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THE AQUINCUM–AQUILEIA–SALONA TRIANGLE* LATIN LANGUAGE IN THE ALPS–DANUBE–ADRIA REGION OF THE ROMAN EMPIRE

Summary: This study attempts to determine the common features and differences between the Latin language of the inscriptions of Aquincum, Salona, Aquileia and the provincial countries of Pannonia Inferior, Dalmatia and Venetia et Histria, compared with each other and the rest of the Latin speaking provinces of the Roman empire, and we intend to demonstrate whether a regional dialect area over the Alps–Danube–Adria region of the Roman empire existed, a hypothesis suggested by József Herman. For our research, we use all relevant linguistic data from the Computerized Historical Linguistic Database of Latin Inscriptions of the Imperial Age. We will examine the relative distribution of diverse types of non-standard data found in the inscriptions, contrasting the linguistic phenomena of an earlier period with a later stage of Vulgar Latin. The focus of our analysis will be on the changes in the vowel system and the grammatical cases between the two chronological periods within each of the three examined cities. If we succeed in identifying similar tendencies in the Vulgar Latin of these three cities, the shared linguistic phenomena may suggest the existence of a regional variant of Latin in the Alps–Danube–Adria region.

Key words: Vulgar Latin, dialectology, regional diversification, vowel system, case system, inscriptions

1. INTRODUCTION

In 1980, Jürgen Untermann suggested in his study,¹ entitled *Alpen–Donau–Adria*, that the Augustan Regio X, Venetia et Histria, the provinces of Dalmatia, Raetia, Noricum,

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¹ UNTERMANN, J.: *Alpen–Donau–Adria*. In *Die Sprachen im Römischen Reich der Kaiserzeit* [Bonner Jahrbücher, Beiheft 40]. Köln–Bonn 1980, 45–63.

Pannonia Inferior and Pannonia Superior, constituted a thoroughly organic and coherent social, economic and political unit within the Roman empire, and that in further historical research they should be treated as a single region. Inspired by this socio-political approach, József Herman proposed in 1983 that Untermann's Alps–Danube–Adria region could be a good candidate as a larger geographic area for future research in Latin dialectology, since socio-political geographical units often tend to form and shape linguistic boundaries.² Herman suggested this region only as a unit suitable for research, and did not claim or try to predict whether the Alps–Danube–Adria region would undoubtedly be proven to be a single dialectal unit within the Roman empire. In our study, we will make some first attempts to experiment with Herman's suggestion, to define the Latin spoken in the Alps–Danube–Adria region, and to see if we can identify a Vulgar Latin dialect in this area.

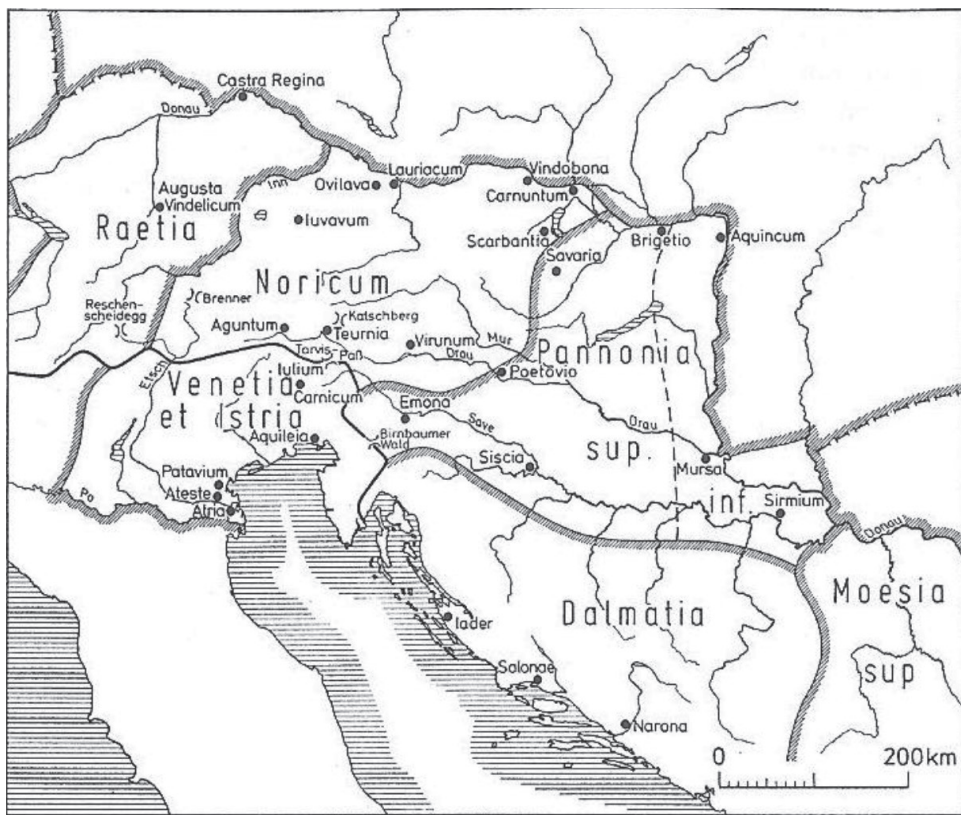


Fig. 1. The Alps–Danube–Adria region of the Roman empire as shown in Jürgen Untermann's study, with the cities of Aquincum, Aquileia, and Saloniae

² HERMAN, J.: Le latin dans les provinces danubiennes de l'Empire romain. Problemes et perspectives de la recherche. *ANRW II* 29.2 (1983) 1089–1106.

We are not going to examine all the provinces covered by the Alps–Danube–Adria region, but we choose three main provinces of the region, and, in the focus of analysis, their three provincial capitals, the most representative and demographically most significant cities: Aquincum, capital of Pannonia Inferior, which is both its northernmost and easternmost urban center, the city which is today part of Budapest; Aquileia (Italy), capital of Venetia et Histria (Regio X of Italia), the western corner of our area, the gates between Italia and the Balkans, which served as the strategic basis for both the occupation and colonization of the region; and Salona, written also as *Salonae* (Solin, Croatia), capital of Dalmatia, which is the southernmost large city and a very important center in this area. Unfortunately, this Aquincum–Aquileia–Salona triangle, much like the infamous Bermuda Triangle, tends to make things disappear. Apart from Aquileia where the Friulian and the Italian languages are derived from Latin, there is no surviving Romance language today in the areas of the three cities. Even though once there existed a Dalmatian language, it became extinct in 1898, and we cannot suppose that Latin survived in Pannonia any longer after the Romans relinquished the province. We are investigating a linguistically obscure area where Latin has largely disappeared without a trace, and we shall have to rely heavily on the linguistic data found in Roman inscriptions. We are going to compare the language of the inscriptions of the provincial capitals with that of the provincial country towns, and the result should give us a reliable picture of the Latin spoken in Pannonia Inferior, Dalmatia and in Venetia et Histria. If we succeed in identifying similar tendencies in the Vulgar Latin of these three areas, the shared linguistic phenomena may suggest the existence of a regional variant of Latin in the Alps–Danube–Adria region.

For our purposes, we have established an early period of Vulgar Latin³ between the 1st–3rd centuries AD, and a later period between the 4th–7th centuries. I had to make some concessions for Aquincum and Pannonia Inferior, because data for the later period are extremely sparse there since the city was abandoned at the beginning of the 5th century. In the case of Aquincum, I included data that have been assigned to a wider possible dating and may have fallen either to the 3rd century or to the 4th. We will examine the relative distribution of diverse types of non-standard data found in the inscriptions, a method established by Herman, and we will contrast the linguistic phenomena of the earlier period (1st–3rd c. AD) with the later stage (4th–7th c. AD) of Vulgar Latin. The three provincial capitals will not be compared only with the provincial countries alone, but also with the rest of the provinces of the Roman empire. The inscriptions of country towns and rural areas of Pannonia Inferior, Venetia–Histria and Dalmatia have been included only in the analysis of the linguistically more important later period: for the early period, we are going to use only the data of the provincial capitals. All these linguistic data will be taken from the Computerized Historical Linguistic Database of Latin Inscriptions of the Imperial Age (LLDB).⁴ In order to get a comprehensive and reliable picture, we will analyze two linguistic subsystems, the changes

³ This chronologic division is also the common practice in epigraphy in case of periodizing the otherwise non dated inscriptions as Pre-Christian (1st–3rd centuries) or Christian period (after the 4th century).

⁴ All statistics are counted from data according to the state of the database in April–May, 2016. The registration of all errors from all relevant inscription corpora is nearly complete in all of the examined cities and provinces as of this date.

in the vowel system and the merger of the grammatical cases between the two chronological periods within each of the three examined cities, beginning with the vowel system.

2. THE VOWEL SYSTEM

The first set of diagrams (Diagram 1) shows the relative frequency of the linguistic and orthographic errors found in the Latin inscriptions of Aquincum, Aquileia and Salona, and in addition, the same data from the rest of the early Roman empire, including all Latin-speaking provinces outside Pannonia Inferior, Venetia–Histria and Dalmatia. The diagrams for the early period do not use data of uncertain dating that can be potentially dated after 300 AD. The criteria for the statistical analysis were the following: I did not include data which could be explained by changes in the declension or conjugation systems, syntactical or stylistic reasons. For example, among the O~V confusions, I did not include the /o/ in the *-os* nominative singular ending in words that normally end in *-us* in Classical Latin, since it can be accounted a stylistic variant imitating archaic orthography, and it is not guaranteed to reflect an actual pronunciation. Likewise, a singular ablative *-e* for 3rd declension i-stem nouns would not be included among the data, because it can be explained not only as a vocalic change, but also as a pattern change in the declension, copying the ablative ending of consonant stems based on analogy. I did not use the data marked as “*fortasse recte*” in the LLDB database so as not to distort the statistical percentages with dubiously categorized entries. The number of linguistic data used in the analysis is therefore significantly lower than it would be without these restrictions; however, it is thus guaranteed that our study will be based only on those data that mirror the local vernacular with the highest certainty.

Among the various categories of “errors” or “mistakes” (henceforth used referring to nonstandard linguistic phenomena without judgment), we find three that function as control groups to contrast and help identify “real time” changes and developments. These control groups are the *Errores quasi orthographici*, which cover misspellings coming from sound changes (both vowels and consonants) that have more or less already taken place in earlier periods, such as the disappearance of /h/ from pronunciation; consequently these errors do not reflect the sound changes of the period we are examining, but they are vestiges of the phonetic developments of earlier centuries, thus they are just a matter of orthography. 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 /ae/ > /e/ monophthongization, the /ns/ > /s/ change, the disappearance of the *-m* caduca, and the various changes of the aspirated consonants. The second control group, *Errores orthographici*, contains data which are undoubtedly orthographical in nature: the confusion between the letters C~K~Q⁵ and X~CS. In the third control

⁵ The confusions between QV~Q, QV~K and QV~C (i.e. when the letter V is missing or is erroneously added in the inscription) are not included in this category, because they signal a real change in the pronunciation, the disappearance of the labial element of the labiovelar /kw/, as in *quinque* > *cinque*.

group, *Errores technici*, are collected the purely technical errors of the *lapicida*: e.g. the carving of F instead of E, etc. The last two categories tell nothing directly about linguistic developments but they serve exclusively to help determine what the proportions of the various types of sound changes are in comparison with the random engraving errors.

Based on these control groups of errors, we can see in what degree our three cities adhered to the orthographic norms, and after having the real linguistic errors compared with the control groups, if we find that a given linguistic error is significantly more frequent than the purely orthographic errors, it will mean that this phonetic development was more active and characteristic in the examined period. This is exemplified by the /ae/ > /e/ monophthongization, which can be regarded as a completed process in Salona with 35%, likewise probably in Aquincum with 29%, while Aquileia's 25% is lower than the average in the empire as a whole, which was 23%, suggesting that the process was less complete here (see numbers in Diagram 1). This observation is fortified by comparing the 25% of AE~E confusions of early Aquileia to the percentage of *Errores technici* (12%) and *Errores orthographici* (15%), which is 27% in total: Salona, in contrast, has the same 27% combined percentage of *Errores technici* and *Errores orthographici*, but it has 35% of AE~E mistakes in its inscriptions. It clearly demonstrates that the /ae/ > /e/ development in Salona was more widespread than random orthographic or technical mistakes, consequently Salona was much more advanced on the way to the monophthongization of the /ae/ diphthong than Aquileia or Aquincum. At the same time, it is worthwhile to note that within each city the proportion of the aforementioned non-linguistic error categories combined together is roughly the same: in Aquincum it is 46%, in Aquileia 45%, in Salona 44%. The average within the empire, based on the data of the LLDB, is 49% in this early period. This indicates that both the intensity of vocalic changes and the quality of the orthography was approximately the same in all the three cities in the early period. It is remarkable that among the non-linguistic errors how small the proportion of the *Errores technici* is in Aquileia, giving only 12%, while Aquincum appears the worst with 25%. This might be explained by Aquileia being the best Romanized cultural center among the three cities, with the most qualified *lapicidae*, whereas the numbers in Aquincum reflect the conditions next to the *limes*. All these initial observations about the early period of the vowel system and its relation to orthography justify the comparison of our selected cities as thoroughly Romanized areas with genuine local versions of Latin.

For the analysis of the regional diversification of the vowel system, 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. If we would like to locate the position of these cities within the dialectal continuum of the Latin speaking empire, we have to identify tendencies within their palatal and velar mergers that match such known and existing vocalic patterns as those which shaped the different Romance languages. Such differentiating vocalic phenomena are easily found in the system of /e~/i/ and /o~/u/ changes. There are three territorial variants of how the Romance languages merged the quality of palatal and velar vowels of Vulgar Latin (the following is a greatly simplified description

but satisfactory for this present analysis⁶): 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/.⁷ There was, finally, a third system, the Sardinian, where none of these fusions happened.

⁶ For the purposes of the following description, we do not discuss whether these vowels were open or closed.

⁷ TAMÁS, L.: Einführung in die historisch-vergleichende romanische Sprachwissenschaft. Würzburg 1983, 45–48. The unstressed /o/ did not change to /u/ automatically, however, just as the unstressed short /i/ did not change to /e/ in all cases either, yet, as Tamás notes, it was a strong tendency testified by Romance languages such as the Romanian and Dalmatian.

Diagram 1. Spelling errors revealing vocalic changes in proportion to technical and purely orthographic errors found in inscriptions in the early period

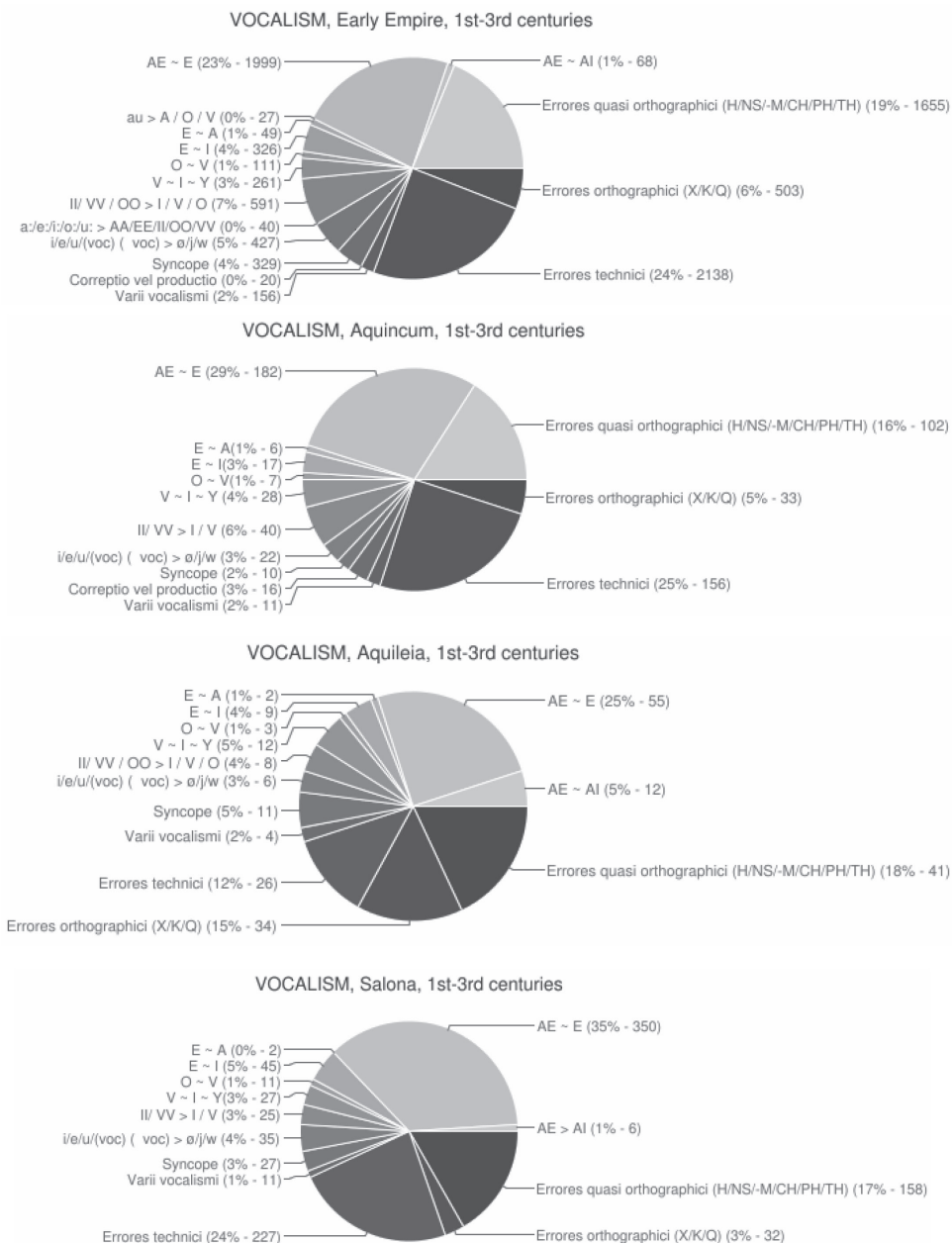


Diagram 2. Spelling errors revealing vocalic changes in proportion to technical and purely orthographic errors found in inscriptions in the late period

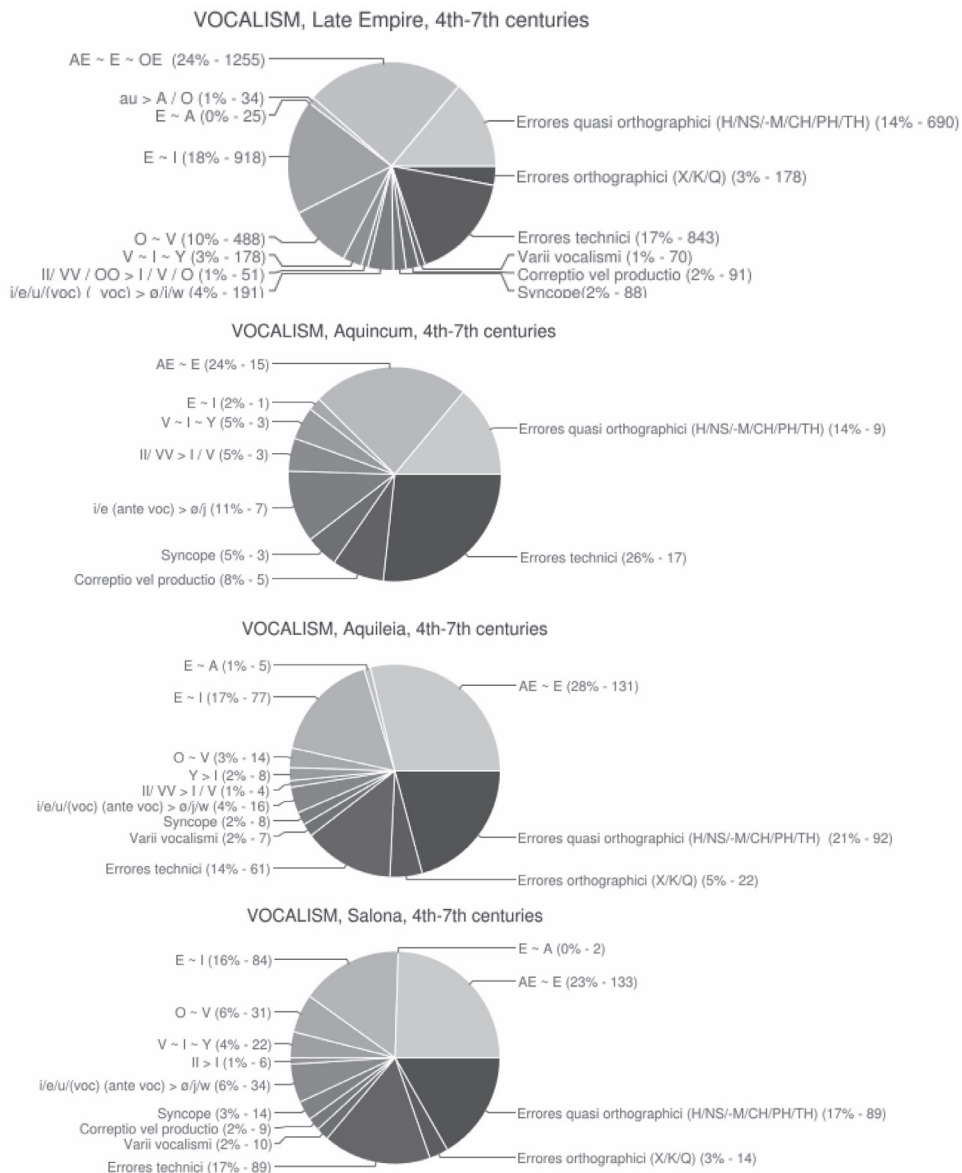


Table 1. The proportions of spelling errors concerning velar and palatal vowels in the early period (1st–3rd c. AD) within the three capitals only

O ~ V misspelling, 1st–3rd centuries								
Early empire		Early Aquincum (and Pan. Inf.)		Early Aquileia (and Ven–Hist.)		Early Salona (and Dalmatia)		
Occurrences of misspelling	Proportion of type of error within all types of O~V misspelling	Occurrences of misspelling	Proportion of type of error within all types of O~V misspelling	Occurrences of misspelling	Proportion of type of error within all types of O~V misspelling	Occurrences of misspelling	Proportion of type of error within all types of O~V misspelling	
Type of error								
ú:>O	2	2%	0	0%	0	0%	0	0%
ó:>V	6	5%	0	0%	0	0%	0	0%
ú>O	9	8%	1	14%	0	0%	0	0%
ó>V	11	10%	0	0%	0	0%	1	9%
u:>O	6	5%	0	0%	0	0%	0	0%
o:>V	5	5%	1	14%	1	33%	2	18%
u>O	35	32%	2	29%	1	33%	4	36%
o>V	37	33%	3	43%	1	33%	4	36%
Total:	111		7		3		11	
Percentage in relation to the E~I errors:	25%		29%		25%		20%	

Stressed

Unstressed

Table 1. continued

		E ~ I misspelling, 1st–3rd centuries							
		Early empire		Early Aquincum (and Pan. Inf.)		Early Aquileia (and Ven–Hist.)		Early Salona (and Dalmatia)	
		Occurrences of misspelling	Proportion of type of error within all types of E~I misspelling	Occurrences of misspelling	Proportion of type of error within all types of E~I misspelling	Occurrences of misspelling	Proportion of type of error within all types of E~I misspelling	Occurrences of misspelling	Proportion of type of error within all types of E~I misspelling
Type of error									
i:>E	Stressed	7	2%	3	18%	0	0%	1	2%
é:>I		27	8%	2	12%	0	0%	9	20%
i>E		36	11%	1	6%	0	0%	2	4%
é>I		31	10%	2	12%	1	11%	0	0%
i:>E	Unstressed	10	3%	0	0%	0	0%	0	0%
e:>I		21	6%	1	6%	0	0%	7	16%
i>E		116	36%	6	35%	6	67%	15	33%
e>I		78	24%	2	12%	2	22%	11	24%
Total:		326		17		9		45	
Percentage in relation to the O~V errors:		75%		71%		75%		80%	

Table 2. The proportions of spelling errors concerning velar and palatal vowels in the late period (4th–7th c. AD) in the three capitals and respective provinces

O ~ V misspelling, 4 th –7 th centuries (in each second column, there follows the provincial country, Pannonia Inferior after Aquincum, Venetia–Histria after Aquileia, and Dalmatia after Salona)														
Type of error	Late empire			Late Aquincum (and Pan. Inf.)			Late Aquileia (and Ven–Hist.)			Late Salona (and Dalmatia)				
	Occur- rences of miss- pelling	Proportion of type of error within all types of O~V misspelling		Occur- rences of miss- pelling	Proportion of type of error within all types of O~V misspelling		Occur- rences of miss- pelling	Proportion of type of error within all types of O~V misspelling		Occur- rences of miss- pelling	Proportion of type of error within all types of O~V misspelling			
ú:>O	5	1%		0	N/A	0%	1	0	7%	0%	0	0	0%	0%
ó:>V	57	12%		0	N/A	0%	0	4	0%	34%	6	0	19%	0%
ú>O	77	16%		0	N/A	0%	2	1	14%	8%	3	5	10%	33%
ó>V	21	4%		0	N/A	0%	1	3	7%	25%	3	1	10%	7%
u:>O	3	1%		0	N/A	0%	1	0	7%	0%	0	1	0%	7%
o:>V	47	10%		0	N/A	0%	3	1	21%	8%	2	2	6%	13%
u>O	213	44%		0	N/A	100%	4	3	29%	25%	7	5	23%	33%
o>V	65	13%		0	N/A	0%	2	0	14%	0%	10	1	32%	7%
Total:	488			0			14				31			
Percentage in relation to the E~I errors:	35%			0%			15%				27%			

Table 2 continued

E ~ I misspelling, 4 th -7 th centuries (in each second column, there follows the provincial country, Pannonia Inferior after Aquincum, Venetia-Histria after Aquileia, and Dalmatia after Salona)												
Type of error	Late empire			Late Aquincum (and Pan. Inf.)			Late Aquileia (and Ven-Hist.)			Late Salona (and Dalmatia)		
	Occurrences of misspelling	Proportion of type of error within all types of E~I misspelling	Occurrences of misspelling	Proportion of type of error within all types of E~I misspelling	Occurrences of misspelling	Proportion of type of error within all types of E~I misspelling	Occurrences of misspelling	Proportion of type of error within all types of E~I misspelling	Occurrences of misspelling	Proportion of type of error within all types of E~I misspelling		
i:>E	15	2%	0	0%	2	3%	1	13%	0	1%		
é:>I	164	18%	0	0%	3	4%	4	17%	2	5%		
i>E	165	18%	0	0%	10	13%	14	0%	7	17%		
é>I	25	3%	0	0%	1	1%	3	0%	1	4%		
i:>E	16	2%	0	0%	3	4%	2	4%	1	2%		
e:>I	82	9%	1	100%	5	6%	6	9%	3	7%		
i>E	376	41%	0	0%	48	62%	41	53%	8	49%		
e>I	75	8%	0	0%	5	6%	13	4%	4	15%		
Total:	918		1		77		84					
Percentage in relation to the O~V errors:	65%		100%		85%		73%					

Our task is very clear: we need to find which Vulgar Latin vocalic merger system would best fit the palatal and velar changes of our three cities. Looking at Table 1, we can see the palatal and velar vowel error data found in the inscriptions of the early period, broken down by stress and quantity. In all the three cities, just like everywhere in the early empire, the most characteristic mistake among the velar vowels in the inscriptions of this early period is the use of the letter V in place of an unstressed /o/, in most of the cases, for a short /o/. However, what is remarkable in contrast to the other parts of the empire, is that in our three cities the long /o/ is represented by the letter V significantly more often: Aquincum shows 14%, Aquileia 33%, Salona 18%, while the average elsewhere in the empire is 5%. Although we must treat this observation with a caveat because we have a statistically small number of data, it may still point to a prominence of the change of unstressed long /o/ > /u/, which phenomenon would be characteristically different from the rest of the empire, and would put our cities, especially Salona,⁸ into the Eastern vowel system. Aquileia seems more conservative than the other two cities, and displays just some vague and random uncertainty and only in the use of velar vowels. Aquincum is more similar to Salona, but it still follows the empire's average in the unstressed velar changes. It is also noteworthy that the merger of the stressed velar vowels is almost totally absent from all the three cities: this corroborates our previous observation that, even in this early period before the 4th century, the Aquincum–Aquileia–Salona triangle seemed to tend towards the Eastern vocalic system, where stressed velars did not merge.⁹

The confusion of the letters E–I in the inscriptions mostly follows the imperial patterns, with Aquileia being a little more conservative again, whereas Salona and Aquincum show a bit more progressive palatal developments. A surprising phenomenon is the low frequency of the error when the stressed short /i/ is denoted by the letter E, which contradicts what we would have expected: according to the testimony of almost all Romance languages, the short stressed /i/ > /e/ change was the most universal vocalic development in Vulgar Latin, which is well demonstrated by the 11% average in the rest of the empire, yet in our three cities we find only 6%, 0% and 4%. At the same time, we find two other phenomena, which similarly go against the tendencies expected on the ground of what we know about the Romance languages and Vulgar Latin sound changes: the stressed long /i/ and /e/ in Aquincum and Salona show a higher degree of confused spelling than elsewhere, and the proportion of /e:/ > I errors in Salona (16%) is also more prominent than in the empire (6%). The 20% frequency of /é:/ > I misspelling in Salona in comparison to the 2% of its opposite, the /i:/ > E, suggests that this phonetic change was probably taking the direction of /e/ > /i/.¹⁰ This may indicate that the /e/~i/ merger was in a very preliminary phase compared to the rest of the empire, since

⁸ Aquileia's 33% cannot be taken seriously because of the extremely small total number of data (3), thus Salona's 18% remains, from the total of its 11 data, the most prominent.

⁹ It is also supported by the fact that the overall proportion of the O > V type of errors (representing both stressed and unstressed vowels) in each city is higher (Aquincum 57%, Aquileia 66%, Salona 63%) than elsewhere in the empire (53%).

¹⁰ Aquincum has two occurrences (12%) of /é:/ > I and three (18%) of /i:/ > E. These small numbers do not allow us to determine with certainty which vowel change was present or dominant in the city, but

it does not seem to follow the patterns expected. In this case, these figures would be explained as some chaotic confusion in the orthography due to the uncertain pronunciation and incomplete status of the vowel changes just begun. Alternatively, the high proportion of /é:/>I, together with its reverse, the /i:/>E, which can be interpreted as hypercorrect spelling due to the E~I confusion, reflecting the same phonetic change as /é:/>I, might indicate that in a manner contrary to the other parts of the empire, where the stressed short /i/ becoming /e/ was a dominant phenomenon, in our examined area there was a tendency of the long stressed /e/ to become closer and to approximate, or outright change to, the long stressed /i/. This process may be hypothesized in all the three cities, but based on statistics it seems more plausible in Salona and Aquincum. However, this hypothesis is not supported by other evidence and scholarship, and it needs to be verified by further research. An attempt at explanation by Greek influence will follow under the discussion of this phenomenon in the later period.

In Table 2 we can see the statistics of the later period. Unfortunately, Aquincum is almost useless in this period because of the lack of inscriptions, but it still gives a very probable impression of the late Vulgar Latin spoken in the city: while there no O~V error could be detected, the E~I confusion, the most active phenomenon throughout the empire, is represented by one instance, which may hint that it was indeed the more active sound change taking place at the time in Aquincum. The intensity of the palatal merger in Aquileia is paramount, 85% in comparison to the O~V misspellings indicating velar changes, but Salona with 73% is also well above the 65%, which is the average in the empire.

Based on the spelling errors of the unstressed velars, Aquileia and Salona appear to belong quite clearly to the Eastern Vulgar Latin vowel system: the unstressed short /u/>/o/ change, which would be typically a Western pattern, and which accounts for 44% of the O~V confusions on average in the rest of the empire, is only 29% in Aquileia and 23% in Salona. The /o/>/u/ type of changes, on the other hand, amount to 35% in Aquileia and 38% in Salona, while the same is only 23% in other provinces. It's interesting that the Eastern pattern of the unstressed velar merger is represented in Aquileia mostly by the long /o/ (21%), whereas in Salona, by the short /o/ (32%).

In the stressed O~V confusions, compared to the previous period, Aquileia now comes up and with 28% it almost reaches the average proportion in the empire, which is 33%. With this, even though the amount of error data is low, we can risk the statement that the Western type of stressed velar merger, when the stressed short /u/ becomes /o/, has taken place here as well: 14% of the data show /ú/>O spelling in Aquileia (it was 0% in the earlier period), and 21% is the ratio of the V>O misspellings of the stressed velars overall, while the O>V is just 7%. All this leads us to the surprising—though based on our previous observations logically following—assumption that Aquileia was developing a “hybrid” vowel system between Eastern and Western paradigms, where the stressed velars fell into line with the Italo-Western vowel system, the unstressed velars with the Eastern. At the same time, Salona shows no such ambivalence. Errors

since the 12% of /é:/ > I is still higher than the average 8% of the empire, the figures of Aquincum do not rule out the possibility that /é:/ was becoming closer in this period.

from the Latin inscriptions of Salona reveal a thoroughly Eastern pattern of the vowel system: only 10% is the V>O type of misspellings of stressed velars overall, in the reverse direction, the proportion of mistakes is 29%. Considering the testimony of Eastern Romance languages, it is unlikely that the stressed /o/ vowels would have become /u/, but it is more plausible to suppose that these were hypercorrect spellings inspired by the intensive /o/ > /u/ transformation happening to the unstressed velars. These velar changes connect the three cities, but Aquileia stands a little bit apart from the rest, and on the boundary of East and West, between two larger dialectal isoglosses, it has mixed properties.

The large proportion of E~I misspellings in the case of both Aquileia and Salona, in harmony with data from the rest of the provinces, demonstrates the advanced status of the palatal merger which was widespread all over the empire. Yet there is a type of error that is strangely dormant in the examined cities: the stressed long /é:/ > I misspelling, which in the rest of the empire has the same percentage (18%) as the stressed short /i/ > E, in Aquileia and Salona, however, it is only 4% and 5%, respectively, while the frequency of /i/ > E mistakes is 13% and 17%, in accordance with the imperial 18%. It strikes us as a truly local phenomenon that, whereas both of these types of errors appear in 18% of the imperial data, in Aquileia and Salona the /i/ > E is prominent, the /é:/ > I is negligible. It is even more interesting, because it is not Aquileia and Salona which deviate from the expected paradigm – they actually produce impeccably correct numbers predicted on the basis of what we know about the universal development of palatal vowels almost everywhere in the empire – but it is the rest of the empire which behaves “strangely” in this later period concerning the misspellings of the stressed palatals. What we observe in Table 2 goes against what we know about the palatal merger in both the Eastern and Italo-Western Vulgar Latin vowel systems, because the stressed short /i/ > /e/ change is universal, except in Sardinia, so it should be prominent in the percentages of the errors everywhere in the empire, while the stressed long /e/ > /i/ is not part of either the Eastern or the Western vowel system, and it should not appear anywhere, except as hypercorrect spellings, prompted by the very widespread stressed short /i/ > /e/ change.¹¹ Therefore, it is Aquileia and Salona that seem to be producing the correct distribution of errors. What happened to the rest of the empire? Why does our region seem normal and the rest of the empire irregular? It is important to note that the “rest of the empire” basically means the Western provinces and Italy, since there are only very few Latin-speaking provinces in the East. Let us recall that in the early period the proportions were reversed, which makes this more of a mystery: the empire had a low frequency of /é:/ > I errors (8%) and a larger number of /i/ > E (11%), whereas Salona and Aquincum a higher number of /é:/ > I errors (20%, 12%), and a lower one

¹¹ The Sicilian dialect and some northern Italian dialects show similar phenomena, but most studies attribute the development of this characteristic to later medieval sound changes, and not to Vulgar Latin. See the problem in e.g. LOPORCARO, M.: Phonological Processes. In MAIDEN, M. et al. (eds.): *The Cambridge History of the Romance Languages*. Vol. I. Cambridge 2011. We might also suppose that instead of a Greek influence, there was a Southern vowel system, which, if vowel change proportions are counted together in the rest of the provinces of the empire, distorts the overall imperial average of the percentage /e:/ > I misspellings.

from /i/ > E (4%, 6%). Since there is a consistency in this pattern of distributions, we must suppose that, if a phenomenon once seems to be active in our Adriatic region, then it decreases, and, at the same time it increases in the West (as the “in the rest of the empire” implies this), it is perhaps not just random, but it may be a “moving” phenomenon, and it is coming from somewhere. Of course, we cannot exclude the possibility that what we experience in Aquincum, Aquileia and Salona is due only to the statistical ambiguity caused by the unsatisfactory number of data, however, in the last couple of years, our methodology, devised by Herman, produced quite reliable predictions and plausible results in Latin dialectology so as to permit some confidence in drawing conclusions, based on Herman’s method, even in the case of a lower number of data. A potential explanation could be an itacism phenomenon going through the empire from East towards West, which, until the end of the 3rd century AD in the East, from the 4th century onward, influenced the Western part of the empire, then disappeared gradually, sometime before the split of various Romance languages. As for what could be the reason for a migrating phenomenon like this, we know that a substantive number of Greek-speaking populations moved from the European and Asian Greek-speaking provinces to Pannonia, Dalmatia and other provinces of the Alps–Danube–Adria region, who carried their language with themselves. Koine Greek long /e/ > /i/ change in pronunciation could have easily influenced errors in the inscriptions, either because the person who erected the inscription had a Greek language background, or because raising of the long /e/ made its way into the Vulgar Latin of at least certain speakers thanks to the massive number of Greek speakers in some areas. A spreading of the Greek population and, in general, Roman citizens from the East towards the West could have happened during the course of the next centuries, but, if not sooner, this itacism might have appeared in the West at least when the Eastern provinces were mostly relinquished by the Romans from the late 4th and early 5th centuries onward, and the former inhabitants moved to the Western provinces. Perhaps they brought this phenomenon to their new home, which increased the frequency of /é:/ > I and /e:/ > I errors elsewhere in the empire. It would not be without parallel to suppose a linguistic phenomenon carried over by immigration of the Eastern Roman population: the otherwise extremely rare and typically Pannonian /e/ ~ /a/ sound changes, after the surrender of the Danube region, appear in greater frequency in the Western provinces.¹²

In most of the cases, we do not find a significant difference between the data coming from the territories outside of the capitals of the three provinces, which are included in the second column of Table 2 showing the O~V and E~I confusions. The mistakes related to the velar vowels in the province of Venetia–Histria, interestingly, in a certain sense almost “complement” the mistakes in Aquileia. The main direction is the /u/ > /o/ change, mostly in case of the stressed vowels. The unstressed velar vowels definitely resemble the Western vowel system. This also holds good for the provincial

¹² More on this GONDA, A.: Aquincum latin nyelve [The Latin Language of Aquincum]. In BÁRÁNY, I. – BOLONYAI, G. – FERENCZI, A. – VÉR, Á. (eds.): *Studia Classica*. Budapest 2015, 317–338, and on its backgrounds MÓCSY, A.: *Pannonia and Upper Moesia: A History of the Middle Danube Provinces of the Roman Empire*. London–Boston 1974, 374.

country of Dalmatia, and not just for the unstressed, but for the stressed velar vowels as well. This may imply that the area between the two capitals constituted a transitional territory, where the farther we were moving to the East, the more dominant the Eastern vowel system would be.

There is an interesting difference between the provincial country of Venetia-Histria and its capital Aquileia regarding the palatal mistakes: the stressed long /e:/>I errors are surprisingly significant in the provincial country in Venetia-Histria, while in Aquileia we saw how infrequent these mistakes were. This gives more support to the theory that the phenomenon of itacism moved from the East towards to the West, which we discussed earlier.

Summarizing the palatal-velar vowel changes, it can be stated that all of our provinces move toward the Eastern vowel system, however, Aquileia keeps some distance from the other two cities. Therefore, we can assume that there is a dialectal fault line in the spoken Latin of the Alps–Danube–Adria region, and that it was very likely divided into multiple related dialectal territories.

3. THE CASE SYSTEM

Now let us examine another subcategory of the language so that we can have a comprehensive picture both in phonetics and likewise in morphology and syntax. Just as we started the analysis of the vowel system with an overview of the theoretical background, we shall do the same with the grammatical cases: the two sets of diagrams, Diagrams 3–4 show the statistics of the errors regarding the noun cases.

As we can read in Herman's famous *Vulgar Latin*,¹³ the merger of the Latin grammatical cases began as a general simplification of the case system all over the empire, starting out from a simplified three-case system, where the nominative kept its independent form, but the accusative merged with the ablative case, and the genitive with the dative. This universal three-case system then gave way to even more simplifications, and these simplifications resulted in three different paradigms in a certain territorial distribution,¹⁴ which can be seen in Table 3. The first of these three simplified case systems of Vulgar Latin is the Gallic Latin case system, where the distinction of the nominative remains intact but the united accusative-ablative case and united genitive dative case merge, thus resulting in a two-case system. The second type, the one prevalent first in Africa, later also in Italia and Hispania, went a step further. Here the nominative merged with the accusative-ablative and genitive-dative cases, and consequently all case inflections ceased to exist, with the exception of retaining a separate form for the plural. The third type is the most interesting for us because it is found in

¹³ HERMAN, J.: *Vulgar Latin*. Pennsylvania State University Press 2000, 58–59.

¹⁴ See the classification in ADAMIK, B.: In Search of the Regional Diversification of Latin: Changes of the Declension System According to the Inscriptions. In *Latin Vulgaire Latin Tardif X: Actes du Xe colloque international sur le latin vulgaire et tardif, Bergamo, 5-9 septembre 2012*. Università degli Studi di Bergamo, Bergamo 2014, 641–661.

the Balkans, partly covering the geographical areas of the three provinces and their capitals that we are examining. This variant has the nominative merged with the united accusative-ablative case, but the dative-genitive preserved its distinct form. If we are searching for dialectal characteristics in the inscriptions of Aquincum, Salona and Aquileia, our first task is to identify which territorial case systems our examined cities belonged to. Theoretically it can be any of the three or four (if we count the original three-case system of the generic Vulgar Latin), but obviously the Gallic system is the least probable candidate due to its geographical distance. So we must simply analyze the statistical distribution of various mistaken uses of the cases. But the question is not as simple as it seems at first. For example, if we find a number of dative-genitive mistakes, how can we demonstrate whether it points to an African-type case system, with all cases merged together, or to the Gallic type, where the nominative is distinct, but all other cases merge, or to the Balkan type, where the dative-genitive is a new case on its own. Is it enough to say that if we find a significantly high number of dative-genitive confusions, it guarantees that we have found decisive evidence supporting the Balkan case system? The problem is that the dative-genitive confusion is part of all of the territorial case systems. In the areas where oblique cases merged, the dative-genitive merger is always present. A higher percentage, especially if we work with a statistically lower number of data, as in the case of our three cities, sometimes can be attributed to randomness or just to the specific topics of the inscriptions, such as a larger number of gravestones, which naturally contain more genitives and datives. Therefore, we must find a methodology adapted to identifying which types of case confusion indicate a certain dialectal case merger system with the highest probability. The appropriate method is included in Table 3 on the case system.

Diagram 3. Case confusions and errors of nominal morphosyntax found in inscriptions in the early period

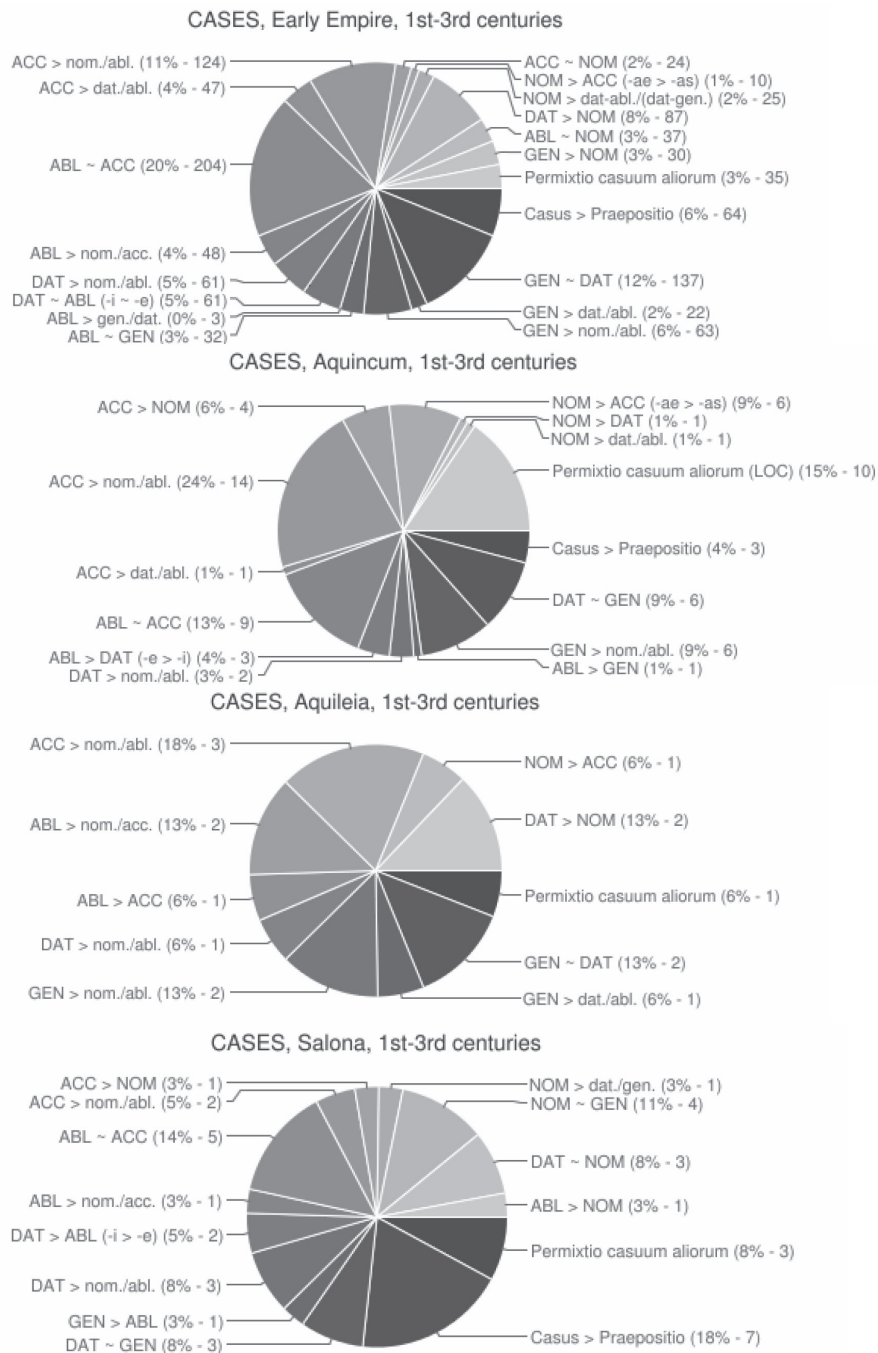


Diagram 4. Case confusions and errors of nominal morphosyntax found in inscriptions in the later period

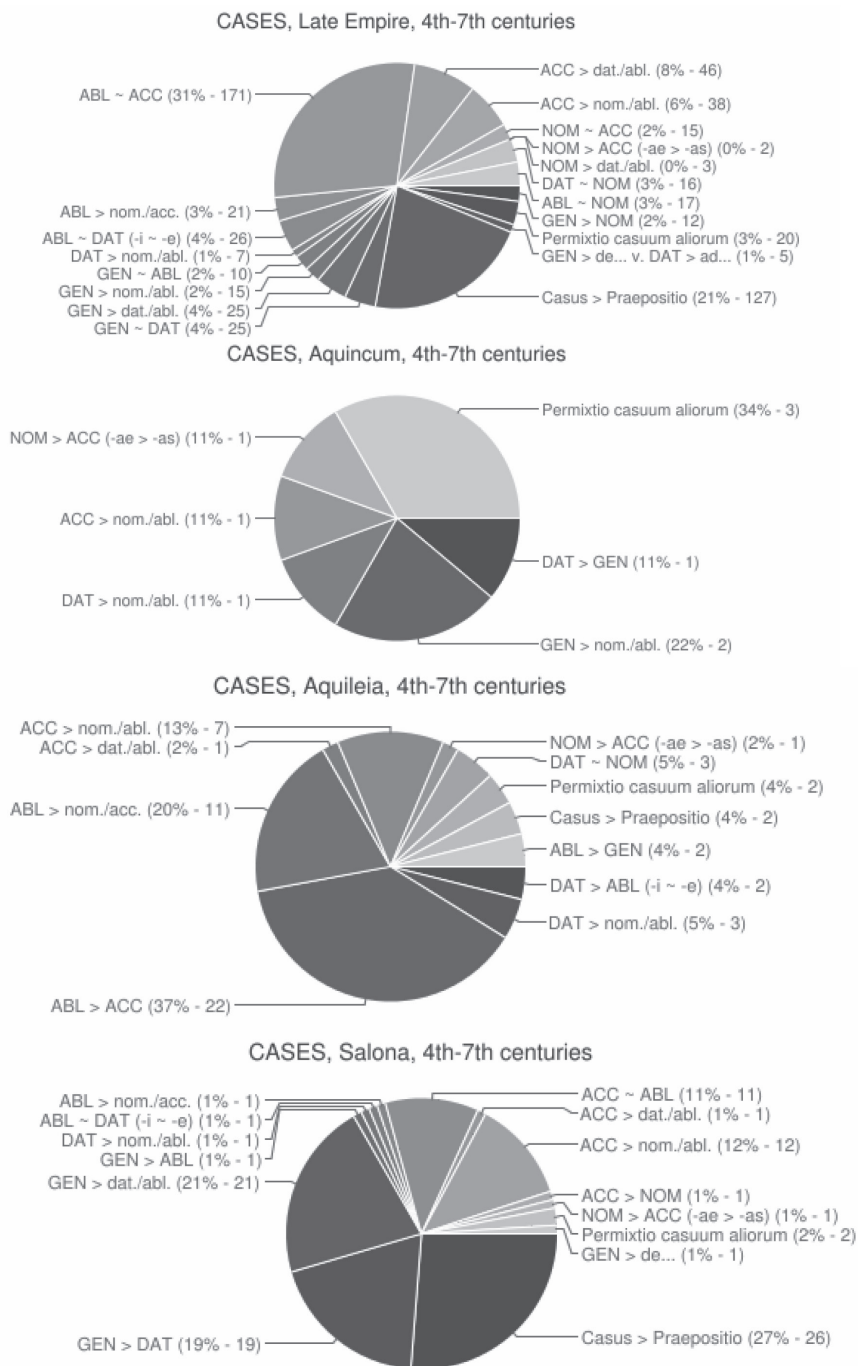


Table 3. The variants of Vulgar Latin case system

Generic Vulgar Latin case system	Gallic system	African-Italian-Hispanic system	Balkan system
1. nom 2. acc–abl 3. gen–dat	1. nom 2. acc–abl–gen–dat	1. nom–acc–abl–gen–dat	1. nom–acc–abl. 2. gen–dat
Case confusions to be expected to occur or not to occur			
		nom–acc	nom–acc
		nom–abl	nom–abl
		nom–gen	
		nom–dat	
acc–abl	acc–abl	acc–abl	acc–abl
	acc–gen	acc–gen	
	acc–dat	acc–dat	
gen–dat	gen–dat	gen–dat	gen–dat
	gen–abl	gen–abl	
	dat–abl	dat–abl	

Our axiom is that there are certain types of case confusions, which are inconsistent with a given territorial case system. Let us take, for example, the Gallic type where there is a distinct nominative in opposition to a single oblique case. We can surely expect great confusion among accusative, ablative, genitive and dative, but it is inconsistent with the system to have any of the oblique cases mistaken with the nominative, since the distinctness of the nominative is the principal characteristic of this case system. On the other hand, we can expect certain case confusions in the Gallic system, such as the confusion between ablative and genitive, which should not be expected in a Balkan-type case system, where the genitive merges with the dative, but the ablative with the accusative. Therefore the absence of genitive-ablative or dative-ablative mergers is much more indicative of Balkan-type case system than the high percentage of genitive-dative confusions, since this latter can be found everywhere, while the absence of the former is exactly what should be expected here. Likewise, the most convincing evidence for a Gallic system is having a lower than usual number of nominative plus oblique case mergers and a higher than usual number of genitive-ablative or dative-ablative confusions, while the confusions between accusative-ablative, dative-genitive, whether it be a high or low number, do not really matter in the identification process, as they can be equally frequent in all types of territorial Vulgar Latin case systems. Table 3 on the case system shows what kind of case confusions should be expected to be characteristically more frequent or absent in each of the Vulgar Latin territorial case systems.¹⁵

¹⁵ ADAMIK (n. 11), with the use of a similar method, successfully identified dialectal patterns in the case mergers of Moesia Inferior, Moesia Superior, Dalmatia, Venetia–Histria and Gallia Narbonensis, which inspired our methodology.

Table 4. Case confusions in Aquincum, Aquileia, Salona, and in their respective provincial countries. For the late period, **in each second column**, there follows the provincial country, **Pannonia Inferior** after Aquincum, **Venetia–Histria** after Aquileia, and **Dalmatia** after Salona

Early empire	Early Aquincum	Early Aquileia	Early Salona
nom–abl 3% (9%)	nom–abl (1%)	nom–abl (13%)	nom–abl 3% (6%)
nom–acc 3% (14%)	nom–acc 15% (39%)	nom–acc 6% (24%)	nom–acc 3% (8%)
nom–dat 8% (15%)	nom–dat 1% (5%)	nom–dat 13% (19%)	nom–dat 8% (19%)
nom–gen 3% (11%)	nom–gen (9%)	nom–gen (13%)	nom–gen 11% (14%)
acc–abl 20% (39%)	acc–abl 13% (38%)	acc–abl 6% (37%)	acc–abl 14% (22%)
acc–dat (4%)	acc–dat (1%)	acc–dat	acc–dat
gen–abl 3% (11%)	gen–abl 1% (9%)	gen–abl (19%)	gen–abl 3%
gen–dat 12% (14%)	gen–dat 9%	gen–dat 13% (19%)	gen–dat 8%
dat–abl 5% (10%)	dat–abl 4% (7%)	dat–abl (6%)	dat–abl 5% (13%)
Permixtio aliorum 3%	Permixtio aliorum 15%	Permixtio aliorum 6%	Permixtio aliorum 8%

Late empire	Late Aquincum (and Pan. Inf.)	Late Aquileia (and Ven–Hist.)	Late Salona (and Dalmatia)
nom–abl 3% (3%)	nom–abl (50%)	nom–abl (20%)	nom–abl (1%)
nom–acc 2% (8%)	nom–acc 11% (22%)	nom–acc 2% (15%)	nom–acc 2% (14%)
nom–dat 3% (4%)	nom–dat (11%) (50%)	nom–dat 5% (10%)	nom–dat (1%)
nom–gen 2% (4%)	nom–gen (22%)	nom–gen	nom–gen
acc–abl 31% (48%)	acc–abl (11%)	acc–abl 37% (72%)	acc–abl 11% (25%)
acc–dat (8%)	acc–dat	acc–dat (2%) (2%)	acc–dat (1%) (8%)
gen–abl 2% (8%)	gen–abl (22%)	gen–abl 4% (7%)	gen–abl 1% (22%) (8%)
gen–dat 4% (8%)	gen–dat 11% 50%	gen–dat 2% (9%)	gen–dat 19% (40%) (8%)
dat–abl 4% (5%)	dat–abl (11%)	dat–abl 4% (9%), 2%	dat–abl 1% (2%) 8%
Permixtio aliorum 3%	Permixtio aliorum 34%	Permixtio aliorum 4%	Permixtio aliorum 2%

However, it is not the only method that can help us identify the dialectal patterns. We can make conjectures on the basis of comparing the error data of Aquincum, Aquileia and Salona, and their respective provinces, with the total of the rest of the Roman empire, by looking for significant differences. In this method, too, we can make use of the observations that we made about the characteristic presence or absence of certain case confusions. For example, where the nominative merged with the accusative, we shall expect a significantly higher percentage of nominative-accusative confusions than what is observable in the rest of the empire. Relying on both of these methods, we shall be able to deduce some conclusions about the development of the Vulgar Latin case system in Alps–Danube–Adria region.

Now we are going to apply these methods I have explained and we will see what the salient or suspiciously absent case confusions in the early and late periods are. Table 4 contains those data of the detailed case-error charts of Diagrams 3–4 that are necessary for the classification of the territorial case system. The numbers in brackets in Table 4 represent data which are ambiguous, where a certain grammatical case is

mistaken with such another case that has a form identical with another case. For example, if a genitive plural is mistakenly replaced by a dative plural, this can equally be interpreted as replacement by the ablative plural, since the dative and ablative plural always have the same inflectional form. In such cases, I account for both the ablative for genitive and dative for genitive type of confusions, but percentages counted by this method are added to the unambiguous data only in the brackets. Highlighted by bold letters are those data that reach 5% even without the addition of ambiguous data of the same type, and those that reach 10% with the addition of ambiguous data, are also highlighted but only if the unambiguous data component reaches at least 1%. We should note that all three cities offer us only a low number of linguistic data, consequently we have to treat the results with some reservations. Only the clearest and most significant percentages should be accepted with enthusiasm.

Taking the data of Table 4 into consideration, a tendency towards the Balkan-type of case system is visible already in the early period. The nominative-accusative and the accusative-ablative permutations reveal that the united nom-acc-abl case is on its way to its creation. Although the nominative-related confusions are more common than expected in every territory, the large proportion of such data is probably due to the statistical ambiguity caused by the low overall number of data. Another reason for the salient ratio of the nominative-dative permutation could be that dative is the most prevalent case used on gravestones and dedicational inscriptions. Also, it was a common technical solution to indicate the person, to whom the inscription is dedicated, in the nominative case instead of the dative case, as if it were a title. Anyway, these ratios do not differ significantly from those of the Roman empire, so no local characteristics are suspected. It is remarkable that in the early period all three cities are close to the overall imperial statistics, but a tendency towards the Balkan-type of case system is visible. Interestingly, Salona appears to be the most advanced of the three cities in moving toward the Balkan type, while taking a look at the later period, we can see that Salona will be the closest to it.

What clearly surprises us is the relatively low number (8%) of the genitive-dative confusions among the data coming from the early period of Salona. Based on that, it can be stated that the Balkan-type of case system has not developed yet at this time in Salona. Interestingly, it seems that Aquileia (and considering the 15% or 39% of the nominative-accusative confusion in Aquincum) advanced towards this direction. In the late period, Salona does not leave any doubt that it belongs to the Balkan-type of case system: the high number of genitive-dative confusions (19% or 40%) – especially compared to the average data of the Roman empire, which is 4% or 8% – and the ratio of the nominative-accusative and accusative-ablative confusions indicates that a two-case system, which contains a genitive-dative and a nominative-accusative-ablative case, evolved.

Aquileia takes a different turn: it seems that it leaves the developing Balkan-pattern in the early period and the complete absence of the genitive-dative confusion and the sporadic nature and randomness of the further confusions points to the fact that it advanced towards the African-Italian-Hispanic model, which was a more common

pattern in the Roman empire.¹⁶ Therefore, we can see that the data of the late period of Aquileia were relatively in accord with those of the Roman empire. An alternative and less likely explanation is possible: on the supposition that the dative-genitive confusions could be few, because the dative case did not merge with the genitive, but with all the other cases, the complete absence of the confusions related to the genitive case may indicate that the genitive was preserved as a separate case. It may be supported by the fact that the ratio of the confusions related to the dative case is relatively high already in the early period: the nominative-dative confusion is 13–19% compared to the Roman empire's 8%. While Salona moved away from this tendency, Aquileia stayed on this path all along.

It is difficult to come to a conclusion in connection with Aquincum because of the relatively low number of the data, however, it is suspected that it changed towards the Balkan-type case system in both examined periods.

Our observations after the examination of the case system show that first Aquincum and Aquileia were more similar to each other and they both moved toward the Balkan-type two case system; however, this procedure of simplification reached only the level of the general three-case system and the generic Vulgar Latin case confusion in Salona. Nonetheless, the case system of Aquileia moved away from that of the other cities in the late period. Aquileia probably followed the so-called African–Italian–Hispanic pattern, on the other hand, Aquincum and Salona followed the Balkan pattern. Interestingly, Aquincum consistently demonstrates the greatest number of instances of mistakes that point to the Balkan-type case system, which may indicate that this type of case-confusion emanates from Pannonia.

The data on the ratio related to the case confusions of the provinces outside of the capital are included in every second column of Table 4, following the data of the capital. In case of Venetia–Histria, the data of the provincial country, just like we have seen at the examination of the vowel system, “complement” the data of Aquileia, as expected, and they also compensate for the relatively low number of the data related to Aquileia. This confirms our suspicion that a dialectal “demarcation line” must have existed within Venetia–Histria, with Aquileia in one part and the rest of the province in the other part of it. We can perfectly observe the dialect's geographical transition between Venetia–Histria and Dalmatia considering the data of the provincial country areas in Dalmatia, which equal to the ratio of Venetia–Histria and Aquileia. The genitive-dative confusion had not developed in the provincial countryside outside of the capital in Dalmatia, in a manner similar to the situation in Aquileia. This phenomenon seems to move from the provincial capital toward the province outside of it.

¹⁶ ADAMIK (n. 11) classified it as Gallic-type, but he noted that the confusion of the genitive and the dative is more isolated in Venetia–Histria than in Gallia. With Aquileia now separately analyzed, we might suppose that the province was not entirely uniform in regards to what type of case system it belonged.

4. CONCLUSION

After having examined the vowel system and the case system in the three central provinces and most important cities of the region, in summary only one further question remains: did we find enough evidence for the existence of a Vulgar Latin dialect of the in Alps–Danube–Adria region? Did we manage to identify any local dialect by comparing the data of the three capitals and their provinces? We can definitely conclude that Pannonia Inferior, Dalmatia and Venetia–Histria have a lot in common: all three territories seem to belong to the Eastern Vulgar Latin vowel system and to the Balkan-type of case system, but Aquileia and Venetia–Histria show mixed elements, most likely by virtue of their being on the frontier between two dialectal subunits. With this, it also turned out that there should have been a dialectal borderline between Aquileia and the other two cities, Aquincum and Salona (which are farther to the East). Therefore, it is possible that further examinations would result in determining not one, but two Vulgar Latin dialects. Additionally, Salona also appears to have its own character (even if less significantly) compared to the two other cities, so the most plausible hypothesis is that two or multiple related dialects could have existed, which all had their own specific but mostly Eastern and Balkan or Illyrian features as typical dialects of the Alps–Danube–Adria region.

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