Università degli Studi di Firenze

DOTTORATO DI RICERCA IN
LINGUISTICA

CICLO XXV

# Positional Effects in Sardinian Muta cum Liquida

## Lenition, Metathesis, and Liquid Deletion

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# Introduction

This dissertation focuses on the role played by positional factors in the evolution of muta cum liquida clusters from Old Sardinian to modern Sardinian. In Old Sardinian, liquids in muta cum liquida were affected by various structural changes, namely various kinds of metatheses and liquid deletion. Dialectological studies offer an intricate picture in which diachronic metatheses, occurring at different historical periods, overlap or superimpose with strong areal variation. Some metatheses can only be found in the south; others are peculiar of a central transitional area, while some are found in all of the Sardinian dialects.

Here I focus on a Campidanese dialect from the eastern area, Tertenia Sardinian, although other Sardinian dialects will also be discussed. In the dialect in question, liquids were removed systematically from word-internal muta cum liquida and moved either to coda position or to word-initial position. Only a few liquids are still in word-internal muta cum liquida. To understand why these liquids did not undergo either metathesis or liquid deletion, I adopt a multidisciplinary approach, paying attention to dialectological, philological, and theoretical perspectives.

In order to best address this issue, I checked both the areal distribution of the various metatheses and their presence in six ancient Sardinian collections dating from the 11$^{th}$-14$^{th}$ centuries. The database was then analyzed within the CVCV model, a theoretical approach that explains structural changes as a result of the positional effects determined by two structural forces, Government and Licensing.

The present work is structured as follows. Chapter 1 offers a sketch of Sardinian and its dialects. Chapter 2 is an overview of the theoretical framework adopted here. Chapter 3 deals with the database and the reconstruction of some problematic items. The various metatheses and their areal distribution are addressed in

Chapter 4, while Chapters 5 and 6 account for the various phenomena in terms of Government and Licensing.

# Chapter 1

## The Sardinian Language

Sardinian is a minority language of the Romance group spoken on the island of Sardinia. Sardinian is the largest minority language spoken in the Italian administrative territory.[1] The Sardinian language has been given official recognition both by the Italian Republic (Historical Minorities Protection Act, N° 482/1999) and by the Autonomous Region of Sardinia (Sardinian Protection Act, N° 26/1997).[2]

### 1. Linguistic Classification

#### 1.1 Sardinian among the Romance Languages

Sardinian has been considered an independent language since the earliest linguistic studies (e.g., Ascoli 1882-85:103ff, Meyer-Lübke 1901:16, 22).[3] Romance languages are traditionally divided into Western Romance and Eastern Romance. For its peculiarities, Sardinian is not included in either branch, as one can see from one

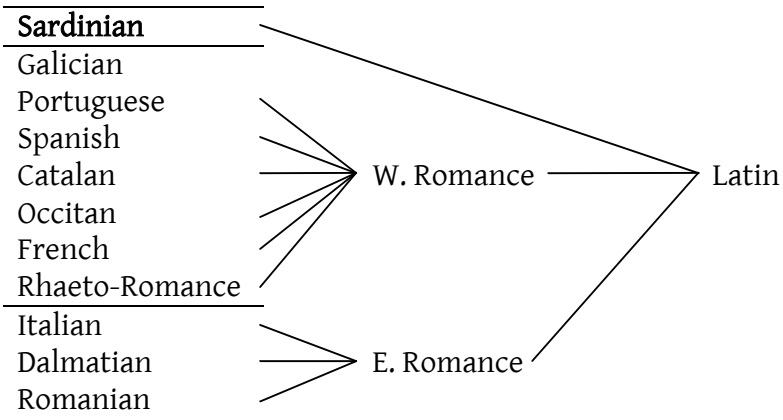
[1] Rindler Schjerve (1993:273).

[2] The Autonomous Region of Sardinia, like the other autonomous regions of the Italian Republic, is granted by the Italian Constitution and its Regional Statute, which guarantees the right for each region to approve legislation on a number of issues of local interest. The various autonomy statutes have constitutional force: "[a]lla Sicilia, alla Sardegna, al Trentino-Alto Adige, al Friuli-Venezia Giulia e alla Valle d'Aosta sono attribuite forme e condizioni particolari di autonomia, secondo statuti speciali adottati con leggi costituzionali" (Italian Constitution, Act N° 116). The Sardinian Autonomous Statute was approved by constitutional law in the 1948, two years after the establishment of the Italian Republic. The Sardinian Autonomous Statute is available in the Sardinian government web portal at http://www.regione.sardegna.it/documenti/1_39_20050318114805.pdf
The Sardinian Language Protection Act can be found at:
http://www.regione.sardegna.it/j/v/86?v=9&c=72&s=1&file=1997026

[3] See also Jones (1988:314): "the dialects of Sardinia [...] are sufficiently distinct from the other Romance languages to warrant the status of a separate language [...]."

recent historical linguistics textbook, Campbell and Poser (2008:84).[4] Their Romance Language Tree is reported in (1). Sardinian is in boldface.

(1) The Romance Language Tree




from Campbell and Poser (2008:84)

1.2 Sardinian and its Dialects

Sardinian is traditionally divided into two main dialectal groups: Logudorese (also known as Logudorese-Nuorese) and Campidanese (Wagner 1941, 1950). Roughly speaking, Logudorese is spoken in northern and central Sardinia,[5] while Campidanese is spoken in the southern areas of the island. This bipartition is nowadays widely accepted (e.g., Blasco Ferrer 1984, Contini 1987, Jones 1997, Loporcaro 2009, among others), even though other scholars prefer a division into three main dialects: Logudorese, Nuorese, and Campidanese (Virdis 1978:9).[6] A further possibility is to classify

[4] Note that the internal classification of Romance languages is a controversial issue in itself. Classifications may differ from the one reported in Campbell and Poser (2008), not only with respect to Sardinian but also to other languages, e.g., Catalan. See also Harris (1988), Virdis (2003b), Loporcaro (2005b:218ff), Adams (2007:3).

[5] I do not consider here the two Italo-Romance languages (i.e., Gallurese and Sassarese) spoken in the northern coast of Sardinia; see Section 5 for further details and references.

[6] "Noi ci atterremo alla partizione ormai classica che divide il sardo in tre principali dialetti: il Campidanese, il Nuorese, il Logudorese" (Virdis 1978:9).

Sardinian into four groups, i.e., Logudorese, Nuorese, Campidanese, and Arborense,[7] as suggested in Virdis (1988:906): "Pertanto le quattro principali aree dialettali del Sardo sono le seguenti: l'area campidanese [...], l'area arborense [...], l'area logudorese [...], l'area nuorese [...]."

Because of the strong dialectal variation displayed by Sardinian, no classification is uncontroversial (Virdis 1978:9).[8] The question of the classification of Sardinian dialects is aptly summed up by Jones (1988:316):

> "The most radical differences are those which distinguish Campidanese from Logudorese and Nuorese; indeed, some linguists classify the Nuorese dialects as subvarieties of Logudorese. It must be emphasised that these dialectal divisions are approximate. The various isoglosses in terms of which the dialects are defined do not coincide exactly and there are others which cut across the major divisions. Moreover, there are many subdivisions within each of these areas."

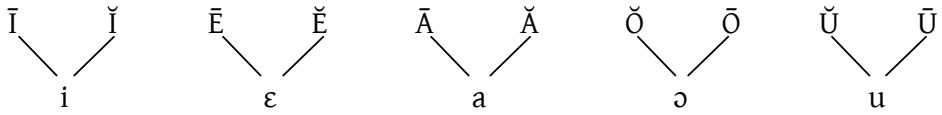
Nevertheless, the vast majority of scholars argue for a division into two macro-areas, because Logudorese-Nuorese and Campidanese are considered sufficiently distinct from each other and both of them have a certain degree of internal uniformity. Here I focus on the most basic aspects that distinguish Logudorese-Nuorese and Campidanese. The contents summarized below can be easily found in any historical account of Sardinian.[9]

[7] Arborense Sardinian is the western transitional area between Campidanese and Logudorese; see, e.g., Maninchedda (1987), Virdis (1988:906).
[8] Map N° 95 in Contini (1987) includes the major isoglosses and may be of help to better address this issue.
[9] Further details can be found in Wagner (1941, 1950), Sanna (1957), Virdis (1978, 1988), Contini (1987), Blasco Ferrer (1984), Blasco Ferrer and Contini (1988), Mensching (1994), Grassi et al. (1997:94), Jones (1997:376), Maiden (1997:7), Savoia (1997:228), Loporcaro (2009:159), among many others. The major isoglosses are discussed in Contini (1987) and Virdis (1988:900ff) and shown in Contini (1987, Map N° 95), and Virdis (1988:908).

### 1.2.1 The Sardinian Vowel System

The Sardinian vowel system is one of the most peculiar among the Romance languages. Latin had a length-based vowel system.[10] Sardinian neutralized the length distinction while "the original qualities remain[ed] intact" (Maiden 1997:7).[11] See (2) for illustration.

**(2) Sardinian Vowel System**




from Grassi et al. (1997:94)

However, Logudorese-Nuorese and Campidanese behaved differently with respect to final vowels. Campidanese, contrary to Logudorese-Nuorese, shows the word-final raising of *ɛ* and *ɔ* that became *i* and *u*, respectively.[12] Thus, for example, the Logudorese-Nuorese outcome of Latin CANEM is *cane*, while the Campidanese one is *cani.* To summarize, Campidanese only has the vowels [i], [u], and [a] in word-final position, whereas Logudorese displays [i], [u], [ɛ], [ɔ], and [a].

### 1.2.2 The Sardinian Consonant System

However, the most important differences between Logudorese-Nuorese and Campidanese concern the consonant system. Table (3), from Jones (1997:377), summarizes some important historical changes and the respective solutions adopted in the two macro-areas.[13]

[10] Maiden (1997:7).
[11] Virdis (1978:24ff), Contini (1987:435ff), Jones (1997:376), Savoia (1997:228), Herman and Wright (2000:34), Adams (2007:11, 260-262, 629), Wright (2011:65).
[12] Virdis (1978:34), Contini (1987:435ff), Jones (1997:376), Savoia (1997:228), Bolognesi (1998) and Loporcaro (2005b:210-217, 2009:162).
[13] Another important difference is the palatalization in Campidanese of Latin C+i,e sequences (with various palatalized reflexes within the Campidanese dialects; see

(3) Historical Changes in Sardinian Consonant System

| | *Campidanese* | *Logudorese-Nuorese* |
|---|---|---|
| [kw] [gw] | kw gw | b(b) |
| AQUA(M) | ˈakwa | ˈabba |
| LINGUA(M) | ˈliŋgwa | ˈlimba |
| [lj] | ll | ʤ |
| FILIU(M) | ˈfillu | ˈfiʤu |
| [ll] | ɖɖ[14] | ɖɖ |
| NULLA(M) | ˈnuɖɖa | ˈnuɖɖa |
| stop + [j] | ʦ | θ or t |
| *PETTIA(M) | ˈpɛʦa | ˈpɛθa or ˈpɛta |

from Jones (1997:377)

As one can see in (3), Logudorese-Nuorese, with respect to the evolution of Latin /kw/ and /gw/, displays a peculiar reflex (i.e., /(b)b/) that differs both from Campidanese and more in general from the rest of Romance languages.[15] This solution, considered as typical of Logudorese-Nuorese, is also attested in the Campidanese Ogliastra dialects;[16] e.g., Tertenia Sardinian displays the same reflexes as Logudorese-Nuorese dialects (i.e., ˈabba and ˈlimba). Campidanese and Logudorese-Nuorese adopted different solutions also with respect to Latin l+j[17] and stop+j sequences.[18]

Virdis (1978:46)). Logudorese and Nuorese still maintain the velar stop; for instance, the Sardinian outcomes of Latin CENA(M) are ˈʧɛna (Camp.) and ˈkɛna (Log.-Nuor.).

[14] For the Sardinian voiced retroflex stop, see Contini (1987:159ff).

[15] A similar solution is found only in Rumanian: the Rumanian reflexes of Latin AQUA(M) and LINGUA(M) are *apă* and *limbă* (Tagliavini 1982:370). See also Contini (1987:68).

[16] On the evolution of Latin labialized velars in Sardinian, see Wagner (1941:227-230), Virdis (1978:71), Contini (1987:68-69, map n°33), Lupinu (2000:§17), among others.

[17] Notice that even in this respect a strong diatopic variation is found. Various other solutions are attested within the Campidanese and Logudorese dialects. For details, see Contini (1987, map n° 73).

[18] For stop+j sequences other solutions are attested as well. On the Sardinian treatment of Latin stop+j, see Wagner (1984:§223ff), Virdis (1978:64ff), Paulis (1984:LXXIVff), Blasco Ferrer (1984:§76-79), Contini (1987:230-241), among others. For a brief account of stop+j sequences, see also Chap. 5, Sect. 6.

Another important phenomenon that will be addressed in the following chapters is the intervocalic lenition that affected Sardinian dialects. In this respect, the division into the two macro-areas of Logudorese-Nuorese and Campidanese cannot be adopted: lenition is restricted to Logudorese and Campidanese.[19] The Central Sardinian dialects (e.g., Nuorese) were not affected at all. Table (4) illustrates this divergent behavior.

**(4) Diachronic Lenition in Sardinian Dialects**

| | *Logudorese and Campidanese* | *Central dialects* |
|---|---|---|
| FOCU> | ˈfoɣu | ˈfoku |
| LUTU> | ˈluðu | ˈlutu |
| APE> | ˈaβe, ˈaβi | ˈape |
| | | |
| NIGELLU> | niˈeɖɖu | niˈɣeɖɖu |
| PEDE> | ˈpe, ˈpei | ˈpɛde |
| FABA> | ˈfae, ˈfa | ˈfava |

from DES

In Logudorese and Campidanese the Latin voiceless stops have became voiced fricatives (maintaining their place of articulation), while Nuorese still displays the voiceless stops. Voiced stops were lost in Logudorese and Campidanese, whereas Nuorese usually has voiced fricatives.

Word-internal lenition is no longer productive. In the past it was an active process that systematically affected every intervocalic obstruent even in muta cum liquida clusters, e.g., PETRA> *pedra* (from C.Volg. I, II˟, XV, XXI).[20]

[19] For further details, see Wagner (1941:117ff, 1950:542).

[20] Probably it applied systematically, as currently happens for Tuscan Italian. In Tuscan Italian, lenition affects all obstruents in intervocalic position, both within words and at word boundaries. The 'gorgia toscana' (i.e., Tuscan Italian lenition) is widely discussed in the literature. For a complete account of Tuscan Italian lenition, including areal and sociolinguistic variation, see Giannelli and Savoia (1978, 1979-80). Other works include Castellani (1960), Contini G. (1960), Giannelli (1976), Cravens (1984), Bafile (1997), Marotta (2006, 2008), among many others. Some are dialectological works on the topic, others theoretical accounts (see References).

Synchronically, Logudorese and Campidanese display intervocalic lenition, but only at word-boundaries:[21] word-internally, lenition is a process that does not apply anymore. Also in this respect, Central Sardinian dialects (e.g., Bitti Sardinian) behave differently from Logudorese and Campidanese: lenition is not observed even at word-boundaries.[22]

Thus, whatever linguistic classification one chooses to adopt, it must be kept in mind that within the main Sardinian groups there is strong diatopic variation. Within each of the main dialectal groups, various subdivisions can be found.

### 1.2.3 Dialectal Subdivisions within Logudorese and Campidanese

The various sub-groups in the traditional bipartition (i.e., Logudorese and Campidanese) may be listed.[23] According to Virdis (1988:906), the subdivisions within Campidanese are as follows:

a) central-western dialects
b) dialects of Cagliari and neighboring towns
c) Sulcis dialects
d) central Campidanese dialects
e) Southern Barbagia dialects
f) Ogliastra dialects
g) Sarrabus dialects

Logudorese can be divided into the following:

a) Common Logudorese
b) Northern Logudorese
c) Central Logudorese (including Nuorese)[24]

[21] See Wagner (1941:117ff).
[22] See Wagner (1941:119).
[23] For a more accurate account of the various sub-divisions, see Contini (1987:539ff).
[24] Wagner (1950:340ff).

A further subdivision within Logudorese includes the central Barbagia dialects (Wagner 1950:349).

### 1.2.4 Sardinian Dialect Classification Adopted within this Work

For the purpose of this thesis, I make reference to the following dialects: Southern Sardinian (Campidanese dialects with the exception of the Ogliastra and Southern Barbagia area), Northern Sardinian (Logudorese dialects with the exception of the central area), and Central Sardinian (Central dialects including the Nuorese area).

These geographical designations are needed because most of the phenomena addressed in this work are widespread in areas that are not easily described by traditional classifications.[25] Thus, in order to identify areas that cut across traditional classifications, I will adopt a compound geographical label. As an example, in Chap. 4 the dialects affected by the SWM metathesis[26] are the Arborense and Campidanese dialects, with the exception of the Southern Barbagia and Ogliastra dialects. I label these dialects 'South-Western Sardinian.'

To conclude, I would like to underline that this section is not and cannot be exhaustive. It is only meant to offer a general sketch of Sardinian. The phenomena addressed in this section are beyond the scope of this dissertation, with the exception of lenition. Further details on historical Sardinian may be found in Wagner (1941, 1950), Virdis (1978), Blasco Ferrer (1984), Contini (1987), among others.

## 2. Tertenia Sardinian: The Dialect under Investigation

Tertenia Sardinian, the Sardinian dialect in question, is the point of inquiry N° 211 in Contini 1987. Tertenia is included in the Ogliastra

[25] See also Chap. 3, Sect. 1.
[26] The South-Western Metathesis (SWM) involved liquids in coda position which migrated to the word-initial position. On SWM see Chap. 4, Sect. 1.4.

Campidanese subgroup in the central-eastern area.[27] The Ogliastra subgroup is a very heterogeneous one (Contini 1987:561). The various sub-divisions within the Ogliastra dialects are listed below. The following sub-divisions are taken from Contini (1987:561ff):

a) Central Ogliastra
b) Northern Ogliastra
c) South-Western Ogliastra
d) Eastern Ogliastra

The most important criterion adopted by Contini (1987) to distinguish South-Western from Eastern Ogliastra dialects concerns the evolution of Latin L+j: in South-Western Ogliastra L+j became [ʎ], while Eastern Ogliastra has [ll].[28]

Contini (1987:562) attributes the [ll] outcome to Tertenia, and as a result he classifies Tertenia as one of the Eastern Ogliastra dialects. However, the Tertenia outcome of L+j is actually [ʎ], as in South-Western Ogliastra. A few examples are listed in (5).

**(5) Latin L+j in Tertenia Sardinian**

PALEA> ˈpaʎa
OLEUM> ˈoʎu
FILIUM> ˈfiʎu

Thus, according to the same criterion adopted by Contini (1987), Tertenia actually belongs to the South-Western Ogliastra dialects.[29]

For my purposes, the most important thing to keep in mind is that in the past Tertenia went though intervocalic lenition.[30] As already

[27] See Virdis (1978:13-14), Blasco Ferrer (1984:1999), and Contini (1987:561ff). On Tertenia Sardinian see Lai (2010, 2011).
[28] See Contini (1987:562). On L+j see also Virdis (2003a:31).
[29] Further evidence comes when comparing Tertenia with the dialect of Perdasdefogu (South-Western Ogliastra group), a village listed in the ALI Atlas (Atlante Linguistico Italiano).

mentioned with regard to Logudorese and Campidanese, word-internal lenition is no longer an active process. In (6) the Tertenia lenis forms are listed.

(6) Diachronic Lenition in Tertenia Sardinian

| | |
|---|---|
| FOCU> | ˈfoɣu |
| LUTU> | ˈluðu |
| APE> | ˈaβi |
| | |
| NIGELLU> | niˈeɖɖu |
| PEDE> | ˈpɛi |
| FABA> | ˈfaa |

As in Logudorese and Campidanese, voiceless stops became voiced fricatives, while voiced stops deleted. Synchronically, lenition is observed only at word-boundaries.

Unless otherwise specified, in the remainder of the thesis Sardinian stands for Tertenia Sardinian.

## 3. History of Sardinian

In the Middle Ages, the island of Sardinia was divided into four independent kingdoms: Kálaris (south-eastern area), Torres (north-western area), Arborea (central-western area), and Gallura (north-eastern area).[31] The kings of these kingdoms were called *judike de logu* 'governor of the State' (Solmi 1917:68).[32]

[30] Historical Tertenia (along with the Ogliastra dialects) displays many interesting phenomena, such as the treatment of the various Latin stop+j sequences, the evolution of Latin /kw/ and /gw/ (already mentioned in Section 1.2.2), the palatalized result of Latin C+i,e, etc. These phenomena are beyond the scope of this work. For details I refer the reader to the classical sources, e.g., Wagner (1941, 1950), Virdis (1978), and Contini (1987).

[31] In Italian they are known by the name of 'giudicati.' In the ancient texts the Kingdom of Kalaris is also known as Callaris, Calaris, Kalares, and Pluminus (in Italian it is called 'Giudicato di Cagliari'). Torres is also known as the Kingdom of

The Sardinian kingdoms were previously part of the Byzantine Empire, but in the 9th century they became autonomous.[33] Their existence is historically well-documented from the 11th to the beginning of the 14th century.[34]

Their independence was subsequently lost, and control of the kingdoms was disputed among the Republics of Pisa and Genoa until the Crown of Aragon conquered Sardinia in 1323.[35] Torres officially fell in 1259 after the death of its last governor Adelasia, but the state was already ruled by the Genoese family Doria in its final years.[36] Torres was immediately followed by Kalaris, which came to an end in 1258 when the Pisans burned Santa Igia (capital of Kalaris) to the ground.[37] The kingdom that lasted longest is Arborea, which survived until 1420.[38]

Sardinian was the official language of the Sardinian kingdoms. Later it was replaced in all administrative functions by Catalan, Spanish, and Italian.[39]

In 1323, Sardinia officially became part of the Crown of Aragon, even though the Catalan influence was strong well before this.[40] There is no doubt that since the 14th century the official language changed from Sardinian to Catalan.[41] In 1479, when the Crown of Aragon

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Logudoro, while Arborea is also known as the Kingdom of Arbaree. On Sardinian medieval kingdoms, see Solmi (1917:35ff).

[32] Note that *judike* or *iudigi* literally means 'judge,' but they were in fact rulers. On Sardinian *judikes*, see Solmi (1917:36, 68) and Ortu (2005:77).

[33] The date is disputed; see Solmi (1917:49ff, 69) and Zedda and Pinna (2007).

[34] Ortu (2005:259).

[35] See Solmi (1917:237ff, 396ff). Zedda and Pinna (2009:12) point out that even though Catalans officially conquered Sardinia in 1323, the Catalan influence should be placed earlier. Note that in 1297 Pope Boniface VIII invested James II of Aragon with the title of king of Sardinia and Corsica (Solmi 1917:358-361, Ortu 2005:243).

[36] Ortu (2005:174-5).

[37] Ortu (2005:175, 178).

[38] Ortu (2005:259).

[39] Wagner (1950:184-232, 233-253), Blasco Ferrer (1988:884-897), and Jones (1988:314). On the linguistic situation of the Italian territories since the unification of Italy, see De Mauro (1963) and Loi Corvetto (1993:59ff). Further discussion on the Sardinian situation and the relationship between Sardinian and Italian can be found in Loi Corvetto (1988, 1992, 1993).

[40] See Solmi (1917:237ff, 358-361) and Zedda and Pinna (2009:12ff).

[41] Wagner (1950:184ff), Blasco Ferrer (1984:143ff, 1988:884ff).

unified with the Crown of Castile, Spanish became the official language, but Catalan was widely spoken and written for some time thereafter.[42]

Spanish was the official language in schools and tribunals until 1764.[43] After 1764, Spanish was replaced with Italian by order of the House of Savoy, which had ruled Sardinia since 1718.[44]

Thus, at least since the 13th century Sardinian has coexisted with a number of dominant languages. These languages have left a mark on the Sardinian lexicon.[45] The first nucleus of loanwords is from the Pisan period, followed by Catalan, Spanish, and Italian loanwords.[46] In Southern Sardinian many Catalan loanwords are found, while the Spanish and the Italian ones are widespread in all of the Sardinian dialects.[47]

## 4. Ancient Sardinian Texts

During the Middle Ages, Sardinian was the official language of the kingdoms of Kalaris, Torres, Arborea, and Gallura.[48] This peculiar situation[49] has made Sardinian one of the Romance languages with the largest number of ancient texts, the most in the Italian administrative territory.[50] Ancient Sardinian texts are collections of private legal acts (i.e., property transfers, donation contracts,

[42] Wagner (1950:184-186) and Blasco Ferrer (1984:162, 1988:888).
[43] Wagner (1950:187); see also Loi Corvetto (1993:41, 55ff).
[44] Wagner (1950:187).
[45] Wagner (1941:401ff, 1950:184-232, 233-253), Virdis (1978:77ff), Blasco Ferrer (1988:884-897), and Loi Corvetto (1988:854-867); see also Chap. 3.
[46] On Pisan loanwords, see Wagner (1950:233-243) and Loi Corvetto (1992:878-889, 1993:15ff). On Catalan and Spanish loanwords, see Wagner (1950:184-232), Loi Corvetto (1992:889ff, 1993:36ff), and Blasco Ferrer (1984:143ff, 162ff; 1988:886ff). On Italian, see Blasco Ferrer (1984:132ff) and Loi Corvetto (1992:898ff, 1993:59ff).
[47] Wagner (1941, 1950) and Loi Corvetto (1992:877). On this topic, see also Blasco Ferrer (1988:885).
[48] There was no standard Sardinian, but the various texts were written in various Sardinian dialects. There is also strong variation with regard to the orthography. See Virdis (2003a:26).
[49] In the other Romance territories during the same period the language of literacy was still Latin. See e.g., Delogu (1997:37, 38).
[50] Tagliavini (1982:§84) and Delogu (1997:25).

litigation acts) and legal codes.[51] Every collection was written during various centuries and by different scribes.

The texts taken into account in this thesis are the following:

*Carte volgari dell'Archivio arcivescovile di Cagliari*
*Condaghe di Santa Maria di Bonarcado*
*Condaghe di San Nicola di Trullas*
*Condaghe di San Pietro di Silki*
*Statuti Sassaresi*
*Carta de Logu*

These texts, dating from the 11th-14th centuries, were written in different Sardinian dialects.

The editions adopted are the following: *Carte Volgari dell'Archivio arcivescovile di Cagliari* (Solmi 1905a), *Condaghe di Santa Maria di Bonarcado* (Virdis 2002), *Condaghe di San Nicola di Trullas* (Merci 2001), *Condaghe di San Pietro di Silki* (Bonazzi 1900), *Gli Statuti della Repubblica Sassarese* (Guarnerio 1892-1894), and *Carta de Logu dell' Arborea* (Lupinu 2010).[52]

Sardinian ancient texts are invaluable linguistic sources on Old Sardinian, but some provisos are in order. As already mentioned, these texts are collections of legal acts or codes, and for most collections the time of writing spans one or more centuries. Each collection was written by various scribes, and in many cases the scribe was not a mother tongue speaker of Sardinian.[53]

[51] See Blasco Ferrer (1984:65, 2003:18).
[52] For a comprehensive discussion on Sardinian ancient texts, see Blasco Ferrer (1984:62ff, 2003:195ff). Further discussion on this topic may be found in the introductions and glossaries of the aforementioned editions. See also Wagner (1941), Tagliavini (1982), Contini (1987), Paulis (1997), DES, among others.
[53] Marriages between Sardinian royal families and Catalan, Pisan, or Genoese families are attested from the beginning of the Sardinian kingdoms (see Solmi 1917:358, Loi Corvetto 1993:36, and Zedda and Pinna 2009:12). In the Sardinian courts, people of various proveniences are attested (Delogu 1997:26, 28). Even in the chancery of the different kingdoms one might find people from outside Sardinia (see Zedda and Pinna 2009:13). An analogous situation can be found in the monasteries, the places in which the *condaghes* were written. See Wagner (1950:187), Blasco Ferrer (1984:130), Loi Corvetto (1993:21ff), Delogu (1997:39). The

No quantitative analysis has been performed on the database. In this respect, one has to bear in mind that the number of data points for many items is low, and given the heterogeneous nature of the database, the interpretation of results would be far from trivial.

### 4.1 Carte volgari dell'Archivio arcivescovile di Cagliari

'Carte volgari dell'Archivio arcivescovile di Cagliari' (henceforth C. Volg.) is a Southern Sardinian collection of twenty-one acts traditionally dated from 1070 to 1226.[54] These documents are official legal acts written by various *iudigis* 'judges' of Kalaris.[55] This collection was published in 1905 in *Archivio Storico Italiano* by Arrigo Solmi, historian and jurist of Medieval Sardinian law. Solmi (1905b:3-4) dates most of these acts as written before 1100. However, the dates of some of these acts are contested in Paulis (1997:133-143). He focuses on some linguistic aspects of the acts n° II, XI, and XX and notes the presence of Catalan loans in a period when a Catalan linguistic influence is not yet expected.[56] Thus, he argues that these acts are fakes written after 1323, the year of the Catalan conquest of Sardinia (Paulis 1997:135).

Zedda and Pinna (2009:12), specialists in medieval history, contest Paulis's (1997) argument by pointing out that the Catalan influence in Sardinia started prior to 1323. In particular, a Catalan loan in acts dated before 1323 is not in itself suspicious, because royal marriages among Sardinian and Catalan families are attested since 1157, and this plausibly could have had implications for the composition of some Sardinian chanceries (Zedda and Pinna 2009:12ff). Therefore, they argue that the scribes who had written these acts might also have been people whose first language was not Sardinian but

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same may have happened later at the time of Catalan influence (Zedda and Pinna 2009:12-3).

[54] Zedda and Pinna (2009:6).

[55] Recall that the *iudigi* or *judike* denotes a governor. It does not refer to the 'judge' of the modern usage.

[56] The numbers of the various acts of C. Volg. are those reported in Solmi (1905a).

Catalan, and thus the presence of Catalan loans is not anomalous.[57] Their conclusion is that the acts contested in Paulis (1997) cannot be considered fakes.[58]

However, Paulis's (1997) claim receives external support from two independent sources: Cau (1989) and Merci (1982). Cau (1989) is a paleographic analysis of the collection in question. In his (1989) paper, Cau advances some doubts with respect to the following acts: III, IV, V, VI, and VIII. By contrast, Merci (1982) has some reservations regarding the peculiar style of act n° XI. Thus, acts other than those in Paulis (1997) may be classified as problematic for paleographic and stylistic reasons.

A possible explanation to solve this intricate situation is found in Cau (1999). Cau (1999:§51) suggests that these acts are probably early transcriptions in Latin characters of original legal acts in Greek characters: "[...] nuovi originali dipendenti da antigrafi che sono fedelmente copiati e dei quali è stato riutilizzato il sigillo."[59]

To better understand the hypothesis in Cau (1999), it is necessary to recall some historical notes. The Sardinian kingdoms were part of the Byzantine Empire and probably became autonomous in the IX century.[60] Thus, just a few centuries before the birth of these kingdoms the island was part of the Byzantine Empire, whose administrative language was Greek.[61] A few centuries later the language of administration became Sardinian but according to Cau (1999:§51) the use of Greek characters in legal documents was customary in the chancery of Kalaris.[62] Further evidence comes from a peculiar document known as *Charte sarde de Marseille* (Wescher and Blancard 1874), a legal Sardinian act written

[57] "[...] deve essere ritenuta certa la complessità della composizione etnica dei componenti della Curia arcivescovile cagliaritana e del Capitolo canonicale della Cattedrale di Santa Cecilia e della Collegiata di Santa Maria di Cluso, nonché della corte giudicale cagliaritana, ossia degli ambienti in cui sono state sicuramente redatte le Carte Volgari Cagliaritane" (Zedda and Pinna 2009:13).
[58] Zedda and Pinna (2009:12ff).
[59] See Cau (1999:§50ff).
[60] See Solmi (1917:49ff, 69).
[61] See Solmi (1905b:24) and Delogu (1997:25).
[62] See also Zedda and Pinna (2009:10ff).

in Greek characters.[63] Cau's (1999) proposal is also shared by Zedda and Pinna (2009:10).[64] The proposal has the advantage of providing a way to see the doubts raised by other scholars in a different light.

Nevertheless, due to the fact that the question of the date cannot be settled uncontroversially, I always mark with the symbols ˇ and * those items that occur in one of the controversial acts. The symbol ˇ before an item from C. Volg. means that the item in question occurs in an act considered anomalous by Paulis (1997), while the asterisk * signals that the item is culled from a controversial act in Cau (1989).

I would like to emphasize that the brief discussion in this section merely seeks to sum up a long-standing quarrel which started even before the publication of these acts in 1905.[65] For further discussion, see the original sources mentioned in this section: namely, Paulis (1997:133-143) for a linguistic account; Solmi (1905a:273-280, 1905b:3-65) and Zedda and Pinna (2009) for historical aspects; and Cau (1989, 1999) for paleographic aspects.

Notice that with regard to lenition these acts display a more advanced condition than Northern texts. It is also interesting to note that all the metatheses that form the object of inquiry in this thesis (see Chap. 4, Sects. 1.1, 1.2 and 1.3) are already attested.

The LDM metathesis is widely attested, e.g.*:*
FABRICARE> *fraigei at* IX*, fraigarunt at* IV*, and *fraigaat at* XIV
FABRU> *frau* at IX, X, XIV, and XVI
COMPLERE> *clonpit/clompit at* IIˇ, 2; XIˇ, 2 (2 times); XVII, 7, 8; XXI, 5; XIX, 2 (3 times), and *clonpilli(s)/clompilli(s) at* X, 3; XIII, 9; XIV, 6; XVII, 3, 8 (2 times), 10, 11 (2 times), etc.

[63] See Cau (1999:§51ff). A new edition of this document is available in Blasco Ferrer (2003:51ff), in which it appears as *Carta di donazione in caratteri greci*.
[64] "[...] la contraddizione è brillantemente risolta [...] dallo stesso Cau che ipotizza una originale scrittura delle Carte prodotte dal giudicato cagliaritano dell'XI-XII secolo in caratteri propri dell'alfabeto greco ed una totale e completa loro riscrittura in caratteri latini all'inizio del Duecento" (Zedda and Pinna 2009:10).
[65] For an overview, see Zedda and Pinna (2009:6, note 2).

The LM metathesis occurs twice:
PRATU> **padru> pardu* at XV, 2
PETRA> *perda* at XXI, 5

Liquid deletion occurs once:
FENUC(U)LU> *finugu* at XX˟, 1

For further discussion, see Wagner (1941), Contini (1987), Paulis (1997), and Blasco Ferrer (1984, 2003:43ff), among others. Further discussion on these acts will be offered in the following chapters.

## 4.2 Condaghe di Santa Maria di Bonarcado

The latest editions of Condaghe of Saint Mary of Bonàrcado (i.e., 2002 and 2003) are edited by the linguist Maurizio Virdis. *Condaghe* (also *condage*) is from Byzantine Greek *kontàkion*.[66] A *condaghe* (plur. *condaghes*) is a collection of private legal acts (i.e., property transfers, donation contracts, litigation acts)[67] written in monasteries or churches.

The Condaghe of Saint Mary of Bonàrcado (henceforth CSMB) is a collection from the Camaldolese monastery of Bonarcado.[68] Thus, it is from the territory of the Kingdom of Arborea.[69] The acts of CSMB are from the 12th to the 13th century.[70]

The language of the manuscript is Arborense Sardinian,[71] a transitional dialect between Campidanese and Logudorese spoken in the central-western part of the island. Being from a transitional area, this *condaghe* displays a strong linguistic variation with regard to

[66] Delogu (1997:9ff), Merci (2001:7, 10ff), Virdis (2003:9), and Blasco Ferrer (2003:116).
[67] See, e.g., Blasco Ferrer (2003:18).
[68] Virdis (2003:8-10). Note that this monastery was dependent on the Tuscan abbey of San Zeno in Pisa (Virdis 2003:10).
[69] See Virdis (2003:7ff) for details.
[70] Virdis (2003:11). See Virdis (2003:11ff) for details on the internal composition of this collection.
[71] Virdis (2003a:7, 26); see also Maninchedda (1987).

lenition, palatalization of Latin C+i,e, and the outcomes of Latin consonant+j.[72]

With regard to the phenomena analyzed in the present thesis, one can find the following:

Items with LDM occur frequently, e.g.:
FABRICARE> *fraigait* at 161, *fraigaresi* at 170, and *fraigare* at 170.
FABRU> *frau(s)* at 114, 167 (2 times) and 205.
COMPLERE> *clomp-* at 1, 11, 13, 15, 32 (2 times), 67, 105, 107, 161, 184, 194, 207, *clompl-* at 28, 107, 184, *clonp-* at 119.[73]

The LM metathesis occurs once:
COPULARE> *colbadas*[74]

Word-initial deletion of the obstruent occurs twice:
GLANDE> *lande* at 34
CRUCE> *ruge* at 219

Other outcomes of CRUCE display word-initial lenition, e.g., *gruge* at 1 and *grugi* at 207.

Further details can be found in the introduction, glossary, and notes in Virdis (2002). Other useful works are Tagliavini (1982:523) and Blasco Ferrer (2003:114ff). Keep in mind that various remarks on CSMB appear throughout Wagner (1941, 1960-64), Blasco Ferrer (1984), and Contini (1987). For the aforementioned items (i.e., the outcomes of COMPLERE, COPULARE, GLANDE and CRUCE) see also Chap. 3.

[72] Virdis (2003a:26-34); see also Virdis (2002:141-322) and Blasco Ferrer (2003:114ff).
[73] Notice the presence of items with a 'double' liquid. For instance, COMPLERE> c**l**omp**l**- (plus the various verbal inflections) displays the liquid in two positions, at its original place (word-internally) and after metathesis (word-initially).
[74] Wagner (1941:§249) reports *cobladas*, but as explained by Maurizio Virdis (personal communication), this item does not appear in the CSMB manuscript; see also Chap. 3, Sect. 4.1.

## 4.3 Condaghe di San Nicola di Trullas

The edition of the Condaghe of Saint Nicholas adopted here (i.e., 2001) is edited by Paolo Merci. The *condaghes* are generally collections written by various scribes in the period of one or two centuries. In contrast, the Condaghe of Saint Nicholas of Trullas (henceforth CSNT) has the peculiarity of being written mostly by one and the same scribe.[75] CSNT is from the Camaldolese monastery of Saint Nicolas.[76]

The entire collection was written approximately between the 11th and the 13th centuries.[77] The dialect of this *condaghe* is Old Logudorese. As for the other Northern texts, lenition is very rarely attested with respect to southern and western texts. Metathesis, however, occurs in various items. By looking at these items, it seems that in the north metathesis (i.e., the LDM) started later with respect to lenition.

The items affected by LDM are listed below:
COPULARE> *clopatas*
FABRICA, FABRICARE> *frabica(s) at* 9, 79 (3 times), *fravicas at* 294, and *frabicare at* 145
INTEGRU> *integru-a* at 276, 278, 280, 281, 291
FABRU> *frabile* at 46, 102, 131, *fravile* at 130, 300

Note that at 291 there is *integra* together with *intrega* and *intregu.* Each occurs once.

Further details on CSNT can be found in Tagliavini (1982:522), Blasco Ferrer (1984:65, 2003:154ff), and Merci (2001).

[75] Merci (2001:31-32).
[76] Blasco Ferrer (2003:155).
[77] Tagliavini (1982:522): "[...] San Nicola di Trullas comprende gli atti di quel monastero dal 1113 fino alla prima metà del sec. XIII." See also Blasco Ferrer (1984:65, 2003:155).

## 4.4 Condaghe di San Pietro di Silki

This collection was published in 1900 by Giuliano Bonazzi and reprinted in 1997 with revisions by Ignazio Delogu. The Condaghe of Saint Peter of Silki (henceforth CSP) was written in a Camaldolese monastery of nuns and is dated to the 11th–13thcenturies.[78] The most ancient acts (i.e., 21 to 89) are from 1064 to 1085 and correspond to the Kingdoms of Barisone and Mariano.[79] Silki was a medieval village now absorbed in the territory of the city of Sassari (Northern Sardinia).[80] The collection is from the territory of the Kingdom of Torres, and the language is Old Logudorese.[81]

From the analysis of the acts it seems that the collection was written by at least thirty different scribes.[82] As reported in Delogu (1997:12), the acts in CSP are of different types: donations, litigations acts, transactions, etc.

In CSP, various phenomena are attested. As in the other northern texts, metathesis is attested before lenition started.[83]

With regard to metathesis one can find the following items:
COP(U)LARE, COP(Ŭ)LA> *clopa* at 214, *clopatos* at 190, 311, *clopatas* at 404
COMPLERE> *clomp-*, *clonp-* at 5, 10 (5 times), 11, 96 (3 times), 110 (2 times), 173, 186, 197, 203, 285 (2 times), 290, 307, 316, 385, 404, 413, 422 (3 times).
FABRICA> *frauica* 31, CSP

[78] Blasco Ferrer (2003:151-152).
[79] Delogu (1997:11).
[80] Blasco Ferrer (2003:151).
[81] Blasco Ferrer (2003:152).
[82] Delogu (1997:11).
[83] Recall that I am talking about ancient texts and not phonetic transcriptions; thus, all possible disclaimers must be applied. If a word is written *pedra*, then it was probably pronounced lenited (i.e., ˈpɛdra or ˈpɛðra). Clearly if the same item is written *petra* one can hypothesis that lenition has not started yet, but this is not guaranteed. The presence of *petra* might also mean that the scribe hypercorrected a word that at that time was already widely pronounced ˈpɛdra or ˈpɛðra, on the example of Latin PETRA. This disclaimer must be kept in mind for all items taken from these ancient texts.

INTEGRU> *intregu* at 36, 47, 68, (3v.), 80, 83, 85, 93, 107, 120, 158, 203, 242 (2v.), 282, 284 (3v.), 299, 302, 307, 312, 314, 316, 340, 365, 372, 376, 378, 383, 386 (2v.), 387 (2v.), *intregos* at 30, 42 (2v.), 89, 316, *intrega* at 43, 44, 46 (3v.), 65, 73, 80, 85, 100, 109, 185, 205, 282, 302, 339, 344, 349 (2v.), 390, 394, 408, *intreu* at 14.
FABRU> *frabu* at 42, 89, 227.

Lenited items are also found:[84]
FABULA> *fauula* at 112
MAGISTRU> *mastru* at 8, 10, 441 (3 times), *mastriu* at 31 (2 times), 202, 244
INTEGRU-A> *intreu* at 14
FABRU> *frauile* at 82, 89, 95, 98, 100, 102, 103 (2 times), 104 (2 times), 105, 107, 108, 111, 177, 223, 226, 341, 352, *fravile* at 2, *frauicatore* at 386.

Further evidence of the instability of voiced obstruents is that forms like CRUCE> *gruke* occur twice, and the same holds of *bruke*[85] or Latin PARABULA, which became *paragula* at 20. Note that this phenomenon is typical of Logudorese.[86]

## 4.5 Gli Statuti della Repubblica Sassarese

The edition of Statuti Sassaresi adopted here was published in *Archivio Glottologico Italiano* in 1892 by Pier Enea Guarnerio. Statuti Sassaresi (henceforth St.Sass.) is the legal code of Sassari (northern Sardinia). This code was promulgated in 1316, a few years after the alliance with the Republic of Genoa.[87] The manuscript is divided into three books, but the acts are not in chronological order.[88] As argued

[84] Recall that the ancient Sardinian texts are collections written by various scribes, with different orthographies, sometimes of different mother tongues (Sardinian, Tuscan, Catalan), and each collection was usually written within one or more centuries.
[85] *bruke* occurs twice at 404 together with *gruke* (4 times).
[86] See Wagner (1941:147).
[87] Guarnerio (1892:1).
[88] Guarnerio (1892:1ff).

for in Guarnerio (1892:1), the manuscript is not the original one written in 1316, although it might be dated to the 14th century.[89]

The language of the code is Logudorese,[90] but with some peculiarities with respect to the Logudorese of CSP and CSNT. Recall that in the northern area of Sardinia two Italo-Romance languages other than Italian are spoken: Sassarese and Gallurese. In the Middle Ages, the extreme north of the island also spoke Sardinian, but from the 16th century the linguistic situation changed.[91] After the dissolution of the Kingdom of Torres, the city of Sassari and neighboring areas were under the influence of Pisa and Genoa. In this code, even though the dialect is still Logudorese Sardinian, various elements of Tuscan and Genoese may be found.[92] Nowadays the language spoken (together with Italian) is Sassarese.

The orthography varies widely with the various scribes that wrote the acts.[93] Blasco Ferrer (2003:187) argues that within the manuscript Tuscan, Genoese, and even Sicilian elements can be found.

As reported in Blasco Ferrer (2003), there is strong linguistic variation in this code. For example, the outcomes of ORIC(U)LA are the following: *oricla*, *oriclas*, *horigia*, *orighia*, and *origia*. Only *oricla(s)* may be classified as Logudorese; the others denote a strong Italo-Romance influence.

With regard to the phenomena analyzed in this thesis, one can find various occurrences of LDM:
COMPLERE> *clomper, clonplimentu*, *clompitu*, *clonpitos, clompita(s)*
CASTRARE> *crastatos*, *crastatu, crastados*, *crastadu*
FABRICARE> *fraicare, fraican, fraicat*
FEBRUARIU> *freargiu*

Lenition, especially in the most recent acts, is widely attested:

[89] Some acts were added more recently and are dated to the 15th century. They may be found in the 2nd book; see Guarnerio (1892:2) for details.
[90] Guarnerio (1892:2).
[91] Wagner (1950:345), Loi Corvetto (1993:5ff).
[92] Blasco Ferrer (2003:187).
[93] Blasco Ferrer (2003:186).

FEBRUARIU> *freargiu*
FABRICARE> *fraicare*, *fraican*, etc.

Further details on St. Sass. can be found in Guarnerio (1892:1) and Blasco Ferrer (2003:182ff), among others.

## 4.6 Carta de Logu

The Carta de Logu 'Code of the State' is probably the most well-known ancient document in Sardinian. It is the code of the Kingdom of Arborea promulgated in the 14th century[94] by the governor Eleonora. The Carta de Logu (henceforth CdL) is the most recent text of the Arborense area. The Carta de Logu is a well-studied text also for the history of law.

The edition adopted here is the one edited by Giovanni Lupinu in 2010. It is based on the so-called 'BUC 211' manuscript. More on BUC 211 may be found in Strinna (2010).

In CdL, lenition and metathesis of various types are attested.
Some items display liquid deletion (see Chap. 4, Sect. 1.3):
ORIC(U)LA> *origa, origha, horiga, origla*
OC(U)LU> *hogu*
MASC(U)LU> *mascho, maschus*

The LM metathesis appears in the following items:
PRATU>**patru*> *pardu, pardarjus, pardarjos, pardarju, pardargios*
PETRU> *Perdu*

In the Incunable A of CdL, the form *lompet* from COMPLERE appears (Lupinu 2010:126), displaying word-initial deletion.

More on Carta de Logu can be found in the introduction and glossary in Lupinu (2010); see also Wagner (1941), Paulis (1997:47ff), and Blasco Ferrer (2003:138ff).

[94] It was promulgated approximately between 1388 and 1392; see Blasco Ferrer (2003:142) and Lupinu (2010:XI).

## 5. Italo-Romance Languages on the Island of Sardinia

On the island of Sardinia, languages other than Sardinian and Italian are spoken. In the extreme north there are two languages of the Italo-Romance subgroup: Gallurese and Sassarese.[95] Gallurese is closely related to the Southern Corsican dialects,[96] while Sassarese, despite being related to Gallurese, displays more of a Sardinian influence. In the town of Alghero (north-west coast of Sardinia), the Catalan dialect Alguerese (or *algherese* in Italian) is traditionally spoken. In the small towns of Carloforte and Calasetta (south-western coast of Sardinia), the Ligurian dialect Tabarchìn (or *tabarchino* in Italian) is spoken.[97]

## 6. Language Policy and Sociolinguistic Situation

According to the Historical Minorities Protection Act, No. 482 from 15 December 1999 (henceforth HMPA),[98] the Italian Republic recognizes the following languages as minority languages: Albanian, Catalan, German, Greek, Slovene, Croatian, French, Franco-Provençal, Friulian, Ladin, Occitan, and Sardinian.[99]

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[95] On Sassarese and Gallurese, see Bottiglioni (1919), Wagner (1950:340ff), Contini (1987), Loi Corvetto (1993:5ff) and Maxia (1999).

[96] On Corsican, see Dalbera-Stefanaggi (1991) and Nesi (1988, 1993).

[97] Gallurese, Sassarese, and Tabarchin are recognized by the Autonomous Region of Sardinian (PASLC art. 2), but not by Italian law. By contrast, Alguerese Catalan is protected by both, like Sardinian. See HMPA and PASLC.

[98] The Historical Minorities Protection Act is available at: http://www.camera.it/parlam/leggi/99482l.htm. A critical discussion of HMPA can be found in Savoia (2001).

[99] Obviously, this act refers to the dialects of the aforementioned languages spoken in the Italian administrative territory. Thus, for instance, it does not refer to standard German but to the Germanic dialects spoken in Italy, that is, in South Tyrol and in the region of Bolzano. The same holds for Greek (i.e., Griko dialects), Albanian (i.e., Arbëreshë), Catalan (i.e., Alguerese Catalan), etc. In addition, this act protects indigenous languages such as Ladin, Friulian, Sardinian, etc. See Savoia (2001:15ff).

## (7) Historical Minorities Protection Act, No. 482

In attuazione dell'articolo 6 della Costituzione e in armonia con i princípi generali stabiliti dagli organismi europei e internazionali, la Repubblica tutela la lingua e la cultura delle popolazioni albanesi, catalane, germaniche, greche, slovene e croate e di quelle parlanti il francese, il franco-provenzale, il friulano, il ladino, l'occitano e il sardo.

from http://www.camera.it/parlam/leggi/99482l.htm

As stated in (7), the HMPA is an act that is meant to protect the aforementioned languages and their respective cultures.

From a linguistic point of view, the HMPA aims at protecting the minority languages in (7) and favors their use in the respective territories as languages of literacy in schools and universities, together with Italian (art. 4 and art. 6). It also promotes linguistic research of these languages (art. 5) and favors their use in the administrative offices both in a spoken and in a written form (art. 9). Publishing and broadcasting in the local minority language is encouraged (art. 12 and art. 14). The articles 15 and 20 concern the financial dispositions to guarantee the applications of HMPA.

The Protection Act of Sardinian Language and Culture (henceforth PASLC) is dated 1997 (two years before HMPA). PASLC contains some provisions about the safeguard of the Sardinian language. Most of the articles are about generic propositions for the safeguard of Sardinian culture and language, which legislators take to be inseparable. Only one article is exclusively about language, namely article 23, which argues for the recognition of Sardinian as an administrative language together with Italian.

Since 2006 Sardinian has a standard form, called 'Limba Sarda Comuna,'[100] adopted by the Autonomous Region of Sardinia in its official documents.[101]

[100] The norms of the Limba Sarda Comuna are available in the web portal of the Autonomous Region of Sardinia at: http://www.regione.sardegna.it/documenti/1_72_20060418160308.pdf.
[101] The act of the Autonomous Region of Sardinian is available at: http://www.regione.sardegna.it/documenti/1_74_20060503165850.pdf (in

Nonetheless, in spite of its constitutionally recognized status, Sardinian is declining. UNESCO classifies Sardinian as an endangered language: "Campidanese Sardinian and Logudorese Sardinian are [...] losing speakers on a scale that makes it necessary to define them as endangered" (Moseley 2007, 2010).[102]

Sardinian stands in a diglossic relationship with Italian. Most Sardinians are bilinguals in Italian and Sardinian, even though proficiency in such languages varies depending on sex, age, and social class.[103] Bilingual people regard Sardinian as the low-prestige language while Italian is the high-prestige one.[104] As a consequence, Sardinian is used within the home or, more generally, in informal settings, while Italian is used in all formal settings, e.g., at school, university, and administrative offices.

Nowadays the competition among Sardinian and Italian has been definitely settled in favor of Italian. The parental transmission of Sardinian has been interrupted in most families,[105] and those children that learn Sardinian in preschool age "[...] stop using it at school age" (Moseley 2007:239, 257). This is evidence of the inadequacy of the Italian educational system in effectively handling the bilingualism question. Linguistic policies of the Autonomous Region, on the other hand, might be seen as lacking a realistic familiarity with the sociolinguistic situation of Sardinia.[106]

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Sardinian) or at:
http://www.regione.sardegna.it/documenti/1_74_20060503165407.pdf (in Italian).
[102] The online version of the UNESCO Atlas of the World's Languages in Danger is available at: http://www.unesco.org/culture/languages-atlas/en/atlasmap.html
[103] Rindler Schjerve (1993:278-9, 1998).
[104] Rindler Schjerve (1993:278ff).
[105] Rindler Schjerve (1993:278, 280).
[106] The Autonomous Region commissioned the sociolinguistic survey in Oppo (2007). This work is rich in demographic and sociological detail, but its reliability as a source of the sociolinguistic reality of Sardinia is to some extent diminished by its methodology, which was based on self-assessed evaluations of competence and use by the speakers themselves.

# Chapter 2

## The CVCV Model

The present chapter illustrates the theoretical background under which the present research was carried out. The CVCV model, also known as Strict CV, is a development of standard Government Phonology (henceforth SGP).[1] Its peculiarity with respect to SGP is that in this approach there are no branching constituents. Branching onsets and nuclei are replaced by strict sequences of onsets and nuclei. Relations between segments are expressed by two forces: Government and Licensing. The CVCV approach adopted here follows Lowenstamm's (1996) proposal as developed at great length in Scheer's (2004) book and further works.[2] This chapter is meant to offer a sketch of CVCV and address the aspects of this approach which will be of great importance for the analysis here.

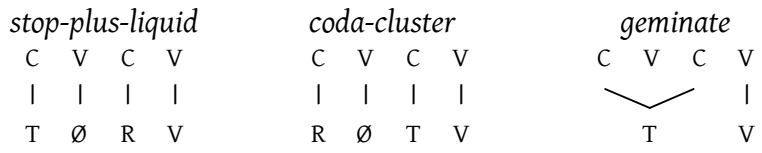
### 1. Introduction

In the CVCV approach, phonological representations are reduced to a sequence of onsets and nuclei. Even traditional branching onsets and nuclei are re-interpreted under the strict alternation of consonantal and vocalic positions. Since this model admits only strict sequences of this kind, it inevitably implements empty nuclei. Therefore stop-plus-liquid clusters, coda-onset clusters, and geminates are taken to enclose an empty nucleus.

Coda consonants are viewed as onsets of an empty vocalic position. Table (1) below illustrates the CVCV representations of stop-plus-liquid clusters (henceforth TRs), coda-onset clusters (henceforth RTs), and geminates (henceforth TTs). T is shorthand for obstruents, R for sonorants, Ø represents empty nuclei, and V stands for nuclei.

[1] Kaye et al. (1985, 1990).
[2] See also Nevins (2008).

(1) Representation of Consonant Clusters in CVCV




adapted from Scheer (2004:§9)

As one can see from (1), there is no difference between codas and onsets. All consonants are onsets, some of a full nuclear position and others of an empty one (in the case of internal and final codas[3]).

To regulate the distribution of empty nuclei, CVCV, like SGP, adopts the Empty Category Principle. In SGP (Kaye et al. 1990), the Empty Category Principle is defined as follows:

(2) Empty Category Principle - SGP

A position may be uninterpreted phonetically if it is properly governed.

from Kaye et al. (1990:219)

A slightly revised version which also takes into account Infrasegmental Government[4] appears in Scheer (2004:§60). In this approach, the Empty Category Principle is defined as follows:

(3) Empty Category Principle - CVCV

A nucleus may remain phonetically unexpressed iff it is

a. properly governed or
b. enclosed within a domain of Infrasegmental Government or
c. domain-final.

from Scheer (2004:§60)

[3] Note that here and elsewhere the use of the term 'coda' is only notational. In CVCV the term 'coda' means "a consonant occurring before a governed empty nucleus" (Scheer 2004:§6).
[4] See Sect. 2.2, this Chapter.

Thus, in Scheer's (2004) version, empty vocalic positions may exist if one of the conditions in (3) is satisfied.

The Empty Category Principle states that a nucleus may be left empty if it is properly governed.[5] The governor must be a filled nucleus; thus, sequences of two empty vowel positions cannot exist for government reasons. The alternation must be between a filled and an empty vocalic position.

## 2. Lateral Relations

### 2.1 Government and Licensing

As mentioned in Section 1, Government accounts for the distribution of empty nuclei. Government and Licensing are the two lateral relations that in CVCV express the traditional syllabic arborescence of more traditional approaches (Scheer 2004:3ff). Thus, in the CVCV model all syllable-related processes can be expressed by the lateral relations of Government and Licensing (Scheer 2004:3ff).

Government and Licensing have antagonist effects. The former has a negative effect while the latter supports its target (Scheer 2004:134ff, 160ff).

**(4) Antipodal Effects of Government and Licensing**

a. Proper Government inhibits the segmental expression of its target.

b. Licensing enhances the segmental expression of its target.

from Scheer (2004:139)

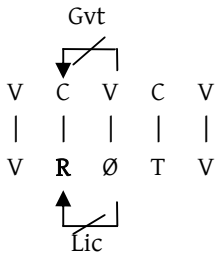
Both relations apply right-to-left. In CVCV, the various segmental positions are expressed within these lateral relations. The strength or the weakness of a segmental position is expressed within these two relations (see Sect. 5).

[5] Kaye et al. (1990:219ff) and Scheer (2004:§15ff).

In this and in the following sections (Sects. 3 and 4), I will anticipate some of the ideas of the Coda Mirror Theory (Ségéral and Scheer 2001).

As seen in Section 1, coda consonants are followed by an empty vocalic position that, as stated in (3), needs to be governed. Thus, the representation of coda consonants in terms of lateral relations is as follows:

(5) Coda Consonants in CVCV



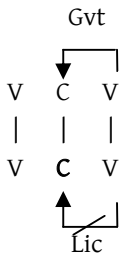

from Scheer (2004:133)

A coda consonant is the onset of an empty nucleus. This empty nucleus is unable to govern its own onset, which thus escapes Government. Coda consonants are in a weak position, neither governed nor licensed.

The other weak position is the intervocalic one. Intervocalic consonants are weak, but in a different way with respect to coda consonants.[6] Figure (6) represents the lateral relations for intervocalic consonants:

[6] Ségéral and Scheer (1999) and Ziková and Scheer (2010); see also Chap. 5, Sect. 5.

(6) Intervocalic Consonants in CVCV

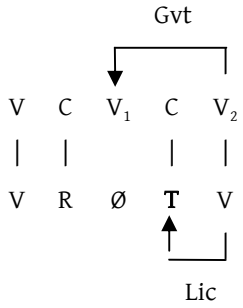



from Ziková and Scheer (2010)

Consonants in intervocalic position are preceded and followed by filled vocalic positions. This means that intervocalic consonants appear to be governed by the following vowel, since the vowel that precedes, being a filled nucleus, escapes Government. Thus, Government applies to the intervocalic consonant. Intervocalic consonants are governed but unlicensed.[7]

As depicted in Figure (7) below, consonants in strong position occur after an empty nucleus.

(7) Consonants in Strong Position in CVCV




from Scheer (2004:132)

In this configuration, T escapes Government since its own nucleus is called to govern the empty nucleus that precedes it. Thus, in (7), in

[7] The representation in (6) follows the version 2 of the Coda Mirror (Ziková and Scheer 2010); see Sect. 5.1 (this Chap.) and Chap. 5, Sect. 5.

contrast to (6), the Government of V2 applies to V1 (i.e., the empty nucleus), and thus the post-coda consonant may escape the effects of Government.

## 2.2 Infrasegmental Government

In CVCV there is also another lateral relation besides Government and Licensing. The lateral relation in question is the so-called Infrasegmental Government.

Infrasegmental Government (henceforth IG) is a lateral relation within a consonantal cluster.[8] This relation does not have any segmental effect, negative or positive, on its target, unlike Government and Licensing (Scheer 2004:162). The difference between Government and IG may be found in Scheer (2004:64):

> "Infrasegmental Government is the equivalent of Proper Government at the level of the internal structure of segments. At the syllabic level, Proper Government describes a lateral relation whereby a contentful position establishes Government over an empty position. Infrasegmental Government does the same thing below the skeleton (and it is therefore called "infrasegmental"). Also the effects of both operations are identical: an empty nucleus is circumscribed and must not appear on the surface."

Thus, IG is a relation contracted among the two members of a cluster, while Government and Licensing are relations that hold at the syllabic level. IG is responsible for the cohesion among the liquid and the obstruent in a homosyllabic TR, i.e., a branching onset[9] (Brun-Trigaud and Scheer 2010:17).

[8] See Scheer (1999, 2004:36ff) and Brun-Trigaud and Scheer (2010:17).

[9] Here and elsewhere the use of the term 'branching onset' is only notational. As already mentioned, in CVCV syllabic constituents do not branch. Note also that other analyses within the CVCV framework may consider TR sequences as contour segments (Lowenstamm 2003, Ségéral and Scheer 2005) or heterosyllabic clusters (Lowenstamm 2003, Ségéral and Scheer 2005). These options will be considered in Chap. 5.

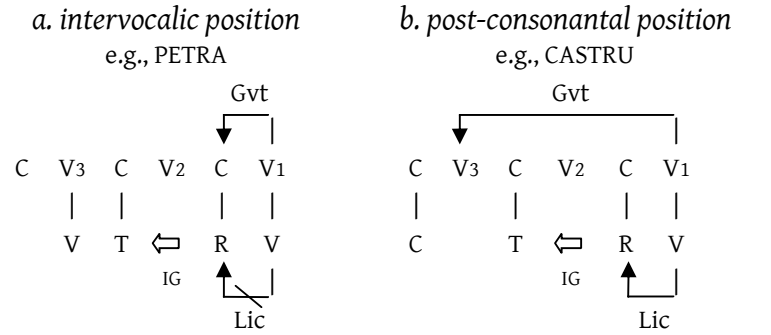
## 3. Branching Onsets and Locality in CVCV

As reported in Scheer (2004:42, 60), IG is based on Harris (1990) and Charette (1990, 1991). In the consonantal interaction that holds among the two members of a branching onset, Standard Government Phonology takes the obstruent as the head of the cluster. By contrast, CVCV maintains that sonorants are more complex than obstruents and the hierarchy is reversed: sonorants govern obstruents. Thus, the liquid is considered the head of a branching onset (Scheer 2004:37, 43, 58ff).[10]

As stated in (3), a vocalic position can remain empty if it is enclosed in a domain of Infrasegmental Government. This means that with regard to branching onsets, the empty nucleus enclosed within the obstruent and the liquid does not need to be governed because of the relation of IG that holds among them (Scheer 1999; 2004:64, 75).

Figure (8) reports the representation of branching onsets within the CVCV approach. IG is represented by the white arrow that connects the two members of the cluster.

**(8) Branching Onsets in CVCV – Classic Representation**




adapted from Brun-Trigaud and Scheer (2010:18)

As argued in Brun-Trigaud and Scheer (2010:18), the representation in (8) has some weak points. First, the obstruents in (8)a and (8)b do not have an identity in terms of local relations. They are involved in

[10] For further discussion, see Harris (1990), Charette (1990, 1991), and Scheer (1999, 2004:37ff).

an IG relation, but as mentioned in Section 2.2, IG does not have any segmental effect. In (8) the liquid is the only target of Government and Licensing. It is governed and unlicensed in the case of an intervocalic TR, while in a post-consonantal TR it is ungoverned but licensed. By contrast, the obstruent has no status at all.

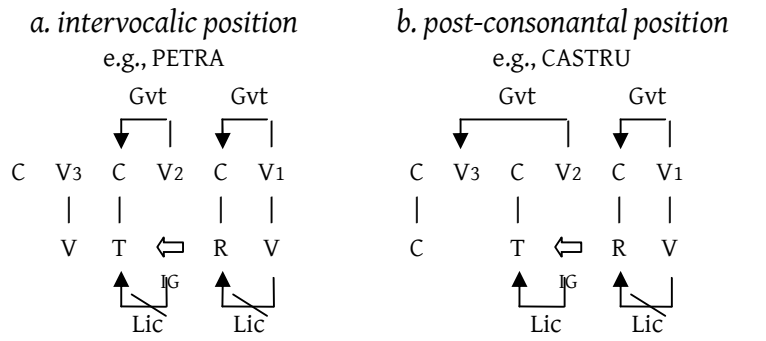
Another weak point concerns locality (Brun-Trigaud and Scheer 2010:18ff). The notion of locality is inspired by the approach to syntactic locality known as Relativized Minimality (Rizzi 1990). In this view, a syntactic relation between two elements A and B cannot be established if there is a third element C such that C is of the same type of B and C intervenes between A and B (i.e., C is closer to A than B is). The most crucial difference between Relativized Minimality and the locality notion adopted by CVCV Phonology is that in the former the notion of intervention is defined on tree structures (in terms of c-command), while in the latter intervention is defined in terms of lateral relations.

Thus, CVCV structures respond to locality principles, but in (8)b locality is violated:[11] the leftmost empty nucleus (i.e., V3 in Figure (8)b) is governed by V1. Thus, this Government relation does not satisfy locality by trespassing a category of the same kind as V3 (i.e., the empty nucleus in V2).[12]

To avoid this undesirable situation, Brun-Trigaud and Scheer (2010) argue in a recent paper for the necessity of a revised representation for branching onsets. The revised version they propose appears in (9):

[11] For the application of the notion of Locality (in the sense of Rizzi 1990) to phonology, see Brun-Trigaud and Scheer (2010) and Scheer (2012a:173, note 41).
[12] A further problem is that the traditional representation in (8) does not fit the Coda Mirror statements; see Sect. 5, this Chap. and Chap. 5, Sect. 3.1.

(9) Branching Onsets in CVCV – Revised Representation




adapted from Brun-Trigaud and Scheer (2010:19)

In (9) locality is now preserved: V3 is governed by V2. As already mentioned, however, an empty nucleus such as V2 in (9) cannot be a governor. Only full nuclei are in the condition to govern.[13] Nevertheless, according to Brun-Trigaud and Scheer (2010:19), "the ability of nuclei to govern and license is defined by their phonological, rather than by their phonetic properties: nuclei are lateral actors iff they are ungoverned, i.e. independently of whether they are pronounced or not."

The other advantage is clearly depicted in Figure (9). The status of T has now been defined: it is governed but unlicensed in an intervocalic TR configuration, while in a post-consonantal position it is ungoverned but licensed. Notice also that in the revised representation, Ts in a branching onset configuration contract the same lateral relations of simplex Ts in an analogous environment (see Figures 6 and 7). Thus, in intervocalic position they are both governed but unlicensed, while in post-consonantal position both are ungoverned but licensed.

In (9) there is also a further change that involves liquids. In contrast to (8)b, in (9)b liquids are governed but unlicensed. Thus in the amended version liquids are always governed and unlicensed, both in intervocalic and post-consonantal branching onsets.

[13] See Kaye (1990), Scheer (2004), and Brun-Trigaud and Scheer (2010:19).

In my view, a further advantage of this version is that it is able to account for the identity of liquids in branching onsets. As will be seen in the following chapters, liquids in TR clusters in Sardinian went through various structural changes (i.e., metathesis and liquid deletion). These changes involved liquids in post-consonantal and intervocalic branching onsets with no difference in behavior. This is further evidence for the claim that the structural configuration of liquids in branching onsets is independent from the fact that the liquid sits in a post-consonantal or an intervocalic branching onset. In both configurations the liquid is in weak position: it is governed and unlicensed.

For the reasons advocated here, I consider the revised version in (9) as the representation of branching onsets in CVCV. Further discussions will be offered in Chaps. 5 and 6.

## 4. The Identity of the Word-initial Position

According to Lowenstamm's (1999) proposal, languages are considered to have an empty CV unit at the left edge of words. In Scheer's (2012a:185) terms it can be said that the phonological identity of the beginning of the word is an empty CV.[14] Lowestamm's proposal was then developed at great length in Scheer (2000, 2004:96ff, 2012a:74ff).

The presence of the empty CV site is in parametric variation; thus, it is only considered to be available for some languages (Scheer 2000, 2012a:190ff). For example, English and Romance languages have a word-initial CV site, whereas Semitic languages and Greek do not display this empty unit.[15] Evidence for this empty CV structure comes from the fact that the left edge of words is the site of various phenomena observed across languages; for examples, see the list in (10) from Scheer (2012a):

[14] The initial CV site realizes morpho-syntactic information; see Scheer (2012a).
[15] Scheer (2000, 2004:97ff, 2012a:188ff), Seigneur-Froli (2003, 2006).

(10) Stable Effects of the Beginning of the Word across Languages

a. **Restrictions on Initial Clusters**
In some languages initial clusters are restricted to #TR. In others, they have the same distribution as internal clusters. But there is no language where they are restricted to #RT.

b. **Strength of Initial Consonants**
In some languages word-initial consonants are especially strong. In others, they do not have any peculiar behaviour regarding strength. But there is no language where they are especially weak.

c. **Deletion of the First Vowel of the Word**
In some languages the first vowel of words is unable to alternate with zero. In others, it does not show any peculiar behaviour with respect to other vowels. But there is no language where non-initial vowels are unable to alternate with zero, while initial vowels do.

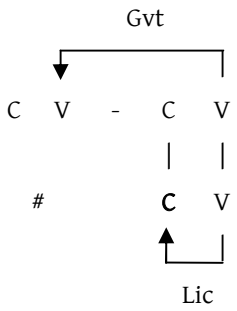
from Scheer (2012a:187)

As can be seen from (10), languages split into two groups with regard to the phenomena under investigation. First, in word-initial position most languages only have TR clusters, while others admit both TR and RT clusters. Second, only in some languages do word-initial consonants appear strong. Third, there are languages in which the first vowel of the word may alternate with zero like any other vowel of the word, while in other languages the deletion of the first vowel is never observed.[16]

The hypothesis of an empty CV unit may easily explain all of the above phenomena (Scheer 2004:97ff). Figures (11) and (12) represent the word-initial position in languages with and without the CV unit. Figure (11) represents a word-initial consonant in a language with an empty CV site, while Figure (12) represents a word-initial consonant in a language that does not display the initial empty site.

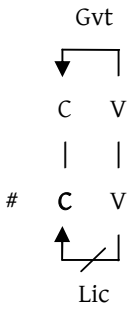
[16] Further discussion on these topics may be found in Lowenstamm (1999), Scheer (2004:97ff), and Ségéral and Scheer (2008b).

(11) Initial Consonant with the Empty CV




from Ségéral and Scheer (1999:23)

(12) Initial Consonant without the Empty CV




In languages that possess the empty CV site, as in Figure (11), word-initial consonants are strong because they escape Government: the empty nucleus of the initial CV dispenses the word-initial consonant from being governed by its own nucleus. By contrast, in languages that lack the initial CV, the word-initial consonants have the same configuration encountered in intervocalic consonants (see Figure (12)). In sum, in Figure (11) the initial consonant is strong: it is licensed but ungoverned. In comparison, in Figure (12) the initial consonant is weak: it is governed but unlicensed.

Thus, as already mentioned, languages pattern differently with regard to the phenomena in (10), summarized again in (13). This

contrasting behavior is analyzed as being related to the different status of the word-initial position.

**(13) Presence vs. Absence of the Initial CV Site**

Languages that admit word-initial RT clusters and those that display weakening in word-initial position are languages without the empty CV site.

By contrast, languages in which word-initial consonants are not subjected to weakening and those that do not admit word-initial RT clusters or word-initial vocalic deletion are languages with the empty CV unit.

In what way might the above phenomena be related to the initial CV?
The empty nucleus of this initial CV string must be licensed by government, as for every empty nucleus (see ECP). For this reason, languages that admit word-initial RT clusters cannot also have a word-initial CV unit. Having a CV unit plus an RT cluster means two adjacent empty nuclei, of which only the one enclosed within R and T can be governed by the first vowel of the word.

Analogously, word-initial vowel deletion in languages with an empty CV site is not possible for government reasons: the deletion of the word-initial vowel means the deletion of the governor of the empty CV nucleus. This is the reason why in some languages the word-initial vowel cannot be deleted, while in others the word-initial vowel can delete as other vowels do (Scheer 2012a:187).

Weakening in languages with an initial CV site is not observed, since the initial empty nucleus preserves the word-initial consonant from the negative effects of Government. By contrast, initial weakening is a possibility in those languages without an initial CV, because, as shown in (12), an initial consonant that is not preserved by the empty CV displays the same lateral relations as intervocalic

consonants: it is governed but unlicensed, and in a weak position changes are possible (see next section). For the time being it must be kept in mind that in a language with the empty CV, weakening phenomena of any sort are predicted not to occur in word-initial consonants.

Further discussions on these topics may be found in Lowenstamm (1999), Ségéral and Scheer (2001), Scheer (2004), Ségéral and Scheer (2008b), and Scheer (2012a). Here I have focused on the more relevant aspects of the theory which will have a direct application in Chaps. 5 and 6. For further discussion, I refer the reader to the original sources.

The notion of initial CV and its implications have been the building blocks of a theory couched in the CVCV model which explains lenition and fortition in terms of lateral relations: the Coda Mirror Theory.

## 5. The Coda Mirror

Some of the considerations I have anticipated in the previous sections also hold for the Coda Mirror Theory, in which strengthening and weakening are interpreted in light of positional effects: lateral relations (i.e., Government and Licensing) explain the processes that affect segments.

The Coda Mirror Theory was first introduced in Ségéral and Scheer (1999, 2001) and further developed in Scheer (2004:117ff), Ségéral and Scheer (2008a, 2008b), and Ziková and Scheer (2010). The basic claim of this theory is that weakening and strengthening are the visible effects of lateral relations, namely Government and Licensing.

As noted by Ségéral and Scheer (1999, 2001), consonants occur in five different positions:[17]

[17] Branching onsets are not examined here. They are discussed in Section 3, this Chapter and in Chaps. 5 and 6.

- in word-initial position #_
- after a coda consonant C._
- in intervocalic position V_V
- before a heterosyllabic consonant _.C
- word-finally _#

With regard to the effects induced by these positions across languages, the above positions are classified as follows:[18]

**(14) The Five Positions and Their Grouping**

| | *position* | *usual name* | | |
|---|---|---|---|---|
| a. | #_V | word-initial | STRONG POSITION | |
| b. | VC._V | post-coda | | |
| c. | V_.CV | internal coda | coda | WEAK POSITION |
| d. | V_# | final coda | | |
| e. | V_V | intervocalic | | |

from Scheer (2004:119)

The word-initial position and the post-coda position are the sites that inhibit weakening, while in the other environments weakening is typically observed.

In Ségéral and Scheer (1999, 2001), diachronic evidence comes from the evolution of French, Portuguese, Galician, and German, whereas on the synchronic side, examples are from Somali and Tiberian Hebrew. Tables (15), (16), and (17) illustrate several examples from historical French; data are from Ségéral and Scheer (1999:2):

[18] Table (14) implicitly refers to languages that have an initial CV; see the previous section.

(15) Consonants in Strong Position from Latin to French

| *a. word-initial position #_* | *b. post-coda position C_* |
|---|---|
| **P**ORTA> porte | TAL**P**A> taupe |
| **B**ENE> bien | HER**B**A> herbe |
| **T**ELA> toile | CAN**T**ARE> chanter |
| **D**ENTE> dent | AR**D**ORE> ardeur |
| **C**OR> coeur | RAN**C**ORE> rancoeur |
| **G**ULA> gueule | AN**G**USTIA> angoisse |
| **F**AME> faim | IN**F**ERNU> enfer |
| **S**ERPENTE> serpent | VER**S**ARE> verser |

(16) Consonants in Coda Position from Latin to French

| *a. internal coda _C* | *b. final coda _#* |
|---|---|
| RU**P**TA> route | LU**P**(U)> [lu] |
| CU**B**(I)TU> coude | U**B**(I)> où |
| PLA**T**(A)NU> plane | MARI**T**(U)> mari |
| A**D**VENIRE> avenir | NU**D**(U)> nu |
| FA**C**TA> faite | *VERA**C**(U)> vrai |
| RI**G**(I)DU> raide | |
| STE**PH**(A)NU> Etienne | |
| MU**S**CA> mouche | NO**S**> [nu] |

(17) Intervocalic Consonants from Latin to French

| |
|---|
| RI**P**A> rive |
| FA**B**A> fève |
| VI**T**A> vie |
| CO**D**A> queue |
| LACTU**C**A> laitue |
| *A**G**USTU> août |
| DE**F**ORIS> dehors |
| CAU**S**A> chose [z] |

As the data show, French was affected by various types of weakening, namely voicing, spirantization, and complete deletion of the consonant. Only in Table (15) have the consonants remained unchanged.

A main bipartition can be found between codas on the one hand and consonants in a strong-position on the other. Consonants in internal and final coda were subjected exactly to the same changes, while word-initial and post-coda consonants systematically avoided any kind of weakening.

To summarize:

1. The previous data clearly illustrate behavior shared by the environments in final and internal coda on the one hand, and word-initial and post-consonantal position on the other.

2. The effects that are found in these two groups are opposite: internal and final coda environments favor weakening, while word-initial and post-consonantal environments do not.

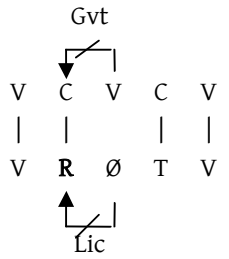
Intervocalic consonants may display weakening as well, but the kind of phenomena in which they are involved differs with respect to codas (see Sect. 5.1).

According to Ségéral and Scheer (1999, 2001), the word-initial and post-consonantal positions are the Coda Mirror contexts: they are the 'mirror' contexts of coda environments. Thus, a bipartition may be observed between coda contexts and Coda Mirror contexts. The consonants in final and internal coda are unified by the fact that both occur before an empty nucleus, while word-initial and post-consonantal consonants occur after an empty nucleus. Figures (18) and (19) present the coda context and its 'mirror,' respectively.

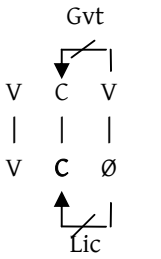
**(18) Coda Context**

ungoverned and unlicensed

*a. internal coda*




*b. final coda*

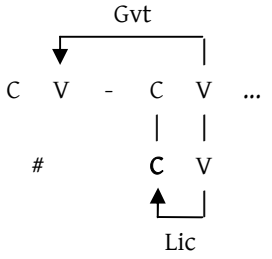



from Scheer (2004:141)

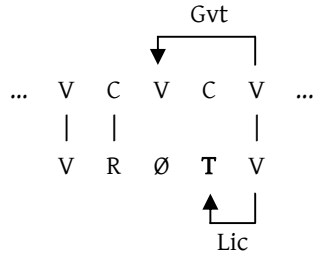
**(19) Coda Mirror Context**

ungoverned but licensed

*a. word-initial consonant*




*b. post-coda consonant*




from Scheer (2004:140)

In (18) internal and final codas occur before an empty nucleus. They are both ungoverned and unlicensed. In the Coda Mirror context the situation is reversed: Coda Mirror consonants occur after an empty nucleus. Thus, they are ungoverned but licensed.

As already seen in (4), Licensing is a positive force that supports its target; being the antagonist of Licensing, Government has a negative effect. In (19) Coda Mirror consonants are strong because they escape Government: the filled nucleus that follows coda mirror consonants is called to govern the empty nucleus to its left. By contrast, codas display a peculiar structural condition: they avoid Government but at the same time fail to receive the support of Licensing.

Table (20) summarizes the bipartition between coda and Coda Mirror context and their opposite effects.

**(20) Coda vs. Coda Mirror – Segmental Effects**

| | *structural description* | *segmental effects* | *syllabic analysis* |
|---|---|---|---|
| Coda | _ {#, C} | weakness | before empty Nuclei |
| Coda Mirror | {#, C} _ | strength | after empty Nuclei |

from Ségéral and Scheer (1999:22)

The segmental health of a consonant is the result of the interaction of these forces. Coda Mirror consonants are strong because they lack the effects of Government. By contrast, codas avoid both Government and Licensing. As Ziková and Scheer (2010:§4.2) state: "[Codas] do not experience any lateral influence. One could say that they appear 'naked' on the surface, i.e. in the positional conditions that are produced by the absence of phonological computation."

### 5.1 Codas vs. Intervocalic Consonants and Their Relative Strength

As already mentioned, the coda position and the intervocalic position are weak positions, even though they can differ in a number of respects.[19]

The two sites are analyzed in terms of lateral relations in Ziková and Scheer (2010). They argue (contra Ségéral and Scheer 2001) that

[19] A list of the different phenomena affecting codas vs. intervocalic consonants may be found in Ségéral and Scheer (1999:24), which is reported in Chap. 5, Sect. 5. For further details, see Harris (1997), Ségéral and Scheer (1999), Ségéral and Scheer (2001), Ziková and Scheer (2010), and the Cyran's (2006) review of Scheer (2004).

Government and Licensing are not equal forces, but Government applies over Licensing, as reported below in (21):[20]

**(21) Government vs. Licensing**

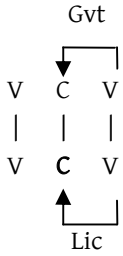
"No constituent can be governed and licensed at the same time. In case a constituent can potentially be subjected to both lateral forces, it will be governed."

Ziková and Scheer (2010:§4.2)

This statement conflicts with the traditional configuration of intervocalic consonants as reported in the first version of the Coda Mirror Theory (Ségéral and Scheer 2001). In the Coda Mirror v.1, intervocalic consonants are affected either by Government and Licensing. According to the principle in (21), intervocalic consonants are considered governed but unlicensed. Figures (22) and (23) present the two configurations.

**(22) Intervocalic Consonants – Coda Mirror v.1**

governed and licensed

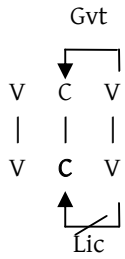



traditional version from Ségéral and Scheer 2001

[20] See Ziková and Scheer (2010:§4.2) and Chap. 5, Sect. 5, in which a brief discussion can be found.

**(23) Intervocalic Consonants – Coda Mirror v.2**

governed and unlicensed




revised version from Ziková and Scheer (2010)

The principle in (21) also has another consequence: intervocalic consonants are weaker than codas.[21] This consequence will be of great importance in the next chapters. It will help to better understand some peculiar behavior found in stop-plus-liquid sequences. Chapter 5, Sections 5 and 6 will provide further discussion on the topic.

## 5.2 Codas vs. Intervocalic Consonants in Sardinian

To give an idea of how the Coda Mirror statements may be of help to understand the Sardinian situation, I report some examples below. In (24), (25), and (26), I provide the Tertenia Sardinian reflexes of Latin B. Etymological forms are from DES, while the Tertenia forms are my own.

**(24) Coda Context in Sardinian**

| *a. internal coda* | *b. final coda*[22] |
|---|---|
| RU**B**EU> *rubiu*[23]> or'ruβiu | - |

**(25) Coda Mirror Context in Sardinian**

| *a. word-initial position* | *b. post-coda position* |
|---|---|
| **B**UCCA> '**b**ukka[24] | CAM**B**A> 'kam**b**a |

[21] Ziková and Scheer (2010:§4.3).
[22] Sardinian never displayed voiced bilabial obstruents in final coda in its history.
[23] The ancient texts display *rubiu* or *ruviu*; see Wagner (1941:234).

(26) Intervocalic Context in Sardinian

FA**B**ULA> ˈfaula

As one can see, consonants in Sardinian in the Coda Mirror context resist weakening. Coda and intervocalic consonants adopted different solutions in the evolution from Latin to Sardinian. The former displays a fricative, while the latter deleted. In other words, lenition applied to intervocalic obstruents (i.e., governed and unlicensed) only, while coda consonants (i.e., ungoverned and unlicensed) were not affected.

I would like to avoid misunderstandings regarding the examples in (24). In Sardinian lenition, voiced obstruents deleted (see Wagner 1941, among many others). The fact that a fricative surfaces in (24) as a result of Latin B is not due to lenition. It might be considered the result of a weakening phenomenon if one accepts that Latin B was a voiced stop, or it might be considered as simply unaffected by changes if one considers that Latin B was pronounced as a voiced fricative.[25] Suffice it to say that it is a different matter from the Sardinian lenition which is relevant here. For current purposes, the forms in (24) did not go through lenition, while the forms in (26) did. The evolution of Latin RUBEUM in Sardinian can thus be regarded as revealing the fact that B was a coda consonant; see Chap. 5, Sect. 6.

## 6. Summary

The Coda Mirror Theory unifies environments that appeared unrelated within other frameworks and offers a unified account for weakening and strengthening.

[24] The status of word-initial voiced obstruents is slightly more complex. See Wagner (1941:§118, 123). On voiced obstruents in Tertenia Sardinian see Lai (2010, 2011).

[25] See e.g., Lindsay (1894:78): "Latin *b*, *p* were labial mutes, apparently with the same sound as *b*, *p* in Ital., e.g. bene (Lat. *bĕnĕ*), pino (Lat. *pīnus*), and English *b*, *p*. Between vowels *b* became in course of time a labial spirant [...]" and Herman and Wright (2000:46).

In the following chapters I will adopt The Coda Mirror Theory and the CVCV model to analyze the behavior of stop-plus-liquid sequences. According to the Coda Mirror Theory, a consonant is expected to reflect its segmental health and this should be visible both in diachrony and in synchrony. Its segmental integrity is related to the lateral relations in which the consonant in question is involved. This is true for simple consonants and heterosyllabic clusters, as stated in the Coda Mirror Theory, but also for branching onsets, as argued for in Ségéral and Scheer (2005) and Brun-Trigaud and Scheer (2010).[26]

[26] See Chap. 5.