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## A STUDY ON THE WEAKENING OF THE WORD FINAL *–S* COMPARED TO *–M* IN THE EPIGRAPHIC CORPUS\*

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*Abstract:* The position of the word final *–s*, after a weakening in archaic Latin, seems to be fixed in the spoken language in the classical period. Then, it partially disappeared in the Romance languages: in modern languages, it is conserved only north and west of the Massa–Senigallia line, while we cannot find it neither in the eastern regions nor in South Italy. Based on this fact, linguists generally claim that the weakening of the final *–s* started only after the intensive dialectal diversification of Latin, simultaneously with the evolution of the Romance languages. However, the data of the *Computerized Historical Linguistic Database of Latin Inscriptions of the Imperial Age (LLDB)*<sup>1</sup> do not verify this generally accepted opinion. We can find almost as many examples of the lack of word final *–s* as that of *–m* also from the earlier centuries of the Imperial age. The aim of this paper is to explore the reasons behind the inconsistencies between the scholarly consensus and the epigraphical data.

*Keywords:* Latin epigraphy, dialectology, Vulgar Latin, word final consonants, quantitative analysis

The position of the Indo-European word final *–m* and *–s* first became unstable in the early Latin language, at the same time as the word final *–d* after long vowels disappeared once and for all. Then, after their restoration in the classical period, both consonants seem to be weakening again in the Late Latin language. Although the histories of the word final *–s* and *–m* are similar in many respects, they cannot be seen as parallel.<sup>2</sup> The word final *–s* was less weakened compared to the *–m* in the early Latin, and its restoration, contrary to that of the *–m*, was absolutely (or almost absolutely) successful in writing and probably also in pronunciation in the classical period, according to most researchers.<sup>3</sup> The restoration of

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<sup>1</sup> <http://lldb.elte.hu/en/database/>

<sup>2</sup> For a short summary of the topic, see e. g.: Adamik 2009, 176–180, 214–217. and Herman 2000, 39–41.

<sup>3</sup> See for the scientific opinions on the question below.

the *-s* is attested by the inscriptions of the late Republic, by the changes in metrical rules, and also by a sentence of Cicero's *Orator* (which is cited by all studies on the topic): Cic: Orat. 161: *Quin etiam, quod iam subrusticum videtur, olim autem politius, eorum verborum, quorum eaedem erant postremae duae litterae, quae sunt in optimus, postremam litteram detrahebant, nisi vocalis insequeretur. Ita non erat ea offensio in versibus quam nunc fugiunt poetae novi. Sic enim loquebamur: „qui est omnibu' princeps,” non „omnibus princeps,” et „vita illa dignu' locoque,” non „dignus.”*<sup>4</sup>

In the inscriptions created after the classical period (that is after the end of the second century AD), we can find many examples of the absence of the word final *-m*, and evidences of the omission of the word final *-s* are also present in the epigraphic corpus, but in a definitely lower amount.<sup>5</sup> Not only inscriptions, but also the Romance languages attest the difference between the development of these two consonants. The word final *-m* disappeared in all of these languages, whereas the dialects east and south of the Massa–Senigallia line retained the *-s* in final position.

How complete was the restoration of the word final *-s* in the classical ages and which social classes were touched by this feature of linguistic normalisation? Was there any continuity between the instability of the word final *-s* in the early Latin language and its weakening several centuries later? When did the weakening start in Vulgar Latin? Is there any connection between its development in the imperial age and the dialectological distribution of the Romance languages? These are the obscure aspects of the history of the word final *-s*, which were studied by many researchers in the last hundred years.

We can find two different opinions on the history of word final *-s* held by linguists. The majority of them thinks that the restoration of the consonant was completely successful in the classical centuries, and its position remained fixed until the Proto-Romance transition, or at least until the last centuries of Vulgar Latin. There are other researches, however, who claim that the position of the word final *-s* did not become stable in the classical age, and the weakening started earlier than the Proto-Romance transition, even if its intensity was definitely lower than that of the word final *-m*.

The former opinion has its origin in a study of Carola Proskauer published in 1910, in which she examined the dropped word final *-s-es* in inscriptions from

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<sup>4</sup> „Furthermore, though it now seems somewhat countrified, it was once considered refined to drop the last letter, if the word ended in the same two letters as *optimus*, unless a vowel followed. Consequently, this was not thought objectionable in verse; now it is avoided by the ‘new’ poets. So we used to say: *qui est omnibu' princeps*, not *omnibus princeps*, and: *vit(a) illa dignu' locoque*, not *dignus*.” (Translated by Hendrickson and Hubbell Loeb Classical Library 342).

<sup>5</sup> Marrotta–Tamponi 2019, 79–95.

Rome. In her study, Proskauer used an exceedingly strict method: she excluded every evidence of the omission of the word final *-s* in three cases: 1. where the omitted letter should have stood at the end of the line, 2. where the word without the *-s* could be interpreted as an abbreviation (e. g. in the commonly used epigraphic formulas as *anni(s)*, *mense(s)* or *di(s) manibu(s)*), and 3. where the form can be explained as a morphosyntactic mistake.<sup>6</sup> Proskauer's method was later followed by Veikko Väänänen in his famous study on Pompeian inscriptions published in 1966.<sup>7</sup> Both studies concluded that the word final *-s* was stable in the examined period. József Herman held the same opinion, based on the data collected by Väänänen. He claimed that the position of the word final *-s* became unstable only from the 6<sup>th</sup> century AD on.<sup>8</sup> In his monograph on the epigraphic material of the eastern provinces, Giovanbattista Galdi also used the same method as the aforementioned scholars, and agreed with Proskauer: he did not see the traces of the weakening of the word final *-s* in the investigated inscriptions.<sup>9</sup> The theory that the word final *-s* was stable during many centuries and it was weakened only in the "very late" period of the Latin language was maintained by J. N. Adams as well. According to his theory, the weakening of the word final *-s* is at first attested only in Italian manuscripts produced after 800 AD.<sup>10</sup>

On the other side, there were philologists (for example Bengt Löfstedt,<sup>11</sup> Sándor Kiss,<sup>12</sup> or Rex Wallace<sup>13</sup>), who criticized Proskauer's technique for being too strict, and for excluding relevant evidences from the analysis. By their researches, the omission of the word final *-s* does not seem to be only a sporadic phenomenon in the Latin epigraphic corpus. However, Adams claims that all these latter studies lack statistical consistency, and the quantity of their examples is not sufficient.<sup>14</sup>

We should note here that the inaccuracy regarding the chronology, which can be seen many times in the literature, makes the comprehension of the arguments quite difficult. Because of this, the evidences of the late Republican restoration of the *-s*, and those of its hypothetic weakening in the Vulgar Latin cannot be separated from one another. For example, Adams treats the history of the phoneme in the classical and in the Vulgar Latin period together, not separating different chronological stages, suggesting with this that if the successfulness of the restoration of the phoneme in

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<sup>6</sup> Proskauer 1910, 50–140.

<sup>7</sup> Väänänen 1966.

<sup>8</sup> Herman 2000, 41.

<sup>9</sup> Galdi 2004, 74–82.

<sup>10</sup> Adams 2013, 143–147.

<sup>11</sup> Löfstedt 1961.

<sup>12</sup> Kiss 1972.

<sup>13</sup> Wallace 1984, 565–77.

<sup>14</sup> Adams 2013, 143–147.

the classical Latin is proved, it means also the proof of the “very late” weakening.<sup>15</sup> The Vulgar Latin texts that he provides as sources show this confusion as well.<sup>16</sup> 7<sup>17</sup> of the 11 items are from the 1<sup>st</sup>–2<sup>nd</sup> century AD, 2<sup>18</sup> of them are dated to the 2<sup>nd</sup>–4<sup>th</sup> century, we can see only 1<sup>19</sup> from the last decade of the 5<sup>th</sup> century, and 1<sup>20</sup> that was produced between the 6<sup>th</sup> and the 8<sup>th</sup> century. Based on these same sources, Adams also argues against the hypothesis of the weakening of the word final *-s* in Vulgar Latin, although the majority of the texts date back to the Classical Latin period.

We meet with the same problem in other studies as well. Väänänen’s results based on the Pompeian material, although relevant regarding the late Republican sociolinguistic situation, have nothing to do with the later development of Latin. Proskauer also examines a mainly pre-Christian corpus (CIL VI), hence their results cannot be conclusive regarding the language of the Christian centuries. Galdi examines sources not only from the pre-Christian, but also from the Christian period, but he does not treat them separately. As in previous cases, his results are only informative about the earlier centuries, since the majority of the evidence is from the Pannonias, from Dalmatia and from Noricum,<sup>21</sup> and among these regions only Dalmatia (or rather its centre, Salona) had such an extended epigraphic culture in the later period that is worth mentioning.

Another problem is that the period of the Proto-Romance transition is not exactly defined chronologically. For example, Herman argued that the weakening of the word final *-s* started only in the 5<sup>th</sup>–6<sup>th</sup> century, as one of the first signs of the Proto-Romance development. On the other hand, according to the generally accepted periodisation, the Proto-Romance transition starts only in the 7<sup>th</sup> century, when the dialectological diversification, which would result in the birth of the Romance languages, has already evidently begun.<sup>22</sup>

In 2018, Béla Adamik expressed his opinion concerning Proskauer’s and Väänänen’s method in regard to the technical mistakes.<sup>23</sup> First, he criticized the

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<sup>15</sup> Adams 2013, 135. “The case can be made that there is only one conclusion fully justified by the evidence. Final *-s* was restored right across the social spectrum and in all areas by the early Empire, and it was maintained for centuries. The loss that shows up in Italian and some other Romance languages must have occurred very late, and was not a direct continuation of the situation obtaining in the archaic period.”

<sup>16</sup> Adams 2013, 135–140.

<sup>17</sup> Letters of Claudius Terentianus, Wadi Fawakhir ostraca, Vindolanda tablets, Charlisle tablets, Vindonissa tablets, graffiti of La Graufesenque, documents of C. Novius Eunus

<sup>18</sup> Bu Njem ostraca, Bath curse tablets

<sup>19</sup> tablettes Albertini

<sup>20</sup> Visigothic slate tablets

<sup>21</sup> Among the 125 examples, there are 39 from the two Pannonias, 21 from Dalmatia and 18 from Noricum.

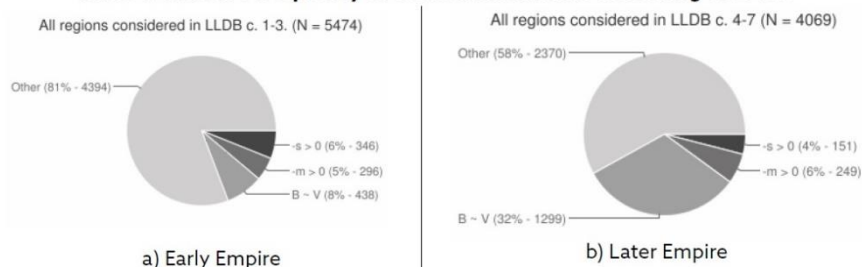
<sup>22</sup> see e. g. Adamik 2009, 26–27.

<sup>23</sup> Adamik 2018.

theory that at the end of the lines, the omission of the word final *-s* is not a grammatical, but a technical mistake caused by the lack of space. Adamik collected many possible and popular techniques that were in other cases used by stonecutters in case of lack of space (as *ligaturae*, decreasing size of letters, etc) to indicate all the phonemes. In his opinion, the exclusion of the examples found at the end of the lines results in a loss of data, which distorts the statistical researches.<sup>24</sup> To that we have to add that Proskauer's attitude to the potential abbreviations seems to be too rigid as well, which rigidity also has the serious risk of losing data. She excluded almost all of the often used formulas from her research (e.g. *annos*, *menses*, *dis manibus*), because in her opinion, the omission of the *-s* in the formulaic expressions could be the result of abbreviating. However, by omitting one single letter, a stonecutter could not save very much space, therefore we might say it would not have been worth him doing so. All the aforementioned expressions had their shortened forms (*ann(is) / a(nnis)*, *mens(es) / m(enses)*, *d(is) m(anibus)*, etc.) which could be used for completing the role of an abbreviation.

As many others (for example Väänänen), Adamik also focused on the proportion of the evidences of the omitted word final *-s*-es and *-m*-s in the epigraphic corpus. His results were highly different from the majority of the earlier published studies, as he found that the two consonants tended to be dropped at the end of the word roughly in the same proportion. Moreover, according to his diagram, in the earlier period (that is from the 1<sup>st</sup> to the 3<sup>rd</sup> century AD), the proportion of the examples attesting the omission of the word final *-s* is slightly higher.<sup>25</sup>

**Table 1: Relative frequency of consonantal faults according to LLDB**



<sup>24</sup> Adamik 2018, 12. (note 14).

<sup>25</sup> Adamik 2018, 9. "(...) as for the omission of word final *-m*, this assumption is hardly supported by the findings of our database, since the rates of both omissions are similar: 9 on average in the early period the *-s* > 0 with 6% only slightly exceeds the 5% rate of *-m* > 0 (see Table 1, chart a), and in the later period the *-m* > 0 with 6% only slightly exceeds the 4% rate of *-s* > 0 (see Table 1, chart b). In short, if the rates of omissions of final consonants *-s* and *-m* are similar, the phonetic explanation considered evident as for the loss of final *-m* cannot be excluded automatically as for the loss of final *-s* either."

Adamik assumes that the surprising difference is due to the methodological mistakes of Väänänen and his followers. These are: first, Väänänen's overly critical stance towards mistakes found at the end of the line, and second, the noticeable inconsistency in his attitude towards the data which can be interpreted also on a morphosyntactic level (e. g. *sorori* instead of *sororis*, where the omission of the *-s* can be explained also as a case confusion: a dative stands in place of a genitive). Adamik observes that the examples as the ones mentioned above (where there is a dropped *-s*) were always excluded from Väänänen's research, but the majority of his data of the word final *-m* is just as much ambiguous in this regard (i.e. can be interpreted on a morphosyntactic level). He found many (not excluded!) examples like *ad porta* instead of *ad portam*, where the mistake is not obviously phonological, since an ablative stands in place of an accusative.<sup>26</sup> Adamik has got his different results by a *consistently* exclusive searching method in which he has taken only the undoubtedly phonologic evidences as relevant.

In the present research, we used a new method. Our starting hypothesis was that it is not certain that the two consonants occur at the same rate in the inscriptions, therefore the chance to make a mistake is not as great in the case of the word final *-m* as in the case of the *-s*. Because of this, we think that comparing only the quantity of the mistakes regarding the two consonants may result in statistical distortion. We should rather calibrate our data in proportion to the distribution of occurrences of the two consonants found at word final position. Furthermore, since the epigraphical language is full of formulas, but the exact formulas were very different in each region, it can be assumed that the distribution of the frequency of the two word final consonants shows dialectological variety as well, therefore we need to examine it province by province.

As for the evidences of mistakes, our data are taken from the *LLDB* database. We made two chronological groups, one that contains the mistakes in inscriptions from the 1<sup>st</sup> to the 3<sup>rd</sup> century AD, and another in which we collected the examples from inscriptions dated between the 4<sup>th</sup> and the 7<sup>th</sup> century. The evidences signed as "*fortasse recte*" are excluded from the analysis. We investigated only the provinces that have more than 20 registered evidences in the *LLDB* concerning the omission of the word final *-m* and *-s*.<sup>27</sup>

To calculate the distribution of the occurrences, we used the *Epigraphik-Datenbank Clauss / Slaby (EDCS)*.<sup>28</sup> Since the majority of the inscriptions is not dated in the database, we could not make chronological groups analogous to the ones created in the *LLDB*. Therefore, as no better solution could be found, we

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<sup>26</sup> Adamik 2018, 9. (note 9).

<sup>27</sup> The data in this study were taken from the *LLDB* database on the 7th July, 2019.

<sup>28</sup> [http://db.edcs.eu/epigr/epi.php?s\\_sprache=en](http://db.edcs.eu/epigr/epi.php?s_sprache=en)

dealt with the non-Christian and Christian material separately. It may not cause noticeable statistical distortion, since public Christian culture started to spread only from the 4<sup>th</sup> century, due to the edict of Constantine. To measure the distribution of the frequency of the two consonants, we had to search separately for the non-Christian and Christian corpus of each province, then, lacking a more advanced searching function in the *EDCS*, we exported the results into Microsoft Excel. In this program, it is possible to delete all irrelevant information (publication details, names of the places where the inscriptions are from, material of the inscription, etc.), which could cause statistical problems in case they are ending in the searched letter. As a second step, we added a “space” to the end of all inscriptions so that we would not exclude from the analysis the *-s-es* and *-m-s* that stand at the end of an inscription. Then, we transported the texts of the found inscriptions into Microsoft Word to search for items, and not for cells; we used the “Find on page” function of the computer (Ctrl + F), and searched for *m + “space”* and *s + “space”*. Thus, we got the number of occurrences of each consonants without any faultily added data.<sup>29</sup>

As a next step, we divided the number of the present *-s-es* by the number of the *-m-s*. The result shows, how many times greater the chance is that a stonecutter omits an *-s* than that he omits an *-m* in word final position. Then, at last, we multiplied the number of the mistakes regarding the omission of the *-m* by the frequency coefficient. For example, if in a province there are 1000 word final *-s-es*, but only 500 word final *-m-s*, we can say, that there is a twice greater chance of omitting an *-s*, than to omit an *-m*. It means that we have to multiply the number of omitted *-m-s* by 2, and this number would show how many times the word final *-m* would have been omitted if word final *-m* was present in the same number as word final *-s*. If in this province we found 20 evidences of the omission of *-m* and also 20 examples of the omission of *-s*, the calibration of the data changes the result to 40 *-m-s* and 20 *-s-es*. Which means that in our fictive province, the omission of the word final *-m* is twice more usual, than that of the word final *-s*, even if the real data suggests that the instability of the two consonants is present in the same degree.

We must take notice of the fact that with this method, we take into account every occurrences of the word final *-m-s* and *-s-es*, including the ones, whose absence might be interpreted also on a morphosyntactic level. Aiming for an equal comparison, we dealt similarly with the data of the mistakes taken from the *LLDB*. The evidences like *ad porta* instead of *ad portam* or *sorori* in place of *sororis* are also included in our analysis. The method is undoubtedly different from that which the majority of researches in the area apply, but in our opinion

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<sup>29</sup> E. g. ILGR 84. *Maximu[s]*, ILTun 199. *tribunu[s]=Z*, Pl. AE 2009, 1287. *praes(es)*

it is well worth to take a chance on such a new method, since phonological and morphosyntactical changes cannot be neatly separated. Phonological changes always affect the morphosyntax as well, and in cases where a morphological explanation seems more likely the phonological background still cannot be excluded from the possible reasons of the change, and the morphological interpretation always remains only one possibility.

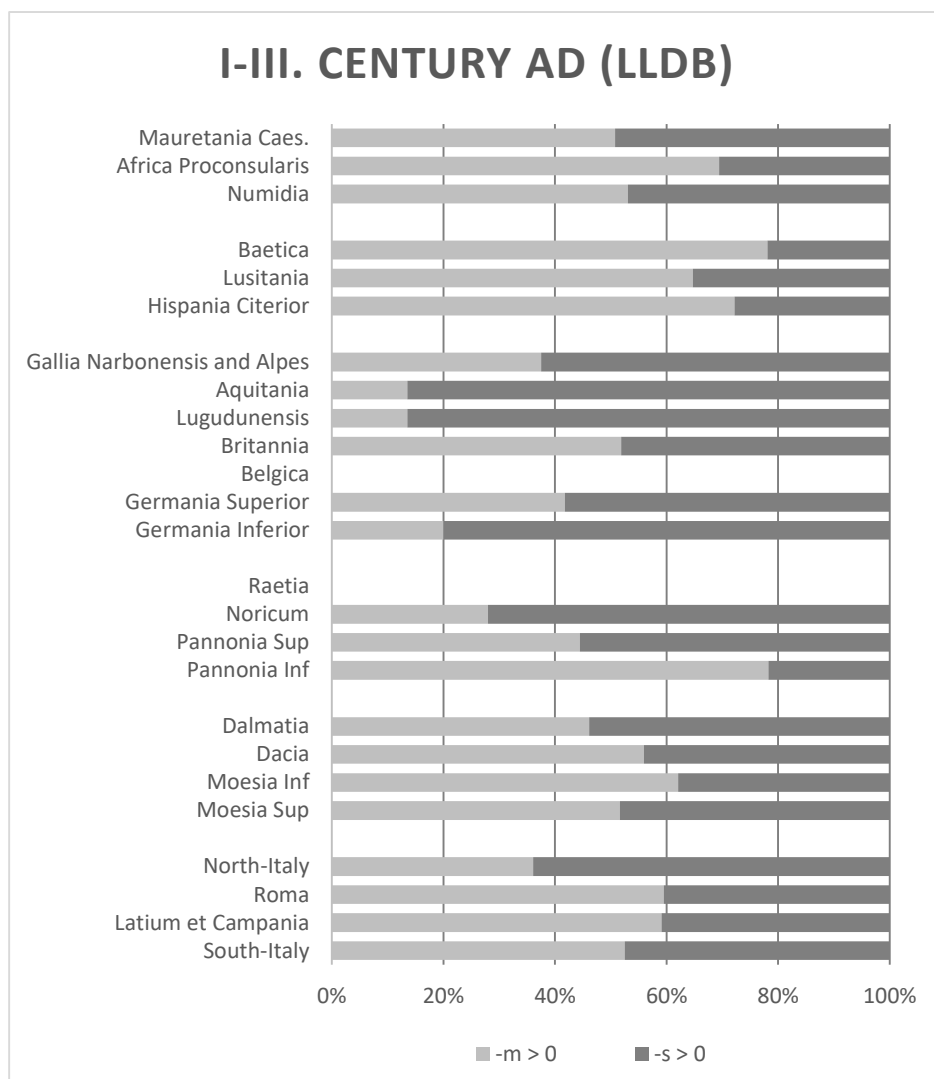


I-III. century A. D.	LLDB <sup>30</sup>				EDCS			calibrated data			
	-m > 0	-s > 0	-m > 0	-s > 0	-m	-s	-s / -m	-m > 0	-s > 0	-m > 0	-s > 0
Mauretania Caesariensis	34	33	51%	49%	1756	8816	4,94	168	33	84%	16%
Africa Proc.	175	77	69%	31%	8 448	42 569	4,95	865	77	92%	8%
Numidia	52	46	53%	47%	3 728	27 513	7,29	379	46	89%	11%
Baetica	57	16	78%	22%	4 199	10 061	2,37	135	16	89%	11%
Lusitania	44	24	65%	35%	1 313	5 968	4,42	194	24	89%	11%
Hispania Cit.	83	32	72%	28%	2 945	12 021	3,98	330	32	91%	9%
Gallia Narb. + Alpes	15	25	37%	63%	1 852	13 600	7,30	109	25	81%	19%
Aquitania	8	51	14%	86%	460	7 028	12,46	100	51	66%	34%
Lugdunensis	8	51	14%	86%	1 204	6 179	6,11	49	51	49%	51%
Britannia	14	13	52%	48%	2 047	7 355	3,24	45	13	78%	22%
Belgica	4	3									
Germania Superior	33	46	42%	58%	1 558	11 999	7,57	250	46	84%	16%
Germania Inferior	7	28	20%	80%	652	5 949	9,07	63	28	69%	31%
Raetia	10	3									
Noricum	7	18	28%	72%	515	4 098	7,89	55	18	75%	25%
Pannonia Sup.	36	45	44%	56%	1 637	6 483	3,90	140	45	76%	24%
Pannonia Inf.	54	15	78%	22%	1 701	3 078	1,76	95	15	86%	14%
Dalmatia	36	42	46%	54%	1 549	6 815	4,33	156	42	79%	21%
Dacia	33	26	56%	44%	1 426	5 577	3,84	127	26	83%	17%
Moesia Inf.	54	33	62%	38%	1 701	4 952	2,84	153	33	82%	18%
Moesia Sup.	16	15	52%	48%	683	2 688	3,87	62	15	80%	20%
North-Italy <sup>31</sup>	22	39	36%	64%	5 145	20 773	4,03	89	39	69%	31%
Roma	207	141	59%	41%	19 735	100 360	5,04	1043	141	88%	12%
Latium et Campania	26	18	59%	41%	7 936	36 311	4,56	119	18	87%	13%
South-Italy <sup>32</sup>	53	48	52%	48%	9 368	32 993	3,51	186	48	79%	21%

<sup>30</sup> Searching question: „code = s > 0” OR „code = elisio -s” OR „code = m > 0” OR „code = elisio -m” OR „alt. code = s > 0” OR „alt. code = elisio -s” OR „alt. code = m > 0” OR „alt. code = elisio -m”) AND „Fortasse recte = no” AND „date = [27 B. C. – 313 A. D.]”

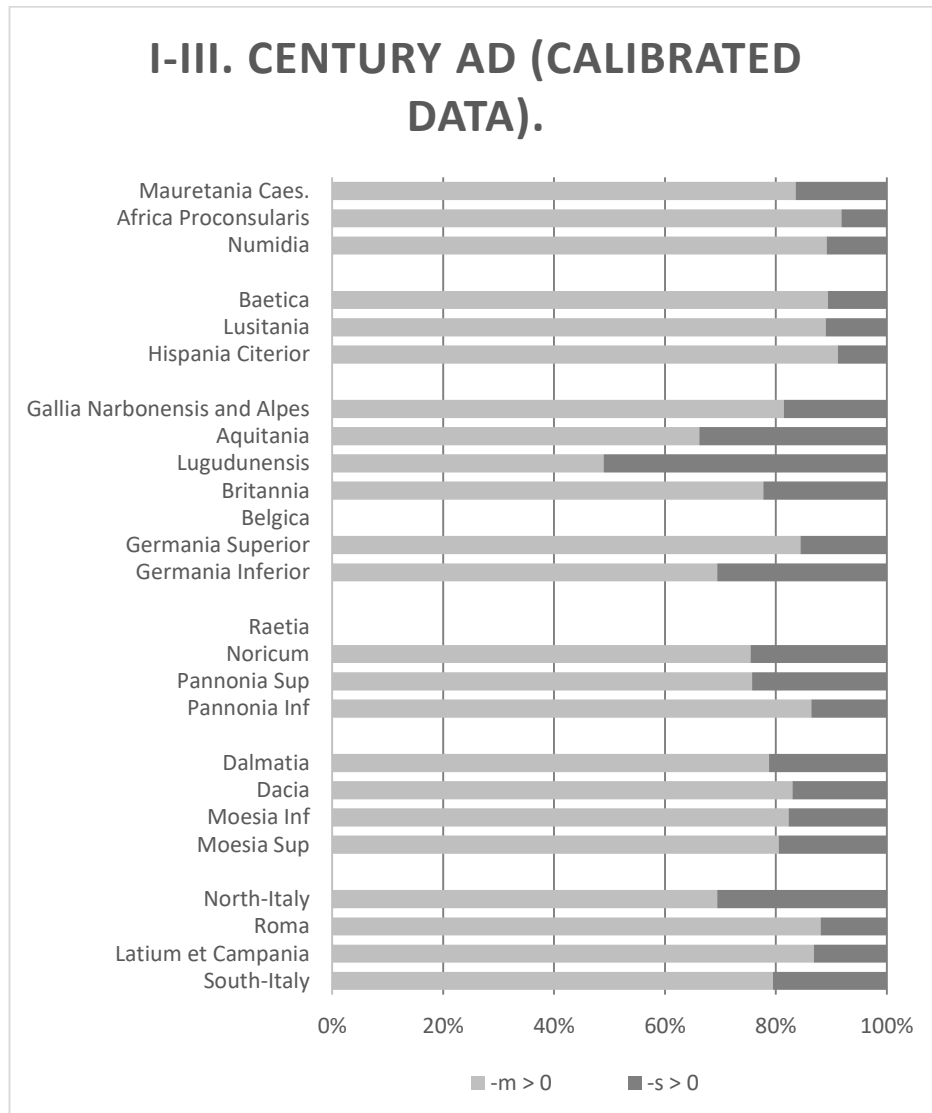
<sup>31</sup> Transpadana, Venetia et Histria, Aemilia, Liguria

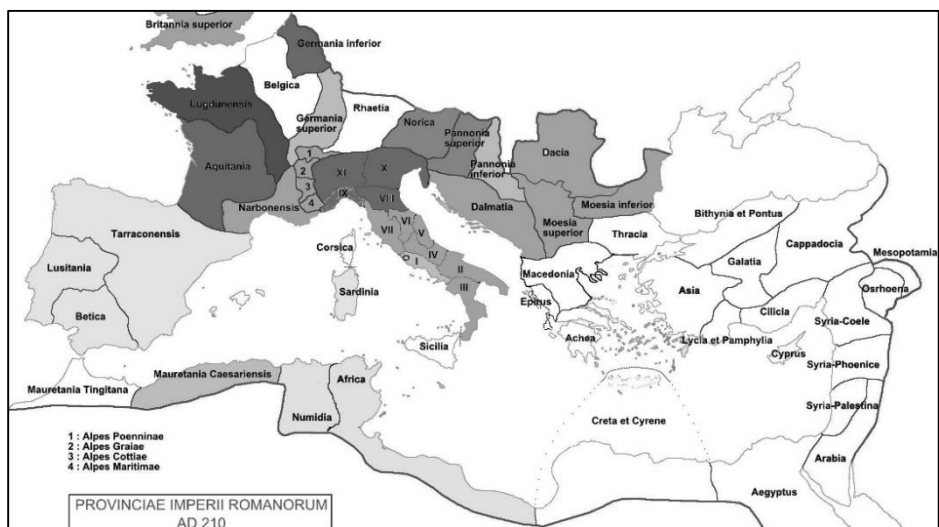
<sup>32</sup> Etruria, Umbria, Picenum, Samnium, Sardinia, Bruttium et Lucania, Apulia et Calabria



If we look at the table and the charts about the earlier centuries, we find the surprising fact that the real distribution of the data taken from the *LLDB* is not really different from Adamik's results, which he got by employing a consistently exclusive method. There is a strong regional variability, nevertheless if we take into account all the provinces (as Adamik did), we find 1088 evidences of omitted *-m-s* and 888 examples of dropped word final *-s-es*, which means that the rates are not exactly the same, but similar. Therefore, it seems that (concerning the

data that can be interpreted also morphosyntactically) consistently inclusive and consistently exclusive research techniques do not lead to contradicting results.





However, if we look at the calibrated data of the earlier period, we can see that the two consonants were not prone to weakening in the same degree. If there were as many occurrences of word final *-m-s* as of word final *-s-es*, we would see a clearly higher proportion of omission of the *-m*. It means that the weakening of the word final *-m* was undoubtedly more intensive than that of the *-s*. Still, we cannot claim that the weakening of the word final *-s* was a non-existent feature: we cannot regard the concerning evidences only as results of technical mistakes, since we can find regional groups where the word final *-s* seems to be weaker or more stable than elsewhere. First good examples are the Iberian Peninsula and the examined African provinces, where the proportion of the mistakes regarding the omission of word final *-s* is only 8–11% (or a little bit higher in Mauretania).

Another group is in the Balkans, where the proportion of the dropped word final *-s-es* is higher, about 17–21%. In South-Italy, we can see a distribution, which is similar to the distribution in the Balkans. We treated Rome and Latium et Campania separately, because of the high quantity of data found in these places. It seems that the restoration of the word final *-s* was successful in the centre of the empire also in the long term: the proportion of the mistakes regarding this consonant was only 12–13% here, similarly to the Iberian and African situation.

It is really difficult to interpret our data from the north-western provinces. We see unrealistically high proportions, which we can hardly explain at this moment. First, we could say that the high proportion of the *instrumenta domestica* in this

region may have caused statistical distortions, because this type of the inscriptions generally contains only a few words (often just the name of the manufacturer in nominative or that of the owner in genitive), and whole sentences are extremely rare in them. Thus, word final *-m-s* occur only in a very low number, which fact radically limits the possibility of their evaluation. However, our calibrating method, which is based on the exact frequency coefficient, probably exclude the possibility of a statistical problem. Based on our data, we cannot exclude the possibility that – contrary to the later history – the word final *-s* was unstable in this region in the early imperial age, most of all in the western part of Western-Europe (Aquitania, Lugdunensis, Germania Inferior). This possibility seems to be acceptable if we look at the bordering provinces: in Pannonia Superior, Noricum and in Italy north of the Massa–Senigallia line,<sup>33</sup> this proportion is still relatively high, between 24 and 30%, which fact, mostly in the case of Northern Italy, also contradicts to later changes in the history of the consonant.

In addition, there is a study that can provide support for our data. Adams attracted our attention<sup>34</sup> to an interesting phenomenon noticed by Marichal, who published the graffiti of La Graufesenque in the corpus that he examined, which included Latin as well as Gaulish texts. He noticed that Latin nouns and Latin or Latinised personal names stand mostly with written word final *-s-es*, while the phoneme is often absent at the end of Gaulish nouns or personal names.<sup>35</sup> If we accept his results (based on the same material) concerning the weakening of the word final *-s* in the Gaulish language of the 1<sup>st</sup> century AD,<sup>36</sup> we can suppose that the instability of the word final *-s* in the Latin of the early imperial period in the region was a Gaulish substrate, which decreased in the later centuries due to the Romanisation of the provinces.

So, we can claim that, if we look at the regional differences among the calibrated proportion of the dropped word final *-s-es* with respect to the omitted word final *-m-s*, we can find dialectological groups also in this early period, which proves that the position of the word final *-s* has already started to weaken. In some cases, this dialectological diversification may already suggest the later tendencies: the word final *-s* was relatively stable in the South-western side of the empire (Iberian Peninsula), and it was a little bit weaker in the Balkans and in Southern Italy. Contrary to this, we cannot see yet the traces of the future changes, or we can find contradictive situations in Northern Italy and in the North-western parts of Europe.

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<sup>33</sup> Within the North-Italian region, the major part of the data was found in Venetia et Histria, where, according to the calibrated data, the proportion of the missing word final *-s-es* is 27%.

<sup>34</sup> Adams 2013, 138–139.

<sup>35</sup> Marichal 1988, 68–70.

<sup>36</sup> Our data regarding Latin words contradicts to the tendencies Marichal observed in that corpus.

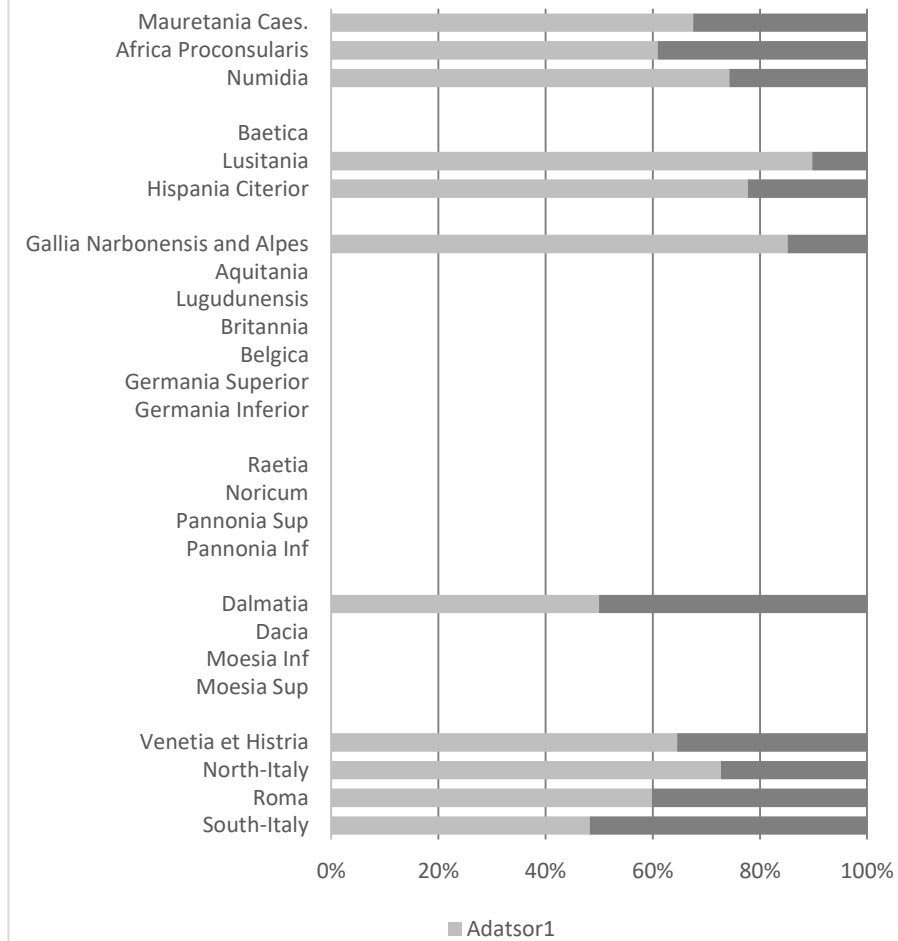
IV–VII. century A. D.	LLDB <sup>37</sup>				EDCS			calibrated data			
	-m > 0	-s > 0	-m > 0	-s > 0	-m	-s	-s / -m	-m > 0	-s > 0	-m > 0	-s > 0
Mauretania Caesariensis	25	12	68%	32%	267	1 493	5,15	129	12	91%	9%
Africa Proc.	109	70	61%	39%	790	6 407	7,24	785	70	92%	8%
Numidia	26	9	74%	26%	136	475	3,04	78	9	90%	10%
Baetica	8	6									
Lusitania	105	12	90%	10%	135	716	3,03	319	12	96%	4%
Hispania Cit.	28	8	78%	22%	541	1 407	2,49	70	8	90%	10%
Gallia Narb.	23	4	85%	15%	453	1 824	3,84	88	4	96%	4%
Aquitania	4	2									
Lugdunensis	6	3									
Britannia	1	3									
Belgica	11	2									
Germania Superior	3	4									
Germania Inferior	2	4									
Raetia	1	1									
Noricum	1	0									
Pannonia Sup.	0	0									
Pannonia Inf.	3	0									
Dalmatia	27	27	50%	50%	403	1 080	2,58	70	27	72%	28%
Dacia	0	2									
Moesia Inf.	8	3									
Moesia Sup.	3	1									
Venetia et Histria	82	45	65%	35%	615	1 722	2,54	208	45	82%	18%
North-Italy <sup>38</sup>	32	13	71%	29%	857	2 908	3,32	105	13	89%	11%
Roma	213	143	60%	40%	6 761	26 597	3,83	817	143	85%	15%
South-Italy <sup>39</sup>	41	44	48%	52%	532	2 510	4,48	183	44	85%	19%

<sup>37</sup> Searching question: „code = s > 0” OR „code = elisio -s” OR „code = m > 0” OR „code = elisio -m” OR „alt. code = s > 0” OR „alt. code = elisio -s” OR „alt. code = m > 0” OR „alt. code = elisio -m”) AND „Fortasse recte = no” AND „date = [300 A. D. – 700 A. D.]”

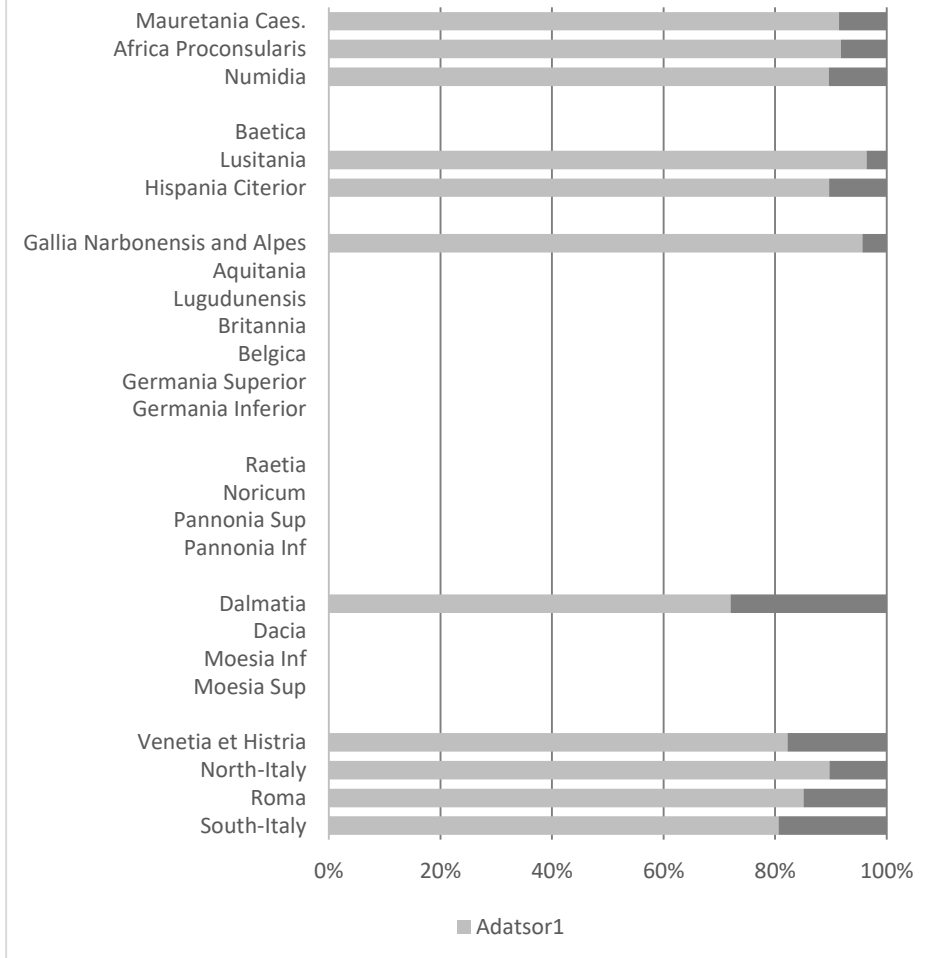
<sup>38</sup> Transpadana, Aemilia, Liguria

<sup>39</sup> Etruria, Umbria, Picenum, Samnium, Sardinia, Latium et Campania, Bruttium et Lucania, Apulia et Calabria, Sicilia

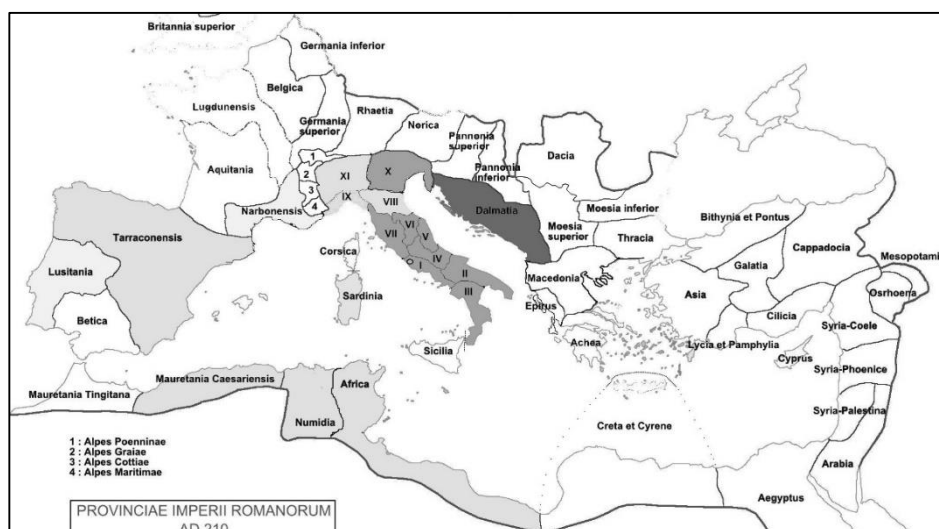
## IV-VII. CENTURY AD (LLDB).



## IV-VII. CENTURY AD (CALIBRATED DATA).







From the later period, we have less data, so we can analyse less provinces. The research method is the same, but we changed a little bit the division of the regions in Italy. We treated the corpus of the Christian Venetia et Histria separately from North-Italy because of the relative abundancy of material from there, and we put Latium et Campania into the southern Italian region due to the insufficient number of examples found there. Even if we have evidences from the 8<sup>th</sup> century, the majority of the data is from the 4<sup>th</sup> to the 6<sup>th</sup> century AD.<sup>40</sup>

We can see a dialectological division, which is similar to the earlier one, but it shows a higher contrast between regions: In Africa and in the Iberian Peninsula, the word final *-s* seems to be fixed, the proportion of the regarding mistakes does not go over 10% in any province of the region. Furthermore, in Lusitania, where the Christian corpus is completely processed in the *LLDB* thanks to Silvia Tantimonaco, the proportion of the mistakes regarding the omission of the *-s* is only 4% compared to the data concerning the weakening of the *-m*. The same proportion (4%) was found in Gallia Narbonensis. This proportion is already in accordance with the Romance development, since in the Gallian regions the word final *-s* survived.

Even if we can see only minimal differences, we can say that the Proto-Romance tendencies can be demonstrated in the Christian inscriptions from Italy as well. In northern Italy, the calibrated proportion of the omission of the *-s* decreased, it reaches only 11% in the later centuries. However, in Venetia et Histria this rate is higher, probably due to the influence of the neighbouring Dalmatia. In south Italy,

<sup>40</sup> 4<sup>th</sup> century: 334, 5<sup>th</sup> century: 301, 6<sup>th</sup> century: 319, 7<sup>th</sup> century: 192, 8<sup>th</sup> century: 48 data

we can see a relatively high proportion, about 20%, which is similar to that in the early imperial period.<sup>41</sup> Finally in Dalmatia, the weakening of the word final *-s* seems to be certain, the proportion of the regarding mistakes reaches almost 30% compared to the omissions of the word final *-m*. But we have to mention that morphosyntactic factors could also influence this proportion: the oscillation between the genitive and the dative was especially usual in Dalmatia from the 4<sup>th</sup> century AD, and in the singular of the third declension, only a word final *-s* makes the difference between the two cases. It means that it is not evident in these cases whether the phonetic or the morphosyntactic background is the cause of these mistakes.

At last, we must call attention to a surprising feature which does not correspond with the generally accepted opinion. Although several researchers (like Herman or Adams)<sup>42</sup> claimed that the weakening of the word final *-s* can be found earliest in the Christian inscriptions of Rome, our calibrated data shows that the consonant was still relatively stable there (15%), compared to the southern Italian region (19%). We may think that the intensive weakening began here only during the Proto-Romance transition.

To sum up, in our analysis, we studied the distribution of the omission of the most often occurring word final consonants (*-m* and *-s*) with the calibration of their frequency coefficient. Based on this study, we claim that in certain regions, the weakening of the word final *-s* has started already in the early imperial ages (I–III. century AD), or its late republican restoration was not perfect everywhere. Looking at the proportion of the omission of the word final *-s-es* compared to that of the word final *-m-s*, we can distinguish certain dialectological groups in this period. In some cases (e.g. in the Iberian provinces or in Africa, where the proportion of the missing word final *-s-es* is the lowest within the empire), these groups seem to be the antecedents of a future process. Elsewhere (first of all in the Northwestern regions and in Northern-Italy, where the weakening of the word final *-s* was evident in this period according to our data), they show a situation which contradicts to the later history of the consonant.

From the 4<sup>th</sup> century, we can study only a limited number of provinces due to the radical decrease of data in many regions, but these data are sufficient to show the tendencies of the Proto-Romance process. The proportion of the omitted word final

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<sup>41</sup> The contrast between northern and southern Italy is more obvious if we investigate the two part not all in one, but only the regions with more than 20 data: Transpadana from the Northern, and Apulia et Calabria from the Southern part. In Transpadana, we have found 26 omitted *-m* and 8 unwritten *-s* in the LLDB. The frequency coefficient is 3,31 in this region, which means that our calibrated data are: 86 omitted *-m* and 8 omitted *-s*, which means that the proportion of the elimination of the word final *-s* is 8,5%. In Apulia et Calabria, there are 6 unwritten *-s* and 15 deleted *-s*. The frequency coefficient is 4,92, so the calibrated data are 45 *-m* and 15 *-s*, which means that the proportion of the eliminated word final *-s-es* is 33,3%.

<sup>42</sup> Herman 2000, 41. and Adams 2013, 140–141.

–s-es is lower in Africa, in the Iberian Peninsula, in Gallia Narbonensis and in Northern-Italy (except Venetia et Histria), in which provinces, the phoneme survives in the Proto-Romance languages. Whereas in southern Italy, in Dalmatia and in Venetia et Histria, where the –s disappears at the end of the word in the future Romance languages, its absence is more frequent. Although, it shows relative stability in Rome, compared to the neighbouring regions.

Based on the results of our study, we cannot accept the theory that the weakening of the word final –s has started only during the Proto-Romance transition and it is not attested in the epigraphic corpus of late antiquity. In addition, Herman’s claim that the weakening of the consonant is shown mostly in the Christian inscriptions of Rome, does not seem to be verified either, since we can find other regions where, at the same period, the position of the word final –s (compared to that of the –m) seems to be more ambiguous.

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