SYNCOPE, EPENTHESIS

AND SYLLABLE STRUCTURE:

THE CASE OF SOME ITALIAN DIALECTS

Laura BAFILE

1. Introduction

Most Northern and Southern Italian dialects, differing from Standard Italian for what concernes prosodic structure, show among other features the weakness of unstressed nuclei. However, while in Southern dialects nuclear weakening typically results in the centralisation or in the raising of mid vowels, in most Northern dialects unstressed nuclei have often undergone the complete loss of their segmental content. Word-final vowel deletion, a process we also observe in other Romance languages, is widespread in most Northern dialects, (excluding varieties of Veneto and Liguria), while only some dialects of Piedmont and Emilia-Romagna also show the deletion of non-final unstressed vowels.

Given that final /a/ has been usually preserved, the deletion of final vowels results in a typical pattern of alternation between forms ending with a consonant and forms ending with /a/ (in (1) Standard Italian (SI) corresponding forms are also reported for comparison):

(1) ['gat] 'cat (m.)' ['gata] 'she-cat (f.)' SI *gatto / gatta*
   ['bɛl] 'beautiful (m.)' ['bɛla] 'beautiful (f.)' SI *bello / bella*

The loss of final vowels produces in some words consonant sequences in final position. However, most Northern dialects only permit some kind of final clusters, and some do not permit final clusters at all. Therefore, different strategies are followed in order to avoid violation of phonotactic requirements. Few varieties, especially in the region of Friuli, show the solution of cluster reduction (see 2a), which usually regards sonorant+sonorant sequences. The insertion of a non-etymological vowel at the end of the word is typical of Southern Romagna and Northern Marche (the example in 2b refers to the dialect of Urbino). Dialects of Emilia and Romagna usually exhibit epenthesis, a process whereby a vowel appears

between the two consonants (see 2c, taken from the dialect of Finale Emilia, Modena).

(2) a. $C_1C_2 \rightarrow C$ e.g.   ['fɔːr] 'oven' (cf. SI *forno*)

   b. $C_1C_2 \rightarrow C_1C_2V$ e.g.   ['forne] 'oven' ['mɛgre] 'thin' (cf. SI *magro*)

   c. $C_1C_2 \rightarrow C_1VC_2$ e.g.   ['forɐn] 'oven' ['magɐr] 'thin'

In the dialects of Emilia and Romagna, forms ending with a cluster take part to alternations of the kind exemplified in (2), due to the preservation of final /a/. Clusters resulting both from syncope (3a) or from final vowel deletion (3b) undergo epenthesis when word-final, while are preserved when followed by a vowel (the following examples are from the dialect of Finale Emilia)[1]:

(3) a.   ['vedɐf] / ['vedva] 'widower' (m.) / 'widow' (f.)   SI *védovo / védova*

   b.   ['magɐr] / ['magra] 'thin' (m.) / (f.)   SI *mágro / mágra*

In the following section we will consider some aspects of phonological theory concerning phonotactic requirements which are connected with syncope and epenthesis. In section 3 we will consider these phenomena in dialects of Emilia Romagna, while section 4 goes into further details of some theoretical issues.

2. Syllable theory and final consonants

Previous analyses relating syncope and epenthesis phenomena to syllable structure (see Repetti 1995a, b, Loporcaro 1998) account for vowel insertion as a strategy to repair sequences that do not satisfy the requirements concerning the syllable. For example, in Repetti (1995a, b) these repair strategies are deemed to be instances of resyllabification that take place to allow both segments of an impossible cluster to receive syllabic constituency, either in the onset or in the coda. In the example in (2b) *(forn → forne)* the second element of a complex coda becomes the onset of a new syllable, while in (2c) *(forn → foran)* the first element of the coda becomes an onset and the second element becomes the coda of a new syllable.

In this perspective, phonological analysis mainly aims to account for the fact that a vowel is inserted in the middle or at the end of the clusters (Repetti 1995a).

A different account of these data will be presented here, developed in the Government Phonology framework (see Kaye, Lowenstamm & Vergnaud 1990, Harris 1994). In this theory, on the basis of strong and various empirical evidence (see for discussion Harris & Gussman 1998), a final consonant is associated to the onset, while codas are excluded from word-final position. Furthermore, any onset,

---

[1]Vowels other than /a/ may appear in final position in dialects of Emilia and Romagna. In Finalese, for instance, /i/ is the marker of feminine plural: ['magri] 'thin' (f, pl).

20

independently of its position in the word, must be followed by a nucleus; therefore, a consonant in word-final position requires a following nucleus, although emptied of its segmental content. These phonotactic relations are expressed by the principles in (4):

(4) a. *Coda Licensing*:   Post-nuclear rhymal positions must be licensed by a
       following onset (Kaye 1990a);

   b. *Final Onset Licensing*: a final onset consonant is licensed by a following
       empty nucleus (cf. Kaye, Lowenstamm e Vergnaud 1990).

Only languages that parametrically allow final empty nuclei permit consonants in word-final position. This is the case for Northern Italian dialects, and we can now represent the alternations in (1) as follows (Ø stands for an empty nucleus):

(5) ['gatø]   ['gata]
   ['bɛlø]   ['bɛla]

Also final clusters need to be sanctioned by an empty nucleus. Depending on their segmental content, clusters may consist of a coda-onset sequence (displaying falling sonority contour) or of a complex onset (displaying rising sonority contour). In both cases, the head of the onset, which is licensed by the empty nucleus, has to license in turn another position, which may correspond to the coda or to the second element of the onset itself (arrows indicate licensing relations)[2]:

(6)   x   [x x]ᵣ [x]ₒ [x]ₙ   [x x]ₒ [x]ₙ
      f   o r   n   Ø   m a   g r   Ø

Only some of the languages that permit final consonants also show final clusters. This variability depends on a parameter which regulates licensing properties of the final empty nucleus: if the nucleus can 'license to govern' (Charette 1993), i.e. if it allows the onset to license its complement, consonant clusters may occupy word-final position. Parametric variation also regards the composition of clusters, since some languages only allow direct licensing, i.e. between adjacent nucleus and onset (see 6a), while other also admit indirect licensing (see 6b), whereby the nucleus and the head of the onset are not adjacent. Typologically, final clusters consisting of complex onset imply coda-onset clusters, since a nucleus that can license indirectly is necessarily able to license directly (Charette 1993). Parametric options concerning

---

[2] In any syllabic constituent the head, that is the first segment, licenses its complement. The coda, which is a complement of the rhyme, must be licensed by its head, the preceding nucleus, and by the following onset (cf. among other Harris 1994).

licensing properties of final empty nuclei give rise to a typological variation, which is summarised in (7). Languages of the first type, like Standard Italian, do not allow empty nuclei[3]. Final empty nuclei cannot license to govern in languages of type II, only permitting single final consonants, while they can license to govern, although only directly, in languages of type III, in which only coda-onset clusters are possible. In languages of type IV, the final empty nucleus exercises any kind of licensing activity, allowing any kind of cluster.

(7)

	Final complex onset	Final coda-onset	Final onset
I) (e.g. Standard Italian)	*	*	*
II) (e.g. Spanish)	*	*	✓
III) (e.g. English)	*	✓	✓
IV) (e.g. French)	✓	✓	✓

Northern Italian dialects exhibit a variety of possible structures, referring to the third and fourth typological classes. Only few dialects permit final clusters of any kind, including complex onset (8a), and most varieties belong to the type III. However, a further distinction is necessary in this regard, since in many varieties we find restrictions concerning the kind of consonants that may constitute a final coda-onset cluster (8b and 8c). Generally speaking, sequences of segments that are too close on the sonority scale (or, in different terms, too similar in their segmental complexity, see Harris 1994), tend to be avoided. In the dialect of Finale Emilia, exemplified in (8c), the sequence vibrant-nasal is not allowed (data in (8 a, b) are taken from Savoia, in prep.):

(8) a. ['kurt] 'short' ['forn] 'oven' ['magr] 'thin' (dialect of Colonnata, Carrara)
    b. ['kœːrt] 'short' ['furn] 'oven' *magr (dialect of S. Bartolomeo Pesio, Cuneo)
    c. ['kurt] 'short' *forn *magr (dialect of Finale Emilia, Modena)

---

[3] There are few words ending with consonant in Standard Italian; all the same, for reason we will not take into account here, Italian can be considered a language that does not license final consonants (see Bafile 2002).

22

3. Syncope and epenthesis in Emilian dialects.

In the dialects of Emilia Romagna, clusters resulting from final vowels deletion and consisting of both complex onsets or not allowed coda-onset sequences, typically undergo epenthesis. In this section we will discuss data referring to the dialect of Finale Emilia (Modena).

In (9a) we find exemplified possible final clusters, while in (9b) we can see alternations between forms that maintain final vowel and forms that have undergone final vowel deletion. An epenthetic segment, which in this variety is a centralised low vowel, is inserted between the two consonants of an impossible cluster, if this is word-final:

(9) a. ['bɔsk] 'wood' b. ['pegɐr] / ['pegra] 'lazy (m./f.)' SI *pigro / pigra*
['loŋg] 'long'   ['kavɐr] / ['kavra] 'goat (s/pl)' SI *capre / capra*
['dols] 'sweet'   ['ferɐm] / ['ferma] 'still (m/f)' SI *fermo / ferma*
['kɔrp] 'body'   ['larɐg] / ['larga] 'large (m/f)' SI *largo / larga*

The same kind of alternations may follow from internal vowel syncope and epenthesis:

(10) [sal'vadɐg] / [sal'vadga] 'wild (m/f)'   SI *selvático / selvática*
['mɔrbad]   / ['mɔrbda] 'soft (m/s)   SI *mórbido / mórbida*
['umɐd]   / ['umda] 'damp (m/f)'   SI *úmido / úmida*
['femɐn]   / ['femna] 'female (s/pl)'   SI *fémmine / fémmina*
[a 'karɐg] / [al 'karga] 'I charge' / 'he charges'   SI *cárico / cárica*

Following previous work on similar phenomena in other languages (see Kaye 1990b for Arabic, Charette 1991 for French, Harris 1994 for English, Savoia 1994 for Italo-Albanian dialects), we will develop here the hypothesis that data like the ones in (9) and (10) reveal the presence of empty nuclei in different positions of the word.

In the dialects we are considering, unstressed vowels have undergone a process of weakening, both word-finally and word-internally. The segmental content of weak nuclei has generally been deleted, leaving as its trace the empty nucleus. The effects of this process are shown in (11), where a Vulgar Latin base is compared with the corresponding lexical representation of present-day dialects:

(11) *silvaticu(m)* (m)   /salvádØgØ/
     silvatica (f)   /salvádØga/

Empty nuclei can be considered to have a latent segmental content, that is realised and therefore associated to the nuclear position only when certain conditions are met. These conditions regard the relation between the final and the

23

internal nucleus, and are expressed in the following statement (we will come back to this point in the next section):

(12) **Proper Government** (cf. Kaye 1990b, Charette 1991)
  To be empty a nucleus must be properly governed, i.e. either be licensed by an adjacent realised nucleus, or be parametrically sanctioned word finally.

The empty nucleus does not license segmental content if it is properly governed, while it must be associated to a minimal content, i.e. the epenthetic vowel, when it is not properly governed. The way proper government gives rise to the syncope-epenthesis alternations is shown in (13):

(13) salvádØgØ   [sal'vadɐg]   *sal'vadg
   salvádØga   [sal'vadga]   *sal'vadɐga

The typical pattern of syncope and epenthesis can also be observed in words that, etymologically, do not contain an internal postonic vowel. This is the case for the words in (9b), which exhibit exactly the same alternation shown in (10), in that the appearance of the epenthetic vowel is determined by the same conditions. For this reason, we will attribute to these forms the same lexical representation, despite their different etymological bases:

(14) *largu(m)*   /lárØgØ/   ['larɐg]   *'larg
   caricu(m)   /kárØgØ/   ['karɐg]   *'karg

The words in (14) are structurally identical. Both contain an epenthetic vowel corresponding to an internal empty nucleus not properly governed. However, these two words result from different developmental paths: the insertion of an internal nucleus in the first case and the delinking of its segmental content in the other.

This approach to syncope and epenthesis differs from traditional account, which regards vowel deletion and insertion as two autonomous, although related, processes, and considers epenthesis as a strategy to repair what syncope destroys.

The main feature of the account we propose here is that it meets the requirement of Structure Preservation, a principle of the grammar whereby the phonological structure established in the lexicon remains immutable through the derivation[4]. In our analysis, forms that are tightly linked in the lexicon and only differ for inflection (e.g. masculine vs. feminine, singular vs. plural) correspond to the same lexical representation. As a consequence, no arbitrary change in the syllabic status of segments needs to be postulated. Following this account, /d/ and /g/ are associated to onset positions in both forms of the pair *salvádag / salvádga*, while in traditional

---

[4] Structure Preservation is also known as Projection Principle, an expression that highlights the parallelism between phonology and syntax.

24

analysis /d/ would be considered, respectively, an onset and a coda and /g/ a coda and an onset.

Furthermore, this analysis can nicely find an answer for some specific questions that would not otherwise find a solution.

A first point is raised by the forms in (10), which contain segmental sequences that are not allowed in the dialect of Finale Emilia, e.g. the cluster with non-homorganic nasal in *úmda,* or the sequences of two stops in *salvádga.* In fact, these segments are structurally not adjacent, since they are separated by an empty nucleus and therefore they do not violate phonotactic constraints.

A further advantage of the account based on empty nuclei is evident if we consider the following data:

(15) a. /lóngØ/ ['loŋg] 'long'

   /bóskØ/ ['bɔsk] 'wood'

   /dólsØ/ ['dols] 'sweet'

   b. /mánØgØ/ /mánØga/   ['manɐg] / ['maŋga]'sleeve' (pl./s.)

   SI *mániche / mánica*

   /tósØkØ/   ['tozɐk] 'poison'   cf. SI *tóssico* 'toxic'

   /sálØsØ/   ['salɐz] 'willow'   SI *sálice*

The words in (15a) contain final clusters of the kind that meet the constraints holding in this variety. However, the same sequences are not preserved in the words in (15b) where, following the usual pattern, an epenthetic vowel surfaces when the word ends with a consonant. This behaviour can only be explained as the effect of proper government on an internal empty nucleus, since any other account, referring to generic phonotactic requirements, is contradicted by the forms in (15a). In other terms, forms like **mang, *tosk, *sals* are excluded only because they contain an empty nucleus that being not properly governed needs to be filled by a minimal segmental content.

4. Licensing, proper government and the foot.

Most segmental processes and phonotactic properties of languages are the product of licensing, a universal, asymmetric head-complement relation holding between constituents of the prosodic structure (cf. Harris 1994). In this paper, treating the syncope-epenthesis phenomena, we have considered licensing relations taking place inside and between syllabic constituents. Licensing also operates at the higher levels of the prosodic structure, i.e. the foot, the phonological word, and the phonological phrasal domains. The heads of the syllabic level, the nuclei, are the units that make up the foot, and, by the same mechanism, stressed nuclei are the heads in the foot, in the word and at further levels. By means of the single principle
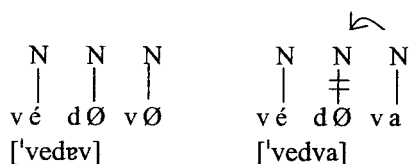
of licensing, whose twofold action consists in autosegmental licensing (a-licensing) and prosodic licensing (p-licensing), this theory accounts for the connection between segmental properties and stress. By a-licensing, each position of the skeletal tier licenses the segmental material with which it is associated, while p-licensing concerns the relations between skeletal positions. At the prosodic levels higher than the syllable, licensing relations are determined by stress, since stressed nuclei are heads in the foot and in the word.

An empty nucleus, as any other prosodic unit, must be p-licensed. The special nature of empty nuclei is expressed in proper government, which is activated by a parameter and sanctions a particular kind of relation among nuclei.

We have seen in section 3 how empty nuclei, when properly governed, cannot a-license segmental content, while they are naturally allowed by their p-licensor to a-license their minimal content, when they are not properly governed. The syncope-epenthesis alternations thus result from the interactions between licensing and proper government (the arrow in (16) indicates proper government):

(16)

$$
\begin{array}{ccc}
\text{N} & \text{N} & \text{N} \\
| & | & | \\
\text{v é} & \text{d Ø} & \text{v Ø}
\end{array}
\qquad
\begin{array}{ccc}
& \overset{\curvearrowleft}{} & \\
\text{N} & \text{N} & \text{N} \\
| & \neq & | \\
\text{v é} & \text{d Ø} & \text{v a}
\end{array}
$$

['vedɐv]   ['vedva]

A question worthy of consideration is how the domain of licensing and proper government should be defined. A natural hypothesis is that this domain should be the foot. However, the definition of foot is somewhat controversial as far as Italian varieties are concerned (see Bafile 1999 for discussion). Before developing this point, it may be useful to note that in Italian varieties primary stress is assigned in the lexicon and that its placement cannot be determined by means of any metrical algorithm or on the basis of exclusively phonological elements.

An open question is whether a foot may contain more than two syllables. In previous work (Bafile 1999) I have proposed that, in Italian, feet consist maximally of three syllables. In fact, for the reason just mentioned, this point has no relevant consequences on stress-assignment, since metrical structure is built on the basis of stress. If we assumed that the foot can maximally contain two syllables, we could represent the structure of an proparoxytonic word like *védova* by building a binary foot starting from the stressed nucleus and attributing to the final syllable the status of extrametrical: [[védo]_F <va>]. However, the dimension of the foot appears to be crucial to phonological phenomena depending on metrical structure.

The data presented in this paper show that the domain of syncope and epenthesis consists of three nuclei, the stressed nucleus and the two weak nuclei to its right, including the empty ones. Whether this domain should be identified as the foot or as

26

a larger constituent (e.g. the 'superfoot', cf. Selkirk 1980) is not a relevant matter and we will not address it here. Instead, the hypothesis here advanced, differing from other analyses of similar facts (Charette 1991, Savoia 1994), is that empty nuclei are included in the metrical structure, i.e. they are visible to it, and therefore they count as constituents in the foot construction.

Independent motivations for this hypothesis can be found in rules concerning stress assignment in different languages. For example, the most frequent stress pattern in Spanish assigns stress on the penultimate syllable when the word ends with a vowel, and on the last syllable when the word ends with a consonant. However, if we analyse the final consonant as an onset licensed by an empty nucleus, the rule can be formulated in more general fashion, provided that the empty nucleus is included in the foot: stress falls on the penultimate syllable (cf. Harris & Gussmann 1998):

(17) Spanish stress :   patáta   papélØ

Including empty nuclei in the metrical structure results in the representation of syncope and epenthesis given in (18). In this way, the prosodic structure is defined in a stable way, consistent with Structure Preservation (in (18) both prosodic licensing and proper government are indicated, by, respectively, straight and curved arrows):
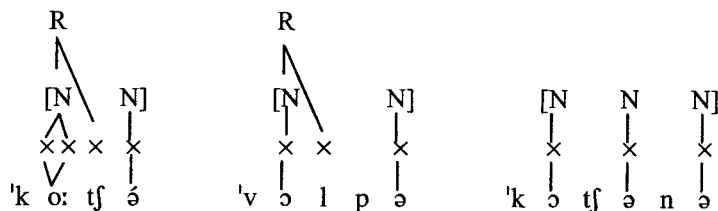
(18)
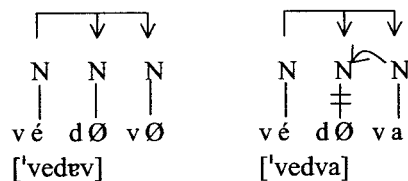
The stress configuration represented in (18) typically causes syncope in many languages. For example, optional vowel syncope in English only takes place if a stressed vowel is followed by two unstressed vowels (the example is from Harris 1994):

(19) English syncope: <séparate> ['sɛprət]   <séparàte> ['sɛpəreɪt] (*'sɛpreɪt)

Trisyllabic stress domain appears to be crucial also in other Italian dialects. In some Southern dialects of Lucania the quantity and quality of stressed vowels depends on the structure of the rhyme (Marotta & Savoia 1994, Bafile 1999). Following a very common pattern, the stressed nucleus contains a short vowel when followed by a coda, and a long vowel if the rhyme does not contain a coda. Interestingly, however, a nucleus followed by two unstressed nuclei is always associated to a short vowel, regardless of the structure of the rhyme.

(20)

```
        R                    R
       /|                   /|
    [N\   N]            [N\      N]         [N    N    N]
    /\  \  |             |  \     |          |    |    |
   x x x  x             x   x     x          x    x    x
    \/     |             |         |          |    |    |
  'k o: tʃ ə          'v ɔ  l  p  ə       'k ɔ  tʃ ə  n ə
```

The forms in (20) show that both the quantity of the rhyme and the number of syllables contained in the stress domain affect the quantity and the quality of the stressed vowel.

We will not go into details of this phenomenon here (see Bafile 1999). However, it is interesting for our purposes to note that the special status of the stressed nucleus in proparoxytonic words can only be explained by referring to a domain corresponding to the strong nucleus and all the weak nuclei to its right.

This observation is consistent with the analysis of syncope and epenthesis we have put forward in this paper, as we have proposed that the domain in which proper government operates, giving rise to the typical alternations of Emilian dialects, corresponds with a sequence consisting in a stressed nucleus followed by two unstressed nuclei, which, under specific circumstances, may be empty.

We can thus conclude that the trisyllabic metrical constituent can be the basis for a unified account of different effects of antepenultimate stress.

References

Bafile, L. (1999) 'Antepenultimate stress in Italian and some related dialects: metrical and prosodic aspects', *Rivista di Linguistica* 11.2: 201-229.

Bafile, L. (2002) 'Le consonanti finali nel fiorentino e nel napoletano', *Rivista Italiana di Dialettologia* 26.

Charette, M. (1991) *Conditions on phonological government*, Cambridge: Cambridge University Press.

Charette, M. (1993) *Government Licensing and Licenser*, ms., School of Oriental and African Studies.

Harris, J. (1994) *English sound structure*, Oxford: Blackwell.

Harris, J. & E. Gussmann (1998) 'Final codas: why the west was wrong', in: E. Cyran (ed.) *Structure and interpretation in phonology: studies in phonology*, Lublin: Folia: 139-162.

Hayes, B. (1995) *Metrical stress theory: principles and case studies*, Chicago: University of Chicago Press.

Kaye, J. (1990a) ''Coda' licensing', *Phonology* 7: 301-330.

Kaye, J. (1990b) 'Government in phonology. The case of Moroccan Arabic', *The Linguistic Revew* 6: 131-159.

Kaye, J., J. Lowenstamm & J.-R. Vergnaud (1990) 'Constituent structure and government in phonology', *Phonology* 7: 192-231.

Loporcaro, M. (1998) 'Syllable sonority and sequencing. Evidence from Emilian', in: A. Schwegler, B. Tranel & M. Uribe-Etxebarria (eds.) *Romance linguistics. Theoretical perspective*, Amsterdam: Benjamins: 155-170.

Marotta, G. & L. M. Savoia (1994) 'Vowel properties and nuclear constituents: evidence from Italian dialects', *Probus* 6: 43-79.

Repetti, L. (1995a) 'Epentesi nei dialetti emiliani e romagnoli', in: E. Banfi *et al.* (eds.) *Italia settentrionale: crocevia di idiomi romanzi*, Atti del Convegno Internazionale di Studi, 1995, Tuebingen: Max Niemeyer: 81-86.

Repetti, L. (1995b) 'Variazione nella sillabificazione: il caso dei dialetti emiliani e romagnoli', *Rivista Italiana di Dialettologia* 19: 41-56.

Savoia, L. M. (1994) 'Parametrical variation in prosodic licensing: evidence from Italo-Albanian dialects', *Rivista di Grammatica Generativa*, 19: 105-141.

Savoia, L. M (in prep.) *Fonologia dei dialetti italiani.*

Selkirk, E. O. (1980) 'The role of prosodic categories in English word stress', *Linguistic Inquiry* 11: 563-605.

29