

# THE CHRONOLOGY OF ROMANCE LENITION

## THE TESTIMONY OF GOTHIC LOANWORDS

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### **Abstract**

This study explores the dating of Romance lenition using the information provided by Gothic loanwords introduced in Ibero-Romance between the 5<sup>th</sup> and 8<sup>th</sup> centuries. It is based on the notion that Romance lenition is a natural internally motivated process (*rafforzamento sintattico* as the catalyst of restructuring) that came from an early allophonic stage (since the 1<sup>st</sup> c. A.D.) into a phonological fact (Cravens 1991; 2000) much time later. The linguistic testimony of the Visigothic period in the Iberian Peninsula demonstrates that Romance lenition, at least for the sonorization of the voiceless velar stop, was active by that period and endured until the 9<sup>th</sup> and 11<sup>th</sup> centuries. This is corroborated with brief reviews on the Latin evidence and the Hispano-Arabic loanwords.

### **Keywords**

Romance lenition – Gothic loanwords – Ibero-Romance – absolute chronology



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# The chronology of Romance lenition: the testimony of Gothic loanwords

## Introduction

Romance lenition, the weakening of consonants in unprotected position which affects the Western Romance languages, has long formed one of the basic problems of historical Romance linguistics. Various approaches throughout the history of this discipline have observed the diverse and complex nature of the phenomenon in different linguistic areas (i.e. various opinions on its origin, whether it occurred due to substratum; on its distribution, whether it was a unified sound shift; on its type, whether it was a push chain process or another kind of reaction; etc.).

Concerning the establishment of its chronology, there is no clear consensus either. Besides the indirect information provided by relative chronologies, a very important testimony for the absolute chronology is given by the loanwords that entered the Romance languages during this crucial period. Germanic loanwords have been studied in that sense, and at least the general coordinates have been determined. The corpus of Germanic loanwords presents several inadequacies for the chronological purpose in terms of precision due to the variety of Germanic languages involved and the wide chronological period of language contact.

Despite these inconveniences, the present project intends to shed further light on the problem of lenition's dating. The study is based on new insights achieved on Romance lenition (§1) and by means of studying a corpus of Gothic loanwords (§2) in regards to their undergoing Romance lenition within one of the areas of Germanic influence during this crucial period, namely the so-called Visigothic Kingdom in the Iberian Peninsula from the 5<sup>th</sup> until the beginning of the 8<sup>th</sup> century. The literature on the matter will be reviewed and an analysis will be carried out placing special focus on sonorization, which is the keystone for chronological establishment of further changes encompassed by lenition) (§3). The insights gained from this analysis will be supported and discussed with brief reviews on other testimonies: the Gothic anthroponymy (§3.3.1), the evidence of Latin (§3.3.2) and the Hispano-Arabic loanwords (§3.3.3).

## 1 Romance lenition

### 1.1 General description

The phenomenon called lenition, or weakening, constitutes a conspicuous, idiosyncratic feature of the different Romance varieties. Foremost, original Latin stops in unprotected position may undergo degemination, voicing (sonorization), spirantization (fricativization) and complete loss (elision). Romance weakening processes are evidently more complex than the general overview presented within the scope of this study. More series and processes can occur, e.g. Latin geminates /f:/ /s:/ /m:/ /n:/ /l:/ lenited to single stops.

The different consonant systems of Romance languages display a diverse picture of the original Latin system encompassing these mentioned processes which depend on geographic and diachronic particularities. The result is a gradient system in articulatory effort:

/p:/	/p/	/b/	/β//v/	∅
/t:/	/t/	/d/	/ð/	∅
/k:/	/k/	/g/	/ɣ/	∅

Table 1: gradient system of series involved in Romance lenition

The occurrences and distribution of these outcomes are particular to every Romance variety. Elucidation of the causes and processes of particular outcomes of this phonological change is a classical topic in Romance historical linguistics.

<i>Latin</i>	<i>Italian</i>	<i>Spanish</i>	<i>French</i>
CUPPA ‘cup’	coppa	copa	coupe
LITTERA ‘letter’	lettera	letra	lettre [lɛtr]
SICCU ‘dry’	secco	seco	sec
SAPERE ‘to know’	sapere	saber [saβer]	savoir [savwaʁ]
VITA ‘life’	vita	vida [biða]	vie
AMICA ‘friend’	amica	amiga [amiɣa]	amie
CABALLU ‘horse’	caballo	caballo [kaβajo]	cheval
SUDARE ‘to sweat’	sudare	sudar [suðar]	suer
LIGARE ‘to bind’	legare	ligar [liɣar], liar	lier

Table 2: Examples of Romance lenition

### 1.2 The problem

Traditionally, since the seminal work of Wartburg (1936), Romance languages have been classified into Eastern and Western branches. Western Romance comprises Galician-Portuguese, Spanish, Catalan, Provençal, French and northern Italo-Romance up to the boundary known as the ‘La Spezia-Rimini line’. After this bundle, Central and Southern Italian (including Sicilian), Dalmatian and Rumanian form the Eastern Romance branch. Sardinian occupies a middle ground between both.

The criteria for this dialectal division are preservation vs. deletion of word-final /-s/ and presence in the west vs. absence in the east of the lenition or weakening of intervocalic obstruents. Sardinian and Old Corsican, in the middle ground, retain word-final /-s/ but do not undergo lenition.

However, closer observation of the situation in the Romania shows that this clear-cut division gives an incorrect impression and that in fact some counter-cases actually exist:

- Southern and Central Italian dialects show some cases of phonemicized voicings where voiceless stops are expected since these dialects are spoken below the aforementioned La Spezia-Rimini line (e.g. *LOCU* > *luogo*).
- Rumanian, despite belonging to the Eastern Romania, displays a case of regular lenition of the Latin geminates, i.e. degemination (e.g. *CUPPA* > *cupă*, *LITTERA* > *literă*, *SICCU* > *sec*).
- West-Central Pyrenees dialects, despite belonging to the Western Romania, show cases of regular retention of Latin voiceless (e.g. *SAPERE* > *sapér*, *SPATA* 'sword' > *espata*, *URTICA* 'stinging nettle' > *ourtico*)<sup>1</sup> and possibly late degemination.
- The *gorgia toscana* (tuscan spirantization) phenomenon presents a case of lenition (aspiration) in a dialect below the La Spezia-Rimini line.

In trying to give an answer to the questions of how (and ultimately also when) lenition occurred, the above mentioned facts must be accounted for. These irregularities with respect to the traditional classification pose the question: is Romance lenition a suitable isogloss for marking a dialectal division in the Romania? Or in other words, and directly concerning the purpose of our study: is Romance lenition a unified Lautverschiebung?

Scholars have proposed diverse hypotheses which would account for the way lenition may have taken place and, if possible, why. Before presenting the view taken in this study, a general notion of the main ideas proposed will be given in order to facilitate a complete understanding of our view. The following points are largely based on the opinion of Cravens (1983; 2000; 2002). Firstly, the externally motivated account (substratum) and then the internally motivated accounts will be summarised.

### 1.3 *Substratum hypothesis*<sup>2</sup>

The theoretical premise underlying the substratum hypothesis is that in language contact situations, where bilingualism is a wide-spread phenomenon between speakers, normally the mother tongue has a strong influence on the second language. In other words, the speech peculiarities of the partially bilingual speaker using the second language are transmitted to further generations.

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<sup>1</sup> Examples taken from Rohlfs 1985: XXI

<sup>2</sup> Cravens 1983: 5-37; 2002: 15-39



Several substratum hypotheses have been suggested in order to explain the peculiar outcomes in the Romania. Thus, not only the Celtic substratum explaining Romance lenition but also a Basque substratum explaining the absence of voicing in West-Central Pyrenees and an Etruscan substratum explaining the *gorgia toscana* have been proposed.

Essentially, the Celtic substratum has been viewed as the cause for intervocalic voicing in Western Romance languages. Celtic dialects were once spoken in the Western Romance area, i.e. Northern Italy, France and, to some extent the Iberian Peninsula. An essential phonological phenomenon of the Celtic languages, at least insular, is their characteristic diachronic weakening of stops (Russell 1995: §7).

This idea was previously established in the 19<sup>th</sup> century by Ascoli (1882) and Mohl (1899), however the academic opinion was already hesitant by that time. Battisti (1912) and Meyer-Lübke (1909), for example, expressed some reservation noting that there is actually no strong evidence to support the claim. The celtologist Vendryes (1925) presented a more intermediate opinion, stating that the influence of the substratum contributed to and hastened the natural tendencies of the language. Meillet (1931) considered that this lack of evidence is not a reason to deny the importance of the substrata in the inherited pronunciation. Tovar, in the 1950's, represented one of the most fervid defences of this idea. Nowadays some scholars are still in favour of the substratum theory but, in general, the academic discussion surrounding it has ceased considerably. The lack of knowledge, on the one hand, of the precise nature of ancient continental Celtic dialects and, on the other hand, of the estimated date of incipience of Romance voicing, constitute the main impediments for a well-founded reasoning. More straightforward arguments against this theory are seen below:

- There is no proven productive allophonic rule for intervocalic obstruents weakening in the Celtic languages of the timeframe, or another motivation triggering voicing in Latin coming from Celtic languages (cf. Gray 1940 and Watkins 1955).
- Voicing also occurred in areas where Celtic was not present (e.g. Veneto) and allophonic voicing can be found in non-Celtic areas as well (e.g. Corsica, Sardinia and Central and Southern Italy).
- Allophonic voicing is evidenced from inscriptions all throughout the Empire, not only in formerly Celtic speaking areas.

#### 1.4 *Internally motivated approaches*<sup>3</sup>

Structuralist interpretations constitute the basis of the research in this field. Compared with the substratum theories, internal phonological explanations are more accurate in the sense that they concentrate on the restructuring of the stop system and the factors that may have led to it. However, they are inadequate in terms of their teleological perspective. According to this kind of

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<sup>3</sup> Cravens 2000: 49-52, 2002: 68-79

interpretation, the phonological opposition between series is something that speakers tend to maintain in order to avoid mergers. Nevertheless, phonological collapses may and do occur but there is no purpose or intention behind the phonological change.

In 1952, Martinet proposed a push chain effect to explain the mutation. The basic assumption behind it is that the simplification of geminates preceded the voicing of simple stops. Then, the contrast with simple voiceless stops was threatened by the reduction of geminates. In order to avoid this, a push chain effect was triggered: geminates /kk tt pp/ realized as [k t p] pushed original voiceless /k t p/ to be realized as [g d b], which pushed original voiced /g d b/ to be realized as [ɣ ð β]. Some counter-arguments can be formulated:

- Relative chronology: voicing preceded degemination. This was borne out e.g. by Politzer in 1951 (examining Merovingian documents) and is confirmed in some living dialects in Corsica and Sardinia with a surface-level alternation between geminates and simple voiced.
- West-Central Pyrenees dialects (in the Western Romance area) show degemination but they do not have systematic voicing of intervocalic single stops, this means that no push chain forced the change and the results coexisted.
- Rumanian (in the non-Western area) displays the same situation, i.e. the merger of reflexes of geminates and single stops.

Weinrich (1958) defended the idea of a therapeutic restoration in order to avoid mergers and therefore misunderstandings between speakers. This is what he calls *Verständigungsprinzip*. Another basic assumption is that surface voicing occurred before degemination. Then, fundamentally, surface lenition would have taken place originally in any intervocalic context (not just within the word, e.g. /ligar/ > [li'ar] 'tie' but also in external positions (sandhi), e.g. /la gola/ > [la'ola] 'the throat'). The consequent possibility of confusion between words was avoided by the *Verständigungsprinzip* with a therapeutic restoration. It is only in external positions where this restoration took place because there was a reference of non-lenited items in cases of strong position (anlaut or post-consonantal environments, e.g. ['gola] and [siŋ'gola] respectively). Conversely, the word-internal restoration of stops failed to occur due to the lack of reference with a non-lenited form. Some counter-arguments can be noted:

- Phonological merger is a common phenomenon (i.e. speakers did not avoid or reverse the mergers). An example is the above mentioned mergers in the West-Central Pyrenees dialects and Rumanian. However, a wealth of cases may be found where there is no necessity for a therapeutic restoration.<sup>4</sup>

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<sup>4</sup> Examples can be found even within Romance languages: in Modern French we find cases of homophony which has not been avoided: [ʃɑ̃'te] stands for: *chanter, chantez, chanté, chantée, chantés, chantées, chantai, chantais, chantait, or chantaient*. In Spanish the original Latin clusters FL-, CL-, and PL- merged into /ʎ/ and there was no restoration to avoid homophony of *llama* 'call' (< CLAMAT) and *llama* 'flame' (< FLAMAM) and nor did it occur when the word for the South American animal *llama* was introduced.

- Bergamasco (in the Western Romance area) has no restoration of surface lenited items between vowels (V#\_V) (e.g. *vi* ‘wine’, *elvi* ‘the wine’, *de i* ‘of wine’). Therefore, therapeutic restoration is not a universal necessity.
- Northern Salentino (in the Eastern Romance area) maintains voiced surface forms only in the *rafforzamento sintattico* position (hereafter RS). E.g. both /t/ and /d/ surface as [t] except in the RS position where /t/ is realized as [tt] but /d/ is realized as [dd]. This being so, surface [dd] does not imply a reanalysis of the non-RS realizations of /d/. Therefore, the assumption that surface mergers force reanalysis is not a universal necessity.

### 1.5 *RS as the catalyst of restructuring*<sup>5</sup>

The view on Romance lenition assumed in the present study follows the theory of Cravens (2000) who considered the syntactic reinforcement, or RS, as the catalyst of the restructuring of /k t p/ to /g d b/.

The innovative readjustment of this explanation lies in the concept that “any account of the motivations for a change must, at least implicitly, provide insight into, and if possible, motivation for, lack of the same change in cognate dialects” (Cravens 2002: 14). Most scholars have focused on the explanation of the motivations for the historical changes of the Western Romance dialects rather than looking to the causes of the preservation of the intervocalic voiceless stops in the eastern branch.

#### 1.5.1 Modern RS

RS ‘syntactic reinforcement’ (or *raddoppiamento sintattico* ‘syntactic doubling’) is a systematic sandhi process which operates in Standard Italian and central and southern Italian (including Corsican), and Sardinian (Loporcaro 1997: 41). It implies the lengthening of initial consonants which are preceded by a stressed final vowel or certain lexical items. More concretely:

- Stress-cued RS: after a word-final stressed vowel the following consonant is geminated, e.g. *parlò* [m:]*olto* ‘he talked a lot’, including stress-bearing monosyllables, e.g. *va* [b:]*ene* ‘OK’. This type of RS is synchronically predictable and productive.
- Lexically-cued RS: after some unstressed monosyllables: *a*, *da*, *e*, *o*, *ma*, *né*, *tra*, *fra*, e.g. *a* [t:]*e* ‘to you’ and a few polysyllabic words that are stressed on the penultimate syllable: *come*, *dove*, *qualche*, e.g. *come* [t:]*e* ‘like you’.<sup>6</sup> There is a diachronic explanation for this type of RS: the assimilation of the original Latin final consonants has a lengthening effect.

The second type is not traceable synchronically but diachronically: the etyma of these words all ended historically in a consonant, which assimilated in external sandhi, e.g. ET / NEC DICIS >

<sup>5</sup> Cravens 2000, 2002: based on Wireback 1997, 1999, Walsh 1991, Hall 1964 and ultimately Weinrich 1958.

<sup>6</sup> Examples taken from Loporcaro 1997: 42

*e / né* [d:]*ici* ‘and / nor say<sub>2sg</sub>’. Therefore, it can be stated that sandhi consonant assimilation is the primary source of RS (Loporcaro 1997: 42).

### 1.5.2 Romance RS

If modern RS has its origins in cases of Latin assimilation, it is probable that the Latin which developed into Western Romance also had RS based in these cases of assimilation. Therefore Western Romance very likely had RS and consequently, there were three possible different word-initial surface manifestations of the voiceless stops:

- RS lengthening [ak'kasa]
- Potential intervocalic weakening: [la'kasa], [la'gasa], [la'hasa]
- Simple non-weakened: ['kasa], [iŋ'kasa]

The result is a peculiar situation where surface forms can contrast for no apparent phonological reason and sometimes in near pairs such as the examples given above. These circumstances constitute a crucial point in the restructuring process of word-internal voicing in Western-Romance.

### 1.5.3 Hall (1964)

These post-pausal, post-consonantal and RS positions exemplified above which did not undergo lenition led Hall to think that this could be the cause of the lack of regular voicing of initial /k t p/ in Western Romance. He corroborated this idea by analysing the occurrences of word-initial consonants in an 12<sup>th</sup> c. Old Provençal text. The majority of initial consonants (64% against 36%) were in non-weakening environments (41% after consonant, 19% in possible RS position and 4% after pause), so he suggested that this high proportion may have inhibited lenition of /k t p/ in word-initial position.

### 1.5.4 Cravens (2000)

Cravens follows *grosso modo* this idea, but attaches greater importance to RS. He argues that the rates of RS position may be higher in everyday speech than in literary texts as the one analysed by Hall, and that by the time of documentation RS instances may have been reduced.

A particular characteristic of Cravens' methodology is the consideration of parallel living cognates, which constitutes the only chance for a direct observation of phenomena that may have occurred in past stages of Romance.

Thus, Canary Island Spanish offers another example of the power of assimilation to block weakening. In general, this dialect has a variable intervocalic weakening rule, e.g. *la parte* [la 'barte] ‘the part’, *mariposa* [mari'bosa] ‘butterfly’, but sandhi assimilation is attested as a prime cause of initial strengthening, e.g. *las partes* [lahp'arte] ~ [lap'parte] ~ [la'parte] ‘the parts’. Also, in some dialects there are cases where surface mergers occur, e.g. *su paño* ‘his/her/your/their

cloth' [su'baño] and the phonetically identical [su'baño] *sus baños* 'his/her/your/their baths'. This argues once against Weinrich's idea of the need for therapeutic restoration.

More importantly, the dialects of Sisco (Northeast Corsican) and Campidanese Sardinian reflect how RS could have developed in Romance.

The first step toward restructuring of /k t p/ at word boundaries was the loss of the consonantal doubling properties of RS. This is evidenced in both dialects: RS can produce realizations that are not geminated in alternation with intervocalic weakening, e.g. Sisco: *tre case* with [k], but *a casa* with [g]; Campidanese: [a'terra] 'to earth' but intervocalic [de'ðerra] 'of earth'.

At the same time, original geminates in internal position could still be present. This is reflected by the fact that Latin geminates in Sisco are preserved, e.g. [kk] in *bocca*, in contrast with [k] in RS *tre case*. Structural geminates can persist for some time after RS has ceased to produce surface lengthening.

Later on, when the reduction of geminates occurred, the surface differentiation of RS was still productive. One example is in the case of Campidanese where geminates did reduce ['boka] but RS can still display a protected form, e.g. ['nara'kustu] 's/he says this' (etymologically NARRAT with final /t/ which triggers RS); conversely the stop in the non-RS position weakened e.g. ['nara'ɣustu] 'say this' (the imperative form NARRA does not trigger RS). In this case, we can observe that word-internal degeminated stops remain distinct from the former respective single stops and that these new single stops coincide with the surface RS forms at word boundaries.

Finally, when RS has ceased to apply, the existence of the voiceless occlusives in the erstwhile RS environment inhibit a systemic reinterpretation of word-initial /p t k/ as /g d b/ while internally it does.

Summing up, the stabilization (not restoration as Weinrich argued) of /k t p/ as [k t p] at word boundaries in Western Romance is due to the influence of RS which eventually loses its assimilatory power. It conserved the original word-initial /k t p/ apart from the influence of lenition, whereas in word-internal the voiced (and perhaps also spirantized) allophones were free to be restructured and converge with /g d b/. Then, when the reduction of geminates took place, these new outcomes merged with those voiceless preserved by RS in word-initial position (2000: 61-62, 2002: 91).

Having outlined the way in which Western-Romance lenition took place, or more precisely, how the phonological restructuring of the occlusive series in Proto-Romance came about, the question of chronology can now be addressed. That is to say, the question of when voicing was accepted as phonological restructuring. In the following chapters, I attempt to provide some clues for the absolute chronology by means of looking at the Germanic loanwords in the Romance languages in that period.

## 2 Germanic loanwords

### 2.1 *Language contact situation*<sup>7</sup>

Germanic speaking tribes came in contact with a great variety of different languages, ranging from Celtic in the west to the language of the Huns in the east. By far, the most important linguistic contact was that with the Latin-Romance speaking world. In view of the scope of this study, the focus will be put on the Latin side, but it is important to note that the influence of Latin on the Germanic languages is quantitatively more significant.

A number of facts limit the exploration of this language contact situation. On the one hand, the information that we have about the languages of the different Germanic tribes is very limited. In the case of the Goths, it is reduced mainly to the 4<sup>th</sup> century translation of the Bible by Ulfilas. Furthermore, their language was changing while migrating, spreading and making contact with other Germanic and non-Germanic tribes. On the other hand, attestations of Vulgar Latin or already Romance languages of that period are also quite limited. Moreover, the traces that a certain Germanic language could leave in a certain Romance variety are likely spread to other Romance languages during the Middle Ages and thus, unfortunately, the traces for determining its source are difficult to follow. However, by using a small number of direct sources, the study of the documents, and linguistic reconstruction, some clues are present regarding the Germanic loanwords during this early period of history.

Before the 4<sup>th</sup> century, the possible situations of contact between Germani and Romans, apart from the territories annexed to the Empire, were mainly threefold (Castellani 2000: 38-39):

- Commercial exchanges with free Germanic territory.
- The establishment of Germanic groups inside the Empire with the status of *inquilini*, *laeti* or *gentiles*.
- The presence of Germanic individuals in the Roman army, becoming more and more important in the final stages of the Imperial period (also Green 1998: 143).

This is reflected by the fact that the lexical fields of the loanwords, above all, from the direct sources are focused on army and trade and possibly did not enter into the higher social speech level (acrolect), they were terms used by merchants and mercenaries (Green 1998: 188).

From the beginning of the 4<sup>th</sup> century onwards, the language contact situation changed drastically. Now, the collapse of the imperial unity resulting from the barbarian invasions made an easy spread of loanwords throughout what was a continuous Latin-speaking world impossible. This historical fact contributed to the linguistic isolation of the different forthcoming Romance languages (Green 1998: 195).

Another unsolved question in this matter is to what extent, and since when, the different Germanic tribes were bilingual. What we know is that these new ruler groups were highly

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<sup>7</sup> cf. Appendix §1 for a historical introduction to the Germanic invasions.

romanised at the moment of settlement in their respective former Roman provinces. The political and administrative structures did not undergo a serious change, the Roman model was generally followed (Díaz y Díaz 1991: 5), and concerning religion, the cultural difference was not significant, since both societies were already Christian. For example in the case of the Visigoths, before eventually arriving in Hispania, they were already in direct contact with the Roman Empire for two centuries. Gamillscheg stated that already when they settled in Aquitania, they were partially bilingual and this is evidenced by toponyms in this region and some loanwords which combine Germanic and Latin elements (1967: 80-81).

To conclude, generally speaking, the influence of the Germanic invasion for the Romance languages resides mainly in the fact that the Germanic people created along the Latin speaking territory the political conditions which permitted this linguistic fragmentation. The development of the different regions became autonomous and they became separated from the linguistic influence of Rome, thus making possible the genesis of the diverse Romance languages (Pfister 1978: 70).

## 2.2 *Corpus*

The study of Germanic loanwords into Romance languages has been a common area of research for both Romance and Germanic philologists since the beginning of academic scholarship of these studies in the 19<sup>th</sup> century. Significantly, it constitutes a source of reciprocal knowledge for both fields of study, on the one hand, Germanic texts and historical reconstruction help to locate dubious Romance etymologies. On the other hand, the reconstruction of Germanic words by means of their attestation in the different Romance languages suggests a significant quantity of new words for the relatively reduced corpus of old Germanic languages that exist.

Despite this study focusing on the lexical loanwords, the more significant linguistic heritage from the Germanic invasions are toponyms and anthroponyms. However, these areas require special attention and therefore only the case of the anthroponyms will be briefly addressed in §3.3.1 in order to contribute to the discussion.

One of the most important works published concerning Germanic loanwords in the Romance languages within a general scope is the *Romania Germanica* of Ernst Gamillscheg (1934 (1970); 1935; 1936). Also Brüch (1913) and Rohlfs (1947) cover the subject looking more precisely to the first testimonies, i.e. into Vulgar Latin.

### 2.2.1 **Problems and methods of the stratigraphy**

A number of obstacles make establishing a clear list of loanwords a difficult task. First of all, the actual complexity of the linguistic contact does not allow us to say simply that the influence on Spanish comes from Visigothic, French from Frankish or Italian from Ostrogothic and Langobardic. More Germanic tribes were involved such as Vandals, Sueves, Burgundians or Alemanni for which we do not have much information in terms of their languages. Furthermore,

Germanic tribes moved all around Europe and had contact with other tribes and various Romance languages, e.g. Visigoths moved from the North to the Pontic area through Dacia, the Balkans, Italy, South of France and eventually Hispania. Moreover Romance languages after the Middle Ages had a lot of contact between each other, so loanwords were able to pass from one to another at a late stage. Another point is the large time span in which loanwords can be introduced: from the first contacts with Germanic speakers to the first testimonies of the Romance languages, more than eight centuries passed, and written testimonies within this time are scarce. In most cases, the etyma of the Germanic nouns are not documented and the etymologists do not agree or are not sure as to which of the Germanic variants that etymon should be attributed.

The methods employed by scholars to identify and classify the loanwords are mainly of two types.

- The geographic distribution of the word: the Romance language or area where the word is attested may suggest which is the Germanic language that supplied the donor form since the history of the migration of the Germanic tribes is known.<sup>8</sup>

Example: on the one hand the Go. word *\*harihring* (Gamillscheg 1967: 85) is attested in Sp, Pg, Cat and Prov as *arenga* 'harangue' and It *arringa* 'speech, harangue' so Gamillscheg (1967) considered this loanword to be from the Visigothic of the Toulouse period. On the other hand, the pret. form *tawida* of *taujan* 'make, produce' is attested only in Sp and Pg *ataviar* 'adorn or dress richly', therefore he suggests that this is a loanword from the Visigothic of the Toledo period when Goths only controlled the Iberian Peninsula.

- Linguistic criteria: the phonological and morphological characteristics of a certain loanword may suggest the language source of it.<sup>9</sup>

Example: the word for 'truce, respite' in Fr *trève* and Cat *treva* goes to a CWG *\*treuwa* (Guinet 1982: 77) but Sp *tregua*, Pg *trégua* are descendant from the Go. *triggwa* and not from *\*treuwa* since in those languages the Germanic intervocalic *-w-* normally yields *-v-* as in Go. *tawida* > Sp and Pg *ataviar*.

Another method is the direct documentation of the loanword, but attestations here are necessarily more limited (Green 184, Gamillscheg 1970: 23). For example, Roman authors attested to warfare terms such as *carrago* 'barricade of waggons or carts'; *drungus* 'band of warriors'; *framea* 'spear' and trade terms such as *ganta* 'wild goose'; *glaesum* 'amber'; *sāpo* 'soap' (Green 184-188).

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<sup>8</sup> Concerning the chronological question, this method can also be useful when the dates of the settlement of the different tribes is known. Cf. §3.

<sup>9</sup> Concerning the chronological question, this method is also used when the relative chronology of the phonological changes is known. Cf. §3.



The method of linguistic geography has several limitations (Pfister 1978: 88): if the loanword is attested too widely in the most part of the Romania, it is difficult to make a choice between the three main possibilities that can be adduced:

- The word belongs to the common Germanic lexicon and there is no difference between the different Germanic dialects.
- The word was introduced into Proto-Romance before the 4<sup>th</sup> century and it was spread through Gallo-Romania and Ibero-Romania before the dismemberment of the Roman Empire.
- The word (arguably Frankish or CWG) was spread during the expansion of the Carolingian Empire around 800 into Catalonia and Northern Italy. The Latin of the administration was its main vehicle of diffusion (also Green 1998: 190).

### 2.2.2 Gothic

The lexical heritage of the Goths in Ibero-Romance is larger than in Italo-Romance. Another relevant comment is the fact, already mentioned, that the number of anthroponyms and toponyms is more numerous than the lexical material.

In terms of linguistic parameters there is no important evidence that allows us to differentiate between Visigoths and Ostrogoths, however some scholars note that some differences can be observed in the anthroponymy (cf. Pfister 1978: 71).

The morphological features arguably coming from Gothic influence is reduced to two, maybe three features (Kremer 2004: 137-138, Penny 1991: 14-16):

- A noun ending *-a -ane* (e.g. Goth *wardja* > Sp *guardián*, Pg *guardião*, Prov *gardian*, It *guardiano*) from the Gothic *-a, -ja* noun stems whose accusative plurals end in *-ans -jans* (having a morphological parallel in Latin nouns like *legiō, -ōnis*).
- In Ibero-Romance the noun suffix *-engo (-enco* around the Pyrenees) from the Gothic *-ingōs* 'belonging to a person or family group'. The Romance function is more general e.g. *realengo* 'belonging to the Crown, of the royalty', *abadengo* 'belonging to an abbey, abbatial', *abolengo* 'ancestry, pertaining to one's ancestors'.
- It is probable that also the patronymic *-ez, -iz* (Sp), *-es, -is* (Pg) widely used (e.g. *Rodríguez, Fernández, Pérez...*), coming from the genitive of Romanized Germanic names in *-iks*, like *Rodericī*.

The list of lexical loanwords taken into account in this study is based mainly, for the Ibero-Romance items, in the one compiled in de Acosta 2011 which is based on Gamillscheg 1967 and Hilty 2007 principally but also Diez 1878, Gamillscheg 1935, Meyer-Lübke 1935, von Wartburg 1950, Corominas & Pascual 1980 and Corominas 1991. Concerning the Germanic reconstruction he consulted Balg 1889, Wright 1954, Onions 1966 and Köbler 1989. For the Italo-Romance loanwords, Castellani 2000 constitutes the main source.

<i>Gothic</i>	<i>Ibero-Romance</i>	<i>Italo-Romance</i>	<i>Gallo-Romance</i>
áiskōn 'ask, look for'	ascar (Asturian) 'fetch'		
*aisto haifsts 'dispute'		astio (It) 'hate, rancor'	
*armalausea 'armless'	armilausea (Lat) 'sleeveless tunic'		
*bēga 'dispute'		bega (It) 'dispute, hassle'	
brikan 'break, contend'	bregar (Sp) 'fight, knead'; brigar (Pg); bregar (Cat)		bregar (Prov)
*brunsts, alabrunsts 'holocaust'		bronza (It) 'hot coal'	
*brutōn 'bud'	brotar (Sp, Pg, Cat) 'bud, geminatē'		brotar (Prov)
*bruts 'bud'	brote (Sp) 'bud'; broto (Pg); brot (Cat)		brot (Prov)
*fat or *fata 'clothing, equipment'	hato (Sp) 'clothing'; fato (Pg) 'suit' (Pg)		fata (Prov) 'pocket'
*faurhs 'furrow, gorge'		forra (It) 'furrow, ravine'	
*fláuts 'vainglorious', *fláutjan 'boast'	lozano (Sp) 'lush, healthy- looking'; loução (Pg)		
*gabila 'fork, gallows'	gavilán 'sparrow hawk'; gavião (Pg)		
gáits 'goat'	gaita (Sp, Pg, Cat) 'bagpipe'		
*galōfa 'glove' lōfa 'palm of hand'	goluba 'rustic glove'		
*gansus or *gans 'goose'	ganso (Sp, Pg) 'goose'		
*gasali 'company'*gasalja 'comrade' *salja 'room'	gasajo (OSp) 'hospitality'; agasajar (Sp) 'treat kindly'		gazalha (Prov)
*grimms 'horrible, wrathful'	grima (Sp, Pg) 'fright, horror, disgust'		
*griuts 'gravel, sand'		greto (It) 'gravel'	
*haribaírgō 'lodging' harjis and baírgan	albergue (Sp, Pg) 'lodging'		alberç (Prov)
*haribaírgōn 'lodge, shelter, harbor'	albergar (Sp, Pg) 'lodge, shelter'		
*harihriggs 'assembly' harjis and*hrings 'circle'	arenga (Sp, Pg, Cat) 'harangue'		arenga (Prov)
*haspa 'hinge'	aspa (Sp, Pg, Cat) 'cross'		aspa (Prov) 'clout, cramp iron'
*hrapōn 'snatch up'	rapar (Sp, Pg, Cat) 'plunder; scrape, shave'		
*kasts 'brood'	casta (Sp, Pg, Cat) 'lineage, breed'		

láistjan 'follow'	lastar (Sp) 'pay for a fault, suffer for another'		
lófa 'palm of the hand'	luva, lúa (OSp); luva (Pg)		
*milma malma 'sand'		melma (It) 'mud'	
nastilo 'lace, string'		nastro (It) 'ribbon'	
*ráupa 'booty, loot, goods'	ropa (Sp) 'clothing'; roupa (Pg)		
ráupjan 'pluck, pick'			
ráuþs, ráuþan 'red'	roano (Sp) 'roan'; raudão (Pg); rodено (Val) 'reddish'		
reiks 'mighty, powerful'	rico (Sp, Pg) 'rich, tasty'		
*rib(b)ja 'rib'	ripia (Sp) 'slat'; ripa (Pg)	rebbio (It) 'prong, tine'	
rikan 'accumulate, amass'		recare (It) 'bring, have'	
*sagjis 'court, messenger'	sayón (Sp) 'court official'; saião (Pg); saig (Cat)		
*skagkja 'official cup bearer'	escanciano (Sp) 'official cup bearer'; escanção (Pg)		
*skagkjan 'serve a drink'	escanciar (Sp) 'pour, drink wine'; escançar (Pg)		
*skaíran 'shear'	esquilar (Sp) 'shear'; esquirar (OSp, OCat)		
*skara 'captain'		scherano (It) 'bandit'	
*smaltjan 'melt, make liquid'		smaltire (It) 'diggest, assimilate'	
*spaiha 'scout, spy'	espía (Sp) 'spy'; espia (Pg, Cat)	spia (It)	espia (Prov)
*spaihōn 'spy'	espiar (Sp, Pg)		
*spaúra 'spur'	espuela (Sp) 'spur'; espora (Pg)		
*spitus 'skewer'	espeto (Sp, Pg) 'skewer'; espito (Arag)		
*stak(k)a 'stake'	estaca 'stake' (Sp, Pg, Cat)		estaca (Prov)
*stanga 'bar, rod'		stanga (It) 'bar, rod'	
*stik(k)a 'stick, piece of wood'		stecco (It) 'stick, twig', stecca 'slat'	
*strappōn 'pull out'		strappare (It) 'pull out, tear up'	
*tappa 'lid'	tapa (Sp, Cat) 'lid'; tampa (Pg)		tampa (Prov)
táujan 'do, make, produce' pret. tawida	ataviar (Sp, Pg) 'adorn or dress richly'		

*p̥ahsuks 'badger'	taxugo, texugo (OSp) 'badger'; teixugo (Pg)		
p̥riskan 'thresh'	triscar (Sp, Pg) 'thresh'		
triggwa 'covenant'	tregua (Sp) 'truce, respite'; trégua (Pg)		
*wáip̥aneis *wáip̥ō 'field'	guadaña (Sp) 'scythe'; gadanha (Pg); guadañar (Sp) 'mow'; gadanhar (Pg)	guadagnare (It) 'gain, earn'	gazanhar (Prov)
*walp̥apairs *walp̥us 'woods, desert'	guadapero (Sp) 'wild pear tree'		
wardja 'guard, watchman'	guardia, guardián (Sp) 'guardian'; guardião (Pg)	guardiano (It)	gardian (Prov)

### 3 Chronology of Romance lenition

The establishment of a chronology of the phonological changes common to the whole Romania and those which are not would provide the crucial information to determine the time of regional differentiation of spoken Latin and the individualisation of Romance languages. Romance lenition is one of the important phonological changes, and more concretely, the sonorization of voiceless stops is the keystone for the chronological establishment of the rest of changes that lenition encompasses.

The aim of this study focuses on the absolute chronology of the linguistic facts, which essentially depend on the date of the documents or attestations where a determined change is reflected in the writing. Other clues can be deduced by means of the versification (suggesting the similar pronunciation between the rhymed words) and also by the direct remarks of the grammarians of the period (Straka 1956; 1979: 193). The means of attestation explored in this study is the testimony of loanwords from a language in contact which can give important data through consideration of how such loanwords adapt to the recipient language once the phonetics of the donor language are known.

In addition to the absolute chronology, there is the study of the relative chronology which, purely linguistic, is based on the analysis and confrontation of the changes themselves. Since generally phonological facts can only be produced in certain conditions, their realization frequently depends on certain prior changes, but also, certain prior changes can prevent the development of other expected phonological changes. In other words, the relative chronology is based on the interdependence of the different linguistic changes in a certain language (Straka 1956; 1979: 193-194).

Despite the fact that relative chronology is more precise in determining the succession of the transformations of a language in time and ultimately its formation (even if it is an undocumented language), the placement of those changes in a historical timeline can only be done by means of the absolute chronology. However, the study of the absolute chronology finds a number of obstacles (even more in a period where written testimonies are scarce) and this has a direct effect on its accuracy. A principal point is that the written form always lags with respect to the pronunciation and due to traditional and literary conventions, it corresponds to an earlier phonetic phase than the one that the texts come from. In the case of attestation by means of rhyme, poets (like scribes) are usually conservative and reluctant to new pronunciations, so the phonetic changes are seen as mistakes. Even the direct testimony of grammarians is also delayed because they usually only reprove the mistakes once they are already widely spread (Straka 1953: 247-248). Concerning the testimony of loanwords, the main problem arises when the details of the phonological system of both the donor and the recipient language are obscure at the time of the introduction of the loanwords.

In the following sections, the focus will be put on the absolute chronology of the sonorization of voiceless stops, which is a crucial matter in order to establish its chronological relations with the rest of the processes of Romance lenition. The date of this feature is one of the most debated subjects of Romance chronology, and one of the less clear, despite it having been heavily commented upon. The contradiction between the differing opinions is influenced by the underlying hypothesis of the conception of lenition itself (substratum hypothesis, structuralist interpretations, etc.). In any case, it is important to keep in mind that, as a natural linguistic change, the process of sonorization may have been productive during a period of time, even centuries, and, therefore, the early testimonies of sonorization do not restrict the process to be active much later. (Pensado 1984: 202).

### 3.1 *Founding research*<sup>10</sup>

Besides the underlying hypothesis on lenition, the aforementioned difficulties surrounding the study of the absolute chronology also influence the lack of consensus between scholars. Generally, their opinions about the date of the sonorization of intervocalic voiceless stops vary in a time-frame from the 3<sup>rd</sup> to the 8<sup>th</sup> centuries. That is to say, the approximated limits of the process itself: its first attestations and the first documents of Romance languages.

- It is placed in the 3<sup>rd</sup> century by Wartburg (1950: 31).
- Between the 4<sup>th</sup> and 6<sup>th</sup> century Richter (1934<sup>11</sup>) deduced from the attestations that happened in France. Also Bustos (1960: 79) argued that in Spain the process generalizes along the 4<sup>th</sup> century although we have attestations before indicating the sporadic character that it had by then. The process will extend some centuries more until it becomes unproductive (1960: 84).
- The 5<sup>th</sup> century is the date given by the majority of Romanists: thus Grandgent (1928: 169), Bourciez (1930: 165), Weinrich (1958: 127), etc. agree to its placement here. Also Straka<sup>12</sup> (following Richter 1934) established it in France around 400 (1953: 251).
- Between 400 A.D. and 720 A.D. it is placed by Leonard (1970: 272-273) who bases his classification of the Romania on the vocalism rather than on the consonantal system. He considers voicing as a secondary wave in the west whereas the vocalic splits were primary.
- Around the 7<sup>th</sup> and 8<sup>th</sup> century it arose and spread, and does not finish until sometime after according to Hall (1976: 200). He gave arguments for this late introduction of lenition and stated that it originated in Northern France and then spread through the west Romania. (1975: 534-535).

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<sup>10</sup> A general overview of the state of the question is given by Pensado 1984: 204 on which this point is generally based.

<sup>11</sup> 1934: 155-156 (§ 118 *t > d*), 158-160 (§ 121 *c > g*), 160-161 (§ 123 *p > b*).

<sup>12</sup> The ideas of Straka are followed in the relative chronologies of Guinet (1982: 25) and others.

- In the 8<sup>th</sup> century, according to Politzer (1951) who analysed Merovingian documents, the simplification of geminates occurred in France. He is of the opinion that degemination was preceded by voicing rather than a push chain which forced voicing. Therefore, the simplification of geminates supposed the phonologization of voicing which had already been phonetic for some centuries. So around this time, voicing is restructured, i.e. it became a structural necessity.

These data on absolute chronology come from the analysis of testimonies such as inscriptions, manuscripts, Late Latin texts, direct testimonies of grammarians, toponymy, etc. As mentioned above, the fact that the dates given are so variant is, to some extent, due to the margin of error that supposes the identification of the first documentations of a process with its real beginning.

Another testimony for dating sonorization is taken from the Germanic loanwords. Concerning the case of Ibero-Romance and using the Gothic loanwords, the previous attempts generally have been done by Meyer-Lübke (1924) and Gamillscheg (1932, 1935). In a recent article, de Acosta (2011) who also analysed Gothic loanwords drew some conclusions about phonetic changes.

Meyer-Lübke (1924) argues that the Germanic loanwords underwent sonorization, therefore at the time of their introduction, sonorization had not taken place yet in Hispania. The Germanic voiceless were identified as Latin voiceless by that time and afterwards both suffered lenition. The examples addressed in this article are, on the one hand for the velar series, the Gothic onomastic ending in *-riks* which became *-rigo* (*Rothariks* > *Rodrigo*) and, on the other hand for the dental series, the case of Gothic *þ* which assimilates with Latin *t* and afterwards both suffered lenition (*Ropariks* > *Rodrigo*, *\*stupjan* > *tudir*). Following, Meyer-Lübke studied to some extent the case of Mozarabic (the different Romance dialects spoken in Al-Andalus) written in Arabic script and concluded (1924: 32) that even by the time of contact with the Arabs, the original intervocalic voiceless series were still voiceless, at least in the part occupied by the Arabs.

Gamillscheg (1932), conversely, opines that the voiceless stops of the Germanic loanwords were preserved in Romance as voiceless, therefore sonorization concluded in the Peninsula before the time of full contact. Concretely, sonorization started in Southern Gaul and ended there already around 450 A.D. and around 500 A.D. in the Iberian Peninsula (1932: 258). Gamillscheg compiled and analysed a list of lexical loanwords and also onomastics. The cases of sonorization are explained as an earlier introduction into Latin which enabled them undergo the evolution of the Latin elements (Gamillscheg still mentioned this fact in 1967: 85), e.g. the onomastic suffix *-riks* is attested already since the 4<sup>th</sup> century.

In *Romania Germanica* (1935)<sup>13</sup> Gamillscheg attempted to reconcile the testimony of Germanic loanwords which according to his analysis preserved the voiceless, and the testimony of Mozarabic, which according to the analysis of Meyer-Lübke, demonstrates the preservation of

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<sup>13</sup> The following review is largely based on the notes of Pensado 1984: 195.

voiceless stops still in the 8<sup>th</sup> century in the territory occupied by Arabs. Therefore, Gamillscheg gave two possibilities to explain the preservation of Gothic voiceless:

- The Romance intervocalic voiceless (still not voiced) had a *lenis* articulation which allowed the identification with the Arabic voiceless but not with the Germanic voiceless which, moreover, were possibly aspirated (1935:48-49, however this idea was already suggested in 1932: 257).
- The development of lenition was more advanced in the north of the Peninsula (which finished before the contact with Visigoths since it did not affect the loanwords) than in the part occupied by the Arabs as it is shown by Mozarabic (which preserves intervocalic voiceless) (1935: 48).

More recently, de Acosta (2011) deduces that the process of lenition was finishing by the time of the first contact with the Goths (5<sup>th</sup> century), since the majority of loanwords did not undergo sonorization of /p/ and /t/. The sonorization of /k/ does not present such a clear-cut situation, it seems a “sporadic and long-lasting change” since cases of sonorization are found during the 6<sup>th</sup> and 7<sup>th</sup> centuries. Conversely, the loanwords do reflect the lenition of voiced stops (2011: 167). De Acosta compiled and analysed a list of Gothic loanwords into Ibero-Romance (which is the basis of the one used in this study) and a selected sample of anthroponyms and toponyms. Regarding the process of sonorization, the conclusions are similar to those reached already by Gamillscheg (1932).

### 3.2 *Analysis of the corpus*

The analysis of the corpus presented above will only focus on the items which are pertinent to the study of the lenition, i.e. the stop series in unprotected position. The adaptation of the vowels and other series of consonants are not treated here. Since the corpus chosen is largely based on that of de Acosta, the results are similar (2011: 161-163).

		<i>Conservation</i>	<i>Degemination</i>	<i>Sonorization</i>	<i>Fricativization</i>	<i>Elision</i>	<i>Other</i>
<i>Geminates</i>	<i>Lab.</i>		tapa				tampa, ripiá
	<i>Den.</i>						
	<i>Vel.</i>		estaca				
<i>Voiceless</i>	<i>Lab.</i>	rapar, ropa, guadapero					
	<i>Den.</i>	brote, ható, hato, gaita,					
	<i>Vel.</i>	rico		bregar			
<i>Voiced</i>	<i>Lab.</i>						gavilán
	<i>Den.</i>						
	<i>Vel.</i>						

Table 3: adaptation of Gothic stops in Ibero-Romance (examples in Sp)



- Geminate stops:
  - Degemination: *estaca* (Sp, Pg, Cat) < \**stak(k)a*; *tapa* (Sp, Cat) < \**tappa*
  - Other: *tampa* (Pg, Prov) < \**tappa*; *ripiá* (Sp), *ripiá* (Pg) < \**rib(b)ja*
- Voiceless stops:
  - Labial:
    - Conservation: *rapar* (Sp, Pg, Cat) < \**hrapōn*; *ropa* (Sp), *roupa* (Pg) < \**ráupa*; *guadapero* (Sp) < \**walþapairs*
  - Dental:
    - Conservation: *brote* (Sp), *broto* (Pg), *brot* (Cat, Prov) < \**bruts*; *hato* (Sp), *fato* (Pg), *fata* (Prov) < \**fat*; *gaita* (Sp, Pg, Cat) < \**gaits*; *espeto* (Sp, Pg) < \**spitus*;
  - Velar:
    - Conservation: *rico* (Sp, Pg) < *reiks*;
    - Sonorization: *bregar* (Sp, Cat), *brigar* (Pg) < *brikan*
- Voiced stops:
  - Labial:
    - Fricativization: *gavilán* (Sp), *gavião* (Pg) < \**gabila*

The lexical loanwords examined here suggest that intervocalic voiceless stops did not undergo lenition, except in the case of /k/, which shows sporadic voicing (evidenced by *bregar* (Sp, Cat) *brigar* (Pg) < *brikan*).

Concerning the voiced series, the lack of testimonies makes an interpretation difficult. The only clue is given by the example of *gavilán* (Sp), *gavião* (Pg) < \**gabila* which suggest that in Ibero-Romance the voiced stops at the time of contact were not yet lenited, since Gothic *b* (which intervocalically was a voiced bilabial spirant according to Wright 1954: 9) did not identify with the Romance *b* and they used the graph *v* to indicate that this *b* was lenited [β].

It is worth mentioning the cases of palatalization which normally occur before a front vowel or glide. Examples listed on this corpus are:

- /k/: *escanciano* (Sp), *escanção* (Pg) < \**skagkja*
- /t/: *lozano* (Sp), *loução* (Pg) < \**fláuts* (\**flautjan*)
- /g/: *sayón* (Sp), *saião* (Pg), *saig* (Cat) < \**saqjis*

As de Acosta noted (2011: 162), this is interesting since the Arabic loans did not undergo palatalization in these environments (e.g. *alquiler* (Sp) < *al-kira* (Ar)), and therefore, this kind of palatalization finished at some point between the Visigothic period and the Moorish invasions. This is not directly related to the matter of lenition but may be interesting for the relative chronology which may relate palatalization to lenition to some extent.

### 3.3. *Discussion*

The Gothic lexical loanwords in Ibero-Romance seem to not undergo the sonorization of the intervocalic voiceless stops (pace Meyer-Lübke (1924), except for the velar series) and therefore this fact can be interpreted in three ways:

- The process of sonorization has ended by the time of introduction (thus Gamillscheg (1932). De Acosta (2011) also stated that but except for the velar series).
- The Germanic voiceless stops were different (possibly aspirated) from the Romance voiceless stops which possibly were already in process of lenition (thus Gamillscheg 1935 trying to combine the idea of preservation of voiceless in the loanwords and the testimony of Mozarabic).
- The process of sonorization had already ended in the north of the Peninsula at the time of introduction, but in the south, the part occupied by the Arabs, the process had not been started by the time of the Arab conquest (thus Gamillscheg 1935 trying to combine those two arguments).

In the second case, the testimony of the loanwords would be useless for the purpose since they could not say that Romance sonorization was, or was not concluded. In any case, the testimony of lexical loanwords alone is insufficient and should be considered together with other arguments. The first aspect to address is the matter of the Gothic anthroponyms (§3.3.1), secondly the information provided by the Latin of the period will be briefly explored (§3.3.2), and finally the testimony of Hispano-Arabic will be reviewed based on Steiger (1932) (§3.3.3).

#### 3.3.1 **The testimony of Gothic anthroponymy**

As briefly mentioned above (§2.2), the most significant heritage of the Visigoths is the anthroponymy (also Kremer 2004: 140). Thus Meyer-Lübke, Gamillscheg and de Acosta used this argument to a greater or lesser extent for reaching their conclusions, and this will be addressed after a brief introduction to the Gothic anthroponymy in the Peninsula. Afterwards, an analysis of a corpus of anthroponyms will be carried out.

##### 3.3.1.1 *Introduction*

The popularity of Germanic names in the Iberian Peninsula during the Early Middle Ages is evidenced by a number of cartularies and documents and this continued until the 12<sup>th</sup> century, when a new fashion of latino-christian saints' names became widespread. It is important to mention that their use is not limited to certain social classes and may not imply ethnic belonging (Piel 1960: 421-422). As is well known, in principle, Germanic names are formed by two elements of the common vocabulary where the second member can be removed or substituted by a suffix (normally with a hypocoristic character).

Besides the information that can provide for the case of lenition, anthroponymy is the testimony for other changes not treated here such as the vowel opening process. Concerning the

sounds that did not exist in the Romance system, anthroponymy shows for example that /h/ has already disappeared in the oldest testimonies (*harjis* > *Argi-*, *Arge-*, *-arius*) or that /w/ is substituted by *g(u)*. The case of *þ* /θ/ will be treated below (according to Kremer 2004: 141, *þ* is treated as Latin /t/ but we will see that the case is more complex). Another important phenomenon is the systematic (except for few cases such as *Álvaro*, *Fáfila*, *Wímara*...) accent shifting to the penultimate syllable, e.g. *Érmenegild* > *Èrmenegíldus*. However, it is uncertain whether this change was already done by the romanized Goths (the transmission of Latinized names seems to point to this possibility) (Kremer 2004: 141).

Over this old layer of Hispano-Gothic names, some centuries later, an influence of names with Frankish origin arrived. Two historical layers can be distinguished here: the first influx is related to the *Marca Hispanica* at the beginning of the 9<sup>th</sup> century, formed by the Frankish Empire, which had important political and cultural consequences. Frankish personal names were soon introduced in Septimania and Catalonia (e.g. *Alamannus*, *Bernardo*, *Guillelmo*, *Bertrando*, *Fulco*, *Gaucefredo*, *Geriberto*, *Rodlando*, *Isarno*, *Leudegario*, *Odolardo*, *Raimundo*, *Teudebaldo*, *Adalaizis*, *Leudegardis*, etc.). In general, they can be easily distinguished from the Gothic names because of the nominal elements which are compounded and their structure. The second influx of Frankish names occurred during the general europeization of the Middle Ages, motivated by the monastic reforms of Cluny and Cîteaux. One of the main ways the names were introduced into the Peninsula was the Camino de Santiago. (Kremer 2004: 141).

Concerning the toponymy, it is important to note that the Germanic names of places in the Peninsula are directly related to the frequency of medieval anthroponyms of the same origin because the majority of them are based on the personal names of the landlords and founders of villages during the Middle Ages. (Piel 1960: 531). More concretely, only three strict Visigothic foundations (Recópolis, Victoriacum, Ologicum) can be attested with certainty. The rest cannot be verbatim Visigothic toponyms, they are Romance toponyms with the typical model *villa* plus the name of the landlord in the genitive case which to great extent were Gothic anthroponyms. In a lot of cases, the basic word is lost and the personal name in genitive undergoes phonetic evolution, e.g. *Villa Roderīci* > *Rodriz*, *Rourís*, *Roiriz*, *Rorís*, *Roriz*, *Rodrid*. (Kremer 2004: 144). This would be another interesting source of data for this line of investigation, but it will not be treated in the present study.

### 3.3.1.2 *Previous attempts*

Continuing the discussion of the sonorization, the authors mentioned above used, to some extent, the argument of the Gothic anthroponymy:

Meyer-Lübke's arguments are actually based mostly on the anthroponymy (*Rothariks* > *Rodrigo*), suggesting that the lenition was not active by the time of contact and the sonorization occurred later but he does not account for the cases of preservation that we explored above<sup>14</sup>.

Gamillscheg (1932) and de Acosta (2011), since the results of the onomastics were mostly lenited and the lexical loanwords do not, proposed an early period of introduction of the anthroponyms where lenition was still working. That seems plausible since personal names, especially if they correspond to the elite of the society, are likely to be the first loanwords.

However, one of the two possibilities proposed by Gamillscheg (1935) seems to contradict the idea of the early introduction of anthroponyms. In this manner, Bustos (1960), presenting an intermediate explanation, stated that the anthroponyms are explained by the early introduction (1960: 85) and that the conservation of voiceless stops is due to the aspiration of the Germanic ones which did not identify with the Romance ones and, therefore, the Germanic loanwords do not indicate anything and the process will continue much later (1960: 86). In my view, both explanations are incompatible because the aspiration of Germanic voiceless stops should also have occurred in the onomastic testimonies. The only argument I find, but which Bustos did not mention, would be that onomastics tended more easily to phonetic change. Use and vulgarization force them to take part of lenition too, unlike the lexical (more restricted) loanwords. This idea could be substantiated on the basis of "onomastic sound-change", cf. Trask (2000: 238) and Clark (1991: 284), according to which proper names does not necessarily respond to the "Mechanical Principle underlying sound-change as conceived by the Neogrammarians [...] in that it recognizes that there may be non-phonetic constraints on sound-change, and that there are some such constraints which are not fundamentally sociolinguistic" (Coates 2006: 265).

De Acosta (2011: 146-148) makes a selection of personal names and toponyms from Gamillscheg (1935) and Lapesa (1980). Here, I mention only the ones that are pertinent for the study of lenition: *Adolfo* (Sp, Pg) < *Atáulfus*; *Rodrigo* (Sp, Pg) < \**hrōþs* 'victory, triumph' + *reiks*; *Gondivao* (Pg) < \**Gundibadu* \**gunþs* 'fight' + \**badu* 'battle'.

Bustos (1960: 82-83), taking Gamillscheg (1932) as reference, noticed toponyms which preserve the voiceless stops: *Guitiza* (Coruña) < *Witiza*; *Guitinande* (Coruña) < *Witinandi*; *Guitian* (Lugo) < *Witila*; *Guitiriz* (Lugo, Coruña) < *Witirici*. And, conversely, others which did undergo lenition: *Godos*, *Godones*, *Godón*, *Godín*, *Godina*, *Gudillos*, *Godojos*, etc. derived from the name of the invading people: *Gotus*, *Gotos* (Latinized of Go. *Gutans*).

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<sup>14</sup> Another critique to the hypothesis of Meyer-Lübke could be the case of *þ*. According to Meyer-Lübke the Gothic *þ* was adapted as /t/ in the beginning and then undergo lenition together with the Romance /t/ into /d/ (*Ropariks* > *Rodrigo*, \**stufþjan* > *tudir*). Pensado 1984: 195 refused this by invoking the argument of Battisti 1949: 189 according who Gothic *þ* was already voiced in intervocalic position in Visigothic. This point will be addressed below because of its possible importance to our research.

### 3.3.1.3 *Study*

In order to contribute to the discussion, a study has been carried out based on a compilation of anthroponyms done by Piel in 1960. From the approximately 580 personal names that Piel took into account (cf. Appendix §2), we selected those that are relevant to lenition (cf. Appendix §3). For the case of intervocalic sonorization this list of anthroponyms gives a relatively solid testimony for /k/ but the cases of /t/ and none of /p/ are few and unreliable. Also, unfortunately, for the case of fricativization/elision we have only testimony of very few Gothic intervocalic voiced consonants.

The intervocalic Gothic /k/ (cf. Appendix §3.1) is mainly attested in the frequent compounds with *-reiks* ‘ruler, lord’. From the 49 forms taken into account, 22 preserve the voiceless:

e.g. *Ade-ricus, Gunte-ricus, Leode-rico*, etc.

and 27 undergo sonorization:

e.g. *Albe-rigo, Ilde-rigo, Sese-rigo*, etc.

The difference is not enough to give a clear-cut conclusion. However, it can be generally supposed from this that sonorization of /k/ is still active after the first contact with the Goths since in a great part of the items the Gothic /k/ identified with Ibero-romance /k/ and then at some point underwent lenition together as Meyer-Lübke (1924) firstly pointed out. This is confirmed by the exception of the lexical loanword *bregar* (Sp, Cat) *brigar* (Pg) < *brikan*.

However, the case of compounds with *wrikan-* ‘persecute, avenge’ shows no sonorization among the 9 items:

e.g. *Reca-drugia, Reca-mondus, Reca-redus*, etc.

Interestingly, there are names in which the voiceless stop is expected to palatalize (/k/ before front vowel *e i*) as it does in *Rece-mundus, Rece-mirus/Rece-miro, Rece-sindo* but does not in *Requi-viro/Requi-vilo, Riqu-ila/Riqu-ilo, Riqu-illi*, which preserve the voiceless stop. Something similar occurs with the compounds of *\*kind-* ‘lineage’ which were supposed to palatalize, as some of them do (*Cenda/Cendus, Cenda-miro/Zenda-miro/Cende-miro, Cende-rigo, Cend-oi, Cend-ulfus*), but others curiously preserve the voiceless stop (*Kint-ila, Quend-ulfo*).

Concerning the Gothic intervocalic voiced stops, the testimonies are not as numerous and it is difficult to determine whether lenition occurs since there are no graphs to note /ɣ/ or /ð/. The cases of elision, however, can be perceived. Thus, for Gothic /g/ only two cases of elision are found:

*Ai-ulfo* (*\*Agi-ulfo*) and *Ei-leuba* (*\*Agi-liuba*).

among the 37 listed (cf. Appendix §3.2.1):

e.g. *Age-sendo, Erme-gildus, Raga-fredo*, etc.

Gothic /d/ is preserved in all the Gothic anthroponyms with the only exception of *Tute-nandus* (cf. Appendix §3.2.2):

e.g. *Argi-vado, Teud-illi, Uadu-vara*, etc.

The case of Gothic /b/ is better attested in names with the words *-badu*, *-liuba*, *gabei-* and *\*saba-*. From the 24 listed, only 4 preserve *b* (*Gondi-bado*, *Froi-liuba*, *Ei-leuba*, *Saba-rico*), the rest are spelled *ν* which probably reflex the lenited pronunciation /β/ (cf. Appendix §3.2.3):

e.g. *Argi-vado*, *Leove-gildo*, *Gav-ino*, etc.

This fact can confirm the testimony seen above of *gavilán* (Sp), *gavião* (Pg) < *\*gabila* and deduce that the fricativization (spirantization) of Ibero-Romance /b/ was not started by the time of introduction of the Visigothic loanwords, since Gothic *b* (which intervocalically was a voiced bilabial spirant according to Wright 1954: 9) did not identify with the Romance *b* and they used the graph *ν* to indicate that this *b* was lenited [β].

The case of Gothic *þ* is more complex, but fortunately there is a lot of evidence of it in the anthroponyms (cf. Appendix §3.3). Traditionally it has been accepted that biblical Gothic *þ* was a voiceless fricative /θ/ (Wright 1954: 12).

The evidence of the anthroponyms here studied is that in intervocalic position, 79 from the 89 items listed (cf. Appendix §3.3.1)<sup>15</sup> are attested in Ibero-Romance as *d*:

e.g. *Reca-redus*, *Ade-ricus*, *Trud-ilo*, etc.

whereas only seven are attested as *t*:

*Aldo-retus*, *Ata-ulfo*, *Vili-atus*, *Iti-la*, *Iti-mondo*, *Gute-ricus*, *Gute-mondo*.

Therefore, this can be interpreted according to Meyer-Lübke's theory (cf. above §3.1 and footnote 13) that intervocalic *þ* identified firstly with the non-lenited Ibero-Romance /t/, and afterwards both underwent lenition turning to /d/. Another possibility is that the intervocalic *þ* was pronounced as /d/ already in Visigothic and it identified with Ibero-Romance /d/. In any case, it is clear that Gothic *þ* could not be adapted as voiceless fricative in Ibero-Romance<sup>16</sup>.

The lexical loanwords *guadaña* (Sp), *gadanha* (Pg) 'scythe'; *guadañar* (Sp), *gadanhar* (Pg) 'mow'; *guadagnare* (It), *gazanhar* (Prov) 'gain, earn' < *\*wáipaneis* (*\*wáipō* 'field') corroborate this outcome.

<sup>15</sup> The case of *\*apan-* 'noble' is an exception because in all cases *þ* is attested as a /t/ even in intervocalic position. However I find that this is a case of sandhi and it was treated as it was an initial (as we will see Gothic *þ* is treated as /t/ in initial position), e.g. *Atana-gildo*/*Tana-gildus*, *Atan-ito*, *Atanus*, *\*Tana-ildus*, *Tan-oy*.

<sup>16</sup> The voiceless fricative phoneme in Castilian is a much later development coming from the palatalization occurred with /k/ plus front vowel. This /k/ + front vowel developed as /tʃ/ as it remains in Italian (CENTU > *cento* [tʃento]) and in Spanish and French a further fronting occurred, yielding [ts] (and [dz] intervocalically). In French (CENTU > *cent* [sã]) both realizations deaffricated and restructured in /s/ and /z/ respectively. In Spanish, both allophones neutralized to /ts/ and then underwent deffrication, yielding /s/ (CENTU > *ciento* [sjento]) which merged with Latin /s/ but in some varieties (e.g. Castilian Spanish) this /ts/ was further fronted to /θ/ (CENTU > *ciento* [θjento]) (Alkire & Rosen 2010: 62-63). Anyways, this was a much later development and by the time, Ibero-Romance indeed lacks of the sound /θ/.

In protected position, 85 cases are listed. The number of cases with *þ* attested as *t* is slightly higher than in intervocalic position, but still is much less than *d* (cf. Appendix §3.3.2)<sup>17</sup>.

*þ* attested as *t*: 17/85. E.g. *Balt-ario*, *Gunte-miro*, *Nant-ildus*, etc.

*þ* attested as *d*: 68/85. E.g. *Balde-miro*, *Gundi-sendo*, *Frede-nandus*, etc.

The case of *þ* in protected position attested in Romance as /d/ entails an important deduction: it seems that *þ* is treated as /d/ already in Gothic, because Romance lenition does not affect the stops in protected position. This contradicts Meyer-Lübke's theory that *þ* adapted firstly as /t/ and then lenited as /d/.

In initial position, all the cases (17) (cf. Appendix §3.3.3) show /t/ in the place of the Gothic *þ*:

e.g. *Tode-mondo*, *Tund-ulfus*, *Tors-ario*, etc.

Following the idea of Meyer-Lübke, initial *þ*, as in other positions, was adapted as /t/ in the beginning, and then underwent lenition. However, in initial position the voiceless would be preserved according to Craven's theory that "the stabilization of /k t p/ as [k t p] at word boundaries in Western Romance is due to the influence of RS which eventually loss its assimilatory power. It conserved the original word-initial /k t p/ apart from the influence of lenition, whereas in word-internal the voiced (and perhaps also spirantized) allophones were free to be restructured and converge with /g d b/" (cf. §1.5.4).<sup>18</sup>

Nevertheless, this idea does not fit with the above mentioned argument of *þ* in protected position, which seems to indicate that *þ* was already /d/ in Visigothic. A very plausible explanation of this case is that, usually, preceding nasal favours voicing. Post-nasal voicing is a well-attested synchronic process in the languages of the world (Locke (1983) refers to 15 languages out of the 197 examined), and it is even more common as a sound change (Kümmel (2007: 53) refers to 32 languages) as reported in Beguš (2015). For an analysis and a theory on the phonetic mechanisms behind post-nasal voicing cf. Hayes & Stivers (2000).

Among the lexical loanwords the same situation as the anthroponyms is found: *triscar* (Sp, Pg) < *þriskan*, *taxugo*, *texugo* (OSp) 'badger'; *teixugo* (Pg) < \**þahsuks*.

To conclude, this brief study on the Gothic anthroponymy of the Iberian-Peninsula provides some information for the purpose of identifying the chronology of Romance lenition:

- Firstly we confirmed the results of the lexical loanwords for the case of intervocalic /k/ which is in process of lenition in the Visigothic period since we find cases of sonorization and cases of preservation in similar proportions.

<sup>17</sup> The important exception this time is *-þrupþ* whose *þ* is treated as /t/, as it were in initial position. This is possibly due to the fact that the presence of the two different words of the compound was clear for the speakers and internal protected *þ* is interpreted as /t/ by reference to the word in initial position.

<sup>18</sup> The sole case of an initial voiced stop in the corpus according to Piel is *draúht-s* 'cohort of a chief' which being an initial voiced stop, the solution in Romance is a voiceless stop as with *þ*: *Trocte-sindo*/*Tructe-sindo*/*Troite-sindo*, *Tructe-miro*, *Tructe-mondo*, *Truct-illi*, *Truct-ino*, *Tructus*, *Fruit-ero*.

Gothic  $VkV \rightarrow$  Ibero-Romance  $*VkV/*VgV >$  Iberian anthrop.  $VkV/VgV$

e.g. *k: Ade-ricus, Gunte-ricus, Leode-rico... | g: Albe-rigo, Ilde-rigo, Sese-rigo, etc.*

- Secondly, the clue provided by the lexical loanwords concerning intervocalic /b/, which is not lenited by the Visigothic period is also reaffirmed. The reason is that Gothic /b/ was fricativized in that position, and Ibero-Romance used the graph  $\nu$  to note this fact since the Romance /b/ was not the same.

Gothic  $VbV \rightarrow$  Ibero-Romance  $*V\beta V >$  Iberian anthrop.  $V\nu V$

e.g. *Argi-vado, Leove-gildo, Gav-ino, etc.*

- Thirdly, more originally, we discovered through the anthroponyms that the original intervocalic /t/ did not undergo lenition by the Visigothic period because Gothic  $\beta$ , which was adapted as /t/ in Ibero-Romance, later underwent lenition and thus is attested in the anthroponyms as  $d$  in intervocalic position, and as  $t$  in initial position (in accordance with the theory of Cravens §1.5.4).

Gothic  $V\beta V \rightarrow$  Ibero-Romance  $*VtV >$  Ibero-Romance  $*VdV >$  Iberian anthrop.  $VdV$

e.g. *Reca-redus, Ade-ricus, Trud-ilo, etc.*

### 3.3.2 The testimony of Visigothic Latin

The examination of the range of Latin evidence from texts to inscriptions, in order to fulfill analytical aims, has been the principal mode of argumentation, as seen in §3.1. A new exploration of these facts would form another thesis entirely, therefore we will only address some important ground ideas and the classic view on the matter, represented by the opinion of the romanist Menéndez Pidal. Also, a brief review on what has been brought to light by looking at the Latin of the time of Visigoths in Spain will be conducted.

Cravens (1991) approached the question of the chronology of the intervocalic sonorization by exploring the Latin testimonies, and assembled important ideas for undertaking a proper exploration. His article is based on the notions of other scholars, principally Wright (1982), Politzer (1955) and Figge (1966), and attempts to criticize the ideas of another sector of romanists. In the following, some points of this article will be presented which we consider to be fundamental to any attempted research on the matter.

An important starting point was already noted by Wright (1982) which is that Late Latin texts are not suitable for a phonetic or even phonological interpretation of the spelling of the spoken Latin of the period. Therefore, studies based on the Latin evidence have to be careful and not take for granted that Late Latin spelling has a direct correspondance with the actual pronunciation of the spoken language.

Also, in connection with the theory presented in §1.5.4, Cravens makes clear an important conceptual distinction on the question of the chronology of Romance lenition: on the one hand it is the beginning of the sonorization as an allophonic phenomenon, and on the other hand, it is



the beginning of the sonorization as a restructured phonological fact. What Cravens' (1991) work attempts to highlight is the first premise and what we try to delimit is the second.

There are two main clues for an early allophonic voicing of Latin /p t k/:

- The fact that Southern and Central Italian dialects show some cases of phonemicized voicings where voiceless are expected since these dialects are spoken below the La Spezia-Rimini line (e.g. *LOCU* > *luogo*) (as mentioned above in §1.2). Politzer 1955 explored this matter and suggested that these are remnants of an ancient lenition (without restructuring).
- The spelling cases of the voiceless stops as voiced are found in inscriptions, papyri and ostraca in the Imperial territory. The examples are not numerous, but they are consistent as is defended by Cravens. Figge (1966) already noticed this, suggesting that this is evidence for the sonorization of /p t k/ without systematic restructuring.

Cravens defended this theory throughout his article. In opposition to those who posited the allophonic sonorization of the intervocalic /p t k/ later in time, e.g. later than the 7<sup>th</sup> century, he argues that there is little chance for a phonological change to pass from voiceless to voiced in only two centuries where we find the first testimonies of the regular voicing (Strasbourg Oaths in the 9<sup>th</sup> century). He also posits, as a living parallel example, the case of American English flapping /t/. Equally, this is a case which shows that very sporadic mis-spellings, like in the Imperial inscriptions, can be motivated by concrete phonological factors. In the conclusion he states:

“Keeping the American English spellings in mind as possible parallel phenomena, Latin <B>, <D>, and with some reservations <G>, where <P>, <T>, or <C> would be expected, provide circumstantial evidence of the possibility that, perhaps as early as the first century, and throughout the area of Roman domination, at least some registers of Latin had a rule of allophonic intervocalic voicing which provided the historical opportunity for subsequent restructuring of two basic types, determined by local conditions [...]” (1991: 66)

Certainly, the beginning of the process is attested in the Latin inscriptions but the continuation of the process is difficult to track through the testimony of Latin. The texts of the period, following Wright's thesis, are written in a learned form of the Latin language and the traces of the actual speaking language are limited. The *terminus ante quem* of the process, i.e. when there is evidence of the restructuring to have taken place and of the phonological change to be systematic, is another of the issues for which the testimony of Latin may provide a chronology.

Traditionally, the Strasbourg Oaths constituted the first clear testimony of the sonorization of intervocalic stops as a restructured phonological change. In the Iberian Peninsula, this *terminus ante quem* of the process lies in a later period.

According to Menéndez Pidal (2005: §87), it is around the 10<sup>th</sup> century when we find clear testimonies in the region of Leon (northwest of the Peninsula). There are examples of sonorization in common words like *rodundo* < ROTUNDU ‘rounded’, *trigo* < TRITICU ‘wheat’, *dublado* < DUPLATU ‘doubled, folded’, *cabra* < CAPRA ‘goat’, *cebolla* < CIPULLA ‘onion’, etc. In Castile, Menéndez Pidal finds a more conservative situation, but still there are examples of both possibilities in notarial documents, e.g. *aguas* < AQUAS ‘waters’, *eglesia* < ECCLESIA ‘church’, *cabrone* < CAPRONE ‘male goat’, *semdero* < SEMITARIU ‘path’, *comde cuemde* < COMITEM ‘count’, and conversely: *capo* < CAPUT ‘head, ending’, *semitero* < SEMITARIU ‘path’.

The Glosas Emilianenses have around sixteen examples of voiceless against only one case of voiced *bergu[n]dian* < VERECUNDIANT. In these cases the voiceless stops were expected to be sonorized but they do not, including very common words like *lueco* < LOCO ‘after’, *siéculos* < SECULOS ‘centuries’ or *faca* < FACIAT ‘s/he would make’. This could be evidence for the argument that the voicing of the voiceless stops was either not prestigious at all, or was actually not a common pronunciation of the oral Romance. Menéndez Pidal opted to say that the non-sonorization is due to the characteristic tendency of preservation of the intervocalic voiceless stops of the adjoining areas to the Basque speaking zone (maybe influenced by the same tendency that is normal in this language) which nowadays is reduced to the western Pyrenees (as we talk about in § 1.2). The monastery of San Millán de la Cogolla (La Rioja), where the glosses were found, belonged to the kingdom of Navarre by that time (Menéndez Pidal 2005: 87).

In this manner, in Navarre and Aragon we find documents of the 11<sup>th</sup> century which preserve the voiceless stops. However, we know that sonorization was present in these regions because we find ultracorreptions like *appate* < ABBATE ‘abbot’. Even in the Aragonese documents of the High Middle Ages the persistence of the voiceless against the voiced is still higher, e.g. *secoridat* < SECURITATE ‘security’, *trico* < TRITICU ‘wheat’, *lacunas* < LACUNAS ‘lakes’, *necesitades* < NECESITATES ‘necessities’, *paredes* < PARIETES ‘walls’, etc. (Menéndez Pidal 2005: 87).

The Cartularies of Valpuesta, which Menéndez Pidal considered to be of the 10<sup>th</sup> century, nowadays are recognised to belong to the 9<sup>th</sup> century (Ruiz Asencio et al. (2010)) and constitute, therefore, the first evidence of an Ibero-Romance language. Some examples of the sonorization of intervocalic voiceless stops have been noticed here: *cabezas* < CAPITAS ‘heads’, *aladarios* < AD-LATANEUS ‘adjoining’, *entrada* < INTRATA ‘entrance’, *exida* < EXITA ‘exit’, *heredad* < HEREDITATE ‘inheritance’, *montadgo* < MONTATICU ‘a kind of medieval tribute’, *semdero* < SEMITARIU ‘path’, *vida* < VITA ‘life’, etc. (Ramos 2000: 90).

It is in the 11<sup>th</sup> century when we definitively find the prominence of the sonorization in the common speech, not only in Leon but also in Castile (Navarra and Aragon constituted a more reluctant case in which progressively also the sonorization will succeed) (Menéndez Pidal 2005: §87). The time window between these limits and the starting point indicated above by Cravens as the initial stages of the whole process of lenition, i.e. as early as the first century, would be the

most important for our purpose, however the studies on the Visigothic Latin of this period are scarce. Among these, it is worth mentioning the one carried out by the latinist Díaz y Díaz (1957). Concerning the sonorization of intervocalic stops, Díaz y Díaz stated that the first examples of Romance sonorization are found from the 7<sup>th</sup> century and more precisely in the South of the Peninsula. This is against the idea of Meyer-Lübke according to whom the Latin intervocalic voiceless stops were still voiceless in the part conquered by the Arabs, as we have already seen above several times. Díaz y Díaz also adduces that from there, by means of the Mozarabic people who emigrated to the Christian territory, the sonorization spread to the north. That connects with the above mentioned idea of Menéndez Pidal on the testimonies in Leon in the 10<sup>th</sup> century (1957: 381-382). Moreover, he gave some arguments to outline the end of sonorization in Catalonia after the Visigothic period since the first testimonies he found were around the 9<sup>th</sup> and 10<sup>th</sup> centuries (1957: 382-383).

In conclusion, the Latin testimony provides some clues about the limits of the process of Romance sonorization: it is in the first century when the process of sonorization begins to be an allophonic feature, at least in some registers of the spoken Latin of the Romania (according to Cravens); and it is as late as the 9<sup>th</sup> century (Strasbourg Oaths and Cartularies of Valpuesta) or at the most, the 11<sup>th</sup> century in the case of Spain when we find abundant testimonies in the Latin texts of vacillation between voiceless/voiced intervocalic stops. This fact, though it does not necessarily reflect the actual pronunciation (taking into account the advice of Wright), may suggest that the process had already spread among the population and the ultracorreptions and vacillations in the written documents are lapses of this vacillating situation (according to Menéndez Pidal). A study on Visigothic Latin (Díaz y Díaz 1957) adduces that the sonorization was a systematic feature already in the 7<sup>th</sup> century in the common language of the Mozarabic people that, in its migration, spread it to the northwest and then it continued progressively to the east. In any case, what the Latin testimony clearly suggests is that since the vernacular is not written, the diverse range of naturally developed phonemes coexists with the old writing tradition. Therefore, the result is a language full of syncretism where the innovation competes with the former system, and this is a process that does not occur within a restricted and concrete period of time, it can be a long-lasting process of six or seven centuries.

### 3.3.3 The testimony of Hispano-Arabic loanwords

Since the 8<sup>th</sup> century, Ibero-Romance has been in contact with Arabic, a very different language typologically speaking. This language contact situation is incredibly important for the latter development of the language. However we will only briefly review the pertinent information that this situation provides in order to, in this case, assess the phonological status of the Romance voiceless stops at the time of the contact. A classical study on the linguistic influence into Romance is represented by the work of Steiger (1932), particularly on the Arabic loanwords into

Ibero-Romance. Based on this study, we will explore how the loanwords were adapted to the Romance phonemics in order to determine the chronology of the sonorization.

Concerning the intervocalic voiceless stops (except for the labial voiceless stops which do not exist in Arabic), these are the results of the Arabic words adapted in the Romance system:

The Arabic *t* is preserved in the majority of the cases, e.g. *fitna* > Sp. Pg. *alfétna* ‘hostility, war’; *zajtûna* > Sp. *aceituna*, Pg. *azeitona* ‘olive’; *ratâm* > Sp. Pg. *retama* ‘broom’ (1932: 128).

The Arabic *ṭ* (emphatic consonant) is adapted sometimes as voiceless and sometimes as voiced, e.g. *raṭl* > Sp. *arrelde*, Pg. *arrate* ‘four pounds’; *qaṭī'a* > Sp. *alcatea*, Pg. *alcateia* ‘pack, herd’; *qaṭâm* > Sp. *alcotán* ‘hobby’; *qûṭn* > Sp. *algodón*, OCat. OArag. *alcotón*, Pg. *algodão* ‘cotton’; *râbiṭa* > Sp. *Rábita* ‘hermitage’, *Rávita*, *Arrávita*, *La Rápita*, *La Rábita*, *La Rábida* (toponymy) (1932: 150-152).

The case of the emphatic *ṭ* is even more complex because it is not clear whether it was already voiced in Hispano-Arabic. Some clues support the idea of *ṭ* as [d]:

- Direct testimonies of Arabic grammarians of the period (1932: 47, footnote 4).
- The transcription of the Romance *d* for an Arabic *ṭ* in numerous examples: *palaṭár* < Sp. *paladar* ‘palate’; *qoṭál* < OSp. *cobdal* ‘cubit’; *qarṭaxa* < OSp. *cardacha* ‘thistle’; *qaṭêna* < Sp. *cadena*, etc. Meyer-Lübke considered that this was a case of early attestation when the sonorization was not active yet and the Romance preserved the original voiceless stop. Conversely, Menéndez Pidal suggested that this is a case of ultracorrección done by the Arabic writers (1932: 155).
- Some loanwords where *ṭ* is not in intervocalic position (to undergo Romance lenition) but still show *d*: *buṭlan* > *budlán* (but also *butlán*); *qanṭûra* > *alcandora* ‘shirt’; *ar-rubṭ* > OSp. *arrobdas* ‘night guards’; *al-murâbiṭ* > OSp. *almoravid*, Sp. *almorávides* ‘Almoravids’ (1932: 156).
- Some of the geminates of *ṭ* suggest the interpretation of *ṭ* as voiced: *baṭṭâna* > Sp. Pg. *badana* ‘sheep or ram leather’; *baṭṭîxa* > OSp. *badeha*, *badea* ‘bad quality melon’; *ṭûb* > Sp. Pg. *adobe* (*aṭ-ṭûb* assimilated article).

A counter argument to these points would be that Arabic normally also transcribed the Greek and Romance *t* with its emphatic *ṭ*. According to Steiger, this is typically characteristic of Semitic languages in order to assimilate foreign words (emphatization), to give them the appearance of Arabic words (1932: 154).

Concerning the Romance velar voiceless stops, we will look at the Arabic loanwords with two different Arabic phonemes: palatal *k* and velar *q*. In the old transcriptions of Arabic they are normally transcribed with the same graphemes *qu* and *c*, but there is evidence for their different pronunciation, at least in the early period of Hispano-Arabic (1932: 54-57). Also, the treatment of the Romanic toponyms is slightly arbitrary: the transcriptions with *k* were used for e.g. *Cuzna*, *Caracuey*, *Tarragona*, *Salamanca*, *Cuenca*; and with *q* for e.g. *Córdoba*, *Santiago*, *Málaga*, *Carmona*, *Segura*, *Mondego*, *Coimbra*, *Coria*.

The intervocalic *k* is treated mostly as voiced in Ibero-romance. In all likelihood, these testimonies with voiced in the Arabic loanwords are due to Romance lenition because it cannot be explained inside the phonetic evolution of Hispano-Arabic.

E.g. *takarnîna* > Sp. tagarnina ‘pure cigar’; *maştakā* > Sp. almáciga, almástiga, Pg. Arag. almazaque, almastec, Cat. (al)màstec ‘kind of resin’; *şabika* > Sp. jábega, Pg. chávega ‘net’; *barrakân* > Sp. barragán, OSp. barracan, OPg. barragam, barregana ‘wool clothing’; *darmaka* > OSp. adargama ‘fine flour’(1932: 207).

The Hispano-Arabic velar *q* could represent two different sounds: voiceless or voiced (1932: 55-57). Intervocally, the loanwords present more cases of *g* being difficult to say whether it was due to the Arabic itself or to the Romance lenition. Steiger suggested that those cases which have archaic doublets are less probably supposed to have undergone sonorization (1932: 213).

E.g. *záwqa* > OSp. azogue, azoche ‘mercury’; *ţarrâqa* > OSp. atarraga ‘hammer’, Sp. atarragar, Pg. atarracar; *búnduqa* > Sp. albóndiga, Pg. almóndega ‘meatball’; *nafaqa* > OSp. añafaga, anafaga ‘expense’, annafaka ‘right of provision’; *nábiqa* > Pg. anáfega ‘Zizyphus Lotus’; *şadaqa* > OSp. azadaga, azadeca, azidaque ‘dowry’, *márfaqa* > OSp. marfega, almarrega, marrega, OArag. almarfaga, Sp. marga ‘duvet’; *fanîqa* > Sp. fanega, hanega, Pg. fanga, Cat. faneca ‘grain measure’; *ta’lîqa* > Sp. talega, Pg. taleiga, taliga, OCat. taleca ‘sack’; *sâqa* > OSp. Pg. çaga, Sp. zaga ‘rearguard’ (1932: 214-215).

Conversely e.g. *sulâqa* > Sp. azulaque, zulaque ‘polish’; *sâqija* > Sp. Pg. acequia, OPg. acéqua ‘canal’; *ţalâqa* > OPg. talaca ‘divorce’; *ħabaqa* > Sp. albahaca, alfábega, Cat. alfábega, Pg. alfavaca, alfábega ‘basil’ (1932: 215-216).

In conclusion, the process of sonorization is apparently not complete for the case of Romance velar series. With respect to the dental series, the situation is obscure: the results of *t* (apart from the Arabic adaptations of Greek and Romance words with *t*) suggest that the process of sonorization is already finished but if we take into account the testimony of *ţ* stops, this premise is not fully appropriate.

Another argument used for dating sonorization was the apparent conservation of voiceless in Mozarabic proposed by Meyer-Lübke (1924) as we have already mentioned above. According to him, the transcriptions suggest that the sonorization did not yet occur in Mozarabic. This is criticized by Menéndez Pidal<sup>19</sup> who claims that the sonorization existed already at that time and within Mozarabic coexisted forms with voiced and voiceless although the prestigious variant was the archaic, thus used by the writers, in a similar way as was preferred in Castile (Menéndez Pidal 1926: 261-263).

The question of Arabic loanwords is now more complex if we add the issue of Mozarabic: given that in Mozarabic could exist, at least in some parts, a tendency towards sonorization, then the

<sup>19</sup> Steiger used to follow the ideas of Menéndez Pidal.

Arabic loanwords reflect the system of Mozarabic, for which the first wave of Arabic loanwords introduced in the future Spanish (in a first moment by means of the migration of Mozarabs to the northern Christian territories) was responsible. The variation in the treatment of the Arabic loanwords could reflect the linguistic state of the Mozarabic at the moment of first contact with Hispano-Arabic and not necessarily the state of the northern Ibero-Romance dialects of the period.

To conclude, the cases of sonorization, although sometimes dubious, of the Arabic loanwords indicate that the process of sonorization was not completely concluded yet, at least in the South of the Peninsula.

#### 3.3.4. Recapitulation

At the beginning of the discussion (§3.3), three possibilities were set out to provide a solution to the evidence of the Gothic lexical loanwords. Having carried out a superficial analysis of some other testimonies, it is appropriate to discard the third option as “the process of sonorization had already ended in the north of the Peninsula at the time of introduction but in the south, the part occupied by the Arabs, the process have not been started by the time of the Arab conquest” (pace Gamillscheg (1935)). Since we have evidence that argues that in Mozarabic the process of sonorization was already active by that time and in the north was still active (at least for the velar series). We can also partially dismiss the two other possibilities: the process of sonorization had not completely ended by the time of Gothic influence (pace Gamillscheg (1932) and partially de Acosta (2011)) and indeed agree (partially with de Acosta (2011)) that sonorization of /k/ was a long-lasting process. The second possibility, i.e. the one that considers that the Germanic voiceless stops were aspirated and therefore could not be adapted by the Romance stops (Gamillscheg 1935), cannot be proved but as far as the case of the velar voiceless stops, we can say that Gothic /k/ identified with the Romance equivalent.

Plainly, the study of Gothic lexical loanwords together with studies of Gothic anthroponyms, the Latin evidence and Hispano-Arabic loanwords reveal that the intervocalic velar voiceless series in Ibero-Romance were undergoing lenition at least since the 5<sup>th</sup> century until approximately the 11<sup>th</sup> century, vacillating with respect to region and social strata.

The question of the lenition of voiceless dental and labial stops still remains uncertain: the evidence of Gothic lexical loanwords suggests that lenition had concluded already by the 5<sup>th</sup> century and this seems to coincide, as far as dental stops are concerned, with the partial testimony of Arabic *t* (besides the transcription of Greek and Romance *t* by the Arabs as a *t*). However, this is often disputed as we explored above. Furthermore, the case of Gothic *þ* in the anthroponyms suggest that /t/ was not lenited yet by the 5<sup>th</sup> century. Concerning labials, the account is only given by the Gothic lexical loanwords which seems insufficient.

With respect to lenition of the voiced series, the scarce information given by the Gothic lexical loanwords coincides with the testimony of the Gothic anthroponyms for the case of the labial stops, which did not seem to undergo lenition by the 5<sup>th</sup> century. The other two studies are focused on sonorization, therefore the treatment of the voiced series by those testimonies remains to be studied.

More generally, the fact that sonorization is still working at the time of Arabic influence (according to the Hispano-Arabic testimony reviewed) can be connected with the linguistic variation testimonies regarding sonorization in the northern Ibero-Romance dialects (in gradation from Leon, passing through Castile, to Aragon) around the 9<sup>th</sup> and 11<sup>th</sup> centuries. What appears to be clear, regarding the testimony of the Latin texts of this period, is that the vernacular language is not written and the Latin of the texts reflects diverse written traditions depending on the region and the period. The degree in which Romance is manifested in the Latin texts is a case of a long scholarly discussion. However, taking into account the vacillation of voiceless/voiced intervocalic stops and ultracorreptions, we can deduce that by that time lenition was wide-spread and even pervaded the written domain. The Romance lenition which seems more probable is a long-lasting change spreading over six or seven centuries, where the new developed phonemes coexist with the former system, which is also the system used in writing, to a greater or lesser extent, depending on the sociolect, region and period.

## Conclusion

The testimony of Gothic loanwords in Ibero-Romance provides evidence for the long-lasting process of Romance lenition occurring in the velar voiceless stop. This fact is confirmed by the testimony of the Hispano-Arabic loanwords, and the evidence of Latin texts, both briefly reviewed in the discussion.

The other voiceless stops (dental and labial) to which Romance lenition seemed not to have applied according to the Gothic loanwords, cannot be corroborated by the rest of testimonies explored in this discussion: Gothic anthroponyms suggest that the dental voiceless stop was not lenited by the 5<sup>th</sup> century (by the evidence of intervocalic Gothic *þ* which was adapted as /t/ and then underwent Romance lenition). The testimony of Latin texts does account for some voiced results of these series. The fact that the velar stops do undergo sonorization and that the testimony of Latin texts is more consistent, means another explanation as to why the Gothic lexical loanwords preserved the dental and labial voiceless stops is required.

Concerning the voiced series, the Gothic evidence shows that labial stops were not fricativized by the 5<sup>th</sup> century. The other two studies in the discussion are focused on sonorization so the treatment of the voiced series by those testimonies remains as a future line of research.

More generally, the implications of this study concern the scholarship of Romance lenition. These consequences are directly related to the basis of the study, that is, Romance lenition is regarded as a natural long-lasting process which starts with allophonic variation as early as the first century (Cravens 1991) and, more importantly, that it can be explained as a natural internally motivated process that came much later into a phonological fact (with the stabilization at word boundaries of the voiceless stops) due to the influence of RS which eventually loss its assimilatory power (Cravens 2000). Thus, explanation by means of Celtic influence is not necessary, nor an establishment of early chronologies for the Romance lenition as numerous scholars did<sup>20</sup>.

The Germanic evidence regarding the chronology of Romance lenition can provide us some clues but still the most important evidence is found in the Latin texts of the period. The establishment of the corpus of Gothic loanwords in Ibero-Romance presented some difficulties and the lexical items suitable for the analysis carried out in this study were limited. The important influence of the Germanic invasions for the Romance languages resides mainly in the fact that the

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<sup>20</sup> Moreover, the fact that Romance lenition is evidenced here to be a long-lasting process ranging from the 1<sup>st</sup> to the 9<sup>th</sup> or 11<sup>th</sup> centuries contradicts the ideas of scholars who give a more concrete date to this phonological phenomenon. Although in this study the scope considered is Ibero-Romance, at least it does induce to reconsider some chronologies of Romance lenition, as the thesis maintained by the classical work of Richter 1934 (and therefore one of many others based on this). As an example, Straka (1953, 1956) based his relative chronology of Galo-Romance in the fact that sonorization took place around 400 A.D. and this is the pivotal point where all his relative chronology is founded (1953: 251). Furthermore, among others, Guinet 1982 is based on the chronology of Straka (explicitly in 1982: 25) to make his stratification of the Germanic loanwords in Galo-Romance.



Germanic people created, along the Latin speaking territory, the political conditions which permitted this linguistic fragmentation.

## Appendix

### Appendix 1: Historical framework

Cultural contact between the Germanic- and the Latin-speaking world had already been occurring well before the period of diversification of Latin. As early as the 2<sup>nd</sup> century, the famous encounter of Gaius Marius against the Cimbri and the Teutones in Southern Gaul who even reached the North of the Iberian Peninsula took place. Some decades later, Julius Caesar took account of the Germanic tribes that he came across during his conquest of Gaul. From then, the Germanic people became influential. The potential interest of the Romans in seizing Germanic territory beyond the Rhine had already been dropped in the first years of the Empire and the progressive incursions of Germanic tribes were a constant reality. This cultural clash reached its height in around the 4<sup>th</sup> century framed into what in historiography is known as the *Völkerwanderung* or Migration Age (Goffart 2006: 13-22). The information about these early periods of contact comes from direct sources such as Tacitus, Ammianus and Jordanes among others but also archaeology and philology gives us important clues about how this process of cultural intermingling really happened.

During this migration of peoples that characterised Europe of Late Antiquity, one of the most important groups who came into contact with the Latin world and played a significant role in the dismemberment of the Roman Empire were the so-called Goths. The first direct testimonies place them in the Thracian area around the 3<sup>rd</sup> century but it is known that Germanic tribes were already moving since the 2<sup>nd</sup> Century B.C.; coming through the Oder and Vistula south-eastwards to the Pontic area. This region was adjacent to the Roman Empire and contact took place which gradually forced Romans to abandon the province of Dacia in 271 and to establish the new frontier along the Danube. The information about the culture and history of the Goths in that period remains quite dubious. Traditionally they have been divided in two main groups which later spread out separately: Visigoths and Ostrogoths.

The battle of Adrianople in 378 constitutes a turning point in the history and politics of Rome. The army of Valens was defeated by Gothic rebels, mainly *Tervingi* and *Greuthungi* (Heather 1991: 146-7) who had crossed the Danube some years before, probably forced by invading Huns. Afterwards, these Gothic tribes settled in Moesia with the status of *foederati* but they continued their wandering first around the Balkans and eventually, in the first decade of the 5<sup>th</sup> century, they reached Italy and sacked Rome (410) with Alaric as leader (now historiographically we can talk about Visigoths cf. Halsall 2007: 194). Thereupon, Alaric's son Ataulf led them to Southern Gaul. Throughout these decades of crisis for the Roman Empire, Germanic tribes participated in the political disputes as allies or enemies of the different factions involved. Visigoths settled in Aquitania as *foederati* and defended the interests of Rome, at least nominally, during this time and took an important role in controlling Hispania and eventually subduing the barbarian tribes

which some time before (409) had entered: Alans, Vandals and Sueves. In 475 Euric proclaimed an independent Visigothic kingdom (with the capital city in Toulouse) which by that time controlled the former provinces of Gallia Aquitania, Gallia Narbonensis and the most of Hispania. In 507 the Franks, led by Clovis and helped by the Burgundians defeated the Visigoths and pushed them to Hispania which was kept by the Visigoths thanks to the help of Theoderic, the Ostrogothic emperor in Italy. The Visigothic kingdom of Hispania (nominally subordinated to the Ostrogothic kingdom in its beginning), whose capital was in Barcelona during the first years and then in Toledo, endured almost two centuries until the Moorish invasions of 711. During this time, the Visigothic elite was gradually integrated into the Hispano-Roman society. One of the most relevant turning points was the conversion of the king Reccared from Arianism, the traditional Gothic doctrine, to Roman Catholicism in 589. Together with this fact, the few possibilities of attestation of their Germanic language were lost since, according to tradition (Chronicle of Fredegar 4, 8), Reccared ordered the destruction and burning of all Arian liturgical and doctrinal books. However, this can be just a symbolic story to explain the actual odd disappearance without clues of the Arian legacy (Díaz y Díaz 1991: 32).

One of the tribes which remained above the Danube when the Huns burst into Europe was the so-called Ostrogoths. Once Attila's realm collapsed, eight decades after the other Gothic tribes did, the Ostrogoths crossed the Danube making contact with the eastern Roman Empire (Halsall 2007: 285-6). In that period, the imperial court in Constantinople experienced a complex situation whereby the power was disputed among a number of factions and interests. The Gothic tribes were involved in these political affairs supporting certain parties. The Emperor Zeno used the Goths of the above mentioned Theoderic to attain his interests, but the power of Theoderic increased until it constituted a threat to the current Emperor. Theoderic's Goths sacked the Balkans and threatened Constantinople. Eventually, they were persuaded to change their plan and sought the conquest of Italy and dispose of the actual ruler Odoacer (Halsall 2007: 286-7). In 489 the first victory of Theoderic took place and three years later he killed Odoacer in Ravenna and became master of Italy for thirty-three years. During his rule, he defeated the Vandals in Sicily, expanded over the Balkans defeating the Gepids, and tried to make diplomatic alliances with the Visigoths and Franks. Clovis' attack on the Visigoths broke the relations in the battle of 507 (Halsall 2007: 288). Generally speaking, the Ostrogothic period in Italy did not suggest a violent alternation of the structures in place, but rather, aspects like administrative organization (Heather 2003: 114) and ideology (Heather 2003: 116) remained thoroughly Roman. After the Byzantine conquest and the nominal end of the kingdom in 536, the original boundaries which originally worked under the first decades of the kingdom to keep the immigrant Gothic elite privileged with respect to the Italo-Roman society, continued to dissolve in a process of cultural assimilation (likewise with the Visigoths in Spain) (Heather 2003: 130).

## Appendix 2: Alphabetical list of the Gothic anthroponyms compiled by Piel 1960

Adal-elle	Ara-gunti
Ada-ulfus/Adau-ulfus/Ada-ufu/Ataulfo/Ad-ulfus	*Ara-vando/Ar-gando
Ade-fonsus	Archen-elde
*Ade-mondus	Ard-ega
Ade-redo	Arge-miro
Ade-ricus	Arge-mondo/Argi-mundo
Adi-leouo	Arge-rigu
Ado-sindu	Arge-sinda
Age-sendo	Argi-fonsa
*Ag-ila	Argi-fredus
Agi-verta	Arg-ila
*Agro-miro	Argi-leova
Ai-ulfo	Argi-rigus
Ala-fonsus	Argi-vado
Ala-guntia	Ari-ulfu/Arj-ulfu
Ala-miro	*Ar-mirus
Ala-trudia	Aru-aldus/ Ar-valdus/Aro-aldus
Albe-rigo	Aru-ili
Alde-fonsus/Alfonso/Afonso/Alonso	Ar-ulfus
Alde-gundia	*Asca-redo
Alde-redo/Aldo-retus	Asca-rico/Asca-rigo
Ald-ila	Asi-ulfo
Ald-onza	Aso-redus
Aldo-sinda	Aspe-rigu
Aldo-varius/Ald-uarius/Alduario	Asth-ufo
Ald-ulfo	Astor-ulfus/Astr-ufu/Astru-gulfu/Astrulfo
Ali-vertus	Astra-gundia
Al-varus	Astr-ario
Andi-arius	Astr-igo/Asta-rigo
And-ila	Astr-illi
And-ulfo	Astro-mirus
*Ans-aldo	Astru-aldo
Anse-mirus	Astr-uarius
Anse-mondo/Anse-mundus	Astru-edo/Astr-edo
Anse-rigo	Astru-ildi/Astr-ildi/Astr-ili
Ans-ila	As-ualdo/As-uldus
Ans-ito	Ata
Anso-redo	Atala-mondo
Ansu-etus	Atana-gildo/Tana-gildus/Atana-gildus
*Ans-ulfo	Atan-ito
*Ante-mirus	Atanus
*Ara-gildo	At-ila

Atra-ulfus	*Destr-ulfo
Atra-varus	Ebra-ili/Ibra-illi/Braili/Ebril(l)i
Atru-arius/Astr-ario	Ebre-guldus
Aude-ricus	Ebre-gulfo
Aud-ino	Ebr-illi
Au-miro	Ega-redo/Ega-reo
Balde-marō	Ei-leuba
Balde-miro	Elde-bredus
Balde-redo	Elde-gundia
Bald-oi	Elde-miro
*Baldo-igius	Elde-sinda/El-senda
Baldo-mar	Eld-oigius
*Baldo-sendo	Em-ila
Balt-ario/Balt-eiro	Enn-ila
Bar-valdo	Erme-fredus
Bel-mirus	Erme-gundia/Erme-gonza
Bera	Erme-isclus
Ber-illi	Erme-miro
Ber-ino	Ermene-gildo/Ermi-gildo/Erme-gildus
Ber-mudus/Ver-mudo	Ermen-tro
*Bero-sendus	Ermen-truia
*Berta-mirus	Erme-rigo
Berti-ario/Bret-ario	Ermi-ario/-eiro
Berto/Bretus	Ern-igio
Bert-ranus	Ern-illi
Ber-ulfus	Ermi-sinda/Ermo-sinda/Ermi-senda
Brande-rigo/Brande-rigu	Ern-olfo
Brand-ila	Ermo-ricus/Ermo-rigo
Bret-andus	Er-senda
Bret-oy	Erus/Ero
Bron-illi	*Er-vigius
Carte-miro/Carto-miro/Karte-miro	Esd-ulfo
Cenda/Cendus	Espana-rigo
Cenda-miro/Zenda-miro/Cende-miro	Espan-sande/Espa-sande
Cende-rigo	Espar-illi
Cend-oi	Eve-nando
Cis-ila	*Evo-rigo
Da(n)-ildo	Evo-sindo
Dad-ila	Fa-gildo
Daga-redus	Fand-ila
Dag-ila	Fav-ila
Da-miro	Fla-gildu
Dan-ila	Fons-inus
Deste-rico	Frade-gundia

Frad-ila	Gaude-sindo
Frad-imiu	Gaud-ila
Fradi-nando	Gaud-ili/Gaud-illi
Fradi-ulfus	Gaud-inus
Fradi-xillo	Gav-ila
Frafe-gundia	Gav-illi
Fram-ila	Gav-inus/Gav-ino
Fram-illi	Gelde-miro/Gile-mirus/Gel-miro/Gide-miro
Fra-miru	Ge-mondo/Ge-mundus
Fram-uldo	Gen-illi
Franchi-mirus	Geno-preda
Frank-ila	Gen-ulfo
Freda	Gese-rigus /Gese-rikus
*Freda-mirus	Ges-il(l)i
*Freda-ricus	Ges-mondo/Gis-mondu
Fred-ario/-eiro	Ges-ulfu/Ges-ulfus
Frede-gundia	Gildo
*Frede-mondo/*Frede-mundus	Gil-miro
Frede-nando/Fernando/Hernando/Frede- nandus/Fer-nando	Gis-mondu
*FREDU-mirus	Gode-geua
Fro-geuua	God-egia
Frog-ianus	*Gode-mirus
Fro-gildo	Gode-redus
Frogi-ulfo/Fro-gulfo	Gode-sindo
Froi-gundia	God-inus/Gud-inus
Froila/Froia/Froilo	Godis-teo/Godis-teu
Fro-ili	*Golfa-mirus
Froiliuba	Golf-eiro
Froi-sendus	Gom-ados
Froj-ulfus/Froi-ulfus	Gom-aldo
Froma-ricus/Froma-rica	Goma-rigo/Guma-rigo
Froma-rigo	Gom-ecius
Froma-suario	Gome-sindus
Frome-gildo	Gomi-ario
From-ista	*Gom-ila
Fromo-sindo	Gonde-maró/Gonde-marus
Fruleuva	Gonde-miro/Gunte-miro
Gaf-ildo	Gonde-mirus
Gala-mirus	Gondi-bado
Galindo	Gond-ulfo
Gat-ildo	Gont-adus
Gaude-miro	*Gor-mirus
Gaud-engu	Gos-mirus
	Gos-uldus

Gres-ulfo	Gunt-adu
Griso-marus	Gunt-agio
Guad-ila	Gunt-aldo
Guad-illo	Gunte-ricus
Guan-adi	Gunt-igio
Guand-ila	Gunt-ildi/Gunt-illi
Gude-nando/Gude-nandus	Gun-trode
Gudes-teua	Gute-mondo/*Gute-mondus
Gud-ila	Gute-ricus
*Guia	Id-idu
Gui-ario	Id-ila/It-ila
Guidin-elle	Id-ilo/It-ilu
Guili-ado	Idi-vertu
Guilia-fredo	Ig-ulfu
Guilia-miro	Ilde-fonso
*Guilia-redi	Ilde-fredo
Guill-isclo	Ilde-ricus/Ilde-rigus
Guil-oi	Ildi-vertu/Eldi-vertu/El-vertu
Guil-ufo	Ild-vara/Eld-vara/Ild-ara
Gui-marus	Ins-aldus
Gui-miro	Inve-nando
Gui-nandus	Iqu-ila
Guisa-mar	It-ila
*Gui-sando	Iti-mondo
Gui-senda	Kint-ila
*Gulfa-ricus	Leode-gildo
Gulf-ila/Wulf-ila	Leode-gundie
Guma	Leode-maró
Guma-rigu	Leode-mundo
Gum-ila	Leode-rico/Lode-rigu
Gunde-bredo	Leode-sindo/Leode-sinda
Gunde-redus	Leo-mirus
*Gunde-salbus/Gon-çalvo	Leove-gildo
Gunde-sindus/Gun-sindo	Leove-redo/Leove-redus
Gundi-ario	Leove-rigo
Gundi-gulfo/Gund-ulfo	Leove-sendo
Gund-ila/Gund-ilu	Leov-ildo
Gund-inus/Gunt-inus	Leov-illi
Gundi-salvus	*Les-mirus
Gundi-scalcos	Leve-godo
Gundi-sendo	Lod-elle
Gundi-sila	Lod-eri
Gundi-uado	Man-icius
Gund-oda	Man-ila

Man-illi	Ragi-mirus
Mani-oi	*Rag-olfus/*Rega-ulfus
Mani-ulfo/Man-ulfo	Rai-rigo
Manno	Ram-aldus
Mans-ila	*Rande-miro
Mant-ila	Rand-ili
Manu-aldus	Rand-inus
Man-ulfu	Rando
Meit-illi	Rand-ulfus
Mod-ario/Mud-ario/Mod-eiro	Rani-mirus/Rane-mirus/(Ramiro)
Mode-rigo	Rani-verta
Mod-ili	Rano-sendo
Monde-rigo	Ran-ualdo
Mond-inus/Mund-ino	*Ran-ulfo
Mono-breda	Ran-valdus
Mud-illi	Reca-drugia
Nand-inus	Reca-mondus/Rece-mundus
Nando	Reca-redus
Nand-ulfo	Rece-miro
Nant-idia	Rece-sindo
Nant-ildo/Nant-ildus	Recune-fredo
Nanti-miro/*Nanti-mirus	Rede-mundus
Nanto-mar	*Rede-sindus
Noli-vado	Rega-ulfus
Obtu-ricus	Rei-mundus
Od-ario/Od-eiro/Od-erio	Remes-ario
Od-uarius	*Remi-ricus
One-gildo	Requi-viro/Requi-vilo
On-eka	Rich-elle
One-senda	Riqu-ila/Riqu-ilo
Ono-rigus	Riqu-illi
Orte-fredus/Ortre-fredus	Rode-rigo/Rode-rigus/Rod-rigo
*Os-gildo/Os-gildus	Rodo-aldus
Oso-redus/Oso-retus/Oso-reu/Oso-reo	Rodo-sili
Quede-ricus	Roma-rigus/Roma-rigo
Qued-ino/Quet-ino	Rude-sindus/Rodo-sindus/Rodo-sendu
Quend-ulfo/Cend-ulfus	Ruge-miro/*Ruge-mirus
Quete-nando/Quete-nandus	*Rug-ulfo
Quid-ila	Rum-ili
Quint-ila	Saba-ricus/Saba-rico/Saba-rigo/Sava-rico/Sava-rigo
Quint-illi	Sag-adus/Sag-atus/Sag-ado
Racune-fredus	Sag-ildus
Raga-fredo	Sag-ulfo/Sag-ulfus
Rage-sendus	Sala-miro/Sal-miro



*Sanda-ricus	Sis-nando
Sande-miro	Siso-aldo
Sand-etus	Sis-vado
*Sand-ila	Sis-valdo
Sand-inus	Soi-miro
Sando	Soni(e)-mirus/Songe-mirus/Soni-miro
Save-godi	Sonia-rigu
Sav-ildi	Soni-gildu
Scele-mondo(?)	Son-ildi/Son-illi
Sege-fredo	Span-illi
Sege-mundus	Spanu-ricus
Sege-sindo/Sege-sinda	Spanu-sindo
Segi-redus/Sege-reo	Su-arius/-eiro
Sel-mirus/Sili-miro	Sunie-mirus
Senda-miro	Sun-ila
*Senda-mondo/*Senda-mundus	Sun-illo
*Send-arius	*Tana-ildus
Send-inus	Tana-redus
Send-uara	Tan-oy
Send-ulfus	Tede-gonza
Sese-rigo	Tede-gundia
Ses-gudus	Teode-fredo
Ses-ita	Teode-gildus/Teo-gildo/Tude-gildus
Ses-miro	Teode-mirus/Tode-mirus/Todo-miro/Theode-mirus
*Ses-ulfo/Ses-ulfu	Teode-redu/Teode-redus/Toe-reu
Sige-ricus	Teode-ricus/Tode-rico/Toe-rigo/Tue-rigo
Silo(n)	Teode-sindo
Sil-vadu	Teod-ila
Sil-valdus	Teod-ildi/Teod-illi
Sil-verta	Teud-isclus
Sinda/Sindo	Tev-illi
Sind-ila/Sind-ilo	Thoris-modus
Sindi-leuva	Tiote-vado
Sind-inus	Toda/Tuda
Sis(e)-nando	Tode-mondo
Sise-buto	Tores-arius/Tors-arius/Tos-arius/Tors-ario
Sise-gundia	Trans-mirus/Tras-miro
Sisi-gundie	Trasa-rigo
Sis-il(l)i	Tras-ario
Sis-ila	Tras-illi
Sis-ildi/Sis-ili	Tras-mundus/Tras-mondo
Sis-ino	Tras-oi
Sisi-vertus	Traste-miro
*Sis-miro	Tras-ulfus

Trocte-sindo/Tructe-sindo/Troite-sindo  
 Tructe-miro  
 Tructe-mondo  
 Truct-illi  
 Truct-ino  
 Tructus  
 Trude-sindu  
 Trud-ildi/Trud-illi/Tru-illi  
 Trud-ilo/Tru-ilu/Truiu  
 Truit-ero  
 Tude-ulfus  
 Tudi-nando/Tute-nandus  
 Tudi-vertu  
 Tumd-uldo  
 Tund-ulfus  
 Uadu-vara  
 Uisando/\*Guisandus  
 Und-isclus  
 Un-ila  
 Un-isco  
 \*Ur-gildo  
 \*Ur-ulfo

Vadu-vara  
 Vand-ila/Guand-ila  
 Vedra-miro  
 Ver(e)-mudus  
 Ve-ulfu  
 Viae-ricus/Via-ricu/Via-rigus  
 Vidra-gildo  
 Vidra-miro  
 Vila-mirus  
 Vili-ario  
 Vili-atus  
 Vili-fonso/Gila-fonso  
 Vili-vado  
 Vil-ulfu  
 Vima-redus  
 Vistra-ricus  
 Vistr-arius  
 Vistre-miro/Vistre-mirus/Vestre-miro  
 Vistre-mundus  
 Vite-miro  
 Viv-illi

**Appendix 3:** Classification of anthroponyms according to the study of lenition**3.1. Gothic intervocalic voiceless velar stop***-reiks* ‘ἄρχων, ruler’

Preservation 21/49	Sonorization 28/49
Ade-ricus	Albe-rigo Anse-rigo Arge-rigu Asca-rigo Aspe-rigu Astr-igo/Asta-rigo
Asca-ricus	Brand-e-rigo/Brand-e-rigu Cende-rigo
Aude-ricus	Erme-rigo/Ermo-rigo España-rigo *Evo-rigo
Deste-ricus	Froma-rigo Gese-rigus Goma-rigo/Guma-rigo
*Freda-ricus	
Froma-ricus/Froma-rica	
Gense-ricus/Gese-rikus	
*Gulfa-ricus	
Gunte-ricus	
Ilde-ricus	Ilde-rigus Lode-rigu Leove-rigo Mode-rigo Monde-rigo
Leode-ricus	
Obtu-ricus	Ono-rigus
Quede-ricus	Rai-rigo
*Remi-ricus	Rode-rigus/Rode-rigo/Rod-rigo Roma-rigus/Roma-rigo Saba-rigo/Sava-rigo
Saba-ricus/Saba-rico/Sava-rico	
*Sanda-ricus	Sese-rigo/Sese-rigus
Sige-ricus	Sonia-rigu
Spanu-ricus	
Teode-ricus/Tode-rico	Toe-rigo/Tue-rigo Trasa-rigo
Viae-ricus	
Vistra-ricus	





Froi-liuba Ei-leuba	Leov-ildo Leov-ildo Leov-illi Leve-godo
Saba-ricus/Saba-rico/Saba-rigo	Gaf-ildo Gav-inus/Gav-ino Gav-ila Gav-illi Sava-rico/Sava-rigo Save-godi Sav-ildi

### 3.3 Gothic thorn

#### 3.3.1 Intervocalic position

*\*rēþs* ‘counsel’ (*\*rēdan*: ‘to counsel, deliberate’)

D: 18/19	T: 1/19
Alde-redo Anso-redo *Asca-redo Balde-redo Daga-redus Ega-redo/Ega-reo Gode-redus *Guilia-redi Gunde-redus Leove-redus Oso-redo/Oso-reo Reca-redus Rede-mundus *Rede-sindus Segi-redus/Sege-reo Tana-redus Teode-redu/Teode-redus/Toe-reu Vima-redus	Aldo-retus

*mōþs* ‘courage, temper’

D: 5/5	
Ber-mudus/Ver-mudo Mod-ario/Mud-ario/Mod-eiro Mode-rigo Modi-ili/Mud-illi	

Mud-illi	
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## \*hapus 'fight'

D: 10/12	T: 2/12
Ada-ulfus/Adaufu/Ataulfo/Ad-ulfus Ade-fonsus/Alfonso/Afonso/Alonso) *Ade-mondus Ade-redo Ade-ricus Adi-leouo Ado-sindu Gom-ados Gont-adus Guan-adi	Ataulfo           Viliatus

## \*fripus 'protection, shelter, peace'

D: 26/26	
Argi-fredus Elde-bredus Elde-bredus Erme-fredus Frade-gundia Frad-ila Frad-imiu Frad-nando Frad-ulfus Frad-xillo Freda *Freda-mirus *Freda-ricus Fred-ario Frede-gundia *Frede-mondo Frede-nando (Fernando/Hernando) Frede-nandus/Fer-nando Guilia-fredo Gunde-bredo Ilde-fredo Mono-breda Orte-fredus Ortre-fredus Recune-fredo Sege-fredo	

*Prup-* 'power'

D: 5/8	Elision 3/8
Ala-trudia  Gun-trode Trude-sindu Trud-ildi/Trud-illi Trud-ilo	Ermen-truia/Ermen-tro   Tru-illi Tru-ilu/Truiu

*ip-s* 'zeal' (?)

D: 3/5	T: 2/5
Id-idu Id-ila/Id-ilo Idi-vertu	It-ila/It-ilu  Iti-mondo

*Gup-* 'god'

D: 7/7	
Gode-geva God-egia *Gode-mirus Gode-redus Gode-sindo Godis-teo/Godis-teu/Gudes-teua Ses-gudus	

*Gōp-* 'good'

D: 5/7	T: 2/7
Gudes-teua Ses-gudus God-inus/Gud-inus Gude-nando/Gude-nandus  Gud-ila	Gute-ricus Gute-mondo

Exception: \**apan-s* 'noble'

T: 5/5	
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Sisi-gundie, Tede-gundia	Gunt-agio Gunt-aldo Gunt-igio Gunt-ildi/Gunt-illi, Gunt-illi  Tede-gonza (sporadic evolution)
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\**sanp*-s 'truthful'

D: 7/7	
Sande-miro *Sanda-ricus Sand-etus Sando Sand-inus *Sand-ila Espan-sande/Espa-sande	

*sinp*-s 'way'

D: 23/23	
Ado-sindu Elde-sinda/El-senda Ermi-senda Er-senda/Elsenda Evo-sindo Gode-sindo Gui-senda Gunde-sindus/Gun-sindo Rano-sendo Rude-sindus/Rodo-sindus/Rodo-sendu Sege-sindo/Sege-sinda Senda-miro Senda-mondo*/Senda-mundus *Send-arius Send-uara Send-uara Send-ulfus Sinda/Sindo Sind-ila Sind-ila/Sind-ilo Sindi-leuva Sind-inus Spanu-sindo	

*\*nanp-s* 'bold'

D: 10/14	T: 4/14
Eve-nando Frede-nandus/Fer-nando Gude-nando Inve-nando Nand-inus Nando, Nand-ulfo  Quete-nando Sis-nando Tute-nandus	Nant-idia Nant-ildus Nanti-miro Nanto-mar

*prup-* 'power'

D: 0/3	T: 3/3
	Ala-trudia Ermen-truia/Ermen-tro Gun-trode

**3.3.3 Initial position***pra-s* 'daring, bold'

T: 7/7	
Trasa-rigo Tras-ario Tras-illi Tras-miro Tras-mundus/Tras-mondo Tras-oi Tras-ulfus	

*piud-a* 'people, nation'

T: 4/4	0
Teod-illi Teud-isclus Tode-mondo Tute-nandus	

*\*pund-* 'swell'

T: 2/2	
Tund-ulfus Tumd-uldo	

*brub-* 'power'

T: 3/3	
Trude-sindu Trud-ildi/Trud-illi/Tru-illi Trud-ilo/Tru-ilu/Truiu	

*\*pauris* 'giant'

T: 1/1	
Tors-ario	

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