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## PHONETIC CHANGES IN THE LATIN OF NORICUM\*

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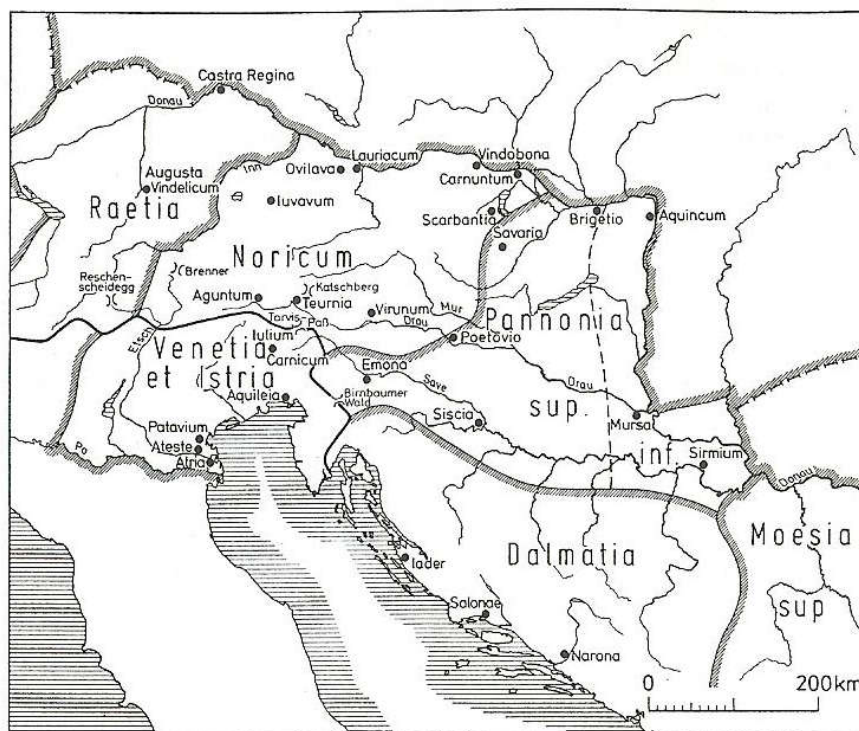
*Abstract:* Previous studies analyzed the Vulgar Latin of the inscriptions of Pannonia Inferior, Dalmatia and Venetia et Histria, comparing the differences between the provincial capitals and the countryside of the provinces, in order to verify the hypothesis of Untermann (1980) and Herman (1983) about the existence of a larger regional dialect of Latin over the Alps–Danube–Adria region. The analyses made clear that these geographic unites don't constitute a solid and uniform dialectal area, but there are undeniable common characteristics, such as the weakness of the /w/-/b/ merger or the lack of sonorization, which allow us to suppose that the Vulgar Latin variants of these provinces were somewhat more connected among each other than with the rest of the empire. This study involves another province of the Alps–Danube–Adria region, Noricum, in the examination, systematically discusses the changes in the vowel and consonant systems based on the relative distribution of diverse types of non-standard data from the inscriptions of Noricum, and contrasts the linguistic phenomena of an earlier period (1st–3rd c. AD) with a later stage (4th–6th c. AD) of Vulgar Latin, attempting to define whether Noricum fits common characteristics found in the other provinces of the Alps–Danube–Adria region.

*Keywords:* vulgar Latin, Noricum, dialectology, regional diversification, vowel system, consonant system, inscriptions

### 1. Introduction and methodology

Noricum was a Celtic kingdom of federal tribes before Roman occupation in 16 BC. Romans gradually started to migrate to the area from the direction of the Augustan *Regio X Venetia et Histria*, but the country remained a protectorate until the 50s AD as a client kingdom, when emperor Claudius made it a province. Noricum was still relatively little Romanized even in the 2nd century, because there was no permanent Roman army stationed in the province until about 150 AD. More intensive Romanization took place in the second half of the 2nd century and in the 3rd century. Noricum was abandoned by the Romans in 488 as the result of the attacks of the Ostrogoths and Alemanni. Consequently, when studying the Latin inscriptions of Noricum, the question arises: did this slower Romanization process affect the Latin spoken in Noricum, and did it cause any deficiency or lack of the progressive Vulgar Latin characteristics?

Based on the idea of József Herman,<sup>1</sup> there have been some investigations conducted about the possible existence of a Latin dialectal unit in the Alps–Danube–Adria region of the Roman empire, which examined the inscriptions of Pannonia Inferior, Venetia et Histria, Dalmatia, and compared them with their provincial headquarters, Aquincum, Aquileia and Salona.<sup>2</sup> The result of these investigations gave a somewhat disappointing answer suggesting that these areas didn't belong to a definite dialectal unit, but were, at best, only loosely related to each other. In this present study, we are including the Latin inscriptions of Noricum into this investigation in order to examine the vowel and consonant changes in the province, and, following the previous studies' practice of comparing the provincial capitals with the countryside, we are going to contrast the data of the Noricum countryside with those of Virunum, the administrative center of Noricum.



**Figure 1.** The Roman province of **Noricum** within the Alps–Danube–Adria region

<sup>1</sup> Herman 1983, 1089-1106.

<sup>2</sup> See Gonda 2017a and 2017b.

Our method of data processing was the following:<sup>3</sup> we divided the linguistic data for an early period and a late period, which we usually determine as from 1st to 3rd and from 4th to 7th centuries, but since the number of data for this province is quite low for the later period, we had to lower the dividing line to 250 AD. Furthermore, we counted for both periods those data which couldn't be dated precisely to only one of the two periods, and we included the data in the category labeled as *fortasse recte* in the “Computerized Historical Linguistic Database of Latin Inscriptions of the Imperial Age” (also known as “Late Latin Database”, and henceforward abbreviated as LLDB), which are those inscriptional errors that potentially might be explained as correct. I didn't include archaic spellings<sup>4</sup> which could have distorted especially the statistics related to the misspelling of velar vowels. These concessions were necessary in order to obtain a number of data significant enough for analysis, but we must keep in mind that our results may be somewhat distorted due to this methodology. The ratios seen in the tables which I use for the analysis are obtained by the Herman-method.<sup>5</sup> For the current examination, I calculated<sup>6</sup> the relative frequencies of all inscriptional errors which cannot be classified as purely orthographical or technical mistakes (“*Errores technici et orthographici*”).<sup>7</sup> Misspellings coming from sound changes that have more or less already taken place in earlier periods, such as the disappearance of /h/ from pronunciation, are labelled as “*Errores quasi orthographici*”, because it is unclear whether these changing processes had already been concluded in previous periods or were still ongoing in our examined periods.<sup>8</sup> We must be mindful that the number of data in the remaining, linguistically

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<sup>3</sup> These methodical rules refer only to the material from Noricum. The data from Dalmatia, Venetia-Histria, Pannonia Inferior and their capitals, according to the methods described in Gonda 2017a. All statistical methodologies regarding the material from Noricum if otherwise not stated, are done as described in Gonda 2017a.

<sup>4</sup> Such as VIVOS > vivus, the archaic spelling of the Classical Latin /uu/ and /wu/ sequences. The carving of C instead of G (such as CONIVCI < coniugi) is counted among the excluded phenomena as a matter of writing technic which can usually be explained by a simplified or archaic writing style (ad analogiam C. = Gaius), since originally all /g/ sounds were denoted by the letter C.

<sup>5</sup> The description of the methodology is found in Herman (2000b) and Adamik (2012).

<sup>6</sup> All statistics of Noricum, if not stated otherwise, are counted from data according to the state of the LLDB in April, 2018.

<sup>7</sup> The purely technical mistakes, labeled as “*Errores technici*”, are the carving mistakes of the *lapicida*: for example, the carving of F instead of E. The purely orthographical mistakes, “*Errores orthographici*” are those that do not imply a change in the pronunciation but only a confusion about the use of certain letters that are pronounced the same, for example, the confusion between the letters C~K~Q and X~CS.

<sup>8</sup> Included among these are some standard, universal Vulgar Latin sound changes, which still might well be ongoing developments in the 1st–3rd centuries, but which have their origin in the republican period vernacular version of Classical Latin, such as the /ns/ > /s/ change, the disappearance of the “-m” caduca, and the various changes of the aspirated consonants.

relevant categories is very low, but we shall consider this as a preliminary evaluation of the possible dialectal categorization of Noricum and Virunum.

## 2. Vowel changes in Noricum

The inscriptional misspellings indicating sound changes in the vowel system of early and late Noricum and Virunum can be seen in Table 1 together with some assorted examples about each phenomenon, taken from the LLDB database variously either from Virunum or from the countryside of Noricum. After a quick reading through the data, we can see that there are no surprising changes in the vowels in this province. Noricum shows the usual state of the vowels which is largely the same as the average in the empire in these periods: the high number of entries with zero percent indicates the low degree of Romanization in the province, as advanced territories usually abound in spelling mistakes that are characteristics of Romance developments.

Looking at the data of Table 1, we start with the enumeration of first those types of misspelling in Noricum which are usually very uniform throughout the empire and do not define dialectal position.

### 2.1. The /ae/ diphthong

The monophthongization of the /ae/ diphthong, exemplified by BEBIVS < *Baebius* (LLDB-65660), is very well advanced, probably a concluded process as everywhere in the empire.<sup>9</sup> We can see that Virunum shows some conservative tendency as it has 1% of archaic spelling variants (AI < ae) of this diphthong, such as SVAI < *suae* (LLDB-712), which may indicate some persistence in the old pronunciation.

### 2.2. The /e~/a/ sound changes

More interesting is the confusion of the E~A letters in Table 1, as in SENACA < *Seneca* (LLDB-51115), which has been explained<sup>10</sup> as a peculiarity of Pannonia and its neighborhood caused by their specific Celtic substratum. Noricum countryside produces 3%, Virunum 1% E~A misspellings in the early period,

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<sup>9</sup> The same entry from the early empire without the provinces of the Alps–Danube–Adria region is 45%, in the later period it's 36%. The AE~AI confusion in the early empire is 2%, in the late empire it's 0%. These data are taken from Gonda 2017b and the percentages are recalculated from the proportions of the errors now with the exclusion of purely orthographical mistakes.

<sup>10</sup> See Gonda 2015 and on the migrational backgrounds Mócsy 1974, 374.

and 1% and 3% respectively in the later period. The same type of error in the rest of the empire outside the Alps–Danube–Adria region is 1% in both periods:<sup>11</sup> this suggests that the degree of E~A confusion is somewhat higher in Noricum than the average of the empire, and it is indeed similar to Pannonia and as a Celtic territory it shows this characteristic sound variation.

### 2.3. Elimination of hiatus

Another frequent type of mistake in Latin inscriptions that deserves our attention is the vowel drop in hiatus, and its reverse, when a new vowel is added to an

**Table 1.** Vowel changes in Noricum countryside and Virunum

	Noricum countryside				Virunum			
	Early		Late		Early		Late	
AE ~ E	151	50%	52	59%	126	59%	12	38%
AE ~ AI	0	0%	0	0%	3	1%	0	0%
E ~ A	8	3%	1	1%	2	1%	1	3%
ú: > O	0	0%	0	0%	0	0%	0	0%
ó: > V	0	0%	0	0%	0	0%	0	0%
ú > O	0	0%	0	0%	0	0%	0	0%
ó > V	0	0%	1	1%	0	0%	0	0%
u: > O	1	0%	0	0%	0	0%	0	0%
o: > V	3	1%	0	0%	0	0%	0	0%
u > O	1	0%	1	1%	2	1%	2	6%
o > V	10	3%	0	0%	0	0%	0	0%
í: > E	0	0%	0	0%	0	0%	0	0%
é: > I	1	0%	1	1%	0	0%	0	0%
í > E	0	0%	0	0%	0	0%	1	3%
é > I	1	0%	1	1%	0	0%	0	0%
í: > E	0	0%	1	1%	0	0%	0	0%
e: > I	0	0%	2	2%	0	0%	0	0%
í > E	1	0%	2	2%	3	1%	1	3%
e > I	2	1%	0	0%	3	1%	1	3%
voc+voc ~ voc	26	9%	4	5%	14	7%	1	3%
ii/uu > I/V	34	11%	5	6%	28	13%	6	19%
syncope praet.	11	4%	1	1%	2	1%	0	0%
syncope postt.	22	7%	4	5%	6	3%	1	3%
V ~ Y ~ I	10	3%	5	6%	5	2%	2	6%
Varia ( <i>exceptis Err. technicis et orthographicis</i> )	20	7%	7	8%	18	8%	4	13%

existing vowel, thus creating a hiatus (usually as hypercorrection). This resolution of hiatus regularly happened through the glidification of originally vocalic Classical Latin /i/, /e/ and /u/ sounds, rendering them /j/ and /w/ respectively.<sup>12</sup> This is the phenomenon which creates the Italian form *signore* out of the original Latin *senior*. In our tables it's labeled as *voc+voc ~ voc*, and is exemplified by GLABRONIS < Glabrionis (LLDB-50173). In the rest of the empire outside the Alps–Danube–Adria region, this error is 10% in the early period and 6% in the later period. This is closely mirrored in the data of rural Noricum, however, Virunum apparently presents a lower number from this type of data (if the statistics isn't much flawed due to the very few data from Virunum). It is remarkable that both the countryside of Noricum and its capital Virunum follows the imperial tendency that the hiatus elimination decreases over time, which verifies our expectations that our statistics of countryside Noricum and Virunum are giving faithful insight into the reality of the spoken language. The possible conclusion from these figures is that Noricum very likely followed the average extent of hiatus resolution in the empire, but in Virunum its degree might have been a little lower.

## 2.4. Syncope

We also have data like the example of MVNME|NTVM < monumentum (LLDB-49964), which is categorized as a *syncope*. The frequency of *syncope* phenomena<sup>13</sup> in the countryside of Noricum is a little bit higher than in the rest of the empire, because in the countryside of Noricum the *syncope praetonica* is 4% in the early period and 1% in the later period, the *syncope posttonica* is 7% and 5% respectively, while in the rest of the empire,<sup>14</sup> the *syncope praetonica* is 2%, later 0%, the *syncope posttonica* is 4% and 3%. Virunum is much more like the rest of the empire: for the *praetonica* Virunum shows 1% and later 0%, for the *posttonica* 3% and 3%. Perhaps the tendency of syncope was a little higher in the province than the average of the empire, but it is not warranted to suppose any special significance to this.

In order to classify the Vulgar Latin character of Noricum, we need to turn our attention to those errors of the inscriptions that as crucially important defining features of Vulgar Latin development herald Romance features.

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<sup>12</sup> Loporcaro 2011a, 99-102.

<sup>13</sup> I included the syncope among the phenomena which are less likely to define a Vulgar Latin dialect, because according to a recent study by B. Adamik, “we cannot observe any correlation or connection between the geographical distribution and frequency of syncope in Latin and in Romance”, see Adamik 2016, 20.

<sup>14</sup> Data taken from the LLDB from status as of 2018, June.

**Table 2–3.** Velar and palatal vowel changes in Noricum countryside and Virunum compared to other territories in the Alps–Danube–Adria region and in the rest of the empire in the Early and Later Periods.

EARLY PERIOD (1st–3rd centuries)												
Empire	Virunum	Aquincum	Aquileia	Salona	Noricum	Pann. Inf.	Ven.-Hist.	Dalmatia				
u>O	2 24%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%
ô>V	6 5%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%
û>O	9 8%	0 0%	1 14%	0 0%	0 0%	1 11%	0 0%	0 0%	1 17%	0 0%	0 0%	1 17%
ô>V	11 10%	0 0%	0 0%	0 0%	1 9%	0 0%	0 0%	2 33%	0 0%	0 0%	0 0%	2 33%
u>O	6 5%	0 0%	0 0%	0 0%	1 7%	1 11%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%
ô>V	5 5%	0 0%	1 14%	1 18%	3 20%	1 11%	1 100%	2 33%	0 0%	0 0%	1 100%	2 33%
u>O	35 32%	2 100%	2 29%	1 33%	4 36%	2 22%	2 22%	0 0%	0 0%	0 0%	0 0%	1 17%
ô>V	37 33%	0 0%	3 43%	1 33%	4 36%	4 45%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%
i>E	7 24%	0 0%	3 18%	0 0%	1 2%	4 14%	1 14%	2 4%	0 0%	0 0%	1 14%	2 4%
ê>I	27 8%	0 0%	2 12%	0 0%	9 20%	1 3%	0 0%	0 0%	2 4%	0 0%	0 0%	2 4%
i>E	36 11%	0 0%	1 6%	0 0%	2 4%	2 7%	0 0%	4 9%	0 0%	0 0%	0 0%	4 9%
ê>I	31 10%	0 0%	2 12%	1 11%	0 0%	1 20%	3 10%	2 29%	1 2%	0 0%	1 2%	1 2%
i>E	10 3%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%
ê>I	21 6%	0 0%	1 6%	0 0%	7 16%	2 7%	0 0%	9 20%	0 0%	0 0%	0 0%	9 20%
i>E	116 36%	3 50%	6 35%	6 67%	15 33%	12 42%	4 57%	16 35%	0 0%	0 0%	0 0%	16 35%
ê>I	78 24%	3 50%	2 12%	2 22%	11 24%	5 17%	0 0%	11 24%	0 0%	0 0%	0 0%	11 24%

LATE PERIOD (4th–7th centuries)												
Empire	Virunum	Aquincum	Aquileia	Salona	Noricum	Pann. Inf.	Ven.-Hist.	Dalmatia				
u>O	5 1%	0 0%	0 0%	1 7%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%
ô>V	57 12%	0 0%	0 0%	0 0%	6 19%	0 0%	4 34%	0 0%	0 0%	0 0%	0 0%	0 0%
û>O	77 16%	0 0%	2 14%	3 19%	0 0%	0 0%	1 8%	5 33%	0 0%	0 0%	0 0%	5 33%
ô>V	21 4%	0 0%	0 0%	1 7%	3 10%	0 0%	3 25%	1 7%	0 0%	0 0%	0 0%	1 7%
u>O	3 1%	0 0%	0 0%	1 7%	0 0%	0 0%	0 0%	0 0%	1 7%	0 0%	0 0%	1 7%
ô>V	3 1%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%	0 0%
u>O	47 10%	0 0%	0 0%	3 21%	2 6%	0 0%	1 8%	2 13%	0 0%	0 0%	0 0%	2 13%
u>O	213 44%	2 100%	0 0%	4 29%	7 23%	1 50%	1 100%	3 25%	5 33%	0 0%	0 0%	5 33%
ô>V	65 13%	0 0%	0 0%	2 14%	10 32%	0 0%	0 0%	1 7%	0 0%	0 0%	0 0%	1 7%
i>E	15 2%	0 0%	0 0%	2 3%	1 1%	0 0%	0 0%	3 13%	0 0%	0 0%	0 0%	3 13%
ê>I	164 18%	0 0%	0 0%	3 4%	4 5%	1 14%	0 0%	4 17%	2 8%	0 0%	0 0%	2 8%
i>E	165 18%	1 33%	0 0%	10 13%	14 17%	0 0%	0 0%	7 27%	0 0%	0 0%	0 0%	7 27%
ê>I	25 3%	0 0%	0 0%	1 1%	3 4%	0 0%	0 0%	0 0%	1 4%	0 0%	0 0%	1 4%
i>E	16 2%	0 0%	0 0%	3 4%	2 2%	1 14%	0 0%	1 4%	0 0%	0 0%	0 0%	1 4%
ê>I	82 9%	0 0%	1 100%	5 6%	6 7%	2 29%	0 0%	2 9%	3 12%	0 0%	0 0%	3 12%
i>E	376 41%	1 33%	0 0%	48 62%	41 49%	2 29%	1 100%	12 53%	8 30%	0 0%	0 0%	8 30%
ê>I	75 8%	1 33%	0 0%	5 6%	13 15%	0 0%	0 0%	1 4%	4 15%	0 0%	0 0%	4 15%



## 2.5. The velar and palatal mergers

Our most important point of reference should be that type of sound change which is the most characteristic vowel change in the Vulgar Latin: the mergers of the palatal /e~/i/ and velar /o~/u/ vowels. There are three territorial variants of how the Romance languages merged the quality of palatal and velar vowels of Vulgar Latin: the Western or Italo-Western vowel system, where both the stressed and unstressed short /i/ merged in quality with the stressed and unstressed long /e:/ and both the stressed and unstressed short /u/ merged with the stressed and unstressed long /o:/; the Eastern system, where the behavior of the /e~/i/ vowels is the same as in the Western system, however, the stressed /o~/u/ did not merge, neither did the unstressed /u/, but the unstressed /o/ sounds, both long and short, changed to /u/.<sup>15</sup> There was, finally, a third system, the Sardinian, where none of these fusions happened. We need to find which Vulgar Latin vocalic merger system would best fit the palatal and velar changes of Noricum and Virunum.

### 2.5.1. The O~V merger

On Tables 2-3, we can study a complete comparison of the palatal and velar spelling mistakes of Noricum and Virunum with the neighboring provinces and with the rest of the empire in the early and late periods. Both early and late Virunum could partially fit the description of the Western vowel system, because among the velar errors, both periods show a 100% of u > O misspelling (ANNORO < annorum, LLDB-709). However, since both are based only on two-two examples, any conclusion would be premature, even if this percentage is very significantly higher than in the empire (32%, later 44%) or in the neighboring provinces (0–36%, later 0–100% where the two areas with 100% are based only on one occurrence in each). These findings – if we take in consideration that there are no unstressed /o, o:/ > V type mistakes and no other types of velar misspelling whatsoever – support our suspicion that Virunum was closer to the Western velar system than to the Eastern. However, the absence of the stressed short /ú/ > O errors from the inscriptions, which is a property of the Eastern vowel system, makes the categorization as Western type questionable. The velar vowels of Virunum were more likely between the two dialect systems.

Noricum countryside, on the contrary, fits the Eastern vowel system better in the early period due to its large number of /o, o:/ > V mistakes, 87% if combined

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<sup>15</sup> Tamás 1983, 45–48. Neither the unstressed /o/ nor the unstressed short /i/ changed to /u/ and /e/ in all instances, but, in the case of unstressed short /i/ > /e/, it is a detectable tendency in all Romance languages, and the unstressed /o/ > /u/ is indeed testified by the Eastern Romance languages such as Romanian and Dalmatian.



(examples include ALBINV < Albino LLDB-45138, MVNME|NTVM < monumentum LLDB-49964), and in this case it comes from a relatively higher number of data, 10 for the short /o/ and 3 for the long /o:/, which might be an indication of the speakers' tendency to pronounce the /o/ sounds closer. The problem with this hypothesis is that 8 out of the 10 data for the /o/ > V spelling come from the mistaken spelling of one god name, Dolichenus, misspelled as "Dulichenus". In the later period, rural Noricum has only two examples for velar merger, a single instance of unstressed short /u/ > O spelling indicating a Western type vowel change (50%), and another single stressed short /ó/ > V error (50%), GVTICA < Gothica (LLDB-2098), which is a little more reminiscent of the Eastern tendency to make the /o/ sounds closer. Without any clear example for Eastern type velar merger (which would be the change of unstressed /o, o:/ > /u/), we are left to hypothesize that in the later period Noricum countryside was more likely moving toward the Western velar vowel system. If we rule out the spelling errors of Eastern type velar merger that came solely from the spelling of Dolichenus, we could characterize the velar system of the entire province as something closer to the Western type, but with the same caveat what we said about the capital of the province.

Regarding the problematics of dialectal classification, it is worth noting the total absence of stressed velar mergers in both periods in both Virunum and rural Noricum, which is typical of the Eastern vowel system. This, and most specifically the lack of data for the stressed short /ú/ > /o/ sound change, which is the single most defining feature of the Western velar system, makes the categorization into the Western type indeed very questionable. This type of inscriptional error (/ú/ > O) is found in late Aquileia (14%), Salona (10%), Venetia–Histria (8%) and Dalmatia (33%), and it is present with 16% in the rest of the empire, suggesting that its absence in the entire province might be more than mere coincidence. Therefore, it's safer to conclude that the velar vowel system of Noricum (both country and capital) wasn't either Western or Eastern type, but it was intermediate between the two, or the velar merger probably wasn't progressed enough to make an impression in the inscriptions.

### 2.5.2. The E~I merger

When it comes to the palatal vowels, they merge the same way in both the Western and the Eastern vowel system in Vulgar Latin. The question in this point is not whether the palatal system of Virunum and Noricum belong to the Western or Eastern system, but whether it's advanced enough in the development of the Romance characteristics, namely in the merger of the stressed (and in lesser extent, also the unstressed) short /i/ with the sound of the long /e:/. This stands

against a diffuse, chaotic confusion of all /e/ and /i/ sounds of the earliest periods of Vulgar Latin, when the main tendency of the inscriptional errors was to replace E letters with I letters, which is exemplified in Noricum by data like DVLCIS < dulces (LLDB-51122). We are going to call this phenomenon, for simplicity's sake, an "itacizing" tendency in this study. There is some vague evidence that in the earliest periods, mostly in the Eastern provinces, the long /e:/ sounds started to change to /i/, perhaps by Greek influence, and this is what is mirrored by the early tendency in the empire to show a predilection to replace E with I and not vice versa, as we would expect from the testimony of the Romance languages.<sup>16</sup>

We can see that Virunum doesn't do anything peculiar or excessive regarding its palatal mistakes, and it looks quite balanced (50-50%, later 33-33-33%) and conservative in the palatal changes in comparison to the neighboring provinces and capitals, and to the rest of the empire, although in the later period it seems a little bit more progressed toward the Romance palatal system. We would expect more stressed short /i/ > E type of errors in order to classify this palatal system confidently as a Romance type, which we in fact see in Aquileia, Salona and Dalmatia, however, Virunum has only one instance for the /i/ > E misspelling, METRAS < Mithrae (LLDB-28063, which makes up 33% of the palatal mergers in the later period). Despite the lack of the /i/ > E error, we hesitate to call it itacistic, either, if compared to Dalmatia and Salona for example, or to the rest of the empire, although it is probably the better fitting classification.

The "itacizing" tendency is more clearly present in the countryside of Noricum of the early period (for example VCCIP|TI < Accepti, LLDB-3672, or MILIS < miles, LLDB-890): if we combine all percentages of early rural Noricum where a Classical Latin /e, e:, é, é:/ sound is written with the letter I, we receive 80%. This "itacizing" spelling decreases for the later period, but a clear Romance pattern doesn't develop, the /i/ > E type of error, which is prominent in Aquileia (13%), Salona (17%), Dalmatia (27%) and in the imperial average (18%), is still missing in the countryside of Noricum.

It must not be unthinkable that a provincial capital differs from the countryside: the capitals are usually a melting pot of different ethnic groups and citizens coming from all parts of the empire. The Latin of the province center is always more cosmopolitan than the rest of the province.

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<sup>16</sup> More about this in Gonda 2017b, 113-115.

### 3. Consonant changes in Noricum

Table 4 shows all consonant changes in Noricum countryside and Virunum and the proportions of their inscriptional mistakes. Similarly to the vowels, there are no surprising changes if we compare the earlier period with the later period.

#### 3.1. *Errores quasi orthographici*

There are a number of phenomena which are so widespread and general in all parts of the empire, and their underlying phonetic processes have been ongoing for such a long time, usually from the mid republican period, that they are classified as *Errores quasi orthographici*: mistakes that tell us about the quality of literacy in the region, and not about the “current” phonetic innovations and tendencies.

We find examples for the disappearance of the nasal component in the consonant cluster /ns/, such as CLEMES < Clemens (LLDB-49930), the elimination of word final /-m/, as in ANNORO < annorum (LLDB-709), the simplification of aspirated consonants /th/ (METRAS < Mithrae, LLDB-28063), /ph/ (both with resulting /f/, as in FYLOSTRAT < Philostratus, LLDB-50109, and with the result of /p/, as in PILIP|PVS < Philippus, LLDB-50203) and /kh/ (resulting in /h/~ /χ/: MIGH < mihi [\*MICI < \*MICH], LLDB-1129,<sup>17</sup> and simple /k/: CRESTVS < Chrestus, LLDB-65658). And of course, there are a lot of examples for the elimination of /h/, see ERCVLII < Herculi (LLDB-898).

If, using the assorted data of Table 5 and Table 6, we compare the statistics of these *Errores quasi orthographici* of Virunum and provincial Noricum with the neighboring provinces in the region and the rest of the empire, we don't find any particularly helpful sign that could be identified as Norican Latinity in the early period: we can mention the ratio of /ns/ > S misspelling is a little lower in rural Noricum (4%) than in the region or in the empire (7–13%, only Venetia–Hiria being even lower with 0%), the drop of the *-m caduca* is also less frequent in Virunum (1%) than elsewhere (2–7%). The aspirated consonant /ph/ is less likely to be written as F in entire Noricum (1%); especially Aquincum (5%) and Salona (7%) seem to indulge in such a spelling – and very likely – pronunciation

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<sup>17</sup> MIGH < mihi (MIGH < \*MICI < \*MICH < mihi) LLDB-1129 is an interesting case because it evidences the pronunciation of CH as /h/ in an indirect way: the speaker who wrote MIGH instead of *mihi*, must have had in mind that sometimes when he utters a /h/ – or more likely, /χ/ – he must write CH. He also had in his mind that some people pronounce what is written with CH simply as /k/, and sometimes words with /kh/ are simply written with C, hypercorrectly (e.g.: *charta–carta*). He probably knew that a letter indicating /h/-sound must be written in *mihi*, but he wasn't sure whether it had to be *\*michi*, *\*mici* or *mihi* in normative orthography. He chose *mici*, but the *lapicida* delivered it as MIGH, G < c, which is a frequent type among the *Errores technici*.

habit. This can be an indication that Noricum had fewer Greek or Hellenized Easterner inhabitants than those places, as the pronunciation /ph/ as /f/ was a property of the koine Greek language. Whereas other territories produce percentages as high as 7% and 8%, the confusion of the spelling of /kh/ as C is also infrequent in Virunum (1%), which supports the previous idea.

In the late period, the total absence of /ph/ > F spelling is striking in comparison to the neighboring provinces and the rest of the empire (these provinces and

**Table 4.** Consonant changes in Noricum countryside and Virunum

	Noricum countryside				Virunum				
	Early		Late		Early		Late		
V ~ B	5	3%	1	2%	4	3%	1	3%	
(voc.)-V-(voc.) ~ (voc.)-ø-(voc.)	22	11%	6	12%	18	13%	2	6%	
(cons.)-V-(voc.) > ø	0	0%	0	0%	0	0%	0	0%	
QV ~ C	10	5%	4	8%	4	3%	0	0%	
Sonorizatio	2	1%	0	0%	0	0%	0	0%	
Desonorizatio ( <i>exceptis /g/ &gt; C</i> )	2	1%	2	4%	2	1%	2	6%	
Degeminatio	59	26%	13	23%	50	35%	9	33%	
Assimilationes ( <i>nct; str; ps etc.</i> )	3	2%	2	4%	4	3%	1	3%	
X > S / SS / CX	1	1%	0	0%	1	1%	1	3%	
n (/m) (ante cons.) > ø	10	5%	0	0%	4	3%	0	0%	
-nt > ø	0	0%	0	0%	1	1%	0	0%	
-t > ø	4	2%	2	4%	0	0%	0	0%	
-s > ø	20	10%	8	15%	12	9%	2	6%	
ci/ce/gi/ge (ante voc.) commutatio	0	0%	0	0%	0	0%	1	3%	
ti/te/di/de (ante voc.) commutatio	0	0%	0	0%	0	0%	0	0%	
Errores quasi orthographici	ns > S	8	4%	5	10%	11	8%	2	6%
	-m > ø	6	3%	2	4%	2	1%	2	6%
	th > T	5	3%	2	4%	2	1%	2	6%
	PH ~ F	2	1%	0	0%	1	1%	0	0%
	ph > P	5	3%	0	0%	0	0%	0	0%
	ch > H	1	1%	0	0%	0	0%	0	0%
	ch ~ C	13	7%	2	4%	2	1%	1	3%
H ~ ø	19	10%	3	6%	22	16%	5	16%	
Alii consonantismi ( <i>exceptis Erroribus technicis et Erroribus orthographicis</i> )	2	1%	0	0%	0	0%	0	0%	

the empire combined have an 8% in average). It further corroborates the hypothesis that Noricum lacked Greek influence. Also interesting is the higher degree of H-elimination in Virunum (16%): it is twice as much as in most of the territories (0–11%).

### 3.2. The final /-t/ drop and the palatalization

The uncertainties of the spelling and pronunciation of the consonants discussed so far were quite permanent throughout the republic and empire everywhere, so we couldn't learn much about the special features of Norican Vulgar Latin. There are certain sound changes, however, which developed in the imperial era only, such as the elimination of word ending /-t/ and the palatalization. Virunum seems to preserve word final /-t/ better (0%) than the countryside (2%, then 4%, an example for the phenomenon is FECI SI|BI < fecit sibi, LLDB-45439). Palatalization of intervocalic /ti, di, ki, gi/ syllables has not yet started in Noricum, as it seems: there is one doubtful FECSERIT < fecerit, (LLDB-1075) the reading of which is uncertain.

These observations so far, however, don't seem to put us in a position to classify Noricum or Virunum as belonging to any category of Vulgar Latin or Romance languages. From these confusing miscellaneous data an order will emerge if we concentrate only on the most decisive Vulgar Latin consonant change phenomena of Noricum and Virunum, shown in Tables 5-6, excerpted and recalculated from the overall data of Table 4, and compared to all the rest of the neighboring Alps–Danube–Adria provinces and capitals altogether with the rest of the empire. These are the phenomena which are not universally or uniformly inherited by all Romance languages, and consequently they can help us classify the Latin of Noricum as a dialect.

The consonant changes, which can serve as differentiating factors for geographical classification, are the loss of the word final /-s/, the sonorization of voiceless plosives, the degemination of double consonants, the assimilation of consonant clusters, and the merger of the /w/~b/ sounds. These sound changes are the basis of classification of Romance languages into the main categories such as Western Romance (with the Ibero-Romance and Gallo-Romance within it) and Eastern Romance consonant system (further subdivided as Southern or Italo-Romance and Balkan Romance), and the overlapping category of the Gallo-Italian, north of the Massa-Senigallia line, which is partly classified as Western, partly as Eastern. We will now systematically analyze these data from Virunum and the countryside of Noricum in order to classify the Vulgar Latin of Noricum, and compare them with other territories, shown in Tables 5–6.

### 3.3. The final /-s/ drop

One of the typical consonantal developments in Romance languages is the loss of the /-s/ at the end of words.<sup>18</sup> Romance languages north of the Massa-Senigallia line originally retained the word ending /-s/, Southern and Eastern Romance lost it, and during later developments almost all Northern Italian dialects lost it, as well. Similarly to the word final /-t/, the provincial capital Virunum conserves the word final /-s/ better than the countryside. The elimination of word final /-s/ – as evidenced in *CLAVDIV* < *Claudius* (LLDB-65659) – is more frequent in both the provincial capital and the countryside of Noricum than in the neighboring provinces and in the other parts of the empire: over time, this /-s/ drop increases in the countryside (10% and later 15%) but it decreases in Virunum, where it is 9% then only 6%. These proportions are significant, considering that the total sum average of the other territories is 4% in the early period and 3% after the 3rd century. We are entitled to suppose that the loss of final /-s/ was more widespread in Noricum than in the majority of the provinces, and together with Venetia–Histria and Dalmatia, or perhaps under these neighbors' influence, Noricum was in the process of eliminating the /-s/ at the end of words.

### 3.4. Sonorization and desonorization

A very important process among Vulgar Latin sound changes is the sonorization of voiceless plosives (/p/, /t/, /k/), evidenced by the Norican inscription *DEBVLSORI* < *depulsori* (LLDB-901). This phenomenon is one of the characteristics of the Romance dialects north and west of the La Spezia–Rimini or Massa–Senigallia line: the Gallo-Italian, Gallo-Romance and Ibero-Romance dialects voiced their intervocalic /p/, /t/ and /k/, while the central and southern Italian dialects, Romanian and the extinct Dalmatian language preserved the original voiceless quality of consonants.<sup>19</sup> From the evidence of Romance languages, however, we must suppose that the reverse of this phenomenon, the devoicing or desonorization in the inscriptions was – at least when not in word final position – usually an error due to hypercorrection, or a sign of a confusing change in the pronunciation of the plosives (some kind of lenition), rather than a permanent loss of the voiced quality.<sup>20</sup>

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<sup>18</sup> For a recent and exhaustive dialectological analysis of the omission of word-final /-s/, see Adamik 2017b.

<sup>19</sup> See Tamás 1983, 66-68, Herman 2000a, 45-47, Loporcaro 2011b, 154.

<sup>20</sup> Compare Gonda 2017a, 171. Romance languages inherited the Latin voiced consonants generally in voiced form, exceptions from under this rule are usually medieval Gallo-Italian, Gallo-

In Tables 5-6, we compare not only the sonorization errors of Noricum with the provinces of the region and with the rest of the empire, but also the desonorization errors (evidenced in Noricum by inscriptions like QVOT < quod, LLDB-3726), since these two processes are interconnected, and both can be signaling the same sound change when the desonorization is a hypercorrective misspelling. Early Virunum has 0% sonorization and 1% desonorization errors, early Noricum countryside has 1-1% from both. In our previous study,<sup>21</sup> we divided the territories of the Alps–Danube–Adria region into a conservative and a sonorizing group: after the examination of the data from early Noricum and Virunum, we can conclude that, in the 1<sup>st</sup>–3<sup>rd</sup> centuries, both belong to the conservative group together with Aquincum, Pannonia Inferior and Dalmatia, which likewise have a low amount of sonorization (2-1-2%) and a low degree of desonorization (2-0-0%), placing Noricum and Virunum into the same category with them.

**Tables 5–6. (Next two pages)** Most characteristic vulgar Latin consonant changes in Noricum countryside and Virunum compared to other territories in the Alps–Danube–Adria region and in the rest of the empire in the Early Period and Late Period.

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Romance and Catalan developments, for example, the final obstruent devoicing in Gallo-Italian dialects, see Benincà, Parry, Pescarini 2016, 190, and in Catalan, see Lloret 2004, 278-280.

<sup>21</sup> Gonda 2017a.



EARLY PERIOD (1st–3rd centuries)												
	Empire	Virumun	Aquincun	Aquileia	Salona	Noricun	Pann. Inf.	Ven-Hist.	Dalmatia			
V ~ B	255	4	1	6	20	5	2	4	14			
(voc)-V-(voc) ~ (voc)-ø-(voc)	199	18	21	5	11	22	9	5	18			
Sonorizatio	70	0	4	2	3	2	1	1	7			
Desonorizatio (exceptis /g/ > C/)	126	2	5	6	10	2	0	3	2			
Degeminatio	1006	50	49	10	53	59	20	23	133			
Assimilationes (ncti; str; ps etc.)	94	4	2	1	8	3	0	3	16			
X > S / SS / CX	61	1	2	3	10	1	0	1	11			
-s > ø	237	12	14	2	14	20	0	5	19			
t/re/di/de (ante voc.) commutatio	15	0	0	4	2	0	1	0	0			
ns > S	386	11	18	7	27	8	11	0	33			
-m > ø	184	2	16	3	11	6	6	4	10			
th > T	128	2	14	6	16	5	5	0	14			
PH ~ F	141	1	11	5	24	2	0	1	12			
ph > P	101	0	7	3	7	5	1	3	8			
ch > H	5	0	1	0	0	1	0	0	0			
ch ~ C	149	2	9	2	24	13	2	5	10			
H ~ ø	562	22	26	18	49	19	11	4	49			
Alii consonantismi (exceptis Erroribus technicis et Erroribus orthographicis)	528	9	43	4	44	26	13	3	48			
	13%	7%	16%	6%	14%	13%	19%	5%	12%			

LATE PERIOD (4th–7th centuries)																		
	Empire	Virunum	Aquincum	Aquileia	Salona	Noricum	Pann. Inf.	Ven.-Hist.	Dalmatia									
V ~ B	529	2406	1	3%	0	0%	41	19%	55	21%	1	2%	0	0%	6	7%	6	13%
(voc.)-V-(voc.) ~ (voc.)-ø-(voc.)	16	1%	2	6%	1	5%	2	1%	3	1%	6	12%	0	0%	3	4%	2	4%
Sonorizatio	24	1%	0	0%	0	0%	2	1%	3	1%	0	0%	0	0%	3	4%	2	4%
Desonorizatio (exceptis /g/> C)	14	1%	2	6%	0	0%	2	1%	14	5%	2	4%	0	0%	0	0%	0	0%
Degeminatio	267	12%	9	33%	1	5%	18	8%	40	15%	13	23%	2	40%	16	19%	3	7%
Assimilationes (nct: str: ps etc.)	90	4%	1	3%	2	9%	8	4%	6	2%	2	4%	0	0%	2	2%	0	0%
X > S / SS / CX	90	4%	1	3%	0	0%	6	3%	5	2%	0	0%	0	0%	2	2%	1	2%
-s > ø	86	4%	2	6%	0	0%	9	4%	6	2%	8	15%	0	0%	4	5%	2	4%
ti/te/di/de (ante voc.) commutatio	87	4%	0	0%	1	5%	7	3%	6	2%	0	0%	0	0%	4	5%	1	2%
hs > S	86	4%	2	6%	2	9%	36	17%	12	5%	5	10%	2	40%	1	1%	2	4%
-n > ø	118	5%	2	6%	2	9%	23	11%	7	3%	2	4%	1	20%	10	12%	1	2%
th > T	47	2%	2	6%	0	0%	3	1%	11	4%	2	4%	0	0%	4	5%	2	4%
ph ~ F	96	4%	0	0%	1	5%	11	5%	36	14%	0	0%	0	0%	8	10%	9	20%
ph > P	2	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
ch > H	6	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
ch ~ C	93	4%	1	3%	2	9%	4	2%	6	2%	2	4%	0	0%	4	5%	4	9%
H ~ ø	242	11%	5	16%	2	9%	15	7%	17	7%	3	6%	0	0%	8	10%	5	11%
Ahi consonantismi (exceptis Erroribus technicis et Erroribus orthographicis)	303	15%	1	3%	8	3%	30	14%	32	12%	6	12%	3	9%	9	10%	6	13%

Errores quasi  
orthographicis

In the later period, sonorization remains a weak phenomenon in both Noricum countryside and in the capital Virunum: so weak that it is nonexistent in both (0%). However, desonorization is increased (6% and 4%), similarly to Salona (5%), a city that is very much eastern Romance, especially if we also take in consideration that Dalmatian language will evolve in this area, and as an Eastern Romance language didn't show sonorization. Interestingly Noricum is showing affinity to Salona and the Eastern Romance dialects in this, and both central and rural Noricum seems to display the most intensive desonorization in the region. This desonorization in the inscriptions was probably caused partly by hypercorrection and partly by an inherent tendency of desonorization in our examined area which might later manifest itself in the final obstruent devoicing characteristic of Gallo-Romance, Rhaeto-Romance and Gallo-Italian dialects.<sup>22</sup> This hypothesis is supported by the fact that 50% of all desonorization errors in Noricum happened with word final consonants, such as in QVOT < quod, LLDB-3726.

### 3.5. Degemination

We have plenty of examples for the simplification of geminates, that is, double consonants in Noricum, like ACEPTVS < *Acceptus* (LLDB-2107). The occurrence of this phenomenon is also split by the Massa–Senigallia line: most of the Romance languages underwent a simplification of geminates, a defining characteristic of Western Romance, but Italian dialects south of the Massa–Senigallia line kept their double consonants.<sup>23</sup> In our statistics the reverse of this phenomenon, i.e. when a double consonant is standing for simple one, is grouped also under the category of degemination as hypercorrection, because degemination is always and in every territory at least two times more frequent than consonant gemination. Early Virunum produces an exceptionally high proportion of degemination, 35%, which marks this aspect of the Vulgar Latin of the city as Western Romance. By observing the percentages of degemination errors, both Noricum (26%) and Virunum (35%) can be grouped together with Aquincum (20%), Pannonia Inferior (24%), Dalmatia (33%) and Venetia–Histria (35%) as intensely degeminating areas, since these all show an identical or higher percentage than the imperial average (24%).

In the later period, both Noricum and Virunum continues to be intensively degeminating their double consonants in comparison to the rest of the examined territories, and it is apparent that Noricum “conducted” a much more extensive degemination process (33% and 23%) than other provinces in the area (the sum average of all other entries is 15%). From the comparisons so far it seems that

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<sup>22</sup> See note 20.

<sup>23</sup> See Väänänen 1981, 58-60, Tamás 1983, 83-85, Loporcaro 2011b, 150-153.

Pannonia and Noricum were similar in this aspect, although the low number of data doesn't allow us to be confident about that (the 40% degemination most certainly is a statistical distortion due to the low number of inscriptions in Pannonia Inferior).

### 3.6. Assimilations

The next related consonant change phenomenon is the simplification of consonant clusters, which was less advanced in the East.<sup>24</sup> An example from Noricum is BENINA < Benigna, LLDB-1726, but the category includes all kinds of assimilations that point towards Romance developments, like the assimilation of /nd/, /nm/ or /gn/ to double /nn/, /rs/ or /ps/ to double /ss/. The consonant cluster /ks/, denoted by the letter X, is represented in Tables 5–6 separately due to its large number so as not to obscure the proportion of other diverse forms of assimilations, but it is taken into consideration for the classification of the provinces. The comparison of the numbers gives both Noricum (2+1%) and Virunum (3+1%) alongside with Pannonia Inferior, Aquincum, Aquileia and Salona as the least advanced territories in respect to the intensity of their assimilation tendencies. It goes hand by hand with the average tendency in the empire, since in this early period assimilation was a very rare phenomenon.

Assimilation increases after the 3<sup>rd</sup> century, and the status of Noricum changes. The figures for assimilation errors for the later period, including the spelling errors of the letter X, put Noricum (4+0%) and Virunum (3+3%) in the same group of intensive assimilation together with Aquileia (4+3%) and Aquincum (9+0%).

### 3.7. V~B merger and intervocalic V drop

Another important and distinguishing feature of Vulgar Latin dialects is the merge of the V~B consonants: the Ibero-Roman and Southern Italian Romance dialects show a merger of the Latin /w/ and /b/ consonants, the Eastern Romance and Gallo-Italian dialects don't.<sup>25</sup> If we compare the relative frequency of the V~B confusions (exemplified by VIBA < viva, LLDB-633) and the drop of the intervocalic /w/, spelled as V (such as AVN|CVLO < avunculo, LLDB-4420) in all territories in Table 5–6 both in the early period and in the later period, we can see that the rate of the B~V confusion generally becomes higher, and the rate of

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<sup>24</sup> Tamás 1983, 74-83, Herman 2000a, 47-48, Loporcaro 2011a, 91-94.

<sup>25</sup> Väänänen 1981, 50–51 on intervocalic /w/ drop and 56-58 on B~V fusion. Also compare Tamás 1983, 61–62 and Herman 2000a, 45-47.

the elimination of the intervocalic V becomes lower. B. Adamik demonstrated<sup>26</sup> a correlation between the increase of the V~B confusion and the decrease of the loss of the intervocalic V that is discernible with the progress of time throughout the provinces of the empire. Adamik explains that the merger of /w/ (spelled V) and /b/ (spelled B) to the bilabial fricative /β/ in word-medial, intervocalic positions, and the loss of the intervocalic V are in complementary distribution with each other: the higher the relative frequency of drop of the intervocalic V in a region, the lower the percentage of the V~B confusion is there. It has been also demonstrated<sup>27</sup> that the degree of the difference in favor of the V~B confusion in comparison to the V-drop in the early period predetermines the degree of frequency of the V~B confusion in the later period, and if the V-drop is more frequent in the early period than in the V~B merger, than the V~B merger will not grow at all, but will probably decrease or disappear.

Noricum and Virunum are consistently similar to each other in both periods regarding the intervocalic V drop and the V~B merger: in the early period, Noricum and Virunum are the most intensive eliminators of intervocalic V (11% and 13%), which is accompanied by one of the lowest degrees of V~B fusion in the region (3%, 3%). Consequently, in the late period, Noricum and Virunum show a very low intensity of V~B fusion (2%, 3%), and a high proportion of intervocalic V drop (12%, 6%), the highest in the region. These findings accurately prove both premises regarding the correlations of V~B merger and V-drop.

#### 4. Conclusion

After the systematic analysis of the error statistics of the Latin inscriptions of Noricum, we made the following observations: the provincial countryside of Noricum and the headquarters of the province, Virunum show the same, or very similar, characteristics most of the time, but Virunum tends to be a little more conservative. Both the countryside and the capital of Noricum have many similarities to the neighboring provinces of the Alps–Danube–Adria region. In an attempt to classify the velar vowel system of Noricum, we concluded that it's intermediate between the Western type and Eastern type, perhaps a little closer to the Western characteristics, however the typical Romance palatal system is not well developed, Noricum is showing signs of the “itacizing” tendencies identified in other Eastern provinces. The examination of the aspirated consonants indicated the absence of extensive Greek influence in their pronunciation, instead of the fricativization of the aspirates, the traditional old Roman deaspiration seems to have been the standard. Due to its higher degree of final /-s/ drop and

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<sup>26</sup> Adamik 2017a, 25-36.

<sup>27</sup> See Gonda 2017a, 177.

from the point of view of sonorization, Noricum appears as an Eastern Romance dialect, while the phenomenon of intensive degemination and assimilation, albeit less progressed, marks the Vulgar Latin of Noricum as being on its way to evolve into a Western Romance dialect. The relative absence of /w~/b/ merger classifies Noricum as a Gallo-Italian or Eastern Romance dialect: and indeed, the most probable compromise for our attempt to describe the spoken Latin dialect of Noricum is to define it as an intermediate variant between Eastern and Western dialects, perhaps part of the language area which later developed into Gallo-Italian and Rhaeto-Romance dialects.

The slower Romanization of Noricum manifested itself in its difference from its very Romanized neighbor, Venetia–Histria, and in its similarity to the Eastern areas of the region, and although many typical Romance characteristics are not well developed, Noricum still behaves as a fully-fledged Latin speaking province, fitting into the overall picture of the Alps–Danube–Adria region.

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