

## CHAPTER 15

### Geminates and Singletons

A number of different changes took place to reduce original geminate consonants in Latin. In addition, there was another rule (or rules) which produced geminates out of original single consonants. Since these changes did not take place at the same time, and were not necessarily reflected in spelling at the same rate, I will discuss them here separately.

#### <ss> and <s>

Double /ss/ was degeminated after a long vowel or diphthong around the start of the first century BC (Meiser 1998: 125; Weiss 2020: 66, 170), for example *caussa* > *causa*. A search for *caussa* finds 23 inscriptions from the first four centuries AD, compared to 269 for *causa* (a frequency of 8%), although the spelling with <ss> is rather higher in the first century AD (18 or 19 inscriptions containing *caussa* to 60 inscriptions containing *causa* = 23 or 24%),<sup>1</sup> including in official inscriptions such as the *Res Gestae Diui Augusti* (Scheid 2007; CIL 3, pp. 769–99, AD 14),<sup>2</sup> the *SC de Cn. Pisone patri* (9 instances of *causa* to 3 of *caussa* in the B copy; Eck et al. 1968, AD 20), and CIL 14.85 (AD 46, EDR094023). By comparison, a search for (-)*missit* finds 4 instances in the first four centuries AD compared to 192 of (-)*misit* (a frequency of 2%).<sup>3</sup>

<sup>1</sup> I searched the EDCS for ‘caussa’ in the ‘original texts’ search, with a date range of ‘1’ to ‘400’, and for ‘causa’ in the ‘original texts’ search, with a date range of ‘1’ to ‘400’ and ‘1’ to ‘100’ (15/09/2021). I omitted instances of *caussa* from the tablets of the Sulpicii.

<sup>2</sup> Which also has *cl]aussum* alongside *clausum* ‘closed’.

<sup>3</sup> I searched the EDCS for ‘missit’ in the ‘original texts’ search, with a date range of ‘1’ to ‘400’, and for ‘misit’ in the ‘original texts’ search, with a date range of ‘1’ to ‘400’ (15/09/2021). I omitted instances of (-)*missit* from the London tablets.

## Geminates and Singletons

Most of the writers on language clearly considered the <ss> spelling old-fashioned:

‘causam’ per unam *s* nec quemquam moueat antiqua scriptura: nam et ‘accussare’ per duo *ss* scripserunt, sicut ‘fuisse’, ‘diuississe’, ‘esse’ et ‘caussae’ per duo *ss* scriptum inuenio; in qua enuntiatione quomodo duarum consonantium sonus exaudiatur, non inuenio.

Archaic writing should not prevent anyone from writing *causa* with a single *s*: for they also wrote *accussare* [for *accūsāre*], just as I find *fuisse*, *diuississe*, *esse*, *caussae* written with double *ss* [as one would expect]. When these words are pronounced I do not know what the double consonant is supposed to sound like. (Cornutus in Cassiodorus, *De orthographia* 1.34–36 = GL 7.149. 12–15)

quid, quod Ciceronis temporibus paulumque infra, fere quotiens *s* littera media uocalium longarum uel subiecta longis esset, geminabatur, ut “caussae” “cassus” “diuissiones”? quo modo et ipsum et Vergilium quoque scripsisse manus eorum docent.

What of the fact that in Cicero’s time and a little later, often whenever the letter *s* was between long vowels or after a long vowel, it was written double, as in *caussae*, *cassus*, *diuissione*. That both he and Virgil wrote this way is shown by writings in their own hand. (Quintilian, *Institutio oratoria* 1.7.20)

iidem uoces quae pressiore sono edu[cu]ntur, ‘ausus, causa, fusus, odiosus’, per duo *s* scribebant, ‘aussus’.

The same people [i.e. the *antiqui*] wrote words which are now produced with a briefer sound, such as *ausus*, *causa*, *fusus*, *odiosus*, with double *s*, like this: *aussus*. (Marius Victorinus, *Ars grammatica* 4.2 = GL 6.8.5–6)

Although Terentius Scaurus states that there are ‘many’ who use the double <ss> spelling in *causa*:

‘causam’ item <a> multis scio per duo ‘s’ scribi ut non attendentibus hanc litteram . . . nisi praecedente uocali correpta non solere geminari.

I know that *causa* is spelt by many with two *s*-es, as by those not paying attention to the fact that this letter is not geminated unless the preceding vowel is short. (Terentius Scaurus, *De orthographia* 6.11.1 = GL 7.21.14–17)

At Vindolanda the 21 instances of etymologically correct <ss> compare with 24 of <s>, giving a total of 47% (see Table 25).<sup>4</sup> The frequency with which the <ss> spelling is found in *mīs-*, the perfect

<sup>4</sup> I do not include *.ussu*. (641), which could be *ussus* for *ūsus* ‘use’ or *iussū* ‘by order’.

Old-fashioned Spellings

Table 25 <ss> at Vindolanda

<ss>	Tablet (Tab. Vindol.)
ussus	180
oççaşşionem	225
[oc]çassionem	
ussibus	
remisseris	256
missi	268
missi	280
missit	299
missi	309
missi	
promissit	310
misseras	312
missi	314
missi	318
nissi	343
commississem	344
]nissici <sup>a</sup>	595
fussa <sup>b</sup>	645
dimissi	691
]assum <sup>c</sup>	838
missi	868
missi	892

<sup>a</sup> The editors suggest that this is to be taken as *c]onfussici* ‘mixed’.

<sup>b</sup> See Adams (2003: 556–7).

<sup>c</sup> Assuming that the editors are right to understand this as *c]asseum* ‘cheese’.

stem of *mittō* ‘I send’, is out of kilter with the uncommon spelling of this lexeme with <ss> in the epigraphic evidence as a whole.

In 225, <ss> is used in the draft of a letter probably written in the hand of Flavius Cerialis, prefect of the Ninth Cohort of Batavians himself, a man apparently of some education (on which, see Adams

1995: 129, and p. 1), who also uses <uo> for /wu/. It is also found in 255, from Clodius Super to Cerialis; the editors suggest that though a centurion, Clodius may have been an equestrian (but there is no evidence he wrote it himself). In 256, a letter to Cerialis from a certain Genialis, <uo> is also used for /wu/ in *siluolas*; there are no substandard spellings. In the case of 312, a letter from Tullio to a *duplicarius* whose gentilicium is Cessaucius, the editors note that '[t]he hand is rather crude and sprawling', which may suggest a lower level of education in the writer, although no substandard spellings are found.<sup>5</sup>

Metto (the author of 309) and the anonymous author of 180 and 344 were probably civilians, and therefore not necessarily using military scribes. The writer of 309 also uses <xs> for <x>, as does the writer of 180 and 344 (who also writes 181: *uexşillari*), who also includes substandard spellings in 180 (*bubulcariis* for *bubulcariis* 'ox-herds', *turtas* for *tortas* 'twisted loaves' and 181 (*emtis* for *emptis*, *balniatore* for *balneātore*, and *Ingenus* for *Ingenus*). Substandard spellings are also found in 892, a letter from the decurion Masclus to Julius Verecundus, prefect of the First Cohort of Tungrians, which has *commiatum* for *commeātum* and *Reti* and *Retorum* for *Raeti*, *-ōrum*. Since the final greeting is in a different hand, presumably that of Masclus himself, the writer of the rest of the text was probably a scribe.

Tab. Vindol. 343, whose author, Octavius, could have been a civilian or in the military, also contains a number of substandard spelling features (see p. 262), but also <k> for /k/ before /a/, and <xs>. The single example of <ss> in *nissi* is interesting because there was never an etymological \*-ss- in *nisi*, which comes from the univerbation of *\*ne sei*. However, since this univerbation must have occurred after rhotacism, *nisi* presumably contained an intervocalic voiceless /s/, a feature shared almost exclusively with forms like *mīsī* < *mīssī*, where it was the result of degemination of original /ss/. The writer of 343 must have learnt the spelling with <ss> and mistakenly overgeneralised it to *nisi*.

We can conclude that the spelling <ss> for /s/ after a long vowel or diphthong is common at Vindolanda (nearly half the examples).

<sup>5</sup> Then again, the same could be said of my handwriting.

## Old-fashioned Spellings

It correlates with other old-fashioned spellings such as <uo> for /wu/, <xs> for <x>, and <k> for /k/ before /a/. However, it does not correlate with quality of spelling: although it is used by the well-educated Cerialis, it also appears in texts which also feature substandard spellings, and in texts which are not necessarily written by military scribes.

Cotugno and Marotta (2017) argue against <ss> at Vindolanda being an old-fashioned feature, on the basis that since <ss> is found in accounts as well as letters, it cannot have been used as a stylistic marker, as might be the case in letters, and consequently that its use should not be considered an archaism. They suggest that instead it arose as a way of marking a voiceless tense /s/ among Batavian speakers of Latin (North-Western Germanic languages having, like Latin, turned original voiceless \*s into /r/ by rhotacism); in this view, therefore, the use of <ss> would reflect Germanic interference in the Latin spoken by the Batavians at Vindolanda. But this is unlikely for several reasons. Firstly, given that (almost) all examples of <ss> are etymologically correct, Occam's razor would lead us to prefer old-fashioned spelling as an explanation; secondly, spellings with double <ss> are found in other corpora where Germanic influence is not to be suspected (albeit mostly at lower rates); thirdly, other old-fashioned features, such as use of <xs> (Chapter 14) and <uo> for /wu/ (Chapter 8) are also found in documents other than letters; fourthly, it is implausible that the highly educated Cerialis, who otherwise spells in a completely standard manner and uses other old-fashioned features (<uo>), should have used a non-standard spelling solely in the use of <ss>; fifthly, at least three of the documents containing <ss> originate from civilian authors, who were therefore probably not Germanic speakers; these may of course have been written by military scribes but they might well not have been. The argument also rests on the implicit assumption that old-fashioned spelling is a variable that differs according to the register of text in which it is found. This may, but need not, be true, and requires demonstration rather than being a premise.

In the tablets of the Sulpicii, apart from in the sections written by C. Novius Eunus, which I consider separately below, spellings with <ss> are outnumbered by those with <s>: there are 4

instances, all of *caussa*, and 12 of <s> (25%); however, two of the instances of <ss> belong to a single writer, Lucius Faenius Eumenes, and another is found in the scribal portion of the same tablet (one wonders if the scribe, who also uses <s> in *causá*, could have been influenced by the spelling of Faenius). The clustering of examples of <ss> in *causa* and not in other lexemes seems to fit with the usage of the epigraphic evidence as a whole (see Table 26).

Eunus shows a consistent double writing of intervocalic /s/, regardless of whether it results from original /ss/ or not. Once again, this will be an overgeneralisation of the rule that <ss> is to be written for /s/ in many words after a diphthong or long vowel to apply to all instances of /s/ (Adams 1990: 239–40; Seidl 1996: 107–8).<sup>6</sup> Thus, in addition to *promissi* (TPSulp. 68), where <ss> is etymologically correct, he consistently spells the name *Caesar* with <ss> (51; 52, 3 times; 67, twice; 68, 3 times), generally does so for the name *Hesychus* (51, twice, 52, twice, 68 once, but twice with <s>), and also uses double <ss> in writing *Asinius* (67) and *positus* (51; 52, twice).

In the curse tablets, all instances of etymological <ss> are spelt with single <s> (7 examples, 3 of *amisit*,<sup>7</sup> 4 of *causa*<sup>8</sup>), but Britain, and in particular Uley, provides a large number of instances of non-etymological <ss>, particularly in the word *nisi* (see Table 27).<sup>9</sup> Should we explain double <ss> in *nissi/nessi* as the result of failure to learn (or teach) the rule whereby some words with /s/ are written with <ss> due to degemination after a long vowel, as with Eunus? Or should we posit some other local development, whether that be an educational tradition or influence on pronunciation from a second language (presumably Celtic)?

<sup>6</sup> This seems to me to be a more straightforward description of Eunus' practice than that of Adams (1990: 239–40), who refers to 'a feeling on the part of Eunus that, regardless of the pronunciation, a double -ss- spelling after a long vowel or diphthong was older and more "correct"', but also says that '[w]hile -ss- tended to be simplified after a long vowel or diphthong, there was a complementary tendency for s to be doubled after a short vowel'.

<sup>7</sup> Bath, Uley and Britannia, second–third centuries AD.

<sup>8</sup> Carthage and Africa, second or third centuries AD.

<sup>9</sup> *Pisso* (Kropp 3.2/77) is probably Celtic, according to Hassall and Tomlin (1982: 407), rather than a version of the Roman name *Pisō*.

Table 26 <ss> and <s> in the tablets of the Sulpicii

<ss>	Tablet	Date	Writer	<s>	Tablet	Date	Writer
caussa	27	AD 48	Lucius Faenius Eumenes	promisit	13	After AD 44	Scribe
caussa	27	AD 48	Lucius Faenius Eumenes	pr omisit	14	After AD 44	Scribe
caussa	27	AD 48	Scribe	causa	27	AD 48	Scribe
caussa	87	AD 51	Scribe	promisisset	48	AD 48	C. Iulius Prudens
				promisisset	48	AD 48	Scribe
				promisi	56	AD 52	Scribe
				promisi	58	No date	Pyramus, slave of Caesia Priscilla
				promisi	68	AD 39	Scribe
				pr omisisse	81	AD 45	Aulus Castricius
				causa	90	AD 61	Scribe
				causa	91	AD 61	Scribe
				usus	101	AD 48	Scribe

The former seems more likely: it may seem remarkable that (mis)use of <ss> should cluster around this word in particular, but its frequency is probably just the result of the formulaic nature of the curse tablets: in the curse tablets from Britain it is common for the curse to threaten a thief with unpleasant punishments unless (*nisi*) the property is returned either to the owner (thus Kropp 3.22/2, Kropp 3.22/29) or to a temple (Kropp 3.2/24, Kropp 3.18/1, Kropp 3.22/3, Kropp 3.22/5). An alternative formula is that the thief is given as a gift to the god, and ‘may not redeem this gift except (*nisi*) with his own blood’ (3.2/79, 3.22/32). And in most of the tablets there are no other examples of single /s/, so we cannot say that it is only *nisi* which receives this treatment, while in 3.22/4, the only example is *misericordia* for *misericordia* ‘pity’, which is also spelt with a geminate.

However, there are two cases where /s/ is spelt singly in tablets which also have <ss> after a short vowel; in 3.22/3 there is also *amisit*, which has <ss> etymologically, and in 3.22./34 there is *thesaurus*, which does not have etymological <ss>, but which might be expected to be spelt with <ss> if the writer had generalised the rule that all instances of /s/ were to be spelt <ss>. But it is also possible that the writers of these tablets were simply inconsistent in their spelling.

The use of <ss> correlates with <xs> in 3.2/24 (*paxsam* ‘tunic’, but [3]xe[3]), 3.33/3 (*exsigat* ‘may (s)he hound’ twice, but *laxetur*); in both the spelling is not far from the standard, although the former has *Minerue* for *Mineruae* and the latter *lintia* for *lintea*. Most of the tablets have some substandard features in addition to <ss> after a short vowel:<sup>10</sup> *Minerue* for *Mineruae*, *serus* for *seruus*, *redemat* for *redimat*, *nessi* for *nisi* (3.2/79), [di]mediam for *dīmidiam*, *nessi* for *nisi* (3.18/1), *coscientiam* for *cōnscientiam* (3.22/5),<sup>11</sup> *tuui* for *tuī*, *praecibus* for *precibus*, *pareat* for *pariat* (3.22/29), *redemere* for *redimere* (3.22/32).

In the London tablets (see Table 28), <ss> shows a remarkably high distribution, including in tablets relatively late in the first century AD; WT 56 includes two spellings with <ss> (*promissit*,

<sup>10</sup> The exceptions are 3.22/2 and 3.22/34.

<sup>11</sup> I assume that *pedit* for *perdidit* is at least partly a mechanical error (haplography) rather than reflecting a substandard spelling.



Old-fashioned Spellings

Table 27 *Unetymological <ss> for /s/ in the curse tablets*

<ss>	Tablet	Date	Location
nissi nissi	Kropp 3.2/24	Third–fourth century AD	Aquae Sulis
nessi	Kropp 3.2/79	Third–fourth century AD	Aquae Sulis
nessi	Kropp 3.18/1	First half of the third century AD	Pagans Hill
nissi	Kropp 3.22/2	Mid-third century AD	Uley
nissi	Kropp 3.22/3	Second–fourth century AD	Uley
ness[i] ness[i]	Kropp 3.22/5	Fourth century AD	Uley
nissi	Kropp 3.22/29	Second–third century AD	Uley
nessi	Kropp 3.22/32	Second–third century AD	Uley
misericordia	Kropp 3.22/34	Second–third century AD	Uley

*ussurae*) and one with <s> (*causae*). In addition there is mistaken use of <ss>, in *messibus* (WT 29) for *mēnsibus* ‘months’, which would have been pronounced [mē:sibus] and hence appeared to be a case of single /s/ after a long vowel, where only one <s> is found in the 4 other instances of the same word in this tablet. The word *ceruesa* ‘beer’ is generally supposed to have been borrowed from Gaulish, and there is no evidence that it ever contained double /ss/. Four other instances in this tablet are spelt with single <s>. If the reading is correct, this would be an example of use of <ss> for /s/ after a short vowel. Once again, this is a corpus which has high frequency of the spelling <xs>.

In the tablets from Herculaneum, geminate <ss> is only found in the name *Nassius* (TH<sup>2</sup> A3, D13, A16, 4),<sup>12</sup> where the spelling

<sup>12</sup> Cf. *nāsus* ‘nose’ and the cognomen *Nāsō*.

change may have been retarded in a name (cf. *causam* TH<sup>2</sup> 89, *promisi* A10, *repromisisse* 4, all 60s AD). In the letters, the only possible instances of <ss> being used after a long vowel or diphthong is *bessem* ‘two thirds (of an *as*)’ in CEL (72) in a papyrus letter of AD 48–49 from Egypt. I think the preceding vowel was probably long, but cannot be certain.<sup>13</sup> Otherwise, 31 other instances show <s>.<sup>14</sup>

In the Isola Sacra inscriptions there are instances of *causa* (IS 57), *laesit* (IS 10), *manumiserit* (IS 320), *permisit* (IS 142 and 179) and, with <ss>, the word *crissasse* (IS 46) for *crīsāsse* ‘(of a woman) to move the haunches as in coitus’ (in a graffito written on a tomb; not earlier than the reign of Antoninus). The word is otherwise found

<sup>13</sup> Evidence for vowel length in this word is exiguous and somewhat contradictory. Both TLL and OLD give the nominative as *bēs* and the genitive as *bēs(s)is* (although differing as to which *s* the brackets are placed around in the genitive). The nominative seems not to be attested in a metrical context which would allow us to tell whether it scanned light or heavy. The only evidence for a long vowel appears to lie in the claim by the (probably) sixth century AD grammarian Adamantius Martyrius that ‘likewise I have found *bes* with a long vowel as a monosyllabic noun’ (*bes longam similiter nomen monosyllabum repperi, De b et u, GL 7.177.1*). However, it is possible that Martyrius’ claim is based on metrical evidence unavailable to us; on the assumption that the nominative went back to *\*bess* (like the word from which it is presumably derived, *as* < *\*ass, assis* ‘an *as*’), this might explain heavy scansion in the nominative. In the rest of the paradigm, if the vowel were long we would expect the eventual standard spelling of the stem to be *bes-* rather than *bess-*. In fact, both of these spellings are found in manuscripts (TLL s.v.), and inscriptionally: *besse* (CIL 11.213, no date), *bese* (CIL 12.1657, second half of the second century; AE 2001.1326; and AE 1957.128, first half of the third century). The examples in the TLL suggest that the <ss> spelling was fairly widespread, which is somewhat surprising if the vowel was long. On the other hand, the very fact that there exist frequent spellings with a single <s> implies that the vowel is long (compare the non-nominative forms of *as, assis*, of which TLL records only a single instance of *as-*). In addition, the manuscript spelling *bissem, bissis, bisse*, mostly in relatively late authors, may also suggest original /e:/, which subsequently fell together with /i/ (unless there was some contamination with *bis* ‘twice’). Furthermore, the derivative *besalis* ‘comprising two thirds’ is almost always spelt with one <s> in ‘libri boni’ (TLL s.v.), and has a heavy initial syllable at Martial 8.71.7, suggesting *\*bēssalis* > *bēsalis* (according to the *mamilla* rule, on which see Weiss 2020: 169, one would expect *\*bessalis* to give *\*besalis*, if there were a short vowel in the first syllable). This evidence leans towards a long vowel, though without being completely conclusive. But the only plausible explanation of the form *bes* does so by way of univerbation of a phrase *duo (partes) assis* ‘two parts of an *as*’, via *\*du’assis* > *\*duūassis* > *\*dūūassis* by vowel weakening, followed by the development of the classical stress rule leading to penultimate stress to give *\*dūūēssis*, with initial syllable syncope to give *\*dūēssis* > *bessis*. This form was then (re)interpreted as a genitive, with a nominative singular *bes* being backformed on the model of *as, assis* (on all of this, see Vine 2016, with further examples of initial syllable syncope). And this explanation relies on a short vowel.

<sup>14</sup> Texts with <s> include CEL 13, from AD 27; 73, 74, 75, 76, 78 and 79 (the Rustius Barbarus ostraca, probably from the first century AD); and 85 in Egypt, from AD 84, a papyrus copy of imperial codicil, in chancellery hand.

## Old-fashioned Spellings

Table 28 <ss> and <s> in the London tablets

<ss>	Tablet	Date	<s>	Tablet	Date
occas{s} ionem messibus	WT 29	AD 80–90/5	causa	WT 30	AD 43–53
fussum	WT 38	AD 80–90/5	promisi	WT 41	AD 80–90/5
u]s{s}uras promis{s}it	WT 55	AD 65/70–80	causae	WT 56	AD 65/70–80
promis{s}it us{s}urae	WT 56	AD 65/70–80			
cerues{s}am	WT 72	AD 65/70–80			

with a single <s> at AE 2005.633 (second half of the second or early third century AD) and Solin (2020, no. 24a). An original geminate is implied by the absence of rhotacism, and is found in Martial and in the grammarians (TLL 1206, s.v. *crīso*).<sup>15</sup>

At Bu Njem there is no sign of the <ss> spelling, but 17 examples of original /ss/ with <s>. At Dura Europos there are 5 examples of (*a*)*misit*; there are no examples of a double spelling for an old geminate.

### <ll> and <l>

Double /ll/ was degeminated after a diphthong, as in *paulus* <*paullus* ‘little’, *caelum* ‘sky’ <*\*kaid-(s)lo-* (Weiss 2012: 161–70) and between [i:] and [i], as in *uīlicus* ‘estate overseer’ beside *uīlla* ‘estate’, *mīlle* ‘thousand’ beside *mīlia* ‘thousands’ (Meiser 1998: 125).<sup>16</sup> The latter change had taken place by the second half of the first century BC.<sup>17</sup>

<sup>15</sup> The etymological handbooks disagree on its origin, but IEW (937) and Walde and Hoffman (1938–54: 1.292–3) are right to compare Middle Irish *crith* ‘trembling’, Middle Welsh *cryt*, *cryd* ‘shivering, trembling’ <*\*krit-u-* or *\*krit-i-*, Old Saxon *hrīdo*, Old High German *rīdo* ‘fever, trembling’ <*\*kreit-on-* (Kroonen 2013: 248). It will originally be a repetitive formed from *\*kreit-sā-* (on this formation, see de Vaan 2012: 317–18; Weiss 2020: 424–5).

<sup>16</sup> Oddly, Weiss (2020: 193, 314 fn. 151) acknowledges only the first environment.

<sup>17</sup> Perhaps the earliest example is *uīlicus* (AE 2004.539, first century BC; 70–31 BC according to EDRo16499); the earliest inscriptional example I can find for *mīlia*, *mīlibus* is dated to the reign of Tiberius (AE 1978.286). CIL 1<sup>2</sup>.638 includes *miliarios* ‘mile-’,

The standard spelling for *mīlia* and *mīlibus* retained the double <ll> until late in the first century AD. Not including the TPSulp. tablets, I find 27 inscriptions containing these spellings dated to between AD 14 and 100 (many of which would be characterised as official),<sup>18</sup> and only 11 in this period with the spelling *milia*, *miliarius*, *milibus*.<sup>19</sup>

The only reference to the geminate spelling in this context in the writers on language which I have found is by Terentius Scaurus, who actually recommends the double spelling:

uerum sine dubio peccant qui ‘paullum’ [et Paullinum] per unum ‘l’ scribunt . . .

There is no doubt that those who write *paullus* with one *l* are wrong . . . (Terentius Scaurus, *De orthographia* 6.7 = GL 7.15–16)

The corpus with the greatest number of relevant forms is the tablets of the Sulpicii, all in the word *mīlia*, *mīlibus* ‘thousands’.<sup>20</sup> By comparison to the use of <ss>, where <s> is favoured by both scribes and writers other than Eumenes and Eunus, <ll> appears to be the standard for *milia* and *milibus* in the tablets, in agreement with the rest of the epigraphic evidence.<sup>21</sup> In Table 29 there are 30 instances of these words being spelt with <ll>, by both scribes and others; none of the 11 instances of spelling with <l> are by scribes; 9 of them are by C. Novius Eunus, whose spelling is highly substandard (see p. 262).

In the Caecilius Jucundus tablets, the balance between <ll> and <l> in *millia* ~ *milia* is much more even, with 4 instances of each spelling (Table 30). It looks rather as if use of *milia* tends to correlate with less standard spelling, and *millia* with more standard spelling, as we might expect if *millia* is standard.

*meilia* ‘miles’ twice in the second century BC, but this inscription does not write geminate consonants, cf. *tabelarios* for *tabellarios*, *suma* for *summa*.

<sup>18</sup> Including in the *Res Gestae* of Augustus (Scheid 2007; CIL 3, pp. 769–99).

<sup>19</sup> The searches I carried out were: ‘millia’ in the ‘wrong spelling’ option on the EDCS with the dates set as from AD ‘14’ to ‘100’; ‘millibus’ in the ‘wrong spelling’ option on the EDCS with the dates set as from AD ‘14’ to ‘100’; ‘milia’ in the ‘no solutions’ option on the EDCS database with the dates set as from AD ‘14’ to ‘100’; ‘milibus’ in the ‘no solutions’ option on the EDCS database with the dates set as from AD ‘14’ to ‘100’ (11/11/2020).

<sup>20</sup> There is also a peculiar mistaken use of <ll> in *Putiollis* (TPSulp. 9) after a short vowel.

<sup>21</sup> Curiously, Adams (1990: 238 fn. 54) refers to the spelling with geminate <ll> as hypercorrect.

Table 29 <I> and <I> in the tablets of the Sulpicii

<I>	Tablet (TPSulp.)	Date	Written by	<I>	Tablet (TPSulp.)	Date	Written by
millia	22	AD 35	Aulus Castricius Celer	millia millia millia millia milibus	51	AD 37	C. Novius Eunus
millia	46	AD 40	Nardus, slave of P. Annius Seleucus	millia millia millia milia	52	AD 37	C. Novius Eunus
millia	46	AD 40	Scribe	m[i]llia	76	No date	C. Trebonius Auctus
milli[bus]	49	AD 49	Scribe	millia	82	AD 43 or 45	L. Patulcius Epaphroditus
millia millia millia	51	AD 37	Scribe				

millia	53	AD 40	L. Marius
millia			Jucundus
millia	53	AD 40	Scribe
millia	54	AD 45	Scribe
millia			
millia	57	AD 50?	Scribe
millia			
millia			
millia	58	No date	Pyramus, slave of Caesia Priscilla
millia	59	No date	Unknown non-scribe
millia	66	AD 29	M. Caecilius Maximus
millia	69	AD 51	C. Sulpicius Cinnamus
millia	71	AD 46	C. Julius Amarantus
millia	74	AD 51	Scribe

Table 29 (*cont.*)

<ll>	Tablet (TPSulp.)	Date	Written by	<l>	Tablet (TPSulp.)	Date	Written by
mill[ <i>l</i> ]ia							
millia	77	AD 58	C. Caesius Quartio				
millia	79	AD 40	Scribe				
millia	98	AD 43 or 45?	Q. Poblcius C[...]				
millibus	108	No date	Unknown non- scribe				

Table 30 millia and milia in the *Caecilius Jucundus* tablets

< >	Tablet (CIL 4.3340.)	Date	Writer	< >	Tablet (CIL 4.3340.)	Date	Writer
milia	3	AD 52 or 33	Non-scribe	milia	6	AD 54	Salvius the slave
milia	145	AD 58	Privatus, slave of the colonia	milia	26	AD 56	N. Blaesus Fructio
mjillia	150	AD 58	Privatus, slave of the colonia	milia	28	AD 57	M. Fabius Secundus
milia	151	AD 62	Privatus, slave of the colonia	milia	34	AD 57	M. Aurelius Felicio



There are no instances of this word written by scribes. The writing of N. Blaesus Fructio (CIL 4.3340.26), who uses *milia*, is highly substandard (see p. 9 fn. 11). That of Salvius the slave (6) is much better, but omits final <m> in a number of words (see p. 262). M. Fabius Secundus (28) omits all final <m>: *de]ce(m)*, *auctione(m)*, *mea(m)*, *tabellaru(m)*, *s[ign]ataru(m)*. In what is left of the writing of M. Aurelius Felicio (34), the spelling is largely standard, but he does omit the <n> in *duce(n)tos*.

By comparison, in tablet 3 there is little remaining of the writing of the non-scribe but the spelling is standard. Privatus, slave of the colonia, who writes the other tablets with *millia*, has largely standard spelling as well as the old-fashioned spellings *seruos* (142) and *duomuiris* (144). He does, however, have occasional deviations from the standard: *Hupsaei*, *Hupsaeo* for *Hypsaei*, *Hypsaeo* (tablets 143, 147 respectively), *pasquam* for *pascuum* (145, 146), *pasqua* for *pascua* (147).

In the tablets from Herculaneum, there are two instances of <ll> in this lexeme (*millibus*, TH<sup>2</sup> 52 + 90, interior; *mi]llib]us* A10, interior), both from the 60s AD, and none of <l>. The spelling with <ll> is also found in the name *Pa]ullin]ae* (62).

In the letters the only case of <ll> is the name *Paullini* (CEL 13); I have found no other instances of original /ll/ after a long vowel or diphthong. At Vindolanda there is one instance of *milia* without a geminate (Tab. Vindol. 343 – the letter of Octavius, whose writing is characterised by both old-fashioned and substandard spelling; p. 262). The curses have *paullisper* (Kropp 1.5.4/3) in a curse tablet from Pompeii and hence no later than AD 79, whose spelling is entirely standard, but *Paulina*, 8.4/1, from the mid-second century AD, and *milibus* in 3.10/1 and 3.18/1, both from third century AD Britain. At Bu Njem there are no examples of original /ll/, and at Dura Europos there is only 1 example of the name *Paulus*. In the Isola Sacra inscriptions there is *milia* (IS 233, dated to the reign of Hadrian), and the names *Paulus* (176), *Paulino* (IS 288) and *Paulinae* (IS 343). This compares with one example of the <ll> spelling in the name *Paullinae* (IS 90).

### Singletons for Geminate Consonants after Original Long Vowels

There were (at least) two sporadic rules which produced geminate consonants in the original sequence  $(^*)V:C > VCC$  (Weiss 2010; Sen 2015: 42–78). One of these affected high vowels followed by a voiceless consonant, in forms like *Iūpiter* > *Iuppiter*. Since long /i:/ and /u:/ from original  $*e_i$  and  $*ou$  were affected, a *terminus post quem* for the change is the mid-second century BC. Another rule resulted in the sequence /a:R/ becoming /arr/ (Weiss), or synchronic variation between /a:R/ and /aRR/ (Sen).

According to Sen, the first rule was a diachronic change, while the variation between /a:R/ and /aRR/ was a continuing synchronic development. However, the exact status of the rules is difficult to establish, partly because the evidence of both manuscripts and inscriptions is not always easy to analyse or to date, partly because older spellings could continue to be used beside newer spellings, and partly because of the sporadic nature of the change: in the case of *cūpa* ‘cask’ and *cuppa* ‘cup’, both versions were maintained beside each other (and both continued into Romance), although with a semantic divergence. However, support for the *Iūpiter*-type rule being diachronic comes from the non-attestation of the long vowel variants of some words such as *uitta* ‘headband’ <  $*ūita$ . The evidence for the change involving /a:R/ is even weaker, but all the best examples ( $*pāsokaiḍā > parriḥida$  ‘parricide’, *gnārus* ‘knowing’ beside *narrāre* ‘I tell’, *parret* ‘it appears’ besides  $(ap)pāreō$  ‘appear, be visible’) suggest a direction of change /a:R/ > /aRR/ and not vice versa, so I take it that this too is a diachronic change.

In the corpora there are two lexemes which contain these environments. The first is *parret*. The consistent long vowel in *pāreō* and its derivatives suggests that the long vowel was original in this word (de Vaan 2008: 445). Festus says that it should be spelt with <r>, on analogical grounds, but noting that it appears particularly in contracts:

*parret*, quod est in formulis, debuit et producta priore syllaba pronuntiari, et non gemino *r* scribi, ut fieret *paret*, quod est inveniatur, ut comparet, apparet.

## Old-fashioned Spellings

*Parret*, which is found in contracts, ought both to be pronounced with a long first syllable, and not to be written with double *r*, so that it becomes *paret*, which is *inuiniatur* ‘should it be proved’, as in *comparet* and *apparet*. (Festus, *De significatu uerborum* 262.16–19)

There is no clear chronological development in the attestations of *parret* and *paret*, but Festus does suggest that (in practice), the double <rr> spelling was found particularly in contracts, and, in our admittedly meagre data, there does seem to be a distinction between the impersonal usage with <rr> in legalistic contexts, while <r> was used in other senses and contexts. The <rr> spelling is attested in 87 BC in the Tabula Contrebiensis from Spain (CIL I<sup>2</sup>.2951a), the *Lex riui hiberiensis*, also from Spain, from the time of Hadrian (Beltrán Lloris 2006), and in a fresco depicting a wax tablet in a villa near Rome of around 60–40 BC (Costabile et al. 2018: 78, and for the dating 22–3).<sup>22</sup> The spelling *paret* appears in the non-impersonal usage at CIL 12.915, CIL 13.5708, Kropp 4.4.1/1 (first century AD), and impersonal but not legalistic at CIL 3.3196 (dated to the second century by the EDCS: EDCS-28600186). The spelling *parret* (TPSulp. 31, scribe) is, therefore, not old-fashioned in the sense that the older form was probably *pāret*. However, it may be that its use with this spelling was specific to the legal/contractual context, and may therefore reflect particular training for this genre for the scribe.

The other relevant lexeme is *littera*, for which the non-geminate spelling is rare; *leteras* (CIL I<sup>2</sup>.583, 123–122 BC) probably represents /li:tɛra:s/ (Sen 2015: 218), and one may add *litteras* (CIL I<sup>2</sup>.3128; 100–50 BC, EDR102136), *l̄iteras* (Castrén and Lilius 1970, no. 266). The spelling with <tt>, on the other hand, is well attested inscriptionally, the earliest examples being *litteras* (CIL I<sup>2</sup>.588.10, 78 BC and CIL I<sup>2</sup>.590.1.3, 70s BC; Sen 2015: 218). In my corpora, the geminate is used in *litteras* in TPSulp. 46 (scribe, AD 40), 78 (non-scribe, AD 38) and 98 (non-scribe, AD

<sup>22</sup> Costabile et al. (2018: 82) also observe that ‘in the Veronese parchment *codex* of Gaius *parret* is found only twice, at III 91 and IV 43, probably surviving through the tradition from the original manuscript of the Antonine era on papyrus, and elsewhere normalised to *paret* by post-classical copyists’ (nel codice pergamenaceo veronese di Gaio *parret* si trova solo due volte in III 91 e IV 43, probabilmente per sopravvivenza dalla tradizione manoscritta originaria di età antonina, su papiro, per il resto normalizzato sempre dai copisti postclassici in *paret*).

## Geminates and Singletons

43 or 45). The geminate in *litteras* is found twice at Kropp 6.2/1, from Noricum. The spelling *literae* (Kropp 11.1.1.7, Carthage, first–third centuries AD) is probably a reflection of the writer’s inability to spell geminates correctly rather than an old-fashioned spelling (cf. *posit* for *possit* (twice), *posu[nt]* for *possunt*, *posint* for *possint*, *ilos* for *illōc*). An early letter (CEL 9, last quarter of the first century BC), has *litteras*; otherwise we find only *littera-* (CEL 13, AD 27, then 7 other examples, from the second to the fifth century). The spelling with a single <ɾ> in CEL 9 might, however, be due to a general loss of geminates in this author, who also writes *disperise* for *disperisse*, *sucesorem* for *succesōrem*, *suffragatur* for *suffrāgātur*, rather than reflecting an old-fashioned spelling.