CONSONANTAL DEGEMINATION IN LATIN INSCRIPTIONS OF THE ROMAN EMPIRE: A DIALECTOLOGICAL AND SOCIOLINGUISTIC PERSPECTIVE*

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Abstract: In this paper, a survey is conducted on the phenomenon of consonantal degemination through the corpus of epigraphic materials. The aim of this research is to understand the nature of this phenomenon and its possible implications in the field of dialectological studies.

Key Words: Degemination, Latin Linguistics, Latin Epigraphy, Sociolinguistics, Romance languages.

Latin and Romance Degemination: Two Related Phenomena?

Latin inscriptions from all over the Roman Empire attest degeminated spellings, whose phonetical value and possible connections with the future developments of the Romance languages have been explicitly claimed by eminent scholars, such as J. Herman, in his handbook of Vulgar Latin,[1] and S. Kiss in his study on

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[1] Cf. Herman 2000, 48: "A final group of examples of intervocalic consonant weakening concerns geminates such as [ss], [tt], and [nn], which often simplify to a single consonant. Toward the end of the Empire in particular, we find written forms such as *posim* for *possim* ("I can," subjunctive), *puela* for *puella* (girl), and *anorum* for *annorum* (of the years); these examples are taken from Christian inscriptions in northern Italy, but similar cases can be found in all regions. This too coincides with the evidence from Romance, which tends to simplify these clusters nearly everywhere, although the spelling sometimes hides this fact, preserving the double letters for what has become a single sound, as, for example, in French mettre ("to put," from Latin *mittere*), which represents a spoken [mɛtr] with a single [t]".

the transformations of the syllabic structures in Late Latin.[2] The question about the dialectological meaning of these spellings is particularly relevant in fact, since the Romance languages mostly simplified the Latin geminates, with the sole exceptions of Sardinian, and the Central and the Southern Italian dialects – including the Tuscan variety, which gave rise to Italian –, which have preserved such phonemes.[3]

Degemination has generally been considered by Romance philologists as quite a late phenomenon, and its chronology has been usually reconstructed in comparison with lenition. The chronology of this latter phenomenon is still debated as well, even if it is generally thought to have occurred "considerably earlier than degemination",[4] as evidenced by some cases, such as Spanish *rueda* from Latin *rota*, in contrast to Spanish *gota* from Latin *gutta*, which clearly shows that the plosives underwent lenition before degemination occurred.[5]

In his above-mentioned study, Kiss followed a theory of Martinet's labelled as "pression of the geminates" ("préssion des géminées"). According to this theory, there was in Late Latin an overwhelming tendency towards consonantal degemination, which 'forced' the process of lenition, in order to preserve phonological oppositions in the system, by avoiding confusions between simple and degeminated plosives.[6] Such a trend towards degemination was interpreted by Kiss within the

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[2] Cf. Kiss 1972, 75: "Il ne faut naturellement pas attribuer de la valeur linguistique à toutes les graphies dégéminées: il s'agit en effet d'un lapsus très facile à commetre, et le même document présente souvent des graphies géminées et dégéminées à la fois. Le grand nombre d'examples et leur extension géographique révèlent néanmoins une véritable tendance phonologique". See also *id*. 2009, 73: "On sait naturellement jusqu'à quel point la transcription des consonnes longues est hésitante sur les inscriptions – il est toutefois possible d'attribuer une valeur phonétique à certaines graphies dégéminées offertes par nos matériaux".

[3] Cf. Lausberg 1976, 406–407.

[4] Loporcaro 2011, 153.

[5] Cf. Lausberg 1976, 407. The theory which connects degemination to lenition is also based on the fact that, where degemination is attested in the Romance languages, then also lenition is attested and, conversely, no degemination generally means no lenition, cf. Loporcaro 2011, 151. Important exceptions to this general panorama are represented by Romanian and Dalmatian, which have degemination but no lenition. Degemination was indeed introduced in the Dalmatian language only after the political annexation of Dalmatia to the Republic of Venice, in the 15th century, and was perhaps an effect of the Venetian influence (of the Croatian influence, according to another theory). The late chronology of this phenomenon and its characterization as an effect of linguistic contact explains why the Dalmatian had consonantal degemination but no lenition, which had occurred in Venetian a long time earlier. In light of this, Dalmatian was forced to develop vocalic changes for preserving phonological oppositions. On this question, cf. Muljačić 2000, 134. In the case of Sardinian, which has no degemination, it seems that lenition was adopted during the Middle Ages, by imitation of the continental languages which presented this feature, with which the Sardinian speakers were in contact, cf. Hall 1975, 530–531 and 534.

[6] Cf. Kiss 1972, 79–80.

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context of a general tendency of Late Latin to open the closed syllables[7] – an argument which has been recently rejected by Loporcaro.[8] Yet Kiss did not even disregard an idea of Weinrich's that the Late Latin degemination could represent a sort of 'reaction' against a supposed increase of duplications, which perhaps occurred in Latin due to the emphasis of popular speech.[9]

According to Loporcaro, degemination neither anticipated nor forced the process of lenition; rather, on the contrary, he considers degemination as a consequence of lenition, and provides documentation in support of the later date of this phenomenon, which is not attested earlier than the 8th century AD in Northern France, it was not yet widespread in the Iberian Peninsula during the Arabic domination (which started in 711 AD), nor yet in the 13th century in Venetian, and not even yet in the first documents of the Daco-Romance languages, which are dated to the 16th century.[10]

Kiss, who based his research on the inscriptional evidence from the 2nd century AD onwards, interpreted his results as faithfully reflecting the situation of the Romance languages.[11] However, the principal problem is that the methodology which he used is not appropriate for dialectological purposes, because – as Herman pointed out in his theoretical works –[12] comparing the number of misspellings with the total number of inscriptions attested within a regional corpus[13] can only provide information about the literacy levels of the investigated territory, but not about real linguistic trends.

In this paper, the research on consonantal degemination will be therefore undertaken anew in light of a more sophisticated methodology, namely one elaborated by Herman himself, which envisages the comparison of different kinds of misspellings from both synchronic and diachronic perspectives. The survey will be based on the data collected in the *Computerized Historical Linguistic Database of Latin Inscriptions of the Imperial Age* (LLDB),[14] which was designed by Herman in order to improve research within and across the field of Latin Dialectology.

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[7] Cf. Kiss 1972, 80–81.

[8] Cf. Loporcaro 2011, 92–93 and 153.

[9] Cf. Kiss 1972, 77.

[10] Cf. Loporcaro 2011, 151–153. On this topic, see also *id*. 2015, 194–196.

[11] Cf. Kiss 1972, 76.

[12] Cf. e.g. Herman 1978 (1990), 36.

[13] Cf. Kiss 1972, 76.

[14] lldb.elte.hu. Data recorded as "*fortasse recte*" or attested in undated or missing inscriptions will be omitted from the present survey, which refers to the data collected in LLDB until 10/07/2019.

The Contribution of Computerized Dialectology to the Problem of Degemination in Epigraphy

Since the aim of the present investigation is to study the phonological value of the degeminated spellings attested in epigraphy and their evolution throughout the centuries, the phenomenon of consonantal degemination will be analyzed not only from a diachronic perspective,[15] but also in relation to another phonological phenomenon which is typical of Vulgar Latin and which has a well-documented continuation in the Romance languages, namely the loss of final consonants.[16] Moreover, consonantal degemination will be compared with duplication – the 'opposite' tendency to degemination[17] – as well as with the confusion of B and V, a phenomenon which can be used as an optimal indicator of phonological movements, due to its very high frequency in the Latin inscriptions across several centuries.[18]

In contrast, despite the connection that has been traditionally established with degemination, it will not be possible to deploy lenition as a parameter for the present study, due to the generally low frequency of examples attested within the epigraphic corpora of the Roman Empire,[19] which clearly contrasts with the ubiquity of other phonetic phenomena, such as the above mentioned. Spellings show-

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[15] The data considered will be divided between an "Early Period", which runs from the 1st to the 3rd century AD, and a "Late Period", which runs up to the 7th century AD, cf. Adamik 2014, 645.

[16] This group also includes examples which might have a morpho-syntactic explanation, such as *CAVE CANE x cave canem* (LLDB-87364), *ARA P x aram posuit* (LLDB-15483), *OB AMORE x ob amorem* (LLDB-2296), *VO/TO QVO | FE x voto quod fecit* (LLDB-79892) or *FILI SIVIS x filiis suis* (LLDB-3370), etc. Other examples are: *E CONTVB/RNALI x et contubernali* (LLDB-957), *FECERVN x fecerunt* (LLDB-44987), *CV FILIO x cum filio* (LLDB-63330), *FE/CI SIBI x fecit sibi* (LLDB-32046), *POS DIES x post dies* (LLDB-26379), *VIXIT DIE XV x vixit dies quindecim* (LLDB-7989), *SEMPE MANENS x semper manens* (LLDB-90178), etc.

[17] The labels "degemination" and "duplication" are meant in relation to the Classical norm, i.e. to the spellings of the Latin words which we know from literary sources. Thus, "degeminated" is, for instance, a form such as *PVELA* (LLDB-82173) in comparison to Classical Latin *puella*, whereas *FECCIT* (LLDB-87934) is considered here as a "duplicated" spelling of Classical Latin *fecit*, and so on.

[18] On this topic, cf. recently Adamik 2017. Some examples of this phenomenon are: *SERBVS x servus* (LLDB-89454), *DONABIT x donavit* (LLDB-30394), *VALNEVM x balneum* (LLDB-18197), etc.

[19] When limiting the research in LLDB to the voicing of the voiceless plosives, one can only find 24 examples from Hispania (16 in the Early, 8 in the Late period), 12 examples in Northern Italy (8 in the Early, 4 in the Late period), 16 examples in Central-Southern Italy (8 in the Early, 8 in the Late period), 7 examples in Dalmatia (4 in the Early, 3 in the Late period), and so on. Some examples are: *PAGE x pace* (LLDB-9393), *IMVDAVIT x immutavit* (LLDB-32290), *EO x ego* (LLDB-72642) and *CINEVS x cinaedus* (LLDB-87891).

ing the weakening of intervocalic B into V are, in fact, very common in epigraphy,[20] but these should be rather ascribed to the "general crisis of the labials", i.e. to the above-mentioned cases of B/V confusions.[21] Examples showing the effective voicing of the intervocalic voiceless plosives are, on the other hand, very scarce, which leads one to suppose that lenition belongs to an earlier proto-Romance linguistic phase, i.e. a phase which is nonetheless later than those considered in the present study (up to the 7th century AD), whose exact chronology, however, cannot be determined exactly here.[22]

For the purposes of the present research, only the provinces of the Roman Empire where Latin has given rise to some of the modern Romance languages have been considered, namely Hispania,[23] Italy, Dalmatia, Gaul[24] and Dacia. As for Italy, the Northern part[25] has been kept separated from the Central-Southern part.[26] The so-called La Spezia-Rimini isogloss indeed divides Romance varieties, which generally show both degemination and the voicing of the Latin intervocalic voiceless plosives – as found at the North and West of this line – and other varieties, which do not exhibit these phenomena – as found at the South and East of the same line.[27] Rome has been treated separately in this study because of its peculiar role as a capital city and the huge amount of data available

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[20] E.g. *PATRI | VENE MERENTI x patri bene merenti* (LLDB-42058), *HA|VITE x habete* (LLDB-11901), etc.

[21] Cf. Herman 1998, 12: "L'affaiblissement des intervocaliques (…) n'est panroman et relativement précoce que dans le cas de *b*, qui partage partout le sort de *v*. (…) Ce flottement se rattache cependant à la «crise» générale des labiales (...) qui se manifeste déjà à Pompéi". For the change of intervocalic B to V and the fall of intervocalic V as processes denoting lenition, see Väänänen 2006 (1981[3]), 57 and Zamboni 1967–1968, 105–107. This phenomenon is also recognised in the Romance languages, cf. e.g. Alsina 2016, 365.

[22] Cf. Herman 2000, 46: "As regards the other unvoiced intervocalic plosive consonants (…) the earliest definite examples are from the sixth century". See also Väänänen 2006 (1981[3]), 57, who indicates instead the 5th century AD. The late spread of this phenomenon in epigraphy is also mentioned in Loporcaro 2011, 153–154.

[23] *Lusitania*, *Baetica* and *Hispania Citerior*.

[24] *Gallia Narbonensis, Lugudunensis*, *Aquitania* and *Belgica*.

[25] *Liguria*, *Transpadana*, *Aemilia* and *Venetia et Histria*.

[26] *Bruttium et Lucania*, *Apulia et Calabria*, *Latium et Campania*, *Samnium*, *Etruria*, *Umbria*, *Picenum*, *Sicilia* and *Sardinia*.

[27] Cf. Harris 1997, 18. Consider, e.g., Venetian *gato* and *amigo* vs Umbrian *gattu* and *amicu*. For the treatment of the Latin intervocalic consonants in Italian, cf. D'Ovidio – Meyer Lübke 1906, 106–109, where forms bearing lenition are explained either as loanwords from Northern Italy or Southern France (e.g. *lido*, *riva*, *spada*, *scudo*, *podere* or anc. It. *tregento*, *magello*, etc.) or as the product of dissimilation (e.g. *strada*, *contado*, *parentado*); in other cases, Italian preserved the voiced consonants of Latin (e.g. *grado*, *sede*, *piede*). Intervocalic voicing has also affected Florentine, though very marginally, cf. Loporcaro – Paciaroni 2016, 241 and especially Ledgeway 2016, 211–212, who quotes terms belonging to the common language, such as *madre* or *padre*, or

in its corpus. In contrast, there is not sufficient data from the province of Dacia, especially for the Late period, so this territory cannot be evaluated for final conclusions, despite its importance within the linguistic domain of the Romania.

Province	Degemination		Trend	Duplication		Trend	Loss of final consonants		Trend	B/V confusion		Trend	100%		
Period	Early	Late	E > L	Early	Late	E > L	Early	Late	E > L	Early	Late	E > L	Early	Late	Total
Hispania	43% (224)	17% (48)	↓	10% (54)	5% (13)	↓	44% (233)	61% (172)	↑	3% (14)	17% (48)	↑	525	281	806
Northern Italy	21% (23)	16% (49)	↓	26% (29)	5% (14)	↓	44% (49)	56% (175)	↑	9% (10)	23% (72)	↑	111	310	421
Central-Southern Italy	17% (102)	11% (37)	↓	6% (37)	2% (7)	↓	17% (106)	30% (104)	↑	60% (372)	57% (199)	↓	617	347	964
Rome	13% (229)	12% (146)	↓	5% (83)	2% (29)	↓	21% (349)	29% (371)	↑	61% (1.020)	57% (720)	↓	1.681	1.266	2.947
Dalmatia	41% (159)	21% (31)	↓	9% (36)	4% (5)	↓	27% (105)	40% (58)	↑	23% (88)	35% (51)	↑	388	145	533
Gaul	38% (137)	29% (37)	↓	10% (36)	7% (9)	↓	42% (151)	45% (56)	↑	10% (34)	19% (24)	↑	358	126	484
Dacia	46% (58)	60% (6)	*	8% (10)	0% (0)	*	41% (52)	20% (2)	*	5% (6)	20% (2)	*	126	10*	136

*Unsufficient amount of data

As one can see in the above Table, in every one of the investigated provinces, degemination represents a phenomenon which decreases over time. In Hispania, it drops from 43% to 17%; in Northern Italy from 21% to 16%; in Central-Southern Italy from 17% to 11%; in Rome from 13% to 12%; in Dalmatia from 41% to 21%; and in Gaul from 38% to 29%. A similar consideration can be made for duplication, which decreases from 10% to 5% in Hispania; from 26% to 5% in Northern Italy; from 6% to 2% in Central-Southern Italy; from 5% to 2% in Rome; from 9% to 4% in Dalmatia; and from 10% to 7% in Gaul.[28] This trend is diametrically opposed to the loss of final consonants, which instead increases in all the selected territories: from 44% to 61% in Hispania; from 44% to 56% in Northern Italy; from 17% to 30% in Central-Southern Italy; from 21% to 29% in Rome; from 27% to 40% in Dalmatia; and from 42% to 45% in Gaul.

As for the B/V confusion, it is interesting to observe that this phenomenon generally undergoes a noticeable increase – from 3% to 17% in Hispania, from 9% to 23% in Northern Italy, from 23% to 35% in Dalmatia and from 10% to 19% in Gaul – with the exception of Central-Southern Italy and Rome, where it decreases from 60% to 57% and from 61% to 57% respectively, a fact which might be connected to the strong influence of the Greek language in these areas,[29]

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specific of the Tuscan varieties, such as *medesimo*, which are unlikely to have been borrowed from other dialects.

[28] In general terms, the relatively lower frequency of the duplications in comparison to cases of degeminations might be explained by the fact that duplication was not a real tendency of the language, but rather represented the 'inverted' phenomenon of degemination, i.e. a hypercorrection.

[29] This might be the case of Rome, which hosted a great Greek-speaking community, as well as several of the provinces included in the territory of Central and Southern Italy, which had been colonised by the Greeks.

which, especially in the Early period, might have favored the interchange of these phonemes.[30]

The results summarized in the Table above seem to indicate that there was some kind of uncertainty in the pronunciation of the Latin geminated consonants in the Early Period, which somehow 'stabilized' in the Late Period, when the misspellings pertaining to such a phenomenon indeed are less frequently recorded. One plausible explanation for this situation might be that the Late Latin intensified accent 'reinforced' these phonemes,[31] by means of the higher tension which such an intensive accent implied for the consonants that followed the stressed vowels. Several scholars have indeed observed that Latin geminate consonants tend to occupy the post-tonic position in the words[32] and that they mostly belong to the domain of daily life and the common language (*mamma*, *pappa*, *cattus*, *gallus*, *cuppa*, *hinnit*, *garrit*, etc.), being the product of emphatic pronunciation and expressivity which is typical of popular speech.[33] Adrados went further by suggesting that Latin geminate consonants were indeed mere "accentual graphemes" ("grafemas acentuales") which indicated the tension, not the duration, of the consonants.[34] He also observed that misspellings of duplications tend to occur in the post-tonic position, as an effect of the Vulgar Latin intensive accent, quoting some examples from epigraphy, such as *DOMITTIA* for *Domitia*, *INCISSO* for *inciso* or *CAMMARA* for *camara*.[35]

Nevertheless, as previously observed, the data collected in the Table indicate that the frequency of duplication, which was expected to increase following the intensification of the stress, decreases diachronically in all investigated provinces. The decrease of both degemination and duplication might be, thus, rather connected to the numerous changes which affected the vocalic system of Latin over time, which certainly gained ground after the territorial division – and subsequent further phases of 'regionalization' – of the Empire, that occurred at the end of the 3rd century AD under Diocletian.

An important role in this respect could well have been played by the collapse of the system of vocalic quantity, which was manifest by the end of the above-

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[30] On the role of Greek with respect to the B/V confusion, cf. Adamik 2017.

[31] On the quality of stress in Latin, cf. Herman 2000, 35–38.

[32] Cf. Giannini – Marotta 1989, 231 and 252.

[33] Cf. Väänänen 2006 (1981³), 59–60, Adrados 1984, 126 and Sen 2015, 55–56. See also Benedetti – Marotta 2014, 38–39, who add: "D'altro canto, sarà opportuno ricordare che nelle alternanze del tipo *bāca*/*băcca*, *cūpa*/*cŭppa* le forme con *CC* appartengono al registro basso della lingua latina".

[34] The question of the prosodic status of the geminated consonants, as well as their mono- or bi-syllabic pronunciation, has been the object of a series of scholarly debates, cf. Giannini – Marotta 1989, 24–25 and especially Veiga 1997.

[35] Cf. Adrados 1984, 127.

mentioned century.[36] This was not only because, after the shortening of Classical Latin's long vowels, a sort of 'compensatory lengthening' or 'secondary lengthening' of the consonants may have taken place, but also because the need for preserving phonological oppositions within the linguistic system might have led to avoid degeminations.[37] In fact, consonantal gemination did not have a high functional load in Classical Latin,[38] but seems to have acquired it in Late Latin, as stated by Loporcaro: "Contrary to C[ontrastive] V[owel] L[ength] consonant gemination was progressively to gain significance in the phonological system and was massively fed by sound change in Late Latin, before being eventually lost in most Romance varieties during the Middle Ages".[39]

To this regard, Classical Latin forms which presented a sequence of long consonant + long vowel (such as *annōs* or *annīs*) might be felt as particularly 'disturbing' for the speakers, who tended to simplify one of these two phonemes.[40] When this long vowel was also accentuated – as in the case of forms such as *annó:rum*, whose gemination spread by analogy to the nominative *annus* – the so-called *lex Mamilla* was automatically applied by the users.[41]

Beside the collapse of the vocalic quantity, one should suppose that all the complex series of vocalic mergers which occurred in Vulgar Latin and gained

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[36] Cf. Väänänen 2006 (1981³), 31; Herman 1998, 21; Loporcaro 2015, 58. In any case, the loss of the opposition of vocalic quantity and the intensification of the stress represent two parallel processes, cf. Väänänen 2006 (1981³), 32 and Herman 2000, 36–37. On the debate around the chronology of the demise of Classical Latin vowel length, cf. Loporcaro 2015, 18–19.

[37] Consider, for instance, a case such as *ānus ~ annus*, two terms which belonged to the same declension and might be confused with each other, if both the degemination and the neutralization of the vocalic quantity had affected these words.

[38] Cf. Loporcaro 2015, 2.

[39] Loporcaro 2015, 3.

[40] After a long vowel or a diphthong, the degemination of the consonant was a regular process in Latin, cf. the following chapter of this paper. See also Väänänen 2006 (1981³), 59. Within the context of this process of redistribution of the quantitative lengths, it also cannot be excluded that a relevant role was played by sociolinguistic 'constrictions', as far as the vocalic lengthening had a positive characterization in Roman society, whereas the consonantal lengthening had a negative one, cf. Vineis 1984, 46, Giannini – Marotta 1989, 260 and Benedetti – Marotta 2014, 35. See also supra, n. 33.

[41] Cf. Väänänen 2006 (1981³), 59: "«La loi de mamilla». – Une géminée suivie immédiatement d'une syllabe accentuée longue est généralement réduite en simple: *canna – canālis*, *currus – curūlis*, *mamma – mamīlla*. Toutefois, cette tendance a souvent été neutralisée par l'analogie (…)". Forms such as *annorum* or *annis / annos*, which appear in the framework of biometric formulae frequently used in epigraphy, are indeed very commonly attested in degeminated spellings in many of the investigated provinces. The term *annus* affected by degemination (in anyone of its declined forms) represents up to the 40% of the entire corpus of degeminated spellings in *Hispania* (109/272 cases); the 33% in *Dalmatia* (62/190 cases); the 28% in Northern Italy (20/72 cases); the 14% in *Gallia* (24/174 cases) and so on.

ground with the passing of time would have led to an internal 'crisis' of the linguistic system, which was forced to find some way to limit incomprehension. Reinforcing the role of the geminate consonants was plausibly one such way, at least insofar as the system itself required this mechanism. In later times, once lenition and other linguistic processes which were able to guarantee the functioning of the system – such as the definitive replacement of vocalic quantity with vocalic quality – were developed sufficiently,[42] the tendency towards degemination re-emerged in the Romance languages, probably because the phonological role of the long consonants had become 'useless' in many of these varieties.[43]

Degemination and Duplication as Sociolinguistic Indicators

Degeminated and duplicated spellings attested in epigraphy might correspond in some cases to archaizing forms, which may reflect the use of a technical language – such as in the case of juridical texts – or the writer's aim to show a higher level of literacy – such as in the case of private inscriptions. Archaisms indeed represent a well-known phenomenon in epigraphy, a domain in which they were especially deployed until the end of the 3rd century AD, when their incidence starts inexorably to decrease.[44]

Over the course of the history of the Latin language, there were, in fact, important events which affected the domain of the geminates, resulting in the fossilization of some degeminated / geminated spellings as archaizing forms.

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[42] Cf. Väänänen 2006 (1981³), 58: "De puis, en français, la géminée empêche les diphtongaisons $\bar{e} > ei$, oi, $\bar{o} > ou$, $a > ae > e$ dans la syllabe précédente; la simplification de la géminée est donc postérieure à ces changements: *chat < cattu*, *an < annu*, *-et < -ittu*, en face de *pré < pratu*, *plain < planu*, *coi < qu(i)êtu*".

[43] Cf. Lausberg 1976, 407: "Las consonantes dobles ocupan los puestos que han quedado libres por el proceso de debilitamiento de las consonantes sencillas intervocálicas y su articulación cuantitativa ha venido a resultar superflua". The phonological role of consonantal gemination in modern Central and Southern Italian varieties, as opposed to the Northern Italian dialects, is stressed by Loporcaro 2011, 151: "Central and southern Italo-Romance, south of the Apennines, is the only Romance area that remained unaffected either by lenition or degemination (…). Preservation of gemination prevented the phonologization of vowel quantity which is observed in northern Romance". See also *ibid.*, 136–137 and above all *id.* 2015, which specifically deals with the compensatory lengthening of vowels followed to the process of consonantal degemination in the variety of northern Romance.

[44] On this topic, cf. Tantimonaco 2019.

The central event was the adoption, at a pure graphemic level, of geminated spellings in order to register the long consonants in the written form.[45] A historical tradition endorsed by Festus indeed ascribes the 'invention' of the Latin geminates to Ennius,[46] who was brought to Rome in 204 BC.[47] In light of this, degeminated forms might be interpreted as spellings emulating the most ancient texts, as prior to Ennius' consonantal 'reform'. The epigraphic evidence at hand indeed seems to confirm at least to some extent the historical development of Latin gemination as described by Festus. The earliest geminate consonants found in inscriptions in fact date to several years before Ennius' arrival in Rome and indeed before the very beginning of his poetic career, but these constitute quite a scarce number of examples, all of which are controverted.[48] It is at the beginning

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[45] It seems surprising that different proposals which were made throughout the history of the Latin language for noticing the Latin long vowels did not succeed instead, cf. Moralejo 2018 (1992), 42. See also Loporcaro 2015, 3–4. The question of the prosodic status of Latin geminated consonants has been already mentioned in this paper, cf. *supra*, n. 34.

[46] See Fest. p. 372, 22–36 and p. 374 1–11: *'Solitaurilia': hostiarum trium diversi generis immolationem significant, tauri, arietis, verris; (...) quia 'sollum' Osce 'totum' et 'solidum' significat. (...) Quod si a 'sollo' et 'tauris' earum hostiarum ductum est nomen antiquae consuetudinis, per unum 'l' enuntiari non est mirum, quia nulla tunc geminabatur littera in scribendo: quam consuetudinem Ennius mutavisse fertur, utpote Graecus Graeco more usus, quod illi aeque scribentes ac legentes duplicabant mutas, semi<vocales...>.* Modern scholars have hotly debated the term *solitaurilia*, and the very Oscan origins of the first part of this compound have been questioned (cf. Anelli 2004, 26–27 and 29–30). Scholz (1973) suggests that *solitaurilia* was a compound of Latin *solus*, "alone", and considers that this term only referred to a specific part of the *suovitaurilia*, which included no more than the offer of a bull. The celebration of this ceremony might have ended in 80/70 BC and, as a consequence of this, the term *solitaurilia* might have become obsolete, originating in a confusion with the similar word *suovitaurilia*, and animating the etymological debate among the ancient grammarians, as is also attested by QVINT. *inst.* 1, 5, 67. Thus, *solitaurilia* would represent a clear case of archaism connected to the dismissed of this word's referent from the Roman culture. See also Fest. p. 484, ll. 8–9: *Torum, ut significet torridum, aridum, per unum quidem 'r' antiqua consuetudine scribitur; sed quasi per duo 'r' scribatur, pronuntiari oportet. Nam antiqui nec mutas, nec semivocales litteras geminabant, ut fit in Ennio, Arrio, Annio.*

[47] The poet Ennius lived between 239 and 169 BC, cf. Buchwald – Hohlweg – Prinz 1963, 143. It has been suggested that Ennius was led to the 'invention' of the Latin geminated consonants by metrical needs (cf. Bernardi Perini 1983, 147–152), an idea which might be supported by the fact that he was also the first author who introduced the Greek hexameter into Latin poetry (cf. Buchwald – Hohlweg – Prinz 1963, 143). It seems, however, necessary to mention the problem concerning the reference to another Ennius, a grammarian, which can be found in SVET. *gramm.* 1, cf. Bernardi Perini 1983, 149.

[48] The most ancient testimony of consonantal gemination might be the milestone from Sicily *ILLRP* 1277, which mentions the consul *Caius Aurelius Cotta*, whose name is written in the Greek-influenced form *Cottas*, with *-s* ending (cf. Moralejo 1981–1982, 587 n. 74). However, the chronology of this piece, which some scholars have estimated around the middle of the 3rd century BC (cf. e.g. Tribulato 2012, 296 and 302), cannot be safely established. Among the earliest

of the 2nd century BC when the custom of writing long consonants seems to have become more widespread in Latin epigraphy, even though the choice between geminated and simple spellings was not completely consistent yet, not even within the same text.[49] Only at the beginning of the 1st century BC is it possible to observe the stabilization of this phenomenon in epigraphy,[50] which agrees with Quintilian's statement that a form such as *iusi* for *iussi* was still used in Latin until shortly before Cicero's times.[51]

Another event was the evolution of the Classical Latin syllabic system according to a balanced redistribution of the vocalic and consonantal durations, denoting a framework in which geminated consonants following a long vowel or a diphthong generally ended up acquiring an archaizing nuance.[52] Some lines before the same above-cited passage, Quintilian indeed refers to some traditional forms such as *caussae*, *cāssus* or *dīvīssiōnes*, which, he explains, were still deployed by Cicero and Vergil – as well as also probably by cultivated speakers of their age[53] – but were instead no longer accepted even in his times.[54] Thus, under

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examples of consonantal gemination, there are also the spellings *Appios* and *Hinnad*, which appear on two inscriptions from Rome, dated to the years 212 and 211 BC respectively (*ILS* 339 and 340), but these are unfortunately lost.

[49] Cf. Benedetti – Marotta 2014, 28. For instance, the so-called 'Bronze of *Lascuta*' of the year 189 BC (*CIL* II 5041 = *CIL* I² 614) shows an evident oscillation between geminated and degeminated spellings; in contrast, in the text of the famous *senatusconsultum de Bacchanalibus* of the year 186 BC (*CIL* X 104 = *CIL* I² 581), the double consonants are completely neglected, following a "rückständige Amtsortographie", according to Leumann (1977, 14).

[50] Cf. Leumann 1977, 14. Consonantal gemination was also occasionally noticed by means of a diacritical sign generally called *sicilicus*, which was engraved on the top of a consonant, cf. Leumann 1977, 15, who quotes the following examples: *CIL* VI 21736, V 1361 and X 3743. On this topic, see above all Oliver 1966, who provides an interesting discussion on shape, chronology and denomination of this sign.

[51] QVINT. *inst.* 1, 7, 20–21: *Quid quod Ciceronis temporibus paulumque infra, fere quotiens S littera media vocalium longarum vel subiecta longis esset, geminabatur, ut 'caussae, cassus, divissiones'? Quomodo et ipsum et Vergilium quoque scripsisse manus eorum docent. Atqui paulum superiores etiam illud, quod nos gemina dicimus 'iussi', una dixerunt.*

[52] On this topic, see Giannini – Marotta 1989, 27–32, 250–253, 263–265, 269–270 and 279–281; see also Weinrich 1958, 23–24, Väänänen 2006 (1981³), 59 and Meiser 1998, 125. According to Weinrich's analysis, the chronology of this phenomenon depended on the type of the consonants involved: it gradually took place throughout the centuries from a relatively early epoch (occlusive consonants) through the early imperial age (sibilants) until the 3rd century AD (liquids). See also Sen 2015, 52.

[53] Cf. Giannini – Marotta 1989, 268.

[54] Cf. *supra*, n. 51. Cf. Giannini – Marotta 1989, 264; Loporcaro 2015, 11–12. It is also to mention the so-called "*littera*-rule" (*lītera* > *littera*), on which see recently Sen 2015, 42–78, who pays special attention to the synchronic/diachronic character of geminated/degeminated variants. The pre-change form *LEITERAS x litteras* is attested in the *Lex Repetundarum* dated to 123–122 BC (*CIL* I² 583), cf. Sen 2015, 43.

certain circumstances, duplicated spellings might also correspond to archaizing forms of a purely stylistic nature. A good example of this phenomenon would be the oscillation of some geminated / degeminated variants of personal names, which seem to have a sociolinguistic value.[55]

On the other hand, there is always the possibility that degeminations and duplications actually correspond to technical misspellings caused by the writer's occasional lapses of attention or errors.[56] Both archaisms and technical mistakes are, however, much more difficult for us to detect, and the boundaries between these and the orthographic misspellings are mostly hard for us to set, because in most cases we do not know the purposes of the writers who composed the inscriptions, nor we do know the material conditions in which the writers were compelled to perform, nor do we have exact information about their respective literacy levels.

Conclusion

In conclusion, degeminations attested in the Latin inscriptions of the Imperial age seem to reveal a real phonetic trend and this same corpus might be profitably used for further dialectal surveys. Nevertheless, in light of the discontinuity of this phenomenon as observed from a diachronic perspective, the degemination attested in the Latin inscriptions up to the 7th century AD does not seem to represent an anticipation of degemination as it emerged in the major Romance languages, which is supposed to have developed in much later times. The mechanisms which led to a massive process of degemination in both the Early Latin period and in the Romance era might be, however, of a similar nature.

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[55] Väänänen (2006 (1981³), 59) indeed observes that the form *Paullus* is limited to the inscriptions of the senators of Rome, whilst the degeminated variant, *Paulus*, is the form mainly used by the common people and in Christian epitaphs. Other similar cases of alternations concerning the domain of the onomastics are attested in epigraphy, such as *Atīlius* ~ *Attīlius*, *Mesāla* ~ *Messalla* and so on. On the peculiar status of names within the linguistic field, particularly with reference to the phenomenon of consonantal degemination, cf. Kiss 1972, 38, n. 36 and 75.

[56] As Kiss correctly pointed out, the omission of one consonant in the context of geminated forms indeed represents a mistake which is very easy to make, cf. *supra*, n. 2.

Abbreviations

CIL = *Corpus Inscriptionum Latinarum*. Berlin, 1863–
ILLRP = Degrassi, A.: *Inscriptiones Latinae Liberae Rei Publicae*. Firenze, 1965².
ILS = Dessau, H.: *Inscriptiones Latinae Selectae*. Berlin, 1892–1916.

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