC}}$ *tó*] is generated by the following constraint hierarchy, where ANCHOR-STRESS is the dominant ANCHOR constraint:

(17) Ranking generating monosyllabic, stress-anchored truncation patterns
   a. Partial ranking responsible for the monosyllabic template:
      MAXIO >> COINCIDE-σ_1 >> FT-BIN, ANCHOR-R
   b. Partial ranking responsible for stress-anchoring
      ANCHOR-STRESS >> ANCHOR-L, ANCHOR-R

Tableau 7: Monosyllabic, stress-anchored truncations

Base: Salvatóre	COINCIDE-σ_1	FT-BIN	ANCHOR-S	ANCHOR-L	ANCHOR-R
a. Sa-[$_{\text{Trunc}}$ sá]		*	*!		lvatore
b. Tóre- [$_{\text{Trunc}}$ tóre]	re!			Salva	
☞ c. To-[$_{\text{Trunc}}$ tó]		*		Salva	re
d. Re-[$_{\text{Trunc}}$ ré]		*	*!	Salvato	

(violations of constraints by the reduplicant are ignored here)

Candidate c. with the monosyllabic truncation morpheme [$_{\text{Trunc}}$ tó] wins, since it is the only one satisfying both the monosyllabic template requirement as well as the requirement of preserving the stress of the base.

4.3. Atemplatic truncations

Atemplatic truncation patterns such as the Southern Italian vocatives in (3) are generated by a ranking in which both ANCHOR-LEFT and ANCHOR-STRESS dominate the SRCs. Through the high position of the two ANCHOR constraints in the hierarchy, alignment of TRUNC to the left edge as well as preservation of the stressed syllable of the base, are guaranteed. ANCHORING to two prominent positions thus is more important than the creation of a wellformed template. However, we do have a process of truncation also in patterns of this type. This means, that some SRC must dominate ANCHOR-RIGHT, the constraint which favors maximality of the TRUNC morpheme in left-anchored truncation patterns. COINCIDE-σ_1 will be the relevant SRC since among the generated TRUNCs we also find monosyllabic truncations. The proposed ranking for atemplatic truncations as in (3) therefore looks like the following:

(18) Ranking generating a left- and stress-anchored, atemplatic truncation pattern:
MAXIO >> ANCHOR-LEFT, ANCHOR-STRESS >> COINCIDE-σ_1 >> ANCHOR-R, FT-BIN

(19) Anchoring to the left edge and to the stressed syllable: atemplatic Southern Italian Vocatives

Tableau 8: doubly anchored truncation

/Bárbara/	ANCHOR-L	ANCHOR-S	COINCIDE-σ_1	ANCHOR-R
☞ a. Bá				rbara
b. Bár.ba			ba!	ra
/Francésca/				
a. Fra		*!		ncesca
☞ b. Fran.cé			ce	sca
c. Fran.cés.ca			cesca!	
/Salvatóre/				
a. Sa		*!		lvatore
b. Sál.va		*!	va	tore
☞ c. Sal.va.tó			vato	re
d. Sal.va.tó.re			vatore!	

The comparison between the candidates *Bá* and *Bárba* as truncations for *Bárbara* illustrates the importance of COINCIDE-σ_1 in cutting down the truncation morpheme to a single syllable. The candidate *Bárba* is equally well-anchored to the left edge and to the stressed syllable, as candidate *Bá*, but it is not as short as required by COINCIDE-σ_1. The SRCs ALL-FT-L and PARSE-σ would be equally satisfied with candidate *Bárba,* which could be parsed into a single foot just as well as candidate *Bá.* They cannot distinguish between the two candidates. The comparison of the candidates *Francé* and *Francésca* as truncations for *Francésca* and of *Salvató* and *Salvatóre* as truncations for *Salvatóre* illustrates an additional interesting point. In both cases, the choice of the truncated candidate over the candidate without truncation is again made by COINCIDE-σ_1. The constraint COINCIDE-σ_1 can make this choice because its violations are counted in terms of the number of segments outside of the first

syllable of the base. In other words, COINCIDE-σ_1 persists in its drive to truncate even though the preferred size of a monsyllabic template is not necessarily achieved. A different definition of the constraint which evaluates simply whether the TRUNC morpheme is one syllable long (e.g. RED=σ, McCarthy and Prince 1993 or MORPH-SYLL, Downing 2006: 120) is not able to generate patterns of this type.[11]

Atemplatic truncations such as the Southern Italian Vocatives thus are interesting for several reasons. They show us that multiple anchoring is possible in truncation patterns, as indeed we would expect it to be, given the set of constraints that we have assumed. They furthermore are evidence for the fact that the SRC responsible for monosyllabic templates cannot assess simply whether the truncation morpheme is one syllable long or not but rather has to assess violations for every segment that exceeds the one-syllable-limit of the template.

5. Conclusions

We have seen that Italian exhibits the full range of typical truncation patterns, as we find them in the world's languages: there are both bisyllabic and monosyllabic TRUNC templates and both of them can be either left- or stress-anchored. Furthermore, the Southern Italian Vocatives are an example of an atemplatic truncation pattern which can be described as anchoring both to the left edge and to the stressed syllable of the base name.

Following Alber and Arndt-Lappe (2007-2009) I have a proposed a set of constraints which are able to target the three main characteristics of truncation morphemes: anchoring,

[11]Note that candidates such as *Francésca* or *Antonélla* cannot be excluded on the simple ground that nothing has been truncated with respect to the base name. First of all, truncation morphemes are not always shorter than their bases, as the hypocoristic form *Hans-i* for the base name *Hans* in German i-truncations illustrates (see Féry 1997, Wiese 2001, Alber 2007, among others). Second, words with antepenultimate stress, such as *Cristóforo* are truncated to *Cristó* and thus win against the competitor *Cristófo*, which would be shorter than the base name as well, yet would allow to preserve more material of the base.

templatic shape and maximality. The main change in the proposed set of constraints, with respect to Generalized Template Theory, concerns the exact definition of the ANCHOR constraints and the substitution of MAXBT with ANCHOR-RIGHT. This set of constraints is able to generate the various patterns that we find in Italian. Since the constraint set contains the two ANCHOR constraint ANCHOR-LEFT and ANCHOR-STRESS, we would expect doubly-anchored patterns when these constraints dominate the relevant SRC. Southern Italian Vocatives are exactly an example of this type and thus confirm one of the predicted possible grammars generated by the proposed set of constraints. The atemplatic vocative pattern furthermore shows us that the SRC responsible for monosyllabic templates has to assess violations for every segment exceeding the one syllable limit. Only in this way can truncation take place even when the template is not observed.

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