Minimality in the Catalan Truncation Process

Teresa Cabré

Universitat Autònoma de Barcelona

The purpose of this paper is to give a description of the Catalan truncation process. The truncated hypochoristics are the outputs of a minimisation process, whose templates are submittted to two prosodic requirements: they are minimally bimoraic and maximally bisyllabic. The theoretical ideas of the Prosodic Circumscription and the Minimal Word are also discussed here. The quantitative trochee is shown to be the prosodic pattern of the language, which scans the base in prosodic constituents. The prosodic analysis of the base explains the different shape of hypochoristics like *Quim* and *Tomeu*, and gives empirical evidence for considering that Catalan is a weight sensitive language and that the quantitative trochee is strictly bimoraic.

1.   Introduction

It has been accepted that the quantity-sensitive trochaic foot cannot have more than two syllables and cannot have heavy syllables in weak positions. As Hayes (1991), McCarthy and Prince (1991) and others have stated, the main characteristic of the quantity-sensitive trochee is moraic weight, which is present in all of its manifestations. We call this foot moraic trochee or quantitative trochee, in opposition to syllabic trochee, which is insensitive to moraic weight. The representation of the strict bimoraic trochee is shown in (1), comprising two successive light syllables or a single heavy.

(1)
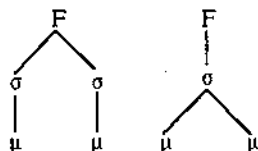
The onset structure is irrellevant in moraic theory. Since moraic weight is only reflected on the rhyme, in languages without vocalic quantity opposition, like Catalan, the moraic weight can only be revealed by the open-closed syllable opposition, where the closure is represented by a consonant or a glide.

In Prosodic Phonology Theory, the foot is a constituent of linguistic structure that accounts for a wide range of results, stress being only one of them. Through the study of prosody-related phenomena we can attain significant progress in the phonological analysis of Catalan lexical stress assignment,[1] since results at the prosodic level of Grammar are coincident with those at the metrical level, as it seems to be accepted.

Prosodic categories are ranked in the Grammar and the prosodic hierarchy is imposed in all linguistic processes. As it is shown in (2), the Prosodic Word is a higher level category and dominates Foot.

(2)   PW —> F —> σ —> μ

From the theoretical point of view, a Prosodic Word is a Minimal Word when PW dominates exactly one foot, the prosodic pattern of the language. A lot of languages requires minimality conditions on lexical vocabulary,[2] but minimality requirements can act in some other linguistic processes.

---

[1] Basically, the stress assigment in Catalan lexical vocabulary works as follows: A word is acute when its final syllable is heavy: *popular* 'popular', *sedàs* 'sieve', *embolic* 'mess', *espai* 'space', *camí(n)* 'way'; if not, the stress falls on the penult syllable: *casa* 'house', *taula* 'table', *oncle* 'uncle', *llebre* 'hare', *poeta* 'poet', etc.

[2] It can be said that Catalan vocabulary requires minimal word conditions. As a matter of fact, except for very few exemples like *fe* 'faith', *cru* 'raw', *re* (or *res*) 'nothing', the name of some alphabet letters and the musical notes, the shortest lexical vocabulary is bimoraic: *por* [pó] 'fear', *dur* [dú] 'hard', *pa(n)* [pá] 'bread', *vi(n)* [bí] 'wine', *peu* [péw] 'foot', *món* [món] 'world', *blat* [blát] 'wheat', *gos* [gós] 'dog', etc.

In this paper, I will analyse the hypochoristic truncation in Catalan as a minimisation process and show that its basic pattern is a moraic trochee. I will also show that all truncated names are the shortest derivated forms and that all of them can be analysed in terms of moraicity. So this process can be considered a minimality fenomenon. Minimal word requirements are reflected in the truncation process scanning the base forms in bimoraic trochees and blocking words not containing a quantitative trochee and longer than two syllables.

2.   The Truncation Process

Truncation is a morphological process that separates a sequence from the base. In Catalan, the boundaries of the truncated sequence can only be found through a bimoraic trochee parsing. This process gives strong evidence for considering that Catalan is a weight sensitive language and that the quantitative trochee is strictly bimoraic.

The main characteristic of the truncation process is that the part of the base that is taken contains the stress; stress cannot move from its place. This is probably due to the fact that the unstressed vocalic system of Catalan is more reduced than the stressed one and different from it,[3] which makes recovery of the underlying vowel difficult. In this sense, Catalan differs from Spanish, which makes the stress shift to the beginning of the word and takes its first two syllables (*Magdalena > Magda, Eduardo > Edu, Matilde > Mati, Pilar > Pili*).[4]

---

[3] As is known, the stressed vocalic system in Central Catalan is [i, e, ɛ, a, ɔ, o, u]. Except for some special contexts, in unstressed position [a, ɛ, e] are reduced into [ə] and [ɔ, o, u] into [u]. In other dialects, the unstressed system is also more reduced than the stressed one, but less than the corresponding system of the Central dialect.

[4] See Prieto (1992). Nowadays, Catalan people often adopt the Spanish system of truncation (*cf. Montserrat > Montse*).

We can classify all truncated hypochoristics in four groups depending on its syllable structure. The first one, with $C\acute{V}$.CV structure, includes all simple bisyllabic trochees and it represents the most extensive group.

(3) | | |
|---|---|
| Agustina > Tina | Anita > Nita |
| Genoveva > Veva | Caterina > Nina |
| Magdalena > Lena | Eulàlia > Laia |
| Enriqueta > Queta | Carolina > Lina |
| Cecília > Cila | Celestino > Tino |
| Gaietano > Tano | Jeroni > Noni |
| Ignasi > Nasi, Nani | Josefina > Fina |
| Teodora > Dora | Misericòrdia > Coia, Cori |
| Camila > Mila | Claudina > Dina |
| Florentina > Tina | Gregori > Gori |
| Margarita > Mita, Ita | Josepa > Pepa |
| Rossita > Sita | Bonaventura > Tura |
| Anna Maria > Ia | Elionora > Nora |
| Gertrudis > Tuies | Victòria > Toia |
| caramelo > melo ('candy') | hermano > mano ('guy') |
| germaneta > teta ('sister') | petita > tita ('little animal') |
| senyoreta > seta ('schoolteacher') | sabates > tates ('shoes') |

The second one, with $C\acute{V}C$ structure, is made up of monosyllabic truncates coming from words with a closed and stressed final syllable.

(4) | | |
|---|---|
| Remei > Mei | Josep > Pep |
| Montserrat > Rat | Isabel > Bel |
| Estanislau > Lau | Anton > Ton |
| Segimon > Mon | Miquel > Quel |

(4)   Elisabet > Bet   Joaquim > Quim

Nadal > Dal   Meritxell > Txell

Jaumet > Met   Ambròs > Bros

The third one, with CV́C.CV structure, groups also bisyllabic trochees with the stressed syllable closed.

(5)   Armando > Mando   Clotilde > Tilde

Fernando > Nando   Francisco > Cisco, Quico

Domingo > Mingo   Leopoldo > Poldo

Jacinto > Cinto   Vicenta > Centa

Raimunda > Munda   Rossendo > Sendo

Eduardo > Dardo   Elisenda > Zenda

Roberto > Berto   Gimnàstic > Nàstic ('a Catalan football club')

The last one, with the iambic structure CV.CV́C, is the smallest group. The final consonant —underlying or not— makes the stresed syllable heavy. The truncation of groups (5) and (6) is completely symmetrical, i.e. heavy + light vs. light + heavy.

(6)   Bartomeu > Tomeu [tuméw]   Montserrat > Serrat [sərát]

Salvador > Vador [bəðó]   Sebastià(n) > Tià [tiá]

Baltasar > Tasar [təzá]   Concepció(n) > Ció [sió]

Narciset > Ciset [sizét]   Marcel·lí(n) > Cel·lí [səlí]

All the exemples in (3) (4), (5) and (6) are the traditional truncated hypochoristics, but nowadays this truncation process is not very productive. Nevertheless, all of them come from the spoken language —I have gathered a hundred of them approximately. Notice that some base forms like *Celestino, Gaietano, Jacinto, Rossita* or *Anita* are loans from Spanish. In spite of that, these forms —much more than Catalan ones, like *Celestí, Gaietà, Jacint, Roseta* or

Anneta— are spoken forms from old people. There is no problem in getting a Catalan truncated name. In fact, in some cases there are no truncated forms from the strict Catalan bases. This means that these Spanish loans are true Catalan names, because the Catalan truncation process applied to these names results in a wellformed structure.

3.   Prosodic Delimitation

I will show in this paper that the Catalan truncation process starts by defining a domain on the base form. The delimitation of the truncation domain is only possible at the prosodic level through a bimoraic trochee foot parsing. Prosodic Circumscription[5] establishes a delimitation device of word domains on which a particular process acts. The device that governs the prosodic circumscription delimitation consists of applying two specific parameters: the *Foot Parameter* —the prosodic pattern of the language— and the *Directionality Parameter* —the direction right to left or left to right of prosodic parsing. These categories delimit on the base form a prosodic constituent called *Positive* Prosodic Circumscription. The rest is the *Negative* Prosodic Circumscription. Theoretically, the Positive Prosodic Circumscription isolates the *Minimal Word.*

As we illustrate in (7), the Catalan Foot Parameter is a moraic trochee because this is the basic prosodic pattern of the language. The Directionality Parameter is Right to Left due to the fact that stress can only appear in one of the three last syllables and the truncation process refers to the stressed syllable. Therefore the right edge of the base-word constitutes the right edge of the prosodic circumscription and the right edge of the truncated word, cf. *Francisco* and *Cisco*, *Ramon* and *Mon*, *Ernestina* and *Tina*, *Joaquim* and *Quim.*

(7)   Foot Parameter: Moraic Trochee $[\mu\mu]$
       Directionality Parameter : ## L <---- R ##

---

[5] See McCarthy and Prince (1990).

The device of prosodic circumscription delimitation applies after syllabification and lexical stress assigment. The prominent element of the moraic trochee settles on the stressed syllable and the vowel of this syllable fills the first mora. The limits of prosodic circumscription always coincide with syllable limits. The prosodic constituent cannot separate onsets from rhymes and cannot exclude extrametrical elements in coda positions.[6] On the other hand, prosodic circumscription must be applied at the underlying level because final consonants —like -r in *Salvador* [səlβəðó] / *Salvadora*, or -n in *Sebastià* [səβəstiá] / *Sebastiana*— are taken into account since they are part of moraic structure.

We can apply this device to any example of the first two truncation groups in (3) or (4) and we will obtain not only a correct truncated form but also a Minimal Word. This is so because the prosodic circumscription limits are the same as those of a bimoraic trochee. If the Minimal Word consists of exactly one foot which is isolated by the prosodic circumscription, as McCarthy and Prince (1990) state, all these truncated hypochoristics with bimoraic shape are Catalan minimal words.

In (8) we can see how prosodic circumscription applies: In both cases the right edge of the base coincides with the right edge of the prosodic circumscription and the right edge of the truncated form. The left edge is bounded by the Foot Pararameter.

(8)

Foot Parameter:

Ge.no.[ve.va] => Veva   Re.[mei] => Mei
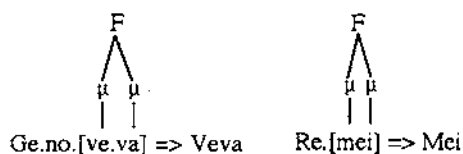
Directionality Parameter: L <---R##   L<---R##

---

[6] After syllabification, the foot cannot cut a prosodic constituent such as the syllable, i.e., Am[bròs] not *Ambr[òs] and the prosodic circumscription must include extrametrical elements at the right edge of the foot, i.e., Fran[ces<c>] or Cris[tòfo<l>], not Fran[ces]<c> or Cris[tòfo]<l>.

3.1. *Differences between inputs and outputs*

Some examples in (3) show some variation in relation to the prosodic circumscription shape of the base form. We are dealing here with cases with not good onsets —for example, *Noni* from Je[ro.ni], with a flap in initial position at the Prosodic Word level. The impossibility of Catalan to have a flap in the word initial position forces to find a repairing strategy to replace the unappropriate segment and fill this position, since Catalan prefers full onsets. In this sense, we can choose between repeating the available consonant, as in *Noni*, picking up the initial onset of the base, as in *Mita* from Marga[ri.ta], or, in a very few cases, leaving the onset void, as in *Ia* from Ma[ri.a].

As it has been said, Catalan forbids flaps in word initial position. So we must appeal to some strategy to fill this onset, because strikingly this medial flap does not become strengthened when gets initial position. This fenomenon has a close relation with the fact that *Montserrat* yields *Rat*. This implies that the base form syllabification at the level of truncation process must be something like [mun.sə.rát], and by no means can be [mun.sər.rát] with two adjacent flaps, as it has been generally accepted.[7] The traditional interpretation of flap/trill alternation does not predict this behaviour, but a strengthening. On the other hand, it seems that truncation process cannot be applied at the surface level, as it has been said above, because final underlying consonants preserve the moraic weight. This is an open problem.

But the most striking case of segmental variation between prosodic circumscription shapes and truncated outputs is the simplification of names like those in (9):

(9)   Eu.[là.li.a] => La.ia
      Mi.se.ri.[còr.di.a] => Co.ia
      Ce.[cí.li.a] =>Ci.la

---

[7] See Mascaró (1986).

As it can be argued,[8] we have to analyse [làlia], [còrdia] and [cﬂia] with an underlying trisyllabic shape. The trisyllabicity should not block the prosodic circumscription parsing. In fact, the Foot Parameter and the Directionality Parameter parse all antepenult stressed names and, given our analysis, there is no difficulty in applying this process onto An[gèlica] or Pe[nèlope]. But, as we can see in (10), there are not trisyllabic truncated names.

(10)   An.[gè.li.ca] => *Gè.li.ca
        Pe.[nè.lo.pe] => *Nè.lo.pe

Let us consider now two facts: on the one hand, there are no antepenult stressed truncates and we cannot get any other truncated word from names like *Angèlica*. On the other hand, this trisyllabic prosodic constituent cannot be the minimal word of the language, because the Minimal Word is exactly one foot and any metrical foot cannot have more than two syllables. Since metrical parsing uses the same categories as prosodic parsing (like foot and direction), it is obvious that antepenult stressed syllables are a marked stress pattern in Catalan.

4.   Prosodic Requirements

The templatic theory says that processes like truncation do not consist of a simple copy of the prosodic constituent obtained through prosodic circumscription, but rather of its projection onto a CV template. So we must specify which prosodic conditions are required by the projection templates of the Catalan truncation process. We will call the first requirement *Minimality Condition*:

---

[8] Nowadays, the pronounciation of names ending in iV usually is jV (*cf. Sebastià, Damià, Concepció, Eulàlia*). Historically iV has become jV in this context, but all truncated forms like *Tià, Mià, Ció*, are bisyllabic. The truncation process starts from the underlying form because of the moraic weight of the final underlying consonants. If niknames like *Tià, Mià* or *Ció* had an underlying glide, we would have to justify how a glide becomes a vowel, how one syllable is changed into two. Moreover, it would be difficult to justify a process opposite the historical one.

(11) *Minimality Condition.* The projection templates contain one moraic trochee and only one.

The target template forces the underlying trisyllabic constituent [kɔ́r.ði.ə] to reduce to a bisyllabic structure [kɔ́r.ðjə]. But the drastic simplification of the syllabic structure [kɔ́.jə] is not trivial, because nothing similar exists in any Catalan historical process.

It has been proposed in Phonological Theory that, once foot constituents have been established, there are some positions in the foot that become weaker than others, that is, open to undergo linguistic changes.[9] The strong position always occupies peripheral places whereas the weak position occupies the internal place between the two nuclear foot elements. So the post-stressed position is weak in trochaic structures and this position is exactly the same that has been affected by this simplification process.

It seems, then, that the target template determines the reduction of the base to a bisyllabic structure. More general phonological phenomena (like palatalization) make the specific simplification of *Cordia* into *Coia* possible. In spite of the fact that there is no difficulty in the utterance of words like [láljə], [kɔ́rðjə] or [síljə] with a glide, the structural simplification process leads to a bimoraic trochee with simple onsets. The *Bisyllabicity Condition* appears as a target template requirement rather than a consequence of the base parsing. Moreover, onsets are taken into account. We can formulate this condition as in (12):

(12) *Bisyllabicity Condition:* The truncation template cannot consist of more than two syllables.

Let us have a look at the examples in (4). All base forms are names stressed on the heavy final syllable. This means that the bimoraic foot is built on this final syllable. The two positions of

---

[9] See Kenstowicz (1993).

the rhyme fill the two moras of the trochee. So *Quim* from *Joaquim*, *Mei* from *Remei* or *Bet* from *Elisabet* are good truncated forms because all of them satisfy the Minimality Condition.

But we have no truncated examples from acute names with a light final syllable like *Salomé*, *Noemí* or *Bernabè*. The prosodic circumscription delimitation cannot take place because the foot parameter cannot be applied. The quantitative trochee cannot be represented by only one mora. Even if we accept this syllable as a degenerate foot that constitutes the prosodic circumscription, the Minimality Condition on target templates rules out this CV shape (*Me, *Mi, *Be).

In all the examples we have analysed so far — the groups in (3) and (4)—, the boundaries of the truncated word coincides with those of the prosodic circumscription and its template scans exactly one moraic trochee. Since this trochee is the basic prosodic foot of the language, this confirms that the theoretical principle according to which the Prosodic Circumscription isolates the Minimal Word of the language is true. Hence, all these truncated hypochoristics are Catalan minimal words.

4.1. *The Minimal Word Boundaries*

Let us consider now group (5). When we apply the truncation process to this group, showing forms stressed on the penult heavy syllable, the rhyme material of this syllable fills the moraic positions of the trochee. In other words, the bimoraic trochee coincides with this stressed syllable. As we can see in (14), the Foot Parameter determines the left boundary of the prosodic circumscription, and the Directionality Parameter, the right edge. The resultant shape is not exactly one bimoraic foot, nor is it a minimal word of the language in a strict sense. The theoretical claim that the Prosodic Circumscription isolates the Minimal Word must be understood in the sense that the prosodic circumscription includes the minimal word, because it is larger than one foot.

(14)

Foot Parameter:

$$\overset{\displaystyle F}{\overset{\displaystyle \wedge}{\underset{\text{Fran.[cis.co]}}{\mu \quad \mu}}} \Rightarrow \text{Cis.co}$$
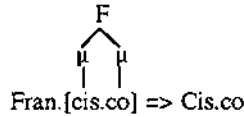
Directionality Parameter: L <---R ##

All wellformed truncated names of this group have the same shape as the prosodic circumscription, in spite of the fact that they are bigger than the strict minimal word. But the truncation template satisfies both conditions: the Minimality Condition and the Bisyllabicity Condition, namely, only one moraic trochee and no more than two syllables. From the wellformedness of truncates like *Cisco, Sendo* or *Munda*, it follows that there is a third requirement on truncate templates. The *Prosodic Circumscription Condition* that we have in (15).

(15)   *Prosodic Circumscription Condition.* The Prosodic Circumscription must be included in the truncated word.

From this requiring it follows that all base names whose edges coincide with the prosodic circumscription cannot make truncated hypochoristics. It is impossible to apply any truncation process onto *Pere, Clara, Rosa, Jaume, Carme, Marta, Blai, Marc*, etc., because the prosodic circumscription delimitation parameters bound the whole base word. The truncated words have to be necessarily shorter than the base ones, because they are the outputs of a minimisation process.

Structure simplifications like [kíku] from [sísku], even [lájə], [kɔ́jə], [sílə] from [láljə], [kɔ́rðjə], [síljə], can be understood as a progress to the unmarked structure of the shortest derived words. The CV́.CV template is the optimal structure: one bimoraic trochee and two syllables.[10]

_____

[10] In some dialects we even find the change from CV́C to CV́.CV structure, like *Ximo* from *Xim* or *Quim*.

If we accept that strict bimoraicity is the only representation of the quantitative trochee for Catalan, we have to parse the truncation template into a moraic foot, that is, the heavy syllable plus a complementary footless light syllable. This analysis assumes a loose interpretation of the notion of prosodic hierarchy[11] since it is no longer strictly layered because the complementary light syllable does not attach to any foot. Prosodic Word dominates immediately Foot as well as Syllable. As we can see in (16), the closed stressed syllable fills the two moras of the foot, satisfying the Minimality Condition, and the second light syllable attaches directly to the Prosodic Word, satisfying the Bisyllabicity Condition.

(16)

A similar analysis could be argued for trisyllabic shapes[12] like *Gèlica* in which the PW would dominate a bimoraic trochee and a complementary light syllable (PW [$_F$Gè.li].ca), but the *Bisyllabicity Condition* rules out this sequence. In addition, this analysis must be applied to cases like *Nàstic*. The prosodic word is parsed as a foot plus a complementary light syllable (PW [$_F$Nàs].ti<c>) because the final consonant is extraprosodic. If we consider the whole last syllable as a foot or accept degenerate feet with only one mora, the PW would dominate two trochees and the *Minimality Condition* would be violated.

---

[11] See McCarthy and Prince (1991).

[12] A similar analysis is argued in Itô (1990) for loans in Japanese.

4.2. Moraic Constituency

We have built our prosodic parsing on the bimoraic trochee, because we have assumed that this foot is the basic pattern for Catalan. In fact, we have argued for bimoraic minimality in order to account for the ungrammaticality of light monosyllabic truncates, like *Me from Salomé. We have also argued for bimoraic maximality in order to bring out a coherent explanation of closed penult stressed truncates. But the strongest evidence to account for the sensitivity of Catalan to syllabic weight of the moraic trochee lies in the prosodic analysis of the last group (6).

With the prosodic circumscription delimitation device, it is impossible to explain why we have iambic truncates like Vador, Tià, Ció, Tomeu or Serrat. We could deal with them as exceptions, due to their small number. But this is not a good answer. We have explained why Quim, Mon or Bet are wellformed truncates, but we do not know yet why *Aquim, *Gimon or *Zabet do not exist, in spite of the fact that they satisfy all requeriments imposed.

Let us pay attention to the prosodic parsing of the base words. We analyse prosodically the whole base. The bimoraic scansion parses the base word into prosodic constituents. This analysis becomes meaningful when the prosodic constituents bound monosyllabic feet and leave a light syllable out of the foot, because heavy syllables attract the foot. In this case, we can account for the light syllable that can be mapped onto the target template, because this syllable is free of prosodic constituency. Since foot parsing skips isolated light syllables to settle on heavy syllables, a footless syllable remains available and can be added to the Prosodic Word. The trochaic parsing of the base is another minimality consequence that confirms the strict bimoraic trochee as the prosodic pattern of Catalan.

In (17) we can verify that the prosodic parsing of the bases on the left column does not let us add a light syllable to the target template of PW, whereas the prosodic parsing of bases on the right column leaves a light syllable without prosodic constituency. This is the syllable that is adjoined to the PW.

14

(17)   ...($_F$ L L) ($_F$ H)   ...($_F$ H) L ($_F$ H)

      (Segi)(mon) > *Gimon   (Bar)to(meu) > Tomeu

      E(lisa)(bet) > *Zabet   (Mont)se(rrat) > Serrat

      (Frede)(ric) > *Deric   (Sal)va(dor) > Vador

      (Joa)(quim) > *Aquim   Se(bas)ti(à) > Tià

      (Isa)(bel) > *Zabel   (Con)(cep)ci(ó) > Ció

Furthermore, an exemple like *Elisabet* provides additional evidence for right to left parameter. If we take the left to right direction, the prosodic parsing leaves one light syllable out of the prosodic constituent. Then the prosodic parsing predicts *Zabet* as a possible truncate form which is completely wrong.

(18)   E(lisa)(bet) ⇒ Bet   (Eli)sa(bet) ⇒ *Zabet

Directionality Parameter   L <----- R   L -----> R

From the results of the constituent parsing of the base, we can derive the *Prosodic Constituent Condition*, that we have in (19).

(19)   *Prosodic Constituent Condition*. A monosyllabic projection template can add a complementary light syllable on the left of the foot if, and only if, this syllable is free from the base prosodic constituents parsing.

We have argued for strict bimoraicity, but only bimoraic minimality has been proved. Let us assume we choose trimoraic maximality to scan templates like *Cisco* or *Tomeu*. We will not need additional devices to parse the complementary light syllable that we have now out of the foot. If we accept trimoraicity to scan the base, all syllables will belong to some prosodic

constituent and we will not account for the difference in prosodic length between *Quim* and *Vador*. Strict bimoraicity not only explains why we have a light syllable added on the left of the foot, but also how we must analyse this syllable. If the foot is strictly bimoraic, this syllable must be attached to the Prosodic Word, adjoined to the bimoraic foot. The hierarchical representation exemplified in (20) maintains a coherent analysis with the symmetrical case outlined in (16).
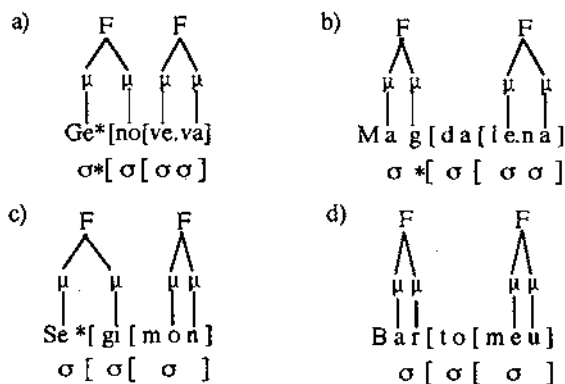
(20)
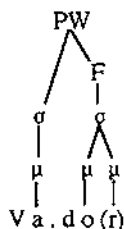
The apparently iambic truncates derive from a strict bimoraicity parsing and they turn out to be wellformed words because they satisfy all conditions we have established: the *Minimality Condition*, because templates have only one bimoraic trochee; the *Bisyllabicity Condition*, because they do not have more than two syllables; the *Prosodic Circumscription Condition*, because templates keep this prosodic constituent; and the *Prosodic Constituent Condition*, because the complementary light syllable does not belong to any trochaic constituent of the base.

We can see in (21) how these four requirements predict all different types of truncate names: In a) and b) we have two different examples of group (3), in which the prosodic circumscription is bisyllabic. If we adjoin a complementary light syllable, the *Bisillabicity Condition* is violated in a) and b) and the *Prosodic Constituent Condition* is also violated in a). In c) we have the representation of a structure of an example of (4). The *Prosodic Constituent Condition* is violated if we take a complementary light syllable. In d) we can see how the group in (6) satisfies all conditions and the complementary light syllable on the left is free to be adjoined to the foot yielding a bisyllabic acute hypochoristic.

The constituent analysis representation of group (5) is trivial now, because the prosodic circumscription includes the complementary light syllable: (Ar.[man.do]).

(21)

a)

```
    F       F
   /\      /\
  μ  μ    μ  μ
  |  |    |  |
Ge*[no[ve.va]
  σ*[ σ [ σ σ ]
```

b)

```
    F        F
   /\       /\
  μ  μ     μ  μ
  |  |     |  |
Ma g [da [ie.na]
   σ *[ σ [ σ σ ]
```

c)

```
    F       F
   /\      /\
  μ   μ   μ μ
  |   |   | |
Se *[ gi [ m o n ]
   σ [ σ[  σ  ]
```

d)

```
    F       F
   /\      /\
  μ μ     μ μ
  | |     | |
Bar[to[meu]
  σ [ σ[  σ  ]
```

4.2.1. Bimoraic constituent violation. There are a few truncated hypochoristics that take a parsed light syllable from the left prosodic constituent, which supposes a violation of the Prosodic Constituent Condition. In these examples, the truncation process is blind to the trochaic parsing of the base.

(22)   ...(L L) (H)

Daniel > Niel [niél], *El   Honorat > Norat [nurát],*At

Gabriel > Biel [biél], *El   Encarnació(n) > Ció [sió], *O

Damià(n) > Mià [miá], *A   Eufemià(n) > Mià [miá], *A

We must pay attention to the fact that the moraic positions of the monosyllabic foot are filled, but this monosyllabic prosodic word does not have any onset.The vowel fills the first mora and the final consonant the second mora; so we have a wellformed trochaic structure and a wellformed minimal word in terms of Prosodic Theory. But the VC shape is a marked structure

in Catalan[13] and there is no possibility to fill the onset position with any available consonant. In cases like (22), Catalan does not give up making truncated hypochoristics but it does not allow marked structures in prosodic derivation either. In such cases, the prosodic circumscription material maps onto the target template defective structures, because they violate a general condition on syllable structure of monosyllabic words prosodically derivated. Catalan solves this illformedness through the *Syllabic Structure Condition*.

(23)   *Syllabic Structure Condition.* The onset position of a monosyllabic truncation template cannot be empty.

In terms of the Optimality Theory (Prince and Smolensky, 1993), the violation of the Prosodic Constituent Condition is permitted in order to block the violation of the Syllabic Structure Condition, which is at a higher level in the prosodic conditions hierarchy.

This analysis also accounts for the application of the truncation process on underlying forms because names like *Eufemià* or *Encarnació* are often pronounced [əwfəmjá] and [əŋkərnəsjó], in spite of the fact that the truncated form is bisyllabic [mià] and [sió].[14] If we start from the surface form, the prosodic parsing would leave free a light syllable which would be added to the prosodic word. So we predict **Fe.mià* from (Eu).fe.(mià) and **Na.ció* from (En).(car).na.(ció) as some wellformed hypochoristics which are completely wrong.

5.   Conclusion

In summarizing the process of hypochoristic truncation in Catalan, we state that all attested structures must be submitted to the parsing of the prosodic pattern of the language: the quantitative trochee.

---

[13] There are no Catalan monosyllabic independent words with an underlying final consonant without onset.

[14] We must keep in mind that the historical evolution shows that the vowel cannot come from a glide (see note 8).

We have provided evidence that in Catalan the quantitative trochee is both maximally and minimally bimoraic, because only strict bimoraicity accounts for the prosodic structure of truncated words. We have also shown that the base scansion into bimoraic trochees can only be understood as a minimality consequence. The conditions on prosodic structure of truncated hypochoristics are derivable from Minimal Word fenomenon and can be reduced to the two following requirements:

> Minimum: one bimoraic trochee
>
> Maximum: two syllables

The conditions of truncation wellformedness take into account the moraic weight of the syllable. Also the presence or absence of an onset in some special cases. The prosodic conditions lead to the best possible structure. The different shapes of truncated hypochoristics must be understood as the best outputs from the available inputs.

References

Cabré, T. (1993a) *Estructura gramatical i lexicó: el mot mínim català*, PhD dissertation, Universitat Autònoma de Barcelona.

Cabré, T. (1993b) *Sensitivity of Catalan to Syllabic Weight*, ms. Universitat Autònoma de Barcelona.

Greenberg, J. H. (ed) (1978) 'Universals of Human Language', *Phonology* 2, Stanford University Press.

Hayes, B. (1991) 'Metrical Theory', lecture notes from LSA Summer Institute, University of California, Santa Cruz.

Itô, J. (1990) 'Prosodic Minimality in Japanese', *Chicago Linguistic Society* 26.

Kenstowicz, M. (1993) 'Evidence for Metrical Constituency' in K. Hale and S.J. Keiser (eds) *The View from Building 20*, Cambridge, MIT Press.

Kenstowicz, M. (1994) *Phonology in Generative Grammar*, Blackwell, Cambridge, Mass.

Lombardi, L. and J. McCarthy (1991) 'Prosodic Circumscription in Choctaw Morphology', *Phonology* 8, 37-72.

Mascaró, J. (1978) *Catalan Phonology and Phonological Cycle*, Bloomington, IU Linguistics Club.

Mascaró, J. (1986) 'Syllable-Final Processes in Catalan', in C. Neidle and R.A. Núñez-Cedeño (eds), *Studies in Romance Languages*, Foris, Dordrecht.

Mascaró, J. (1987) *Morfologia*, Enciclopèdia Catalana, Barcelona.

McCarthy, J. and A. Prince (1990) 'Foot and Word in Prosodic Morphology: the Arabic Broken Plurals', *Natural Language and Linguistic Theory* 8, 209-284.

McCarthy, J. and A. Prince (1991) 'Lectures on Prosodic Morphology', LSA Summer Institute, University of California, Santa Cruz.

Mester, A. (1993) 'The Quantitative Trochee in Latin', *Natural Language and Linguistic Theory* 12, 1-61.

Moll, F. de B. (1952) *Gramàtica Històrica Catalana*, Universitat de València, edition of 1991.

Prieto, P. (1992) 'Truncation Processes in Spanish', *Studies in the Linguistic Sciences* 22.1, 143-158.

Prince, A and P. Smolensky (1993) *Optimality Theory. Constraint Interaction in Generative Grammar*, ms. Rutgers University.

Wheeler, M. (1979) *Phonology of Catalan*, Blackwell, Oxford.

Departament de Filologia Catalana

Universitat Autònoma de Barcelona

E-08193 Bellaterra

E-mail: ilft3@cc.uab.es