The sibilant sounds of Hispano-Celtic: phonetics, phonology and orthography

On the strength of both recent discoveries concerning the use of the Latin alphabet in different places of Central Hispania to write official documents in Celtiberian and the new readings of indigenous names on inscriptions belonging to Latin, not Celtiberian, epigraphy, some novel reflections on Celtiberian phonology are in order. Epigraphic and linguistic considerations in turn lead to a refinement in the delimitation of Hispano-Celtic regions. These attend to dialectal differences and to the emergence and stabilisation of scribal habits. New etymologies for some hitherto uninterpreted or even misinterpreted personal names are put forward. Some of these have the comparative advantage of matching inherited Celtic forms surviving in Insular Celtic and Gaulish. Finally, three new readings are proposed: BVGAN-SONIS, CLOVSOCVM and AISAE, possibly also VXSEISVS.

Keywords: Celtiberian languages; Indo-European reconstruction; Celtic etymology.

1. Introduction 1

The fate of the Indo-European sibilants, and clusters containing sibilants, in Celtiberian (or, broadly speaking, Hispano-Celtic)² has been a bone of contention for thirty years. The discovery that the use of *san* and *sigma* for the two sibilant phonemes was not arbitrary, as a rather vague scholarly consensus had dictated *faute de mieux*, but followed a precise, discernible pattern, shattered the foundations of the discipline (cf. Villar 1995). From this moment on, I shall use Villar's notation $\langle s \rangle$ (for san) — $\langle z \rangle$ (for sigma).³

The subsequent discovery of the existence of «lost» cases in the nominal inflection, specifically an ablative singular (spelt -az, -uz, -ez and -iz), caused commotion (and, I have to say,

¹ As always, I want to thank the editor and two anonymous reviewers for their work. N.B.: Texts written in the Latin alphabet are rendered in SMALL CAPITALS; texts in the Iberian script, here labeled «Early Celtiberian», are in *italics*. The sign $<\chi>$ used for Celtic reconstructed forms stands for a possibly uvular voiceless fricative sound that goes back to IE /p/ in coda position preceding alveolar obstruents. Abbreviations of special interest are: CCelt. = Common Celtic; HCelt. = Hispano-Celtic. For syllabograms of stop + vowel, the traditional, overarching system will be used, which assumes that the Celtiberian script does not distinguish between voiced and voiceless stops. This may be simply interpreted as an "archigraphemic" transliteration by those who prefer to see internal differences in some texts. I shall make an exception when a whole text (specifically in the area of the Arevaci) can demonstrably make sense by consistent application of the so-called "dual system".

² Hispano-Celtic territories exhibit interesting differences in vocabulary, phonetics, onomastic subsystems (e.g. numeral-based names), etc. For the time being, however, we are unable to detect non-trivial differences going back to Common Celtic that are suggestive of different Celtic language subfamilies having penetrated into Hispania at different stages. Under the most economic assumption, one or more waves of speakers of Celtic traversed the Pyrénées, but most of the traits separating Hispano-Celtic from the rest of Celtic belong to a more recent period.

³ This option is favoured over $\langle s \rangle - \langle s \rangle$ in *MLH* I (which is counterintuitive) and $\langle s \rangle - \langle \tilde{\sigma} \rangle$ in *MLH* IV and V (which benefited from Villar's discoveries but has turned out to be misleading and simply does not do justice to the phonemic contents of at least the second of these signs). Celtiberian texts will, when possible, be cited according to *MLH* I (coins: inscription numbers are preceded by A.) and *MLH* IV (rest of texts: numbers are preceded by K.).

stubborn disbelief in some quarters, which in a few cases endures to the present day). None-theless, in the meantime Villar's acclaimed work has been partly called into question and refined to some degree. In my view, some of the criticism is justified and several of his tenets need correction. Others, however, will remain pending issues for the foreseeable future.

In Celtiberian texts written in the Iberian script (from now on referred to as «Early Celtiberian»), the sign <s> reflects the outcome of Indo-European /s/ in initial and final position (and probably in onsets after voiceless obstruents) and of several clusters in medial position. For a number of scholars, it also represents the unchanged, voiceless outcome of /s/ in intervocalic position, mainly on the strength of *soisum* 'of these, of them', gen. pl. masc. of the anaphoric pronoun *so*, ultimately going back to Indo-European *toisōm.

By contrast, $\langle z \rangle$ is a cover symbol that represents the outcome of Indo-European /d/ and /dh/ in intervocalic and final position (its phonemic status is, however, uncertain; see below), and /t/ in final position. In addition, $\langle z \rangle$ systematically renders an affricate or fricative phoneme going back to -t(i)j- (cf. Prósper 2014, with literature), and alternates with 'historical' $\langle ti \rangle$, often in the same names, for unknown reasons, related to dialectal or sociological differences.⁴ Finally, according to Villar (followed by Prósper 2014) $\langle z \rangle$ also represents the voiced outcome of /s/ in some contexts in medial position, of which these are my best examples:

- 1) $arznas < *pqrsn\bar{a}s < *pqrsn\bar{a}s$ 'parts, ground lots' (K.1.1, Botorrita), a match of OIr. rann that is strongly suggestive of the fact that the metathesis * $\varphi ars > *\varphi ras$ is a late, probably Insular Celtic phenomenon⁵;
- 2) kabizeti 'may take' < *kabi-s-e-ti (K.1.1., Botorrita; cf. 3rd p. pl. CABINT in Novallas);
- 3) *uerzaizokum* (K.1.3, Botorrita) is a family name probably going back to *uer-s- 'better, higher', in OIr. *ferr*. It may be identical to Goth. *waírsiza*, OHG. *wirsiro* 'worse', Skt. *varṣīyas* 'better' (< *uers-is-) with an intrusive /a/ found in Hispano-Celtic names going back to comparatives and superlatives.⁶ In superlative forms in *-isamo-, the sibilant may have undergone expressive strengthening, like in Latin (as opposed to weakening in the rest of Italic), contrasting with -aiz- in the comparative.⁷
- 4) *uerzoniti*, subjunctive form of a present **uper=sonh*₂-*eie* (K.1.1., Botorrita), cf. Gaul. SONITI (*RIG* II, L- 101, Lezoux), possibly U. 3rd p. impv. SONITV/*sunitu* (*Tabulae Iguvinae*) 'cause to obtain?'. This example is especially interesting because a root beginning with /d/ is virtually ruled out: since the first phoneme in the second member of a transparent compound usually behaves as if it stood in word-initial position, /d/ is preserved as a stop in every context potentially conducive to lenition: cf. *uertatuz*, *uertatos* < *d^hħ₁- 'put' (K.1.1, Botorrita), *ambitinkounei*, *ambitiseti* < *d^hing^h- 'build' (K.1.1, Botorrita), *taruotureska* (K.23.2, Osma) = TARVODVRESCA. Accordingly, the rejection of the above etymology by *LIV*: 533, *senh₂- 'erlangen, erwischen', with fn. 11, and the proposed asso-

⁴ From now on I shall refer to this sequence as $-t\underline{i}$, since loss of syllabicity is likely to have happened early in Celtic.

⁵ The original idea must be credited to Eichner (1989: 33–34). The alternative reconstruction *ard- $n\bar{a}$ has no visible cognates.

⁶ The existence of comparative/intensive grades of adjectives in -ais-/-aiz- is ascertained by such personal names as TVRAESIVS 'very strong' (*EDCS*-22800201, Guadalajara; *EDCS*-03700402, Cáceres, etc.), vis à vis superlative TVRAESAMVS (*CIL* II: 2957, Contrasta, Álava). The family name akaizokum (K.0.14) vis à vis Gaul. ACISIVS is suggestive of a Late PIE comparative *ōk-is- in L. ōcior 'faster'.

⁷ Nevertheless, while superlatives contain <s> in Early Celtiberian, examples found in the Latin alphabet show a single <S> and not a geminate, as in BERISAMO (*EDCS*-11701112, Orense, Callaecia Lucensis), TVRAESAMVS (*CIL* II: 2957, Contrasta, Álava), BLETISAM(ENSES) (*CIL* II: 859, Ledesma, Salamanca), but the fact that the attested forms are mostly peripheral blurs the picture.

ciation with * d^henh_2 - (LIV: 144, 'sich in Lauf setzen', only attested with certainty in Indo-Iranian and Greek), simply beg the question, in that etymological suggestions are restricted in accordance with MLH V's arbitrary transliteration *uerðoniti*. Since a prefix *uer*- must have been as transparent in this as in other forms, the resulting form would have been †uertoniti. But then, why not †uersoniti? One could venture the possibility that compound forms of this verb were far more common than the simplex or that the latter was no longer used; the lenited outcome of /s/, once it became phonemic, could occur in word-initial position and became the default anlaut for this root (note that this was not necessarily a neutralisation context, since there may have been ancient structures containing the sequence $-rt^st$ -, like * $uper=d^hh_1$ - $t\acute{o}->*uersso-$).

- 5) At any rate, we have no independent evidence for an intramorphemic sound change $-rd- > -r\delta$. We might have an instance of $-rd- > -r\delta$ in the name burzu (K.1.3, Botorrita) if it is equivalent to BVRDO (for instance in a vast number of attestations of a Gaulish potter's name), and then not to Celtic *burro- 'inflated, strong' (cf. OIr. borr, if from *bhorsó- in PGerm. *barzaz 'breaking through').
- 6) The existence of a place name *burzau* on Celtiberian coins (A.48), which unequivocally matches the base of the ethnonym *Bursaonenses* (Pliny 3, 24, nowadays *Borja* in Saragossa), is definitive proof of the existence of a sibilant spelt <*z*> in Early Celtiberian, and this would still apply even if the place name were demonstrably Iberian. However, if this were the case, the foreign sibilant could have been identified with /ṣ/ < -ti-(see below), which is immaterial to the problem of Celtib. /z/.

The best counterexample to the voicing rule thus far is the anaphoric pronoun *soisum* (gen. pl. < CCelt. *soisūm, K.1.3, Botorrita). Besides assimilatory devoicing, there is a possible explanation for the anomaly: Celtiberian may have had a gen. sg. *sosio, which would regularly show strengthening of medial /s/ (as in *makasiam*, K.1.1.). If *sosio was metathesised into *soiso by analogy with the plural form, it could in turn have caused a homogenisation of sibilants in the pronominal paradigm.

To recap: the fact that the lenited outcome of /s/ is reflected in writing suggests that it was underlyingly phonemic. The rise and completion of inter- or intra-paradigmatic analogical processes also crucially depends on this. In addition, orthography may have often resorted to phonemic, not morphophonemic spelling, which would for instance explain the differences in arznas (<* $\phi arsn\bar{a}$ -) and masnai (<*mad- $sn\bar{a}$ or *mag- $sn\bar{a}$; both in K.1.1, Botorrita), assuming these were still perceived as $-sn\bar{a}$ -derivatives.

2. New evidence, new scripts... and new signs for old scripts

A recently unearthed Late Celtiberian document, the so-called bronze of Novallas (Saragossa), probably to be dated not later than 50 BC, has unexpectedly brought to light nothing less than a regional, hitherto unknown version of the Latin alphabet. In my view (Prósper 2017), it contains a description of the general design, size and trajectory of a Roman road built by Roman engineers long after Roman rule had been established in most of Hispania, and was written at a time when the Latin language was not yet definitively imposed for official documents, but the Iberian script had already been abandoned.⁸

The main distinctive trait of this alphabet is the use of a «barred <s>» that characterises, for instance, the ablative endings, and in this way successfully distinguishes the outcome of

⁸ Cf. also the recent edition by Beltrán Lloris et al. 2021.

Indo-European -Vd (where the final consonant is represented in Early Celtiberian by <z>, and in the new alphabet by <s>) from that of -V(n)s (represented in Early Celtiberian by final <s>, and in the new alphabet by <s>). Jordán Cólera (2016) has also identified the «barred <s>» in other Celtiberian texts in the Latin alphabet, e.g. the rock inscription of Peñalba de Villastar, Teruel (K.3.3).

In my view, formerly expressed in Prósper (2016: fn. 145), this regional version of the Latin alphabet originally constituted a unique means of *transcription* of the Iberian script. This new system may have been implemented by indigenous Celtiberian scribes at the Romans' request, probably some time before the Latin alphabet was finally imposed *and* the official documents switched to Latin. It preserved the digraph <EI> for IE /ei/ and <QV> for /k¼/, at a time when indigenous names already showed <E> and <P> in Latin funerary and votive epigraphy (incidentally coinciding with the Gaulish outcomes, which suggests that there was already some amount of allophonic variation when Early Celtiberian became a written language two centuries earlier). In addition, it introduced a new sign <S> in order to render a phoneme for which no Latin letter was available, and at the same time to reduce ambiguity in the representation of phonemic contrasts.

When we compare the Iberian and this particular Latin script, we find that Celtic intervocalic /d/ is respectively spelt <z> and <D>, but, as observed above, /d/ in final position is spelt <z> and <S>. In Novallas, we find ODAS < *\varphi od- 'feet'; BEDAM < *bed\var\varphi- 'road'; MEDOM < *medo- '\varphi middle'. Again, we are at a loss as to whether the Early Celtiberian use of <z>, which reflects a process of fricativisation of /d/ in intervocalic position, constitutes a very rare example of allophonic writing. This *could* be explained by accepting that the use of alphabetic as opposed to syllabographic writing drastically reduced ambiguity (since the reader did not have to guess whether the vowel in the syllabogram was mute or not). At any rate, there is at least one case of initial <z> from /d/: *zizeti*, *zizonti* 'may give' < *dideti, *didonti (respectively Iniesta and K.1.1., Botorrita).

By contrast, the ablative forms attested in Novallas are VSAMVS < * $u\chi sam\bar{u}d$ 'from above'; TERGAS, and not, as we would have predicted, †VSAMVD and †TERGAD. This allows us to draw an interesting conclusion: the scribes who designed this hybrid script did not resort to the expedient of writing -AD, -VD (which would have been much easier to distinguish at first glance from -AS, -VS than the innovative -AS, -VS) for some important reason. This points to lenition of final -d and, quite conceivably, to its attribution to another phoneme somewhere down the line, a point that could not be clarified thus far, since, as observed above, $\langle z \rangle$ functioned in Early Celtiberian as a cover symbol for more than one fricative. I shall come back to this problem at the end of this work.

3. How to write the indigenous names of old times in Latin epigraphy: what is the use of «crossing» the letter <5>?

In recent years, it has been argued (cf. Simón Cornago & Jordán Cólera 2018) that a limited number of indigenous names found in Latin epigraphy show the intervocalic sequence <s>, which in most cases goes back to -ti-.9 Their showcased examples thus far are PRESSVS, SEGOSSOQVM, NISSICVM and DERCINOASSEDENSIBVS, to which a new instance TELASSICVM has most recently been added (Jordán Cólera & Díaz Ariño 2022). Let us examine their examples in detail.

 $^{^9}$ They always speak in phonetic terms; when they vaguely speak about letters in different scripts representing [δ], [θ], or the affricates [d2], [t8], the reader is often lost as to their respective etymological origins and, crucially, the synchronic phonemic contrasts.

In point of fact, the first one looks doubtful. PRESSVS is mostly attested in Hispania (except for one case in Dijon, Gallia Belgica/Germania Superior), though PRISSIA and PRISSO are well attested in Belgica and Germania. The authors have missed a number of related names, like PRESSILLA in a Latin onomastic context and one AEMILIA PRESSA in Catalonia (*CIL* II: 4469, Isona/Aeso, Lérida). In spite of their efforts, this name has no obvious Celtic etymology, and it may well be simply Latin since, to begin with, the four extant Hispanic cases of PRESSVS are inserted in a purely Roman onomastic context. If, however, one sticks to an indigenous interpretation of this form, and, crucially, if at least *one* example contains <\$5>, a conceivable preform would be the derivative in -(i)io- of a very archaic root participle *kur-ent- (LIV 391 *kuer- '(ab)schneiden, schnitzen'). Non liquet.

SEGOSSOQVM (CIL II: 5790, Buenafuente del Sistal, Guadalajara) was identified with sekonzos (K.1.3, Botorrita) for the first time by Ballester (2003), who correctly reconstructed a departicipial adjective *segont-(i)io- 'victorious' before the present reading <ss> had even been considered. Both reading and etymology are undoubtedly correct. An abbreviated SEGOSS(VS) from Medellín (Cáceres, Lusitania Emeritensis), edited by Saquete Chamizo — Guerra Millán (2015), is most likely to be the same name. Early Celtiberian attests a place name in the ablative case sekotiaz on coins (A.77) 'from Segontia', as opposed to the individual names sekonzos and sekontios (K.1.3, Botorrita). Examples of an indigenous personal name SEGONTIVS abound in northern Celtiberia and its periphery (Burgos, Álava). The fact that the place name Segontia has become present-day Sigüenza (Guadalajara) may prove irrelevant to this problem: it must have been identified with Roman place names of good omen early in the 2nd c. BC, and adapted as *segontijā or even *segontijā with 'Vulgar Latin' phonetics (anticipating the hiatus resolution presupposed by all the Romance languages). As has been observed in a number of works, CCelt. *-ijo- had undergone loss of syllabicity in Hispano-Celtic or earlier, so that innovative Latin phonetics would roughly coincide with conservative Celtiberian phonetics. 11

DERCINOASSEDENSIBVS VICANIS CLVNIENSIVM (Peralejo de los Escuderos, Soria; cf. *ERS*: 133). The etymology of the second member of the compounded place name underlying this *origo* is obviously *ad-sedo-, probably meaning 'settlement, see'. The same form is found in Gaulish onomastics, where it is spelt in various ways, as in the personal name ASSEDOMARI (*CIL* III: 3291, Noricum), ADEDOMARI (*EDCS*-11401186, Aquitania), ADSEDI, ADSEDILI (*CIL* III: 4847, Noricum). This means that -ds- underwent a late regressive assimilation, and that, consequently, the resulting geminate sibilant preserves dental features. If, conversely, one were to argue that <ss> stands for an affricate, there is no explaining why the orthographic spelling <DS> did not survive, or why an alternative <TS> was not substituted for it following regressive assimilation of voice, as in the provincial «title» ATSERTORI (reflecting *adsertorī* 'protector')

¹⁰ They partly misunderstand the arguments put forward in Prósper (2016): while the study focuses on western Celtiberia and the Cantabri, their assertion (fn. 71) «another, separate question is to accept the isogloss $*k^w$ - (and *kw-) > p- proposed by B. Mª Prósper, *The Indo-European names* (note 64) 123–198, which would affect the western Celtiberia that the author delimits» is off the mark. The original text reads on p. 119 «Labialization of the voiceless labiovelar is a late, but probably pan-Hispano-Celtic feature outside early Celtiberian (i.e., transmitted in the Iberian script)», and there is no mention of an isogloss covering a specific area of Celtiberia. As for the rest, they have wholesale ignored virtually every other argument about Celtiberian sibilants put forward in the book.

¹¹ There are of course other names with <nz> from *-nt-(i)io- not attested in later epigraphy: the personal name Melmanzos (K.1.3, Botorrita) goes back to *menmant-(i)io- (cf. the divine name MINMANTIIS, dat. pl., Périgueux, CIL XIII: 940), from *menmŋ-tó- 'having sense'. Fricativisation of the cluster with loss of the preceding nasal and regressive assimilation of /nm/ are patent in the potter's name MEMASVS (CIL XIII: 12014, 60 a/b, Noricum, Pannonia). The place name Mazonza (A.15), on several coins found in Alcañiz (Teruel), can be unproblematically traced back to *madont-(i)iā.

awarded to the young Lollianus in the interesting *mischsprachlich* text reading [LOL]LI/ANO DVRE/TA SALDAN/ICA ATSERT[O]/RI IVVENTVT/IS (written by a Vaccaeus from Saldania and found in León, see Martínez Chico & Prósper 2021 for details).

In sum, DERCINOASSEDENSIBVS originally contained a heteromorphemic and heterosyllabic sequence -d.s-: the dental and sibilant segments occur across a morpheme boundary, which neatly explains the preservation of dental articulation after regressive assimilation (if we provisionally accept that CCelt. -ds- would otherwise become /s:/). Other instances of heteromorphemic -d.s- are mostly roots beginning with s- prefixed by ad- and roots ending up in -d- and followed by a suffix -s-. They are rendered as <s> in Early Celtiberian, which points to preservation of the cluster -d.s-, possibly realised as [t.s], when Celtiberian became a written language: cf. the subjunctive form $robiseti < *\varphi ro-bid-s-e-ti < *bhid^{(h)}$ - (K.1.1, Botorrita), and asekati < (hyperthematic) *<math>ad- $s\varphi ek$ - \bar{a} -(i)- \bar{e} -ti¹² 'may envisage' < *spek- (K.1.1, Botorrita).

These subjunctive forms are, of course, not isolated, and as a consequence the above argument does not incur circularity: other sigmatic subjunctives are *kabizeti* 'may take' < **kabi-s-e-ti* (K.1.1, Botorrita; cf. 3rd p. pl. CABINT in Novallas), ¹³ *ambitiseti* 'may surround, build around' < * $di\chi se$ - < * d^hig^h -s-e- (K.1.1, Botorrita). ¹⁴

Subjunctive forms found in the same syntactic slots (subordinate clauses headed by 'if' or 'whoever') are as follows.

Hyperthematic subjunctives: uerzoniti (corresponding to an IE indicative * $uper=sonh_2$ -eie-(K.1.1., Botorrita); asekati < (hyperthematic) *ad- $s\phi ek$ - \bar{a} -(i)- \bar{e} - ti^{15} 'may envisage' < *spek- (K.1.1, Botorrita). A similarly built form is kuati (K.1.1, Botorrita), in my present view corresponding to the indicative * $(s)kouh_1$ - eh_2 -ie/o- 'takes a look at, oversees', identical to OHG. scouwôn 'schauen' and then a Germano-Celtic isogloss; both are denominative to * $(s)kouh_1$ - eh_2 . ¹⁶ At any rate, a subjunctive to the indicative zero-grade primary formation found in Skt. \bar{a} -kuvate 'to have in view' cannot be ruled out.

Thematic subjunctives built from athematic present or aorist indicatives: *zizeti*, *zizonti* 'may give' < *di- dh_3 -e-ti, *di- dh_3 -o-nti (respectively Iniesta and K.1.1., Botorrita), with generalised zero grade of the root and restoration of the alternation o/e regardless of the preceding laryngeal, as opposed to the athematic imperative forms tatuz (K.1.1, Botorrita; Iniesta lead) and tizatuz (BB.IV, Botorrita), probably < * $(d^{(h)}i$ - $)d^{(h)}h_{1/3}$ - $t\bar{o}d$ 'place, pay, give?'.

Another interesting case in point is *auzeti* (K.1.1, Botorrita), a thematic subjunctive endowed with primary endings, corresponding to the indicative pret. 3^{rd} p. sg. $auz < *au\delta < *aud <$

¹² Assuming that the outcome of the contraction of long vowels of different colours is not wholly predictable. Even if the second vowel often predominates, this may not necessarily be the case, as in Greek. In fact, this is why both the 3rd p. sg. of the indicative and the (hyperthematic) subjunctive of Gk. τιμάω 'to honour' are identical: τιμ \tilde{q} . Note, in addition, that $-\tilde{a}$ - (\tilde{i}) - \tilde{e} - need not have become a dipthong /ai/ or /a:i/, since the change /e:/ > /i:/ is not as early as usually assumed. By the same token, unless one chooses to reconstruct this conjugation as athematic *- \tilde{a} -ti, a thematic indicative $-\tilde{a}$ - (\tilde{i}) -e- would have undergone the same change.

¹³ Note that the *ad hoc* reconstruction of a preform *kam-bid- in MLH V, 144 is untenable, since the IE prefix *km- is nonexistent.

¹⁴ The question remains undecided whether these are aorist subjunctives or, as their zero root vocalism would seem to suggest, subjunctives built from athematic desideratives. The comparison of the stem *kabis- with the desiderative *kapis- in L. re-cuperāre 'recover' (Nussbaum 2007: 4) opens new prospects.

¹⁵ See fn. 12 above.

¹⁶ By contrast, L. $cave\bar{o}$ and Gk. κοέω are usually considered iterative and not denominative formations in spite of the conceivable essive/stative derivation Gk. -σκόος 'overseer' \rightarrow -e-io/e-, - eh_1 -io/e- 'be an overseer, watch over, see'. Cf. on the last forms Vine 2006 and Garnier 2010: 441. Assimilatory reduction - $o\mu a$ - > - $u\mu a$ -, progressively conducive to loss of syllabicity, is otherwise well attested in vast areas of central and south-western Hispano-Celtic (cf. Prósper & Medrano Duque 2022).

*aud-t (with regular, probably early loss of the ending -t in complex codas, which I deem more likely than a prevocalic outcome -ss: see below). The 3rd p. pl. auzares (K.0.14, Bronze 'Res') reflects Celtib. *auð-ares << *aud-ars < *h2eudh-rs. The 3rd p. pl. pass. pret. was auzanto < *auð-anto < *h2eudh-nto (K.1.3, Botorrita). All these forms contain a Celtic neo-root *aud- that goes back to *h2eu-dh1-, possibly meaning 'to issue', in which, contrary to most former treatments of these forms, the laryngeal does not play a role any more. The fact that Novallas attests a present participle in the gen. pl. AVDINTVM points to the existence of a suffixed present stem (probably in -io/e-). The segment -d- was no longer interpreted as the second member of a compound, and hence became a fricative (see Prósper 2016: 188, fn. 152, which rendered my former analysis *h2eu-s- obsolete; and, for the general concept, Hackstein 2002).

The family name NISSIC[VM] in the construction LVCIV[S] NISSIC[VM] ACCVT[I] F (Almadrones, Guadalajara) has been traced back to *nitio- 'inner' by Prósper (2016: 144, where the spelling <55> went unnoticed). Simón Cornago & Jordán Cólera (2018: 198) seem to find this etymology acceptable. While a preform *nitio- was in itself not implausible before the use of «barred <55» was ascertained for this name, other alternatives may now be considered, and this form would be more likely to have been reflected as †NISICVM or possibly †NISICVM (see below). Let us explore further options: the compositional scheme «prefix + past part. * d^hh_1 -tó-» may have been productive to some degree in Hispano-Celtic, witness ensikum (K.1.3, Botorrita, as if from * h_1 en(i)- d^hh_1 -tó-), eisubos (Torrijo del Campo, as if from * h_1 epi- d^hh_1 -tó- 'resident'?). In the same vein, we cannot rule out a reconstruction *ni- d^hh_1 -tó- 'settled'. For conceivable Eastern Gaulish parallels, cf. NISSA (Aquincum, Pannonia Inferior; EDCS-51400615: 16), NISS[-] (Dacia, CIL III: 6268). Unfortunately, in that case we would definitely expect †NISSICVM instead of the attested NISSICVM, where «barred <\$55>» shows up for some reason. In sum, the last word on this name has not been pronounced yet.

On the other hand, this form could conceivably be traced back to *nenti-io-, from Celtic *nenti-, *nntei- 'fight'. Gaulish nouns in *nanti-, attested in compounded personal names, have occasionally been identified with OIr. néit 'fight' (see LEIA-N). For his part, Hamp (1976: 14) has connected these Celtic forms with Goth. ana-nanpjan 'to dare', from *nont-, OHG. gi-nindan, from *nent-, OE. nóp 'courage' from the zero grade *nunp- <*nnt-), and on the strength of this comparison has set up «a good Germanic-Celtic etymon *nent- 'to be bold, aggressive'» (on this form see also Irslinger 2002: 226). While the Irish form has been traced back to *nanti- with the zero grade of the root, it may contain the full grade /e/ equally well, and this would have yielded the attested form, as in OIr. cét 'first' < *kentV-, etc. 20 Gaulish names in *nant-, if related, may lead us to the conclusion that different Celtic branches generalised different root-allomorphs of this form. In Celtiberian, /e/ may have been raised because it was preceding a complex cluster -nti-, or, crucially, because the palatalisation and fricativisation of -ti-, followed by loss of the preceding nasal, had given rise to a long/tense vowel that was phonemicised as /i:/. In that case, an underlying *nent-(i)io- or *nenti-(i)o- would have given *nintso- and eventually *ni:s:o-.21 However, one cannot entirely rule out a derivative of a root participle *ni-

¹⁷ Cf. K.2.1: [*R*] *etukenos auz a*[---] (Albalate del Obispo, Teruel); K.5.1: *Besku auz uetikubos* (Caminreal, Teruel); K.0.8: *Letontu auz*: *soz* (unknown origin).

¹⁸ The vowel /e/ was in all likelihood inserted in the ending in analogy to the 1st and 2nd p. pl. -*mes*, -*tes*, thus averting the problems of the unstable cluster /rs/; see Prósper 2016: 197.

¹⁹ Cf. for both etymologies Prósper 2014; in both cases, the laryngeal has been lost in compounds early on.

²⁰ For nasals in coda position in Insular Celtic, cf. Schrijver 1993.

²¹ This definitely speaks against my own interpretation of NARISST (Coca, Segovia, CIL II: 2728, allegedly a misreading or misspelling for a genitive NARISSI, unfortunately only surviving in a drawing) as *narit-(i)io-, and then a

nt- 'leading', from *niH-nt- (for * $ne\bar{n}H$ - see LIV: 450), which, needless to say, would have undergone phonotactic rearrangement, by which the preconsonantal zero-grade stem * $n\bar{i}$ - (e.g. in the past part. * $n\bar{i}$ - $t\acute{o}$ -) would have been generalised, as is probably the case in other languages with productive long vowel stems (cf. L. * $am\bar{a}$ - \rightarrow * $am\bar{a}$ -nt-, etc.).

NESŞIA (Reznos, Soria, Arevaci) has been prudently read NES+IA by Gimeno Pascual & Ramírez Sánchez (2002: 277). However, the lower part of the letter is preserved. Their proposal to read the missing letter as is considerably less promising than their own alternative <S>. This name may unproblematically be traced back to *nedh-tó-, like Skr. naddhá- 'tied', and then is a match of the second member of the compound kounesikum, a family name in K.1.1, B-1 (Botorrita), from *kom-nesso-, like OIr. comnessam 'neighbour, relative' (the descriptive account in MLH V, 202: «kou-n-es-» is worthless). In the present state of our knowledge, forms like Gaul. NEDDAMON are unlikely to belong here.²² But, of course, the alternative possibility cannot be rejected out of hand that NESŞIA is a match of NISSICVM, and that scribes simply hesitated as regards the phonemic attribution of contextually raised /e/. In view of the photograph, the use of «barred <S>» cannot be entirely ruled out for this name, since there seems to be a small diagonal stroke under the first <S>.

TELASSICVS (on a funerary inscription from Sisante, Cuenca, first edition by Corell i Vicent 1992: 584) is a family name agreeing in the nominative with the preceding individual name RETVCENVS.²³ The available photograph suggests that the correct reading is TELASSICVS. In my view, it is a close match of the family name telazokum (K.1.3, Botorrita; no etymological explanation is offered in BB.III), with trivial differences in the suffix. Interestingly, these forms have not undergone Joseph's Law, according to which PCelt. *-eRa-, commonly resulting from an Indo-European sequence *-eRH-, yielded CCelt. -aRa- through vowel-to-vowel assimilation. Therefore, they do not contain a Common Celtic phoneme /a/ in the second syllable, but either /a:/ or /an/ with loss or graphic omission of /n/ (as we are going to see, loss is more likely to have taken place). Like many other Celtiberian names, TELASSICVS and telazokum can be unproblematically traced back to a derivative in -(i)io- of a root part. *tel-ant- < *telh2-nt- or *telh2ent- 'supporting, holding' (for *telh2-, cf. LIV: 622). As observed by Harðarson (1993: 183–184), Gk. τάλαντα 'scales' goes back to the original root participle * tlh_2 -ént-. The Celtiberian form has conceivably reintroduced the full grade from the original alternating athematic aorist stem: sg. *telh2-, pl. *tlh2-; *tlh2-ént- would have evolved into Celtic *talant-, not *telant-. At any rate, the etymology *telh2-tyo-s proposed most recently by Jordán Cólera & Díaz Ariño (2022: 163) for their own, tentative reading TELASSICVM is not possible for the above reasons.

Other conceivable cases are:

The place name Τουοιασσώ (Ptolemy, *Geogr. 2, 6, 57*), *Turiassonem* (Pliny, *Nat. Hist. 34, 41, 144*), TVRIASSONESIS (*CIL* XIII: 586, Bordeaux), today Tarazona in northern Saragossa, *could* re-

cognate of Gaul. NARITVS, NARITI (Prósper 2016: 170). It could conceivably be taken from *narent-(i)io-. Besides the river Narenta we have a personal name NARENSAI ANNVAE (dat., Dalmatia), a NARENS('VS) (nom., Dalmatia), neither of them necessarily Celtic, and a NERANT[V]s (Este, Venetia et Histria). Since we lack other parallels, this must remain speculative. If we were to read NARISST(I) or even NARISST+I, this could be an old superlative form *nār-isto- 'most noble' (cf. MIr. nár 'magnanimous'). In that case, the doubling of <s> may be related to the fact that /t/ is, of the voiceless stops, the shortest in duration (see Méndez Dosuna 1985). This phenomenon is also attested, for instance, in Greek.

²² See Prósper 2018a. Early syncope in this context is attested in nearly all Celtic branches, as in OIr. *nessam*, Gaul. NEDDAMON 'closest, nearest,' from **nezd-isamo-*, as claimed by Cowgill (1970: 132). The Sabellic forms O. *nessimas* 'nearest', NESIMVM, U. *nesimei*, etc., point to an intermediate stage **neds-iz(v)mo-*, with inner-Italic loss of the penultimate vowel.

²³ The editor read NEIVCENVS. The definitive reading was suggested by Abascal Palazón (2015: 238–240; cf. *CIL* II–13: 952).

flect a departicipial adjective *turiant-(i)iā. The indigenous attestations are *Turiazu* (A.51), TVRIASICA CAR (K.27.1, Monte Cildá, Palencia). The geminate <SS> (never attested as "barred <SS>" in Hispania, however) seems to suggest that this is correct, and that the peripheral, northern place/river names *Toranzo* (Cantabria), beach *Torranza* (Asturias), are its cognates. See Prósper 2014: fn. 26.

A set of names E[L]ANDI (EDCS-00380519, Álava), AELANDI (CILCaceres-02: 793, Cáceres), ELANDVS (Turma Salluitana, CIL I²: 709) may be taken either from *elantī 'doe' (cf. MIr. elit, ailit 'doe', in turn from *(H)el-ŋ-tiH₂) or from a participle * φ elant- < *pel(H)-.²4 We may, with due caution, add the family name Elatunako (K.9.4, Numancia), which derives from a personal name *Elantū. In my present view, there are no insurmountable obstacles to identifying the above forms with the base of Celtiberian Elazunos (K.6.1, Luzaga),²5 Elazuna, Elazunos (K.1.3, Botorrita), if from *(φ)elant(i)iū, but their uniformly 'innovative' phonetics in Early Celtiberian call for prudence. An inscription reading [E]LASVS N[-] / [-] E(L)ANDI(?) F(ILIVS) (Álava, cf. Sáenz de Buruaga & Sáenz de Urturi 1994) could accordingly contain a son's name derived from that of his father, but the text is mangled and altogether unreliable.

What we can gather from the above examples is that a phoneme rendered <*z*> in Early Celtiberian, which goes back to -*ti*- (at least when this cluster was preceded by a nasal), occasionally corresponds to <*ss*> on inscriptions resorting to the «innovative» version of the Latin alphabet for the rendition of Celtiberian names. This is clear at least in *sekonzos*, SEGOSSOQVM, SEGOSS(VS); promising examples are NISSICVM and TELASSICVS, *telazokum*; and this can hypothetically be extended to the families of *Turiassonem*, *Turiazu* and ELANDVS, *elazunos*.

To my mind, scribes were ill at ease with using <SS> and <TS> for the underlying fricative or affricate phoneme, and they chose a digraph because it was in fact a long/geminate phoneme. As we will see, examples of a single intervocalic <S> may have passed undetected. This phenomenon is reminiscent of «tau Gallicum», which arose from clusters in Gaulish epigraphy to note a phoneme alien to Latin and going back to Indo-European, and was thereupon borrowed by workshops with bilingual customers. These workshops commissioned texts in Latin that could, for instance, mention Gaulish gods.

The sociological substrate of this practice may have been similar in both regions, and both spellings may be compared in *formal*, genetic terms, that is to say, the Celtiberian digraph may have come about in imitation of Gaulish practice. Still, the functional connection of «barred <ss» with «tau Gallicum» partly escapes us. The denomination «tau Gallicum» encompasses a plethora of signs and combinations thereof, <DD>, <D>, <DD>, <TS>, <DS>, <SS>, <SS>, etc., testifying to the scribal uneasiness concerning the articulation of the represented phoneme, which probably varied across periods, regions and workshops. In my present view, there is no proof that «barred <SS>» could represent the outcome of *-tst-, and, conversely, «tau Gallicum» could not represent the outcome of *-ti-. Of course, this does not mean that they could not synchronically be used for a phoneme with similar phonetic features in both systems. To make my case clear, I shall put forward some novel interpretations of the Celtiberian names.

While <ss> could have represented an affricate phoneme, a number of reasons cast doubt on this possibility:

First, the simplex <s> in indigenous epigraphy (specifically Novallas) can reflect a fricative phoneme, at least in word-final position, where it has never been an affricate at any stage.

²⁴ It is additionally found in European onomastics, as in the place name *Elantia* > *Elz*, the Gaulish personal names ELANTIA, ELANTIAE (Reims, *CIL* XIII: 3320), etc.

²⁵ My reading for former *Elazunom*; see Martínez Chico — Prósper 2021.

Second, forms containing $\langle ss \rangle$ show loss of the preceding /n/. This seems to suggest that the original cluster had been weakened and become a fricative, *and* that the nasal had been lost as a consequence of the difficult nasal-fricative transition. If this is true, occasional occurrence of $\langle N \rangle$ may be due to the synchronic association of a name with its living participial base, or may be reflecting secondary nasalisation of the preceding vowel. I consequently start from an evolution $-nt\dot{i}->-nts->-(n)\dot{s}\dot{s}-$ (with or without lengthening of the preceding vowel after loss of the nasal segment).

Our best case of Late Celtiberian <NS> going back to -nti- is the recently edited form BVGANSONIS (Soria, Arevaci), ²⁶ the father's name of the deceased person in a funerary inscription. On closer inspection, the photograph offered by the editor shows a vertical stroke crossing the base of <S>, and the reading is consequently <S>. I have traced it back to a Celtic root participle *bugant- < *bhugant-, a match of the Venetic name FVGANTIVS (CIL V: 8986, Aquileia). Both names probably go back to the root ^{2*}bheug- (cf. LIV 84–85 'jmdm. nützen, Nutzen bringen'), systematically found in the zero grade (cf. Lat. fungor 'to enjoy, perform' and Skt. bhunakti 'to enjoy, use, consume'). See Prósper (2019: 36–39) for details and comparanda. It definitely points to fricativisation prior to complete loss of the nasal.

In Celtiberian texts written in the Iberian script, both $\langle ti \rangle$ and $\langle z \rangle$ reflect inherited $-t\underline{i}$, though the reasons for the distribution of these spelling variants are unclear: their distribution may have been dialectally conditioned or simply reflect different social strata. After a Celtiberian sequence $-nt\underline{i}$ - evolved into -nts-, the affricate became a long/tense dental sibilant /s̄:/, or, conceivably, $/\theta$:/, since interdental fricatives and dental sibilants are auditorily confusable sounds. The nasal was thereupon lost, and, as we shall see in what follows, a new phonemic contrast emerged between intervocalic /s̄:/ and /s̄/ (for a comparable phenomenon in Italic, see Prósper 2020: 69). The same reasoning applies to the phonetics of heteromorphemic -d/t-s-. Where possible, the digraph $\langle ss \rangle$ was pressed into service in order to distinguish the new phoneme from the already existing long/tense alveolar /s:/ ($\langle s \rangle$, $\langle ss \rangle$) and the lax /s̄/ ($\langle z \rangle$, $\langle s \rangle$), but the spelling of BVGANSONIS at least seems to have favoured a compromise solution, reflecting either the nasal or a nasalised vowel. Similarly, the divine name VELONSAE (dat., Navarra, *IRMN* 55; unearthed in Tobalina, Burgos) goes back to * μ el(H)-ont- μ iā willing/strong'.

4. The reflection of Early Celtiberian <s> in the Latin alphabet

Many (if not all) cases of Early Celtiberian word-medial $\langle s \rangle$ go back to expressive geminates, resyllabification/ fortition ($-s.\dot{i}->-s.s\dot{i}-$), clusters of two dental segments (*- $t^st->-ss-$), heteromorphemic clusters of a dental stop + sibilant, or the Celtic cluster - $\chi s-$. Let us consider some indigenous names in Latin epigraphy, specifically those in which we can reconstruct an Indo-European sequence *- nt^st- .

The family name COSSOVQVM (Sigüenza, Guadalajara; lost) can be seamlessly traced back to an adjectival * $kom-d^hh_1$ -teu-o-(i)io-, directly derived from the action noun * $kom-d^heh_1$ -tu'confluence of paths or watercourses' (cf. Gaul. $Condate < *kom-d^hh_1$ -ti). It survives in the Roman divine name $C\bar{o}sus$ (which somewhere down the line became thematic) and its derivative $C\bar{o}su\bar{a}lia$, as well as the Lusitanian divine name COSSVE (dat. sg.) and its variants, which go back to *kom- d^hh_1 -tu- with early laryngeal loss and generalisation of the zero grade of the root (see Prósper 1997).

²⁶ Cf. Alfaro Peña 2017.

The individual name LESSO (K.1.2, Botorrita), LESSONI (*CIL* II: 3852, Valencia) is in my present view a match of Gaulish names attested in the Venetic record: *le.s.sa* (*LV*: 208, Cadore), *leso* (*LV* 93: Este) may derive from *splend-tu- 'splendor' (cf. OIr. *lés* 'light').

BESSVCA (*CIL* II: 3097, Cuenca, lost) probably continues an agent/object noun *bhendh-tu'manners, habits, behaviour' that became CCelt. *bēssu-, and whose perfect match is OIr. bés.
At the present state of our knowledge, however, we must be prudent, since the stone is lost
and the only available drawing may have ignored a "barred <ss>". This is esspecially true of
the divinity to which the stone is devoted. If the reading and segmentation LEIOSS(A)E G(-)
BESSVCA PRO FILIO V L R M are correct, LEIOSS(A)E may be concealing an active participle in -ntfollowed by the relational suffix -iio-, which has parallels in the indigenous theonymy of Hispania and Gaul (see most recently Prósper & Medrano Duque 2022: 25).

*-ntst-, and all of them show loss of the nasal in coda position in contact with a fricative. The Hispano-Celtic outcome of Late Indo-European *-tst- was probably /s:/ in every context. This is regularly rendered as <s> in Early Celtiberian, whose script does not note geminates, and <ss> in the Latin alphabet.

5. -ti- in non-nasal environments

We may consequently wonder at the cases of simple <s> in (originally) intervocalic position, of which a single instance has been detected on the indigenous rock inscription of Peñalba de Villastar (K.3.3). Here, we read ENIOROSEI and ENIOROSEI, apparently belonging to two different sentences, as we are going to see in what follows.

In Early Celtiberian, both $\langle ti \rangle$ and $\langle z \rangle$ occur when -ti- is not preceded by a nasal: cf. the place name tirzoz < *trit(i)io- 'third' (A.45), arzakoz < *arti-āko-, cf. Northern Italian Arsago Seprio (A.36), both probably «Vasconian mints», but Lutiakei (K.6.1, Luzaga), Lutiakos (A.76), Titiakos (A.58), Teitiakos (A.57). These four forms might reflect the «Sievers effect» if they were respectively rendering $*lu\chi tiiV$ -, $*di\chi tiiV$ -, $*te\chi tiiV$ -, or simply a synchronic process of derivation from participles in -to- or nouns in $-teh_2$ by means of a productive suffix $-i\bar{a}ko$ -. For many other cases of this alternation, which are essentially contingent on the chosen etymologies, see Prósper 2014.

No certain instances of the use of a single <s> have been detected thus far in Latin epigraphy, where fricativised -ti- is occasionally spelt <s>, but at least two promising instances have been overlooked.

The family name of an individual called ALBANVS CLOVSOCVM (Sayatón, Guadalajara, 1st C. AD, cf. Abascal, López de los Mozos, 1993), reflects the evolution of an erstwhile *klout-(i)io-, still attested in Early Celtiberian as koloutios (K.1.3, Botorrita) and later as CLOVTIVS all over Hispania. The photographs provided by HEp online edition²⁷ and EDCS-03700465 are suggestive of an alternative reading CLOVSOCVM with a slanting stroke that runs downwards left to

²⁷ Retrieved from http://eda-bea.es/pub/record_card_1.php?page=6&rec=142.

right from the base of <s>, traversing the deeply incised horizontal guideline. It occurs exclusively in this instance of <s> (and not in the Latin forms ALBANVS and LIBERTVS).

Another inscription from the realms of the Arevaci reads: AISAE · VIANNETIQ(VM) CAV[C(ENSI)] / AN(NORVM) · [-] (Sepúlveda, Segovia, *ERSg*, 27). It has passed unseen that the right reading is probably AISAE. It shows a «barred \lt s», again in the form of a slanting stroke that runs downwards left to right from the base of the letter. Consequently, this name can be traced back to *ait-(i)iā, a derivative of *ai-to- 'time' or, perhaps more plausibly, to *axt-(i)iā (see below).

Cases of -VtiV- spelt <s> in Latin epigraphy are:

SEGISAMA BRASACA (*CIL* II: 4157, Tarraco), which comes from *brāti̞-ākā (cf. Prósper 2014, 122). This etymological attribution is now cemented by other traditionally misinterpreted Gaulish and Early Brittonic examples, like DEO MARTI BRACIACAE in Derbyshire, Britannia (cf. Prósper & Medrano Duque 2022). It undoubtedly corresponds to *barazioka* '?lawful' (K.6.1, Luzaga, North of Guadalajara), which shows addition of synchronic -ioko- to a preexistent base *brāt(i)io- (cf. tanioka < *dāno-, risatioka < *φri-sant- in K.1.3, Botorrita).

VASCASVS (Hontoria, Burgos, CIRB: 332), which goes back to * $u\varphi o$ - $sk\bar{a}t$ -(i)io- 'protector', attested in OIr. foscad 'shelter', etc. (see Prósper 2016: 135).

SECOVESO (Lara de los Infantes, Burgos, lost; *CIRB*: 358) is a derivative in -(i)io- of *sego-uet-, preserved in individual names like SEGOVETIS F(ILIA), SEGGVES, SEGVETI F(ILIA), etc.

Occasionally, the spelling <TI> alternates with <S> for the same name:

VSSVEITIO AMMONIS F(ILIVS) (Clunia, Burgos, *CIRB*: 68); VSSEITIO (Clunia, Burgos), VXSEISVS / ELLICO / STENION/TIS F(ILIVS) (Sotodosos, Guadalajara), where the photograph offered by *EDCS*-21900141 shows a stroke under the second $\langle S \rangle$ that is compatible with a reading $\langle S \rangle$, and possibly also the western form SVNVA VSEITI (Coria, Cáceres, *CIL* II: 785). This name may be traced back to a compound $*u\chi s - ue\chi t - (i)io - (-\bar{u}) > *u\chi s ueitio - (-\bar{u})$ from the past participle of $*ue\acute{g}^h$ - 'to move, drive, carry'.³⁰

²⁸ See Jordán 2016 for the new reading.

²⁹ We cannot say whether <\$\$> was ever used in the innovative «Aragonese» alphabet created to write Celtiberian. Since, as contended above, it was partly designed as a transcription of the corresponding forms in the Iberian script, it might never have used geminate letters, but our evidence is too paltry. This would, for instance, account for TIASO in Peñalba de Villastar, if it stands for †TIASSO and continues a past participle in *-to-, related to the form TIATVNEI in the same text.

³⁰ See Prósper (2012; 2016: 178–179). The readings VSSEITIO and VXSEISVS have been put forward by González Rodríguez & Gorrochategui Churruca (2011). The comparison with *useizu* in K.1.3 that they propose without further linguistic analysis is uncertain, because these forms are irreducible to a common etymology unless Botorrita is

In these forms, the sequence $-e\chi t$ - has eventually become $-e\dot{\chi}t$ -, as in Welsh, Alpine Gaulish, Venetic (see Prósper 2018b), South-Western Slavic (see Šefčík 2020) and a number of Romance languages, notably Catalan, Portuguese and Galician. The change is already apparent in Early Celtiberian: cf. $*d\bar{u}$ -re $\chi t\bar{a}$ 'issued' in taruotureska tureita (K.23.2)³¹ and DVREITA TARVODVRESCA (Arevaci, Untermann & Villar 1999) 'issued by the city of Tarvodurum'. By contrast, more peripheral Hispano-Celtic dialects seem to have lost any trace of preconsonantal velar or uvular fricatives, as transpires from DVRETA SALDANICA (León; see Martínez Chico & Prósper 2021) or the widespread AMBATVS (as opposed to Gaul. AMBACTVS, AMBAXTVS).³² In spite of the traditional vision of Common Celtic as a dialect in which $/e\dot{j}/$ had been monophthongised, it must still have existed in Celtiberian, at least as a phonosyntactic variant, when the Iberian script was adopted, around the beginnings of the 3^{rd} c. BC, but it had already become /e:/ before the Latin alphabet was definitively imposed. Accordingly, late attested, indigenous names containing <EI> are likely to have undergone the abovementioned change $-e\chi t$ - > -eit-.

6. Another letter comes to complicate matters: the use of <z> for the Celtic names of Central Hispania

In a number of names attested in Latin epigraphy, the outcome of -ti- is reflected as <z>, occasionally alternating with <TI> and <S> for the same name. This letter was used in a reduced area in Central-Southern Spain (the adjacent provinces of Madrid, Toledo and Cuenca).

A name VA(---) ANNESVS (Pedraza, Segovia, *ERSg*, 170) is obviously the same name as the more peripheral ANNETIAE AROCI F(ILIAE) (León, *CIL* II: 2689), ANNETIA (Noricum, *EDCS*-14400122), and the cognomen of ACILIA ANNEZA (Titulcia, Madrid, *CIL* II–13: 2; see Prósper 2016: 146). This is a derivative of the name *annet-, attested as ANNETIS (gen., Segovia, *ERSg* 138). In this case, we exceptionally find both <S> and <Z> for original -ti-.

In addition, a number of forms show a sequence $\langle IZ \rangle$, which in my view goes back to a CCelt. cluster $-\chi t(i)\underline{i}$. As in the forms VSSVEITIO, VSSEITIO, VXSEISVS and DVREITA/tureita (or dureita) of the Arevaci reviewed above, a glide is the only trace left of the fricative uvular segment originally preceding $-t\underline{i}$. In the following cases, the fricative outcome of $-t\underline{i}$ is rendered $\langle Z \rangle$:

ARBAIZA (Caesarobriga, Toledo, 150–200 AD). If Hispano-Celtic displayed the same tendency for syncopation of the prefix * φ are- in intensive compounds as the British and Gaulish-speaking territories, this name could go back to * φ are- ψ a χ t-(i)io- '?very bad', 33 containing the past part. * ψ axto- in MIr. facht 'malice' (cf. EDCP: 405). Onomastic cognates may be ARVATIVS in Germania (CIL XIII: 7577, Wiesbaden), and VAXTVLLA (CIL XIII: 5864, Langres, Belgica/Germania superior). A potter's name VAXTI is attested (as usual, in the genitive case) in Britannia and Aquitania. 34

reflective of a late and dialectal stage of this form. The form useizu may simply reflect an erstwhile $*u\chi s-edio-$. See the parallel of *seg-edio- in A.78 sekeiza, and the late coin reading SEGEIDA, for the place name $Segeda/\Sigma \epsilon \gamma \dot{\eta} \delta \alpha$. The reading sekaiza is definitively superseded thanks to the palaeographic observations of Rodríguez Ramos (2002, neatly confirmed by etymological considerations.)

³¹ Or taruodureska dureita under acceptance of the dual system.

³² The variant form VXSEISVS has undergone further, predictable changes: hesitation between <SS> and <XS> bears witness to the difficulties that scribes experienced when trying to reflect what may have been a palato-alveolar fricative [ʃ:], and the glide [u] tends to be absorbed by the preceding long sibilant.

³³ See Prósper 2019.

³⁴ There is a reason for the apparent fricativisation $-r\mu$ - > $-r\beta$ - that explains the sequence <RB> in Hispania. Imported forms attested in Lusitania Emeritensis usually show for <V>, probably indicating that this fricativi-

CAECILIA CONTAIZA (Saelices, Cuenca, *CIL* II–13: 426, 2nd c. AD) furnishes an interesting case in point.³⁵ The text reads CAECILIO VICTORI / CAECILI ISARGYRI LIB(ERTO) / CAECILIA CONTAIZA / VIRO ET SIBI ET / SVIS ET EVTIC(H)IAE F(ILIAE).

CONTAIZA may well go back to *kom-tan χt -(i)io-, containing the Celtic past part. *tan χ -to-(<*tn\k-t\o'-, cf. *tenk- 'to be gathered, become fixed') in OIr. t\u00e9cht 'calm, undisturbed, frozen'. Its adjectival derivative *tan χt -(i)io- is also attested in OIr. t\u00e9cht techtae 'proper, right', and W. teithi 'characteristics, qualities' goes back to *tan χt - (with i-affection). A number of Old or Middle Irish prefixed forms can be directly compared with CONTAIZA: cf. \u00eantechta 'splendid and fitting'. But the perfect match of CONTAIZA is OIr. coitechta '(equally) legal, proper, suitable' (see eDIL, s.u. coitechta). As a consequence, this form may be regarded as an inherited compound. The nasal has been lost early on before a fricative, probably with ensuing lengthening of the preceding vowel. Context-sensitive raising [an] > [\u00exn], or its conceivable variant [\u00e1] > [\u00exilon], seem to have never occurred in Celtiberian, since it would have probably been identified with Latin $|\varepsilon|$ and would have been spelt $|\varepsilon|$ or $|\varepsilon|$, not $|\varepsilon|$ and would have been spelt $|\varepsilon|$ or $|\varepsilon|$.

CONTAITA (showing a ligature in which an <I> «longa» is superimposed on <T>; the resulting sign is cross-shaped) appears on a slightly earlier inscription equally unearthed in Saelices, Cuenca (CIL II–13: 474, 70–130 AD), reading MATIRA VALERIORVM / L(VCI) ET NEPOTIS LIB(ERTA) H(IC) S(ITA) E(ST) / CAECILII VICTOR ET / CONTAITA [M]ATRI. As the editors contend (see Abascal et al. 2011: 222), it may actually refer to the same person as CAECILIA CONTAIZA, and, in addition, both may be instances of the same name. But this is simply impossible under acceptance of the respective readings <T> and <Z>, which cannot be reconciled as variant spellings of a single phoneme: it transpires from hundreds of cases that intervocalic voiceless stops are neither voiced nor fricativised in Celtiberia. In fairness, there are cases in epigraphy in which we may reasonably suspect that postconsonantal <I> has been omitted in writing because of incipient palatalisation. This is hardly ever the case with -ti-, however, especially because alternative means to reflect palatalisation were available.

We could speculate with the idea that CONTAITA, after she and her husband, liberti of *Caecilius Isargyrus* (himself probably a freedman), were manumitted, not only took her master's gentilic name, but adapted her cognomen by attaching -(i)io- to it. In this way, she would have managed to harmonise it to a common onomastic formula illustrated by VALERIA LATVRINA (Soria), AEMILIA ITVNDIA (León) or TERENTIA NESSIA (Segovia). But this is an altogether unsatisfactory escape route. The dedicants of the older text are the married couple CAECILI VICTOR ET CONTAITA 'the Caecilii V. and C.', who probably were already Caecilius' liberti by that time, and therefore there is no reason to believe there was any change in the wife's name somewhere down the line.

Under a more trivial assumption, both names are in fact the same, but definitely not because <T> and <Z> can alternate freely. In fact, the form the scribe intended to write in the earlier text could be CONTAITIA with a triple ligature <I+T+I> (of which we have no fewer than two examples in the form <V+A+LERIOR+V+M> on the same inscription). The sequence <TI> was in all likelihood rendering an affricate (at least in careless speech or among the lower classes) that

sation was alien to the indigenous variety of this part of Lusitania at least, where $[r\beta]$ was automatically interpreted as containing an original /b/. If context-bound fricativisation of [u] in onsets was an ongoing process in western and/or southern Celtiberia, it could be indirectly reflected in the names of migrants hailing from this region, if the sound change had not taken place in their destination.

³⁵ Note that the same form might occur in the *hápax* CONTAECA (*CIL* II–13: 142, Gálvez, Toledo) if the reading <C> in the suffix, which is hardly legible on the photograph, were erroneous (possibly <S>?).

³⁶ The nasal was never reintroduced (but cf. L. $s\bar{a}nctus$, with /n/ in analogy to $sanci\bar{o}$, as opposed to O. saahtum, U. sahta, sahata, sahata, satam-e); for Lusitanian SINTAMOM <* $san\chi to$ -, cf. Prósper 2021.

would become a fricative and be naturally spelt $\langle z \rangle$ in that region in the lapse of barely one generation: CONTAITIA \rightarrow CONTAIZA. Accordingly, this case provides a precious testimony of the diachronic evolution of the sequence -ti- for the same name and referent.³⁷

As contended above for $\langle \text{EIP}, \langle \text{AIP} \rangle$ cannot be plausibly taken to reflect an original diphthong: apart from etymological difficulties, an inherited diphthong would have a recognisable tendency to become $\langle \text{ag}/. \rangle$. All these names have one thing in common: they contain $\langle \text{IP} \rangle$ for Celtic $[\chi]$, the outcome of Indo-European labials and (labio-)velars in coda position preceding an obstruent. Celtiberian in the Iberian script is ambiguous in this regard, since it does not note fricatives in coda position except sibilants, for which it had alphabetic signs available. We cannot reject out of hand the possibility that the change $-a\chi t - \rangle -ait - \langle t \rangle$, at least, has been favoured by the presence of a following $-i - \langle t \rangle$. By contrast, metathesis $(-Vti - \rangle -Vit - \langle t \rangle)$ or palatalisation followed by prevocalisation $(-Vti - \rangle -Vit - \langle t \rangle)$ can in my view be safely ruled out, both for etymological reasons and because there are forms containing $-Vti - \langle t \rangle$ that militate against this idea: VASCASVS, ANNESVS, ANNEZA, BRASACA, SECOVESO, actually show the culmination of the palatalisation process, with no apparent effect on the preceding syllable.

Still another interesting name containing <z> is attested in the same area:

TVRPIO / AN(NORVM) XXV / H(IC) S(ITVS) E(ST) S(IT) T(IBI) T(ERRA) L(EVIS) / CAIZITA / F(ACIENDVM) C(VRAVIT) (Polán, Toledo, CIL II–13: 150, 71–130 AD)

The dedicant's name has been unanimously read as CAIZITA to my knowledge. All I can discern with certainty on the photograph is <CAIZI>, followed by a somewhat longer, deeply carved <I> and a final blurred letter. The $h\acute{a}pax$ CAIZITA can be interpreted in the light of the above examples.³⁸ It might be a comparatively late derivative (probably in imitation of other local names) of †CAIZA, in turn from $*ka\chi t - (i)\dot{l}i\ddot{a}$, a derivative of CCelt. $*ka\chi to -$, from a Late Indo-European past part. $*kap - t\acute{o} -$ 'caught, grabbed' (cf. L. captus, Goth. hafts). This participle has survived in OIr. cacht, MW. caeth 'slave' (EDPC: 197) and a Gaulish personal name CAXTOS.³⁹

In sum, intervocalic -ti- (including original $-V\chi tiV$ - in (south-)western areas where this sequence has evolved into -VitiV-) can be rendered <TI>, but in some places also <S>, <Z>, and <S>, indicating that it has undergone affrication and eventually become a short/lax, not a long/tense sibilant.

The letter $\langle z \rangle$ was used in Latin for the first time on a denarius in 81 BC. As is well known, Greek $\langle \zeta \rangle$ represented a voiced sibilant from Hellenistic times onwards. While $\langle z \rangle$ is very frequent in Greek names in Hispania, these are often spelt with $\langle s \rangle$. From the 1st century BC on, $\langle z \rangle$ was hesitantly used in Latin epigraphy for the rendition of Greek names, to render a voiced sibilant $\langle z \rangle$: the *Paradebeispiel* is $Z\omega\sigma\iota\mu\sigma\varsigma$, which occurs as ZOZIMA, ZOSIMVS and

³⁷ Jordán Cólera & Díaz Ariño (2022: 159) propose a reading CONTATIA. While this is formally possible, it can hardly account for CONTAIZA. Their views are eclectic as concerns the relation of writing with the phonetics (phonology is not mentioned) of the sequences <T+I> or <I+T> and <I+Z>, and, in order to make sense of the erratic spellings of this name, allow for phonetic changes, apparently affecting the same form, which have long since been proven incompatible (see below). Their reconstructed *kontatya [sic] is not further explained.

 $^{^{38}}$ Under the assumption that the segmentation is right, this name could be read CAIZIIA, with <II> = <E> (which is underpinned by the alternative reading TVRIIO of the deceased person, which has direct cognates in TVREO, Villamanta, Madrid, TVREO, Nunomoral, Cáceres, and TVREA, three times in Lusitania).

³⁹ Such names as CAITTA / ANNAE MAX/VMILLAE SER/VA (Palencia, Vaccaei); VAICVS C/AITAE LIBE/RTVS (Cáceres, Emeritensis) could conceivably belong here and go back to the unenlarged form *kaχto-, if the bearer of the name came from the territory of the Arevaci or from Central-Southern Hispania, which is impossible to ascertain. This might also be the case with some names attested in the Alpine areas: MOSICAITO, MOSGAITO, DIOCAITO (Noricum). However, we are in the dark as to whether we are catching the last glimpses of «trans-Alpine» Venetic. Alternative etymologies are offered in Prósper 2016: 30.

SOSVMVS. An indirect parallel is provided by Late Oscan in the Latin alphabet, which introduces <Z> for its own voiced sibilant. This does not necessarily mean that <Z>, in so far as it represented the outcome of -ti-, already had a voiced realisation in Early Celtiberian, or that it ever acquired one. The individual names ANNEZA, ARBAIZA, CONTAIZA, definitely point to a (phonemically voiceless) dental fricative sibilant /s/.

The dental fricative nature of the phoneme rendered <Z> is now confirmed by an inscription from Villaminaya (Toledo), originally read as NEZVTVS / CAECILI / LVCANI / SERBVS / H(IC) S(ITVS) EST (*CIL* II–13: 119, 1st c. AD). Velaza (2008: 369–370) corrects NEZVTVS into MEZVTVS (a suggestion certainly borne out by the ductus, the presence of a short unfinished or erased fourth diagonal stroke, and the room between this letter and the adjacent <E>). He relates this form to Indo-European * med^hu - 'mead' (which he, however, translates as 'sweet'). His phonetic explanation for the use of <Z> as reflective of a Celtiberian intervocalic dental segment is plausible, but his etymological attribution is problematic, and I remain convinced that this is a mere thematicisation of *med- $\bar{u}t$ - 'ruler' (in several cases of MEDVTTIVS, MEDVTICA, etc.). The variant MEZVTVS vs. «orthographic» MEDVTVS indicates that the intervocalic dental stop had been fricativised.

The personal name LVRAEZI (gen., Madrid, *CIL* II–13: 23, 50–150 AD) may contain *-aido-, like ARRAEDO (Soria), ABLAIDACORVM (Asturias), TVRAEDOQV(M) (Ávila), cf. Prósper 2016: 53. The inscription has been read DOMITIA VIC/CI MALVGENIQ(VM) / <F=E>(ILIA) LVRAEZI AVCALI/Q(VM) VXSOR H(IC) S(ITA) E(ST) S(IT) T(IBI) T(ERRA) L(EVIS). Needless to say, it is arbitrary to spell out <E>, which follows the indigenous family name and not the father's name, as F(ILIA), and the interpunction is not visible on the available photographs. One could therefore speculate with an alternative possibility: the father's name might have been ELVRAEZI. The advantage of this segmentation is that it allows us to connect the base *(ϕ)eluro- with hypothetically Gaulish names like ELVRINI (gen., *EDCS*-78600062 Germania Superior). In turn, these may reflect the crossing of * $pelh_1$ -u- 'much, many' and * $pelh_1$ -r0- in OIr. ilar 'big number' (cf. Widmer 2004: 90–92) and Celtib. ELARCORVM (family name, Belorado, Burgos, *ERPB*: 39; see Prósper 2016: 100). On balance, given the existence of hypercorrect forms with <AE> for orthographic <E>, we could reckon with an original *(ϕ)elur-etio- (cf. ANDAETI for ANDETI in Lusitania, etc.). *40

The scribe who wrote MEZVTVS can hardly have *intended* to reflect [ð]: this amounts to accepting that he felt the need to accord a specific spelling to allophonic [ð] (as noted above, the phonemic status of a voiced dental fricative would at best be marginal). This leads us to an interesting, albeit merely provisional conclusion on the phonetics of Hispanic Latin in the 1st c. AD: if workshops occasionally resorted to <z> when faced with [ð] or a similar sound, this may be taken to mean that fricativisation of Latin voiced stops was still at a very incipient stage or had not begun at all, and, as a consequence, they could not ignore the fricative nature of the foreign sound. Alternatively, slight differences in voice or point of articulation of obstruents may have been at play here: taking into account the existence of the spellings <TI>, <S>, <Z> and <S> in exactly the same slots, we may provisionally surmise that the scribe who wrote MEZVTVS (and, in view of SERBVS, was not proficient in Latin orthography, either) actually heard a sibilant [z] that he was unexperienced enough to parse as /s/ and not as /d/.

We have an indirect clue that points to [ð] tending to evolve into a sibilant [z] in central/southern Celtiberian, a fact concealed by orthographic spelling in most places: a new inscription from Abánades, Guadalajara (see Barbas et al. 2011) contains two instances of the family name OBIDOQ(VM). The personal name that forms its base looks identical to OBIDDVS, attested once as a cognomen in Castro Verde (Beja, Portugal, Lusitania Pacensis): M(ARCVS) VLPIVS

⁴⁰ L IVLI RVFI / VZENTI (Madrid, *CIL* II: 4975, lost) may be another instance of <*Z*> for expected <*D*>, but this cannot be proven.

OBIDDVS / H(IC) S(ITVS) E(ST). 41 As other scholars have noticed before, OBIDOQ(VM) has a match in MACER OBISOQ(VM) AMBATI F TOLETA(NVS) (Casas de Don Pedro, Badajoz, Lusitania, *CIL* II–13: E 4) 42 . There is no doubt as to the southern Celtiberian, specifically Carpetanian origin of the deceased individual. It is therefore intriguing that his family name was not written with 5 , but with 5 . It is tempting to assume that the western scribe took it to be not an allophone of 6 (for which 5) would have been used), but of 5 . Again, this speaks in favour of a realisation closer to 5 . Both MEZVTVS and OBISOQVM seem to testify either to the incursion of speakers of dialects with dental fricatives into areas where lenition of voiced stops had not begun, or to assibilation of the lenited dental fricatives in a central zone that we cannot possibly delimit.

The sign <Z> has not yet been found in the special, «Aragonese» version of the Latin alphabet. It serves a conscious need to render dental, probably voiceless fricative phonemes. Our extant cases span a vast area of Central Spain comprising the present contiguous provinces of Madrid, Toledo, Ciudad Real and Guadalajara. This time, the solution to the deficiencies of the received alphabet came from the Baetica, not from Celtiberia. When the need was felt to represent a dental fricative sound in Celtiberian names, <Z> began to be used and succeeded in spreading northwards from the workshops of Baetica and the East. The letters <SS>, <S> and <Z> stand in complementary spatial distribution because they provide alternative solutions for similar problems encountered by scribes trained in writing Latin in the buffer zones between central Celtiberia and peripheral, highly Romanised regions, to which foreigners were presumably attracted by intense trade activities.

7. The evolution of Celtiberian sibilants. What can be deduced from the increasing amount of graphic variation?

The new signs <\$>, <\$\$>, associated with the creation of a new Latin alphabet designed to write Celtiberian, could be pressed into service to distinguish some Celtiberian phonemes for which the Latin alphabet had no specific letters. But this resource could not be expected to reach long beyond the original boundaries of that alphabet. It was diffused from its locus somewhere in Aragon to the south, reaching the south-eastern periphery of Celtiberia, and in view of our available materials, was circumscribed to Cuenca, Segovia, Guadalajara and their north-eastern boundaries, roughly coinciding with present-day Soria (DERCINOASSEDENSIBVS, BVGANSONIS).

In a nutshell, Celtiberian may have had a phonemic contrast of place between two long/ tense sibilants:

- 1. /s:/ both intervocalic (-ss-), in codas and in onsets after voiceless obstruents (-C-s-);
- 2. $\frac{1}{2}$ < -nt(i)i- (phonemic upon loss of /n/);

There may have been short counterparts for both, namely

- 3. z/ (or simply a lax, possibly approximant-like s/) < -s- in intervocalic position and after r/;
- 4. $\frac{1}{5}$ < -ti-, -t, -d.

The Iberian script, with its characteristic orthographic underrepresentation of phonemic contrasts and its lack of geminate letters, respectively used <*s*> and <*z*> for the tense phonemes (1., 2.), and <*z*> for their lax counterparts (3., 4.) or their immediate antecedents.

The dental sibilant /s:/, /s/ may have shown a distinct tendency to become a fricative interdental / θ :/, / θ /, as in the well-known Spanish evolution *sperantia* > *esperantsa* > *esperansa* >

⁴¹ See Encarnação (2016), correcting his former reading OBIDVS; one cannot jettison the possibility that the scribe has heard [ovid: us] and that this is a case of *nomen pro cognomine*.

⁴² First edited by Roso de Luna (1904: 127). He, however, erroneously read it as OBISOD(ICVM); only a drawing is available.

esperanza. This change tends to maximise the articulatory space between phonemes, especially prone to happen if the system already had an alveolar and a palatal sibilant (whether there actually was an underlying palatal sibilant in Celtiberian is unknown, however).

Some pending issues remain: what exactly defines the contrast of <D> vs. <S> in the «Aragonese» alphabet, corresponding to one single sign <z> in the Iberian script? We have every reason to assume that word-medial [ð] was still an allophone of /d/ around the change of the era; the fact that it does not occur in final position in the new «Aragonese» alphabet, in the slots in which we would have expected it to, is intriguing. For instance, ablative endings were spelt with the Iberian sigma, vaguely transliterated as <z> or <ð> by modern scholarship under the assumption that it was a voiced fricative. And yet, in the «Aragonese» alphabet, sigma was replaced by a sibilant <S>. This can only mean that its phonetic content was, counter to expectations, quite different from the intervocalic allophone of /d/, rendered <D> in all the known varieties of the Latin alphabet, and that it was consequently assigned to another phoneme, which I have formalised as /s/.

The phonemic contrast /\$/ (<z>/<\$>) - /s:/ (<s>, <\$>) discernible in word-final position presupposes a reorganisation of the phonemic system somewhere down the line. In that context, the contrast stood between two fricatives, not distinguished by voice, but more likely by point of articulation, stridency, and tenseness: an alveolar /s:/ contrasted with a dental fricative that was realised as [\$] or $[\theta]$, perhaps already an approximant on its way to total effacement. We have to bear in mind that words in the «innovative» alphabet mimic or transcribe the corresponding words in the Iberian script, except that the Iberian script suffered from some underrepresentation of phonemic contrasts between fricatives, now partly repaired in the innovative version of the Latin alphabet by the introduction of «barred <\$>».

Therefore, we may suspect that the new alphabet was designed to be phonemically more consistent than its antecedent, but at the same time tended to reproduce *all* the characters present in Early Celtiberian, even if this procedure was misleading as to the actual phonetics when compared with contemporary Latin usage. Thus, it utilised the digraphs <QV> and <EI> for labiovelars and diphthongs that did not exist any longer, but had evolved into /p/ and /e:/ everywhere, as transpires from contemporary onomastics in the Latin alphabet, which show <P> and <E> (see Prósper 2016: 183 and fn. 144). As we are going to see, the use of word-final <S> as opposed to <S> in the «Aragonese» alphabet may be artificially recording distinctions long vanished in the language of most speakers for the sake of transparent and explicit inflectional morphology.

Since $\langle z \rangle$ functioned in Early Celtiberian as a cover symbol, the hypothetical shift -t#, $-d\# > -\theta/-g\#$ may be older than we think. -t# and -d# are often held to have merged already in Proto-Indo-European. Lipp (2016: 268–269, 287) starts from lax plosives, which resulted from the neutralisation of the phonetic manner of articulation features like tenseness, voice and aspiration in word final position. In this context, Proto-Indo-European displayed unreleased *lenes* ([-tense, -voiced, -aspirated]). In a vast number of languages, where tenseness (and not voice) was distinctive, they were classified in phonemic terms as [-tense, -aspirated], and not as [+tense, -aspirated]. This includes Italic (witness OL. FECED), as opposed to Late Vedic, where a final unreleased *lenis* is identified with /t, k, p/ = [+tense, -voiced], because the phonological identification was based on the common feature [-voiced] and the distinctive feature was voice and not tenseness (cf. *uṣarbhut* 'awakening at dawn'). This cannot be weighed against the Celtiberian evidence, which, for all we know, does not preserve Indo-European word-final stops (and consequently only uses syllabograms in word-final position when there was, or had been till recent times, a final vowel).

If the contrast /d/-/t/ had been neutralised in final position, we probably have to start from *-d#.⁴³ It was never voiced and was never identified with word-medial [ð] in Hispano-Celtic. Over time, it was lenited but remained a voiceless dental [§], parsed as /s/ when this new phoneme arose upon fricativisation of the cluster - $t\underline{i}$ -. This explains the 3rd p. sg. pret. tekez (K.6.1, Luzaga), $<*d\bar{e}ke-t$ ($<<*d^heh_1k-t$).⁴⁴

CCelt. -d# was probably dropped after (a number of) consonants. See, for instance, the sequence reconstructed as -d-t# in the 3rd p. sg. pret. auz (see above), -s-t# in the 3rd p. sg. pret. $tures < *d\bar{u}$ - $re\chi$ -s-t 'issued, ordered' (Torrijo del Campo, Teruel); tures/dures (K.0.7, Gortono)⁴⁵ and -n-t# in the 3rd p. pl. pret. tako /dakon/ < *dak-ond $< *d^hh_1k$ -ont (lead letter of Iniesta, with trivial omission of the nasal in coda position).⁴⁶ Hence, the outcome of CCelt. -d# in Celtiberian was either $-\omega$ (after consonants) or a fricative -s (after vowels). This is unproblematic and comparable to the situation in other Celtic languages: cf. the Gaulish verb forms GABAS '?took, has taken' (RIG II: L–55), PRINAS 'bought, has bought' (RIG II: L–32), and READDAS 'gave, has given' (RIG II: L–78), as well as probably Insular Celtic preterite forms as they looked prior to the rise of the absolute-conjunct system. Predictably, it has parallels outside Celtic, e.g. OL. DEDRON (CIL I: 30, Rome), DEDERO (CIL I: 2659, Albano Laziale), which preserved the inherited form, later replaced by dederunt (with spread of the primary ending -nt to the perfect), the Vedic sigmatic aorist $dh\bar{a}k$ 'burnt' $< *d^h\bar{e}g^{uh}$ -s-t, etc.

Somewhere down the line, the primary ending -(n)ti dropped its final vowel in Celtic, as shown by the 3^{rd} p. pl. present CABINT (Novallas). The designers of this alphabet unequivocally parsed post-apocope -t# as a voiceless stop, in spite of the fact that an early rule -ntV - > -ndV can be set up for Celtiberian (see Prósper 2016). This points either to comparatively early loss of -i, or to preservation of the voiceless quality of the stop, favoured by the phonosyntactic alternation $-nt\cancel{i}\#V$ vs. -nt(i)#C-. We may consequently surmise that a 3^{rd} p. sg. present form would have terminated in -<T> in documents written in the same alphabet.

As observed in different previous works (the last of which is Martínez Chico & Prósper 2021), postvocalic final dentals were eventually lost, and the exponent of the ablative case, once its distinctive feature ceased to exist, merged with that of the instrumental endings (and with the nominative in the first declension). This can be detected in a number of inscriptions (see Martínez Chico & Prósper 2021), but it is difficult to draw significant conclusions since this is a sociolinguistic, not only a dialectal problem: when loss of the final dental segment was reflected in official documents, we may be pretty certain that the change had been completed.

⁴³ Concurring with Kiparsky (2006) that there are no languages with a synchronic word final voicing rule, as opposed, for instance, to German or Catalan, which have a devoicing rule. This does not mean that allophonic voicing is not common between words closely connected in speech when the second begins with a vowel, but this does not affect phonemic contrasts.

⁴⁴ If this document is written in the dual writing system (which for the time being can only be claimed with any degree of certainty for the *Arevaci*), we have to read *<dekez>*. See Martínez Chico & Prósper 2021: 176–177. Jordán (2007) transliterates it as *<tegez>*, overtly misapplying the rules established by himself for texts showing the distinction between voiced and voiceless syllabograms and in this way jeopardising the very possibility of finding a meaning for this document.

⁴⁵ The probably allative preposition DV is now attested in the bronze of Novallas.

⁴⁶ See Prósper 2007: 85–87. The preceding form silabur 'money' is its DO. The occasionally raised objection that the sign < ta> is smaller or written in superscript (which would apparently call into question its obvious status as a syllabogram endowed with phonemic content) does not withstand scrutiny. Upon autopsy (december 12th, 2021) I can confirm that < ta> and < ko> are roughly the same size, but the scribe tried to spare some room by inserting the upper angle of the second sign into the right side of the X-shaped sign < ta>. As a consequence, < ko> stands slightly underneath the writing line.

A comparative table of all the Hispano-Celtic forms discussed in the paper

Indo- European	Hispano-Celtic	Iberian script	Latin alpha- bet	Forms in the Latin alphabet
-ntiiٍ-	-ntị-	<nti>> <nz> <z></z></nz></nti>	<nti></nti>	SEGONTIVS [sekontios, sekonzos]
			<ns></ns>	VELONSAE
			<ns></ns>	BVGAN S ONIS
			< SS >	SEGOSSOQVM [sekontios, sekonzos] TELASSICVS [telazokum] NISSICVM, 'NESSIA/NESSIA 'LEIOSS(A)E/LEIOSS(A)E
			<ss></ss>	SEGOSS(VS) [sekontios, sekonzos]
-tii-	-t <u>i</u> -	<ti>></ti>	<ti></ti>	CLOVTIVS [koloutios] ANNETIAE
			< \$>	BRASACA [barazioka] SECOVESO ANNESVS
				VASCASVS
			<\$>	CLOV S OCVM [koloutios]
			<z></z>	ANNEZA
-(n)Ktii̯-	-χt <u>i</u> - > - <u>iti</u> - (Arevaci)	<ti>> <2></ti>	TI	VSSVEITIO, VSSEITIO CONTAI+T+IA
			s / s	AI S AE [?] VXSEI S VS/VXSEISVS
			Z	CONTAIZA ARBAIZA CAIZITA
-T=s-	-ts-	< _S >	< SS >	DERCINOA SS EDENSIBVS

Dental stops show a tendency to weakening and eventual loss in final position that often compromises grammatical distinctions: this is a platitude in Greek and Latin studies, especially as far as verbal endings are concerned. To illustrate the process and its repercussion in synchronic phonemic contrasts, we may note its remarkable similarity with present-day Spanish. In some central varieties of Castilian Spanish, specifically in Salamanca, Valladolid and other provinces of «Old Castile», as well as some areas of Madrid, many speakers only distinguish two dental phonemes in codas, including word-final position: /s/ and / θ /. The latter is realised as an approximant, and results from merger of historical / θ / and / θ /. Still respec-

tively written $\langle z \rangle$ and $\langle d \rangle$.⁴⁷ In some places, by contrast (*e.g.* some areas of Madrid), final $-\delta$ is laxed into a barely perceptible approximant $-\delta$ and progressively lost, so that -s# and $-\theta\#$ are the only surviving word-final obstruents, at least in some contexts (since the preceding vowel and the following vowel/consonant also play a role).⁴⁸

In a nutshell, attrition of final stops proceeded in Celtiberian in a typologically frequent way: the only inherited word-final dental was not specified for voice and tended to disappear early on after consonants, but may have been partly restored for grammatical reasons; it was lenited and may have eventually disappeared after vowels; a released, voiceless dental stop, which came to be in final position after apocope of *-i*, lasted longer but probably suffered the same fate over time.

References

Abascal, Juan Manuel, José Ramón López de los Mozos. 1993. Inscripciones latinas de Sayatón (Guadalajara) en Territorium de Ercávica. *Wad-Al-Hayara* 20: 357–364.

Abascal Palazón, Juan Manuel. 2015. Estudios sobre la tradición manuscrita de la epigrafía hispano-romana. Madrid: Real Academia de la Historia.

Abascal Palazón, Juan Manuel, Geza Alföldy, Rosario Cebrián Fernández. 2011. *Segóbriga V: inscripciones romanas* 1986–2010. Madrid: Real Academia de la Historia.

Alfaro Peña, Eduardo. 2017. Los Casares de San Pedro Manrique: Un viejo *oppidum*, una pequeña ciudad. *Anejos de Segovia Histórica* 2: 51–69.

Ballester, Xaverio. 2003. Celtibérico SECoNZOS = ¿Secundus o SECoNTiOS?. Veleia 20: 351–354.

Barbas Nieto, Ricardo, Emilio Gamo Pazos, Helena Gimeno Pascual. 2011. Nuevos epígrafes latinos en el alto Tajo. Abánades, Ocentejo y Zaorejas. *Veleia* 28: 161–173.

BB.III = Francisco Beltrán, Jürgen Untermann, Javier De Hoz. 1996. El tercer bronce de Botorrita. Saragossa: Institución Fernando el Católico.

BB.IV = Francisco Villar, María Antonia Díaz, Manuel Medrano, Carlos Jordán Cólera. 2001. El IV Bronce de Botorrita (Contrebia Belaisca): Arqueología y lingüística. Salamanca: Ediciones Universidad de Salamanca.

Beltrán Lloris, Francisco, Carlos Jordán Cólera, Borja Díaz Ariño, Ignacio Simón Cornago. 2021. The Novallas bronze tablet: An inscription in the Celtiberian language and the Latin alphabet from Spain. *Journal of Roman Archaeology* 34: 713–733.

CIL = Mommsen, Theodor, et al. (eds.). 1862-. Corpus Inscriptionum Latinarum. Berlin: De Gruyter.

CIRB = Crespo Ortiz de Zárate, Santos, Ángeles Alonso Ávila. 2000. Corpus de inscripciones romanas de la provincia de Burgos. Fuentes epigráficas para la historia social de Hispania romana. Valladolid.

Corell i Vicent, Josep. 1992. Inscripciones romanas de Iniesta y Sisante (Cuenca) y la Iglesuela del Cid (Teruel). In: Estudios de arqueología ibérica y romana: homenaje a Enrique Pla Ballester: 583–596. Valencia: Museu de Prehistòria de València.

EDCS = Epigraphik Datenbank Clauss-Slaby. Available online at: http://www.manfredclauss.de. Accessed on 02/15/2022.

eDIL = *An Electronic Dictionary of the Irish Language, based on the contributions to a Dictionary of the Irish Language* (Dublin: Royal Irish Academy, 1913–1976). Available online at: http://www.dil.ie. Accessed on 02/15/2022.

EDPC = Matasović, Ranko. 2009. Etymological Dictionary of Proto-Celtic. Leiden: Brill.

Encarnação, José. 2016. Os romanos de Castro Verde (Conventus Pacensis, Lusitania). Revista Portuguesa de Arqueologia 19: 195–210.

Eichner, Heiner. 1989. 'Damals und heute: Probleme der Erschließung des Altkeltischen zu Zeußens Zeit und in der Gegenwart'. In: Bernard Forssman (ed.). Erlanger Gedenkfeier für Johann Kaspar Zeuß, Erlanger Forschungen, Reihe A Geisteswissenschaft, Band 49: 9–56. Erlangen: Universitätsbibliothek.

⁴⁷ The sibilant goes back to L. -s#, and the two obstruents - θ # and -d# were in word-final position after final vowels were apocopated posterior to the western Romance processes of palatalisation (radice(m) > raíz 'root') and intervocalic voicing (ite > id 'go!').

⁴⁸ This is of course a simplified description of a very complex variation that is in flux. See for details Molina Martos 2016, with references.

- ERS = Jimeno, Alfredo. 1980. Epigrafía romana de la provincia de Soria. Soria: Diputación de Soria.
- ERSg = Santos Yanguas, Juan, Javier del Hoyo Calleja, Ángel Luis Hoces de la Guardia y Bermejo. 2005. *Epigrafia romana de Segovia y su provincia*. Segovia: Caja Segovia.
- Ezquerra Lebrón, Beatriz, José B. Vicente Redón. 1999. El bronce celtibérico de Torrijo del Campo (Teruel). In: Francisco Beltrán et al. (eds). *Pueblos, lenguas y escrituras en la Hispania prerromana: Actas del VII Coloquio sobre Lenguas y Culturas Paleohispánicas*: 581–594. Salamanca: Ediciones Universidad de Salamanca.
- Garnier, Romain. 2010. Sur le vocalisme du verbe latin. Étude synchronique et diachronique. Innsbruck: Innsbrucker Beiträge zur Sprachwissenschaft.
- Gimeno Pascual, Helena, Manuel Ramírez Sánchez. 2002. Dos inscripciones inéditas de la provincia de Soria (España). Zeitschrift für Papyrologie und Epigraphik 139: 273–278.
- González Rodríguez, M. Cruz, Joaquín Gorrochategui Churruca. 2011. Nuevas lecturas de tres inscripciones de Clunia (Hispania Citerior) con repercusión sobre la expresión de algunas agrupaciones familiares celtibéricas. *Veleia* 28: 271–279.
- Hackstein, Olav. 2002. Uridg. *CH.CC > *C.CC. Historische Sprachforschung 115: 1–22.
- Hamp, Eric P. 1976. On some Gaulish names in -ant- and Celtic verbal nouns. Ériu 27: 1–20.
- Harðarson, Jon A. 1993. Studien zum urindogermanischen Wurzelaorist und dessen Vertretung im Indoiranischen und Griechischen. Innsbruck: Innsbrucker Beiträge zur Sprachwissenschaft.
- IRMN = Castillo, Carmen, Joaquín Gómez-Pantoja, M. Dolores Mauleón. 1981. Inscripciones romanas del Museo de Navarra. Pamplona: Diputación Foral de Navarra.
- Irslinger, Britta. 2002. Abstrakta mit Dentalsuffixen im Altirischen. Innsbruck: Innsbrucker Beiträge zur Sprachwissenschaft.
- Jordán Cólera, Carlos. 2007. Estudios sobre el sistema dual de escritura en epigrafía no monetal celtibérica. *Palaeo-hispanica* 7: 101–142.
- Jordán Cólera, Carlos. 2016. Sobre el valor de la *s* marcada en la epigrafía celtibérica en alfabeto latino. *Études Celtiques* 41: 75–94.
- Jordán Cólera, Carlos, Borja Díaz Ariño. 2022. Antropónimos de la Hispania céltica escritos con Z. *Emerita* 90: 149–167. Kiparsky, Paul. 2006. The amphichronic program vs. evolutionary phonology. *Theoretical Linguistics* 32: 217–236.
- LEIA = Vendryes, Joseph, Édouard Bachallery, Pierre-Yves Lambert. 1959–1996. Lexique etymologique de l'irlandais ancien. Dublin: Dublin Institute for Advanced Studies.
- Lipp, Reiner. 2016. Final stops in Indo-European: their phonological classification as a key to the Proto-Indo-European root structure constraint. *Slovo a Slovesnost* 77: 251–299.
- LIV = Rix, Helmut, et al. 2001². Lexicon der indogermanischen Verben. Die Wurzeln und ihre Primärstammbildungen. Wiesbaden: Ludwig Reichert.
- LV = Michel Lejeune. 1974. Manuel de la langue vénète. Heidelberg: Winter.
- Martínez Chico, David, Blanca María Prósper. 2021. A new Celtiberian tessera in the Latin alphabet from Virovesca (Briviesca, Burgos) and the typology of tesserae hospitales. Zeitschrift für Celtische Philologie 68: 167–196.
- McCone, Kim. 1996. *Towards a Relative Chronology of Ancient and Medieval Celtic Sound Change*. Maynooth: National University of Ireland at Maynooth.
- Méndez Dosuna, Julián V. 1985. La duración de S en los grupos SP, ST, SK: A propósito del orden regular de difusión en algunos cambios fonéticos. In: José Luis Melena (ed.). *Symbolae Ludovico Mitxelena Septuagenario Oblatae*: 647–655. Vitoria: Universidad del País Vasco.
- MLH I = Untermann, Jürgen. 1975. Monumenta Linguarum Hispanicarum I. Die Münzlegenden. Wiesbaden: Ludwig Reichert.
- MLH IV = Untermann, Jürgen. 1997. Monumenta Linguarum Hispanicarum IV. Die tartessischen, keltiberischen und lusitanischen Inschriften. Wiesbaden: Ludwig Reichert.
- MLH V = Wodtko, Dagmar S. 2000. Monumenta Linguarum Hispanicarum V. Wörterbuch der keltiberischen Inschriften. Wiesbaden: Ludwig Reichert.
- Molina Martos, Isabel. 2016. Variación de la -/d/ final de palabra en Madrid: ¿prestigio abierto o encubierto?. *Boletín de Filología* 51/2: 347–367.
- Nussbaum, Alan J. 2007. Latin present stems in $-s\bar{a}$: A possibly not so minor type. Handout. Kyoto, September 2007. 1–15
- Nussbaum, Alan J. 2016. Replacing *locus* 'place' in Latin *locuplēs*. In: Dieter Gunkel, Joshua Katz, Brent Vine, Michael Weiss (eds.). *Sahasram Ati Srajas. Indo-Iranian and Indo-European Studies in Honor of Stephanie W. Jamison*: 276–295. Ann Arbor / New York: Beech Stave Press.

- Prósper, Blanca María. 1997. La divinidad paleohispana *Cossue/Coso* y el dios itálico *Consus. AIΩN* (*Sezione Linguistica*) 19: 267–302.
- Prósper, Blanca María. 2005. Estudios sobre la fonética y la morfología de la lengua celtibérica. In: Francisco Villar, Blanca M. Prósper. *Vascos, celtas e indoeuropeos. Genes y lenguas*: 153–364. Salamanca: Ediciones Universidad de Salamanca.
- Prósper, Blanca María. 2007. Estudio lingüístico del plomo celtibérico de Iniesta. Salamanca: Ediciones Universidad de Salamanca
- Prósper, Blanca María. 2008. Estudios sobre el bronce de Botorrita I. Pisa-Rome: Fabrizio Serra Editore.
- Prósper, Blanca María. 2011. The instrumental plural in the thematic noun inflection of Continental Celtic. *Historische Sprachforschung* 124: 224–241.
- Prósper, Blanca María. 2012. The Hispano-Celtic divinity *Ilurbeda*, gold mining in Western Hispania and the syntactic context of Celtiberian *Arkatobezom* «silver mine». *Die Sprache* 49: 53–83.
- Prósper, Blanca María. 2014. Time for Celtiberian dialectology: Celtiberian syllabic structure and the bronze tablet from Torrijo del Campo (Teruel). *Keltische Forschungen* 6: 115–155.
- Prósper, Blanca María. 2016. *The Indo-European Names of Central Hispania. A Study in Continental Celtic and Latin Word Formation*. Innsbruck: Innsbrucker Beiträge zur Sprachwissenschaft.
- Prósper, Blanca María. 2017. Novallas, ¿un testimonio celtibérico de la ingeniería romana en Hispania?. In: Juan Antonio Álvarez-Pedrosa et al. (eds). *Ratna. Homenaje a la profesora Julia Mendoza*: 163–169. Madrid: Guillermo Escolar.
- Prósper, Blanca María. 2018a. The Indo-European personal names of Pannonia, Noricum and Northern Italy: comparative and superlative forms in Celtic, Venetic, and South-Picene. *Voprosy Onomastiki* 15: 108–138.
- Prósper, Blanca María. 2018b. The Venetic agent nouns in *-tōr-* revisited. In: José M. Vallejo, Carlos G. Castillero, Iván Igartua (eds.). *Studia Philologica et Diachronica in Honorem Joaquín Gorrochategui*: 453–471. Vitoria: Publicaciones de la Universidad del País Vasco.
- Prósper, Blanca María. 2019. Celtic and Venetic in contact: the dialectal attribution of the personal names in the Venetic record. *Zeitschrift für Celtische Philologie* 66: 7–52.
- Prósper, Blanca María. 2020. The Sabellic accusative plural endings and the outcome of the Indo-European sibilants in Italic. *Journal of Language Relationship* 18: 41–79.
- Prósper, Blanca María. 2021. Latin sancītō vs. Lusitanian singeieto. Is the Lusitanian inscription of Arroyo de la Luz I the westernmost lex sacra?. In: Marco A. Coronel Ramos, Ricardo Hernández Pérez (eds.). PRISCORVM INTERPRES. Homenaje al profesor Jaime Siles (= Studia Philologica Valentina, Anejo 2): 339–350. Valencia: Ediciones Universidad de Valencia.
- Prósper, Blanca María, Marcos Medrano Duque. 2022. Ancient Gaulish and British divinities: notes on the reconstruction of Celtic phonology and morphology. *Voprosy Onomastiki* 19: 9–47.
- RIG II = Lambert, Pierre-Yves. 2002. Textes gallo-latins sur instrumentum (Recueil des inscriptions gauloises. Vol. II, 2). Paris: C.N.R.S.
- Rodríguez Ramos, Jesús. 2002. Okelakom, Sekeida, Bolsken. Kalathos 21: 429-434.
- Roso de Luna, Mario. 1904. Nuevas inscripciones romanas de la región Norbense. *Boletín de la Real Academia de la Historia* 44: 113–137.
- Sáenz de Buruaga, Andoni, Paquita Sáenz de Urturi. 1994. La epigrafía romana de San Román de San Millán. *Veleia* 11: 49–82.
- Saquete Chamizo, José C., Santiago Guerra Millán. 2015. Una inscripción constructiva procedente de Metellinum (provincia Lusitania). Zeitschrift für Papyrologie und Epigraphik 196: 303–306.
- Schrijver, Peter. 1993. On the development of vowels before tautosyllabic nasals in Primitive Irish. Ériu 44: 33–52.
- Šefčík, Ondřej. 2020. The development of Indo-European obstruent clusters of types plosive + *t/s* into Slavic. *Zeitschrift für Slawistik* 65: 222–248.
- Simón Cornago, Ignacio, Carlos Jordán Cólera. 2018. The Celtiberian S. A new sign in (Paleo)Hispanic epigraphy. *Tyche* 33: 183–205.
- Untermann, Jürgen. 1967. Die Endung des Genitiv singularis der o-Stamme im Keltiberischen. In: W. Meid (ed.). Beiträge zur Indogermanistik und Keltologie, Julius Pokorny zum 80. Geburtstag gewidmet: 281–288. Innsbruck: Innsbrucker Beiträge zur Sprachwissenschaft.
- Untermann, Jürgen, Francisco Villar. 1999. Las «téseras» de Gadir y Tarvodurum. In: F. Villar et al. (eds). *Pueblos, Lenguas y Escrituras en la Hispania Prerromana. Actas del VII Coloquio sobre Lenguas y Culturas Paleohispánicas*: 719–732. Salamanca: Ediciones Universidad de Salamanca.

Velaza, Javier. 2008. La onomástica personal en la epigrafía romana de la Meseta Meridional: una aproximación. In: G. Carrasco Serrano (ed.). *La romanización en el territorio de Castilla-La Mancha*: 367–383. Ciudad Real: Ediciones Universidad de Castilla-La Mancha.

Vicente Redón, Jaime D., Beatriz Ezquerra Lebrón. 2003. La tésera de *Lazuro*: un nuevo documento celtibérico en La Caridad (Caminreal, Teruel). *Palaeohispanica* 3: 251–269.

Villar, Francisco. 1993–1995. El instrumental en celtibérico. Kalathos 13–14: 325–338.

Villar, Francisco. 1995. A New Interpretation of Celtiberian Grammar. Innsbruck: Innsbrucker Beiträge zur Sprachwissenschaft.

Vine, Brent. 2006. On Thurneysen-Havet's Law in Latin and Italic. Historische Sprachforschung 119: 211–249.

Widmer, Paul. 2004. Das Korn des weiten Feldes: Interne Derivation, Derivationskette und Flexionsklassenhierarchie. Aspekte der nominalen Wortbildung im Urindogermanischen. Innsbruck: Innsbrucker Beiträge zur Sprachwissenschaft.

Б. М. Проспер. Сибилянты в испано-кельтских языках: вопросы фонетики, фонологии и орфографии

На основании недавних открытий относительно использования латинского алфавита в официальных документах, написанных на кельтиберском языке в различных регионах Центральной Испании, а также в результате нового прочтения автохтонных имен, обнаруживаемых в латинской (не кельтиберской) эпиграфике, автор выдвигает ряд новых гипотез об устройстве кельтиберской фонологии. Аргументы, основанные на эпиграфическом и лингвистическом анализе, в свою очередь, позволяют точнее очертить границы испано-кельтского языкового ареала, определить внутри него некоторые диалектные различия и описать возникновение и фиксацию отдельных орфографических норм. Приводятся несколько новых этимологизаций для ряда личных имен, до сих пор не имевших этимологии или этимологизировавшихся ошибочно (включая случаи, когда новая этимология позволяет отождествить ту или иную форму с формами, сохраняющимися в галльском или в островных кельтских языках). Наконец, для трех известных лексем предлагаются новые чтения вубамуюміс, ссоучести и AISAE (а также, возможно, VXSEISVS).

Ключевые слова: кельтиберские языки; индоевропейская реконструкция; кельтская этимология.