CHAPTER 14

<xs> for /ks/

Mancini (2019) provides a useful summary of the history of the spelling <xs> for <x>. The earliest example in a Latin inscription is exstrad (twice) in the SC de Bacchanalibus (CIL 1².581) of 186 BC, ¹ although two instances of faxsit in testimonia of the Laws of the Twelve Tables are argued by Mancini to reflect an edition carried out by Sextus Aelius Paetus, curule aedile in 200 BC, consul 198, and censor in 194.² In addition, the Marrucinian 'Bronze of Rapino', datable to the second half of the third century BC, has lixs 'law' < *lēg-s. In a corpus of inscriptions from this period until 30 BC, Mancini counts 135 occurrences of <xs> beside 1,310 of <x> (<xs> thus making up 9% of the total).

From the Augustan period it more or less dies out in 'official' inscriptions, with occasional archaising usages in juridical inscriptions in the first and, once, second century AD. However, it continues to be used in other inscriptions until a late period, although always making up a small minority compared to uses of <x>. Mancini compares the 655 examples of *uixsit* '(s)he lived' with 62,946 cases of *uixit* (1%); likewise he finds 497 cases of *uxsor* beside

¹ Mancini argues that the reason for the creation of the digraph <xs> is the innovatory practice, at the same period, of writing geminate consonants double. According to him, this reflects a move towards a principle of matching spelling to syllabification, whereby for example in /mit.to:/, the spelling *mitto* more accurately represents the fact that the geminate /tt/ crosses a syllable boundary than *mito*. Likewise, in *deixsit* the digraph <xs> marks the syllabic structure /de:k.sit/. However, if this is correct, it is hard to see why, in the *SC de Bacchanalibus*, we should find <xs> but a determined avoidance of geminate consonants. Cugusi (CEL 2, p. 22) sees use of <xs> as an expansion of the spelling in words like *exspectō* recommended by the grammarians just below.

² As explained by Mancini (2019: 29–30), the first is in Aulus Gellius, *Noctes Atticae* 20.1.12, read in the δ family of manuscripts (Parisinus Lat. 8664 = Q and Leidensis Vossianus F7 = Z) as well as Franequeranus (= F); this has better authority than *faxit*, which is found in the γ family. The second is a conjecture by Schoell for *factum sit* found in all manuscripts of Macrobius, *Saturnalia* 1.4.19. Given the fairly common use of <xs> into the imperial period (below), there seems little certainty that the <xs> spelling could not have entered the text of the Tables subsequent to the early second century BC.

6,858 of *uxor* (7%).³ To what extent these figures are reliable as to the rate at which <xs> was used is unclear. The EDCS with which he carried out these searches throws up plenty of false positives, and with such great numbers not much checking can have been carried out. As an additional contribution, I carried out searches for *sexaginta* and *sexsaginta*, and checked them for accuracy. The former appeared in 71 inscriptions, the latter in 14 (16%), giving a much larger minority for <xs>.⁴ The variation may reflect the smaller numbers of *sexaginta* in inscriptions, or genuine lexical variation as to use of <xs> versus <x> (although no particular pattern arises on this front from my investigation of the corpora below).

The spelling <xs> is barely mentioned by the writers on language, except for a brief hint by Cornutus and more explicit statements by Caesellius and Terentius Scaurus that <xs> should only be used in compounds consisting of the preposition *ex* plus a word beginning with /s/. There is no suggestion that <xs> is old-fashioned, just incorrect:

'exsilium' cum s: "ex solo" enim ire, quasi 'exsolium' . . .

Exsilium with s: because it comes from ex solo, as though it were exsolium ... (Cornutus, in Cassiodorus, De orthographia 1.77 = GL 7.152.6)

quaecumque uerba primo loco ab s littera incipient, ea cum praepositione 'ex' composita litteram eandem s habere debebunt ... cetera, quae simplicia sunt et non componuntur, sine ulla dubitatione x tantum habebunt, ut 'uixi', 'dixi', 'uexaui', 'faxim', 'uxor', 'auxilium', 'examen', 'axis' et 'exemplum'.

Any word which begins with s ought to maintain the s when preceded by the preposition ex...⁵ Other words, which are *simplicia* and not compounds, should have, without any doubt, only x, such as *uixi*, *dixi*, *uexaui*, *faxim*, *uxor*, *auxilium*, *examen*, *axis*, and *exemplum*. (Caesellius, in Cassiodorus, *De orthographia* 10.18–45 = GL 7.203.14–24)

item cum 'exsul' et 'exspectatus' sine 's' littera scribuntur, cum alioqui adiecta ea debeant scribi, quoniam similiter 'solum' 'spectatus' que dicatur, et adiecta praepositione saluum esse illis initium debeat.

³ These percentages are mistakenly given as 0.01% and 0.06% respectively by Mancini (2019: 21–2); before rounding up, 497/(497+6,858) is 0.068 (to three significant figures).

⁴ Just taking the headline numbers from the search gave 82 inscriptions with *sexaginta*, and 13 with *sexaginta* = 14% <xs>.

⁵ Followed by a long list of examples of words whose simplex does and does not begin with *s*, beginning with *exsilio* and *exspecto*.

Likewise when *exsul* and *exspectatus* are written without *s*, when on the contrary they should be written with it, since one says *solum* and *spectatus* alike, and their initial letter ought to be preserved when the preposition is added. (Terentius Scaurus, *De orthographia* 7.2 = GL 7.22.13–16)

Terentius Scaurus also mentions people who argue that words ending in <x> should have <xs>; again this is described as incorrect rather than old-fashioned:

similiter peccant et qui 'nux' et 'trux' et 'ferox' in <'s'> nouissimam litteram dirigunt, cum alioqui duplex sufficiat, quae in se et 's' habet.

Likewise those who direct an additional s onto the end of nux, trux and ferox, when, on the contrary, the double letter (x) is enough, which contains s within it. (Terentius Scaurus, $De\ orthographia\ 6.4 = GL\ 7.19.13-14$)

The marginality of the spelling <xs> is confirmed in my corpora, although with some variation. In the Vindolanda tablets (see Table 19) I find 10 certain instances of <xs> vs 66 of <x>.7 Mancini (2019: 27) reproves Adams (1995: 90) for the statement that 'xs is commonly written for x in the tablets', but at 13%, <xs> does appear at a higher rate than *uixsit* and *uxsor* in Mancini's calculations from the whole corpus of Latin inscriptions. Adams

<xs></xs>	Tablet	Document type
uexșillari	Tab. Vindol. 181	Account
exsigas	Tab. Vindol. 284	Letter
sexs	Tab. Vindol. 301	Letter
axses	Tab. Vindol. 309	Letter
axsis	Tab. Vindol. 309	Letter
axses	Tab. Vindol. 309	Letter
uexsare	Tab. Vindol. 343	Letter
uexsilló	Tab. Vindol. 628	Letter
maxşimum	Tab. Vindol. 662	Draft of letters
dixsit	Tab. Vindol. 735	Unknown

Table 19 < xs> at Vindolanda

⁶ I have not included instances of compounds of *ex* and a word beginning with <s>.

⁷ There is also the name Exş.. [(Tab. Vindol. 581), and ..xşe (Tab. Vindol. 876), where we cannot rule out that the <s> is etymological.

sees the use of <xs> as formal or archaising, while Mancini (2019: 28) argues that it is 'informal and bureaucratic' (informale e cancelleresco). This disagreement may be due to a different perspective on the status of the Vindolanda tablets. Mancini is comparing the presence of <xs> in 'everyday documents' such as the tablets from Vindolanda, London and those of Caecilius Jucundus from Pompeii, alongside papyrus letters, with its absence in public epigraphy. By comparison, Adams is more focussed on the usages of individuals in the Vindolanda tablets, and variation between genres within the corpus.

Clearly, the letters found at Vindolanda are 'informal' relative to public epigraphy, but we do have a hint that they could be marked out from other genres by the tendency for *apices* to be used preferentially in letters as opposed to other types of text (see pp. 235–6). And in fact, *apices* and <xs> co-occur in Tab. Vindol. 628. The sequence <xs> also tends to appear in letters, which provide 8 out of 9 instances in which the genre of the text is recognisable. This compares with <x>, of which 37/65 instances appear in letters (one document is of uncertain genre). The numbers are too small, however, to be sure that <xs> does correlate with letters. The use of <xs> is also not necessarily consistent within a text: 301 has *explices* beside *sexs*, and in the letter of Octavius (343), apart from *uexsare*, there are 6 instances of <x>, consisting of *dixi* and 5 examples of the preverb *ex*-.

Adams also observes that the three examples of $\langle xs \rangle$ in 309 appear alongside the spelling of $m\bar{\imath}s\bar{\imath}$ 'I sent' as missi, missi, in a text whose spelling is otherwise standard. And in fact there are further connections between use of $\langle xs \rangle$ and $\langle ss \rangle$. The same hand that writes 181, which contains uexsillari, also writes 180, another account, and 344, a letter which enables the author to be identified

⁸ For more on this, see pp. 268–9.

⁹ Although the editors remark of Tab. Vindol. 309, which contains 3 of the examples of <a >x >> , that '[t]hough couched in the form of a letter, it is in fact no more than an inventory of goods despatched'.

The distribution has a *p*-value of 0.0804, using the Fisher Exact Test Calculator at www .socscistatistics.com/tests/fisher/default2.aspx (accessed 23/10/2020), which is low, but not statistically significant at a significance level of 0.05.

The use of $\langle x \rangle$ in *souxtum* apparently represents $/\chi$ / in this Celtic loan word (Adams 2007: 597–8).

as a civilian trader. 180 (which has <x> in ex) also has <ss> in ex in ex in ex in ex is ex in e

The spelling <xs>, therefore, appears in texts which use other spellings which might be considered old-fashioned. It is reasonable to suppose that <xs> may have had a similar value. From a sociolinguistic perspective, <xs> appears in letters from a range of backgrounds. In 301, the writer Severus is a slave, writing to a slave of the prefect Flavius Genialis in his own hand. The author of 284 is probably a decurion, writing to the prefect Flavius Cerialis, and 628 is also a letter to Cerialis from a decurion called Masclus (but both are probably using scribes; note the use of apices in the latter). The author of 309 (Metto?) is probably a civilian trader, though most of the letter is written in another hand. Very little remains of 662 or 735. All of these show otherwise standard spelling, as far as we can tell (other than Masclus for Masculus in 628, with a 'vulgar' syncope; but since this is the author's name this does not necessarily suggest a lower educational standard on the part of the writer). 12

On the other hand, the writer of 343, whose author was Octavius, who may have been 'a civilian entrepreneur and merchant, or a military officer responsible for organising supplies for the Vindolanda unit', according to the editors, combines use of <xs>, <ss> and <k> with the substandard spellings <e> for <ae> in illec for illaec 'those things', arre for arrae 'pledge', que for quae 'which', male for malae 'bad', <ae> for <e> in mae for mē 'me',

¹² 735 has *Ingenuus* as opposed to the substandard *Ingenus*, which also appears at Vindolanda.

and <i> for <ii> in necessari for necessari 'necessary'. The letter 344 contains only standard spelling, but the accounts 180 and 181, by the same writer, do include a few substandard spellings: bubulcaris for bubulcāriīs 'ox-herds', turṭas for tortās 'twisted loaves' (both 180), emtis for emptīs, balniatore for balneātōre, and Ingenus for Ingenuus (all 181).

Overall, Adams' view that <xs> is formal or archaising, within the context of the Vindolanda tablets, receives some support from its association with other old-fashioned spellings, in the form of <ss> for <s> by three different writers, and with <k> in one of them. However, we cannot be sure that its greater frequency in letters is due to the relatively more formal status of these than other types of document. The writers who include <xs> in their texts all probably belong to the sub-elite, consisting of slaves, scribes and perhaps civilian traders. It is found in texts which demonstrate both standard and substandard spelling. It is conceivable that <xs> is not actually a major part of the scribal tradition of the army itself, since at least 4 of the instances come from letters whose authors were civilians (5 if Octavius, the author of 343, was also a civilian), and only 284 (I example) and 628 (I example) seem to have definitely been written by military personnel. But of course, military scribes, and/or education in writing, may have been available also to non-military personnel.

Two of the other corpora are particularly noteworthy in terms of use of $\langle xs \rangle$. One is the London tablets, which contain 4 examples of $\langle xs \rangle$ and only 3 of $\langle x \rangle$ (see Table 20). The spelling of WT 44 and 45 is standard; WT 55 is substandard (see p. 264), and also uses another old-fashioned spelling, $\langle ss \rangle$ after a long vowel in $u]s\{s\}uras$ and

< _{XS} >	Text	Date	<x></x>	Text	Date
exs	WT 44	AD 53-60/I	a duxerat	WT 29	AD 80-90/5
			sex	_	AD 62-65/70
dixsit	WT 55	AD 65/70- 90/5	ex	WT 72	AD 65/70–80
Sexsti	WT 67	AD 90/5-125			

Table 20 < *xs*> *and* < *x*> *in the London tablets*

promis{s}it; the spelling of WT 67 is also substandard (see p. 264). As for the tablets which have <x>, WT 29 has substandard features (see p. 264), along with 2 instances of <ss> in [o]cassionem for occāsiōnem 'occasion' and (hypercorrect) messibus for mēnsibus 'months'. WT 31 has standard spelling except for Aticus for Atticus, which may simply be a haplography. WT 72 has Butu for Butum, but the reading is difficult and the word is at the end of a line anyway so may reflect lack of space. What other text there is has standard spelling (n.b. Ianuarium) and a hypercorrect use of <ss> in ceruessam. It seems that in these tablets <xs> can correlate with both standard and substandard spelling, and with <ss>, while <x> is found with substandard spelling and <ss>, but there is hardly enough evidence to draw particular conclusions from this other than that <xs> is remarkably common.

The other corpus is the tablets of Jucundus, in which <xs> is characteristic of the scribes, who use it 35 times to 11 instances of <x>, whereas the other writers have 2 examples of <xs> and 15 of <x> (see Table 21 and Table 22). In fact, there seem to be three important factors which apply to the use of <xs>. 25 of the examples of <xs> occur in the word *dixsit* (and *dixserunt*) in tablets concerning auctiones, which contain the formulas habere se dixsit ... '(s)he said that (s)he has [a certain amount of money]' and accepisse se dixit/ dixserunt ... '(s)he/they said that (s)he/they has/have received [a certain amount of money]', which are always written by scribes. The difference between use of <xs> in dīxit/dīxĕrunt and in other words by the scribes is statistically significant. 13 An explanation for this might be that the spelling with <xs> was felt to be particularly appropriate for this word because it appears in a formulaic context. 14 However, even if we leave dīxit/dīxerunt out of the equation (and not including one uncertain case), there is still a statistically significant difference between the rates of use of <xs> and <x> in other words by scribes (10:11) and other writers (2:15); see

The distribution has a p-value of 0.0312 (at p ≤ 0.05), using the Fisher Exact Test Calculator at www.socscistatistics.com/tests/fisher/default2.aspx (accessed 16/11/2020).

If so, it could be relevant that all instances of dixsit occur in the sequence habere se dixsit, while the two spellings of dixit appear in a different version accepisse se dixit (although the only instance of dixserunt in the plural also has accepisse but uses the <xs> spelling).

Table 21 < xs> and < x> in dixit in the Caecilius Jucundus tablets

<xs></xs>	Tablet (CIL 4.3340)	Date	Writer	<x></x>	Tablet (CIL 4.3340)	Date	Writer
dixsit	2	AD 27	Scribe	dixit	I	AD 15	Scribe
dixsit	10	AD 55	Scribe	dixit		AD 54	
dixsit	II	AD 55	Scribe		3	54	
dixsit	12	AD 55	Scribe				
[di]xsit	13	AD 55	Scribe				
dixsit	14	AD 55	Scribe				
dixsit	17	AD 55	Scribe				
dixsit	22	AD 56	Scribe				
dixsit	25	AD 56	Scribe				
dixsi[t	26	AD 56	Scribe				
dixsit	27	AD 56	Scribe				
dixsit	28	AD 57	Scribe				
dixsit	31	AD 57	Scribe				
dixsit	32	AD 57	Scribe				
di]xsit	34	AD 57	Scribe				
dixsit	35	AD 57	Scribe				
dixsit	40	AD 57	Scribe				
dixsit	43	AD 57	Scribe				
dixsit	46	AD 56?	Scribe				
dixsit	47	?	Scribe				
dixserunt	48	?	Scribe				
dixs[it]	55	?	Scribe				
di]xsit	57		Scribe				
dixsit	78	?	Scribe				
dixsit	124	?	Scribe				

Table 23.¹⁵ Tablet I is the earliest of the tablets, and perhaps reflects a slightly different orthographic training: as well as using <x> in dixit, it also uses the spelling pequnia versus the pecunia found uniformly in the other tablets.

It is difficult to identify a cohesive pattern in the use of <xs> across the corpora. On the one hand, the scribes of the Caecilius Jucundus tablets heavily favour <xs> at a rate of 69%, or 53% if

¹⁵ The distribution is statistically significant at p ≤ .05, with a p-value of 0.014 (Using the Easy Fisher Exact Test Calculator at www.socscistatistics.com/tests/fisher/default2 .aspx (accessed 27/11/2020).

Table 22 < xs > and < x > in other words in the Caecilius Jucundus tablets

	Tablet (CII.				Tablet (CII.		
<xs></xs>	4.3340)	Date	Writer	<x></x>	4.3340)	Date	Writer
Maxs.	10	AD 55	Scribe	buxiaria(m) 5	5	AD 54	Scribe
s[e]xs	2 I	AD 56	M. Alleius Carpus	ex	17	AD 55	Non-scribe
sexsaginta	23	AD 56	Slave Of Umbricia	ex	25	AD 56	D. Volcius Thallus
			AIIIOCIIIS				
Maxsim(i)	38	AD 57	Scribe	ex	25	AD 56	D. Volcius Thallus
Axsioc.	40	AD 57	Scribe	se]x	26	AD 56	N. Blaesius Fructio
Maxsimus	49	3	Scribe	ex	28	AD 57	M. Fabius Secundus
Maxsi(mi)	49	3	Scribe	ex	33	AD 57	A. Messius Speratus
proxsima	71	3	Scribe ^a	ex	33	AD 57	Uncertain ^b
Maxsimi	80	3	Scribe	Axiochus	40	AD 57	Sex. Pompeius
							Axiochus
Maxsi[m]i	84	ż	Scribe	sexages	40	AD 57	Sex. Pompeius
							Axiochus
Alexsandrini 100	100	3	Scribe	ex	40	AD 57	Sex. Pompeius
							Axiochus
Alexsandrini 100	100	3	Scribe	ex	45	ż	P. Alfenus Varus
				ex	45	ż	Scribe
				ex	46	AD 56?	Non-scribe
				Sextili	71	6	Scribe

Table 22 (cont.)

	Tablet				Tablet		
<sx></sx>	4.3340)	Date	Writer	\X>	4.3340)	Date	Writer
				Sextilì	92	i	Scribe
				Dextri	103	3	Scribe
				ex	141	AD 58	Privatus, slave of the
							colonia
				ex	141	AD 58	Scribe
				ex	142	AD 58	Privatus, slave of the
							colonia
				Sextio	143	AD 59	Privatus, slave of the
							colonia
				Sextio	143	AD 59	Scribe
				Sextio	143	AD 59	Scribe
				ex	145	AD 58	Privatus, slave of the
							colonia
				ex	145	AD 58	Scribe

^a Page 2 of this tablet, on which proxima occurs, has lost almost all its writing, but on the basis that there are nine witnesses, this tablet must be the record of an auctio, in which case the inner writing is always carried out by a scribe (Andreau 1974: 18–19).

Page 2 of this tablet contains the *chirographum* of A. Messius Speratus, which seems to end on that page; on page 3, on which ex occurs, we then get what appears to be an incomplete version of the auctio formula, which is in the third person, and hence would be expected to be written chirographum, and it looks as though the writer may have started off using the first person: Zangemeister prints abere m.., and comments inchoasse videtur aliam constructionem: me (scripsi vel dixi) '. It seems more likely that for some reason Messius also wrote this page. by a scribe. However, the spelling is substandard (abere for habēre 'to have', Mesius for Messius, Pompes for Pompeīs), as in the

Table 23 *Use of <xs> and <x> by* scribes and others in the Caecilius Jucundus tablets

	Scribes	Others
<xs></xs>	10	2
<x></x>	9	15

we assume that dix(s)it is a special case, which compares significantly with the usage of the other writers, who use <xs> only 12% of the time. By comparison, the typologically, geographically and chronologically similar corpora TPSulp. and TH² demonstrate an avoidance of <xs>, on the part of both scribes and others. The former has a single use of <xs> in *sexstum* (TPSulp. 46, scribe), compared to 87 other examples of <x> (and one case of <cs> in *Alecsi*, TPSulp. 90). The latter has 32 instances of <x> and none of <xs>.

In Kropp's corpus of curse tablets there are 19 instances of <xs> overall, and 131 of <x>, giving a rate of 13%. 7 of these are in texts dated to the second and first centuries BC; Table 24 gives all examples from the first century AD onwards. All of these tablets except 3.2/26 feature substandard spellings; 3.2/24 and 3.22/3 also have (hypercorrect) <ss> in *nissi* for *nisi* 'if not'.

The Isola Sacra inscriptions contain a few instances of <x>, with 5 compared to 105 of <x>. I example of uixsit (IS 258) compares with 43 instances of the perfect stem of $u\bar{u}u\bar{o}$ with <x>, and the I example of uxsori (IS 98) with 7 of uxor (though this does give rates of 2% and 14% respectively, both twice as frequent as the rates found by Mancini in the epigraphic evidence more generally). Strikingly, the word most frequently spelt with <x> is the cognomen $F\bar{e}lix$, with 3 instances of <x> (IS 44, 225, 312) versus 4 of <x>. Only one of the inscriptions containing <x> also contains a substandard spelling, in the form of comparaberunt for comparauerunt (IS 312). The same inscription also has <x> in Maxima.

Table 24 < xs> in the curse tablets

	Tablet	Date	Location
exsemplaria	Kropp 2.2.I/I	AD 100–150	Hispania Baetica
Exsactoris	Kropp 3.2/9	Third century AD (?)	Aquae Sulis
paxsa	Kropp 3.2/24	Third-fourth century AD	Aquae Sulis
exsigatur	Kropp 3.2/26	Second-third century AD	Aquae Sulis
paxsam	Kropp 3.2/54	Third-fourth century AD	Aquae Sulis
exsigat	Kropp 3.22/3	Second-fourth century AD	Uley
exsigat	Kropp 3.22/3	Second-fourth century AD	Uley
maxsime	Kropp 5.1.3/1	First-second century AD	Germania Superior
uxsor	Kropp 5.1.4/8	First half of the second century AD	Germania Superior
uxso[r]	Kropp 5.1.4/8	First half of the second century AD	Germania Superior
Maxsumus	Kropp 5.1.4/10	First half of the second century AD	Germania Superior
proxsimis	Kropp 7.5/1	c. AD 150	Raetia

The other corpora mostly show no or little use of <xs>. The only instance of <xs> in the Bu Njem ostraca is <code>sexsagi[nta</code> (O. BuNjem 78), in a letter written by a soldier called Aemilius Aemilianus, whose spelling is not as bad as in some of the other texts, but does include some substandard features (see p. 263). They also include the non–old-fashioned <code>transmisi</code>, which appears in all the letters, but this spelling probably comes from the template that Aemilianus was using (Adams 1994: 92–4). There are 24 instances of <x> in other ostraca. At Dura Europos <xs> is entirely absent, and there are more than a hundred cases of <x>. Vindonissa has no examples of <xs>, but only 3 of <x>. The graffiti from the Paedagogium have 25 instances of <x> and none of <xs>.

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Within the corpus of letters, <xs> is interestingly absent from those of Claudius Tiberianus, despite the preponderance of both old-fashioned and substandard spellings (although there are only 8 instances of <x>, 4 each in P. Mich VIII 467/CEL 141 and 472/147). The letters definitely attributed to Rustius Barbarus also have 9 instances of <x> (CEL 73, 74, 77, 78) and none of <xs>, although CEL 80, which belongs to the same cache but may not have been written by Rustius, has *exsigas* for *exigās* 'you should take out'. Of the other letters, the private letter of the slave Suneros (CEL 10), of Augustan date, has 3 instances of <xs> (on Suneros' spelling, see pp. 10–11). There is then 1 in CEL 88 (probably first century AD), and CEL 140, a papyrus copy of an official letter of *probatio* from Oxyrhynchus (AD 103), which also contains three examples of <x>, and which has otherwise standard spelling (including <k> in *karissim[e]*).