Modelling phonologization: vowel reduction and epenthesis in Lunigiana dialects

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Cover Page

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The handle http://hdl.handle.net/1887/32587 holds various files of this Leiden University dissertation.

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Title: Modeling phonologization : vowel reduction and epenthesis in Lunigiana dialects
Issue Date: 2015-03-24

PART I: DIALECTOLOGICAL OVERVIEW

2 The two dialects

2.1 Introduction

Carrarese and Pontremolese are two Northern Italian dialects (Rohlfs 1966; Maffei Bellucci 1977; Loporcaro 2009) spoken in Lunigiana. Within this group, historical and geographical conditions fostered the development of the linguistic variability that allows us to classify Lunigiana dialects as peripheral varieties (Bertoni & Bartoli 1925; Andersen 1988)[5], namely as varieties where it is "likely to see the development of elaborate phonetic norms and the proliferation of low-level pronunciation rules" (Trudgill 1992: 206). The extreme variability of Lunigiana dialects has already been observed by Giannarelli (1913), who claims that

> "probably, no other region of the Peninsula can present the scholar with so many phonetic varieties in such a small area, as Lunigiana does; here the phonetic laws of a village differ, often fundamentally, from the ones of nearby villages. The origin of this endless variation can be found, without any doubt, in the encounter within this region of Tuscan, Ligurian and Emilian: indeed, it can be said that Lunigiana dialects represent the joining link between the above mentioned dialects, whose elements continuously clash against each other, the victory smiling alternatively to one or the other. Variability, then, together with the melting of different elements, constitutes the peculiar character of Lunigiana dialects […]."[6] [EC]

Lunigiana's linguistic heterogeneity is mimicked by its politically fragmentary nature. Its northwestern borders nowadays include some Ligurian districts, such as Calice al Cornoviglio, Bolano, Vezzano Ligure, Santo Stefano Magra, Arcola, Sarzana, Lerici, Ameglia, Castelnuovo Magra and Ortonovo. As for its northern and

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[5] "It may be tempting to take 'central' and 'peripheral' as purely spatial terms, but to be of any value in historical dialectology these terms should be used to characterize dialects from the point of view of their socio-spatial function, as suggested by Jakobson […]. As such these are purely empirical, descriptive notions, and they correlate with the density and orientation of networks of communication, peripheral dialects being characterized by a lower density and more clearly defined orientation of lines of inter-community communication than central dialects." (Andersen 1988: 74)

[6] "[n]essuna regione della Penisola forse può presentare allo studioso tante varietà fonetiche in così piccolo territorio, come presenta la Lunigiana; dove le leggi fonetiche di un paese differiscono spesso fondamentalmente da quelle di un paese vicino. L'origine di questa infinita varietà è da ricercarsi senza dubbio nell'incontro, in questa regione, del Toscano, del Ligure, dell'Emiliano: anzi si può dire che i dialetti della Lunigiana rappresentano l'anello di congiunzione fra le tre unità dialettali sopra ricordate, i cui elementi cozzano in questa regione di continuo fra loro, ed ora la vittoria arride agli uni, ora agli altri. La varietà dunque e la fusione di elementi diversi costituiscono il carattere peculiare dei dialetti Lunigianesi […]." (Giannarelli 1913: 261)

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eastern borders, they coincide with the Tuscan border, including Zeri and Pontremoli districts in the north, and Filattiera, Bagnone, Licciana Nardi, Comano, Fivizzano and Casola in Lunigiana districs in the east. Finally, Lunigiana's southern border crosses the Massa-Carrara district, including only Carrara. This is shown in Fig. 2.1, where the borders of Lunigiana and its districts are represented (in the map, only Carrara, Pontremoli and Ortonovo districts have been shaded).

Fig. 2.1   Lunigiana's political and linguistic borders

From a geographical point of view, this region is closed on the western, northwestern, eastern and southeastern sides by a crown of mountains (respectively, the southernmost side of the Ligurian Apennines, the western side of the Tusco-Emilian Apennines and the northwestern side of the Apuan Alps) and on the southwestern side by the Tyrrhenian Sea. This is shown in Fig. 2.2, where Lunigiana's geographical conformation is shown together with its position with respect to Italian borders and, in the bottom-right circle, to the La Spezia-Rimini bundle of isoglosses.
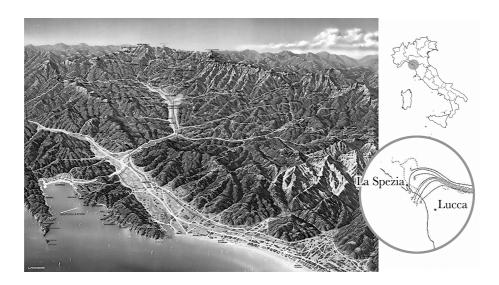
Fig. 2.2   Lunigiana's geographical positioning

Notwithstanding the apparently closed setting of this half-moon, different populations met and clashed within this region, the *limes* periodically moving and dividing ancient Ligurians from Etrurians (VI-V BC) and Romans (II BC), Byzantines from Langobards (VI-VII AD), Maritime Republics of Genoa from the one of Pisa (XI AD) and from Milan (XV AD), Florence from Modena and Parma (XVI-XVIII AD), the Kingdom of Sardinia form Modena and Parma (XIX-XX AD) and, nowadays, Tuscany from Liguria and Emilia (Pistarino 1986). One of the reasons for the political instability of this region is its having always been a stopover along the north-south track (Ambrosi 1967). Indeed, this area was cut through by important commercial and pilgrim routes such as the pre-Roman path from the modern-day Lucca to Piacenza, the Via Aurelia (Rome - Arles), the Via Francigena (Rome - Canterbury) and a pair of routes from Luni, one of the most important Roman harbours (nowadays in Ortonovo district), to Emilian centres (Banti 1932; Ambrosi 1967). Along these routes, hence, together with money, marble and swords, different languages met and crossed for many centuries, making Lunigiana a transition area between the Northern Italian varieties of Ligurian and Emilian, and the Tuscan in the south. As a consequence, a lot of variation can be found within the whole area, the influence of the surrounding varieties increasing the more close close to the natural boundaries we get. As hinted at in the opening quote, the transitional nature of Lunigiana varieties is particularly evident in more 'superficial' linguistic component, such as lexicon, phonetics and phonology (Maffei Bellucci 1977).

As an example of this great variation, it suffices to have a look at Carrara district. Indeed, within this small area (71,01 km^2), etymologically Ligurian, Emilian and Tuscan lexical entries can be found, each with its proper 'phonetic dress'.

Interestingly, their percentage varies depending of the part of the district that is taken into account. For instance, while in the variety spoken in the centre of Carrara the syncopated Emilian forms are the majority, as soon as we get closer to the seaside (Avenza), the percentage of Ligurian words (which display a lower degree of vowel reduction) increases, as does the percentage of Tuscan forms in the southeastern villages of Colonnata, Bedizzano and Bergiola Foscalina (in these areas, for instance, long consonants resisted the elsewhere regular degemination). The form used for 'to lean', for instance, is [arəmˈbarə] (see Genovese *arembare*) in Avenza, but [aponˈtar] in Carrara, while the form for 'anaesthesia' is [alˈlɔp:jə] in Colonnata, Bedizzano and Bergiola Foscalina, but [ˈdɔrma] in Carrara.

Similarly, in the whole of Lunigiana, different groups of dialects have been identified depending on the quantity of features shared with the Tuscan, Ligurian and Emilian dialects. One of the first proposals in this direction has been made by Giannarelli (1913), who divides the area into the three groups presented in Tab. 2.1:

Tab. 2.1   Lunigiana dialects classification (adapted from Giannarelli 1913)

a.   *Tusco-Ligurian* dialects

spoken between the lower part of the Magra river (northwest), the sea (southeast), the Frigido (east) and the Apuan Alps (north), with two offshoots along the upper part of the Aulella river (up to Casola and Regnano) and its affluent (the Lucido river, up to Gragnola)

b.   *Tusco-Emilian* dialects

spoken along the lower part of the Aulella and Rosaro rivers (east), the Taverone river up to the Apennines (west) and the Magra river up to Villafranca and Bagnone (north)

c.   *Liguro-Emilian* dialects

spoken in the upper part of the Magra river (north of Villafranca), up to the Apennines

Notwithstanding the validity of this partition, according to which Carrarese and Pontremolese belong, respectively, to b) and c), it has to be pointed out that the linguistic borders between these three sub-groups of varieties are obviously not so sharp. Indeed, Ligurian features progressively decrease from west and northwest to southeast, where they increasingly melt with Tuscan features. Similarly, Emilian features progressively decrease from north to south and southeast, increasingly melting with Tuscan features (Bottiglioni 1911; Giannarelli 1913; Ambrosi 1956; Maffei Bellucci 1977; Luciani 1999, 2002). Because of the variety and the gradualness of these linguistic dimensions, other partitions have been proposed, such as the one suggested by Maffei Bellucci (1977), who identifies seven main groups (with a set of sub-groups) centred on the (historically) more important towns of the area: Pontremoli, Zeri, Filattiera, Bagnone, Sarzana, Carrara and Lerici. To side with

one or the other of the different partition proposals is a matter of deciding which features are considered more or less relevant in this respect[7].

It is interesting to point out that, among the various phonetic/phonological characteristics contributing to this kind of *sfumato* picture of Lunigiana dialects, one of the firstly recognized features is the variability of the unstressed vowel outcome. Indeed, Giannarelli (1913) considers the "vocali indistinte", namely the "faint", reduced central vowels, as the joining link between the unstressed vowels' persistence in Tuscan and their constant deletion in Emilian:

> "And this is an extremely natural thing; that a vowel which tends to disappear is first obscured and then, little by little, disappears: actually, the fact that on the Emilian border the phenomenon is very rare, while it is more frequent in Fivizzano and extremely frequent, almost constant, in Lower Lunigiana […] leads us to maintain that Lunigiana dialect's faint vowel, in place of the unstressed vowels that tend to disappear, is the joining link between their persistence in Tuscan, and their disappearance in Emilian."[8] [EC]

Interestingly, Giannarelli (1913) introduces the parallelism between the diatopic and the diachronic variation, claiming that the graduality characterizing the diachronic dimension of the change under concern can be synchronically mimicked by the diatopic distribution of unstressed vowel outcomes within this peripheral area:

> "the quantity of the cases of [ə] persistence is inversely proportional to the distance that divides the villages of this area from Tuscany, and directly proportional to the distance that divides them from Emilia."[9] [EC]

The data supporting this claim will be extensively presented and discussed in Chapters 5 and 7, where the difference between Carrarese and Pontremolese with respect to the "faint vowel" is made evident.

As already hinted at above, though, notwithstanding this difference, the two dialects under concern belong to a pretty homogeneous group of varieties sharing a wide set of features. Indeed, since this area comprises all the southern isoglosses

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[7] Given that in the present work we are considering the phonological systems of the varieties spoken in Carrara and Pontremoli, and that these varieties are classified as belonging to different groups in every proposed partition, we do not take any particular side. What matters here is that they display a significantly different behaviour with respect to the phonological processes under concern.

[8] "E questa è cosa naturalissima; che una vocale tendente al dileguo prima si oscuri e poi dilegui del tutto a poco a poco: anzi il fatto che sul confine Emiliano […] il fenomeno è molto raro, mentre si fa più frequente a Fivizzano e frequentissimo, fino a diventar costante, nella Lunigiana inferiore […] ci induce ad asserire che la vocale indistinta dei dialetti della Lunigiana, al posto delle vocali atone che tendono al dileguo, è l'anello di congiunzione fra la persistenza di esse vocali, propria del toscano, e il dileguo costante dell'Emiliano." (Giannarelli 1913: 278)

[9] "il numero dei casi di persistenza [of [ə], EC] è inversamente proporzionale alla distanza che separa i paesi di questa zona dalla Toscana, e direttamente proporzionale alla distanza che li separa dall'Emilia." (Giannarelli 1913: 278)

characterizing Northern Italian varieties (Fig. 2.2 and Fig. 3.1), Lunigiana dialects can be included within this dialectal group.

Together with Northern Italian dialects, Lunigiana varieties share the features presented in Tab. 2.2[10] (the dialect of Ortonovo has been included as representative of the Tusco-Ligurian group presented in Tab. 2.1):

Tab. 2.2   Phonological features shared among Lunigiana and Northern Italian dialects

a.   Degemination

SEPTE(M) 'seven'   >   Carr., Pontr. and Ort. [sɛt] vs. It. [ˈsɛtːe]

b.   CL- > [kʲ] > [tʃ] and GL- > [gʲ] > [dʒ]

CLĀVE(M) 'key'   >   Carr., Pontr. [ˈtʃava], Ort. [ˈkʲawa] vs. It. [ˈkjaːve]

GLĂCIĒ(M) 'ice'   >   Carr. [dʒats], Pontr. [dʒas], Ort. [ˈgʲatʃo] vs. It. [ˈgjatːʃo]

c.   (-)Cᵉ/ⁱ- > [tʃ] > [ts] > [s] and (-)Gᵉ/ⁱ- > [dʒ] > [dz] > [z] (see also Section 3.1.1)

CENTU(M) 'hundred'   >   Carr. [tseŋt], Pontr. [sent], Ort. [ˈtʃento] vs. It. [ˈtʃɛnto]

GĔLŪ(M) 'freeze'   >   Carr. [dzel], Pontr. [zel], Ort, [ˈdʒelo] vs. It. [ˈdʒɛːlo]

d.   SKJ-, STJ-, SKᵉ/ⁱ- > /s/

BESTIA(M) 'beast'   >   Carr., Pontr. [bis 'snake', Ort. [ˈbiʃo] vs. It. [ˈbiʃːa]

e.   /n/ > [ŋ] in etymological and derived Cd position

CĀNE(M) 'dog'   >   Carr., Pontr., Ort. [kaŋ] vs. It. [ˈkaːne]

f.   voicing of intervocalic voiceless plosives and /s/

CUTICA(M) 'rind, turf' >   Carr., Ort. [ˈkod⁽ᵊ⁾ga], Pontr. [ˈkudga] vs. It. [ˈkoˑtica]

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[10] See also Section 3.1, where a picture is given of the features characterizing Western Romance.

g.　-RJ- > /r/

FURNĀRĬU(M) 'baker' >　Carr., Ort. [forˈnar], Pontr. [furˈnar] vs. It.
[forˈnaːjo]

h.　Ŏ, Ĕ > [o](/[u]), [e](/[œ]) in open syllables and in closed syllables if
followed by a nasal

BŎNU(M) 'good'　　　>　Carr., Ort. [boŋ], Pontr. [buŋ] vs. It.
[ˈbwɔːno]
DĔNTE(M) 'tooth'　　>　Carr. [dent], Ort. [ˈdento], Pontr. [dønt])

Besides these phonological features, Lunigiana and Northern Italian dialects
share some morphosyntactic feature, such as the ones presented in Tab. 2.3 (Maffei
Bellucci 1977; Luciani 1999):

Tab. 2.3　　　Lunigiana and Northern Italian dialects' morphosyntactic features

a.　I-III feminine declension /-a/ metaplasm

CARNĔ(M) 'meat'　>　Carr., Ort., Pontr. [ˈkarna] vs. It. [ˈkarne]

b.　confluence of II and III masculine declension

PISCĔ(M) 'fish'　　>　Carr., Pontr. [ˈpes], Ort. [ˈpeʃo] vs. It. [ˈpeʃːe]

c.　/-i/ PL.MASC morpheme instead of /-a/ PL.N morpheme

BRĀCHĬA 'arms'　>　Carr. [ˈbratsi], Ort. [bratʃi], Pontr. [brasi] vs.
It. [ˈbratːʃa]

d.　augmentative by adjective-participle juxtaposition

It. [ˈnwɔːvo di ˈdzekːa] 'brand new' vs. Carr. [ˈnov ts⁽ᵊ⁾ˈkent], Pontr.
[ˈnøṷ tʃœˈkant], Ort. [ˈnoo¹¹ ts⁽ᵊ⁾ˈkento]

e.　obligatory proclitic subject

It. [ˈdiːtʃi] '(you) say' vs. Carr. [t ˈdits], [t ˈditʃa], Pontr. [t ˈdiz]

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¹¹ Notice that this form is bisyllabic. As a consequence, the two rounded vowels of the
transcribed form constitute two different nuclei. Phonetically, this is made evident by a tonal
break occurring between the two acoustically identical vowels.

    f.   past perfect instead of preterite

       It. [lo ˈfeːtʃi] 'I did it' vs. Carr. [a ɖ ɔ ˈfat], Pontr. [a l ɔ ˈfat], Ort. [a ɖ ɔ ˈfato]

Now that the features contributing to the characterization of Lunigiana dialects as Northern Italian varieties have been presented, in the next two sections a sketch is given of the phonological features singularly characterizing Pontremolese (Section 2.2) and Carrarese (Section 2.3).

2.2   Pontremolese

2.2.1 Consonant system

Pontremolese is spoken over an area of 182.48 km^2, with a population of 7,524 inhabitants[12]. As far as social mobility is concerned, the main (economical and educational) centre of attraction is represented by the Emilian town of Parma. This is a consequence of the XIX century political unification of Pontremoli and the surrounding villages (Zeri, Mulazzo, Filattiera, Bagnone and Villafranca) into a single administrative district that, after the Congress of Vienna (1815), has been assigned to Parma's Borbon family (Maffei Bellucci 1977 and references therein). From this moment, the road running along the Cisa mountain pass, i.e. the road that links Lunigiana to Parma, progressively gained importance.

As for the dialect, the knowledge of Pontremolese is more and more exclusively passive (see also Section 4.1). Younger generations, indeed, rarely exhibit an active competence: the regional variety of Italian is nowadays their mother tongue.

As reported by Maffei Bellucci (1977) and Restori (1892), Pontremolese displays a 19-segment consonant system:

Tab. 2.4   Pontremolese consonant system (adapted from Maffei Bellucci 1977: 34)

	Bilab.	Labiodent.	Alv.	Postalv.	Retrofl.	Pal.	Velar
Stop	p b		t d				k g
Affricate				tʃ dʒ			
Fricative		f v	s z				
Nasal	m		n			ɲ	(ŋ)
Lateral			l				
Rhotic			r				
Glide						j	w

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[12] Data relative to 31st December 2013 (ISTAT).

While Pontremolese stops and fricatives do not display any particular characteristic[13], it is interesting to point out that, as in the majority of Northern Italian dialects (Tuttle 1991), the alveolar nasal is neutralized to its velar counterpart in word-final position (see also Tab. 2.2e). Together with the labiodental nasal occurring before labiodental stops (see fn. 13 for an example), the velar nasal should hence be considered an allophone of the alveolar one.

Another segment displaying an interesting behaviour is the lateral. Indeed, when followed by another consonant, /l/ can be neutralized either to /u̯/ or to /r/: [myl] < MŪLU(M) 'mule' vs. [mur] < MŪRU(M) 'wall', but [kau̯d] < CǍLǏDU(M) 'hot' vs. [kurp] < CǑLǍPHU(M) 'strike'. Moreover, it can be also deleted: [dus] < DŪLCE(M) 'sweet', [sɔd] < SǑLDU(M) 'money'). Finally, another context triggering a change in the etymological lateral is the presence of a following front glide/vowel: [ˈfɔdʒa] 'leaf' vs. It. [ˈfɔʎːa] 'leaf' < FŎLĬA).

As can be noticed by these examples, the lateral is consistently reduced when occurring in coda position, i.e. in a prosodically weak position. Interestingly, the fact that in forms such as [myl] ('mule') the lateral is not reduced, suggests that word-final consonants should not be considered coda segments. Indeed, they are considered onsets of a syllable projected by a following nucleus lacking any phonological content (Section 6.3.1.1.2). It should also be noted that when reduction occurs, its direction depends on the content of the following onset and, partially, on that of the preceding nucleus: as reported by Maffei Bellucci (1977), if the lateral is followed by dental or palatal consonants, then /l/ is reduced to [u̯]. Furthermore, if the preceding vowel is back, then the lateral can also be dropped. If, instead, the following onset is a labial or velar consonant, then it is reduced to [r] (see Section 7.4, fn. 140, for a tentative phonological account of the [u̯] ~ [r] alternation).

The behaviour of the lateral in coda position described above is displayed by other Northern Italian dialects as well (Loporcaro 2009). Similarly, Pontremolese shares with these varieties the voicing of intervocalic voiceless consonants (see Tab. 2.2f). Indeed, few forms can be found which resisted this assimilative process: [buˈkal] 'chamber pot', [ˈgutʃa] 'needle', [gyˈsuŋ] 'dry chestnut', but [furˈmiga] 'ant' (It. [forˈmiːka]), [ˈreza] 'root' (It. raˈdiːtʃe), [muˈruza] 'girlfriend' (It. moˈroːza) (Maffei Bellucci 1977: 36-37).

Another phonological characteristic that deserves to be mentioned is the outcome of Latin velar and alveolar stops when followed by the front glide/vowel: G[e,i], GJ and DJ are reduced to the fricative [z] ([zel] 'freeze' vs. It. [ˈdʒɛːlo], [dzyŋ] 'fasting' vs. It. [diˈdʒuːno]), and C[e/i], TJ and STJ to [s] ([bras] 'arm' vs. It. [ˈbratːʃo], [ˈvisi] 'vice' vs. It. [ˈvitːtsjo]). Interestingly, as can be grasped from the examples just given (see also Tab. 2.2b and Tab. 2.2c), Pontremolese outcomes constitute a further argument supporting the hypothesis according to which this dialect represents a diachronic stage that follows the Carrarese one: while Standard Italian preserves the post-alveolar affricate outcomes of proto-Romance, Carrarese shows their alveolar

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[13] They behave similarly to the corresponding Standard Italian segments: they are always distinctive, except from the set of sibilants. Indeed, the voicing contrast of this subset of fricatives is neutralized in preconsonantal position, where the sibilant assimilates to the voicing specification of the following consonant ([skrit] 'written' vs. [zguɱfjar] 'to deflate'). The same holds for Carrarese.

counterparts and Pontremolese, crucially, their fricative cognates. In other words, Standard Italian, Carrarese and Pontremolese seem to be arranged along a diachronic *continuum* whereby the relevant consonant's place of articulation is gradually assimilated to that of the following front segment. Similarly, these segments seem to gradually lose their consonantal strength: they start as stops (Latin), develop into affricates (Standard Italian and Carrarese) and end up as fricatives (Pontremolese and other Northern Italian dialects; Loporcaro 2009).

2.2.2 Vowel system

The Pontremolese vowel system is made up of the eight segments presented in Tab. 2.5, where the right-hand segments of the front series represent the rounded counterparts of the left-side vowels, and the brackets the dubious phonological status of the relevant vocoid (see below):

Tab. 2.5   Pontremolese vowel system (adapted from Maffei Bellucci 1977: 34)

	Stressed vowels			Unstressed vowels		
	Front	Central	Back	Front	Central	Back
High	i y		u	i		(u)
High-mid	e ø					
Low-mid	ɛ (œ)		ɔ			
Low		a			a	

The first things worthy of attention are the front/back asymmetry of the stressed vowel subsystem and the presence of front rounded vowels.

As for the front rounded vowel class, it has to be pointed out that it constitutes one of the major arguments in favour of the classification of Pontremolese as belonging to the Liguro-Emilian group (Tab. 2.1). Furthermore, these vowels have been resorted to by Maffei Bellucci (1977) as evidence for the linguistic influence exerted on Pontremolese by Lombard dialects such as Piacentino (Maffei Bellucci 1977: 22-24). Indeed, both Ligurian and Lombard display front rounded vowels, which, in Lunigiana, are only present in Pontremolese and in the two related sub-varieties spoken in Zeri and Filattiera.

As a matter of fact, the phonological status of one of these rounded vowels, namely of the front low-mid vowel that Maffei Bellucci (1977) transcribes as [œ], is uncertain. Similarly to what happens in Turin dialect (Berruto 1974), the [ø] ~ [œ] opposition does not display a great functional load. Indeed, these two vocoids could be considered two allophones (Restori 1892; Savoia 1983), but, since they do not seem to occur in complementary distribution, they have been considered by Maffei Bellucci (1977) to have a phonological, distinctive status. However, as explicitly claimed by Maffei Bellucci (1977: 47, fn. 103), she lacks experimental evidence to substantiate the acoustic difference between these two vocoids. Moreover, as pointed out by Carpitelli (1995: 80), Maffei Bellucci (1977) grounds the alleged

absence of complementary distribution on etymological considerations. Maffei Bellucci (1977), indeed, maintains that, while [ø] developed either from Ŏ in open syllables (['søla] < SŎLĔA 'sole') or as a result of an assimilation process (to a following labial consonant: ['fømna] < FĒMĬNA 'female'), [œ] developed either from Ĕ in preconsonantal position ([dœnt] < DĔNTE(M) 'tooth'), or from Ē/Ĭ in etymologically closed syllables (['fœta] < *fetta 'slice', [vœrd] < VIR(Ĭ)DE(M) 'green'). To solve the issue about the phonological status and the actual acoustic content of [ø] and [œ], Carpitelli (1995) analyses the vocoids under concern in the relevant phonological contexts and shows that as far as their formant structure is concerned, these sounds do not show any significant difference. This finding rebuts the [ø]/[œ] distinction proposed by Maffei Bellucci (1977) for Pontremolese and supports instead the impressionistic/auditory-grounded proposals of Restori (1892) and Savoia (1983), according to which these two phonetic labels refer to a single acoustic, and phonological, object: [ø] /ø/. This is the reason why the lower front rounded vowel has been represented within brackets in Tab. 2.5.

As for the front/back vowel asymmetry, Tab. 2.5 shows that while the front series displays three segments, the back one lays out only two vowels: the proto-Romance [o] has not been preserved. Indeed, the vowels that have been reduced to [o] in proto-Romance (Calabrese 2003), namely Ō and Ŭ (It. [aˈmoːre] < AMŌRE(M) 'love'; It. ['doltʃe] < DŬLCE(M) 'sweet'), developed into [u] ([aˈmur] 'love'; [dus] 'sweet') in Pontremolese. Furthermore, notice that [u] can be the outcome of Ŏ as well, i.e. of a vowel that in proto-Romance developed into [ɔ] (It. ['bwɔːno] < BŎNU(M) 'good'). Indeed, if followed by a nasal, Ŏ developed into a back high vowel ([buŋ] 'good'; as shown in Tab. 2.2f, a similar raising affected the corresponding front vowel: Ĕ > [ø]). This also happened to Ŏ in syllables closed by a liquid or a nasal ([kurp] < CŎL(Ă)PHU(M) 'strike'; ['stumg[(ə)]] < STOMĂCHUS 'stomach'). Together with the 'regular' outcome (OCŬLU(M) 'eye' > It. ['ɔkːjo], Pontr. [ɔtʃ]) then, Ŏ displays a further development: [ø]. In this case, the triggering context is the open syllable: ['søla] < SŎLĔA 'sole'.

Latin Ū, instead, developed into [y]: LŪNA(M) 'moon' > Pontr. ['lyna] vs. It. ['luːna].

As for the front vowels, they do not display any difference with respect to the proto-Romance developments: Ē and Ĭ gave [e] (CĂTĒNA(M) 'chain' > Pontr. [kaˈdena], It. [kaˈteːna]; SĬTI(M) 'thirst' > Pontr. ['seda], It. ['seːte]), Ī gave [i] (AMĪCU(M) 'friend' > Pontr. [aˈmig], It. [aˈmiːko]) and, if not occurring in an open syllable or in a syllable closed by a nasal (see Tab. 2.2f), Ĕ gave [ɛ] (MĔDĬU(M) 'half' > Pont. [mɛz], It. ['mɛdːzo]).

Another development characterizing the stressed vowel system is the palatalization of the low vowel (Maffei Bellucci 1977; Restori 1892). However, this process seems to be limited to the infinitive morpheme of the first conjugation and to the outcome of the Latin suffix -ARIUS. Even in these cases, though, this process does not apply regularly: [aˈmar] ~ [aˈmɛr] < AMĀRE 'to love', [tlar] ~ [tlɛr] < TĒL-ARIU(M) 'loom'.

As far as the unstressed vowel system is concerned, we should distinguish between pre- and post-tonic context. Indeed, similarly to what happens in Western Romance (see Sections 3.2.2 and 3.2.3), while unstressed vowels have been

systematically deleted when occurring in post-tonic position, in pre-tonic position they display a higher resistance.

The behaviour of the post-tonic unstressed vowels is extensively discussed, both from a phonetic and a phonological point of view, in Sections 5.2 and 7.2. As just hinted at, all the unstressed vowels occurring after stressed syllables undergo deletion, except when they represent the SG.FEM ([a]) or the PL.MASC ([i]) morpheme. However, in the case that the PL.MASC is preceded by a nasal, it is deleted as well (Pontr. [kaŋ] 'dog/dogs' vs. It. [ˈkaːne] 'dog' ~ [ˈkaːni] 'dogs').

In pre-tonic position, instead, unstressed vowels can be retained. The low vowel, for instance, generally undergoes apheresis ([ˈgutʃa] < ACŬCŬLA(M) 'needle'), but not necessarily ([kaˈval] < CĂBALLUS(M) 'horse'). The same happens to proto-Romance /i/ ([fnir] < FĪNĪRE 'to finish', but [ziˈrar] < GȲRĀRE 'to turn'), /o/ ([vrer] < *VOLERE 'to want', but [uˈnur] < HŎNŌRE(M) 'honour') and /u/ ([byˈter] < BŪTȲRU(M) 'butter').

The reader is referred to Sections 5.2 and 7.2 for a more detailed discussion of the unstressed vowels' fate in Pontremolese. However, before tackling these sections, the features characterizing Carrarese phonology with respect to Pontremolese must be presented. This is the topic of the next section.

2.3 Carrarese

2.3.1 Consonant system

Carrarese is spoken over an area of 71,01 km^2, with a population of 64.234 inhabitants[14]. In contrast with Pontremoli, Carrara constantly represented a pole of attraction for the surrounding area. Indeed, the need for manpower to employ in the marble quarries periodically attracted migrants from the areas that were politically related to Carrara. Because of the political instability of Lunigiana (see Section 2.1), migrants came from Pisa, Florence, Siena and Genoa (about 14th-15th century), or from small villages in Emilian and Reggian Appennines[15]. The same political instability, together with the peculiar attitude of Carrara inhabitants with respect to authority[16], can possibly be considered a factor contributing to their political and

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[14] Data relative to 31st December 2013 (ISTAT).

[15] Notice that marble extraction started very early: the first mention of Carrara's marble can be found in Pliny the Elder (*Naturalis Historia* XXXVI, 7), who claims that in 48 BC Mamurra, Julius Caesar's *praefectus fabrum*, used this marble for his villa in Celio. (At least) since that time, marble extraction has never stopped, becoming particularly intense in the Roman Augustean and Imperial ages, then again during Renaissance humanism and as a consequence of technological developments, in 19th and 20t^h century.

[16] After the First International (1864), anarchism rapidly spread in Carrara's area, where, because of the hard working conditions of quarry workers, anarco-syndacalism found fertile ground (also notice that, since the Roman period, quarry workers were mainly slaves and convicts, although the working conditions of later 'free' workers were not so different from slavehood). In the last part of 19th century, hence, several uprisings occurred and various secret organizations were constituted (such as the "Spartana", a kind of First International

social identity. If asked whether they felt "more Tuscan" or "more Ligurian", the majority of Carrara inhabitants would refuse both identities in favor of the local Carrara identity.

As in the case of Pontremolese, knowledge of Carrarese is almost exclusively passive (see also Section 4.1), the regional variety of Standard Italian being the mother tongue of younger generations. This is made explicit by Luciani (Carrara, 1923-2004), who explicitly claims to

> "belong […] to a generation of Carraresi, maybe the last, that in its childhood, within the family, heard relatives (parents, uncles, grandaparents, etc.) chatting with friends […] in dialect, while addressing us (sons and nephews) in Italian."[17] [EC]

Even if the Carrarese consonant system shares many features with almost all Lunigiana dialects (Tab. 2.2), it differs from other varieties, and mainly from Pontremolese, in some features (Bottiglioni 1911; Maffei Bellucci 1977; Luciani 1999, 2002). Its consonant system is represented in Tab. 2.6:

Tab. 2.6   Carrarese consonant system

	Bilab.	Labiodent.	Alv.	Postalv.	Retrofl.	Pal.	Velar
Stop	p b		t d		ɖ		k g
Affricate			ts dz	tʃ dʒ			
Fricative		f v	s z				
Nasal	m		n			ɲ	(ŋ)[18]
Lateral			l				
Rhotic			r				
Glide						j	w

The Carrarese consonant system displays the alveolar affricates /ts/ and /dz/, which come respectively from CJ and C followed by front vowels ([brats] 'arm' vs. It. [ˈbrat:tʃo]; [diˈtsembra] 'December' vs. It. [diˈtʃembre), and from J, DJ, Gj and G followed by front vowels ([dzov] < 'yoke' vs. It. [ˈdʒo:go]; [ˈɔdzi] 'today' vs. It. [ˈɔd:dʒi]). As discussed in Section 2.2.1 and 3.1.1, these affricates occur as fricatives in Pontremolese.

Another difference is the Carrarese preservation of the pre-consonantal lateral (Carr. [alt] vs. Pontr. [au̯t] 'high'; Carr. [kolp] vs. Pontr. [kurp] 'strike'). If, instead,

offspring particularly interested in armed struggle) in order to improve workers conditions. These organizations then merged into an Anarchist Federation, which in turn flew into the Italian Anarchist Union (UAI, 1920). Then, after Mussolini banned UAI (1926), in a congress held at Carrara in 1945, Italian anarchists constituted the Italian Anarchist Federation (FAI), which still keeps its seat in Carrara (Fedeli 2004).

[17] "Appartengo […] ad una generazione di Carraresi, forse l'ultima, che nell'infanzia, nella vita di famiglia, sentiva i parenti (genitori, zii, nonni, ecc.) e i loro amici e conoscenti conversare fra loro in dialetto e rivolgersi a noi (figli e nipoti) in italiano." (Luciani 1999: 42)

[18] As in Pontremolese, the alveolar nasal is neutralized to its velar counterpart in word-final position, which should hence be considered an allophone.

the post-lateral segment is a palatal glide, while Pontremolese transforms the lateral into a post-alveolar affricate, Carrarese deletes it (Pontr. [adʒ] vs. Carr. [ai̯] < ALIU(M) 'garlic'). The more interesting characteristic of Carrarese liquids, though, is the outcome of the etymologically geminate /l/. Indeed, while single intervocalic laterals underwent no change, geminate laterals developed into single voiced retroflex stops (['paɖa] < Long. *palla 'ball' vs. ['pala] < PĀLA(M) 'shovel'; [ɖ] < ILLU(M)/ILLA(M) 'the SG.MASC/FEM'). This feature characterizes, within Northern Italian dialects, all (and only) the dialects spoken around the Apuan Alps (Ambrosi 1956; Savoia 1980; Luciani 1999, 2002) and has been traced back to a pre-Latin Mediterranean substrate (Bottiglioni 1955, Merlo 1956a, 1956b). However, as for many other phonological structures of Romance varieties that were absent from the Latin inventory, retroflex segments are nowadays better explained as later innovations (Savoia 1980; Caracausi 1986; Loporcaro 2011b). It has to be noticed, though, that this retroflex stop is undergoing a further change. Indeed, while it is commonly found in varieties spoken in the small villages surrounding Carrara (for instance, in Ortonovo), in Carrarese it is often reduced to the correspondent alveolar stop (Luciani 1999, 2002). The above mentioned ['paɖa], for instance, is often pronounced as ['pada][19].

Finally, with respect to Pontremolese, Carrarese lacks intervocalic stop voicing. It should be pointed out, however, that a set of ancient forms, often referring to traditional and popular elements, shows the voiced outcome of an etymological voiceless stop. This happens especially if that stop is velar ([fuˈgatsa] < *FOCACIA, a typical Carrarese cake; [a ˈdig] < DĪCO 'I say'; [pɔg] < PAUCU(M) 'few, little'), but also, even if less often, with alveolar and bilabial stops (['kod⁽ᵊ⁾ga] < CUTICA(M) 'rind, turf'; [kaˈvest⁽ᵊ⁾r] < CAPISTRU(M) 'noose'). Furthermore, the

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[19] Lateral, retroflex and alveolar consonants can be all referred to as coronal sounds. From an elemental point of view (Section 6.3.1.1.1), the homogeneity of this class is formalized as the inclusion of |A| in these consonants' phonological representation. Indeed, if unheaded, |A| is argued to represent the alveolar resonance (of [l] and [d]), while, if headed, it represents the retroflex resonance (of [ɖ]). The phonological link between the alveolar and the retroflex segment is shown, for instance, by Wambaya. Indeed, in this Non-Pama-Nyungan West Barkly Australian language, these two consonants alternate in word-medial position (['guɖa] 'to be sick' vs. ['guda] 'stone'), but are neutralized in favour of the retroflex in word-initial position, i.e. in a prosodically strong position. In other words, the element occurring unheaded in a prosodically weaker position surfaces as headed in the prosodically strongest position. As an example, consider the reduplication process of a form such as [ɖidid ʲa] 'to carry'. The word-initial consonant of this form is retroflex. However, when reduplication occurs, this consonant surfaces as alveolar, while the first segment of the reduplicant, being word-initial, is retroflex: [ɖi-didid ʲa] 'carry (dur.)'. In other words, the underlyingly alveolar segment ([d] = |ʔLA|) is 'enhanced' ([ɖ] = |ʔL<u>A</u>|) when occurring in word-initial position (but see Hamann 2003 for other Australian languages displaying the opposite neutralization pattern). Under this approach, the Carrarese [ɖ] to [d] diachronic change could hence be considered a weaking process (occurring in intervocalic position), which could have been enhanced by the contact with Standard Italian, which crucially lacks retroflex sounds. Furthermore, it is interesting to point out that the similarity between alveolars and retroflexes rests on acoustic grounding as well. Indeed, they both present an energy peak in the central region of the spectrum, the difference being in the slightly lower values of F3 in the case of the retroflex (Backley 2012: 94).

more we move away from the city of Carrara toward smaller villages in the countryside, the more this voicing is generalized (Ort. [faˈdiga] vs. Carr. [faˈtika] 'effort'; Ort. [kuˈɲad] vs. Carr. [kuˈɲat] 'brother-in-law'). However, notice that the Carrarese forms that underwent voicing underwent voicing in North Western Tuscan as well, where voicing arrived in the medieval period from the north (through Lucca) and has never been generalized (Savoia 1980; Castellani 2000). Moreover, the southern isogloss of intervocalic stop voicing has been argued to coincide with the Po river up to 8th century (Politzer & Politzer 1953). As a consequence, Carrarese voiced forms should be analysed in the same way as Tuscan forms, namely as the result of a lexical diffusion phenomenon (Loporcaro 2009).

2.3.2 Vowel system

Like the consonant system, the vowel system of Carrarese also displays some differences with respect to the Pontremolese one.

As far as the stressed vowel system is concerned, Carrarese differs from Pontremolese in a) the lack of front rounded vowels (Carr. [pu] vs. Pontr. [py] 'more'; Carr. [ˈfora] vs. Pontr. [ˈføra] 'outside'); b) the lack of palatalization of the Latin low vowel in open syllables (AMĀRE > Carr. [aˈmar] vs. Pontr. [aˈmɛr] 'to love'); c) the presence of the high-mid ~ low-mid vowel opposition (Carr. [ˈbota] 'barrel' vs. [ˈbɔta] 'knock'; Pontr. [i ˈkøz] 'he cooks' vs. [kɔz] 'things'; Carr. [ˈora] 'hours' vs. [ɔr] 'gold'; Pontr. [ur] 'hours' vs. [ɔr] 'gold'). The other stressed vowels do not display any particular difference with respect to Pontremolese developments (Section 2.2.2 and Tab. 2.2).

As for the unstressed vowel system, it doesn't show relevant differences with respect to the Pontremolese one: unstressed vowels have been generally deleted in post-tonic position (Section 5.2 and 7.2), showing instead some more resistance in pretonic position (as discussed in Sections 3.2.2 and 3.2.3, this generalization holds in the whole Western Romance domain). Maffei Bellucci (1977), for example, reports instances of forms where back vowels either resist reduction or, if followed by a high stressed vowel, reduce to [u]: [porˈtoŋ] 'front door' ~ [purtunˈtsiŋ] 'small front door'. Few forms can be found where the front and back high vowels also resist deletion: [vriˈta][20] < VĒRĬTĀTE(M) 'truth'; [uˈnir] < ŪNĪRE 'to join'. Letting aside these few exceptions, she claims that, both in pretonic and post-tonic position, unstressed vowels are generally reduced to schwa. However, as she explicitly states, her analysis of Carrarese is not supported by direct evidence: it is based on the data reported by Luciani (1999, 2002), which, in turn, relies on an impressionistic/auditory analysis. As discussed in Chapters 5 and 7, the schwas they report as outcomes of the reduction process should rather be considered as articulatory driven intrusive vowels, and not as 'reduced' versions of the corresponding etymological vowels. In other words, Carrarese schwa is a phonetic by-product lacking any underlying vocalic correlate. As a consequence, it should not be inserted in the vocalic segment inventory presented in Tab. 2.7 (where the vowels

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[20] Notice that this form's etymologically first vowel has been deleted.

that can exceptionally occur in unstressed position are in brackets). As can be noticed from the few exemples just given, the two front vowels and the low one regularly occur in unstressed position as well. However, this happens only in the case that they represent SG.FEM ([a]), PL.FEM ([e])[21] and PL.MASC ([i]) morphemes (Chapters 5 and 7). As in the case of Pontremolese, if PL.MASC [i] if preceded by a nasal, then it is deleted as well (Carr., Pontr. [kaŋ] 'dog/dogs' vs. It. [ˈkaːne] 'dog' ~ [ˈkaːni] 'dogs').

Tab. 2.7 Carrarese vowel system

	Stressed vowels			Unstressed vowels		
	Front	Central	Back	Front	Central	Back
High	i		u	i		(u)
High-mid	e		o	e		(o)
Low-mid	ɛ		ɔ			
Low		a			a	

Finally, as far as the length feature is concerned, while in surrounding (Ligurian and Emilian) dialects it has a distinctive value (Loporcaro 2009, 2011b), in Carrarese, as in the other Lunigiana dialects, it does not (Barbera 2008; Loporcaro 2009).

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[21] Recall that, in Pontremolese, the PL.FEM ([e]) also undergoes deletion.