Cisalpine Celtic literacy

Proceedings
of the international symposium
Maynooth 23–24 June 2022

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Cisalpine Celtic literacy

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Corinna Salomon & David Stifter

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Cisalpine Celtic Literacy

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Abbreviations

AE	*L'Année Épigraphique*.
CIE	*Corpus Inscriptionum Etruscarum*, ed. Carl Pauli et al. (Berlin 1885–).
CII	*Corpus Inscriptionum Italicarum*, ed. Ariodante Fabretti (Augusta Taurinorum 1867)..
CIIC	*Corpus Inscriptionum Insularum Celticarum*, ed. Robert A. S. Macalister (Dublin 1945).
CIL	*Corpus Inscriptionum Latinarum*, ed. Theodor Mommsen et al. (Berlin 1863–).
ET/ET²	Gerhard Meiser: *Etruskische Texte*, 2 vols (Hamburg 2014).
Hesp	Javier de Hoz et al. (eds): *Hesperia. Banco de datos de lenguas paleohispánicas* (2005–), URL: https://hesperia.ucm.es.
Im.It.	Michael H. Crawford et al. (eds): Imagines Italicae*: A corpus of Italic inscriptions*, Bulletin of the Institute of Classical Studies supplement 110, 3 vols (London 2011).
InscrAqu	Johannes Baptista Brusin (ed.): *Inscriptions Aquileiae* (Udine 1991–1993).
IPSTS	*Index of potters' stamps on terra sigillata 'Samian ware'*, ed. Felix Oswald (Margidunum, East Bridgford, Notts 1931).
LexLep	*Lexicon Leponticum*, ed. David Stifter et al. (Wien 2009–), URL: https://lexlep.univie.ac.at.
LV	Giovan Battista Pellegrini & Aldo Luigi Prosdocimi: *La Lingua Venetica*, 2 vols (Padova/Firenze 1967).
MLH	*Monumenta Linguarum Hispanicarum IV, Die tartessischen, keltiberischen und lusitanischen Inschriften*, ed. Jürgen Untermann (Wiesbaden 1997), 349–722.
Ogham 3D	Ogham in 3D, URL: https://ogham.celt.dias.ie.
RIG G/I	*Recueil des inscriptions gauloises I, Textes gallo-grecs*, ed. Michel Lejeune (Paris 1985).
RIG E/II/1	*Recueil des inscriptions gauloises II/1, Textes gallo-étrusques. Textes gallo-latins sur pierre*, ed. Michel Lejeune (Paris 1988), 1–54.
RIG L/II/2	*Recueil des inscriptions gauloises II/2, Textes gallo-latins sur instrumentum*, ed. Pierre-Yves Lambert (Paris 2002).
RIG M/IV	*Recueil des inscriptions gauloises IV, Les legends monétaires*, eds Jean-Baptiste Colbert de Beaulieu & Brigitte Fischer (Paris 1998).
RIIG	*Recueil informatisé des inscriptions gauloises*, ed. Coline Ruiz Darasse et al. (2022–), URL: https://riig.huma-num.fr.
RIU	*Die römischen Inschriften Ungarns*, eds László Barkóczi, et al. (Amsterdam – Budapest – Bonn 1972–2001).
TIR	*Thesaurus Inscriptionum Raeticarum*, ed. Stefan Schumacher et al. (Wien: 2013–), URL: https://tir.univie.ac.at/.

Foreword

In the study of past written traditions, but especially in the case of languages of which only fragments – in a literal and in a metaphorical sense – survive, questions of literacy and its position in the languages' past social environments take centre stage. These questions relate, for instance, to the external or internal origin of literacy, to external influences on it, to the dispersal of its knowledge in society and its social diversification, and to its seat in life. Who writes for whom, what genres is writing used for, examples of what genres have survived and what has not survived but can be safely inferred to have existed? In the case of extinct languages and writing systems, another question relates to the factors that were important in the decline and death of literacy.

Naturally all of these and still other issues are prominent in the case of the Cisalpine Celtic writing tradition from the 7th or 6th century B.C. until around the Augustan period. Cisalpine Celtic is the cover term for a small corpus of inscriptions in the vernacular Celtic languages from north-western Italy north of the River Po and from southern Switzerland, especially Canton Ticino, written for the most part in the local Lepontic script, with some of the late texts also using the Roman alphabet. Around 450 short inscriptions are known, collected in *Lexicon Leponticum* (https://lexlep.univie.ac.at/), the vast majority of which do not extend beyond a single word, usually a name, and in many cases are even shorter than that, sometimes not more than single characters. When, as is the case in Cisalpine Celtic, the one thing that we know best are *letters*, then the study of *literacy* becomes focal.

For the purposes of this proceedings volume, the editors pragmatically understand the Cisalpine Celtic corpus as comprising two – probably closely related – languages, namely Lepontic and Cisalpine Gaulish. If and how the two languages differ from each other is an open question. According to an alternative view, the differences in language and form within the corpus reflect the diachronic development of a single language that is fundamentally the same as Gaulish spoken in Transalpine Gaul, the region largely coterminous with modern France. The 2022 workshop on Cisalpine Celtic literacy held at Maynooth University can be seen as one contribution to that ongoing debate. The workshop was organised by Dr Corinna Salomon as part of her CCeLL project (*Cisalpine Celtic Language and Literacy*, 2020–2022), funded by the Austrian Academy of Sciences. In the aftermath of the Covid-19 pandemic, the workshop was held virtually over two days in June 2022. It comprised twelve papers by fifteen scholars.

The contributions to these proceedings demonstrate forcefully the vibrant and exciting research that is carried out even in a small philological field such as Cisalpine Celtic Studies, whose corpus is thankfully constantly growing. Particularly when the textual corpus is small, the addition of new material can have disproportionate repercussions on the received wisdom. We are reminded of this point by the new texts recently discovered in excavations in the City of Milan, communicated by Anna Maria Fedeli, Pietro Giusteri and Francesca Roncoroni. The immense boost in our knowledge of Cisalpine Celtic provided by the graffiti from Carona (Val Brembana, Bergamo) is illustrated by the contributions of Joseph Eska and David Stifter, as is the importance of paying attention to the smallest epigraphic and philological details in the analysis of our sources, of revisiting long-known texts and of reassessing them in the light of changing scholarship. The momentous results of adopting – literally – a new angle of looking at the Briona inscription are evident in the studies by Patrizia Solinas and by Francesco Rubat Borel and Andrea Arcà, as are the impact of modern technology on recording and analysing ancient epigraphy. Romeo Dell'Era presents new insights into the chronology of the inscriptions from the Lugano region by taking their archaeological and topographical context into account.

The Cisalpine Celtic material is significant in perspectives that reach wider than the comparatively circumscribed area of its attestation. Especially because the corpus is so small, Cisalpine Celtic is an ideal testing ground for technical experiments. Corinna Salomon and Coline Ruiz Darasse speak about the importance of digitisation for making progress in our understanding of the texts, and of linking them electronically and culturally with the other ancient Celtic traditions. Bernard Mees' and Thomas Markey's contributions talk about the connections of Cisalpine Celtic literacy, the inscriptions, the languages and the cultures, with other traditions in Italy, and Alexander Falileyev's study of the Lepontic patronymic suffix *-al-* takes us even further afield to Asia Minor. We should not underestimate the interest that the study of literacy in a tradition even as small as Cisalpine Celtic can generate globally and in other areas of study.

The editors thank all contributors to the conference and to this volume for sharing their research and their insights with us and with the wider communities who have an interest in the progress of Cisalpine Celtic Studies.

Thomas Markey, whose paper at the workshop was read by Bernard Mees, sadly did not live to see its publication in these proceedings. Our thoughts are with his wife Patricia and his family.

David Stifter and Corinna Salomon

Lexicon Leponticum – concept and implementation

Corinna Salomon

Maynooth University

Abstract

The digital edition and etymological dictionary of Cisalpine Celtic, *Lexicon Leponticum* (LexLep), has now been online for thirteen years. I want to take this opportunity to take stock of what has been achieved so far, present the status of the site as of 2023, and cast a look into its future.

1. History

Lexicon Leponticum was first created during the original LexLep project, which ran from 2009 to 2011 at the Department of Linguistics of the University of Vienna.[1] The project's initiator and director David Stifter and a team of graduate students[2] succeeded in setting up a Semantic MediaWiki system which was initially intended to function primarily as an etymological dictionary of the Cisalpine Celtic language(s) Lepontic/Cisalpine Gaulish; testing the software constituted a core project goal. The necessity of providing information like datings and provenance about the epigraphical sources themselves and of discussing reading variants – factors which are of surpreme importance in the study of fragmentarily attested languages – soon led to the extension of the site's source section into a full edition of the inscriptions. Even though the data entered into LexLep was needs based on previous print editions (primarily Morandi 2004 and Solinas 1995) and involved little original research beyond occasional autopsies and improved linguistic

[1] Austrian Science Fund (FWF) project no. P21706 *An interactive online etymological dictionary of Lepontic*. In 2012, a six-month extension was funded by the Celtic Research Trust.

[2] Technical staff: Martin Braun, Marcel Schwarz; data entry: Michela Vignoli, Eva Lettner, Chiara Dezi, Anna Adaktylos, Corinna Scheungraber.

analyses, the wider scope of the site together with the unforeseen complexity of the technical aspects went beyond the project's means in terms of time and personnel. At the end of the project, LexLep was fully functioning as a system, but skeletal in terms of content. Though the site's search and statistics functions proved useful in addressing research questions concerning for example the use of the letter san (Stifter 2010) and the development of writing direction within the corpus (Stifter 2019: 104), LexLep did not achieve its full potential as a searchable online Digital Humanities tool.

After eight years in which activity on LexLep was restricted to the occasional addition of major new inscription finds (VS·1, VS·2, VR·21–34, BG·41.1–30), a thorough revision and extension of the edition began in 2020. The two-year project CCeLL – *Cisalpine Celtic Language and Literacy* led by myself at the University of Vienna[3] initiated the transformation of the site from a searchable data repository into an original edition based on the in-person re-examination and documentation of all inscriptions. In the course of the project, the entries for 177 inscriptions and their associated pages (archaeological sites, linguistic forms, etc.) were revised, completed and augmented by a commentary including a discussion and full list of references.[4] 32 inscriptions were added to the corpus.[5] 75 documents and specimens of seven coin types in 18 repositories were examined,[6] and new photographs of 61 documents were added to LexLep. The LexLep team would like to take this opportunity to thank the numerous colleagues in museums and monuments offices in Italy, Switzerland, Germany, Austria, France, the Netherlands and the UK who have been incredibly kind and helpful in answering questions about the whereabouts of objects and in hosting members of the LexLep team at their institutions.[7]

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[3] Funded by an Austrian Academy of Sciences (ÖAW) APART-GSK fellowship (2020–2022).

[4] A list of publications which resulted from the work on the LexLep edition can be found at https://lexlep.univie.ac.at/wiki/The_Project\#Publications; see esp. Salomon 2022 and 2023.

[5] A list of inscriptions in LexLep which are not included in earlier print editions can be found at https://lexlep.univie.ac.at/wiki/Concordance.

[6] A list of the examined documents can be found at https://lexlep.univie.ac.at/wiki/Property:date_autopsy.

[7] https://lexlep.univie.ac.at/wiki/The_Project\#Acknowledgements.

Work on LexLep will continue during a two-year Marie Skłodowska-Curie fellowship[8] conducted by myself and mentored by David Stifter at the University of Maynooth, starting in June 2023. One of the aims of the project CLINIAR – *Celtic Literacy in Northern Italy and the Alpine Region* is to complete the examination and documentation of the inscriptions and the revision of the entries, which will result in a fully annotated edition of the sources in combination with an exhaustive etymological dictionary.

2. Corpus

LexLep currently contains 510 inscriptions – a somewhat inflated number which is due to the fact that multiple sections of one document are counted separately. The number of documents (i.e. inscribed objects) is 435, and includes several subcorpora:

I. The corpus of Cisalpine Celtic inscriptions proper, i.e. inscriptions in a Celtic language written in the Lepontic alphabet (ca. 450 documents). Technically, many inscriptions cannot be assigned to the corpus based on strict linguistic or palaeographic criteria, being too short or fragmentary to permit a clear classification – a considerable number of pre-Roman graffiti are part of the corpus by virtue of their find place, dating, and/or general typological similarity to identifiably Celtic documents. LexLep proceeds in accordance with previous printed editions in this regard, including all documents which were considered relevant by Solinas (1995), Morandi (2004) and other scholars, and adding any material which was subsequently published as evidence of Cisalpine Celtic literacy.

II. Alphabetically and partly also linguistically Latin inscriptions which (potentially) contain Celtic language (i.e. onomastic) material (29 documents excluding the Latin parts of bilingual inscriptions). Here, again, LexLep follows previous collections in including such inscriptions as can be considered to be part of the pre-Roman epigraphical production due to their find context, palaeographic features and/or stylistic aspects; the

[8] Funded by the European Union under the Horizon Europe programme.

large amount of Celtic onomastic material attested in Roman epigraphs from northern Italy is beyond the scope of the edition.

III. Alphabetically Camunic inscriptions which have been argued to be linguistically Celtic (3 documents).

IV. Alphabetically Venetic inscriptions which have been argued to be linguistically Celtic (5 documents) – again, the great number of Venetic inscriptions which contain etymologically Celtic names is not part of the corpus; this also goes for Raetic inscriptions.

V. Alphabetically and linguistically Etruscan and Sabellic inscriptions which feature Celtic onomastic material (10 documents) – included in full due to their comparatively small number.

VI. The 'Ligurian' inscriptions of the Lunigiana region (5 documents), which have been considered to be linguistically and/or alphabetically Celtic by some scholars (cf. the contribution of Bernard Mees in the present volume).

VII. (Potentially) linguistically Celtic documents from Carnia, Noricum and Pannonia, being negligible in number and technically 'Cisalpine' (3 documents, partly overlapping with group IV).

The sigla system of LexLep follows the principle introduced by Pellegrini & Prosdocimi 1967 (LV) for the Venetic inscriptions: a two-letter code for the find area followed by a sequential number. To distinguish North Italic inscriptions from other corpora, the manner in which area code and number are separated is different for each of them: a space for Venetic (Es 1), a middle dot for Cisalpine Celtic (CO·1), a hyphen for Raetic (SZ-1). In LexLep, the area code refers to an Italian province, Swiss canton, or national equivalent in other countries. LexLep assigns its sigla to inscriptions of all groups except V to ensure that all relevant documents can be referred to unambiguously, even when they are not (yet) part of another edition; multiple sigla for individual documents in different editions (e.g. LexLep SP·1 = ET² Li 1.3) as a result of slowly growing corpora and the expansion of editions are to an extent unavoidable.

3. Functionality

LexLep is constructed with the software Semantic MediaWiki. The data are organised into nine fundamental categories: inscriptions, the objects on which they are written, the sites and find spots[9] where these objects are from and the museums in which they are kept, the words and morphemes which are attested in the inscriptions, the letters which are used to write them, and the phonemes that these letters denote. Every item in one of these categories has its own page with the pertinent information and links to all immediately related pages. Information about the items is presented in two ways: basic data are encoded in a tabulated section on top, while the commentary provides a discussion, contextualisation, and references. The data in the table section is semantically annotated, allowing the automatic retrieval of information within the system, and is thus largely searchable. Simple searches are most easily conducted by either – for relations between items – using the lists of attestations on the individual item pages, or – for properties of items – by clicking on the name of a property, on whose pages maps and statistics are provided. Complex customised searches can be conducted via the search masks or the 'advanced search' button in the navigation menu. Search results can be retrieved in the formats JSON, CSV, RSS and RDF; individual pages can be downloaded in PDF and RDF format.

LexLep also provides a full bibliography whose entries link to the pages on which they are mentioned, and a concordance with past editions (PID, Tibiletti Bruno 1981, Solinas 1995, Motta 2000, Morandi 2004). The section entitled 'Cisalpine Celtic' contains overview chapters on a range of topics related to the study of the Celtic language remains south of the Alps.

To enable scholars to conduct detailed research into issues of palaeography, the characters and character variants which are used to write Cisalpine Celtic inscriptions – viz. the letters and punctuation signs of the Lepontic or Lugano alphabet and of the other involved writing

[9] Sites are modern communities to which finds can be assigned unambiguously and uniformly (unless the find place is outright unknown), so that they can be displayed on a map. The category 'field name' covers more precise find spots – anything from an excavation or archaeological site to a literal field name – for documents where such details are known.

systems – are recorded as individual items. To each 'archigrapheme' (alpha, san, etc.) are assigned numbered image files which display the character variants; the files are semantically annotated and linked to the inscriptions in which they are attested. This avoids the issues which come with both downloadable and web fonts; it allows us to describe and classify the character variants more easily, and to make changes when new analyses cause a re-assessment of the data.

The core of the edition is the dictionary, which is split into two parts: the 'Dictionary of Attested Forms' (i.e. the list of words) and the 'Morphological Lexicon' (i.e. the list of morphemes). The Dictionary contains all Celtic linguistic forms which are or can be argued to be attested in the inscription corpus. Uncertainties regarding the reading, segmentation and analysis of inscriptions are taken into account by listing all plausible forms; all lemmata are defined as 'certain', 'probable' or 'uncertain'. The forms are not normalised, but appear in transliteration exactly as they are spelled in the respective inscription(s); any variation in spelling/phonetics or formation is reflected in separate lemmata. This avoids any distortion of the evidence through potentially flawed efforts at standardisation and interpretation – we do not understand the material sufficiently well to be able to standardise with any pretence of confidence. Inflected forms are also listed separately to enable the tracking of the attestation of inflectional endings. The Dictionary of Attested Forms thus serves as a word index more than as a reference work of Old Celtic languages such as the DLG or LEIA. The latter function is fulfilled by the Morphological Lexicon, which supplements the Dictionary by providing a list of attested or possibly attested morphemes in normalised Gaulish spelling. It includes lexical as well as derivational and inflectional morphemes which can be identified, compared with elements of Transalpine Gaulish or other Celtic languages and thus integrated into the larger context of Celtic historical linguistics, and which can thus be used to find specific linguistic elements in Cisalpine Celtic that are not masked by spelling quirks of the Lepontic alphabet. It also serves to create links within the Dictionary between the non-standardised attested forms which are related to each other.

4. Outlook

Beside the extension and update of the LexLep edition in terms of content and functionality, future projects related to the site will be concerned with broader issues of Digital Humanities and the position of LexLep within an ever-growing network of digital edition and lexicography endeavours. LexLep and its sister site *Thesaurus Inscriptionum Raeticarum* (TIR), which covers the Raetic inscriptions, are unusual among digital epigraphic editions of ancient languages insofar as they do not employ a markup language – viz. the state-of-the-art TEI XML standard for digital epigraphy EpiDoc[10] – to organise the data, but run on an adapted version of the open-source content management system MediaWiki with a number of semantic extensions. With EpiDoc being increasingly considered the standard tool for our purposes, this sets limits to the interoperability and reusability of the LexLep data. The use of a MediaWiki software does, however, also have some advantages, not the least of which is the comparatively low participation threshold for editors, beside convenient inbuilt features like the history function, which renders the release of site versions unnecessary, and the excellent community support for WikiMedia software which provides troubleshooting help and regular software updates.

One focus in the future development of LexLep will therefore lie on efforts to increase data interoperability and to integrate the site into the Linked Open Data nexus in ancient history, epigraphy and philology. It is our goal to participate in FAIR – Findable, Accessible, Interoperable, Reusable – epigraphy[11] and make our work useful to scholars of all disciplines and research needs. The most immediate desiderata in this respect are the interlinking of the documents in LexLep with the Texts section of the Trismegistos portal[12] (as already achieved in the TIR) and concurrent update of the latter's inventory of Cisalpine Celtic inscriptions, and the alignment of our linguistic data and analyses with the digital edition of Transalpine Gaulish RIIG – *Recueil Informatisé des Inscriptions Gauloises* (see the contribution of Coline Ruiz Darasse in this volume).

[10] https://sourceforge.net/p/epidoc/wiki/Home/.
[11] https://www.csad.ox.ac.uk/fair-epigraphy.
[12] https://www.trismegistos.org/.

In its digital format, LexLep has the potential to fulfil the otherwise practically unattainable ambitions of epigraphic edition: to be exhaustive, and to remain complete. We are therefore particularly grateful to Martin Braun (University of Vienna), the original IT mastermind of the LexLep and TIR sites, for his continued commitment and support, which has saved the editions from succumbing to PHP updates and other calamities which regularly threaten online academic resources. Thanks to a group of scholars who are dedicated to the LexLep project and its impact beyond funded projects, the site will – for the foreseeable future – be continuously improved and updated with new documents, analyses and literature.

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Transalpine and Cisalpine Gaulish: the RIIG and LexLep projects in synergy

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Abstract

The work of digitizing Gaulish inscriptions across the territory of France is under way in the ANR RIIG project (*Recueil Informatisé des Inscriptions Gauloises*), taking advantage of the work carried out on Cisalpine Celtic in *Lexicon Leponticum* (LexLep). In this paper, I will present some elements of interaction between these two corpora and the methodological problems that this type of documentation raises.

Recueil Informatisé des Inscriptions Gauloises (RIIG) is a young-researcher project funded by the Agence Nationale de la Recherche in France (ANR JCJC 19-CE27-0003) which started on 1 January 2020 for a duration of four years. It ultimately aims at a complete and new edition of all Gaulish inscriptions from the French territory known to date, at the updating and modernisation of the previous editions, at the new publication of each inscription with a precise contextualisation, at the preparation of a sociolinguistic analysis, and at the provision of an updated archaeological and linguistic bibliography.

The project focuses on inscriptions in the Gaulish language from Transalpine Gaul, i.e. inscriptions found on the territory of present-day France. In RIIG, we have deliberately left aside the Cisalpine data because they were already treated in LexLep, which predates our ANR project and from which we were able to benefit.

Transalpine and Cisalpine Gaulish differ little from each other (Stifter 2020: 337) and the division is mainly made on a geographical level. This short and rather methodological paper aims at explaining

how RIIG has benefitted from the experience of LexLep[1] and from the *Ogham in 3D* website,[2] and how they function alongside one another. Aligning the two corpora is also about providing comparisons between the two sets in the future.

1. Setting up the digitisation

As its name indicates, the RIIG project is in line with previous works, the volumes of the RIG (*Recueil des Inscriptions Gauloises*), published since 1985 as supplement no. 45 of the journal *Gallia* (RIG I = Lejeune 1985; RIG II/1 = Lejeune 1988a; RIG III = Duval & Pinault 1986; RIG IV = Colbert de Beaulieu & Fischer 1998; RIG II/2 = Lambert 2002) and its complements (Lejeune 1988b; Lejeune 1990; Lejeune 1994; Lejeune 1995; Lejeune & Lambert 1996; Lambert 2008).

For over thirty years, the data was scattered over several publications and, above all, the Gaulish language lacked a modern working research tool aligned with other epigraphic corpora (like the Klaus-Slaby database[3] for Latin, LexLep for Cisalpine Celtic or *Hesperia*[4] for Palaeohispanic languages). On the other hand, since the publication of the first volume of RIG, the knowledge about the early history and the very definition of this period has clearly changed among researchers.

The first major step of the project was to digitise the initial corpus, prepared between 1985 and 2002 mainly by Michel Lejeune and Pierre-Yves Lambert. This part of the project has been completed, and a consultation website, hosted by TGIR Huma-Num, was launched on 1 September 2022.[5] Elements of the archaeological contextualisation of the texts are included and will be added to as we go along.

All this documentation is provided in Open Access, under the CC BY-NC-ND 4.0 licence. Registration records have a DOI and URI so that they can be properly cited and participate in Linked Open Data. References to entries in other online databases are also available. Finally, the XML file of each entry can be downloaded.

[1] https://lexlep.univie.ac.at/.
[2] https://ogham.celt.dias.ie/.
[3] https://db.edcs.eu/.
[4] http://hesperia.ucm.es/.
[5] https://riig.huma-num.fr/.

The public platform provides access to the online edition of all the data published since 1985 in *Recueil des Inscriptions Gauloises* and its complements. These are the Gallo-Greek inscriptions (RIG I, G-1 to G-275) and the Gallo-Latin inscriptions on stone (RIG II/1, L-1 to L-16) as well as the Gallo-Greek inscriptions published since 1988 in various supplementary articles mainly in the journal *Études Celtiques*. The Gallo-Latin inscriptions on instrumentum will be treated in a later project.

Our ANR project is affiliated with the Ausonius Institute at Université Bordeaux Montaigne. Therefore, the records of the RIIG are presented according to the PETRAE model that has been developed there (*Programme d'Enregistrement Traitement et Reconnaissance Automatique en Épigraphie*, cf. Navarro Caballero, Prévôt & Ruiz Darasse 2022 for a short history of this programme) and follow the TEI-XML EpiDoc scheme.

The EpiDoc encoding system conforms to the logic of the semantic web and is part of the tagging of texts (TEI – *Text Encoding Initiative*) by adding metadata specific to epigraphic documentation. The tagging in EpiDoc is then based on an encoding with determined tags, which are well structured and which, for the RIIG, had sometimes to be adapted to the Gaulish language. In contrast, LexLep is a Wiki-type database (see the article by Corinna Salomon in this volume), but the preparation of RIIG has benefitted from the existence of LexLep for several reasons.

Firstly, many choices about the structuring of the data had already been proposed in LexLep. We were equally happy with them so we adopted them. For example, the initial numbering of documents in RIIG was abandoned and is now presented in a manner very similar to that of LexLep: it consists of the abbreviation of the French département, a number for the archaeological site within the département, and a continuous number for the inscriptions from the site (e.g. BDR-01-01 = the first inscription of the first site of the Bouches-du-Rhône). The reference to the writing system present in the original RIG system (G for Gallo-Greek and L for Gallo-Latin) has been abandoned in favour of a logic based on archaeological sites, which emphasises the context of discovery and allows future data to be accommodated by incrementing the information in a continuous manner. Nevertheless, the older references still remain available (BDR-01-01 = RIG I G-1). This choice was made in view of the practice in LexLep, but also in the *Hesperia* project for Palaeohispanic languages and scripts. These databases merge several

inventories that have dealt with the same inscriptions at different phases of the research. In the section presenting the archaeological site, we were mainly inspired by the *Ogham in 3D* project: inscriptions can be sorted by the major French regions, by départements or by communes. In the main section, they can also be sorted by type of text, by medium or material, by graphic system or by period.

Secondly, LexLep is, as its name suggests, first and foremost a lexicon, and its purpose is to be a dictionary of Lepontic and Cisalpine Gaulish, with comprehensive lemma entries. RIIG does not intend to include such information, although we also aim to create the most accurate indexes possible. In creating LexLep, several types of words were defined (personal name, noun, verb, indeterminate); entries have a translation and a degree of certainty assigned.[6] Therefore, in the RIIG data set, we have also tried to mark up the linguistic material as precisely as possible in order to provide the visitor with the clearest possible linguistic features.

These aspects, which may appear trivial or technical, determine a number of issues for the final work of analysis and comparison.

2. Alignment and Linked Open Data between RIIG and LexLep

Our online edition of the Gaulish texts is intended to be as accurate and accessible as possible. The linguistic analysis of each interpretation is available by ticking the 'linguistic characteristics' button, as well as all previous proposals for an analysis made by specialists of Gaulish, in order to easily compare them. All the details underlying this synthetic and simplified visualisation are more extensively presented in the critical apparatuses and in the comments of members of the RIIG team. The readings and related comments are easily identifiable by tags. A system of colour coding of the identified parts of the inscriptions and their functions allows a quick orientation as to which lexeme is being discussed. The scholar responsible for each comment is clearly indicated in order to identify the source of each hypothesis.

Wherever relevant, links are made with the Cisalpine documentation, for example when the analysis of an inscription justifies a reference to roots or elements of anthroponymic composition. Indeed, the

[6] See https://lexlep.univie.ac.at/wiki/Dictionary_of_Attested_Forms.

vast majority of the Lepontic and Cisalpine Gaulish inscriptions contain personal names, as do the Transalpine Gaulish ones. Most of the links between the two corpora that have already been created are therefore on onomastic and anthroponymic topics.[7] For example, the anthroponymic element *gonn-/genn-* 'born, birth' of κογγεννολιτανος in Alleins (RIIG BDR-01-01 = RIG I G-1) or αδγοννος in Alès (RIIG GAR-01-01 = RIG I G-156) can be also found in other Continental Celtic languages, such as Lepontic or Celtiberian; see the detailed discussion in LexLep.[8] This is also the case for the stem **biu̯o-* 'alive' on the Villevielle jar (RIIG GAR-16-02 = RIG I G-281) which also features very peculiar additional signs. The onomastic form that can be read, ροβιος, consists of the intensive prefix *ro-* and the stem *biu̯o-*, which Dagmar Wodtko has linked to Lepontic **piuonei**, **piuonta** and **piuos**. The morpheme is also listed in LexLep.[9] Sometimes, it is an entire name that echoes between Cisalpine and Transalpine Celtic, as for example on the lost stele of Cadenet (RIIG VAU-03-01 = RIG I G-112), where the name μετελαιος appears. The archaeological context of this stone is complicated by the fact that it has been lost since the late 19th century. The most reliable parallels are, again, in Lepontic **metelui**, **metelikna** (NO·18 Miasino) and perhaps **metalui** (TI·36.3 Davesco).

These are just a few examples taken from different entries in the RIIG project. We follow the dictionaries and standard works for these specific topics: Schmidt (1957), Evans (1967), Delamarre (³2018) and Matasović (2009). These shared references for Gaulish (either Cisalpine or Transalpine) are one form of alignment between the two corpora. But the work carried out in LexLep makes it possible to refer to much more extensive and complete entries and to propose very useful Linked Open Data (LOD).

In order to reinforce these LOD, we have started a detailed indexation of the data in RIIG. We have prepared encoding rules for onomastic, lexical, verbal and even some morphological indexes (prefixes, suffixes, nominal and verbal stems, etc.).

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[7] Indeed, it is quite likely that once the instrumentum data joins this first set, there will be many more points of comparison, particularly with regard to elements of anthroponymic composition.

[8] https://lexlep.univie.ac.at/wiki/gon(n)-.

[9] https://lexlep.univie.ac.at/wiki/biu̯-.

The question of verbal forms is more complex, since we are trying to isolate variable elements (e.g. the thematic vowel, number markers or those specific to a verbal mood). For instance, we can analyse the verbal form present on a stone from Saignon (RIIG VAU-11-01 = RIG I G-151) where the sequence καρνιτου is clearly written in Gallo-Greek. A new reading by David Stifter of an inscription on a column found in Apt (RIIG VAU-01-02 = RIG I G-110, Fig. 1), improved by an autopsy and a revision of the Gallo-Greek lapidary epigraphy,[10] provides probably a new piece of evidence for this verb (*κλιρνιτου newly read καρνιτου). It is clearly the same verb as found in the funerary monument from Briona (NO·21 = RIG II/1 E-1) in the plural form **karnitus** referring to multiple curators, as well as in the Gaulish text of the bilingual epitaph of Todi (PG·1.2, 1.4), where it appears in the third person singular **karnitu**, because it is a private inscription with only one curator. XML is relatively flexible to present these cases, and best use was made of the EpiDoc guidelines to follow the same principles as LexLep and favour future links. Nevertheless, some strictly technical issues prevent us from presenting some linguistic elements. For example, we wanted to isolate all elements of compound names, in particular the thematic vowels, the inflectional endings, etc., but the multiple layers of information are still too difficult to render. Exchanges with specialists in Digital Humanities and the further development of encoding will undoubtedly resolve these issues in the near future.

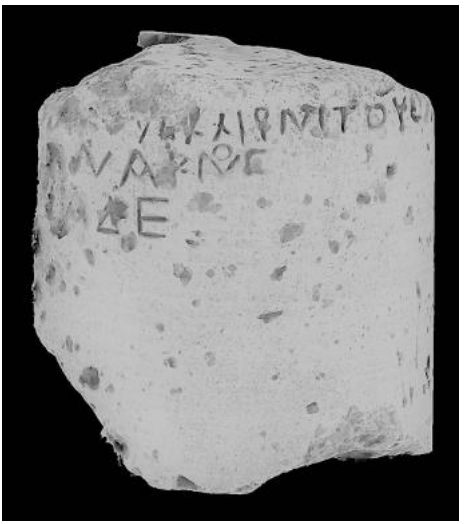

Fig. 1: RIIG VAU-01-02 (= RIG I G-110). Colonne d'Apt (occlusion). Author: F. Comte - Ausonius UMR 5607 - service AusoHNum - Labex LaScArBx ANR-10-Labex-52. © RIIG (ANR 19-CE27-0003) ; propriété de la fondation Calvet d'Avignon. URI: https://www.nakala.fr/11280/e6e84beb.

[10] This illustrates the usefulness of being able to make autopsies of the inscriptions and to have a fresh look at established readings.

3. Next steps

The aim of aligning the databases is to be able to detect variations or close correspondences, notably on the morphophonological level, so as to be ultimately able to decide whether Lepontic and Gaulish were related or not and what position Lepontic occupies within Continental Celtic.

It is obvious that, in the first instance, the result will be to verify that these languages belong to the Celtic language family. By digitising the epigraphic corpora, constants and repetitions can be identified through batch processing, which will subsequently be better exploited.

The challenge is to create direct links between the large databases of Continental Celtic: Celtiberian with *Hesperia*,[11] Gaulish with RIIG, and Cisalpine Celtic with LexLep. The process is valid in all directions. Some of the elements present in the Transalpine Gaulish corpus that could, depending on the type of text and inscriptions in which they appear, find a new semantic interpretation would in turn allow us to make new proposals for the Cisalpine and Celtiberian corpora.

Furthermore, within RIIG, the emphasis was placed on contextualisation in order to specify the dating of the inscriptions or at least their conditions when they were discovered. In this way, a more detailed chronology can be established, which has implications for the different phases of the use of writing and the grammatical elements that have come down to us. These elements will be presented as accurately as possible in the 'Grammatica' section of the online platform.

4. Conclusion

The digital approach to the Gaulish language is a great opportunity to question again elements that may seem trivial but are not: what is a word, how to establish a lemma, where does the suffix/prefix begin, is it already listed, etc. This fixes certain data but it does not set them in stone. Aligning the corpora with each other encourages us to look closely at what exists in each case, to check the relevance of the comparisons, to

[11] Even though the data in *Hesperia* are encoded neither in XML nor in a Wiki system, and cannot be directly linked at this point.

observe also very clearly the differences and thus to progress in the knowledge of each.

The work of enriching the platform is still ongoing and will continue throughout the RIIG project and beyond, in a larger project that will add the data of Gaulish inscriptions on instrumentum. Only then will the documentation be complete. It will also be necessary to think about how to integrate the Gaulish onomastic data present in the Latin inscriptions in order to have a complete vision of the evolution of the Gaulish language between the 2nd century B.C. and the 4th century A.D.

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Something new in Briona – Analysis of the signs and the archaeological contexts of the two epigraphs

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Abstract

An in-depth documentation program, complete with evaluation of the archaeological contexts, was carried out concerning the two inscribed lithic archaeological finds of the Briona territory (NO – I), the well-known stela (LexLep NO·21) and the large pebble (LexLep NO·22). Being engraved surfaces, they were examined not only as epigraphs but also as petroglyphs, using all available recording methods, in particular iconographic tracing, grazing light orthophotomosaics and 3D models. Regarding the Briona stela, its vertical orientation, the surface preparation by rough-hewing and bush-hammering, the presence of a foot and its excellent preservation were acknowledged; a new reading, which aims at resolving previous uncertain readings, is also presented, while thanks to archival sources it was possible to precisely identify the find spot. For the Briona large pebble, epigraphic analysis confirms the presence of the letter qoppa, while comparisons with similar engraved figures from Alpine rock art and Etruscan and Italic votive bronze statuettes reinforce the chronological attribution to the second half of the 6th to the first half of the 5th century B.C.

The Briona stela (RIG E-1 = Solinas 1995: no. 140 = Morandi 2004: no. 97 = LexLep NO·21), discovered in 1859 and published in 1864,[1] is one of the most important epigraphic monuments of

[1] The earliest scientific study on the stela is Flechia 1864, where it was read, identified as an ancient Celtic document and translated.

Cisalpine Gaul. Although it has been reproduced dozens of times in photographs or drawings, there are still some uncertainties in reading the signs or inscription segments, even with divergent alternatives. It was therefore decided to undertake a documentation program, employing current technologies in use for rock art;[2] the standard acronym system applied to petroglyphs (BRN1) was adopted, with each sequence of engravings – here the lines – named as if they were rock art figures (BRN1.1, BRN1.2, etc.).[3] This made it possible to recognise the engraved signs, to distinguish them from the natural irregularities of the stone, to understand how the stela was made, and to determine how it was originally positioned.[4] In addition, consulting archival sources made it possible to precisely identify the place of discovery. All of this may bring new contributions to the understanding of this epigraphic monument, to which another older, but equally problematic, piece of epigraphic evidence has been added in recent years, the large pebble LexLep NO·22, marked as BRN2 in the iconographic tracing.[5]

[2] Rock art documentation methodologies (iconographic tracing) have been applied to petroglyphs with Celtic and Roman inscriptions at Arcelle Neuve, near the Mont Cenis Pass (Arcà et al. 2001; Mennella 2009: 27–32), Carona (Casini et al. 2008; Casini et al. 2014a; 2014b), Liddes-Mur d'Hannibal (Aberson et al. 2021); for Valcamonica see Marretta & Solano 2014.

[3] Three consonants for the site, the rock number, one or more letters for the sector (if any), followed by the numbering of each figure and subfigure (if any), marked in the iconographic tracing; each line of text was considered as a figure and each letter as a sub-figure, starting the numbering, for BRN1, from **karnitus**; in this way, e.g. the element coded as BRN1.9.12 corresponds to the twelfth letter of text line 9 **tanotaliknoi**.

[4] It was not possible to verify in detail on the original the presence of any engraved marks along the back face, as the slab is leaning against the wall and immovable; from the limited examination of the cast, however, they appear to be absent, as well as on the side faces.

[5] The epigraphic and archaeological analysis of the two inscriptions will be further detailed in a paper to be printed in *Studi Etruschi. Rivista di Epigrafia Italica*. For the Diocese of Novara-Museo della Canonica, we thank don Paolo Milani, Paolo Mira and Paolo Monticelli; for the Musei Reali di Torino-Museo Archeologico, we thank Enrica Pagella and Elisa Panero; for the Soprintendenza ABAP Novara, we thank Lucia Mordeglia.

The inscriptions

First of all, the discovery site had not been precisely located until now: the locations marked cartographically by Lejeune 1988: 12, and in *Tra terra e acque* 2004: 223 are only approximate.

The first information, on the other hand, is quite accurate:

> "Fu trovato l'anno 1859 fra ruderi antichi scoperti nel dissodare un bosco di proprietà del Signor Conte D. Eugenio Tornielli-Brusati, sito in regione detta di S. Zeno, tra i paesetti di S. Bernardino e di Fara, alla distanza di 10 chilometri a nord-ovest di Novara."
>
> (Cavedoni 1864: 117)
>
> It was found in the year 1859 among the ancient ruins discovered in the clearing of a wood belonging to Count Don Eugenio Tornielli-Brusati, located in the region known as San Zeno, between the San Bernardino and Fara villages, about 10 km north-west of Novara.

Consulting the 1723 cadastre, we discovered that it indicates the location of the ancient and destroyed church of San Zeno,[6] northwest of the hamlet San Bernardino di Briona, towards the small towns of Briona and Fara Novarese (Gallina 1723); it is possible to recognize this location on contemporary cartography and on the ground, where aerial photos[7] show a soil-mark, corresponding to the now buried ruins of the building (Fig. 1). Built near a ford on the River Strona – in the 15th century, and then more recently, regularised in today's Roggia Mora irrigation channel – this church was very important in the Middle Ages as it was the seat of a parish church, named in 949 *plebis sancti Zeni sito Petrurio* […] *de loco Petrurio* […] *fundo Petrurio* (*BSSS* 78, L, anno 949, p. 72). In ecclesiastic documents of later centuries, it is called *de plebe Pedrori*; (1013) *plebem Petrorii* (1133), *ecclesia Petrorii* (1157). In the 16th century, the church lay in ruins and by 1711 it had disappeared (Andenna 1980: 82). Today, the place name survives in the 15th-century Proh Castle, just over 1.5 km to the northwest. Considering the evolution from Latin to the local

[6] Sheet 9, parcel 218; it can be consulted in digitised form in full definition on the Archivio di Stato di Torino website; URL: https://archiviodistatotorino.beniculturali.it/dbadd/visua.php?uad=740389&indx=9&rife=.

[7] Orthophoto 2009–2010 Regione Piemonte, http://webgis.arpa.piemonte.it/geoportale.

Fig. 1: Briona stela, location of the destroyed church of San Zeno: left, 1723 Cadastre, Proh territory, sheet 9 (from Gallina 1723); centre, orthophoto 2009–2010 of the Regione Piemonte; right, details in boxes.

Romance Gallo-Italic dialect (Western Lombard), with the loss of intervocalic occlusives, of unstressed [e], of final unstressed vowels (except [a]) and the development of the nexus [tr] > [r], *Proh* is the regular local outcome of the medieval place name *Petruriu(m)*; although an outcome of petra has been hypothesised (Olivieri 1965: 279), it is possible to recreate an original *petrŭrĭtu(m), from a Celtic compound with *petru-* 'four' and *ritu-* 'ford' or 'wheel' (Delamarre 2003: 250, 251, 259, 260). For either explanation, one can either evoke the rivers flowing in the Proh plain or the four wheels represented on the stela.

When it was discovered, Count Tornielli-Brusati donated the stela to the Bishop of Novara – an important Greek and Latin epigraphical museum had been set up in the cathedral (*Epigrafi a Novara* 1999; Gambari & Solari 1999) – and had a plaster cast made of it, which he sent to the Civico Museo Archeologico in Milan; photographs from the 19th and early 20th century reproduce the white plaster in Milan,[8] which is unfortunately no longer available and was perhaps destroyed during the Second World War.

[8] The ones published in Cartailhac 1878: figs 10, 10bis are excellent, where the white cast shows the engraved marks and letters probably retouched in black.

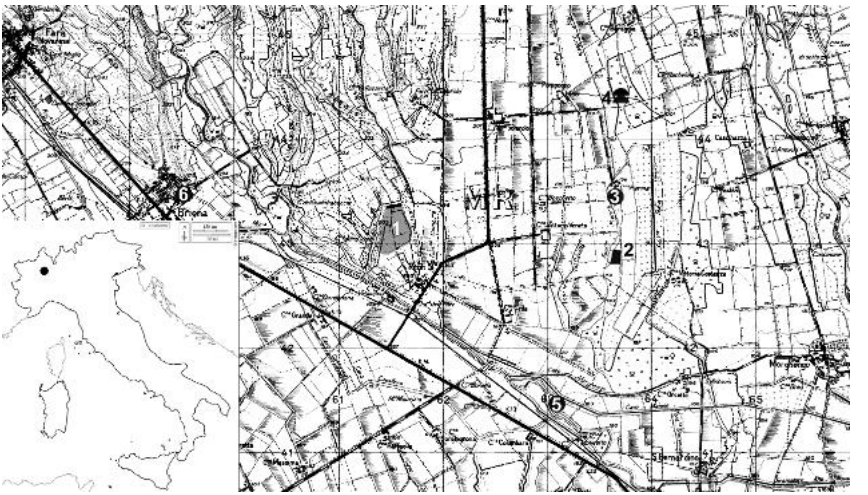

Fig. 2: Area of settlement and necropolises near Briona: **1**: hillfort near Proh, with a moat and wall; **2**: Cascina Pierina necropolis; **3**: tumuli and inscribed large pebble from Cascina Pierina; **4**: tumuli near Cascina Baraggia, Momo; **5**: old San Zeno church near San Bernardino, where the inscribed stela was found; **6**: church of Briona, where two Late Bronze Age tombs had been found (map base IGM F° 44 IV SO Momo; elaborated by FRB).

The area had an intense and complex occupation during the 1st millennium B.C. (*Tra terra e acque* 2004: 216–221; Paltineri & Rubat Borel 2022). Between the 6th and 5th centuries B.C. the southern end of the plateau was occupied by a large settlement, bordered to the north by a moat and a rampart, while the east and west sides were taken up by the over 20 m high escarpment. Approximately 2 km to the east, towards the River Agogna, along the course of the Guidetta irrigation channel, which flows southwards and merges into the River Strona-Roggia Mora irrigation channel at the site of the ancient church San Zeno, lies the system of rich necropolises of Cascina Pierina – where LexLep NO·22 was found – dating from the mid-6th to mid-5th century B.C.; two mound structures, 15–20 m in diameter, south-west of Cascina Baraggia in Momo (*Tra terra e acque* 2004: 368) should be added to these (Fig. 2). At the end of the 19th century, large areas were transformed into rice fields, destroying necropolises and other archaeological contexts.

All of this evidence from the 6th–5th century B.C. – hillfort and wealthy necropolises with burial mounds – show the presence of an important

seat of the Golasecca culture, perhaps similar to the *Fürstensitze* of southern Germany and western France. The stela RIG E-1 = LexLep NO·21, however, is from the late 2nd–1st century B.C., when no other finds are known in the area, except for a sword datable between the 3rd and 2nd century B.C., of which only the provenance from San Bernardino is known (*Tra terra e acque* 2004: 220). The dating is determined by the form of the letters – of the second period of the Lugano alphabet – and the mention of **kuitos** (*Quintus*) and **lekatos** (*legatus*), which place it between the middle of the 2nd century B.C. – at the end of the wars of subjugation to Rome of this land in *Transpadana* – and 89 B.C., when the *Lex Pompeia de Transpadanis* granted Latin citizenship, or 49 B.C., when all the Transpadanians had been granted Roman citizenship by Julius Caesar (Cassola 1991; Giorcelli Bersani 2002: 41–46; Spagnolo Garzoli 2004).

The stela RIG E-1 = LexLep NO·21 (Figs. 3, 4, 13 and 15) is an occhiadine gneiss slab, showing grey, white and yellow colours, with some nodules that prevent homogenous engraving (Frisa Morandini & Gomez Serito 1999). The lithotype is found between Lake Orta and Lake Maggiore, 30 km north of Briona; it is possible that it was taken from a rock transported to the plains by the action of glaciers. There are two holes drilled in the two sides, probably during the 19th century for fixing the slab to the wall with hooks in the rectory of the cathedral in Novara; there are no signs that suggest detachments or damage after the 19th-century rediscovery. The only apparent ones, which are probably ancient – the patina is the same as that of the rest of the surface –, probably occurred during the handling for reuse of the stela in the church San Zeno (*infra*). The damage during the century of conservation in Novara reported by Michel Lejeune (Lejeune 1956; Lejeune 1988: 13) is probably due to a confusion of 19th-century photographs of the plaster cast, which is white, and of the original, which shows the chromatic irregularities of the gneiss.

Today, the stela is displayed with the long side horizontally, with the main part inscribed with horizontal lines, as in Greek and Latin epigraphy. In reality, as already shown in Rhŷs (1906: 63 and 1913: 46[9]), followed by Prosdocimi (1991: 292) and Solinas (1995: 379; 2013b:

[9] The photo shown in pl. VI is that of the plaster cast, with the engraved figures and text lines enhanced in black.

192–193), the stela should be rotated 90° clockwise, with the lines of the main inscription oriented vertically, below the wheel figures, aligned horizontally. In fact, this is the only way the wide foot – today the empty space on the right – allows the stela to be driven into the ground; the vertically oriented inscription finds comparisons in the Canton Ticino and Cerrione stelae (Motta 2000; Solinas 2013a). In this position, the upper part is oblique, as we find in almost all the stelae inscribed in the Lugano alphabet (Gambari 2011). In contrast, the inscriptions in Vercelli (RIG E-2 = LexLep VC·1) and Todi (RIG E-5 = LexLep PG·1) are horizontal because in these the most important text is Latin, mainly addressed to Romans. We may compare the four wheels with the two of the Dormelletto stela (LexLep NO·27), engraved above the inscription, and with the one of the Gozzano stela (LexLep NO·19), which, moreover, have horizontal inscriptions (Fig. 5). In Roman times, funerary stelae with a decoration similar to a rose with six petals or a wheel with six rays on the top are not rare in the Cisalpine area (for example not far from Briona CIL V 6549, V 6612; *Epigrafi a Novara* 1999: 186, 189). In the Late La Tène settlement in Villeneuve-Saint-Germain, in Northern Gaul, a large number of little bronze wheels has been interpreted as voting tokens: may it be related to **takos·toutas** (Peyre 2000)?

Adopting the rock art recording methodology, we decided to number the lines from left to right, according to the current reading direction of the Latin alphabet. This does not imply that this inscription begins with BRN1.1 **karnitus** and not with BRN1.10 **ọnakọ**[-]**tesạso·poikạm** or – in case this line was written later – with BRN1.9 **tanotaliknoi**:

BRN1.1 **karnitus**
BRN1.2 **tanotalos**
BRN1.3 **anareuiśeos**
BRN1.4 **esanekoti**
BRN1.5 **setupokios**
BRN1.6 **anokopokios**
BRN1.7 **lekatos**
BRN1.8 **kuitos**
BRN1.9 **tanotaliknoi**
BRN1.10 **ọnạko**[.]**tesaso·poikạm**; or more difficult **ọnẹko** and **poikạni** / **poikẹm** / **poikẹni**
BRN1.11 **takos·toutas·pu**+[---]

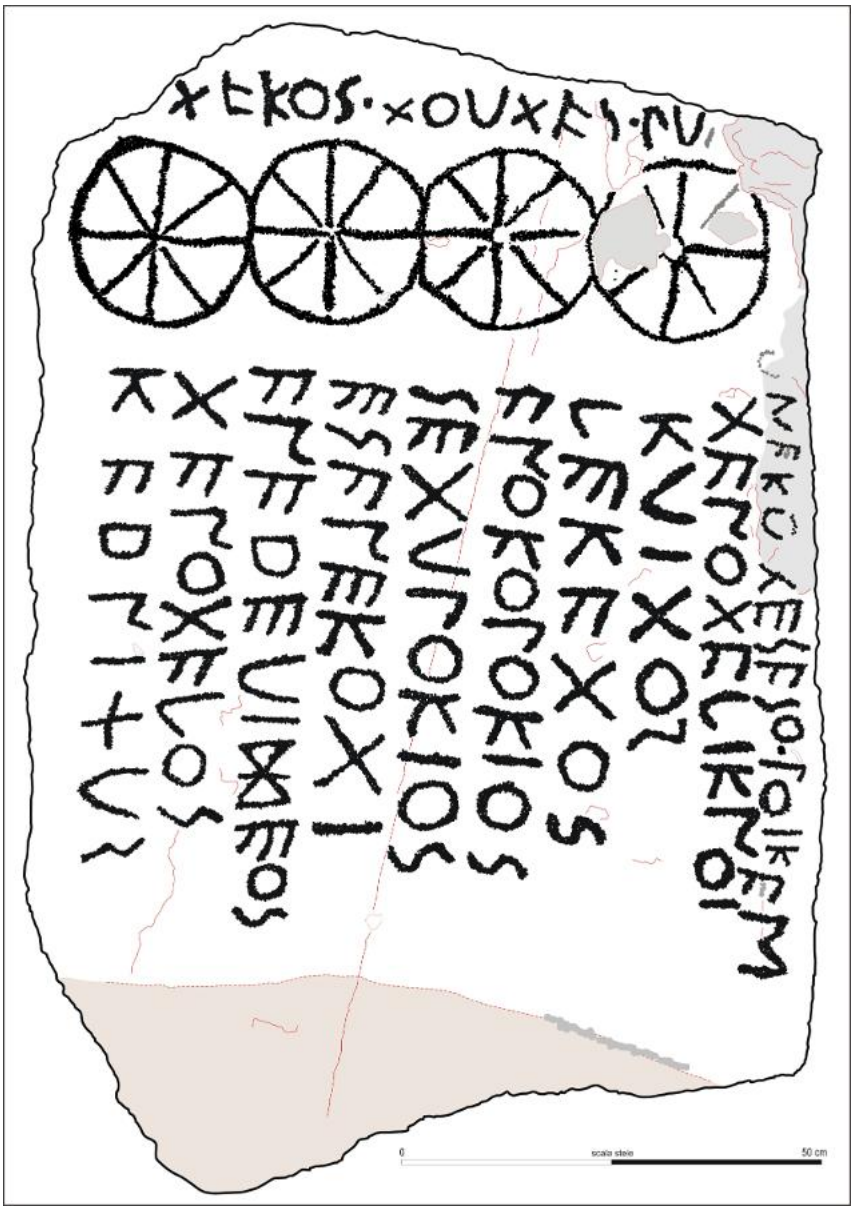

Fig. 3: BRN1, iconographic tracing of the Briona stela (RIG E-1 = LexLep NO·21), figures and inscriptions only (tracing AA-FRB).

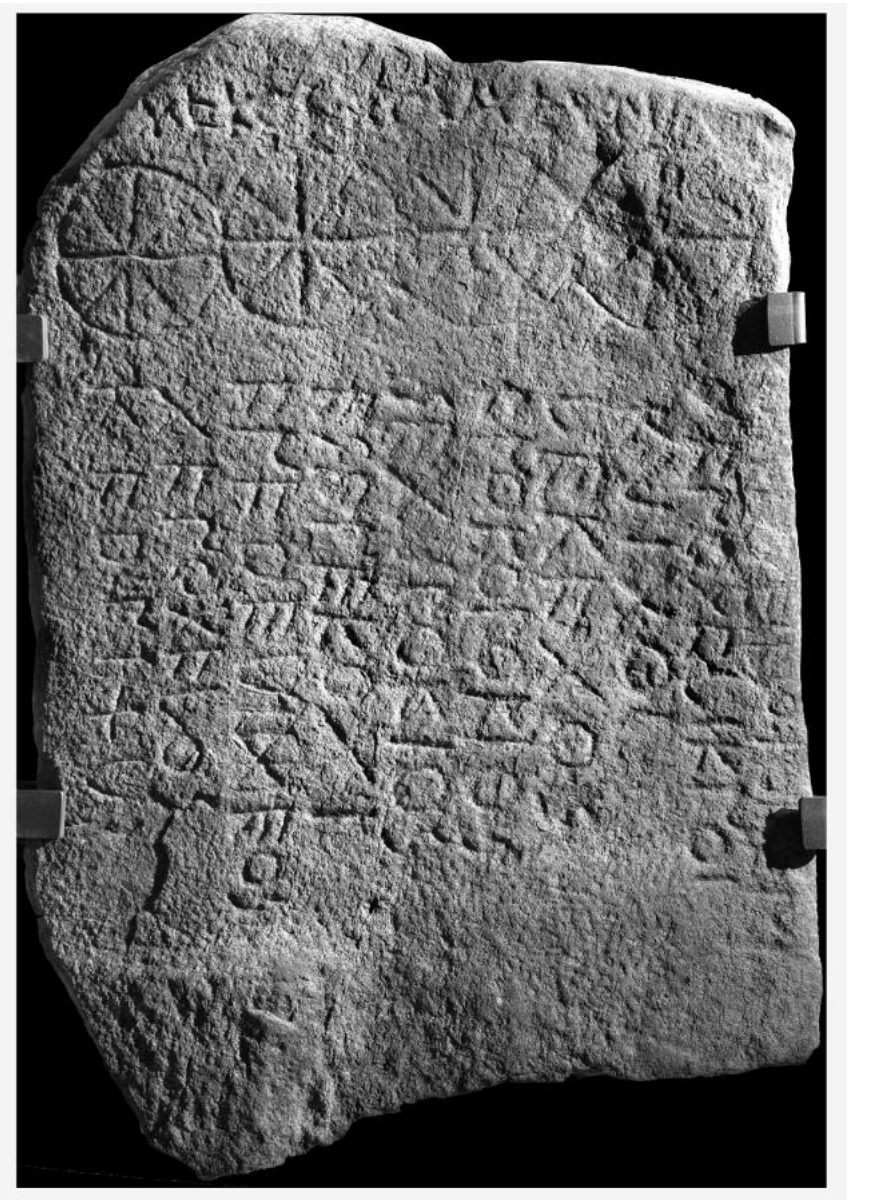

Fig. 4: BRN1, the Briona stela (RIG E-1 = LexLep NO·21), grazing light orthophotomosaic (photo AA).

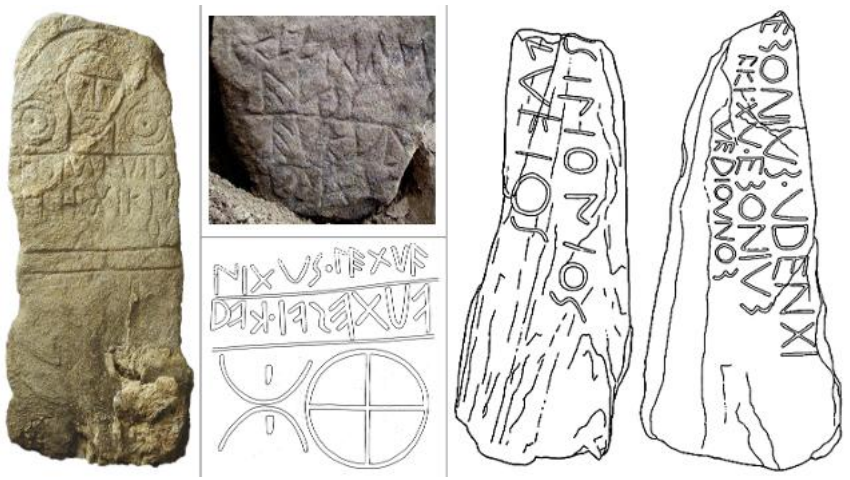

Fig. 5: From left to right, stelae from Dormelletto (LexLep NO·27 and NO·28: Spagnolo Garzoli 2010), Gozzano (LexLep NO·19: F. M. Gambari, unpublished), Cerrione (LexLep BI·1 and BI·4: Solinas 2013a), not to scale.

The wider band, on which the four wheels and the inscription lines BRN1.1–9 were made – only partially BRN1.10, on the margin of the stela – was carefully regularised and bush-hammered by percussion. Such a treated surface allowed an easier engraving of the inscription marks. The pecking dots are visible and clearly recognisable, albeit lighter and less deep than the dots forming the inscription marks. The narrowest strip, occupied by BRN1.11, has an un-bush-hammered and very irregular surface.

All this suggests to us that the lines BRN1.1–9 were drawn up in a first phase, for which the surface was bush-hammered. Subsequently – even immediately afterwards, as an addition – BRN1.10 was engraved on the remaining, unplanned space. BRN1.11 was also engraved on an unregularized surface, thus not present in the original design. We have no evidence to say whether or not BRN1.10 and BRN1.11 are contemporary with each other, or later.

Is **karnitus** the first word, in a verb-subject sentence, as in the Todi bilingual, perhaps in stela n. 7 from Cerrione and in some Gallo-Latin inscriptions in Transalpine Gaul (RIG E-5 = LexLep PG·1; Solinas 2013a = LexLep BI·4; Lambert 1994: 68–69), and in Irish and Welsh? The patronymics in *-iknos* are always after the personal name, not before. The

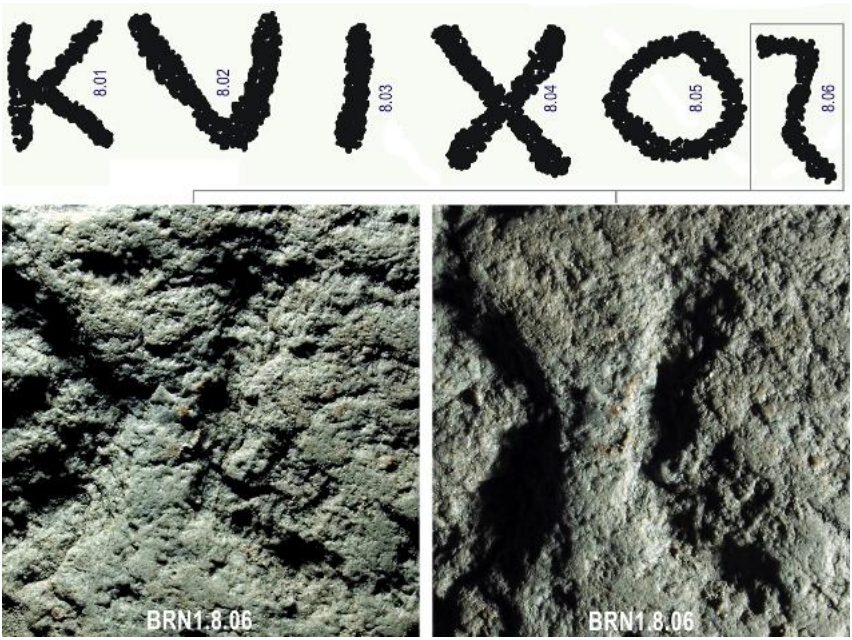

Fig. 6: Iconographic tracing of line BRN1.8, in detail BRN1.8.06 under different angles of grazing light.

sons of Dannotalos aren't three but two: Setubogios and Andocobogios, whose Roman (or Latin) citizen's praenomen as a legatus is Quintus?

Observations on the signs are deferred to a specific contribution elsewhere. Here, we point out that **s** is dextroverse eleven times and sinistroverse twice, possibly due to the presence of nodules in the gneiss that prevented the tracing of a very compressed sign. In particular in BRN1.8 **s** is right-handed, and not left-handed as in the drawing in RIG E-1. Three sections of the **s** are present: due to nodules in the rock the upper and lower sections are poorly executed; the upper section is horizontal, the middle section almost vertical. The first and third tracts are clearly visible in grazing light, while they are difficult to distinguish in perpendicular light (Fig. 6), justifying the reading **i**, which has recently been debated (Estarán Tolosa 2015; Eska & Eska 2017).

The two rows BRN1.10 and BRN1.11 have smaller marks; some of them are very unclear or ambiguous to read, and several divergent readings have been proposed over time. We note the presence

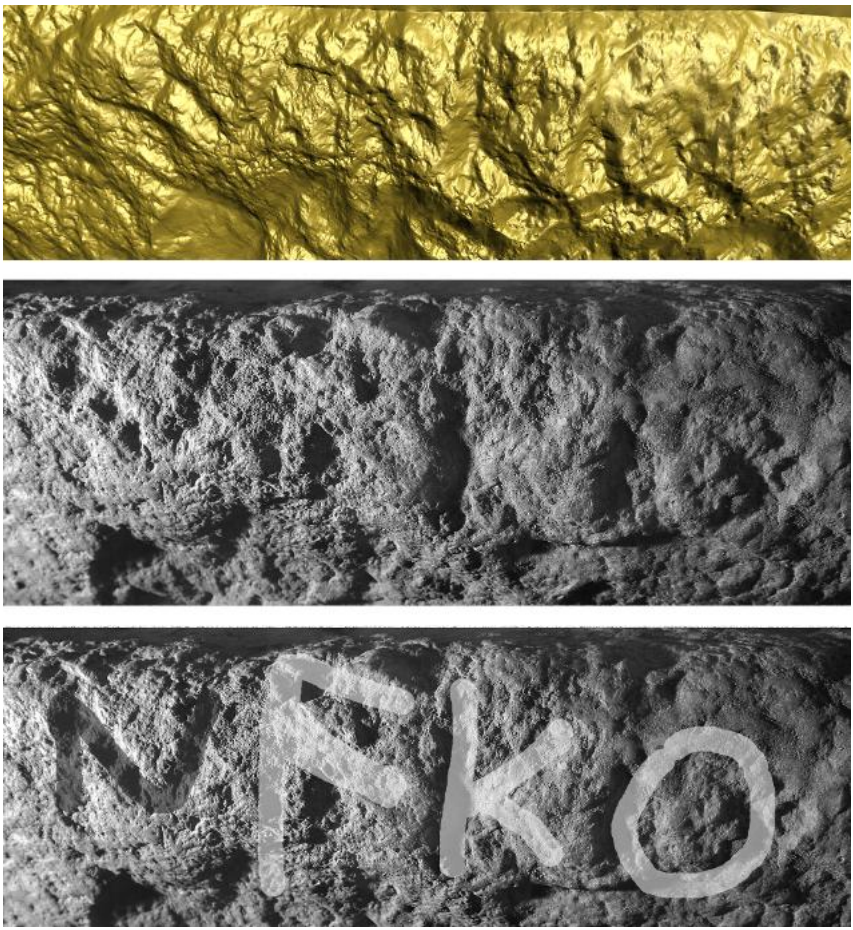

Fig. 7: Initial section of line BRN1.10: top, photometric 3D model (by Paolo Emilio Bagnoli); centre, grazing light photo; bottom, highlighting of epigraphic characters.

of punctuation marks – recognisable through careful examination of bush-hammering, pecking and natural surface detachments – made by pecking, as well as the letters. In BRN1.10 (Fig. 7) the reading of the initial **o** remains uncertain (as in Rhŷs 1913: 45–50). The **a** in **ọnạko** and **poikạm** are probably the right reading, but there are two shallow indeterminate depressions, natural or artificial, which make it possible to read **ọnẹko** and **poikẹm**. At the end of the line, the incised signs give **m**, with the third oblique and the fourth vertical stroke touching

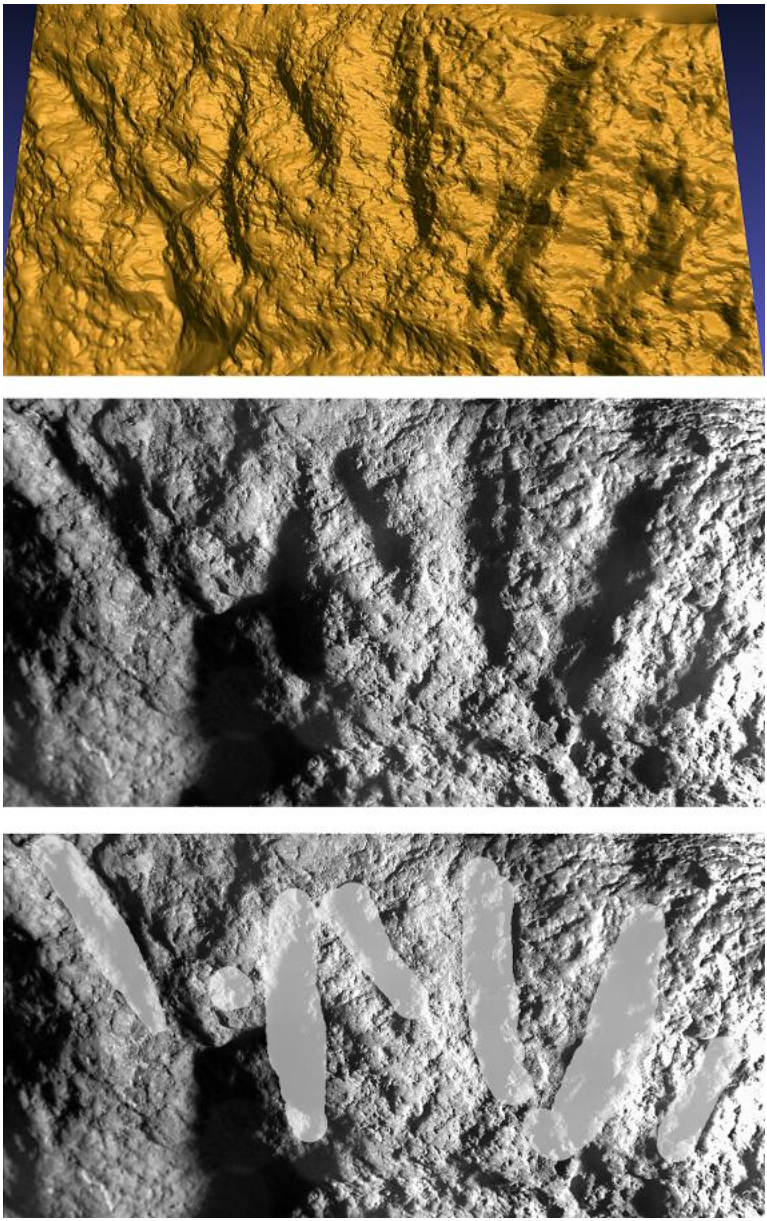

Fig. 8: End section of line BRN1.11: top, photometric 3D model (by Paolo Emilio Bagnoli); centre, grazing light photo; bottom, highlighting of epigraphic characters.

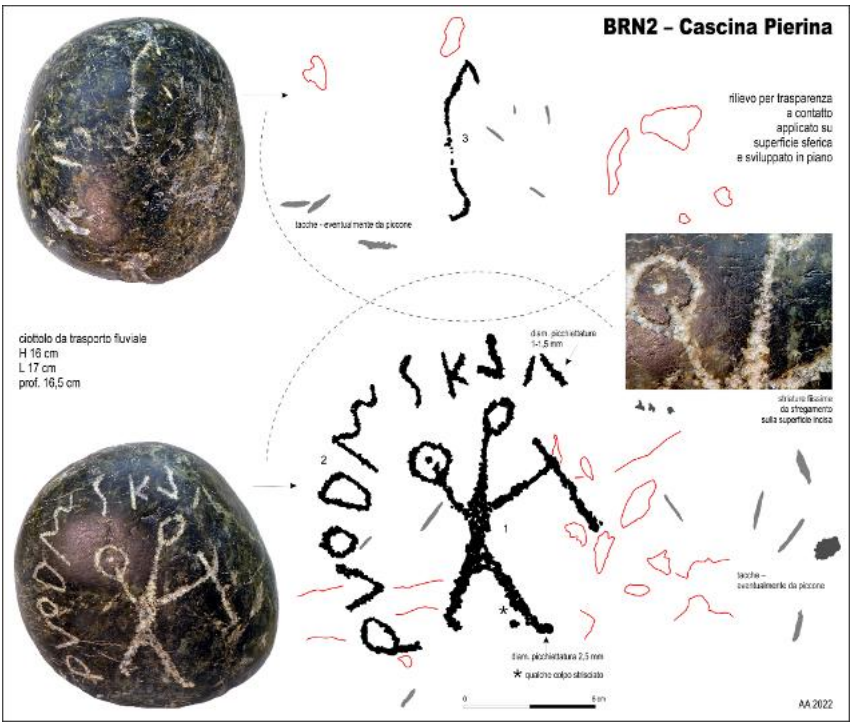

Fig. 9: BRN2, Cascina Pierina large pebble (NO·22), vector rendering of the iconographic contact transparency tracing and photographic footage (AA).

each other; however, the reading **ni** is not to be ruled out, but only on the assumption that the two signs both touched while being engraved, thus becoming equal to **m**. These are no longer epigraphic problems, however, but linguistic ones: **poikam**, **poikani**, **poikem**, **poikeni**. At the right end of BRN1.11 (Fig. 8), a deep rupture in the rock broke the inscription. The last sequence consists of **pu** followed by the lower part of a vertical line of a sign that is no longer identifiable (BRN1.11.16) – here marked +[---] as in the conventions of Latin epigraphy – because it was damaged by the detachment of the rock surface: it is therefore possible to hypothesise the ancient presence of **i**, **m**, **n**, **p**, **ś**, **t**. The readings **au** or **eu** are due to surface irregularities: only the upper section of BRN1.11.14 is artificial, engraved by pecking, so that **p** can be recognised.

Fig. 10: The large pebble from Genoa with the Etruscan inscription *mi nemetieś* (ET Li 1.2; from Colonna 2004).

Also from the area around Briona comes another inscription, LexLep NO·22 (Rubat Borel 2005; 2006; 2011; Fig. 9), which is older and more problematic. It is a large, engraved, sub-spherical serpentinite pebble, probably a funerary marker, coming from some burial mounds destroyed by agricultural work in the early 1980s, west of Cascina Pierina. It dates to the late 6th to early 5th century b.c., both for the context of its discovery, the depiction of the warrior wielding a spear and shield – raising them high – and the shape of the inscribed characters. The closest comparison is in the large serpentine pebble, reused in a mid-5th century b.c. pole pit from Genoa, 28 cm long and 21 cm wide, with the inscription in the Etruscan alphabet and language *mi nemetieś* (Fig. 10), with onomastics of Celtic origin adapted to the phonetics and morphology of Etruscan (ET Li 1.2; Colonna 2004); large pebbles are also used as grave markers in the Etruscan area at Volsinii (Orvieto) from the 7th century b.c. to the Roman period, with or without inscriptions (Camporeale 1970: 184–185; Colonna 2007) and in the Venetic area in the 5th–4th century b.c. (Prosdocimi 1988: 288–292). The inscription and the figure have been engraved by pecking, as in the contemporaneous Valcamonica-Valtellina and Western Alps rock art, leaving a white trace that stands out against the dark black-green background. The warrior is in an attacking position, seen from the side with a spear in his right hand, stretched out forward, and the shield held high in his left hand, behind his back; his head is seen in profile, as we can see from the position of the neck. The schematic-linear representation of the figure instead makes him appear to be in frontal view with the sword in the left and the shield in the right.

Above the head, in a crescent, is the inscription **quormskla** or **quormsklp** or **quormsklu**. The last sign, although well preserved, is of uncertain interpretation: it may be an **a** without internal stroke, a **p**, or an inverted **u** (as in Maras 2014). We will not give a phonemic value to qoppa here, since it may be an aspirated or unaspirated labiovelar, voiceless or voiced, or the sequence of a velar and an approximant: these are all possibilities with serious repercussions in the historical linguistics of Celtic. However, we are certain that it is a qoppa. Signs of the shape Ꝑ do not occur in the Lugano alphabet, and within the same inscription /r/ is regularly marked D. The appendix of the qoppa does not appear centred because the entire inscription is arranged in a semicircle. Moreover, for reasons of engraving, even in some Etruscan alphabetaries (Fig. 11) the qoppa has the appendix rendered laterally (Pandolfini & Prosdocimi 1990: n. I.5 Veii, late 7th c. b.c.; III.2 Roselle, late 6th c. b.c.; III.19 Nola, 5th c. b.c.). The sequence **uo**, which immediately follows, also makes the reading qoppa compatible. The presence of qoppa attests to the adoption of this sign, to represent the (labio)velars, by the Etruscan alphabets. Together with phi that we recognise in **kiφisi** of Capriate San Gervasio, 5th century b.c. (Morandi 2004: 223 = LexLep BG·20; Rubat Borel 2005; Maras 2014), the Lugano alphabet in its first phase appears therefore complete, with all the signs present in the Etruscan model alphabets, as suggested by the teaching of Aldo Luigi Prosdocimi's alphabetic corpus.

FRB

Documentation and analysis of the engraved surfaces

The in-depth documentation program concerned the two inscribed lithic archaeological finds, coming from the territory of Briona (NO – I), as described above. Treating them here as engraved surfaces, we adopt the acronym system in use for rock art:

- BRN1 (RIG E-1 = LexLep NO·21 in the epigraphic literature), a local gneissic serizzo-stone sub-rectangular or sub-hexagonal granite slab, measuring 95×140 cm, 22–25 cm thick, known in the literature as the Briona or S. Bernardino di Briona stela;
- BRN2 (LexLep NO·22 in the epigraphic literature), a sub-spherical serpentinite pebble, originating from river transport, from Cascina Pierina, diameter 16–17 cm.

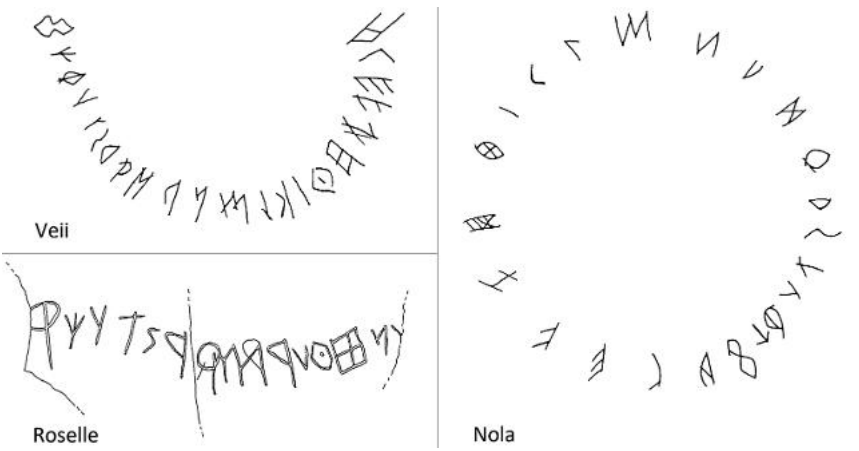

Fig. 11: Comparisons for BRN2, qoppa's shape in the Etruscan alphabets from Veii, Roselle and Nola (Pandolfini & Prosdocimi 1990: n. I.5, III.2, III.19).

Both petroglyphs bear inscriptions, as well as figures of cart wheels in the case of BRN1 and of a weapon-bearing man in the case of BRN2; according to what is diagnosed by close observation, the engravings were done by means of a lithic instrument; such a technique, which involves the repeated tapping or poking on the rock surface by the tip of a pebble[10] of greater hardness than the support, probably locally available quartz or flint, is defined as pecking; the results of the impacts, that is the dots, are also defined as pecking. The use of a metal tool – chisel and/or awl – would have produced sharper, deeper and sharp-edged marks,[11] in contrast to the 'soft' sections of the engraved signs found on the two surfaces. Since these are pecked signs, for which the production of the image, and the related literal or symbolic meaning, occurs through the juxtaposition of a series of points, their affinity to a drawing, and to handwriting in alphabetical cases, is greater than to a low/high relief or a sculpture. This aspect is fundamental for the documentation technique

[10] Depending on the size and weight of the stone tool, this results in producing broader or narrower and deeper or shallower pecking.

[11] As with the 2nd century B.C. epigraphs on stelae (Fig. 12) found in the excavations of the Celtic necropolis in Dormelletto (LexLep NO·27 and LexLep NO·28; Spagnolo Garzoli 2007; Gambari 2007; 2011).

Fig. 12: Left, BRN1, pecked inscriptions with a lithic tool (detail); right, metal chisel inscriptions on stelae from Dormelletto (NO·27, NO·28).

and the related graphic rendering, as the two-dimensional aspect is prevalent.

Such observations belong to the field of petroglyph study, i.e. rock art, not least because petroglyphs and tombstones or stelae with epigraphs are related items in terms of nature and execution technique; if, however, the epigraphs on stone are in effect rock engravings and petroglyphs, the reverse is not true. Speaking of affinities, and of the evident descent of the petroglyph tracing techniques from the mode of operation of antiquarian epigraphists – the chronological priority in the study of epigraphs over petroglyphs should be recalled – it is interesting to consult the textbook published by Abbé Texier in the mid-19th century, which despite its age presents aspects of indisputable relevance. Dealing with epigraphic cast, that is, with "procédés d'estampage", Texier appropriately states how:

> "par leur moyen, les personnes les plus étrangers à l'art du dessin peuvent presque toujours se procurer rapidement et sans frais une

> sorte d'épreuve, plutôt que de copier des inscriptions les plus longues, les plus compliquées. Et ces copies données par les monuments eux-mêmes excluent toute chance d'erreur ou d'interprétation fautive."
>
> (Texier 1851: 11–12)

Texier describes three types of cast or tracing, "l'estampage à la manière blanche", carried out by applying over the epigraph a sheet of sturdy, glue-free paper that is wet and beaten with a brush so that the paper penetrates the engraved parts; "l'estampage à la manière noire", a similar technique that, however, makes use of rubbing, on the paper placed over the inscription, of black coloring matter, graphite, lampblack or shoe polish (today's *frottage* or *frottis*); and finally the "calque", for which

> "on fixe sur l'inscription un papier transparent au travers duquel l'inscription peinte se laisse entrevoir, et la pointe du crayon ou de la plume suit les contours des lettres et des ornements." (*ibid.*)

i.e. today's contact transparency tracing. All these methods are still current and practised today for rock art recording, except for the availability of new materials and the use of digital techniques.

The theoretical bases are indisputable and always valid:

> [exhortation to the antiquarian epigraphist] "qu'il relève les moindres accidents, les moindres signes en apparence étrangers au texte; ces signes peuvent avoir une valeur que la postérité, à son défaut, saura découvrir. Qu'il se souvienne qu'on lui demande d'abord un témoignage et non une interprétation [...]. Tout antiquaire remplit à l'égard du passé les fonctions de juge. En toute cause, le juge recueille les témoignages avant de prononcer : un dessin doit être une déposition". (*ibid.*: 16)

Therefore, both to stick to these premises and to devote the necessary attention to the two finds from Briona, it was deemed appropriate to consider them not only as epigraphs but also as petroglyphs, applying the relevant methods of documentation (Anati 1974; Arcà et al. 2008; de Marinis & Fossati 2012). In the conviction that each method has particular and distinct advantages (Arcà 2022), all methods available have been applied.

Such documentation methodology has never before been adopted in its entirety for the Briona BRN1 stela, despite the fact that it has been

studied for almost 160 years; an examination of the more than 70 papers published so far (no monographs) since 1864 reveals the production of casts (in plaster and resin), line and shadow drawings, sketches – regardless of the accuracy of the epigraphic analysis, the execution of sketches and line drawings is often schematic – transcriptions, apographs, general and detailed photographs, but never of iconographic tracings, photo plans or 3D modelling.

Therefore, the following operational chain was used:

- carrying out photographic shots, iconographic tracings, tracing by profile comb of the sections of the engravings, photomosaics, orthomosaics, photogrammetric 3D models, photometric 3D models, isoipse planimetries, frottages;
- digital processing and rendering of all documentation produced;
- analysis and study.

For BRN1, the recording procedure also included the use, for the purposes of photographic footage and 3D models, of the casts[12] currently available, commissioned in the early 1990s by Filippo Maria Gambari – whose attention to and expertise in the archaeologically based study of rock art is worthy of note – during his careful study of the two Briona items (Gambari & Solari 1999; *Tra terra e acque* 2004).

All this was accompanied by the retrieval and reading of the entire previous bibliography, by the complete analysis of the research history,[13] and by archival research, in order to find the precise location of the discovery site.

Iconographic tracing (Fig. 13) was performed according to the standard methods for the documentation of Alpine petroglyphs, i.e. preferring the contact transparency tracing[14] operated by tracopying on

[12] Two casts made with elastomer negative and resin positive are available for the BRN1 stela: the first, white and not coloured, is displayed along the inner wall of the portico of the Novara Cathedral rectory; the second, coloured, is kept inside the archaeological museum of the Musei Reali di Torino; their resolution is equal to the original.

[13] In the course of which thirty different versions, excluding variants, of the two text lines revealing reading difficulties (BRN1.10 and 11) have been proposed, published by 37 different authors.

[14] The surface of BRN2 is spherical; however, the ductility of the PVC sheet allowed it to fully adhere to the engraved surface during the tracing; the plastic sheet was subsequently made flat for the rendering.

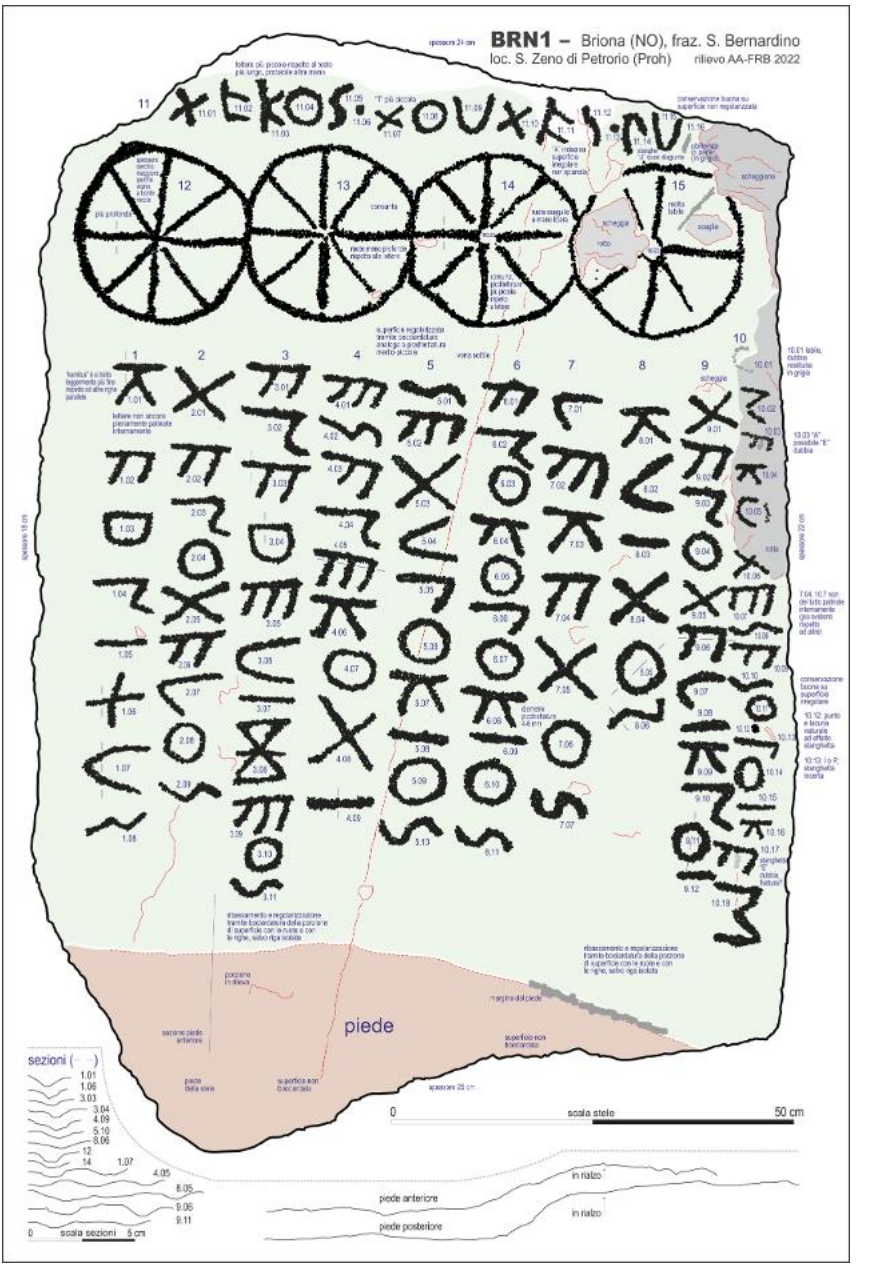

Fig. 13: BRN1, vector rendering of the iconographic contact transparency tracing, codes, annotations and sections (tracing AA-FRB).

transparent sheets of PVC Cristal under multi-oriented artificial grazing light; its digital rendering was done by scanning, cleaning, vectorization and final graphic post-production at a scale of 1:1.

All the engraved elements have been rendered in full black, while the poorly legible, damaged and/or doubtful letters are rendered in grey. The graphic conventions adopted also require the margins of incised surfaces to be rendered with a thick black line, fracture lines to be rendered with thin red lines, areas subject to flaking or detachment of clasts with light grey fill, bush-hammered areas with light greenish fill; for BRN1 the foot of the stela was coloured in ochre. In neither object is there any overlap between figures, which otherwise would have been indicated in different shades of grey scale. All annotations drafted while performing the iconographic tracing have been included within the final renderings, paginated as graphic plates. On the BRN1 graphic plate, lines corresponding to the profile comb measurement points of the sections of the engravings have been marked,[15] while the outlines of the 16 sections – twelve of which relate to letters and two to wheel figures, as well as two profiles of the foot – were reproduced; three photographs, front side, back side and detail, were included on the BRN2 plate. On the basis of the dimensional variability of the surfaces, and also considering that the vector renditions maintain the same definition regardless of the scale adopted, metric references, of 50 cm for BRN1 and 5 cm for BRN2, were added along the margins of the graphic plates.

The iconographic tracing of BRN1 produced 15 figures, articulated in four figurative elements – the wheels – and 117 alphabetical signs, including 114 letters, and three punctuation marks; two letters that are uncertain (BRN1.10.01) or partly obliterated as a result of surface chipping (BRN1.11.16) are rendered in grey, two others (BRN1.10.03, BRN1.10.17) have a dubious horizontal stroke, also in grey, and can therefore be read as **a** or **e**. On the other hand, the tracing of BRN2 produced three figures, including a schematic human figure with spear and shield, a nine-letter line and an elongated 'S' line on the back, as well as some small indentations, a possible outcome of pickaxe blows; on the engraved surface one may note numerous very fine multi-oriented striations from rubbing.

[15] Due to the small size, it was not possible to obtain the BRN2 sections by the profile comb.

It is worth noting that undertaking the contact tracing took several hours, during which the two specimens were subjected to constant and close observation, always under grazing light, thus enabling at the same time a particularly thorough autopsy examination to be carried out; this detailed examination continued in the course of the digitisation and analysis of the recorded material.

The photographic and meta-photographic shots were also taken under grazing light, in order to best highlight the engraved signs; to obtain the maximum definition, numerous close-up shots were taken; a stitched 29-megapixel photo was thus obtained for BRN1, while an orthomosaic of 304 megapixels, reduced to 115,[16] was created from the 3D SFM model, which has the characteristics of a macro photo extended to the whole engraved surface. Thanks to tile tessellation,[17] the latter can be conveniently browsed online,[18] with bird's-eye navigation of the entire surface and zoom magnification options.

The use of grazing light highlighted how certain signs are variously legible depending on the orientation of the light source; examples include the 'butterfly san' BRN1.3.08,[19] where the vertical bar is recognizable only under a certain angle of illumination, as well as the letter **s** BRN1.8.06 – which is confirmed, contrary to what is argued in Estarán Tolosa 2015 – where the upper bar is legible only with light coming from the left.

3D modelling followed two distinct and parallel paths, adopting both the stereo-photogrammetric technique (SFM-Structure from Motion) and, only for BRN1, also the stereo-photometric one. This latter work was done by Paolo Emilio Bagnoli, who developed a special operational chain applicable to petroglyphs (Vanzi et al. 2016), which solves the problems of non-uniform lighting and digital noise correction. Avoiding technical details that are beyond the subject of this paper, the photogrammetric modelling derives the numerical values of the three xyz axes of each point of the polygonal mesh by analysing and measuring the different distances among the recognizable tie points of the

[16] The reduced version has a maximum side of 12 thousand pixels.

[17] Through the use of a high-performance viewer for pano-images and interactive virtual tours, to be used via a browser on both PCs and smartphones/tablets.

[18] http://www.rupestre.it/Briona2.

[19] A *unicum*, as already noted in Tibiletti Bruno 1981: 188. On the evolution of san, Pandolfini & Prosdocimi 1990: 294.

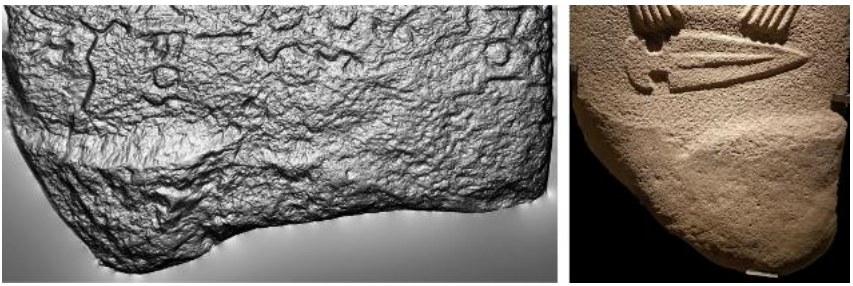

Fig. 14: BRN1, the foot of the stela (3D model); on the right, comparison with the foot of the Chalcolithic stela of Groppoli VIII (photo AA).

surface, which are arranged according to different perspectives and two-dimensional geometries depending on the shooting points. Instead the photometric modelling, which has radiometric bases, is based on the measurement for each point – thus for each pixel of the digital photograph – of the reflected fraction of incident light, i.e. irradiance, which is assumed to be dependent on the orientation of the surface with respect to the horizontal plane (Harker & O'Leary 2013). It follows that the photometric method has a much higher definition, since it produces a polygonal mesh with as many points as there are pixels in the source photographic shot, and is not limited to the tie points, which are automatically recognized by the photogrammetric software by collimation of the geometries. In fact, for BRN1, this resulted in 214.000 tie points according to the photogrammetric method and 12 million according to the photometric method. The far higher definition achievable by the photometric method is obvious; by contrast, the latter works only on flat surfaces and is not applicable at the maximum definition to large areas, as it requires substantial computational power and large data storage space.

As regards BRN1, the 3D model on a photogrammetric basis proved useful to highlight the foot volumes (Fig. 14) and to produce the ultra-high-def orthomosaic, while the photometric model, by applying the appropriate shading, allowed us to obtain a very highly-defined pseudo-photographic image (Fig. 15), rivalling the best grazing light shots. In both cases, 2D isohypsis plans were derived by exporting the DEM-Digital Elevation Model and plotting its curves via QGIS software in vector graphics. Considering the shallow depth of the engravings, such

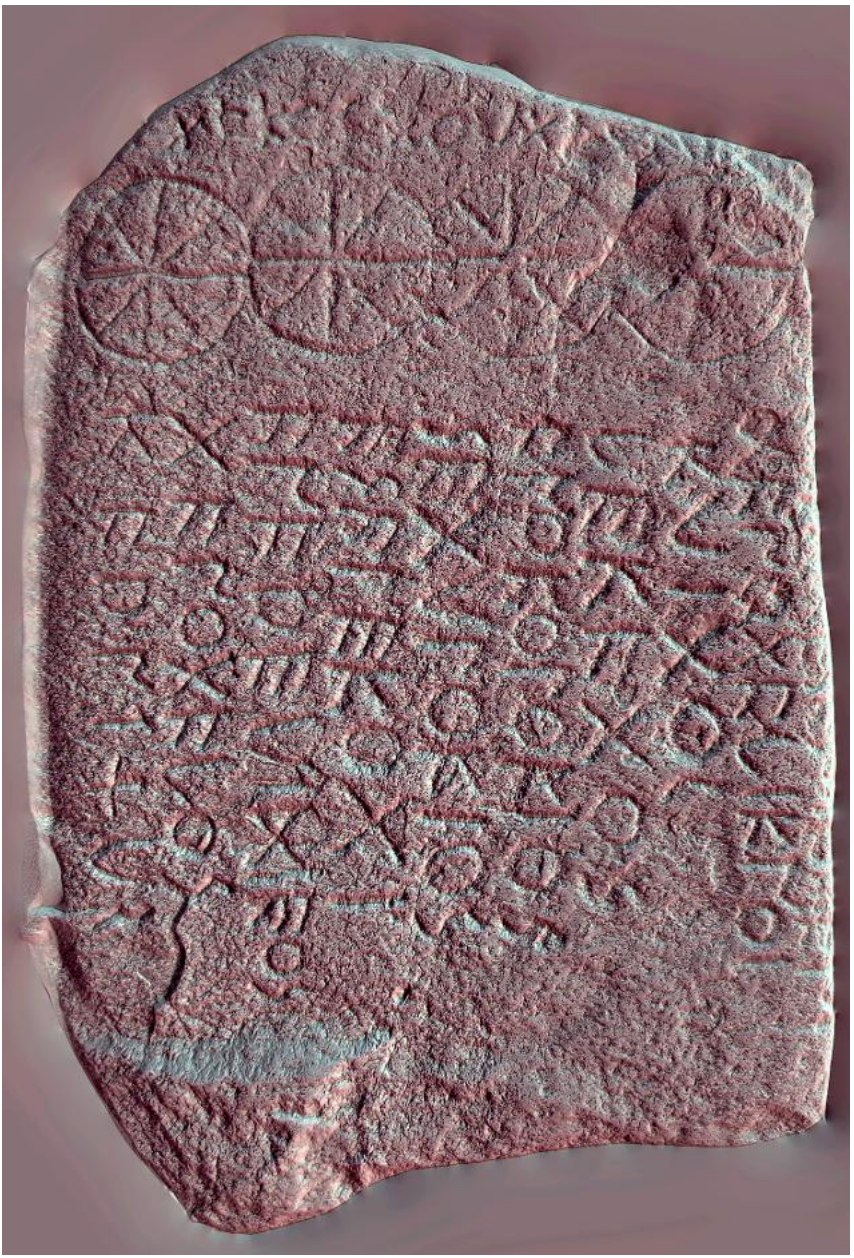

Fig. 15: BRN1, photometric 3D model, shader radiance scaling Lit sphere207 (3D photometric model by Paolo Emilio Bagnoli).

planimetry is unable to reveal greater details than the other applied methodologies. In addition, two photometric detail models were also produced for BRN1 (Figs. 7–8, top sections), involving the last letters of the text line BRN1.11, and the first, more uncertain ones, of the text line BRN1.10, engraved on the right, bevelled and convex edge of the stela, on a surface beyond the margins and of different orientation with respect to the front epigraphic speculum. The careful analysis of these detailed models – together with grazing light shots of the same portions of the surface – which can be oriented and shaded as desired, supports and confirms the reading reported on the iconographic tracing.

Finally, *frottage*, operated according to the traditional technique of rubbing carbon paper on tissue paper fixed on the etched surface, did not, as otherwise expected, produce particularly high-quality results.

Turning to the analysis of the data, it should first be noted that the surface of BRN1, contrary to assertions in the literature,[20] is in an excellent state of preservation. Different patinas on the surface, resulting from recent detachments – i.e. in the last two or three centuries – of the rock, cannot be recognized, and what is visible today corresponds to what can be inferred from the first photo published in Cartailhac 1878, figs 10 and 10bis. In fact, most dots of pecking are clearly discernible and no obliterated parts are present due to usage; only figure BRN1.14 (wheel) shows some wear and tear, perhaps as a result *ab antiquo* of protracted touching or rubbing over time. There are only limited detachments due to chipping in the upper right corner – referring to the stela when infixed vertically by the shorter side – and abrasions of the upper part of the right side; figure BRN1.15 (the first wheel from the right) also shows the detachment of two surface flakes, with the loss of a spoke. The chips therefore partially obliterate the last letter(s) of the horizontal line BRN1.11, as well as a spoke of the wheel figure BRN1.15 and a segment of the letter **t** BRN1.10.06; the first 4 or 5 letters of the right vertical line

[20] "[...] on mesurera la détérioration survenue en un siècle en confrontant les photographies (fig. 6 et 12) publiées en 1876 et celles (fig. 7 et 10, 11) que nous avons fait faire (pour *Lepontica*) in 1970" (Lejeune 1988: 13); the author does not seem to take into account the fact that some of the photographs published in the nineteenth-century contributions are photographs of the plaster cast made shortly after the discovery, which is no longer available today, with the engravings repainted, and that different grazing light conditions can notably alter the rendering of the engraved signs, increasing or decreasing their contrast.

Fig. 16: BRN1, bush-hammered surface detail.

(BRN1.10) are particularly difficult to read because they are engraved on an irregular, unprepared surface. It can be assumed that the chipping at the margins was produced during the displacement and reuse in historical times of the slab in the walls of the parish church of San Zeno. Other small detachments, which, however, do not impair either pecking or readability, are present inside some letters,[21] likely produced in the course of their incision, where the angle of the stems encountered adverse texture or graininess of the rock support.

Some letters show a lighter shade inside them,[22] suggesting that the engraved surface was not completely patinated, and consequently exposed not too long before being covered as a result of burial or reuse; however, it must be considered that the surface of BRN1 was exposed, after the late 19th-century discovery, to a range of treatments – plaster cast and repeated chalking or colouring to highlight the signs – which may have caused the different shades of some engraved grooves.

[21] BRN1.4.08 **t**, BRN1.5.07 **k**, BRN1.6.08 **k**, BRN1.6.10 **o**, BRN1.7.04 **a**, BRN1.7.05 **t**, BRN1.7.07 **s**.

[22] In particular BRN1.7.04 and BRN1.10.07.

Close autopsy examination of BRN1 reveals that much of the surface, all that was affected by engraving activity, and in particular the epigraphic speculum, with the exception of part of lines BRN1.10 and BRN1.11 – moreover the least legible ones – and of the foot, has been levelled off, and perhaps even lowered, by means of medium-small bush-hammering (Fig. 16); this is revealed by the myriad of dots, smaller than the pecking strokes, spread along the surface;[23] bush-hammering is absent on both the lateral and rear faces of the artifact. Considering the parallelepiped morphology, it is likely that the stela BRN1 was not only bush-hammered, but also previously rough-hewn.

The analysis of the pecking strokes on BRN1, which shows diameters of 4–6 mm, and which can therefore be defined as hemi-centimetre,[24] reveals some differences: the pecking of the four wheels is finer and generally shallower; this could indicate the presence of at least two lapicides, but also simply the use by the same lapicide of stone strikers of different size and weight. The pecking of the inscribed lines is also not uniform: line BRN1.1 **karnitus** has a thinner stroke and sharper peckings, as do some letters in adjacent lines, such as BRN1.2.07, BRN1.3.08, and BRN1.3.09. The two marginal text lines BRN1.10 and BRN1.11 have lower letters, even by a third,[25] and both greater and lesser groove depth than the other lines; apart from considerations related to the possible presence of different lapicides or various stages of execution, the author was forced to adapt to the narrowness and irregularity of the surface, which is convex and has depressions. It should be recalled in this regard that making a rock carving originally produces cavities of much lighter coloration – often white – than the surrounding surface, due to the lack of patina, and that therefore signs of different depths are equally legible, although they become less distinguishable after the patina has reformed, which usually takes several decades, if not centuries, if the surface is

[23] In the letters **o** BRN1.6.03, BRN1.6.10, BRN1.7.06, BRN1.8.05, some of the bush-hammering pecking strokes give the impression of the presence of a central point – like a letter θ – which should be excluded as incongruent.

[24] Much finer on BRN2, with diameters of 1–1.5 mm on the inscription and 2.5 mm on the weapon-bearing figure.

[25] Measurements, which can be made accurately on the iconographic tracing, which is at a scale of 1:1, show that the height of the letters is 37–61 mm, averaging 55, for line BRN1.10; 32–68 mm, averaging 50, for line BRN1.11; 49–88 mm, averaging 70–75, for the others.

not exposed to the weather. Text line BRN1.10, the last to the right of the vertical ones, and part of line BRN1.11, lie on the bevelled edge of the slab and not on the flat and regular area of the epigraphic speculum. BRN1.10.17 and BRN1.10.18, the last two letters in the line, are misaligned, as they had the opportunity to occupy the space left vacant by the previous line.

Along the shorter, lower side, the presence of an unengraved area, its pointed shape, the existence of an elevation, and the lack of bush-hammering make the morphology of a stela foot evident, as also shown by comparison with many other engraved stelae; all this is diagnostic of the monument's erection vertically with the ten lines of text in the vertical and the four wheels in the horizontal.

The eight-spoked wheels, engraved freehand and without a compass, as evidenced by the imperfect roundness of the rims[26] and the offset of the spokes – oriented identically in the wheels BRN1.12, BRN1.13 and BRN1.14 and inclined by almost 4° in the wheel BRN1.15 – are evidently four wagon wheels,[27] as in two of them (BRN1.14 and BRN1.15) there is, through a small central ring, the depiction of the hub. The different orientation of wheel BRN1.15 might indicate that it was done last of all, with less suitable remaining space on the levelled-off surface than the others, and thus the engraving of the wheels started with the first one from the left; this observation can also be made in the order of execution of the inscriptions, beginning with line BRN1.1, i.e. **karnitus**, as argued above. The presence of a foot at the bottom – traditionally located on the right with the stela oriented horizontally –, the bush-hammering and the distribution of the figures suggest a design of the entire surface.[28] Wheels BRN1.12–BRN1.15 and the text lines BRN1.1–BRN1.9 show an orthogonal orientation and distribution within the ideal rectangle of the epigraphic speculum – from which text lines BRN1.10 and BRN1.11, probable additions (*supra*) or afterthoughts, seem to be excluded – the perimeter of which is delimited by the outer margins of the above lines and those of the four wheels, which correspond; the aforementioned wheels and text lines must therefore be considered as

[26] Diameters 211 to 224 mm; the wheels BRN1.12, BRN1.13 and BRN1.14 touch each other at the ends of the rims; the wheel BRN1.15, the one on the right, has the rim partially entering that of the previous one.

[27] To be read as 'four-wheeled cart'?

[28] However, no pre-plotting striations or graffiti are present.

Fig. 17: LBS2 (Paspardo, Valcamonica), comparisons with the wheel-headed figure of Taranis, Celtic deity, 2nd–1st century B.C. (photo and tracing *Footsteps of Man*).

a contextual association, semantically connected in forming a syntactic association, where text and figures contribute to the formation of meaning, to which the toponymic situation of the discovery site may not be extraneous (*supra*).

The presence of figurative elements encourages the search for iconographic comparisons, which will be dealt with in detail in a further paper. For BRN1, and its wheel figures, we may simply mention an engraved human figure from Valcamonica – as well as several older, four-wheeled chariot figures from the Early Iron Age – dating back to the 2nd–1st centuries B.C. with a 5-spoke wheel in place of the head (Fig. 17), a likely representation of the Celtic divinity Taranis (Fossati 1998: 219, fig. 5 A; Fossati 2007: 33, fig. 29), which coincides chronologically with the stela BRN1, as with ones in the Dormelletto (LexLep NO·27) and Gozzano (LexLep NO·19) stelae. Concerning the weapon-

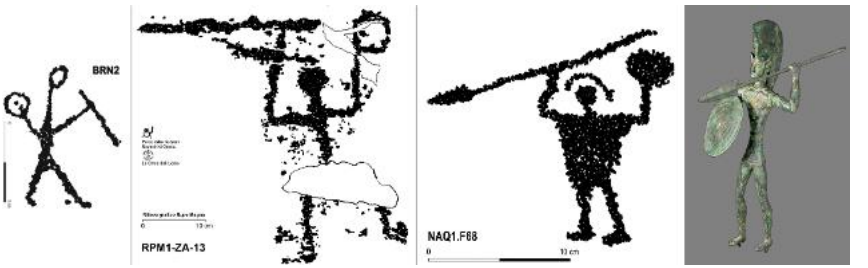

Fig. 18: The weapon-bearing figure BRN2.1; right, comparisons with figures RPM1.ZA13 from the *Rupe Magna* at Grosio (SO – I; 9th–8th century B.C.; *Footsteps of Man* tracing), NAQ1.F68 from the *Great Rock* of Naquane (BS – I; 7th–6th century B.C.; AA tracing) and with a Populonia Etruscan votive statuette (5th century B.C.; photo MET-*Metropolitan Museum of Art*, New York).

bearing figure of BRN2, the iconographic comparisons, if parametricized to Valcamonica-Valtellina rock art (Fig. 18), may find a match in the schematic or semi-naturalistic figures of the early Iron Age. The repetitiveness of such figures (late 7th to mid-5th century B.C.), particularly those with helmet, shield, and spear raised – these, moreover, are the attributes of the war god – similar to Etruscan and Italic votive bronzes or depicted on Greek and Etruscan painted vases, may suggest the representation of mythological, heroic, or divine figures (Arcà 2018: vol. I, 340–344) carried out as votive iconic deposits and intended as a heroic identification or a request for protection.

The epigraphic characters of BRN1 are also diagnostic of freehand execution, as evidenced by the dissimilarity in the length and inclination of the stems of the different instances of the same letters; no pre-tracing striae are present. It is possible, however, given the discrete regularity of the epigraphic speculum, that a draft was traced prior to engraving with pigments or other colours that disappeared during engraving or later. The vertical lines of text are nearly parallel, with seven lines at a constant angle to the outer margin of the engraved surface (BRN1.2, BRN1.4, BRN1.5, BRN1.7, BRN1.8, BRN1.9, BRN1.10) and three lines inclined +0.9–1° (BRN1.1, BRN1.6) and –0.6° (BRN1.3) to the others. The orientation of both the vertical and horizontal text lines with respect to the outer vertical margins of the slab may indicate its inclination of 2–3° with respect to those margins, if the stela was set with the vertical plumb-lines. As already mentioned, analysis of the sections of the

engravings reveals the absence of sharp edges at the margins of signs, as well as a soft semi-circular course, except for the V-shaped section of the letter BRN1.1.01 (the **k** of **karnitus**), and indicates the use of a lithic and not a metallic striker.

On BRN2 the lighter, almost white colour of the pecked elements, both the letters and the figures, which contrasts with the dark grey-black colour of the surrounding surface, suggests the burial of the find not many years after having been engraved, unless it is a very slowly patinating rock type.

AA

Ultimately, the articulated and accurate recording allowed us to reveal some aspects of the engraved signs, such as, for BRN1 (LexLep NO·21), the vertical orientation, the preparation by rough-hewing and bush-hammering, the presence of a foot, the excellent preservation, a more detailed restitution of the signs, including the four cart wheels, the confirmation of the **s** of **kuitos**, the engraving, and thus epigraphic sequence, as well as the presence of two text lines probably engraved in a second phase. For BRN2 (LexLep NO·22), instead, the comparisons with similar engraved figures from the Alpine arc, particularly from Valcamonica and Valtellina, help to confirm to a good extent the chronological attribution to the second half of the 6th to the first half of the 5th century B.C. expressed by Filippo Maria Gambari (*Tra terra e acque* 2004: 220) of a figure that may go beyond the simple representation of a weapon-bearing man.

A sincere and deserved acknowledgement and tribute to the memory of † Paolo Emilio Bagnoli – former Full Professor of Photonics and Optoelectronic, Information Engineering Department, Pisa University (I) – who sadly left us recently. We are grateful to Paolo for writing the calculation routines and realising the photometric 3D models of the stela BRN1.

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On the Celtic inscription of Briona

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Abstract

I make some suggestions about the lapidary inscription written in the 'Lepontic' alphabet, found in San Bernardino di Briona in the 19th century and now preserved in the Lapidary Museum of the rectory of the Cathedral of Novara. The aim is to show just how much the traditional interpretation needs revision. This follows the re-assignment to the stone of what must have been its original vertical position, with the short side placed into the ground, the 'wheels' arranged horizontally and ten of eleven lines of writing to be read from top to bottom. I wish to highlight some pragmatic and linguistic difficulties in the traditional interpretation, while, on the other hand, I would like to show how the 'vertical approach' has some advantages for the interpretation. The reassessment also leads to reflections on the relationship of the direction of writing with the sequence of reading of the vertical lines.

1. Premises and objectives

I propose some reassessments of the well-known Celtic inscription of San Bernardino di Briona.[1] My objective is not to provide a new interpretation of this much-discussed document, which would obviously be too broad for this occasion, but rather to show how much the interpretation has changed (or needs to be changed). This follows the re-assignment to the stone of what must have been its original vertical position, with the short side placed into the ground, the 'wheels' arranged horizontally, and ten of the eleven lines of writing to be read from top to bottom (see Fig. 4 in Arcà & Rubat Borel in this volume).

[1] LexLep NO·21 = RIG II E-1, Solinas 1994 n° 140, Morandi 2004 n° 97. The number of epigraphic testimonies of Celtic from Italy is constantly increasing. In this article, I identify inscriptions with reference to the main corpora currently in use.

The idea of a different analysis goes back to the observation (made over thirty years ago by A. L. Prosdocimi)[2] that the shape of the stone indicates the area intended for being covered by soil. This indicates that the original position of the stone must have been vertical and inevitably carries implications about the sequence in which the lines are to be read and the relationship between the various parts of the written text. Immediately after Prosdocimi's observation, I had drawn only a few consequences from it,[3] especially because of the influence exerted by previous authoritative analyses such as that of Lejeune for the whole text or that of Campanile for the identification of the famous *Quintus legatus*.[4] I went back to the inscription on the occasion of the study of the Gallo-Latin necropolis of Cerrione (Biella),[5] which is close both in terms of location and of chronology. From this necropolis, some inscriptions in the Lepontic alphabet emerged, with a textual *dispositio* comparable to that of Briona. In more recent years, proposals have been made to reread some signs in the Briona inscription, offering an opportunity for a new interpretative perspective on the entire text. However, due to the uncertainty and the erroneousness of the proposals,[6] this did not happen. Recently, the new study by Arcà and Rubat Borel[7] prompted me to reflect again on the document, encouraged by the fact that, also from the perspective of a non-epigraphic and non-linguistic investigation, the original position had to be vertical.

My objective is therefore to restart from Prosdocimi's observation and to reconsider the whole monument, freeing the analysis from what had been imposed by the traditional horizontal view. I do not intend to present a new interpretation of the text and the precise forms that it includes, but rather I wish to highlight some pragmatic and linguistic difficulties of the traditional interpretation. At the same time, I would

[2] Prosdocimi 1991b: 291–293.

[3] Solinas 1994: 379–381.

[4] RIG II E-1; Campanile 1981.

[5] Cresci Marrone & Solinas 2013.

[6] Various attempts have been made to (re)read Lejeune's lines B1 and A1. However, the state of the engraving is such that it is difficult to reach an unanimous reading, except perhaps for the **takos:toutas** segment of B1. I do not think we should accept the alternative reading **kuitoi** instead of **kuitos** proposed by Estarán Tolosa 2015. Arcà & Rubat Borel in this volume share the same opinion, as do Eska & Eska 2017.

[7] Arcà & Rubat Borel in this volume.

like to show how the 'vertical approach' has some advantages for the interpretation.

The reassessment has also led me to reflect on the relationship of the direction of writing with the sequence of reading of the vertical lines: if the direction of writing of the inscription is dextroverse, should the vertical lines be read in succession from right to left (the traditional sequence) or from left to right (in accordance with the direction of writing)? Here, the aim is not so much to answer this question or to present a new analysis, but rather to find some plausible comparisons in other epigraphic documents from Celtic and non-Celtic areas in northern Italy, and to show how the left-to-right succession could solve some interpretative problems.

2. The traditional interpretation

As concerns the stele and the archaeological context, I refer here to the article by Arcà & Rubat Borel in the present volume. I only mention the fact that the inscription cannot be dated archaeologically. It has been dated based on palaeographical considerations, and, overall, in reference to its historical context – the complex and diversified phenomenon of 'Romanization'. The ways and strategies of 'Becoming Roman'[8] are different in different areas and chronologies; indeed, historical research has shown how, in northern Italy, the assimilation process has had more peculiar features than elsewhere.[9] For this reason we do not enter into the specifics of the arguments put forward by various scholars to arrive at a dating of the document between the end of the second and the first century B.C.

The interpretation of the text – with a story disturbed only by the alternative voice of Rhŷs (1906 and 1913) – finds its current form in the *Recueil des inscriptions gauloises* (RIG) of M. Lejeune (1988). The traditional analysis of the structure of the text, today almost unanimously accepted and substantially coinciding with that of Lejeune, can be illustrated in a brief and simplified manner. Lejeune rightly notes how the written text is arranged around the four circles present in the writing space:

[8] Woolf 1998. See also Haeussler 2013.

[9] The literature about this is obviously endless, see for example Cassola 1991 and numerous studies by G. Bandelli.

> "Ont d'abord été gravées, en alignement vertical, et tangentes, quatre «roues» à huit rayons, d'un diamètre de 22 cm, dont la série occupe pratiquement toute la hauteur de la pierre, du côté gauche, ne laissant à sa gauche qu'une marge étroite, mais ménageant vers sa droite un vaste champ pour l'inscription (champ dont le lapicide n'a d'ailleurs pas utilisé toute la largeur). Il est clair que les «roues» sont l'élément primordial de la gravure, autour de quoi s'est venu ordonner le texte" (RIG II-1: 17).[10]

Therefore, the inscription would be read in the position in which it is visible at the Lapidarium of Novara, namely with the long side set horizontally and, consequently, with ten lines of horizontal writing, one below the other.[11]

The inscription is divided into three sections of different conditions of conservation:

1) a central section of nine well-preserved lines (A2–10 of Lejeune in RIG II), read almost unanimously as dextroverse and arranged horizontally one below the other, each one consisting of a single word: **tanotaliknoi** | **kuitos** | **lekatos** | **anokopokios** | **setupokios** | **esanekoti** | **anareuiśeos** | **tanotalos** | **karnitus**.

2) a section read vertically from bottom to top on the extreme left of the epigraphic space, still dextroverse and parallel to the vertically aligned radial motif (B1 of Lejeune in RIG II): **takos** : **toutas** :[.

3) a third section – perhaps connected to section 2 – inscribed on the edge of the upper end of the stone, maybe a secondary incision, made up of poorly preserved and hardly legible letters, understood as a dextroverse horizontal line (A1 of Lejeune in RIG II):
]**n**[-]**k**[--]**esasoioikan**[-].

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[10] I will return to the fact that Lejeune's intuition on the centrality of the 'wheels' in the way the text is constructed and operates remains valid even and above all when considering a vertical positioning of the stone.

[11] RIG II-1: 17: "Son mode d'utilisation est incertain: couchée? adossée à la pente d'un tertre ou à la paroi verticale d'une construction? en tout cas, non érigée par implantation dans le sol, puisque l'inscription va jusqu'au bas de la pierre. [L'orientation de la stèle ne fait pas de doute; seul Rhŷs a eu l'idée saugrenue que la série de figurations de roues et la ligne écrite qui lui est parallèle devaient être horizontales, les dix autres lignes d'écriture se dirigeant de haut en bas.]"

There is no agreement among scholars about the relationship between the sections and their sequence of reading.

The structure of the central section was regarded as a series of binomial onomastic formulas that serve as subjects for the closing verb form (*karnitus*).[12] The onomastic formulas have been identified as nominatives of personal names, mostly of recognizable Celtic ancestry. In three cases (*kuitos lekatos*, *anokopokios* and *setupokios*),[13] these names are completed by a preceding 'cumulative' adjectival patronymic in the nominative plural (*tanotaliknoi* 'sons of *tanotalos*') and, in the other two (*anareuiśeos* and *tanotalos*), by a genitival patronymic, again 'cumulative' and put before the names (*esanekoti* '(the sons) of *esanekotos*'). Lejeune proposes the Latin translation: "Dannotali fili, Quintus Legatus, Andocombogius, Setubogius, Exandecotti (autem fili), Andarevisseus, Dannotalos, erexerunt" (RIG II-1: 20), and similarly Lambert: "Les fils de Dannotalos, Quintos, légat, Andombogios, Setubogios, et (les fils) d'Essandecot(t)os, Andareuiseos, Dannotalos, ont élevé le tumulus" (1994: 72).[14]

[12] Following her proposed reading of **kuitos** as **kuitoi**, Estarán Tolosa 2015 proposes that the phrase *tanotaliknoi kuitoi* (dative singular) is the name of the dedicatee: "«Au fils de Dannotalos, Quintos». Les autres noms désigneraint les dédicants" (106); alternatively, if it were not a personal name, *kuitoi* would still be syntactically connected to *tanotaliknoi* as a nom. pl. *o*-stem. (Estarán Tolosa 2015 speaks of a traditional interpretation with "une série de sept individus qui sont chacun représentés par un *nomen unicum* local" (95), but in the literature I cannot seem to find interpretations with seven individuals.)

[13] For simplicity's sake, I leave aside the phonetic interpretations, which, in some cases, could also vary in the analyses of different scholars, and I quote the forms of the text through graphical notation.

[14] Markey & Mees 2003: 139–140 propose an unconvincing structure: "the sons of Dannotalos, Quintos the legate (and) Annocombogios, Setubogios son of Essannecottos (and) Anarevisos's son Dannotalos, raised this *cairn*"; the same in LexLep. On this proposal, see also Eska & Eska 2017: 83, n. 10, which expresses perplexity on the coexistence in the same text of three diverse ways of giving the patronymic in various positions. Likewise, Peyre 2000: 179–180 is puzzled by the three different ways of expressing the patronymic (even if one adopts Lejeune's analysis which, regardless of the original functionality, considers *-eos* as a formant of an idionym). Therefore, he proposes *-eos* as a suffix with agentive value and then *anareuiśeos* as a function name, parallel to *lekatos*: "celui qui veille (ou qui s'occupe) de manière générale (ou en premier) aux côtés de (ou à la place de), en somme un mandataire général" (2000: 180). In this perspective, the textual structure would be different

In section 2, Lejeune considered only **takos : toutas** to be readable with sufficient certainty: he interpreted *toutas* as a genitive[15] of the name of the 'city' or 'community',[16] maybe syntactically connected with a following noun, in a phrase with a meaning like 'civitatis iussu'. As regards *takos*, he suggested a neuter accusative singular 'sepulcrum', object of *karnitus*, or a neuter nominative singular of an abstract noun **tangos* 'decretum' (sigmatic derivative of the same nasal stem which is found in the Oscan accusative *tanginom*), here functioning as nominative absolute. This analysis is taken up in P.-Y. Lambert's handbook *La langue gauloise*.[17] More recently, the hypothesis of *takos* = *tagos* as a name of a magistrate has been put forward,[18] hence the *tagos* of the *touta* would be seen as the 'guarantor' of what is described in the central section.

The reading of the third section is so uncertain that an interpretation, even a partial one, is not possible.

In my opinion, the traditional analysis presents more than one difficulty. Here, I highlight two of these, which seem to be at least partially overcome by my revised analysis of the text. Firstly, there is a difficulty of a pragmatic order and of general verisimilitude: the monument (funerary or not) is evidently the result of an important design, for which therefore we may imagine minimal randomness. However, the mention of the *touta* and possibly of one of its hypothetical magistrates or one of its decisions (*takos*) is found in a secondary section of the writing space. This truly makes little sense.

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and the genitive *esanekoti* would be a determinative: "le fils de Dannotalos, Quintos le Légat (1), Anoco(m)bogios (2), Setubogios mandataire général d'Esanecotos (3), Dannotalos (4 portant le même nom de son père), ont élevé le monument" (2000: 180).

[15] *toutas* as a genitive singular is an important morphological piece of evidence – as are others of Italian Celticity such as *rikanas* from Oleggio (LexLep NO·8 = Morandi 2004 n° 84) – for the question of the inflection of *ā*-stems in Celtic. The bibliography is boundless, see for example Lejeune 1985, Motta 1989, Prosdocimi 1989, Lambert 1995, De Bernardo Stempel 2007.

[16] Cf. Matasović 2009: 386 s.v. **towtā*.

[17] Lambert 1994: 74. Cf. also Gambari & Solari 1999: 146.

[18] Cf. for instance Markey & Mees 2003: 131. I believe (as did Rhŷs 1913: 47) that Briona's *takos* is to be compared also with *Prasutagus*, see the analysis proposed by Delamarre 2017: 104–105.

Secondly, there are some issues that I would define as of a linguistic-cultural order: in a Celtic binomial onomastic formula, even in the context of cultural Romanization *in fieri*, the genitive with patronymic function or the patronymic constructed as a derivative (*-ikno-*) always constitutes the second element of the formula,[19] cf. *esopnos kepi* (LexLep PV·1 = RIG E-4, Solinas 1994 n° 110, Morandi 2004 n° 101), *alkouinos aśkoneti* (LexLep TI·41 = Solinas 1994 n° 21, Morandi 2004 n° 38), *esonius urenti* (LexLep BI·4), *aśmina krasanikna* (LexLep NO·18 = Solinas 1994 n° 122, Morandi 2004 n° 94), *koisis trutiknos* (LexLep PG·1.2 and .4 = RIG E-5, Solinas 1994 n° 142, Morandi 2004 n° 277) etc. In the traditional interpretation of the Briona stele, on the other hand, both *esanekoti* (cumulative genitive patronymic for several individuals) and *tanotaliknoi* (cumulative patronymic with the formant *-ikno-*) would be placed before the personal names. We do not have structural parallels of cumulative patronymics in the Celtic epigraphy of Italy, but in the inscription in Latin characters and in the Venetic language from Canevoi (Belluno) we read: enoni.ontei.appioi.sselboisselboi.andeticobos ecupetaris (LV Bl 1). In this example, the cumulative patronymic *andeticobos* is postponed to all idionyms (*ontei*, *appioi*) and also to *enonios*, the curator of the burial (gen. enoni), through *sselboisselboi*.[20]

3. The vertical position of the stele

Here, I introduce my proposal for the structure of the text and some related observations. This does not set out to be a new and complete interpretation, but only starting points for a future interpretation. Both the space and occasion allow me to present only those aspects that I would define as structural, without discussing detailed arguments referring to etymologies and cultural and institutional contents, that I will consider elsewhere.

The general impressions that I had acquired when I personally examined the stele a few years ago seem to be confirmed by what

[19] On the structure of the onomastic formula in northern Italy and in the Celtic context in particular, cf. Prosdocimi 1988: 367–388 and Prosdocimi 1991a: 159–176. See also De Bernardo Stempel 2009; Motta 2009; Solinas 2013: 199–204.

[20] The inscription is lost but can be read from a preserved apograph; see also Prosdocimi 1988: 307.

has been highlighted by Arcà and Rubat Borel: the original position of the stone was vertical, and we can clearly observe the space which was going to be underground and did not undergo any preparation for engraving.[21]

3.1 The structure of the text

The written text is arranged around the horizontal line of 'wheels', which, in my opinion, must also play an important part in the reconstruction of the meaning of the entire monument. Without going specifically into the various hypotheses which have been formulated about the symbolic value of the wheels, they could be elements of reference to the funeral rite (*petorritum*)[22] or to a public judgment or to a vote.[23]

However, I believe that the vertical position of the stele and the centrality of the wheels in textual semiology are premises that, when combined, must condition the entire interpretation. Indeed, it is evident that the text as a whole is articulated and works around the four wheels, which have both the function of separating the various sections and of joining them in a textual syntax (which does not necessarily have to coincide with the linguistic syntax). The wheels, obviously, also have the function of an iconographic reference to a series of cultural contents which I will not go into here, but which contribute to the construction of the textual meaning. The topic is that of the so-called 'symphysical context' of Bühler 1934, for which the relationship between the linguistic sign and the object with which it is related (in our case the stele with the four wheels) has meaning in relation to the 'cognition of things' of the interpreter. Therefore, I believe that an interpretation aiming at the reconstruction of the meaning of the text must consider the whole complex of the engraved space as a unit articulated in images and lines of alphabetic writing with different orientations.

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[21] Estarán Tolosa 2015: 97 noted that the idea of vertical placement is not plausible due to the little space that would remain between the last signs and the base. To refute the objection suffice it to compare the proportions of the buried parts and the position of the letters in other Cisalpine Celtic inscriptions of Italy, for example the inscriptions of Vergiate (LexLep VA·6 = Solinas 1994 n° 119, Morandi 2004 n° 106) or of Vercelli (LexLep VC·1 = Solinas 1994 n° 141, Morandi 2004 n°100).

[22] RIG II-1: 17–18; Hamp 1990; Eska & Eska 2017.

[23] Peyre 2000.

The nine lines of vertical writing (A2–10) are arranged exactly under the four wheels and, in the original layout, were surrounded on all four sides by an empty frame. It seems to me that this general arrangement had to include the top horizontal line (B1). The same cannot be said with certainty for the line engraved on the far right margin (A1), since this is located in a space which, in the original layout, was intended to be empty. Furthermore, the signs engraved in this line, slightly smaller than those of the contiguous line, are less spaced apart, and dividing dots are present between the words. Dots are not present in the vertical lines of the inscription, perhaps also because the division into one-word lines did not require them. Moreover, this is the same logic of division through dots adopted in the inscriptions coming from the necropolis of Cerrione, which I will discuss later.

It would appear quite clear that there was no writing in the upper right corner, which is now damaged. The textual structure resulting from the vertical repositioning of the stone is therefore:

- A dextroverse horizontal line which I read as **takos : toutas : eu**.[24]
- The horizontal line of the wheels.
- Nine dextroverse parallel vertical lines to be read from top to bottom (but should they be read from right to left or from left to right? – see below).
- The vertical line on the far-right margin remains of uncertain reading. However, for the purposes of identifying a textual structure, reading is not as relevant as the fact that this line of writing remains of uncertain connection (syntactic or not) with the rest of the text. I would rule out a syntactic connection with **takos : toutas : eu**, but it is not possible to exclude that there is some link with the other nine vertical lines.

In any case, the question of the number and the connection of the utterances must be tackled from a textual perspective (especially with a text made up of linguistic and non-linguistic signs). In such a perspective it would also be possible that the absence of a syntactic connection does not invalidate a connection in the articulation of the meaning of the text.

[24] Other readings have been proposed by others, most recently Arcà & Rubat Borel in this volume.

Various proposals have been put forward on both the morphology and the lexical basis of the plural verb *karnitus*. Here, to identify the general structure of the text and any syntactic connections, it suffices to point out that the semantics must be those of 'building', 'setting up' or 'preparing' – more generally one could say of 'doing' – for which an object is implied. This object could be a) not expressed linguistically, but pragmatically evident in the original context of the placement of the stone (again what Bühler would call symphysical context), or which more simply would be called a contextual object and specifically, in my opinion, this would hardly be a burial for an unmentioned dedicatee; b) expressed in the first horizontal line above the wheels, where it could be *takos* (perhaps to be interpreted in relation to Welsh *tanc* 'pace' < **tanco*-); c) expressed in the line on the far right margin in the form in *-am*, which could be the accusative of the object. I believe that the most plausible hypothesis is that of the contextual object and that, due to the absence of a reference to the dedicatee, it is difficult to think of a funerary inscription.

3.2 The vertical view of the stele

In support of the vertical view of the stele, I believe that an item of historical-cultural – rather than linguistic – evidence can be adduced. The arrangement in vertical lines of the inscriptions on stone seems to be a characterizing trait in Cisalpine Celtic epigraphy, from its beginnings up to more recent times. Indeed, the texts of many of the oldest inscriptions (from the 5th century B.C.), characterized by large supports, are arranged in vertical lines and, in some cases, the word *pala* is present to indicate the burial.[25] Arriving at a more recent epoch, closer to the context of the Briona inscription, we can consider, for instance, the Gallo-Latin necropolis of Cerrione (Biella).[26] The ancient presence in the necropolis dates from the beginning of the 1st century B.C. to the 3rd century A.D., but all the inscriptions in the Lepontic alphabet are dated to the 1st century B.C. The case of Cerrione is significant because of a

[25] Cf. for instance the inscriptions of Bioggio: LexLep TI·43 = Morandi 2004 n° 300; LexLep TI·44 = Morandi 2004 n° 301; LexLep TI·45 = Morandi 2004 n° 302 A e B. About 'Lepontic *pala*' see Solinas 2015.

[26] See Cresci Marrone & Solinas 2013.

rare aspect among the documentation of north-western Italy, namely the coexistence in the same burial site of two different alphabets, the Lepontic[27] and the Latin one. This peculiarity is a fruitful starting point for investigating the modalities of Romanization in progress in a peripheral area compared to the better investigated and better known urban contexts. The necropolis of Cerrione yields inscriptions in the Lepontic alphabet which can be compared to the one of Briona, owing to their arrangements in lines of vertical writing, engraved on large tombstones.[28] In contrast, the inscriptions in the Latin alphabet from the same necropolis, even in cases where the support is large enough, always present horizontal lines of writing.[29] Based on this comparison with what is found in other Po-valley contexts of Romanization, it can be hypothesized that, in recent chronological phases, the arrangement in one or more vertical (possibly parallel) lines may have been perceived as characterizing a non-Latin text model – therefore, what we could call a text model pertinent to local culture, written in the local Lepontic alphabet, with local onomastics and, in the case of the Briona monument, with a local institutional reference (*touta*).

The presence of the term *touta* demonstrates an intervention/will/patronage of the community in relation to what is mentioned in the rest of the text. I believe that the form *eu* could be the same that appears in

[27] The Lepontic alphabet in ancient Italy is associated with manifestations of Celtic identity. Writing has played a key role in the issue of linguistic Celticity in Italy, but here I wish to note that the creation of the alphabet of the Celtic of Italy dates back to around ± 600 B.C. in the area of the Golasecca culture. Since the earliest attestations, the epigraphic corpus is produced in alphabetical varieties with local characteristics, and these varieties continue from the beginning up to Cerrione in the 1st century B.C. The motivation for so much vitality and longevity is ideological: it is perceived as a manifestation of Celtic identity in, but also outside of Italy, as shown by the attestations in transalpine contexts, see Marinetti et al. 2000, Solinas 2002.

[28] LexLep BI·1–6. A separate case is that of LexLep BI·7, engraved on a large support in a single vertical line, but in the Latin alphabet with graphical features which refer to the Lepontic tradition. The text also contains an onomastic formula. In terms of bases and structure, this refers to the indigenous context for which the inscription, in a cultural horizon of Romanization *in fieri*, can be interpreted as an expression of transition (Cresci Marrone & Solinas 2013: 49–52), but also of deliberate reference to a non-Latin cultural model (cf. Solinas 2002).

[29] Cf. for instance Cresci & Solinas 2013 n° 9, n° 10, n° 11 etc.

Vercelli (LexLep VC·1.2 = RIG II E-2) and on the bronze of Vieil-Evreux (RIIG EUR-01–01 = RIG I L-16), which Lejeune suggested to interpret as an abbreviation of a Gaulish expression equivalent to Latin *ex voto*, but for which other hypotheses could also be made. The public legitimacy of the curation mentioned in the text is given by the reference – in a privileged position in the textual structure – to the authority of a magistrate or a judgment of the community. The vertical view of the stele allows us to eliminate the aforementioned difficulty represented by the fact that the mention of the *touta* and of a *takos* (be it a 'decree, a 'judgment' or a 'magistrate') would cover a secondary position in the text as a whole. Instead, the vertical view places it, as we would expect, in a prominent position, which distinguishes it from the indication of the construction / curatorship expressed in the vertical lines.

3.3 On the succession of reading of the vertical lines

In my proposal for a vertical view of the inscription, I raised the question of the sequence of reading of the vertical lines, wondering if it is not plausible to consider a reading that would start from the first vertical line on the left. It does not seem possible to identify decisive arguments in favour of this hypothesis, but it is certainly possible to highlight some neutral aspects and some facts in favour as well.

Regarding the arrangement of the text in the space prepared for the engraving, it can be observed that the vertical lines are more regular, larger, and more regularly spaced out on the left side of the stone, and gradually become smaller and closer to each other on the right side. This could be an indication of an incision which started from the left. If this observation is valid, it would be an argument in favour of a sequence of vertical lines from left to right. This modality in the succession of reading of the vertical lines may appear unusual to the modern viewer, who tends to visualize also the vertical and parallel lines of writing as horizontal and underlying one another. The modern textual model conditions this visualization, so that, even when the arrangement of the lines is vertical, there is a tendency to mentally bring what we see back to a horizontal type of arrangement. Different perspectives of textual conception allowed the dextroverse direction as well as the sinistroverse and the boustrophedon, and horizontal lines as well as vertical lines. In fact, the arrangement (and succession of reading) of vertical lines from left

to right is not unusual either in the Cisalpine Celtic context, or in other epigraphic corpora of ancient Italy, for example in the Venetic context. Hence, the **komoneos** | **uarsileos** of the inscription from San Pietro di Stabio (LexLep TI·40 = Solinas 1994 n° 23, Morandi 2004 n° 40) could be the result of the reading in two parallel vertical lines in succession from left to right. Returning to the aforementioned necropolis of Cerrione, we can consider for instance the inscription **lukios** | **sipionios** (LexLep BI·1) engraved in two parallel vertical lines: if, as it seems likely for morphological reasons, the form *sipionios* is in apposition and thus in second position in a binomial onomastic formula, the first line in the order of reading would be the one on the left (see Fig. 1).[30] On the other hand, from the same necropolis we can consider the inscription **esonius** | **urenti** | **akitu : esonius** | **ueriounos** (LexLep BI·4). The text is arranged in three vertical lines, but the distribution of the signs shows a reduction towards the left of the writing space – clearly to correct an erroneous calculation of the layout – and that makes the succession of lines proceeding from right to left almost certain. It is possible that for the latter inscription, which is placed at a slightly more advanced chronology and shows traits of a strong mixture with the Latin cultural and writing model, there are reasons to think of influence from that model of writing and of textual disposition.[31] In any case, it is evident that there is no univocal criterion for documents that come from the same cultural context and even from the same necropolis. From Venetic epigraphy, I can recall a couple of examples. The first case is *Fremaistos Vennonis molon Vennonis itos gentei* from Padua (LV Pa 13),[32] which was read according to two different premises: the first one identifies dextroverse horizontal lines in succes-

Fig. 1: lukios | **sipionios** (LexLep BI·1).

[30] The same reasoning could apply in the case of other inscriptions from Cerrione, see Cresci Marrone & Solinas 2013.

[31] Cresci Marrone & Solinas 2013.

[32] See also Prosdocimi 1988: 293.

sion from bottom to top; the second, probably preferable, identifies vertical and dextroverse lines in succession from left to right. Another case is that of a cippus, again from Padua, *entollouki termon* (LV Pa 14), for which we cannot exclude a succession *termon entollouki*, which – even in a predictably gen. + N language like Venetic – would be justifiable with the needs / will of topicalization. It is also worth highlighting how, both in Cerrione and in the Venetic inscriptions of Padua, it is evident that the high-low orientation of the letters is not decisive for the logic of succession of the lines. Therefore, there would not seem to be any reasons to exclude a succession of lines from left to right *a priori*. On the other hand, there could be evidence regarding the consistency with the direction of writing that may well prove to be in favour of this notion. If the succession and orientation of the letters in the line goes from left to right, then the same could be also the direction in which the vertical and parallel lines are arranged.

Reading the vertical lines in sequence from left to right would make it possible to eliminate the difficulty of the cumulative patronymics in the first position of the onomastic formulas. We are all fond of *Quintus Legatus* identified more than forty years ago by Enrico Campanile but, apart from wishful thinking, I do not think there are any reasons not to review the function and the attribution and interpretation of the form *lekatos*. The similarity with Latin *legatus* is strong and seems compelling, but it is not a given that the form must be an integral part of an onomastic formula with *kuitos*, as has been said up to now. In a reading of the vertical lines that starts from the left, *lekatos* could refer to *kuitos*, which follows it, but also to *anokopokios* which precedes it. So, even if we wish to keep the idea of the name of a temporary institutional office that has become a stable element of the onomastic formula placed in second position after the primary onomastic designation, why not an *anokopokios lekatos tanotaliknos* followed by a *kuitos tanotaliknos*? I do not even see good reasons to exclude a *lekatos* (name of institutional office preceding the uninterrupted onomastic designation) *kuitos tanotaliknos*. This arrangement would also have the advantage of standardizing all the onomastic formulas as binomial formulas, as well as that of giving back to the text an order corresponding to the succession of generations: if *setupokios, anokopokios* and *kuitos* are brothers, sons of *tanotalos*, it is reasonable that they are named after their father *tanotalos* and their uncle *anareuiśeos*, the sons of *esanekotos*.

Lastly, the verbal form *karnitus*, in first position in the sequence of vertical lines, could be justified with arguments of different types. The question of the syntactic order of the constituents in Celtic languages, and in a language of fragmentary attestation mostly in formulaic sequences, is quite complicated; however, it seems appropriate to emphasize that, in an inflected language, the syntactic order is always adaptable to the needs of topicalization in order to indicate a relevant semantic core.[33]

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[33] Cf. within Cisalpine Celtic the position of *karnitu* in the bilingual inscription of Todi (LexLep PG·1 = RIG II E-5, Solinas 1994 n° 142, Morandi 2004 n° 277) and in the inscription of Gozzano (LexLep NO·19 = Morandi 2004 n° 95): in the former, after the mention of the dedicatee, there are the verb (*karnitu*), its object (*lokan* / *artuaś*) and, lastly, the subject (*koisis trutiknos*), all in correspondence with a Latin text in which the order is different, with the verb translated with *locavit et statuit* and in absolute final position. In the latter – which, by the way, also features 'wheels' – presumably the order is dative of the dedicatee + *karnitus* + nominative of the dedicant.

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New pre-Roman inscriptions from Milan

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Abstract

In this paper 19 new inscriptions in the Lepontic alphabet are presented, along with two fragments featuring decorative drawings. The archaeological finds discussed here are the results of the excavation of three sites in Milan, conducted between 2013 and 2020. The details of the archaeological and chronological context of these finds are laid out in Section 1 (by A. M. Fedeli and F. Roncoroni), while Section 2 (by P. Giusteri) contains a linguistic analysis of the most significant inscriptions found. Section 3 consists of an illustrated catalogue of the 21 inscribed fragments featured in this paper, in which each find is accompanied by its physical description and a brief discussion of the proposed reading.

The latest update on the pre-Roman inscriptions from Milan dates back to over ten years ago, when seven inscriptions on ceramics from the excavations of via Moneta (1986–1987 and 1990–1991) and via Gorani (2010) were presented.[1]

In the years since, the Soprintendenza[2] has carried out an increasingly careful action to protect the archaeological heritage of the city through urban excavations that have returned multi-layered archaeological sites of particular relevance for the knowledge of both the Roman city and the pre-Roman settlement.

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[1] Casini & Motta 2011; MI·19–25. All the Cisalpine Celtic inscriptions in this paper are cited according to their reference number in the *Lexicon Leponticum* on-line database (LexLep).

[2] This task was performed until 2016 by the Soprintendenza Archeologia della Lombardia, and later, after the reform of the Ministry, by the Soprintendenza Archeologia, Belle Arti e Paesaggio per la città metropolitana di Milano.

The Maynooth symposium offered the opportunity to present some epigraphic documents discovered in recent years, consisting of 19 complete and fragmentary inscriptions in the Lugano alphabet, in addition to two drawings from three sites.[3] This first selection is not to be considered exhaustive, not only because, as far as discoveries go, it halts in 2020, which was the year of the identification of layers with materials from the Iron Age in the Roman amphitheatre site, but also because some sites excavated in the past have not yet exhaustively been studied.[4]

1. Discoveries and dating of ceramics

As it is widely known, the discoveries made in the city centre have made it possible to fix the first moments of frequentation of Milan by Golasecca Celts in G III A, corresponding to the 5th–early 4th century B.C., which would be followed (after 388 B.C.) by the arrival of the Celts from beyond the Alps, historiographically recognized in the Insubrian *ethnos*.[5] The latter, probably attracted by the strategic position of the centre for the control of the middle-western Po Valley in trade routes between *Etruria Padana* and the emporium of Genoa,[6] would therefore have settled in a place already occupied by Celtic-speaking people. This did not cause a cultural rift, but rather – as the material sources seem to suggest – revived the local cultural background. The Insubrian centre of *Mediolano*[7] (a proper city, according to the sources Strabo, *Geographica*

[3] Area of the Roman amphitheatre, via Torino and via Lupetta.

[4] Other excavations carried out after 2020 made it possible to recover numerous inscriptions; among them, the area of via Zecca Vecchia is particularly noteworthy, located near the southern side of the *Mediolanum forum*, which has yielded a conspicuous quantity of materials from the Iron Age, many of which are in their primary position. Other sporadic attestations still come from the layers of the Roman amphitheatre area, corresponding to the arrangement of the land in view of the construction of the monument, which will be the subject of subsequent studies and publications.

[5] Livy, *Ab urbe condita* V, 33–34.

[6] Rapi 2010: 60–61.

[7] From the (Roman-influenced) Celtic inscription *Meśiolano XXIIII* (MI·10.1 = Solinas 1995: 104a; Morandi 2004: 140a), found on a block of stone used for the construction of the first city walls in the Caesarian-Augustan period. See Morandi 2004: 615–617.

V, 6 and Polybius, *Historiae* II, 32, 5–6) is archaeologically attested by a series of finds that seem to concentrate mainly around what would become the future Roman *forum*, allowing us to hypothesize that the main settlement area extended over ca. 30 hectares. There are many attestations located in a more suburban context, such as the areas to the south (later occupied by the amphitheatre building or by the late antique basilica of Sant'Eustorgio) or the one to the west (subsequently destined for the imperial palace), which seem to testify the existence, around a main *oppidum*, of scattered settlements,[8] whose relevance is still far from being fully understood.

Among the excavations that in recent years have allowed an advancement in terms of knowledge of the Insubrian town, the via Moneta site stands out in terms of importance (Casini & Tizzoni 2015a): it is located close to the Roman *forum*, which testifies in an exemplary way the strong conditioning generated by the spatial arrangement of the protohistoric settlement and of the paths connected to it, which determined a remarkable persistence when it came to the expansion of the settlement. The north-east/south-west alignments of the unstable wooden housing structures of the Golasecca settlement (5th century B.C.) and of the later Celtic settlement (4th–2nd century B.C.), in fact, were respected in the building rearrangement and in the Late Republican road and in the drainage system,[9] which was followed by the monumentalization of the *forum* complex at the beginning of the 1st century A.D.[10]

The inscriptions that we present here come from excavations conducted in two areas close to the *forum* (via Torino and via Lupetta), as well as from a deposit of Celtic pottery found in a peripheral area with respect to the supposed Insubrian centre, in correspondence with the area of the amphitheatre. Of the latter, built in the southwest suburb of the Roman city, only the foundation structures are preserved. Although known since the thirties of the last century,[11] only in recent years has it been the subject of extensive excavations, which are returning unpublished information relating to the structure of the building, the construction

[8] Salsarola & Ruffa 2000: 176; Ruffa 2004: 48; Mills et al. 2007: 138.

[9] Fedeli & Pagani 2016; Fedeli 2019.

[10] The block is currently occupied by the complex of the Biblioteca Ambrosiana, which still maintained the same guidelines as the public *forum* in the 17th century, cited again in 10th-century sources: Ceresa Mori 2010.

[11] Its identification dates back to Levi 1931.

techniques adopted and the presence of underground rooms useful for management of men, animals and machines in gladiatorial *ludi*.[12] On this site, the area of origin of inscriptions 2 and 4 consists of US 298, i.e. the filling of a hole that, in terms of stratigraphic relationship, is cut by the radial foundations of the entertainment building: this, together with some ditches, testifies to the existence in this area of an intense presence relating to the second Iron Age. Thousands of ceramic fragments come from the hole, belonging to hundreds of containers currently undergoing an important reassembly and restoration work, which are attributable to LT B and C (4th and 3rd century B.C.), i.e. to the full Celtic phase of Milan. The chronology of the finds and the fact that the fragments allow almost complete vases to be reassembled allow us to hypothesize that this material was taken from a Celtic place of worship and placed there before the construction site for the amphitheatre was inaugurated.[13] In this deposit two foot sections of bowls were found, on which a single letter (No. **2**) and a drawing (No. **3**) are scratched. Since these are not diagnostic elements for the recognition of types,[14] it is not possible to propose a precise dating, which is consequently based on the chronological range of the deposit (4th–3rd century B.C.); the more relevant inscription (**plios**, No. **4**) is instead found on the body of a beaker of the globular goblet type (in the variant G following De Marinis), attributable to the phases of LT B1 and B2, i.e. to the 4th century B.C.[15]

Only one inscribed fragment (No. **1**) comes from via Torino 21. The excavation, carried out in 2013, was limited to two areas of modest dimensions, corresponding to the lift shaft and the base of the escalator in the basement of a shop: this circumstance certainly limited the understanding of the relations among the various stratigraphic units and of the

[12] The excavations, which began in 2019, have revealed in the south-east quadrant of the monument large portions of the crown of radial foundation walls, together with sections of two underground corridors built along the main axes of the ellipse: they have a width between 3.30 and 5.20 m and must have had a height of about 2.50/3 m. Currently the field investigation is concentrated along the eastern limit, in correspondence with the *triumphalis porta*. Preliminary news of the discoveries are found in Ranaldi 2021 and Consonni & Fedeli 2021.

[13] Roncoroni 2021: 42.

[14] In these two cases the chronology is restricted between LT B and LT C, based on the general context of the deposit.

[15] Roncoroni 2021: 33–35; MI·26.

nature of the site. The fragment with the inscription is part of a bowl, inscribed on the outside, made of a common pottery not dissimilar in terms of quality to those found in abundance in the deposit US 298 of the amphitheatre area. In this instance the absence of diagnostic parts prevents a typological attribution with chronological significance as well, nor does the context of the US 125 from which it comes appear to be of much help, as it is characterized by fill materials from various periods.

Of particular interest due to the number of inscriptions found (Nos **5–14**, **16–21**; No. **15** is a figurative drawing) is the excavation of via Lupetta, south-east of the *forum* area and, therefore, among the three sites, the one closest to the area recognized as the centre of the Celtic *oppidum* because of its subsequent evolution into the centre of the Roman city. In the analysed area the most ancient attestations are part of a road surface, positioned directly over the natural ground, with irregular traces of wagon ruts. It was probably a secondary road layout with a NE/SW orientation, which in some points, in correspondence with depressions in the ground, would have been regularized with gravel. Beside the road was a canal, about 3 meters wide. The road and canal operated until the end of the 2nd and the middle of the 1st century B.C., when the area was levelled in preparation to the first buildings of the Augustan age, as demonstrated by the ceramics that mix materials of the Republican age with fragments of more ancient times, in particular of the 4th and 3rd centuries B.C. (LT B and C). The latter could come from older areas of the Celtic settlement, eventually abandoned due to the reorganization of urban spaces that began in the late Republican age.[16]

In this group of finds there are fragments bearing inscriptions in the Lepontic alphabet, engraved both on pottery of the Celtic tradition and on black painted shapes from central Italy (or local imitations). More precisely, regarding the materials of likely Celtic production, these are mostly wall fragments without diagnostic parts, but attributable to the pre-Roman tradition on the basis of the mixture as in the case of fragments Nos **9**, **10**, **12**, **17**, **18** and **19**. The mortar fragment No. **6**, devoid of diagnostic parts, cannot be attributed with certainty to either

[16] Among them we note the presence of a fragment probably belonging to an Attic ceramic eye cup with red figures from the 4th century B.C., which, despite its negligible size, attests to the existence of long-distance commercial traffic involving Milan (Lambrugo 2015: 268).

Celtic or Roman production, given the long permanence of use of its morphological-functional class.

Of great relevance are the fragments on which inscription No. **16** can be found, as they help to reconstruct to a large extent a carinated bowl with enlarged rim (type 1 following Casini and Tizzoni)[17] in the C variant (G III A3–LT C1), datable between the 4th and 3rd centuries B.C. While the inscription is found on the external surface, on the internal one there is an engraving of a five-pointed star, likely carrying an apotropaic meaning. Four inscriptions (Nos **5**, **7**, **8**, **11**) are instead found on pottery fragments of clear Roman tradition, belonging to black-glazed shapes, including a part of a patera basin ascribable to the Lamboglia 5/Morel 2255 shape (No. **11**) and the foot of a pyx of Lamboglia 6/Morel 7545 form (No. **5**). Both forms are attested in Milan between the end of the 2nd century B.C. and the 1st century B.C.[18]

At the present moment, the group in via Lupetta constitutes the largest group of Celtic inscriptions from a single excavation site in Milan.

A.M.F., F.R.

2. Linguistic analysis

The majority of the fragments found feature very short inscriptions, consisting of one or two letters; while some of these texts might have been originally part of longer inscriptions (e.g. Nos **1**, **6**, **9**, **10**, **13**, **17**, **18**, **20**, **21**), others are found in isolation (Nos **2**, **5**, **7**, **11**, **12**). These isolated characters most likely represent abbreviations, featuring the initial letter of a personal name.

In this category, inscriptions No. **7** (**ue**) and No. **11** (**uer**) are particularly interesting. These two inscriptions were both carved on pottery of Roman origin (see §1) using dextroverse Lepontic characters and, in opposition to the other isolated abbreviations, they are composed of more than one letter; specifically, inscription No. **7** consists of the first two letters of a name (**ue**) and inscription No. **11** features the first three letters of a name (**uer**).[19] Judging by their similarity (and the similarity

[17] Casini & Tizzoni 2015b: 179–184.

[18] Scavi MM3: 3.1, 24–25.

[19] It must be pointed out that, when considered each on its own, both inscriptions could represent the first syllable of a word, *ue-* being an open syllable and *uer-*

of the two pottery pieces), it does not seem to be too far of a stretch to hypothesize that both abbreviations might be referring to the personal name of a single individual (although, alluring as this hypothesis may be, there is of course no way to verify it in a satisfactory manner). There are many attested Celtic names that start with this sequence, which can be pertaining either to the intensive prefix *uer-* or to the root *uert-*;[20] in Gaulish we have *Veransatus*, *Vercassivellaunos*, *Vercingetorix*, *Vertacus*, *Vertiscus* and many others.[21] The most evident Lepontic parallel, on the other hand, would be AO·3, read by Morandi[22] as **uericou** and by Marinetti and Prosdocimi[23] as **uerkou**. This name, in turn, may be connected to the patronymic **uerkalai** (TI·36.1).[24]

Of the inscriptions that do not feature abbreviations for personal names, but rather full forms, the vast majority are incomplete (Nos **1**, **6**, **8**, **9**, **10**, **13**, **17**, **18**, **20**, **21**). Thus, aside from making some educated guesses (see infra), we cannot say anything conclusive about their original content; fortunately, this is not the case for inscriptions Nos **4**, **14**, **16** and **19**, which survived in their entirety.

Among these, inscription No. **4** (**plios**) is outstandingly well preserved. The sinistroverse lettering is very clear, and **plios** appears to be the (hitherto unattested) nominative of an *o*-stem personal name, previously only attested in the genitive **plioiso** (CO·6, CO·15, CO·16, CO·72).[25] A connection between **plioiso** (and, by extension, our **plios**)

being a closed one; but since we cannot be reasonably sure about what names are being abbreviated here, it is preferable not to use a label which would imply a phonological analysis not supported by any real data.

[20] DLG 314, 316; see also Matasović 2009: 398.

[21] GPN 279–281.

[22] Morandi 2004: 564.

[23] Marinetti & Prosdocimi 1994: 44; see also Mollo Mezzena 1994. This reading enjoys a more widespread academic consensus; see the relevant entry (curated by C. Salomon) in LexLep.

[24] Motta 2000: 200–202. Further etymological discussion can be found in Delamarre 2007: 195–196 (cf. Eska 1998: 69). See also Prósper 2008: 74 for some tentative Celtiberian comparisons.

[25] Originally, Tibiletti Bruno (1969a) argued in favour of reading it as an optative verbal form; since then (starting from Campanile 1969) the academic consensus shifted decidedly towards an *o*-stem thematic genitive (see for example Lejeune 1971: 59; Eska 1995: 42–43; Motta 2000: 208–209). It is fair to say that, although very little doubt remained on the subject, our **plios** settles the question once and for all.

and **plialeθu** (from the inscription of Prestino, CO·48), which likely represents a derivative form of the same base (*pli-al-ed-ū*), is widely accepted;[26] from an etymological point of view, a possible connection with the Latin name *Plinius* (tentatively mentioned by Tibiletti Bruno)[27] has been thoroughly examined by Markey and Mees,[28] who proposed an Etruscan origin for the root *pli-* (for which they cite as a possible instance *plikaśnaś*, CII 801),[29] shared by the Latin *Plinius* and the Lepontic **plioiso** ("merely a nativized Etruscan form") and **plialeθu** (a "cognominalized patronymic", formed by Etruscan **Plī-al-* and Celtic **-edōn*). As a final side note on **plios**, it is interesting to note that, among the other fragments analyzed in this paper, inscription No. **17** (see §3) is very likely to present another instance of an *o*-stem nominative ending (*-os*), although nothing more can be said about it since the rest of the text is missing.

Another inscription which is undeniably complete is number No. **14** (**ulu**), written on the foot of a small drinking cup. Rather than taking it as a very peculiar abbreviation,[30] it is sensible to analyze it as a personal name in full form, characterized by an *on*-stem nominative ending (*ul-ū*); the base *ul-* is also found in the feminine *a*-stem **ula** (VR·16).[31] Another tentative connection might be made with **ulkos**, but tempting as it may be – considering that, apart from the already cited **ula** and **ulmi** (see infra, inscription No. **19**), it is the only other attested instance of initial **ul-** in Lepontic – this comparison poses two difficulties: first, **ulkos** has been reasonably ascribed to the 'wolf' root **u̯lkᵘo-*,[32] and such an

[26] Motta 2000: 198; see also Motta 1983. Compare Eska 1995: 35–36, who reads *plialetū* (with ⟨θ⟩ standing for /t/, as opposed to the cross-shaped taus in the rest of the inscription, likely denoting /d/ – e.g. **tetu**, to be read *dedū*, 'gave') and suggests that *-ū* is the **-on-*stem in patronymic function, with *-et-* simply being a *t*-suffix in the underlying personal name.

[27] Tibiletti Bruno 1969a: 1011–1012.

[28] Markey & Mees 2003: 144–149 and passim.

[29] An anonymous reviewer kindly informed me of *Plitine* (CIE 4427), not mentioned by Markey and Mees.

[30] I will happily include here the insightful suggestion of an anonymous peer-reviewer, who observed that this name can indeed be taken as a hypocoristic form, possibly with gemination (*Ullū*): compare, among others, the attested names *Ullinos* and *Ulluccus* (Delamarre 2007: 203).

[31] See Salzani & Solinas 1998: 52; Morandi 2004: 690.

[32] Lejeune 1971: 130; on the root itself in the Celtic languages, see McCone 1996: 44; Matasović 2009: 400.

etymology would not fit *ul-ū* in any meaningful way; secondly, **ulkos** is only attested on two coins (NM·14) which were lost in the nineteenth century,[33] therefore making any statement depending on their testimony unfalsifiable at best.

A whole different set of difficulties, on the other hand, comes with the comparison with inscription No. **19** (**ulmi**). The reading of initial **ul**- here, although reasonably maintainable, is not at all clear (see §3 for a discussion of the possible readings); furthermore, analyzing the name as *ul-m-ī* (gen.) would require positing internal *-m-* as an otherwise unattested derivative morpheme of unclear function. What is clear, instead, is that in all likelihood *ulm-ī* represents the genitive singular of an *o*-stem or *i̯o*-stem personal name (**ulmos*/**ulmi̯os*); this, in turn, might represent a hint towards classifying this inscription as Cisalpine Gaulish rather than Lepontic.[34]

Judging by the overall state of the fragment and the spacing of the characters, it seems safe to assume that inscription No. **16** is also complete. Nevertheless, the reading is far from clear, as the first letter can be either read as **t** or **k** (see §3), thus yielding **tinoo** or **kinoo**, both of which do not have meaningful parallels in the corpus. The final **-oo**, in particular, is unique; the closest instances in the corpus are a small number of **-ou** endings (NM·9 **anatikou**, TI·38]**uisou**, VB·3.2 **inou**, VB·3.3 **lutou**, AO·3 **uerkou**), which are generally understood as a variant spelling of the nominative *on*-stem ending, *-ū*. While this might well be the case here, it must be pointed out that the last character (albeit lacking the top half) seems to be shaped more like an **o** rather than a **u**; we could argue, then, that if we are indeed dealing with an *on*-stem nominative, -⟨oo⟩ might simply be a dittographic error for -⟨o⟩, yet another possible spelling for the nominative ending *-ū* (e.g. VR·29 **eskiko**, VA·27 **kaio**, BG·49 **piuo**, MI·10.6 **śuro**),[35] possibly influenced by Latin *-ō*.

A somewhat similar situation occurs with inscription No. **8** **ṇerṭ**[: while the text is quite fragmentary and likely to be incomplete (see §3),

[33] Pautasso 1966: 141–142.

[34] Note that inscriptions No. **9** and No. **13** can both be interpreted as final **-ti**, which in turn might be a Gaulish *o*-stem genitive singular; the highly fragmentary state of those inscriptions, though, demands caution (see §3).

[35] It must be noted, though, that an alternative interpretation as *o*-stem nominative (with dropped *-s*) has been proposed for these instances; see De Marinis & Motta 2007: 146.

the portion that can be read does have a good amount of relevant Celtic comparisons. A sizeable number of the attested Gaulish names (*Nert*[, *Nerta*, *Nertacus*, *Nertecoma*, *?nertes*, *Nertilla*, *Nertinius*, *Nertinus*, *Nertius*, *Nertomarus*, *Nertomaria*, *Nertomarius*, *Netron*[, *Nertonius*, *Nertoualus*, *Nertus*)[36] starts with the element *nert-*, to be ultimately ascribed to a pan-Celtic stem **ner-to-*, meaning 'physical strength; virtue'.[37] Unfortunately, no sensible estimation can be made regarding the original full length of the inscription, therefore it is equally plausible that the text represented either a simple *Nertus-*/*Nertius*-like name or a longer, compound name with *Nerto-* as the first element.

P.G.

3. Catalogue and readings

1. Milan, via Torino 21, 2013 excavation, US 125

Inv. St 23.S287-1.1076. Wall fragment of medium-fine clay of a reddish-brown colour, probably belonging to a bowl of Celtic production. While externally uncoloured, it has internally a pink engobe. Inscription on the outside. Max height 6.2 cm; max width 4 cm; thickness 1 cm.

No. 1: Milan, via Torino 21, US 125.

]**te**

Two letters are visible in this fragment; both are partially damaged. There is no doubt, however, that the one on the right is **t** (Χ), since the continuation of the top-left to bottom-right stroke after the crossing of the opposite stroke can be easily observed just before the breaking point; the second letter, on the other hand, is clearly sinistroverse **e** (ᗄ), thus yielding sinistroverse **te**. Unfortunately, there is no way of knowing whether other letters origin-

[36] GPN 105–106, 227, 237; see also Lambert 2003: 32.

[37] DLG 235; compare Old Irish *nert* 'strength, virtue; might, power' (eDIL s.v. *nert*) and Welsh *nerth* 'bodily or physical strength; power; hardness' (GPC s.v. *nerth*). See also Matasović 2009: 289.

ally preceded **t**; there seems to be enough blank space after **e**, though, to think that no other letter followed. This situation mirrors that of the one found in the most immediate parallel to this fragment, CO·27.[38]

2. Milan, Roman amphitheatre, 2020 excavation, US 298

Inv. St 20.S287-7.971. Ring-shaped foot fragment of bowl of medium-fine beige colour, probably of Celtic production. While externally uncoloured, it has internally a brown engobe. Inscription on the outside. Base diameter 11.5 cm; max height 2.7 cm.

No. 2: Milan, amphitheatre, US 298.

χ

This fragment clearly displays a single letter in isolation, χ (Ⱳ). The symbol is quite crudely carved; towards the bottom, repeated corrections were required in order to make the three convergent strokes meet in the centre. No other intentional marks are visible; no text direction can be established. The most likely explanation is that this single letter served as an abbreviation for a personal name.[39] A very close parallel is found in BS·26.[40]

[38] Originally published in Garovaglio 1883; see also Tibiletti Bruno 1969b: 202–203; Solinas 1995: 357; Morandi 2004: 174.

[39] Compare NO·1, which features the genitive **χosioiso**, starting with (sinistroverse) Ⱳ (Gambari & Colonna 1988: 130–132; Solinas 1995: 369; Morandi 2004: 569–570; see also Motta 1992: 312–313).

[40] Morandi 2004: 673.

3. Milan, Roman amphitheatre, 2020 excavation, US 298

Inv. St 20.S287-7.970. Ring-shaped foot of medium-fine clay pottery belonging to a bowl of probable Celtic production. Externally achromatic, internally painted in coral red colour. The inscription can be found on the outside. Base diameter 8.6 cm; max height 2.3 cm.

This fragment features a stylised drawing, but no alphabetical character.

No. 3: Milan, amphitheatre, US 298.

4. Milan, Roman amphitheatre, 2020 excavation, US 298

Inv. St 20.S287-7.566. Fragment of beaker with globular goblet, var. G. by De Marinis,[41] of Celtic production; fine impasto. Base diameter 4.4 cm.[42]

plios

No. 4: Milan, Roman amphitheatre, US 298. Drawing by F. Roncoroni.

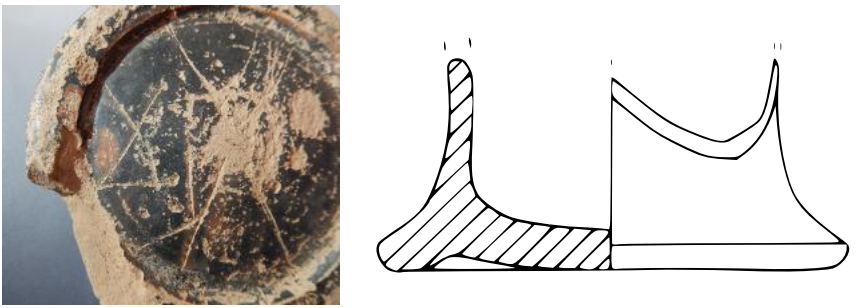
[41] De Marinis 1981: 199–200; Rapi 2009: 81–83.
[42] Published in Roncoroni 2021: 33–35, fig. 26, 4.

Already featured in LexLep as MI·26,[43] this goblet clearly reads a sinistroverse **plios** (𐌛𐌏𐌉𐌋), which appears to be the nominative form of a personal name, previously attested in the genitive **plioiso** (CO·15); see §2 for further references and discussion.

5. Milan, via Lupetta, 2013 excavation, US 143

Inv. St 23.S287-1.1077. Ring-shaped foot of black-varnished pyx, Lamboglia 6/Morel 7545 type. Pinkish-beige mixture, glossy black varnish, very flaked. Inscription on the outside. Base diameter 9.3 cm; max height 4 cm; thickness 0.5 cm.

k x



No. 5: Milan, via Lupetta, US 143. Drawing by M. T. Colomba.

This fragment features two distinct characters in isolation. One of them is quite clearly **k**, although it is virtually impossible to determine its direction, due to the fact that the other discernible letter does not seem to be aligned with it. Taking **k** as dextroverse (𐌊), the second character might be taken at first glance as **t** (𐌗); on a close inspection, however, it is utterly clear that the transversal stroke on one side of the cross-shaped character is indeed an intentional mark, as opposed to the shallow scratches over the rest of the surface. This, in turn, leaves two possibilities open: we could read the two letters following the circular shape of the fragment, which would yield 𐌊 and (maybe) a hitherto unattested variant of **ś** (𐌘); on the other hand, we could read both characters

[43] Originally published in Consonni et al. 2021.

as sinistroverse and, keeping the ᚾ as spatial reference, read the second letter as ᚷ.[44]

6. Milan, via Lupetta, 2013 excavation, US 143

Inv. St 23.S287-1.1078. Wall fragment of purified ceramic mortar. Pink-orange mixture. The inscription is engraved outside. Height 8 cm; width 8 cm; thickness 0.7–1.1 cm.

peu[/ **ieu**[

No. 6: Milan, via Lupetta, US 143.

The sinistroverse characters on this fragment are quite clearly visible, but the breaking point runs right through the text, leaving only the bottom part of the letters. Judging by the shape and the likely proportions of the third and last visible letter, **u** (ᚢ), it is fair to think that the second character would originally appear as **e** (ᛖ) rather than **a** (ᚪ). As for the first letter, it is virtually impossible to decide whether it is **i** (ᛁ) or **p** (ᛈ); while there are no visible traces of a left-oriented top hook in the currently visible fragment, it is possible that it might have been high enough (relative to the main vertical stroke) to be completely lost. It must be noted that BG·2.1[45] exhibits]**peuesa**, which would make a good parallel for the reading **peu**. While it is safe to say that no other letters precede **p** (or **i**), there is no way of knowing if the text originally continued after **u**.

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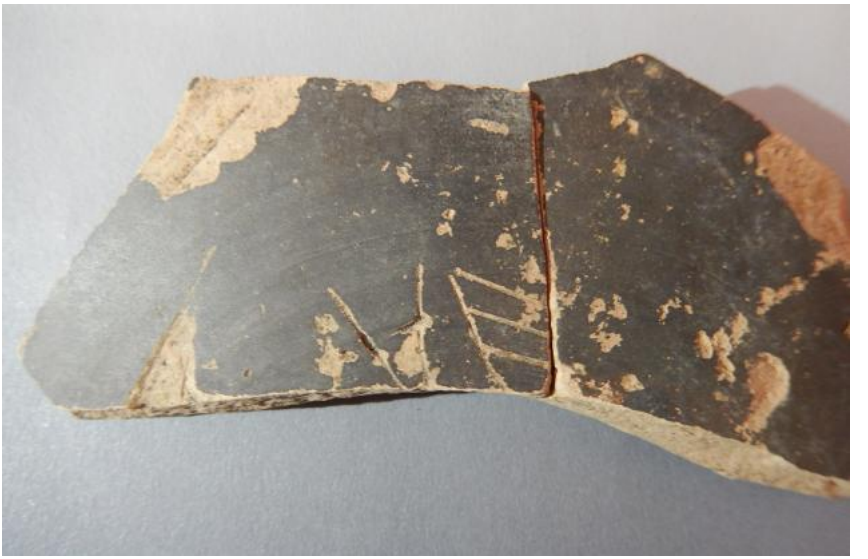
[44] See VB·3.1, which has **uinom naxom** 'wine from Naxos, Naxian wine' (Stifter 2010: 371). An anonymous reviewer suggested that it's possible that what we see in the central part of the fragment might be an elaborate factory mark, although this would not exclude intentional lettering.

[45] Originally published in Poggiani Keller 1989: 234; see also Morandi 2004: 658. It is fair to mention that other readings have been proposed in lieu of initial **p** (see for example Casini & Motta 2018: 220, n. 3), although none of the alternative proposals seems quite as convincing. See also BG·41.19, which has **piuos** (Casini et al. 2014: 191).

7. Milan, via Lupetta, 2013 excavation, US 145

Inv. St 23.S287-1.1079. Two fragments of a bowl or patera covered in black paint. Pinkish-beige ceramic mix, opaque and sometimes flaking black paint. Inscription on the outside. Max height 4 cm; max width 11.5 cm; thickness 0.4–0.9 cm.

ue



No. 7: Milan, via Lupetta, US 145.

The lettering is very clear here. Nothing precedes or follows the two characters (dextroverse ⋁Ǝ); they are likely to be an abbreviation for a personal name (see also inscription No. **11**).

8. Milan, via Lupetta, 2013 excavation, US 145

Inv. St 23.S287-1.1080. Part of the basin and foot of a patera in black varnish. Pinkish-beige mix and matt black varnish. Three palmettes are impressed on the inner foot. Base diameter 6 cm; max height 3 cm; max width 11 cm; thickness 0.8 cm.

ṇerṭ[

No. 8: Milan, via Lupetta, 2013 excavation, US 145. Drawing by M. T. Colomba.

While the second and third letter are immediately identifiable as dextroverse **e** and **r** (ⱑᗡ), the first and last of the four visible characters are badly damaged. The shape and proportions of the extant upper part of the fourth character strongly suggest **t** (X): the two oblique strokes converge right before the break, which occurred just below the middle point of the expected height of the letter (when comparing it to the preceding two characters), and this prevents the last letter from being read **u** (V), while in the meantime having precisely the shape and proportions we would expect for **t** (X). As for the first letter, the projected convergence of the two visible strokes appears to be too high to be either **t** or **u**; a good fit, on the other hand, might be **n** (ᴙ), which in turn would yield **nert**.[46] Given the relatively abundant documentation for Celtic personal names derived from the root **ner-to-* 'strength', this does seem to be the safest option (see §2 for the relevant references and discussion); this, in

[46] An anonymous reviewer kindly suggested that for the first letter a reading **t** (X) cannot be excluded. While this is arguably the case, due to the vast portion of the letter that is now lost, we would argue that the reading **tert**[does not lend itself to any satisfactory etymological analysis. On the other hand, a reading **teru**[would permit an enticing etymological comparison with Gaulish **deru̯os* 'oak' (DLG 141; compare also **terialui** in TI·27), but as we have explained supra, we believe that the fourth letter cannot be read as **u**.

turn, highlights the (unverifiable) possibility that the inscription might have continued with other letters, now lost.

9. Milan, via Lupetta, 2013 excavation, US 145

Inv. St 23.S287-1.1081. Fragment of the wall of a light beige-colored thin-mix ceramic bowl of probable Celtic production. The inscription is engraved on the outside. Height 5 cm; width 8.5 cm; thickness 0.6 cm.

No. 9: Milan, via Lupetta, US 145.

]**ti**

Due to the shape of the letters featured in this fragment (Ⅺ or ⅨⅩ), it is not possible to establish the direction of writing; there are no visible strokes after **i**, while the breaking point does not permit to see whether other characters originally preceded **t**. Inscription No. **13** (infra) presents a very similar situation.

10. Milan, via Lupetta, 2013 excavation, US 538

Inv. St 23.S287-1.1082. Wall fragment of bowl in purified pottery, probably of Celtic production. The inscription is engraved outside. Height 3.5 cm; width 5.8 cm.

No. 10: Milan, via Lupetta, US 538.

ṭaụ / **ḳaụ** / **ḷaṭ**

Three separate letters are identifiable on this fragment. The central one seems quite clearly **a** (Ⱥ); text direction cannot be established on account of said **a**, since similarly shaped alphas are attested both in sinistroverse (e.g. BG·31)[47] and in dextroverse script (e.g. VA·16).[48] The first and third character are too frag-

[47] Published in Morandi 2003: 127; see also Morandi 2004: 712.
[48] First published in Volontè Fredini 1990; see also Morandi 2004: 601.

mentary to propose a definitive reading. If the text is taken to be sinistroverse, then the inclination and position of the only surviving stroke of the first letter suggest that it may be part of **t** (𐌕) or **k** (𐌊); both possibilities have interesting comparanda in the corpus.[49] It seems fairly reasonable, albeit far from safe, to read the remaining letter as **u** (𐌅). If we read the text as dextroverse, then the first letter on the left could be **l** (𐌋), followed by **a** and, probably, **t**. In this case, the most striking parallel would of course be the personal name **latumarui**, found in VB·3.1.[50]

11. Milan, via Lupetta, 2013 excavation, US 564

Inv. St 23.S287-1.1083. Fragment of a patera with black varnish, type Lamboglia 5/Morel 2255. Mix of pinkish-beige colour, medium-gloss black varnish. Inscription outside. Diameter reconstructed at the edge 18 cm; max height 2.2 cm; max width 11.7 cm.

uer

No. 11: Milan, via Lupetta, US 564. Drawing by M. T. Colomba.

The three dextroverse letters are very clearly traced. The same text appears in VR·2;[51] it may be interpreted as an abbreviation for a personal

[49] BG·29 (= Morandi 2003: 125) has **tau**, probably to be read as an abbreviation of a personal name. As for the sequence **ka**-, it is very well attested in Cisalpine Celtic; the abundance of such a simple sequence, though, is hardly of any significance.

[50] See Lejeune 1971: 74–75.

[51] Salzani & Solinas 1995: 13; Morandi 2004: 682.

name (see AO·3 **uerkou**/**uericou**, and TI·36.1 **uerkalai**). See §2 for further etymological discussion and references.

12. Milan, via Lupetta, 2013 excavation, US 617

Inv. St 23.S287-1.1084. Wall fragment of a medium-thin ceramic mix bowl of red colour with black fire highlights; probably of Celtic production. The inscription is engraved outside. Height 4 cm; width 3.5 cm; thickness 0.5 cm.

a

No. 12: Milan, via Lupetta, US 617.

In this small fragment, only isolated **a** (Λ) is legible. There is, in fact, another visible mark that seems to be carved in the same way as **a** (although not aligned with it), but unfortunately only a tiny portion of it remains visible, not enough to propose any sensible reading.

13. Milan, via Lupetta, 2013 excavation, US 1018

Inv. St 23.S287-1.1085. Wall fragment likely belonging to an olla with grooves (type 27 by Casini & Tizzoni 2015b) in purified ceramic. Grey-beige coloured mix. The inscription is engraved on the outside. Height 6 cm; width 5.5 cm; thickness 0.6 cm.

]**ti**

No. 13: Milan, via Lupetta, US 1018.

This fragment is a close parallel to inscription No. **9** (supra). No text direction can be reasonably established, and the readable letters (either IX or XI) spell **ti**. It is impossible to know whether anything preceded **t**; surely nothing follows **i**.

14. Milan, via Lupetta, 2013 excavation, US 1018

No. 14: Milan, via Lupetta, US 1018.

Inv. St 23.S287-1.1086. Fragmentary foot of a ceramic beaker of Celtic production. Gray-brown mix. Base diameter 3.7 cm; max height 2.5 cm; thickness 0.35 cm.

ulu

The text, which clearly reads sinistroverse **ulu** (VJV), appears to be complete. While it is possible that we are dealing with yet another abbreviation, it is worth mentioning that this might as well be a full form of a personal name (compare VR·16 **ula**).[52] Further discussion supra (§2).

15. Milan, via Lupetta, 2013 excavation, US 1018

No. 15: Milan, via Lupetta, US 1018.

Inv. St 23.S287-1.1087. Fragment of purified pottery with translucent grid decoration on the outside and engraving on the inside. Grey-brown mix, brown grid. Perhaps part of a cordoned olla. In that case, on the basis of the comparison with via Moneta (US 233), it would be pertaining to LT B. Max height 8.4 cm; max width 6 cm; thickness 1 cm.

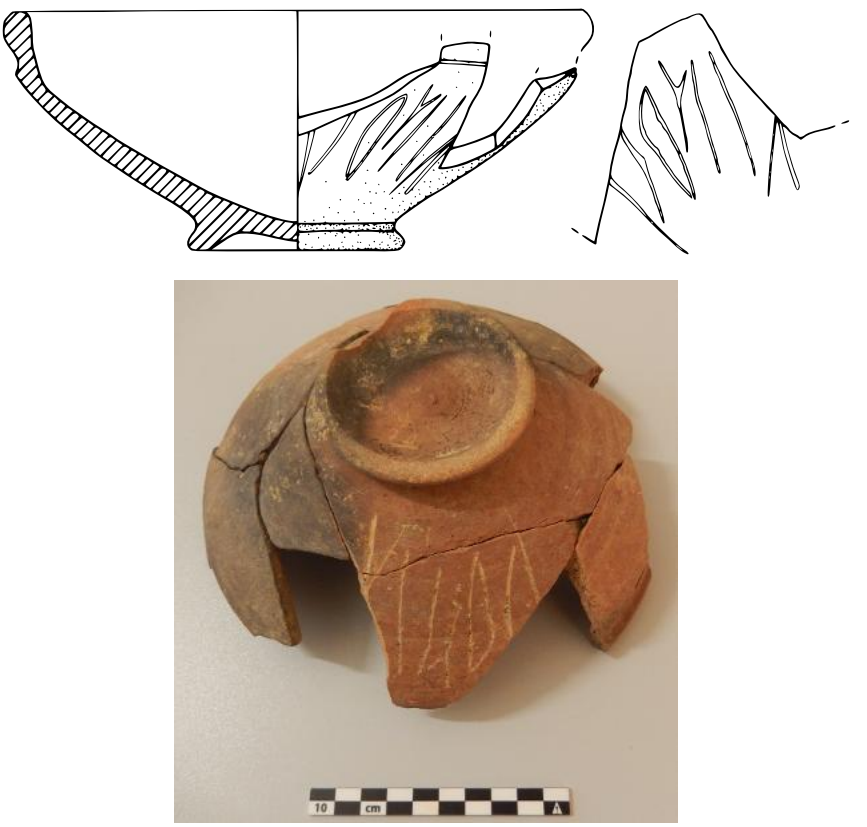
This fragment displays a decorative element; no alphabetical characters can be seen. The depicted object is not easily identifiable.

[52] Salzani & Solinas 1998: 52; Morandi 2004: 690.

16. Milan, via Lupetta, 2013 excavation, US 660

Inv. St 23.S287-1.1088. Fragmentary carinated bowl (14 fragments) with enlarged rim (type 1, var. C by Casini & Tizzoni 2015b) in medium-fine mix of uneven colour ranging from dark red to blackish brown. The inscription is engraved on the outer surface. There is a five-pointed star engraved on the inside. Diameter at the rim about 23 cm; base diameter 7.8 cm; height 9 cm; thickness 0.5–0.9 cm.

ṭinoọ / ḳinoọ



No. 16: Milan, via Lupetta, US 660. Drawing by M. T. Colomba.

This relatively sizeable inscription is sinistroverse and, judging by the spacing of the characters and what can be seen of the rest of the fragment, it is probably complete. Only the bottom part of the first letter

remains: the two visible strokes could be part of **t** (𐌕) or **k** (𐌊); without the top portion, it is not sensible to exclude either possibility. The second and third character from the right are beyond any reasonable doubt **i** (𐌉) and **n** (𐌍). The left-most ascending stroke of **n** looks slightly elongated towards the bottom; this is probably due to a later accidental scratch, as the difference in depth and width of the groove suggests. The following two characters are most likely to be both **o**; the top part of the fifth character is missing, and while the bottom half strongly suggests an **o**-shape, we might be possibly dealing with **u**. The fourth letter's shape, in turn, would make it possible to tentatively read it as **r** (𐌓), but it must be noted that a sequence -**nr**- is hitherto unattested in the corpus (see §2).

17. Milan, via Lupetta, 2013 excavation, US 1017

Inv. St 23.S287-1.1089. Wall fragment of bowl of medium-fine purified dough. Brown coloured mix painted red inside the wall. It is probably a Celtic production. Height 4 cm; width 5.9 cm; thickness 0.9–1.1 cm.

No. 17: Milan, via Lupetta, US 1017.

]**o̩s**

In this tiny fragment two letters are clearly visible. One of them – after which (or before which) no other characters can be seen – is **s** (𐌎) and its shape strongly suggests a dextroverse direction; the other letter, albeit damaged, is almost certainly the bottom part of **o**. This, in turn, makes it preferable to read the two letters as -**os** rather than ****so**-; given the onomastic nature of the vast majority of this kind of inscriptions, it probably represents an *o*-stem nominative ending of a personal name (see inscription No. **4 plios**, and §2).

18. Milan, via Lupetta, 2013 excavation, US 1045

Inv. St 23.S287-1.1090. Wall fragment of an uncoloured bowl. Medium purified pinkish mix. Probably of Celtic production. The inscription is engraved on the outside. Height 5.5 cm; width 7 cm; thickness 0.8 cm.

No. 18: Milan, via Lupetta, US 1045.

ma

This fragment features two sinistroverse letters, which are clearly **m** (ᛖ) and **a** (ᚨ); the first vertical stroke of **m** is partially cut off. The current state of the fragment makes it impossible to determine whether other characters preceded or followed these two. This sequence is well attested in the corpus as part of longer inscriptions, and **ma** by itself appears in CO·24.[53]

19. Milan, via Lupetta, 2013 excavation, US 1111

Inv. St 23.S287-1.1091. Wall fragment of a bowl of medium-fine grey mix. Probably Celtic production. The inscription is engraved on the outside. Height 3.5 cm; width 4 cm; thickness 0.6 cm.

No. 19: Milan, via Lupetta, US 1111.

ulmi / **utmi**

The four letters featured in this fragment are very faded. The text is sinistroverse, and there is little doubt that the first, third and fourth character represent respectively **u**, **m** and **I** (ᛁᛖ_ᚢ). The second letter, though, is trickier. Its shape (ᛚ) can be linked to **u** (in the form listed in the LexLep database as U_6) or to **t** (LexLep: T_5),[54] but both options present some difficulties. U_6 is

[53] Bertolone 1954. See also Tibiletti Bruno 1969b: 198; Morandi 2004: 634–635.
[54] We owe this suggestion to Prof. D. Stifter (p.c.).

utterly ruled out by the immediately preceding (and differently shaped) letter (V); while T_5 in this shape is only attested in a dextroverse context (confront VA·29,[55] dextroverse, and PD·2,[56] sinistroverse). Our suggestion is to read it as a variant form of **l** (ᒧ), with the transversal stroke originating from a higher point of the main vertical stroke than expected. This, of course, does not necessarily mean that we should posit an additional, distinct form for **l**, since this kind of variance might simply be due to shoddy execution. The whole text, then, would read **ulmi**; see §2 for etymological discussion and further references.

20. Milan, via Lupetta, 2013 excavation, US 1111

No. 20: Milan, via Lupetta, US 1111.

Inv. St 23.S287-1.1092. Fragment of the wall of a medium-thin mix, pinkish-beige bowl. Probably of Celtic production. The inscription is engraved on the outside. Height 6 cm; width 6.5 cm; thickness 0.9 cm.

ụọ_[

It is hard to read this small inscription since the letters are both very faded and partially missing. It can be stated with some degree of certainty that at least three characters were originally present; of a third one, though, only part of a single stroke remains. A tentative reading for the other, less damaged letters might be **uo**; there is enough surface before **u** to believe that nothing preceded it.

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[55] Tizzoni 1981: 13. It must be added, here, that the reading of this character in VA·29 as "retrograde tau" (Morandi 2004: 608) is far from firmly established; see the *Commentary* section of the relevant page on the LexLep website.

[56] Published in Eichner et al. 1994. This inscription reads ᛁᛋᛞᛉᛜᛞᛟᛉᛞᛟᛞᛚᛞᛚᛞᛚ (*artebuθzbroχθui*), which clearly shows how, in sinistroverse script, ᛋ represents **u** while ᛉ stands for **t**; this, of course, may or may not be relevant to our discussion, since we've already established that in the inscription that we are dealing with ᛋ cannot represent **u** either.

21. Milan, via Lupetta, 2013 excavation, US 1111

Inv. St 23.S287-1.1093. Wall fragment of a bowl of medium-fine impasto. Probably of Celtic production. The inscription is engraved on the outside. Height 3 cm; width 3.4 cm.

]**mi̯**_[

No. 21: Milan, via Lupetta, US 1111.

Similarly to inscription No. **20**, in this fragment two characters can be discerned quite easily, while the presence of a third one is only indicated by a single remaining stroke. The text is sinistroverse and seems to be starting with **m** (𐌌). It looks like the top section of the main vertical stroke was re-carved a few times, probably in order to connect it to the rest of the letter on the left; the second vertical stroke is likely to be **i** (𐌉).

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Dating Cisalpine Celtic stone inscriptions from the Lugano region in an archaeological perspective[1]

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Abstract

Stelae with Celtic inscriptions from the Lugano region (Canton Ticino, Switzerland) were mostly found in situations of re-use, and scholars have dated them based on palaeographic comparisons. In this paper, these inscribed stelae will be put into the archaeological context of the area, whose greatest occupation took place during the Early Iron Age (Golasecca culture). Moreover, tombs from that period are often attested near the findspots of inscribed stelae. Since finds from the Early and Middle La Tène culture are extremely limited in the Lugano region, it seems unlikely that there was a significant epigraphic production in the Late Iron Age. The Celtic inscriptions on stone stelae found in the Lugano region should therefore be a local expression of the Golasecca culture.

Many stone stelae with Cisalpine Celtic inscriptions have been discovered in the Lugano region (Swiss Canton Ticino) since the 19th century. None of these funerary stelae has been found in a primary archaeological context, but major displacements for such objects seem unlikely. These documents constitute an important cluster in the study of Cisalpine Celtic epigraphy, so much so that their script is sometimes referred to as the 'Lugano alphabet'. A recurrent scheme can be observed: a sinistroverse text is arranged vertically (from bottom to top) within a schematized anthropomorphic figure that occupies a sig-

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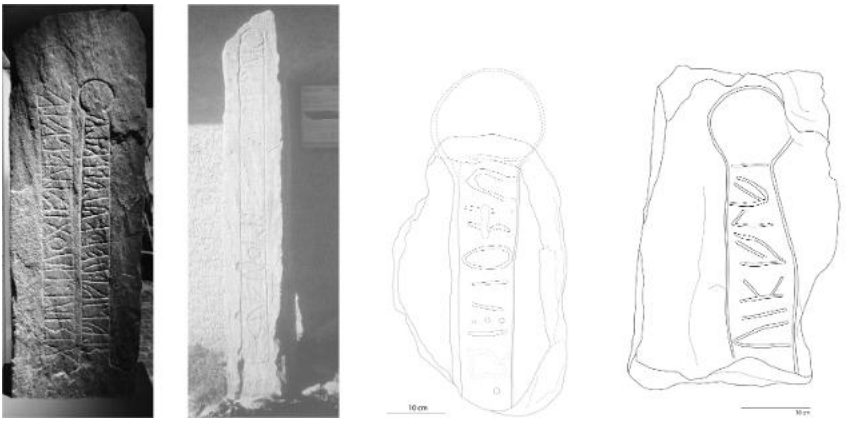

Fig. 1: Examples of stone stelae with Celtic inscriptions from the Lugano region. From left to right: TI·36, from Davesco (photograph by Corinna Salomon from LexLep); TI·27, from Mezzovico (photograph by Carlo Reguzzi from Motta 2000: 198); TI·38, from Pregassona (cf. Dell'Era 2020); TI·54, from Dino (cf. Dell'Era 2018a).

nificant area on the front of an elongated schist stela. The texts consist in masculine or feminine onomastic formulae in the dative case, sometimes accompanied by the word *pala*. This particular epigraphic production is endemic to the Lugano region, where no other kind of Cisalpine Celtic inscriptions, such as graffiti, has ever been discovered.[2]

[2] Seventeen inscribed stelae are considered in this paper: TI·26, TI·27, TI·29, TI·30, TI·31, TI·32, TI·33, TI·34, TI·35, TI·36, TI·37, TI·38, TI·39, TI·43, TI·44, TI·45, TI·54. Cf. Piana Agostinetti 2004b: 145–147, 151–174, 367–368. The only stela from the southern Locarno region (TI·26) is included in this list due to typological proximity. The four Celtic stone inscriptions from the Mendrisio region (TI·28, TI·40, TI·41, TI·42) could be related to other epigraphic productions: if TI·42 still shows some similarities to the stelae from the Lugano region (albeit with important iconographic, palaeographic, and epigraphic peculiarities), the other three are completely different. The same can be said about the only Celtic stone inscription from the southern Grisons (GR·1). Celtic inscriptions from Como are mainly graffiti. Merely three stone inscriptions have been discovered there: CO·21, CO·48, CO·71. Only this last one, very fragmented, might be typologically related to the inscriptions from the Lugano region. On onomastic formulae see Motta 2009; Stifter 2020: 354–357. On *pala* see Solinas 2015. For a historiographic approach to Cisalpine Celtic epigraphy see Solinas 1992–1994.

Existing dating proposals

The first chrono-typology of Cisalpine Celtic stone inscriptions was proposed by Raffaele De Marinis in 1991. He attributed the inscribed stelae from the Lugano region to two of the five types he defined. Type B, showing a very schematized anthropomorphic figure and an 'ancient' script (with a classical closed-shaped alpha 𐌀), was dated to Golasecca III A. Type C, showing a less schematized anthropomorphic figure and a 'recent' script (with a more or less open-shaped alpha 𐌀/𐌚, similar to the former digamma), was dated to La Tène B–C.[3] A few years later, Patrizia Solinas accepted De Marinis' typology and chronology, but she conceded that the categorization might be too schematic and possibly required transition phases.[4] Filippo Motta pointed out that alpha is the only dating sign, and that the transition from 'ancient' to 'recent' script is very difficult to date.[5] In 2004, Alessandro Morandi used De Marinis' typology with some reservations, especially about palaeography as the main dating criterion.[6] Then, in 2014, Daniele Maras proposed a new chronology of the Cisalpine Celtic inscriptions. The documents from the Lugano region are divided into three phases: the archaic one (Golasecca II A–III A2, 6th–5th century B.C.) with closed-shaped alpha 𐌀, the transitional one (Golasecca III A2–3, end 5th–first half 4th century B.C.) with 'half-open' alpha 𐌀, and the recent one (La Tène B–D, 4th–1st century B.C.) with completely open, digamma-shaped alpha 𐌚.[7] However, Maras' transition phase is only attested on stone stelae from the Lugano region (without archaeological context), whereas the 'half-open' alpha is already attested in an archaic graffito from Como, dated to the middle of 5th century B.C. (Golasecca III A1).[8]

[3] De Marinis & Motta 1990–1991: 206–218. The chronology of type C depends on the fact that the allegedly later type D is dated to La Tène D1 because the stela TI·40 was found in San Pietro di Stabio (Mendrisio region) in 1875 together with fibulae of the late 2nd or the early 1st century B.C. (cf. Piana Agostinetti 2004b: 179–181).

[4] Solinas 1994: 313. See also Solinas 2002: 482 (first publication of the inscribed stelae from Bioggio, TI·43, TI·44, TI·45).

[5] Motta 2000: 184, 196.

[6] Morandi 2004: 519. The dates proposed by Morandi were organized into chronological phases by Piana Agostinetti 2004b: 307–315.

[7] Maras 2014: 85–86.

[8] CO·53. Cf. CO·54, another graffito from Como with an open-shaped alpha and

LexLep	Place	De Marinis	Solinas	Motta	Morandi – Piana Agostinetti	Maras
TI·26	Vira Gambarogno	G II A – type B	G II A	G II A	1st half 4th cent. – LT B	5th - beginning 4th cent. – type 2
TI·27.1	Mezzovico	G II A – type B	G II A	G II A	5th-4th cent. – G II A3	2nd half 5th cent. – type 2
TI·27.1	Mezzovico				advanced 3rd cent.	end 5th - beginning 4th cent. – type 3
TI·29	Aranno	LT B-C – type C	LT B-C	LT B-C	full 4th cent. – LT B (earlier)	
TI·30	Aranno	LT B-C – type C	LT B-C	LT B-C	"quite late" – LT B (later)	end 5th - 1st half 4th cent. – type 3
TI·31	Aranno	LT B-C – type C	LT B-C	LT B-C	"quite late" – LT B (later)	
TI·32	Aranno	LT B-C – type C	LT B-C	G II A	beginning 4th cent. – LT B (earlier)	
TI·33	Banco	G II A – type B	G II A	G II A	advanced 4th cent. – LT B	5th - beginning 4th cent. – type 2
TI·34.1	Tesserete	G II A – type B	G II A	G II A	4th-3rd cent. (earlier) – LT B	5th - beginning 4th cent. – type 2
TI·34.2	Tesserete	LT B-C – type C	LT B-C	LT B-C	4th-3rd cent. (later) – LT B (end)	4th cent. – type 3
TI·34.3	Tesserete	LT B-C – type C	LT B-C	LT B-C	4th-3rd cent. (later) – LT B	5th - beginning 4th cent. – type 3
TI·35	Ponte Capriasca			LT B-C	3rd-2nd cent. – LT C1	
TI·36.1	Davesco	LT B-C – type C	LT B-C	LT B-C	4th-3rd cent. (earlier) – LT B (end)	end 5th - 1st half 4th cent. – type 3
TI·36.2	Davesco	LT B-C – type C	LT B-C	LT B-C	4th-3rd cent. (later) – LT B (end)	4th - 1st half 2nd cent. – type 4
TI·36.3	Davesco	G II A – type B	G II A	G II A	4th-3rd cent. – LT B	5th - beginning 4th cent. – type 2
TI·37	Viganello	LT B-C – type C	LT B-C		3rd-2nd cent. – LT C1	end 5th - 1st half 4th cent. – type 3
TI·38	Pregassona				3rd-2nd cent.	
TI·39	Sorengo	LT B-C – type C			4th-3rd cent. – LT B (end)	
TI·43	Bioggio		G II A3		LT B (end)	1st half 4th century – type 3
TI·44	Bioggio		G II A3		advanced 3rd cent. – LT B (end)	2nd half 5th cent. – type 3
TI·45.1	Bioggio		G II A3		beginning/1st half 4th cent. – LT B	
TI·45.2	Bioggio		G II A3		beginning/1st half 4th cent. – LT B	

Fig. 2: Different dating proposals for Celtic inscriptions from the Lugano region (references to De Marinis & Motta 1990–1991, Solinas 1994, Solinas 2002, Motta 2000, Morandi 2004, Piana Agostinetti 2004b, and Maras 2014). In orange the Early Iron Age (Golasecca), in green the Late Iron Age (La Tène).

While generally agreeing on relative chronology, these scholars have proposed significantly different absolute chronologies. If one compares them, the same stelae and inscriptions are dated either to the Early or Late Iron Age (respectively Golasecca and La Tène cultures). De Marinis, followed by Solinas and Motta, divided them between both periods, but Morandi, followed by Piana Agostinetti, dated nearly all inscriptions to the La Tène culture, whereas Maras attributed almost the entire Cisalpine Celtic epigraphic production from the Lugano region to the Golasecca culture.[9] Evidently, palaeographic analysis can lead to different dates.

dextroverse writing, classified in the recent phase but dated to the second half of 5th century b.c. (Golasecca III A2) by Maras 2014: 88. Cf. also CO·47.

9 Besides, none of the Celtic inscriptions from the Lugano region surely include letters that could be dating elements, such as digamma, theta, qoppa, phi or chi (cf. Maras 2014, 2020: 943–945).

Problems of absolute and relative chronology

The shape of alpha is considered as the main dating criterion for the Cisalpine Celtic inscriptions from the Lugano region, whereas non-closed alpha, foreign to the Etruscan writing tradition, seems to be attested not only in graffiti from Como as early as the 5th century B.C. (Golasecca III A1–2), but also in other North Italic Early Iron Age epigraphic cultures such as the Raetic and maybe Venetic one.[10] Since Celtic graffiti are unknown in the Lugano region and inscribed funerary stone stelae are very rare if not absent in Como, it is difficult to compare their respective epigraphic productions, especially for a chronological purpose. Furthermore, to understand how difficult the definition of a relative chronology can be, it seems interesting to mention some critical notes made by Maria Grazia Tibiletti Bruno regarding De Marinis' proposals. Contrary to the latter, she suggested that the earlier stelae should show the less schematized anthropomorphic figures – with still distinguishable head and feet –, but that older stelae could also be used as iconographic models in later times. She also pointed out that the analysis of the inscribed object should take precedence over palaeography to determine which inscription has been carved before or after another on the same stela: as a result, according to her, a closed-shaped alpha should not necessarily be earlier than a non-closed one but may have been borrowed from another epigraphic tradition that had developed a different writing variety.[11] Regarding relative chronology of inscriptions

[10] For a useful overview see Maras 2020. On Raetic writing and its chronology: Marchesini & Roncador 2015; Salomon 2020: 273–277. For example, non-closed alpha can be observed on the Demlfeld bronze plaque (TIR IT-5), which is dated to the end of the 6th or the beginning of the 5th century B.C. (De Simone & Marchesini 2013). Open-shaped alpha is used in the north-eastern variety of Venetic writing, but those inscriptions cannot be dated more precisely than between the 5th and the 2nd–1st century B.C. (Marinetti 2020: 372–377). Dating is even more complex for Camunic inscriptions, which always show open-shaped alpha (Marchesini 2011). It might be worth noting that open-shaped alphas are also attested in 6th–5th-century Latin inscriptions from Rome (Maras 2020: 941).

[11] Tibiletti Bruno 1997: 1003–1013, with remarks on TI·27, TI·34, TI·36, TI·42: "Per l'iconografia ritengo quindi che quest'epigrafe di Mezzovico sia da considerare fra quelle «attardate», o meglio con ripresa di motivi ormai poco compresi e pertanto grossolanamente interpretati o esasperati." On TI·34: "Mi è parso ovvio [...] che la più antica fosse l'iscrizione mutila [...], poi venisse, sull'altra faccia della pietra,

engraved on the same stela, scholars have made different proposals, which also depend on their greater or lesser emphasis on either inscribed objects or palaeography.[12]

The Lugano region in the Iron Age

A possible solution to these chronological problems would be to compare Cisalpine Celtic stone inscriptions with the Iron Age archaeological finds from the Lugano region.[13] The Cassarate Valley, corresponding to the eastern part of the area, can be used as a case study because its archaeological finds have been studied recently.[14] None of the Iron Age finds of the Cassarate Valley were unearthed during a systematic archaeological excavation, and many of them were discovered by chance during the first half of the 20th century. Many archaeological sites of the Early Iron Age are known throughout the valley, such as stray finds, dwellings, and especially cremation tombs, found either in isolation or in small groups (Golasecca II A/B–III A3). The two tombs of Pregassona

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l'iscrizione nell'ominide [...] e infine l'iscrizione nel cartiglio". On TI·36: "La pietra che sembrava portare solo su una faccia due iscrizioni, l'una a fianco dell'altra, una volta smurata ha lasciato riconoscere sull'altra faccia l'esistenza di una iscrizione poco leggibile [...]. Questa faccia è rovinata, ma mi sembra anche poco sgrossata, con ondulazioni, mentre la faccia con le due figure umane è lisciata, come di solito avviene quando si prepara *ex novo* una pietra per l'incisione di un'epigrafe". That was also the opinion of Ernst Risch, who discovered the third inscription on the stela (Risch 1989: 1581–1582; cf. 1984: 26).

[12] Different proposals about TI·27, TI·34, TI·36: De Marinis & Motta 1990–1991: 217–218; Solinas 1994: 322, 331; Motta 2000: 200–201; Morandi 2004: 538, 539–540, 707–708; Piana Agostinetti 2004b: 154, 157, 159–161; Maras 2014: 81–82, 86, 88. If one considers that a stela would have been re-inscribed after a break, there may have been a time lag of a few generations between the inscriptions.

[13] Rubat Borel 2005: "Infatti nella prospettiva di una ricostruzione delle culture antiche (e questo è il caso soprattutto della protostoria) non si può prescindere da nessun dato e quelli linguistici sono importanti esattamente quanto quelli paleoambientali o antropologici. D'altro canto, ciò che noi sappiamo di queste lingue, tranne poche glosse negli autori greci e romani, viene da contesti archeologici su reperti archeologici. Perciò, se da un lato c'è bisogno dello specialista (il linguista), dall'altro è l'archeologo a contestualizzare l'iscrizione e svilupparne i risultati nella ricostruzione culturale e storica."

[14] Dell'Era 2019.

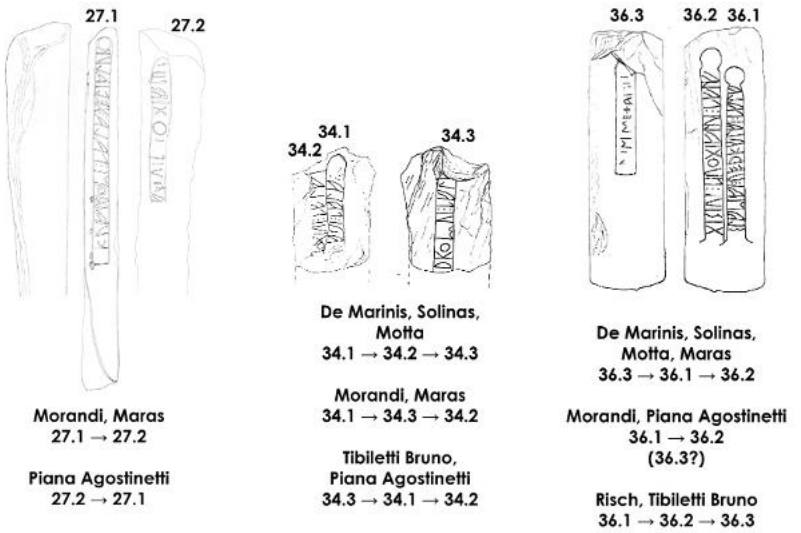

Fig. 3: Different proposals about internal relative chronology for Celtic inscriptions on the same stela (references to Risch 1989, De Marinis & Motta 1990–1991, Solinas 1994, Motta 2000, Morandi 2004, Piana Agostinetti 2004b, and Maras 2014). From left to right: TI·27, from Mezzovico (drawing from De Marinis & Motta 1990–1991: 203, and Morandi 2004: 708, completed after comparison with a frottage of Ernesto Oeschger from Pietra, Carta, Carbone); TI·34, from Tesserete (drawing from De Marinis & Motta 1990–1991: 208); TI·36, from Davesco (drawing from De Marinis & Motta 1990–1991: 208).

(Golasecca II A/B–III A1) and the three of Porza (Golasecca III A1) contained interesting pottery and bronze items that have been thoroughly studied and published.[15] Other cremation tombs were found in Davesco, Sonvico, and Tesserete; their grave goods are now lost, but they should be dated to the Early Iron Age.[16] The bronze parure stray find of Cadro

[15] Porza, Belvedere: Magni 1910; Primas 1970: 139 + pl. 47/A, B, C. Pregassona, Viarnetto: Magni 1921; Primas 1970: 139–140 + pl. 48/A, B; Schindler & De Marinis 2000: 165–168; De Marinis 2000: 369–370.

[16] Davesco, Comòrt, and Sonvico, Ganón: Baserga 1936: 302. Tesserete, Morín: Giussani 1902: 27–28.

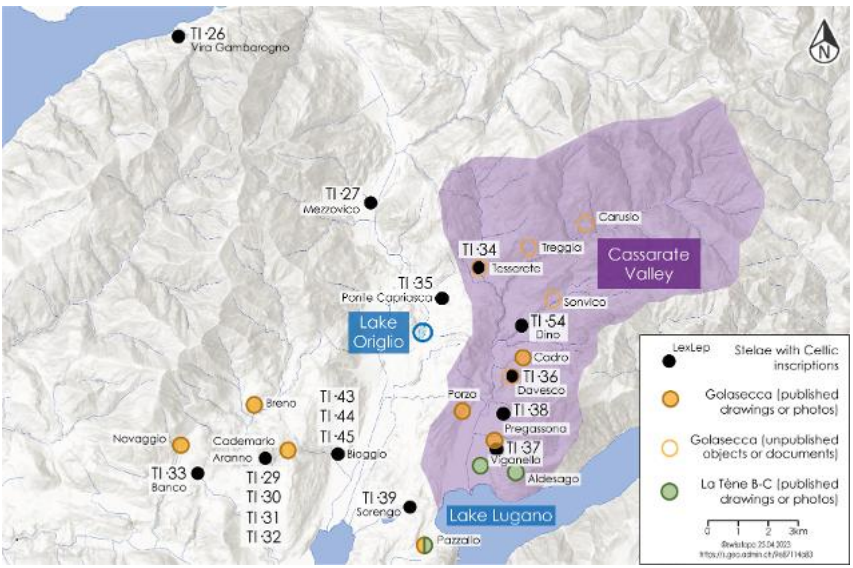

Fig. 4: The Lugano region in the Iron Age: finds from Golasecca II to La Tène C.[21]

has been lost too, but it can be surely dated to Golasecca III A thanks to a photograph.[17] More recent finds of the Early Iron Age are still unpublished: a dwelling in Treggia (1991 and 1996) and two tombs as well as other stray finds from Carusio (1999 and later).[18] All those archaeological sites show that many communities of the Golasecca culture were settled in the Cassarate Valley. In contrast, Early and Middle La Tène finds are very few and confined to the lower part of the valley, near Lake Lugano: a La Tène B cremation tomb was discovered in Aldesago, and three Celtic drachmae (3rd century B.C.) were by chance found in Viganello.[19] Inscribed stelae have been found in the whole valley, often in the same villages or neighbourhoods as Golasecca finds.[20]

[17] Cadro, Novarétt: Ortelli 1946.

[18] Cf. Dell'Era 2019: 229–231, 234.

[19] Aldesago: Dell'Era 2018b. Viganello, via alla Roggia: Chiesa 1996: n° 7; Nick 2015: 1313.

[20] Dell'Era 2019: 233. See also Dell'Era 2018a: 154–155.

[21] On the Cassarate Valley see Dell'Era 2019; on the other areas cf. De Marinis & Biaggio Simona 2000: II 394–397, and Janke 2015: 40–42, with bibliography.

As far as is known from the relatively few published and studied sites, the tendency observed in the Cassarate Valley seems to be valid for the rest of the Lugano region as well.[22] The numerous Golasecca cremation tombs are well distributed in the valleys, especially in the western Lugano region, called Malcantone. The best-known site is the necropolis of Cademario (Golasecca III A1–III A3) with 31 structures (tombs and ustrina) excavated in 1939–1940.[23] At the same time, further contemporary tombs were discovered in Novaggio and Breno.[24] In Pazzallo, near Lake Lugano, a tomb dated to Golasecca III A1 was found in 1963, and another three were identified six years later.[25] While one of them is dated to Golasecca III A3, the other two have been dated to La Tène B1 and are the only remains in the Lugano region outside the Cassarate Valley that can be securely attributed to the Early La Tène period.[26]

The archaeological finds (mainly tombs) thus seem to indicate that the whole Lugano region was densely occupied during the Early Iron Age, but not in the Late Iron Age.[27] However, since 'the absence of evidence is not evidence of absence', another explanation might be possible: it could be suggested that the region was inhabited by an Early and Middle La Tène population that had different funeral practices, which left no or fewer traces in the ground – and maybe used to raise inscribed stelae on their tombs.[28] In the absence of archaeological contexts for inscribed stelae, the use of anepigraphic stone stelae as grave markers may be pointed out for Early Iron Age cremation tombs in the Lugano region, as well as for several inhumation tombs in the regions of Bellinzona and Locarno, of both Golasecca and La Tène cultures.[29]

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[22] Janke 2015: 40–42; cf. De Marinis & Biaggio Simona 2000: II 394–397.

[23] Cademario, Fórcora: Crivelli 1939a; 1939b; Silvestrini & Crivelli 1941; Primas 1970: 125–126 + pl. 27/B, C–28/A, B, C.

[24] Novaggio: Chiesa 1938; Crivelli 1942. Breno: Silvestrini & Crivelli 1941: 449, 451.

[25] Pazzallo (1963): Primas 1970: 138 + pl. 46/B. Pazzallo, Carzo (1969): Donati 1972–1973; cf. De Marinis 2000: 357, 375–377, 379, 383.

[26] Some Celtic coin hoards from Malcantone could possibly be dated to Middle La Tène, but more probably to Late La Tène: Nick 2015: 1300–1317 (all coins are lost).

[27] Janke 2015: 38, 43.

[28] According to Piana Agostinetti 2004b: 305–306, inscribed stelae could have taken over the function of grave goods.

[29] Crivelli 1943: 30, 45–46. In the Lugano region, anepigraphic stelae are attested in Cademario, tomb 25 – Golasecca III A3 (Silvestrini & Crivelli 1941: 446;

Additional information on human activity in the Lugano region during the Iron Age can be garnered from palaeoecological data. The sediments of Lake Origlio contain pollen and traces of charcoal. Logically, pollen values of cereals and pasture plants – which indicate human activity – are higher when those of forest trees are lower and vice-versa. Significant charcoal traces, dated by radiocarbon analyses, are related to forest clearances through burning. These very interesting data are relevant for the whole Lugano region and show great human activity in the Early Iron Age (600–500 B.C.), declining from around 450 B.C. onwards due to climate cooling. Very little human activity is attested in the Late Iron Age: anthropic indicators reached their minimum around 350 B.C. and did not significantly increase before 50 B.C.[30]

New dating proposals

The Cisalpine Celtic stone inscriptions from the Lugano region cannot be precisely dated through palaeographic analysis alone, and even their relative chronology is not without uncertainties. Tombs from Golasecca II A/B–III A3, which corresponds to the greatest occupation of the region, are relatively often attested near places where inscribed stelae were found. In contrast, finds of La Tène B and C are extremely limited in the Lugano region. Considering that palaeoecological data attest to a low level of human activity during the Late Iron Age, a significant epigraphic production at that time seems unlikely.[31] Moreover, well dateable Celtic inscriptions (like graffiti on pottery) are extremely

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Primas 1970: 126), and in Novaggio – one stela for two tombs (Crivelli 1942). Inhumation tombs with anepigraphic stelae are known in Gudo near Bellinzona (Golasecca III A2–3: Sormani 2011–2012: 126–129) and in Solduno near Locarno (La Tène C1–2: Crivelli 1941a; 1941b; cf. Stöckli 1975: 117–128, 139–188). The regions of Bellinzona and Locarno, unlike the Lugano region, did not decline and were prosperous during La Tène B (Janke 2015: 43–44; Carlevaro 2018: 348–352). On the history and territory of the Lepontii, who are often identified as the Iron Age population of these regions, see Dell'Era & Gregori 2021: 167–174 (with bibliography). On the problem of using the term 'Lepontic' for the (Early) Iron Age Cisalpine Celtic language see Lejeune 1972; Aberson et al. 2019: 22–24.

[30] Conedera & Tinner 2000: 67–69.

[31] Cf. Dell'Era 2018a: 154–155; 2019: 233.

rare in Northern Italy during the same period.[32] Celtic inscriptions on stone stelae from the Lugano region may thus be dated to a period of time corresponding to the highest human presence in the same area, i.e. between the end of the 6th and the first decades of the 4th century B.C. (Golasecca II A/B to III A3). However, given the problems within the relative chronology, it cannot be excluded that the inscribed stelae are the expression of a relatively short-lived local phenomenon that did not outlast the transition to the Late Iron Age.

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[32] Solinas 2017; Stifter 2020: 338–339.

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More on san in Cisalpine Celtic

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Abstract

In this article, I first revisit my arguments from 2010 that the letter san 𐌎 in Cisalpine Celtic inscriptions in the Lepontic script represents not only the sound **t*^{s} (tau Gallicum), but also occurs in positions where Proto-Celtic **d* is expected. The second part of the article is dedicated to the nine attestations of the letter san that have become known since 2010. One instance, **akluśamoụalos** (NO·28) < **ad-klut-*(*i*)*samo-u̯alo-* 'most-heard-about ruler', is strong evidence for the sound value **t*^{s}. The other eight instances, all from the high-Alpine site of Carona (Bergamo), are more difficult to interpret. Various etymological suggestions are made for the words containing them, but none of them is incontrovertible evidence for either **t*^{s} or **d*. Seven of the nine new instances of san are written with the usual butterfly sign 𐌎, two with the rare and late double-axe sign 𐌏. The new evidence contains two possible examples of word-initial san.

In Stifter 2010,[2] I presented and discussed evidence for the hypothesis that the letter which is traditionally transliterated **ś** (occasionally **š**) and called 'san' (occasionally 'sade' or 'tsade'), and most commonly written 𐌎, represents two separate, but related sounds in inscriptions in Cisalpine Celtic, i.e. Lepontic and Cisalpine Gaulish. One is the

[1] Cisalpine Celtic inscriptions are cited from *Lexicon Leponticum* (LexLep). I am grateful to Corinna Salomon and an anonymous reviewer for very valuable help and advice. All disclaimers apply with regard to errors.

[2] I presented the idea first in the paper 'Bemerkungen zur Phonologie und Graphie des Altkeltischen' at the 31st *Conference of Austrian Linguists* at the University of Vienna (December 2003).

bimoraic sound *t^s a.k.a. 'tau Gallicum', which results from the combination of two dental sounds or a dental sound + *s (cf. Eska 1998); the other one is etymological *d, irrespective of whether it was synchronically realised as a stop [d] or as a fricative [ð]. The idea that san stands for [ð] was independently also suggested by Schrijver (2008; cf. also 2015: 198–200). It is a corollary of this hypothesis that the shape ᛞ of the Germanic rune **dagaz* for *d*, whose origin had hitherto been mysterious,[3] may have been borrowed from the Lepontic script. Although there is a gap of approximately one or two centuries between the end of the Cisalpine Celtic writing tradition and the earliest known runic inscriptions, scenarios are conceivable in which interactions between Alpine Celtic and Germanic peoples may have led to the cultural transfer of this letter from the former to the latter (Stifter 2020: 146–148). In the present contribution, I want to revisit, and occasionally revise, my proposal from 2010, and to investigate if it can be applied also to the new Cisalpine Celtic inscriptions which have been discovered or published since then.

1. The double value of san

The hypothesis of multiple values of san is in line with the character of the Lepontic script in general, and it is unremarkable in the global perspective. Eska (2017: 60) has called the Lepontic script 'hypocharacterised'. In the bulk of the inscriptions, fourteen graphemes (*a e i k l m n p r s ś t u o*) serve to represent the ca. two dozen simple phonemes of the Cisalpine Celtic languages (see Table 1), so that by necessity most graphemes must have carried multiple values. It could be objected that, in the case of other letters, their multiple values mostly relate to sounds that share the place of articulation, but have different modes of articulation. For instance, in the case of the vowels, the phonological distinction of length remains unexpressed so that a letter such as ⟨a⟩ represents both short /a/ and long /a:/, any further differences in 'colour' between the two probably not being phonologically essential. In the case of obstruents, ⟨p⟩ stands for /b/ and /p/, which I take to differ from each

[3] Cf. the speculative attempts by Robertson (2011: 13–14) to account for the shape of the runic letter, and the overview in Salomon (2020: 169, 180).

	plosive	fricative	nasal	liquid	glide
bilabial	p b	(φ)	m		w
dental	t d		n	l r	
alveolar		s (z) t^s			
palatal					j
velar	k g	(x ɣ)			
labiovelar	g^w (?)				

	front		back
high	i i:		u u:
mid	e	o	
open	a a:		

Table 1: Full inventory of consonant and vowel phonemes of the Cisalpine Celtic languages.

other in voicedness, but which otherwise share their phonetic features. The hypocharacterisation of the Lepontic script not only pertains to the ratio between graphemes and phonemes, but also to other aspects of the orthography. Another distinction in the Cisalpine Celtic languages, not included in the phonological system in Table 1, is that between simple vs. geminate consonants. For instance, both /t/ and /t:/ (or /tt/) are expressed by the single letter ⟨t⟩, which means that Cisalpine Celtic orthography has a prohibition on the graphic doubling of characters even where this would avoid phonological ambiguity.

Viewed in this light, the assumed double value of san, which seemingly cuts across several phonetic features, looks extraordinary. But it must be remembered that the historical-phonological representation of the two sounds as *t^s and *d is purely conventional in modern Celtic Studies. Depending on the actual *phonetic* realisation(s) of the reflex(es) of Proto-Celtic *d in Cisalpine Celtic, the difference between it and tau Gallicum may only have been comparatively small and may have pertained to few phonetic features. Furthermore, or alternatively, the use of san to represent *d in all phonetic contexts may have been *orthographically* generalised from a subset of contexts in which *d had become *phonetically* close to tau Gallicum.

Be that as it may, the postulate of multiple values for san is not a novelty in Cisalpine Celtic studies, but has been commonplace for a long time. A few examples will suffice: in his seminal article, Lejeune (1971: 375, 416, 431) hesitates between the values *-ss-* < **-ks-*, *-^{t}s-* from various dental clusters, and **-ssi̯-*. Uhlich (1999: 295) reckons with reflexes of **-ksi̯-*, **-st-*, **-t^st-*, **-ds-* and **-n^ts-* < **-ns*. Maras (2014: 90) states that beside its use for tau Gallicum the letter represents a "sifflante complexe", i.e. **ks*. The latter idea is commonly implied, but not explicitely stated,

like, for example, when Motta derives **iṣos** (VA·6) from **is-tos* (2000: 192), while at the same time translating **naśom** (VB·3.1) as "di Nasso" (2000: 194).

That letters have multiple, sometimes phonetically very diverse values is also paralleled in many other languages. Such a situation is usually the consequence either of a long literary tradition or of the adoption of a writing system devised for a foreign language with a different phonological system. An obvious and close parallel to the multiple use of a sibilant character is Celtiberian, where the letter conventionally transcribed as *z*, which is derived from the Greek letter sigma, is used for etymological **d*, but possibly also for a variety of other sounds ([θ], [tˢ], [tʃ], [ʃ]?; see Jordán Cólera [2019: 77] for further references).

Old Irish orthography uses 18 letters plus two diacritics to express 56 different single sounds and 13 diphthongs. On average, every letter therefore represents four different sounds, or has some additional function in digraphs (Stifter 2006: 15–24). The situation in Modern English is not so systematic (there is, in fact, nothing systematic in English orthography), but to pick one of the most egregious examples, the letter ⟨g⟩ represents [g], [dʒ], [ʒ] and ø, while the digraph ⟨gh⟩ stands for [g], [f], [x] and ø. In German, ⟨v⟩ represents [f] and [v]; without the knowledge of the history of the language, it is not formally predictable which value applies in a given word.

Going beyond European alphabetic scripts, it may be noted that the values of cuneiform signs changed and tended to become more and more complex over time, while the script was adapted to the different needs of the Sumerian, Akkadian, and Babylonian languages. Classical Japanese plays in a league of its own when it comes to the readings of *kanji*, i.e. Chinese syllabogrammes or ideogrammes. To pick just one catchy example, the Chinese character 生 'life; to be born, exist, live' (Mandarin *shēng*, Middle Chinese *ʃʸæŋ*, Old Chinese **sreŋ*) has the following readings, i.e. sound values. In *go-on* (the reading of early Sino-Japanese borrowings) it stands for *shō* < Old Japanese *syau*. In *kan-on* (roughly Middle Chinese borrowings) it is *sei*, while in the rare *tō-on* (modern borrowings) it is *san*. When expressing native Japanese words (*kun* readings), it occurs in the verbal roots *ik-*, *um-*, *o-*, *hay-*, *na-*, *mus-* and in the nominal stems *ki* and *nama*. Finally, *nanori* refers to readings in proper names of people and places. In those, it is found for *asa*, *i*, *iki*, *iku*, *ike*, *ubu*, *umai*, *e*, *oi*, *gyū*, *kurumi*, *gose*, *sa*, *jo*, *sugi*, *so*, *sō*, *chiru*, *naba*, *niu*, *nyū*,

fu, *mi*, *mō*, *yoi*, and *ryū*.[4] While this is an extreme case, it nevertheless illustrates the practice well. Which of the readings applies in a given instance is not predictable from external factors, but has to be known.

It is a related issue with similar practical consequences when, either through drift through time or caused by external events, separate letters that used to be distinct end up with identical glyph shapes. In the Lepontic script this happened to alpha 𐌀 ⟨a⟩ and digamma 𐌀 ⟨v⟩; the dilemma was mitigated by the fact that digamma was no longer regularly used after the early period.

The Gallo-Latin writing tradition of the Gaulish language (mid-1st century B.C. to ca. 3rd century A.D.) makes fundamentally use of the Latin alphabet, but two or three Greek letters from the preceding Gallo-Greek tradition (2nd–1st century B.C.) were adopted in order to write Gaulish sounds for which no adequate letters existed in the Roman script. One of these is Greek chi Χ ⟨χ⟩ to write the sound [x]. At the same time, in some Gaulish inscriptions the identical-looking Latin letter ekse Χ ⟨x⟩ was used to write the sounds [ks] and, in younger vulgar pronunciation, [s] (see RIG II-2: 380–381 for the situation, which is even more complex in the details). Other scripts which are notorious for the formal ambiguity of some of their letters are the Pahlavi script or Arabic.

2. Evidence for san until 2010

With this we can now look at the actual evidence for my proposition that san represents **t*^{s} and **d*. Pertinent examples are cited with their LexLep sigla, followed, where available, by a Roman numeral that represents the period according to the phases defined in Maras (2014), and by their approximate date, where possible in absolute dates B.C. or expressed as archaeological stages within the La Tène period. Linguistic and philological discussions of forms will be limited to the absolutely necessary. Any additional bibliographical references and discussions can be found in LexLep.

[4] https://en.wiktionary.org/wiki/生#Japanese (accessed 10.11.2022).

2.1. The Cisalpine Celtic corpus available before 2010 contained a number of good[5] examples for the sound value *t*^{s} (tau Gallicum) of the letter san. In three cases it is likely, or possible, that -⟨ś⟩ goes back to final *-*n*^{t}*s* which developed from the participal suffix *-nts* or from the accusative plural ending *-*ns* with an epenthetic dental stop (Lejeune 1971: 381, 461; Eska 1998: 120, n. 17; Uhlich 1999: 293–298; differently Mees 2002: 25; Markey & Mees 2003: 135, 154–155).

(1) **siteś** (CO·48; II; 6th/5th c.) < **sīdan*^{t}*s* < PC **sīdans* < PIE **sēd̥ns* 'seats'.
(2) **piraụiχeś** (TI·13; IV; LTD) < PC **-u̯ikants* < PIE **-u̯ikn̥ts* 'fighting', but the reading of upsilon is uncertain.
(3) **artuaś** (PG·1.2; IV; 2nd/1st c.) < **ardu̯ān*^{t}*s* < PC **ardu̯āns* < PIE **h₂erdu̯eh₂ns* 'heights'.

2.2. Five examples illustrate the origin of word-internal -⟨ś⟩- from Proto-Celtic *-*st*-, but not all explanations are equally compelling:

(4) **iṣos** (VA·6; II; 6th/5th c.) < demonstrative **is-tos* 'that one', a combination of the nominative singular pronoun PIE **is* 'he' + the pronominal stem **to*-.
(5) **tośokote** (VC·1.2; IV; 1st c.). The 'infixed pronoun' **-śo-** is believed to come from a preform similar to that in (4), namely **is-to*(*m*)*/d* (Eska 2001; Uhlich 2007: 388).
(6) **kośio** (VR·15; IV; LTD1) < PC **gostiio̯s* << PIE **g*^{h}*osti-* 'guest'; alternatively **kośio** can be connected with *Cossius*, a name attested in the Roman period, but whose etymology is unclear.
(7) **anteśilu** (TI·25; IV; 2nd/1st c.); apparently a compound of **and*(*e*)-*testi-* with an *l*-suffix. The second part of the compound is traditionally identified as PC **-te*(*φ*)*sti-* 'heat' < PIE **-tep-sti-*, cf. OIr. *tess*, W, OCorn. *tes*, Bret. *tez*, but note that the Insular Celtic words are *u*-stems (in the case of the British languages, deducible from the lack of *i*-affection in Welsh).
(8) **maeśilalui** (NO·18; IV; 1st half 2nd c.). The presuffixal section of this name could be connected with PC **magestu-* 'plain, field' (cf. W *maes*, Bret. *maez* 'field'), but there is no clear evidence for loss of intervocalic **g* (perhaps phonetically [ɣ]) in Cisalpine Celtic other-

[5] I use 'good' pragmatically to signal that the explanation accords well with our current level of knowledge of the languages. All of my explanations are open to refutal on the basis of new information or new arguments.

wise. Schrijver (2015: 199) sets up the onomastic basis **Maid-ilo-*, which he tentatively compares with OIr. *moídid* 'to boast', but this leaves the *a* unexplained.

2.3. There is one good example for word-internal -⟨ś⟩- from *-*tˢ*- < *-*dt*-:

(9) **anareuiśeos** (NO·21.1; IV; 2nd/1st c.) < *-*u̯id-t*(*o*)-*iio̯s* 'seen' or *-*u̯id-teio̯s* 'visible'.

2.4. Word-internal -⟨ś⟩- resulting from a complex palatalised or assibilated cluster *-*χtio̯*- may be represented by one uncertain example:

(10) **amaśilu** (VB·2; IV; 2nd/1st c.) may perhaps contain the stem **ambaχtio*- 'pertaining to servant status (?)'; cf. Gall.-Lat. *ambactus* 'servant, messenger' < PC **ambi-ag-to*-. Schrijver (2015: 199) instead sets up **Amb*(*i*)*-ad-ilōn*, which he compares with OIr. *ad* 'law' and Welsh *eddyl* 'plan, intention'.

2.5. The number of good examples for word-internal -⟨ś⟩- that occurs in the position of Proto-Celtic *-*d*- is comparatively large. Most contain the preverb **ad*- 'at', either in a literal, local meaning, or as an intensifying prefix:

(11) **aśuesa** (BG·23; IV; 3rd c.) can be compared with the Eraviscan male name *Aduesio* (AE 2002, 1728).
(12) **aśkoneti** (TI·41; IV; 2nd/1st c.), cf. Gaul. Αδγοννος (RIIG GAR-01-01), *Adgonna* (CIL XII 3370) and *Adgonnetus* (AE 1972, 331).
(13) **aśkonetio** (VB·22; IV; 2nd/1st c.); see the preceding name.
(14) **aśmina** (NO·18; IV; 1st half 2nd c.), cf. *Admina* (CIL VI 12594), *Adminius* (a British king mentioned by Suetonius). This inscription (**metelui : maeśilalui : uenia : metelikna : aśmina | krasanikna**; NO·18) contains two instances of san, the other being **maeśilalui** (8). The names of the two people in this inscription appear to differ linguistically, perhaps across a generational and/or ethnic language divide: the recipient *metelos* forms his patronymic by the addition of the Lepontic suffix *-alo-*, while the woman (his wife?) *aśmina* uses the Gaulish suffix *-ikno-*. In that context it may be significant that san could have different values in the two names. This could reflect two different standards of writing, or the conservative nature of spelling of names, which, once established, won't be changed, even if new orthographic practices arise.

(15) **aśouni** (VB·27; IV; 2nd/1st c.). If we allow for the possibility that ⟨u⟩ represents the glide of the diphthong of PC **φou̯no-* 'fear', which more commonly appears as a fricative spelt ⟨b⟩ or ⟨m⟩ in the names *Exomnus* or *Exobnus* in Ancient Celtic, **aśouni** can be analysed as **ad-ou̯no-* or perhaps **ad-oβno-* 'having/causing great fear'. This name has an exact parallel in OIr. *Adomnán*. A radically alternative solution is to read the name as **eśouni** = *Exomni/Exobni*. The letters alpha ⋌ and epsilon ⋹ differ only by a single stroke. Two of the three Cisalpine Gaulish attestations of that name (VB·24 EXOBNA and VB·28 **esopnio**) come from the very same town Stresa as **aśouni**. The downside of this explanation is that san would represent **ks*, while otherwise sigma ⟨s⟩ is used for it. In any case, the traditional comparison of **aśouni** with *Axiounus* (CIL XII 3215) explains *obscurum per obscurius*.

Three further examples of initial ⟨aś⟩- could be abbreviations of similar compound names with **ad-*, but the brevity of the inscriptions allows no certainty:

(16) **aś** (BG·5.1; 4th c.).
(17) **aśeś** (NM·10.1 and NM·10.2).
(18) **aśoip**[or]**piośa** (VA·28.1; IV; 2nd c.).

There is no reason to assume that ⟨aś⟩- in examples (11)–(18) represents a 'sigmatic' variant **ad-s-* of the preverb **ad-* (first mooted in LEJEUNE 1971: 414; taken up by UHLICH 1999: 295, but not included in DUNKEL 2014: 10), a variant that is miraculously restricted to a tiny geographical region and to texts in the Lepontic script. It is more reasonable to assume that ⟨aś⟩- is simply a spelling for expected, inherited **ad-* (cf. SCHRIJVER 2015: 199 n. 7).

The next example either reflects the same development as the preceding one, or yod plays a role in the assibilation of **-di̯-* > **-dᶻ-* = -⟨ś⟩- (cf. RUBAT BOREL 2006: 206):

(19) **meśiolano** (MI·10.1; IV; 2nd/1st c.), the name of the city that is called *Mediolānum* in Latin < PC **medi̯o-φlāno-*.

In (11)–(14) and (16), **-d* stands in syllable-final position. In this group it can be speculated that the dental stop became allophonically assibilated in the syllabic coda, as it happened independently and later in Cornish.

In the case of (15) **aśouni** and, if pertinent, (16)–(18), it can be argued that the treatment of **ad-* is analogical to the position before the syllable break. To this group of good examples, several less certain examples of medial -⟨ś⟩- < **-d-* can be added. For Schrijver's (2015: 199) suggestions for **maeśilalui** and **amaśilu**, see (8) and (10) above.

(20) **keleśu** (VR·14; IV; LTD1) < **-edon-* (cf. Markey & Mees 2004: 86)? The argument in favour of assuming **d* here is morphological, since it yields a suffix that is attested elsewhere. Alternatively, one can think of a stray spelling for **ti̯*, i.e. **keleti̯on-* (Rubat Borel 2006: 206).

(21) **akeśi** (VA·16; IV; LTD2). Salomon (2022: 186) compares this with various names beginning with *Aged-* in Gaul and Spain, which Delamarre (2007: 14, 210) tentatively interprets as related to OIr. *agad* 'face'.

In one uncertain case, it is possible that word-initial ⟨ś⟩- continues **d-*:

(22) **śuro** (MI·10.6; IV; 2nd/1st c.). This word is read dextroverse **oruś** in Solinas (1995: 366), but the leftward-facing rho is a strong indication that the direction of writing is in fact from right to left (Morandi 2004: 617). If san can represent **d* even word-initially, **śuro** could be compared with the name *Durus* in Latin inscriptions.

2.6. In two instances, (23) and (24), word-internal -⟨ś⟩- has been suggested to represent the cluster **-χs-*, but both explanations are formally difficult. Furthermore, in other, clearer cases, **-χs-* is written with sigma, the 'normal' sibilant character, namely **esopnos** (PV·1) and **esopnio** (VB·27), both < PC **eχs-obno-* 'fearless < *being out of fear', and perhaps **sasamos** (VB·1), if from **sa/āχsamo-*, either from the root PC **sa/āg-* 'to seek' < PIE **seh₂g-* 'to follow a track' or perhaps related to Lat. *saxum* 'stone'. The two suspected examples of ⟨ś⟩ for **χs* are:

(23) **riśoi** or **riśos** (BG·21; IV; LTD2) < **rīχs(i̯)o-* 'kingly' (e.g. Morandi 2004: 664). This is morphologically dubious. Extensions of the nominal stem **h₃rēĝ-* 'king < to straighten' by **-s-* are otherwise unknown. Furthermore, if the reading is **riśoi**, the ending would be unusual, since -⟨ui⟩ would be expected for a dative singular in Cisalpine Celtic.

(24) **ośoris** (CO·62; IV; LTD1) < **oχsorīχs* 'ox king (uel sim.)' (Tibiletti Bruno 1981: 183; Morandi 2004: 646; Rubat Borel 2005: 24). This has been compared with the Gaulish compounds *Oxicarus*

or *Oxidubna*, which are commonly analysed as compounds with the first element 'ox' (e.g., Delamarre 2003: 254), without addressing the associated phonological problems of the initial *o-* and of the representation of **-χs-* by ⟨ś⟩. What would be expected is Gaul. ***us(n)o-* < ***uχs(n)o-* ← PC **uχsen-* < PIE **h₂uksen-* with *u-*. Note also that, if the traditional analysis is correct, the second **χs* in the compound, the word for 'ruler, king', is written with sigma. Very speculatively, ⟨oś⟩- could be connected with the verbal root **od-* 'to smell' (Delamarre 2003: 238) or with the nominal stem **φod-* 'foot, path, journey', seen in Celtiberian *ozas* 'feet (?)' or OIr. *uide* 'journey, measure of distance', even though neither etymon is compelling in a personal name.

2.7. Other examples of san remain unclear because the texts are too short or fragmentary to allow an inference about the intended meaning of the word, because of palaeographic issues, or because there is no obvious etymological comparison. I will not discuss them here:

(25) **kuaśoni** (TI·27.1; II; 5th/4th c.).
(26) **śium** or **śiun** (TI·24; IV; LTD). Very speculatively, this could be connected with the stem **diu̯-* 'day, sky, divine'.
(27) **ṣnaśi̯o̯u̯i̯to̯ṣ** or **naśio̯u̯i̯to̯i̯** (VA·20; IV; LTD1/2). For the unclear reading see the entry in LexLep.[6] If this is a compound with a first element *snaśio-*, this could be tentatively compared with OIr. *snaidid* 'to cut, chip, hew' (< PC **snad-* << PIE **sned^{h}-* 'to cut', LIV² 571; or **sneHd^{h}-*, Schumacher 2004: 594–595) or OIr. *snáidid* 'to protect' (< PC **snād-*).
(28)]**ạuśi** or]**ạumi** (NO·26).
(29)]**ś** (CO·44).

In addition to the preceding five items, four examples, which were already mentioned before but which are not entirely certain, could also be included in the unclear category, namely (8) **maeśilalui** (NO·18), (10) **amaśilu** (VB·2), (20) **keleśu** (VR·14), and (22) **śuro** (MI·10.6).

2.8. A number of instances of letters which were previously read as san should either be left out of the discussion because of palaeographical issues, or they should be discarded altogether.

[6] https://lexlep.univie.ac.at/wiki/VA·20 (accessed 20.3.2023).

(30) **priś** (JU·1). Even though this inscription from Montmorot in France undoubtedly contains the letter san, I do not regard it as part of the Cisalpine Celtic literate tradition proper. San is of the variant Ϻ of which no certain example occurs elsewhere in the Cisalpine Celtic corpus.[7] Furthermore, JU·1 contains the unique example of rho ᑭ in the corpus. Palaeographically, JU·1 is therefore very distinct from the core of the Cisalpine Celtic corpus and consequently may reflect a separate orthographic tradition.

Two inscriptions feature a letter Ⲭ which has been previously read as san. It consists of a St Andrew's cross Χ – i.e. the letter ⟨t⟩ – whose bottom ends are connected by a horizontal line. In actual fact, I do not think that this letter is san at all, but that in both cases it has to be interpreted differently.

(31) †**peśu** (MI·1). While the rest of the name has been scratched comparatively lightly into the soft clay, the bottom line underneath St Andrew's cross is much deeper. Furthermore, it goes beyond the bottom left tip of the letter. I believe that this line is an accidental horizontal scratch, unrelated to the inscription. When the scratch is ignored, the name **petu** results, which looks like a short name derived from a compound name with *petru-* '4' as first member.

(32) †**naśom** (VB·3.1). Something similar applies to this inscription. The bottom stroke is executed more forcefully and deeply than the rest of the relatively long text. If the stroke is accidental, the word has to be read as **natom**. A reading with ⟨t⟩ was already proposed by Tibiletti Bruno (1981: 163–164). However, the extent of the stroke corresponds well with the bottom ends of St Andrew's cross and may therefore be intentional. In that case, it is not obvious to interpret the character as a variant of san, whose basic form is quite different. In view of the attractive interpretation of the phrase **uinom naⲬom** as 'Naxian wine, wine from the island of Naxos', it is worth considering if the letter in question is a Latin xenograph in the Lepontic alphabet, i.e. Χ̲, a Latin Χ ⟨x⟩ with a diacritic stroke underneath to distinguish it from the native ⟨t⟩, i.e. **naxom**; or perhaps **naxiom** 'Naxian', if the stroke represents iotised ⟨x⟩.

[7] https://lexlep.univie.ac.at/wiki/Ś (accessed 12.12.2022).

2.9. In some inscriptions, san in traditional scholarship is a misreading or misinterpretation of other letters.

(33) **śu** (VA·1.2). The letter beside upsilon does not even remotely resemble a known variant of san. Although the reading is far from clear, it could either be rho or St Andrew's cross.

(34) **koiśa** (TI·2). Based on a close scrutiny of this inscription, I conclude that it has to be read as **koma** with mu Ϻ, perhaps a short form of a compound name beginning with *kom-*.

Several late inscriptions, especially from Canton Ticino, have commonly been read with san Ϻ, but in my opinion the letter in question is rather mu Ϻ, influenced in this late period by Latin writing.

(35) **arimai** (TI·5; IV; LTD; not ****ariśai**); perhaps a short form of *Arimanus*; cf. *Arimus* (RIG IV M-46).

(36) **amu** (TI·7; IV; Augustan period; not ****aśu**); a short name built from the root **am-* 'to love'? If read ****aśu**, it could be interpreted as a short name created from a compound with **ad-*.

(37) **remu** (TI·9; IV; LTC–Augustan period; not ****reśu**); perhaps **φreim̨o-* 'first'. If read ****reśu**, it could be interpreted as a short name derived from a verbal noun **ret^{s}V-* < **ret-tV-* of the root **ret-* 'to run'; cf. W *Rhŷs* < **ret^{s}i-*.

(38) ? **utme** (VR·3.2; LTD1; hardly ****utśe**); of unclear analysis.

For comparison, more or less distinct specimens of mu Ϻ are also attested in other inscriptions. Like in the examples from Canton Ticino, the hastae are perfectly vertical in:

(39) **musu** (VR·12; IV).

(40) **namu** (VB·28; IV).

(41)]**o̱**[|]**ṭo̱**[ ]**iknos** | **m̨atopokios** | **sola** | **nimoniknạ** (NO·20; IV).

(42) As far as the poor, sole available photo of the inscription in Rhŷs (1913–1914: pl. VII) allows us to tell, the hastae in all instances of the letter mu are vertical in **metelui** : **maeśilalui** : **uenia** : **metelikna** : **aśmina** | **krasanikna** (NO·18; IV).

(43) **komono**[(VR·1; IV); here, the outer hastae are slightly oblique.

(44) **akisios** : **arkatokok** | **materekos** : **tośo** | **kote** : **atom** : **teuoχ** | **to**? : **koneu** (VC·1.2; IV). The third letter in the last line, here represented by a question mark, has sometimes been read as mu Ϻ (e.g.,

Morandi 2004: 589–590), but the reading is uncertain (cf. Estarán Tolosa 2016: 233). The other two examples of mu in this inscription are written with Ⅿ with noticeably oblique outer hastae.

In (39), (41–42), and in the dubious example in (44), the triangular tip in the middle of mu goes down to half the height of the letter, like it clearly does in (35)–(37).

2.9. Several inscriptions which have been assigned to the Cisalpine Celtic corpus in the past are certainly or probably not Celtic at all and will therefore be ignored here. The two inscriptions (45) and (46), which contain examples of san Ⅿ and Ⅿ (or mu Ⅿ) respectively, are from the region of Liguria and most likely represent the shadowy Ligurian language.

(45) **nemuśus** (SP·1).
(46) **ś**[or **m**[(MS·3).

(47) and (48), here given in their traditional transliteration, stand out from the rest of the words discussed in this study in that they are written in the Latin alphabet. They would be examples of the use of xenographs in the Latin alphabet, if the letter in question is san. In any case, their analysis remains obscure.

(47) **saśadis** (BS·3). This form is from the inscription from Voltino, whose linguistic ascription is highly problematic. Pace Eska & Wallace 2011, it is not regarded as Celtic in LexLep. I remain agnostic as to what language is represented by this text. The letter ⋈ traditionally read as san could conceivably be a nu Ⅳ whose oblique middle stroke was written in the wrong direction first, and which was then corrected, overwriting it with a stroke in the right direction, or even a ligatured double Ⅳ (cf. Schürr 2006: 340–341; Zavaroni 2008: 20).
(48) ciposis (VB·30). No comparandum exists for this name; parallel to the case of (47), Schürr (2006: 343) suggests an error for *ciponis, the Latin genitive of **Cipō*.

2.10. To sum up, the conclusion reached in Stifter 2010 was that there is good evidence that the letter san represents two distinct phonemes in Cisalpine Celtic inscriptions, namely **t*^{s} 'tau Gallicum' and Proto-Celtic **d*, whatever the latter's precise phonetic realisation or realisations ([ð], [ð̲], [θ̲]?) were at that stage. The evidence for further phonological

values is weak, but not entirely excluded. It may also have been used for another 'complex sibilant', e.g. **ks*, or even other sounds.

3. Evidence since 2010

Since 2010, over 90 new inscriptions have been added to the corpus of Cisalpine Celtic. These texts contain nine new examples of san, which provide a small, but welcome corpus to test my hypothesis of 2010. Eight of the nine new tokens of the letter are from Camisana in Carona in the Val Brembana (Bergamo) (BG·41.5, .11, .16 [2×], .19, .22, .25, .30). Camisana is an archaeological site on a mountainside stretching from 2112 to 2260 meters above sea level. Discovered 2005 and systematically investigated between 2006 and 2015, 139 rocks with petroglyphs were found across the site (Casini et al. 2008, 2010; Casini & Fossati 2013a, 2013b, 2016; Casini et al. 2014a, 2014b; Motta 2008, 2016). The boulder with the designation CMS 1 is covered with ca. 30 graffiti in the Lepontic script,[8] dating between the 5th century B.C. and the early 1st century A.D. (Casini et al. 2014a: 179). My readings below are mostly based on the readings and images in Casini et al. (2014a).

The ninth example of san is from Dormelletto in the province of Novara (NO·28), dating to the second half of the 2nd century B.C. In all cases, except twice in BG·41.16, the butterfly form ⋈ is used. BG·41.16 uses the rare double-axe variant ⋈ instead, which otherwise only occurs in the comparatively late Cisalpine Gaulish inscription NO·21.1 from San Bernardino di Briona.

Finally, the editors of one more inscription believe it to contain the letter, but it most probably does not. It is a fragmentary stone from Argnou in the Canton of Wallis in Switzerland:

(49) **ritiliọ**[|]**iponiạ** (VS·1; maybe 4th–3rd c. B.C.; not **]**ipośa**); what Rubat Borel & Paccolat (2008) believe to be **ś** is actually **ni**.

3.1. Several of the new inscriptions remain unclear for the moment. In two of them, the words with san are too short for a meaningful analysis.

[8] Casini et al. (2014a: 182–198) list 43 Cisalpine Celtic inscriptions, but 13 of these repeat the same word **isiti**. Motta (2016: 24) speaks of 80 graffiti in total.

(50) The four-word inscription BG·41.11 **nosarti** : **klamuram**[9] (or **kremuram**) : **poinunei** : **oś** could conceivably contain a full sentence. The indirect object in the dative case **poinunei** is easily identified as the name of the mountain deity variously found as **poininos**, **poenino**, or **penini** (for more information see Eska's contribution to this volume). **nosarti** could be a 3sg. verbal form in *-ti*, the subject, or a preposed genitive; **klamuram** or **kremuram** is the direct object. The final word **oś** can hardly be a pronoun, since a – presumably – weakly stressed form would be expected to gravitate toward the verb. As it stands, it does not look like a fully-fledged noun, but rather like an abbreviation. Since its function and meaning are unclear for the time being, I will not discuss it further.

(51) Casini et al. (2014a: 192) print BG·41.25 as **siś** and call it explicitly sinistroverse, but I think this is wrong. The two 'bosoms' of the four-stroke sigma have their open side facing to the left. It is typical for sigma in the Lepontic script to face against the direction of writing. From this it follows that this text is probably dextroverse and we should rather read **śis** or maybe even **śi s**, seeing that there is a small gap between the iota and the sigma. This increases the number of words with initial san. Other members of this group are **śuro** (MI·10.6), **śium/n** (TI·43) and **śuksim** (BG·41.16). If we allow for the possibility that san can represent **d*, then the first two letters of **śi s** could stand for /dī/, i.e. the Celtic preposition **dī* 'from' < PIE **dē*. Since initial **d* could also be represented with the letter ⟨t⟩, the same word can also be written ⟨ti⟩, which is indeed found five times in the Carona corpus. This scribal variation is to be expected, resulting from a tension between phonemic and phonetic spelling.

3.2. Several longer word forms in comparatively long sentential structures are equally difficult to interpret:

(52) **pekuśia** : **isosśuksim** (BG·41.16) contains two examples of san, both in the rare and probably late variant 𐌎. A verb seems to be suppressed in the phrase. It is suggestive to separate **isos**, which looks like a nominative singular ending in *-os*, and **śuksim**. **isos** is reminiscent of the nominative singular pronoun **iṣos** < **is-tos* in VA·6. If it is the same word, it follows that the way how **st* is written is different

[9] Hardly ****kpamuram** despite the rarity of inverted lambda in the Lepontic script.

between the two texts. **pekuśia** looks like a *i̯ā*-stem nominative singular, but it could also be an instrumental. In neither case does an etymology suggest itself. The ending of **śuksim** looks like an accusative singular. It is unusual to find the sequence *-ks-* in spelling since in other cases inherited sequences of gutturals + *s* are usually expressed by a sole ⟨s⟩, namely **esopnos** (PV·1), **esopnio** (VB·28) < **eχs-obno-* 'fearless', and perhaps **sasamos** (VB·1). Unless **śuksim** belongs to a different orthographic tradition, it could mean that its sequence *-ks-* arose secondarily through syncope < **śukVsim*, or that there is a word boundary between **śuk** and **sim**. Very speculatively, **śuk** could be connected with the Proto-Celtic verb **duk-e/o-* 'to lead, bring, carry' (Schumacher 2004: 286–289), and **sim** could be a demonstrative pronoun < PIE **sih₂m* (cf. OIr. *-sin* and the article *in* < **(s)in-d-os*).

I also want to propose an alternative reading of this inscription: The drawing (Casini et al. 2014a: 186) shows a tiny gap after **pe**, which opens up the possibility that **pe** and **kuśia** are two separate words. **pe**, which is also found in BG·41.27, .28., .29, as well as perhaps in BG·16, BG·33, BG·39, and CO·29 outside of Carona, could be the abbreviated divine name *Penninos* (perhaps in the dative). **kuśia** could be connected with the names *Cudus*, *Cudia*, *Cudso* or *Cusius*, *Cutius*, *Cutia* (Delamarre 2007: 79–80), or perhaps with the word PC **gustu-* 'violence'.

(53) BG·41.19 is the longest Cisalpine Celtic inscription known to date, consisting of 15 words: **anio** : **arpatimoi** : **risi** : **riaśana** : **tanatani** : **i̯**[ ]**ueriopoi** : **iknoiso** : **oisenu e̯k̯**[ ]**e̯tiun** : **piuos** : **upi̯**[ ]**apauatos***:* **ase** : **katutiniois** : **sionpiri**. Although several nominal inflectional endings are recognisable, I will refrain from attempting a global analysis since it has no direct bearing on the subject of this study. Only speculations are possible about the one word with san, **riaśana**. Perhaps it can be divided into a compound of **φri̯i̯ā-* < **priHo-* and a second element beginning with *st°*; or, if we allow for the possibility of loss of (lenited) *g* after *i*, the written form could represent **rīganti̯o°* with assibilation of the dental and effacement of the nasal.

3.3. The new inscriptions include one good example for t^s, i.e. tau Gallicum, resulting from a cluster of *-*t*-*s*- across a morphological boundary, which deserves greater attention. The inscription is from Dormelletto:

(54) **akluśamo** | **u̯alos** | **leukur** | **uritu** (NO·28; 2nd half 2nd c. B.C.).

Following Salomon (2022: 183–185) and Solinas (2022: 860–862), I divide this into two names **akluśamou̯alos** and **leukururitu**, of which the first is an *o*-stem nominative singular and the second one, probably **leu̯kur*(*o*)-*u̯ritū*, is either an *n*-stem nominative singular in apposition or the dative singular of an *o*-stem indicating a recipient. In the following, I will only discuss the first name. **akluśamoualos** can be analysed as a multiply composite name of four lexical elements **ad-klut-*(*i*)*samo-u̯alo-* 'most-heard-about ruler' (or 'most-listened-to ruler'). With Salomon, I analyse *-kluśamo-* as syncopated from **klut-isamo-*, i.e. the verbal adjective **kluto-* < PIE **k̂luto-* 'heard' followed by the Celtic superlative suffix < **-ism̥h₂o-*. All segments have parallels in the Celtic-speaking world and beyond. Names with **kluto-* 'heard, famous' occur in a diversity of related formations:

The first part of *akluśamoualos* has a close parallel in *Aclutius* < **ad-klut-i̯o-* 'much heard about' (CIL X 4875, Venafro, Latium).

Clotualus (CIIC 471; Egglosheyl/Phillack, Cornwall) probably reflects PC **kluto-u̯alo-* 'heard-about ruler; ruler of famous ones' with syncope and vowel lowering; it contains the same two core lexical elements as the Cisalpine Gaulish name. The semantically very similar compound name PC **kluto-rīg*(*o*)- 'heard-about ruler/king; ruler/king of famous ones' is attested in the forms *Clutorix*, *Clutorigus*, Ogam CLUTARI (CIIC 435, Llandissilio, Wales; CIIC 446, Nanhyfer/Nevern, Wales).

Clutamus (CIL III 8577, Salona, Dalmatia; CIL II 2633, Astorga, Hispania; CIL II 2584, Lugo, Hispania; AE 2005, 913 Middlewich, Britannia), which may be syncopated from **kluto-tamo-* 'most heard about', appears to feature a superlative formation of the verbal adjective **k̂luto-* 'heard'; it is noteworthy that the son of the man in the Dalmatian inscription is called *Cloutius* in an instance of an intergenerational *figura etymologica*, and that this son had been enlisted among the Susarri, one of the twenty-two tribes of the Hispanic Astures, as a reviewer points out (see also Meyer 2012: 111–112). For *Clussimi* (CIL V 4637, Brescia, Venetia et Histria), perhaps originally from **klust-isamo-* 'most obeyed / listened to' see Prósper (2018: 122–123).

Superlatives with the syncopated suffix **-samo-* from **-isamo-* are known from other Celtic-speaking and neighbouring areas (after Prósper 2018: 124–127).[10] The genitive plural *Rixamarum* (Martial 4,55,16, relating to Hispania) and dative plural *Rixamis* (AE 2012, 734, Aroche, Hispania) < **rīg-(i)samo-* 'most kingly' stands beside the theonym dative *Rigisamo* (CIL XIII 1190, Bourges, Aquitania; CIL VII 61, West Coker, Britannia) without syncope. *Saxamus* (common in the Western Roman Empire) and Cisalpine Celtic **sasamos** (VB·1) appear to come from **sa/āg-(i)samo-* 'most inquisitive'; *Uenixamus* < **u̯eni/īk-(i)samo-* 'most beloved' is known from the western provinces, the feminine form *Uenixama* is attested in the onomastics of Ig (Slovenia; Stifter 2012: 257; Repanšek 2016: 349–350). The Hispano-Celtic placename *Uxama* comes from **uχs(i)samo-* 'highest'. Finally, some of the regular superlatives of Insular Celtic and possibly Continental Celtic are also formed in this way: **ītˢ(i)samo-* 'lowest' **mess(i)samo-* 'worst', **nezd-(i)samo-* 'next', **sātˢ(i)samo-* 'easiest', **treχs(i)samo-* 'strongest' (Jasanoff 1991: 172).

There is a tradition in ancient and early medieval Celtic onomastics to create 'intensive', hyperbolistic ruler names. One common type of 'intensification' is compounding with the preverb **u̯er-* 'super': beside *Cassiuellaunus* '*cassi*-ruler',[11] there is *Uercassiuellaunus* 'super-*cassi*-ruler'; from *Cingetorix* 'foot-soldier ruler', *Uercingetorix* 'super-foot-soldier ruler' is formed. And beside the generic noun **tigernos* 'lord', which is the basis of several monothematic names in Gaulish and Insular Celtic, the intensive **u̯ortigernos* 'super-lord' is found in W *Gwrtheyrn*, OIr. *Fortchern*. A further case is more sophisticated: the British name *Uoteporix* (Ogham 3D: W-CMN-005, Castell Dwyran) is a compound of *rīx* 'ruler' and the verbal stem **u̯o-tepo-* 'to help, succour' (cf. W *godeb* 'refuge'), which in turn is a compound of the preverb **u̯o-* 'under' and the verbal root **tep-* < PC **tekᵘ-* 'to run' (cf. OIr. *teichid* 'to flee, run away'). The intended meaning must therefore have been 'refuge-ruler' (paralleled in CisGaul. ateporix 'refuge ruler', VR·7). However, the formation of

[10] For thoughts about the conditioning factors for the syncope, which will not be investigated here, I refer to Prósper (2018: 124–131).

[11] The semantic identification of the name element *cassi-* is disputed (cf. Delamarre 2003: 109–110).

Uoteporix must have been re-analysed as 'sub-(**u̯o-*)*tepo*-ruler', where the preverb *RC*u̯o-* was perceived as expressing low status. In response, a new name **Uorteporix* was created that superficially is meaningless from the point of view of non-onomastic language usage, but which in onomastic terms was probably understood as 'super-*tepo*-ruler', since it conforms with the pattern of intensified names. It is attested as the name of the early-6th-century British *tyrannus Uortiporius* (OW *Guortepir*, MW *Gwrdeber*/*Gwerthefyr*) in Gildas' *De Excidio et Conquestu Britanniae*.

An alternative strategy of creating 'intensive' ruler names is the formation of superlative nouns. From PC **rīg-* 'king' comes Brit. *Riotamus* 'most-kingy' and the divine epithets *Rigisamus* and *Rixamus* discussed above; from PC **kun-* 'dog' comes CUNOTAMI 'most-doggy', and PC **maglo-* 'lord' (W *mael*, OIr. *mál*) leads to **maglotamo-* that is reflected in W *Maeldaf* 'most-lordy'. In a similar spirit, the attested Cis-Gaul. **ad-klut-*(*i*)*samo-u̯alo-* 'most-heard-about ruler' can be understood as the intensification of an erstwhile formation **ad-kluto-u̯alo-* 'much-heard-about ruler'.

3.4. One of the bigger surprises of the Carona graffiti has been the discovery of a word that recurs in three inscriptions, namely **ześu**.

(55) **ześu** (or **zaśu**) : **poininos** : **kopenatis** : **tonoiso** (BG·41.5).
(56) **ześu** : **isti neisu** : **k**[(BG·41.22).
(57) **ti ześu** (BG·41.30).

I regard the variant reading **zaśu** in BG·41.5 either as a misreading or as a mistake for **ześu**. The difference between the two letters alpha and epsilon is just one oblique stroke more or less. Given that no interpretation of the word immediately imposes itself, all formally conceivable possibilities, no matter how speculative, need to be explored. It is not immediately obvious what word class **ześu** belongs to. In BG·41.5, the other three words in the phrase are unambiguously nouns, which leaves the possibility that **ześu** fills the verbal slot. The following word **poininos** could be the nominative of an *o*-stem or, speculatively, the genitive of a nasal stem. It is reminiscent of the mountain deity otherwise called **penini** in the *o*-stem genitive (BG·41.24) or **poinunei** in the *n*-stem dative (BG·41.11). **kopenatis** could be the nominative of an *i*-stem appurtenative adjective, which can be interpretated alternatively as **kom-penn-atis* 'belonging to something having the same head', **kom-benn-atis* 'belong-

ing to something having the same peak' or **gobenn-atis* < **gobann-atis* 'belonging to a smith', all of which are more or less meaningful.

If **ześu** is a verb, it could be identical with Early Lepontic **tetu** /dedū/ (CO·48) < PIE **d^{h}e-d^{h}oh$_1$-e* 'has put' (LIV^2 136–138) or PIE **de-doh$_3$-e* 'has given' (LIV^2 105–106). This explanation has two corollaries: the letter zeta stands for initial **d- à la vénète*, and there seems to be a phonetic difference between initial and medial **d*. The spelling would be 'phonetic' in the sense that an orthographic distinction, using the letters zeta and san, is made between two allophones of **d*, perhaps one for the occlusive variant of the sound ('unlenited'), the other one for the corresponding fricative ('lenited'). If, however, **ti** in **ti ześu** (BG·41.30) represents the preposition **dī*, then it would be very unlikely that initial **d* would be represented by two different signs in adjacent words.

Alternatively, **ześu** could stand for another perfect verb, namely **ste-stoh$_2$-e* 'is standing (LIV^2 590–592) < has placed oneself' (or, with a transitive meaning, 'has established'?). This would have developed to **stestō* > **stestū* > **stet^{s}ū*. The corollary of this interpretation is that zeta stands for initial **st*. Like in the previous analysis, this entails a 'phonetic' distinction between initial and medial **st*, perhaps retained as /st/ at the beginning of the word, but metathesised to /t^{s}/ in medial position.

An even more speculative interpretation of **ześu** is possible. It could consist of the root part **ste*/*a*-, perhaps representing the root **steh$_2$*- 'to stand', + an innovative perfect 'ending' **-dū*, generalised from originally reduplicated **dedū*.[12]

If **ześu** is a verb, it is noteworthy that in BG·41.5 and BG·41.22 it appears in sentence-initial position. The few verbs known from Cisalpine Celtic inscriptions so far otherwise occur sentence-medial or final.

The alternative is to analyse **ześu** as a nominal form. If anything, the options are even more prolific than in the case of the verbal interpretation, and the gates are open to all kinds of speculation. Formations from the root **steh$_2$*- play again a prominent role. As for the stem or word formation, one can think of a compound of an unclear element **ze*- + **sth$_2$-o*/*u*-. This can be compared with adverbial formations in **-sth$_2$-ú*- (NIL 637) or with adjectival and substantival formations in **-sth$_2$-ó*- (NIL 638) in other Indo-European languages. If the reading **zaśu** in BG·41.5 is

[12] It is unlikely that the -⟨śu⟩ portion of the verb reflects the 3sg. imperative ending in **-tu* or **-tū*(*d*) < **-tōd*.

taken seriously, the initial syllable could be the zero-grade or full-grade form **sth₂-/stah₂-* of the 'stand' root + an obscure suffix **-śu-*.

The ending of the word, if nominal, is polyvalent. The interpretation as a dative singular in **-ū(i̯)* < **-ōi̯* 'for the *z.* (of X)' is syntactically unsatisfactory, since it would require that **poininos** or **isti** are genitives, neither of which is very likely. In BG·41.30, a genitive would even be missing. Another option is to analyse it as an instrumental singular in **-ū* < **-oh₁* 'with *z.*' or adverbially '*z.*ly'. The formation would be comparable to Gaul. βρατου 'with gratitude'. Thirdly, the ending could be that of an ablative singular **-ū(d)* < **-ō(d)* 'from *z.*' with loss of the final **d*, perhaps again adverbially '*z.*ly'. For BG·41.30, this would open up the possibility of interpreting **ti ześu** as **dī z.ūd* 'from *z.*'. At this comparatively early stage of research into the graffiti from Carona, I do not want to take a firm position what is the best analysis.

3.6. In conclusion, it can be said that of the nine instances of san that have been added to the Cisalpine Celtic corpus since 2010, one (**aklušamoualos**, NO·28) provides solid evidence for san representing tau Gallicum **t^{s}*. There are three tokens of probably a single piece of evidence (**ześu**, BG·41.22, .30; assuming that **zaśu** is just an error for **ześu** in BG·41.5) that, unfortunately, is ambiguous as to the value **d*, **t^{s}*, or even **st*.

The interpretation of the remaining five instances of san is even more speculative at the moment. There is no lack of possibilities, but a lack of cogency for privileging one over the others (BG·41.11, .16 (2×), .19, .25).

It is of relevance for the orthographic distribution and the phonological value of the character that the new corpus probably contains two new examples of word-initial san (**śuksim**, BG·41.16; **śis**, BG·41.25), thus bringing their total number in Cisalpine Celtic to four. Seven of the nine new instances of san are written with the butterfly form ⋈, while one inscription (BG·41.16) uses the rare and late double-axe variant ⋈ twice.

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Addendum:

After the main part of this article had been finished, I accidentally found another possible example of san that has not been recognised in Cisalpine Celtic scholarship so far. On a tour of museums and collections of Gallo-Greek inscriptions in Southern France with Coline Ruiz Darasse, I saw in the Musée d'Histoire de Marseille on 19 April 2023 a fragment of a ceramic vase from Campania in Southern Italy (the inventory number D91·9·68 is scratched on its foot). On its bottom, it bears a fragmentary inscription that includes an instance of butterfly san. The object was found in the oppidum of Baou de Saint-Marcel in the 11th arrondissment of Marseille. Bats (1988: 141; 2011: 217) assigns it to the 2nd century b.c., but the legend on the glass case in the museum speaks of a date between 100–50 b.c.

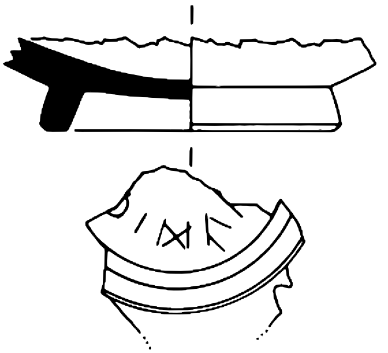

Fig. 1: 'Baou de Saint-Marcel' after © Guichard, Rayssiguier & Chabot 1988: 80, Documents d'Archéologie Méridionale 11.

The inscription, which appears to be dextroverse, is written in large, well-executed letters inside and along the protruding rim on the bottom of the vase, with the base line facing outwards. Its first editors Guichard, Rayssiguier & Chabot (1988: 79–80 fig. 7, no. 102) regarded it as an Iberian graffito, but Bats (1988: 131 fn. 28, 141–142 fig. 13; 2011: 217–218 fig. 25) recognised the script as Lepontic ("alphabet de Lugano", "gravé en alphabet gaulois cisalpin"). Three letters are fully preserved. Two, one on each side, are only partially preserved, of which the left one can be securely amended to an omicron. Only one oblique hasta remains of the rightmost letter. At its top, the faintest trace of an oblique hook going downwards to the right is visible. The letter is either a dextroverse mu, nu or pi. If no significance is afforded to the trace of the hook, iota is also possible. The side hastae of the san are not perfectly closed. My provisional reading is]**ọiśa**.[(where the dot stands for **m**, **n**, **p** or **i**). No clear analysis suggests itself at the moment. Bats (1988: 141; 2011: 217) compares the sequence with the name **koiśa** in TI·2, but as I have argued in (34) above, I am doubtful of that reading, for which I instead prefer **koma**.

Arguments for associating this inscription with the Cisalpine Celtic trad-

ition are the use of butterfly san and its discovery in an arguably Gaulish context. Therefore it has been given the siglum BR·1 in LexLep. Campanian pottery was a common merchandise. In view of the fundamental geographical confinement of the Lepontic script to Northern Italy, the graffito was most likely added there. Perhaps the object had been first traded to Cisalpine Gaul, and then came to Transalpine Gaul through secondary trade. It is unlikely that the inscription had been engraved in a local language in Campania. Although butterfly san occurs in southern, Campanian Etruscan (Conway 1897: 524–527), the presence of omicron speaks against an Etruscan text. Somewhat further afield, a butterfly-shaped character occurs also in South Picene, where it represents a vowel which is transcribed as *í* (Zamponi 2019: 199; cf. Conway 1897: 528–529, who subsumes it under 'East Italic' or 'Sabellic'). However, there is no reason to make connection of BR·1 with South Picene since the inscription features no other typical signs for that writing tradition.

In any case, the inscription from Baou de Saint-Marcel deserves further study.

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Observations on the Carona (Bergamo) inscriptions

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Abstract

This paper reviews the inscriptions engraved in the Alphabet of Lugano discovered at the apparently votive site of Carona (Bergamo), which probably date to the third through first centuries BC. Though they have been known about for over a decade, they have not been intensively investigated, nor have their linguistic features been integrated into what is known about Cisalpine Celtic. This paper takes some first steps in those directions based upon the inscriptions published through 2014.

Prelude[1]

In 2005, Felice Riceputi and Francesco Dordoni, two local scholars, discovered the site of Carona (Bergamo) on the southern slope of Mt. Aga in the Italian Alps, where well over 250 stones bear pictorial engravings – there are tokens of Solomon's knot, crosses, ladder shapes, circles, stars, hearts, animals, humans, warriors, etc. (see Casini et al. 2008: 77) – and two bear ancient inscriptions. At the time, Riceputi and Dordoni noted only pictorial engravings incised from ca. 600 AD to the mid-nineteenth century, but subsequent visits to the site led to the discovery of the inscriptions, which Motta 2016 reports as being somewhat fewer than 80 in number as of excavations completed in 2015.[2]

[1] I should like to thank Charlene Eska, Ronald Kim, Jean-François Mondon, and Paul Russell for extensive discussion about the Carona inscriptions, as well as two anonymous readers for their comments. All usual disclaimers apply.

[2] Motta 2016 reports that work at the site ceased after 2015 owing to lack of funding.

The site is divided into four sectors designated as follows (Casini & Fossati 2013a: 377–378):

a. Le Torbiere at 2350–2384 m has 41 stones with pictorial inscriptions.
b. Aga at 2356–2427 m has stones with the same pictorial themes as Le Torbiere.
c. Valsecca has not been investigated as yet.
d. Camisana at 2112–2260 m has 139 stones, two of which bear ancient inscriptions.

The stone designated as Camisana 63 bears seven brief inscriptions in the Camunic alphabet (after Casini & Fossati 2013a: 382):

a. liu
b. zait
c. teli
d. kpa
e. tusa
f. ?**aru**
g. ?**aru**

These inscriptions may well be in the Camunic language, about which almost nothing is known, and will not be treated further here.

The remainder of the inscriptions, largely engraved in the Alphabet of Lugano, are on the stone designated as Camisana 1, which is ca. 16 m^2 in size at an altitude of 2248 m above sea level. It bears 44 inscriptions which have been published by Casini et al. 2008, 2014a, 2014b and Casini & Fossati 2013a.[3] Camisana 1 is close to a pass which leads to Valtellina and Val Seriana, as well as near the River Brembo (Casini et al. 2008: 92). The large stone is located so as to dominate the Val Camisana (Casini et al. 2014b: 105) and has been said to be the focal point of a natural sanctuary (Casini et al. 2010: 145).

A few bronze objects located around Camisana 1 with the aid of a metal detector can be dated to the fifth century BC (Casini et al. 2010: 133). A fibula can be confidently attributed to the Golasecca culture (Casini et al. 2010: 146). This suggests that Carona was a votive site.

[3] Motta (in Casini et al. 2014a: 201; 2014b: 112–113) and Motta 2015: 41; 2016: 335 suggest that not all of the inscriptions are necessarily Celtic.

The inscriptions in the Alphabet of Lugano have been dated to the third to first centuries BC upon the basis of the shape of the character ⟨a⟩, which earlier was closed Ⱥ, but which shifted to open ⅁ when the shape ⅁, which earlier represented /ɸ/, became available with the loss of the voiceless bilabial fricative (Casini et al. 2008: 79; 2014a: 180).

The texts of the inscriptions published thus far[4]

1. **aTeriolaniaKios** ⇐ (BG·41.1)
2. **Timirios** ⇐ (BG·41.2)
3. **rolios** ⇐ (BG·41.3)
4. ?]**ạeṛ**[*24 cm.*]**saliuiui** ⇐ (BG·41.4)
5. **zaśu**[5] · **Poininos** · **KoPenaTis** · **Tonoiso** ⇐ (BG·41.5)
6. **solos** ⇐ (BG·41.6)
7. **mauila** · **uiTeKioiṣ** · **eT** ⇐ (BG·41.7)
8. **oisaPi** ⇐ (BG·41.8)
9. **leTa** ⇐ (BG·41.9)
10. **Pusi** ⇐ (BG·41.10)
11. **noṣarTi** · **K{P}[l]amuram Poinunei** · **oś** ⇐ (BG·41.11)
12. **aPueso** ⇐ (BG·41.12)
13. **Ṭiu** · **Praino** ⇐ (BG·41.13)
14. **Tị** · **i͡siTi** ⇐ (BG·41.14)

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[4] Numbering is as per Casini et al. 2008, 2014a, 2014b and Casini & Fossati 2013a. Sigla for Cisalpine Celtic inscriptions, in general, are after LexLep. ⇐ and ⇒ indicate the direction of the ductus, which is usually sinistrograde, but not exclusively. Readings are mine based upon the photographs and drawings published by Casini et al. 2008, 2014a and Casini & Fossati 2013a. Permission to reproduce images from their publications for this article was not granted, so I provide the URL to where an image may be viewed on-line when drawing attention to an epigraphic feature.

Epigraphic symbols: Square brackets [ ] indicate characters which are restored or can no longer be read; round brackets ( ) indicate characters that were left out by the engraver; curly brackets { } indicate characters erroneously incised by the engraver; the underdot ̣ indicates characters which are damaged or no longer clearly legible; × indicates space for a character that cannot be read; the tie-bar ͡ indicates that characters are engraved as ligatures; the pipe | indicates line breaks.

[5] LexLep suggests that "a reading of the second letter as epsilon" is possible, thus yielding the form **ześu**, as attested in (35) and (54); see https://lexlep.univie.ac.at/wiki/BG·41.5 (accessed 15 May 2022).

15. Ṭị ilus Ṭọṛḳọṣ ⇒ (BG·41.15)
16. ⅃BCD||FGHIKLMNOΓQRSTV𐌅 ⇒
17. PeKuśia isos · śuKsim[6] ⇐ (BG·41.16)
18. Teụạ · asTuo ⇐ (BG·41.17)
20. PiPen ⇐ (BG·41.18)
27. anio · arPaTimoi · risi · riaśana · TanaTani · i[×××××]**uerioPoi · iKnoiso · oisenu e**[×××××]**eTiun ·· Piuos · uPi**[×××××]**aPauaTos · ase · KaTuTiniois · sionPiri** ⇐ (BG·41.19)
31. alieı͡ṣ̣ ⇐ (BG·41.20)
32. Ti isiTi Pesọui ⇐ (BG·41.21)
35. ześu · is(i)Ti neisu · K[⇐ (BG·41.22)
37. iluṣ ⇒ (BG·41.23)
39. Penini ⇐ (BG·41.24)
41. siś ⇐ (BG·41.25)
43. Ti uPa ⇐ (BG·41.26)
45. Pe ⇐ (BG·41.27)
52. Pe ⇐ (BG·41.28)
53. Pe ⇐ (BG·41.29)
54. Ti ześu ⇐ (BG·41.30)
56. ı͡siTi
57. ı͡siTi
58. ı͡siTi
59. ı͡siTi
60. ı͡siTi
61. ı͡siTi
62. ı͡siTi
63. ı͡siTi
64. ı͡siTi
65. ı͡siTi
66. ı͡siTi
67. ı͡siTi
68. ı͡siTi

[6] This inscription is engraved between orientation lines. Another inscription immediately above, also between orientation lines, has been effaced. They probably formed a single text. See Casini et al. 2014a: 186, fig. 6 (viewable on-line at https://www.academia.edu/29071203/Nuove_iscrizioni_in_alfabeto_di_Lugano_sul_masso_Camisana_1_di_Carona_Bergamo_).

General remarks on the inscriptions

There are a number of interesting features in the Carona inscriptions. First of all, there appear to be a number of verbal desinences attested: 3. sg. pres. **-Ti** (11, 14, 32, 35, 56–68); 3. sg. pret. **-u** (5, 35, 54); and 3. pl. pret. **-us** (15, 37). While **-u** and **-us** are attested elsewhere in Continental Celtic, e.gg., 3. sg. **KarniTu** (RIG E-5 = PG·1.2 & 1.4) and 3. pl. **KarniTus** (e.g., RIG E-1 = NO·21.1), unapocopated **-Ti**, if correctly identified as such, is the first known occurrence in Continental Celtic outside of Celtiberian. Its presence in (11), in which a nominal direct object also occurs, suggests that **-i** is not a clitic object pronoun (though clitic doubling is a formal possibility).

An apparent oddity of these inscriptions, since Carona appears to be a votive site, it that the apparent verbal forms usually appear without an overt subject. We may note that this is also the case with the Celtic inscription at the so-called *Mur d'Hannibal* (Liddes, Valais, Switzerland), another high Alpine site (see Eska & Eska 2022: 23–24). This matter is raised below.

In the matter of nominal flexional morphology, thematic gen. sg. **-oiso** (5, 27) had been attested only in inscriptions from no later than the fourth century BC, and generally earlier than that. Thematic instr. pl. **-ois** (7, 27) is attested for the first time in any Celtic language. Elsewhere in Continental Celtic, the athematic desinence has been adopted, e.g., Transalp. Celt. *mesamobi* (RIG L-66). Motta 2015: 40 concludes that this site preserves archaic features owing to its geographic marginality.

In the matter of nominal derivational morphology, the dative singular theonym **Poinunei** (11) provides the first example of *n*-stem flexion with the lengthened grade suffix adopted after the nominative singular in Cisalpine Celtic. This is the norm in Celtiberian, e.g., nom. sg. **useiđu** (MLH K.1.1 B7 = Hesp. Z.09.01), gen. sg. **useiđunos** (e,g., MLH K.1.3 ii 15 = Hesp. Z.09.03), dat. sg. **useiđunei** (Hesp. CU.00.02). There are also a few tokens in Transalpine Celtic, e.gg., in the dative singular derivatives βλανδοουικ**ουν**ιαι (RIG G-146 = RIIG VAU-06-01) and τοουτ**ουν**ιαι (RIG G-163 = RIIG GAR-02-03). Heretofore, only the *o*-grade suffix was known in Cisalpine Celtic, e.gg., dat. sg. **aTilonei** (TI·12) and **Piuonei** (TI·39).

A noteworthy feature is that the form **Ti** occurs at the beginning of five inscriptions (14, 15, 32, 43, 54).

Preliminary linguistic evaluation

Though it has been nearly a decade since the last publication of any of the Carona inscriptions, there has not yet been a systematic linguistic analysis of them. Motta has offered some commentary in Casini et al. 2008, 2014a, 2014b and Motta 2008, 2015 & 2016, as has LexLep,[7] but the features of these inscriptions have not yet been integrated into what is known about Lepontic. What follows is an attempt to catalogue what can be said about the language of these inscriptions at this time, both what conforms to previous knowledge and what is new. No claim is made that this is a definitive account.

1. aTeriolaniaKios ⇐ (BG·41.1)

Motta (in Casini et al. 2008: 94–95) divides the text as **aTeriola niaKios** and sees a masculine *ā*-stem idionym and patronymic in *-i̯o-*. LexLep prefers to divide the text as **aTerio laniaKios** with a thematic nominative singular idionym with loss of inherited nom. sg. -/s/.[8] There are no word dividers. Motta's word division results in the initial consonant group /nj/-, which would be unusual for Celtic. In support of the analysis of LexLep, one may note the Latinised idionym aterivs (AE 1993, 1245[b])[9] and the onomastic element *lano-* in Latinised visv**lan͡i**vs (CIL XI 709).

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[7] On the pages for individual words.

[8] See https://lexlep.univie.ac.at/wiki/aterio and https://lexlep.univie.ac.at/wiki/laniakos (accessed 15 May 2022). A reviewer suggests that **aTerio** – and other forms terminating in -**(i)o** – could be *n*-stems in which Celt. -/u:/ was lowered in final position. In view of the lack of any positive evidence for such a change anywhere else in Celtic, I do not find this view credible.

[9] Probably continuing proto-Celt. */ɸat^{h}er/- 'father'. In view of Iosad 2023, I now reconstruct proto-Celtic forms as evincing a contrast between the plosive series via an overspecified system, the proto-Indo-European voiceless plosives being continued via the feature [spread glottis], the proto-Indo-European voiced plosives being continued via the feature [voice], i.e., */p^{h} t^{h} k^{h}/ vs. */b d g/. I posit that this contrast shifted to one of [spread glottis], i.e., /p^{h} t^{h} k^{h}/ vs. /p t k/, in Cisalpine Celtic after some of its distinctive innovations took place, but before its earliest attestations (Eska, *in preparation*). This may well obtain for Hispano-Celtic and Transalpine Celtic, as well, but further scrutiny is required.

2. Timirios ⇐ (BG·41.2)

This form is likely a thematic nominative singular idionym. I am not aware of any good comparanda.

3. rolios ⇐ (BG·41.3)

This form appears to be a thematic nominative singular idionym. The root appears to be the same as that attested in Latinised gen. sg. ROLOGENI from a potter's stamp from London (IPSTS 266).

4. ?]**ạeṛ**[*24 cm.*]**saliuiui** ⇐ (BG·41.4)

It is uncertain whether any characters are lost prior to the sequence of **ạeṛ**. Though the sequence **saliuiui** after a considerable length of damage to the stone is assumed to be part of the same inscription, the characters are considerably larger than the **ạeṛ**, so I am dubious.[10] CASINI et al. 2008: 80 see a word divider and read the second sequence as **saliu · iui**, but I see no evidence of a word divider in the available photographs.[11] Though final **-ui** is identical with the thematic dative singular desinence and would make sense in a votive context, the preceding sequence is completely unclear to me.

5. zaśu · Poininos · KoPenaTis · Tonoiso ⇐ (BG·41.5)

zaśu

I read a clear ꟻ = ⟨a⟩ in this form,[12] but it could easily be an error for

[10] So also LexLep at https://lexlep.univie.ac.at/wiki/BG·41.4 (accessed 15 May 2022). See CASINI & FOSSATI 2013a: 389, fig. 10 (viewable on-line at https://www.academia.edu/8824272/INCISIONI_RUPESTRI_E_ISCRIZIONI_PREROMANE_A_CARONA_VAL_BREMBANA_BERGAMO_Stefania_Casini_e_Angelo_Fossati).

[11] So also LexLep at https://lexlep.univie.ac.at/wiki/BG·41.4 (accessed 15 May 2022). See CASINI & FOSSATI 2013a: 389, fig. 10 (viewable on-line at https://www.academia.edu/8824272/INCISIONI_RUPESTRI_E_ISCRIZIONI_PREROMANE_A_CARONA_VAL_BREMBANA_BERGAMO_Stefania_Casini_e_Angelo_Fossati).

[12] See CASINI & FOSSATI 2013a: 389, fig. 10 (viewable on-line at https://www.academia.edu/8824272/INCISIONI_RUPESTRI_E_ISCRIZIONI_PREROMANE_A_CARONA_VAL_BREMBANA_BERGAMO_Stefania_Casini_e_Angelo_Fossati).

𐌇 = ⟨e⟩ given the amount of space between the horizonal bars and in view of the attestation of **ześu** in inscriptions (35) and (54). See Kent 1926 and Buonocore 2019 on the typology of epigraphic errors, including the omission of a stroke in the execution of a character.

The characters 𐌚 = ⟨z⟩ and 𐌛 = ⟨ś⟩ represent the tau Gallicum phoneme in forms such as **uvamoKozis** (CO·48) < proto-Celt. **/gost^{h}i/-* and **iśos** (VA·6) < proto-Celt. */ist^{h}o/-, but are known to sometimes represent coronal plosives; cf. **seKezos** (CO·57) /seget^{h}os/[13] and **meśiolano** (MI·10.1) /medjo/-. See further Stifter 2010 and in this volume.

Mees 2020: 24 assumes the reading **zaśu** and connects it to the root **steh$_2$-* 'stand', but does not discuss the overall morphology of the form. LexLep assumes the reading **ześu** and suggests that it could represent /dedu:/ = [deðu:] 'gave', to which compare **TeTu** (CO·48).[14] An alternative phonetic analysis could be [t^{j}etu].

Motta (in Casini et al. 2008: 97) presumes that, if **zaśu**/**ześu** is a verb, **Poininos** must be the subject, and takes **KoPenaTis Tonoiso** to be a two-term personal name with idionym and patronymic. On the latter point, he is followed by De Bernardo Stempel 2014: 98 and Mees 2020: 24.

I note the common appearance of apparent verbs without subject in the Carona inscriptions — at least in (5, 14, 32, 54, 56–68), perhaps in (35, 37, 43). This may be because the subject is simply to be understood, the inscription being a private dedication and the dedicator/engraver, of course, knowing who s/he is, and the god knowing, as well.[15] Under this analysis, it is clear that the dedications in the δεδε and ievrv series of inscriptions in Transalpine Celtic include an overt subject because the inscription is public and the dedicator wants to be known, e.gg.:

(1) a. RIG G-27 = RIIG BDR-09-01:
ουηβρουμαροϛ | δεδε ταρανοου | βρατου δεκαντεμ
'Vebrumaros offered a tithe to Taranus in gratitude'

[13] This orthographic sequence could also represent proto-Celt. */segesto/-, but, in view of **seχeθu** (NM·6.1), it seems more likely that ⟨z⟩ represents a coronal plosive in **seKezos**.

[14] See https://lexlep.univie.ac.at/wiki/ześu (accessed 15 May 2022).

[15] I owe this very pertinent suggestion to Paul Russell.

b. RIG L-10 = RIIG SEL-02-01:
LICNOS CON|TEXTOS · IEVRV | ANVALONNACV | CANẹCOSEDLON
'*Licnos* the *contextos* offered a *canecosedlon* to Anvalonnacos'

Poininos

Poininos is a well-known theonym attested in Latin sources as *Poenīnus*. De Bernardo Stempel 2013: 85; 2014: 93, 98; Mees 2020: 25, and Delamarre 2021: 222–223 svv. **poiniācon** and **poininā**, **-on**, connect *Poenīnus* to a supposed proto-Celtic root */k^{wh}ojn/-, allegedly continued in its nil-grade form by OIr. *cin* 'guilt, fault, crime'. The Old Irish form, however, is a *t*-stem, derived by Thurneysen 1946: 110 from */k^{wh}in-ut^{h}/-, which obviously does not occur in *Poenīnus*. More significantly, as demonstrated by Schrijver 1999: 134[2], */i/ regularly becomes /u/ after a labiovelar in Old Irish, so the equation of *Poenīnus* with OIr. *cin* cannot stand.

Motta 2010: 401–402, on the other hand, following many others going back at least to Zeuss 1837: 5*, connects the theonym to the Celtic etymon */k^{wh}enno/- 'head, top, summit' > Og. Ir. **QENO-** 'head', OIr. *cenn* 'head, roof, endpoint', OW *penn* 'head', MW *penn*, 'head, top, summit, etc.', OCorn. *pen* gl. 'capud', OBret. *penn* 'head, end, top'. He suggests that the Celtic theonym became confused with oral traditions about Hannibal transiting the Alps at the Great Saint Bernard Pass, which led to orthographic ⟨poen⟩- after *Poenī*, the Roman name for the Carthaginians.

There is another example of such an orthographic crossing. Tansey 2019 proposes that the cognomen *Poenus* attested in the *Fasti consulares Urbisalvienses* represents the archaic spelling of *Pennus*. This is not possible, however. Lat. /oe̯/ could monophthongise to /u:/ – cf. *Pūnicus* beside *Poenicus* 'Carthaginian' –, but *Poenus* cannot have anything to do with *Pennus*, which itself is probably an old form. *Poenus* can only represent a contamination.[16]

The attestion of this theonym as gen. sg. **Penini** elsewhere in the Carona corpus (39), furthermore, clinches its analysis as being derived from proto-Celt. */k^{wh}enno/- 'head, top, summit', since Celt. /oj/ does not monophthongise in non-final position in any variety of Continental

[16] I should like to thank Michael Weiss for discussion on this matter.

Celtic. I also note that the abbreviation **Pe** occurs three times in the Carona corpus (45, 52, 53), presumably for a case form of thematic **Penino-** or *n*-stem **Penun-**.

KoPenaTis

As mentioned supra, Motta (in Casini et al. 2008: 97), De Bernardo Stempel 2014: 98, and Mees 2020: 24 take **KoPenaTis** to be an *i*-stem idionym followed by a thematic genitive singular patronymic **Tonoiso**. De Bernardo Stempel wishes to connect **KoPenaTis** to the 'smith' etymon, but we would expect *__KoPan-__ upon the basis of forms such as *Gobannitio* (Caesar, BG vii 4.2) and Latinised dat. sg. gobanni[c]o (CIL V 7290). It is true that /a/ is known occasionally to be fronted before nasals, but a connection to the 'smith' etymon leaves the suffix **-aTi-** unaccounted for. Mees transcribes the putative idionym as *Compenatis*.

Following a suggestion by LexLep,[17] I take the sequence **Poininos KoPenaTis** to be the theonym followed by an adjectival epithet and derive it from intensive */k^{h}om/- + */p^{h}enno/- 'summit' + geographical adjective forming *-/a:t^{h}i/- – cf. Transalp. Celt. *ναυμαcατιc* 'of Naumausos' (RIG G-153 = RIIG VAU-13-01) and lixovi**ati**s 'of Lexovios' (RIG M-195)[18] –, perhaps 'of the mountaintop' in light of the non-transparency, in Celtic terms, of the root **Poin-**. The non-attestation of an Irish **__co(c)cenn__ or a Welsh **__cymhenn__ leaves us without any semantic guidance from Insular Celtic.[19] Lambert 2013: 119–120 discusses such epithets employed with divine names, e.gg.:

(2) a. marti randos**ati** (CIL XIII 1516)
b. deo mercvri | dvmi**ati** (CIL XIII 1523)

Tonoiso

Elsewhere in the Cisalpine Celtic corpus, genitives are employed either as patronymics on funeral inscriptions, e.gg., **alKouinos** | **aśKoneTi** (TI·41) and **esoPnos KePi** (PV·1), or as proprietary or name of manufac-

[17] See https://lexlep.univie.ac.at/wiki/BG·41.5 (accessed 15 May 2022).
[18] N.B. the effacement of the nasal at a morpheme boundary, as is the norm in Cisalpine Celtic (Eska 2002: 263–268).
[19] I leave aside MW *cymen* 'wise' as being of uncertain etymology.

turer inscriptions, e.gg., **Plioiso** (CO·72) and **KiraTi** (CO·66.1), neither of which make sense in this inscription. Here gen. sg. **Tonoiso** – cf. Latinised Cisalp. Celt. gen. sg. DONNI (CIL V 7231) and Transalp. Celt. DONNVS RIG M-149, 169) – perhaps is used to indicate the name of the dedicator, i.e., as an agentive genitive. Cf. **oisaPi** (8) and **Pusi** (10).

6. solos ⇐ (BG·41.6)

This form appears to be a thematic nominative singular idionym. Cf. Cisalp. Celt. **sola** (NO·20) and Transalp. Celt. SOLA (CIL V 6553) and SOLLOS (RIG M–270).

7. mauila · uiTeKiois · eT ⇐ (BG·41.7)

mauila

This form appears to be an *ā*-stem nominative singular idionym. Cf. Latinised Transalp. Celt. MAVILLA (CIL XIII 4003). MOTTA (in CASINI et al. 2008: 97) takes it to be a masculine *ā*-stem idionym. LexLep takes it to be a feminine *ā*-stem derived with dim. *-illā*.[20] Note the loss of intervocalic *[ɣ̊] < proto-Celt. */magu/- 'servant'.

uiTeKioiṣ

MOTTA (in CASINI et al. 2008: 99) states that the flexional morphology of this form is "non chiara", but it clearly is a thematic instrumental plural that continues proto-IE *-*ōis* via Osthoff's Law, whereby a long vowel is shorted before a sonorant followed by another consonant. He suggests (in CASINI et al. 2008: 97) that the stem of **uiTeKioiṣ** is composed of onomastic material. For the initial element, proto-Celt. */wint^{h}o/- 'wind' may be possible; cf. Latinised VIN͡TELIVS (AE 1897, 3), VINTIDIAE (CIL XIII 2305 dat. sg.), and VINTINVS (AE 1996, 965). Perhaps we have to do with a comitative instrumental 'along with the family of *__uiTeKos__'.

[20] See https://lexlep.univie.ac.at/wiki/mauila (accessed 15 May 2022).

eT

This form appears to be an abbreviation, perhaps for the idionym of a dedicator; cf. **oś** at the end of (11). The *n*-stem nominative singular idionym **eTu** is attested at VA·23. The genitive singular would be ***eTonos** or ***eTunos**.

8. oisaPi ⇐ (BG·41.8)

This form is likely a thematic genitive singular idionym, perhaps to be understood as '(a dedication) by ***oisaPos**' or '(a dedication in behalf) of ***oisaPos**'. I am not aware of any good comparanda.

9. leTa ⇐ (BG·41.9)

This form appears to be a feminine *ā*-stem nominative singular idionym. Cf. Latinised dat. sg. LEDIAE (CIL III 4743).

10. Pusi ⇐ (BG·41.10)

This form appears to be a thematic genitive singular idionym, perhaps to be understood as '(a dedication) by ***Pusos**' or '(a dedication in behalf) of ***Pusos**'. Cf. Latinised Transalp. Celt. gen. sg. BVSSI] (IPSTS 50).

11. noṣarTi · K{P}[l]amuram · Poinunei · oś ⇐ (BG·41.11)

noṣarTi

This form was read as **noiarTi** by CASINI et al. 2008: 80, but they correct it to **noṣarTi** in 2014a: 185. It appears to be a third person singular present tense verb, especially in view of the accusative singular form that follows it. At this point, I have no worthwhile suggestion for its analysis, which clearly must be considered in conjunction with the direct object and the votive context.

MEES 2020: 26 analyses this form as a preverb **no-** + preverb or pronoun **i-** + root **ar-**, which he takes to be the nil-grade of proto- IE **perh₃-* 'give' + affixation to make a *t*-preterite. I find little to recommend such an analysis, as I would expect proto-IE **nu* to continue to bear its inherited vocalism – cf. Transalp. Celt. *nu* (RIG L-66), probably 'now' – and the

t-preterite in Continental Celtic, at least as it is known to date, continues the proto-IE imperfect – built from the present stem – to which is affixed either 3. sg. perf. *-e*, e.g., **KariTe** (VA·6) < pre-Celt. **kr̥-i̯e-t* + *-e* , or 3. sg. perf. *-ū*, e.g., **KarniTu** (RIG E-5 = PG·1.4) < pre-Celt. **karne-i̯e-t* + *-ū*. I would expect a *t*-preterite of proto- IE **perh₃-* to appear as **(ɸ)arnat* + *-e*/*-ū* < proto-IE **pr-n-h₃-t* in Cisalpine Celtic.

K{P}[I]amuram

This *ā*-stem accusative singular form clearly reads 𐌊𐌀𐌌𐌅𐌌𐌀𐌓𐌊 = **KPamuram** ⇐,[21] but certainly is to be corrected to 𐌊𐌀𐌌𐌅𐌌𐌀𐌋𐌊 = **Klamuram**; cf. 𐌀𐌋𐌀𐌋 = **lala** for 𐌀𐌋𐌀𐌓 = **Pala** at TI·39.

Mees 2020: 24 suggests a connection with Lat. *clāmō* 'call, cry out'. The Latin verb is often used of animal vocalisations, but, significantly, can be used in invocations. If there were a Celtic cognate of *clāmō*, and Continental Celtic, like Latin, could make a verbal abstract in **-ūrā*, the form could conceivably mean 'proclamation' or 'declaration' vel sim.;[22] cf. Lat. *statūra* 'stature' ← *status* 'standing' and *ūsūra* 'enjoyment' ← *ūsus* 'used' (see Weiss 2020: 322).

Poinunei

Though the divine name **Poininos**/*Poenīnus* is normally a thematic stem, it is interesting to find it attested also as an *n*-stem – 'the summit-y one' as opposed to **Poininos** 'the high one' vel sim. – and with lengthened grade **-un-** extended from the nominative singular. Mees 2020: 23 disputes the reading of the ⟨**u**⟩, which can hardly be doubted,[23] and struggles to read the form as a thematic locative singular functioning as a dative, but the analysis of the form as an *n*-stem dative singular is entirely straightforward.

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[21] See Casini & Fossati 2013a: 390 fig. 11 (viewable on-line at https://www.academia.edu/8824272/INCISIONI_RUPESTRI_E_ISCRIZIONI_PREROMANE_A_CARONA_VAL_BREMBANA_BERGAMO_Stefania_Casini_e_Angelo_Fossati).

[22] Given the apparent votive nature of the Carona site, a comparison with OIr. *glám* 'satire, censure; outcry' seems less likely to me.

[23] See Casini & Fossati 2013a: 390 fig. 11 (viewable on-line at https://www.academia.edu/8824272/INCISIONI_RUPESTRI_E_ISCRIZIONI_PREROMANE_A_CARONA_VAL_BREMBANA_BERGAMO_Stefania_Casini_e_Angelo_Fossati).

oś

oś in final position is taken by Mees 2020: 27 to be related to the Celtiberian apparent pronominal forms **osKueđ** (e.g., MLH K.1.1 A3 = Hesp. Z.09.01) and **ođias** (MLH K.1.1 A8 = Hesp. Z.09.01). Given the presence of an idionym at the end of (5) and the probable abbreviation of an idionym at the end of (7), I am given to taking **oś** as the abbreviation of an idionym; cf. **ośoris** at CO·62. It is possible that **oś** is an abbreviation for the subject of a single clause, here in clause-final focus position. But it is also possible that it does not form part of a clause with the three preceding forms.

12. aPueso ⇐ (BG·41.12)

This form is likely a thematic nominative singular idionym with loss of final inherited -/s/ – cf. **aTerio** in (1). LexLep also suggests that the form could be an *n*-stem nominative singular with Latinised desinence.[24] I am not aware of any good comparanda.

13. Ṗiu · Praiṇo ⇐ (BG·41.13)

Ṗiu

This form appears to be an *n*-stem nominative singular idionym /piwu:/, the dative singular of which is attested as Cisalp. Celt. **Piuonei** (TI·39).

Praiṇo

I read the fourth character of this form as ꟾ = ⟨**i**⟩ with a stray mark at the bottom of the hasta rather than as Ʇ = ⟨**l**⟩ for both epigraphic and linguistic reasons. The angular horizontal stroke is exactly parallel with a second similar incision, which suggests that they are a pair and do not belong with the vertical hasta; see Fig. 1.[25] It is also

[24] See https://lexlep.univie.ac.at/wiki/apueso.

[25] From Casini et al. 2014b: 109 fig. 10 (Joseph F. Eska) (viewable at https://www.academia.edu/8152783/Un_santuario_celtico_alle_fonti_del_Brembo_Le_iscrizioni_in_alfabeto_di_Lugano_incise_su_roccia_a_Carona_Bergamo_).

unlikely that ⟨**l**⟩ is to be read since the group */ln/ is thought to have assimilated to */ll/ already in proto-Celtic (cf. Stifter 2023). For the root, perhaps cf. Latinised dat. sg. braemvsae (CIL X 2215) and braetivs (e.g., CIL V 2851). **Praịno** presumably is a thematic nominative singular with loss of inherited -/s/ – cf. **aTerio** in (1). I am not certain that **Ṛiu** and **Praịno** constitute a single inscription. If they do, they appear to be idionyms in asyndeton.

Fig. 1

14. Tị · i͡siTi ⇐ (BG·41.14)

Ti

Given that **Ti** occurs at the beginning of the five inscriptions in which it is attested (14, 15, 32, 43, 54), and before an apparent verb in at least four of the inscriptions (**i͡siTi** 14, **ilus** 15, **i͡siTi** 32, **ześu** 54), it seems likely to be a verbal particle or a vocative. N.B., however, that it does not appear before the apparent verbs in (5, 11, 35, 37, 56–68).

In view of the votive character of the Carona inscriptions, the vocative of 'god' would not be surprising, here most likely as an abbreviation. N.B. that two-character abbreviations are very common in the Cisalpine Celtic corpus, e.gg.:

(3) a. **al** (e.g., BG·38): perhaps to **alios** (CO·73), **alKouinos** (TI·41), etc.
b. **aP** (AO·1.1): perhaps to **aPios** (VR·20).
c. **aT** (e.g., BG·3): perhaps to **aTePu** (TI·8), **aTeraTos** (TI·21), etc.
d. **il** (VA·15): perhaps to **ilauKi** (VA·21).
e. **Ka** (e.g., VA·18): perhaps to **Kasiuos** (VA·1.1), **KaTua** (BG·15), etc.

There is a potential phonological issue, as proto-IE voc. sg. **deiu̯e* would be continued as ***Teue** */tewe/ – in view of nom. sg. **Teu** (VA·6) /teːwuː/ – and abbreviated as ***Te**. But perhaps the raising of */eː/ > /iː/ could be countenanced in view of, e.gg., divogen[ia] (CIL XIII 571) and divvogna (CIL XIII 10024[291]) with the same etymon.[26]

[26] A reviewer suggests that the root could be nil-grade **diu̯o-*, which would mitigate the vocalism issue.

i͡siTi

Under the assumption that this form is a verb, the root *$h_2e\underset{\frown}{i}s$- 'seek' appears to suit the votive context. Semantically, 'seek' > 'ask/request' > 'pray' is straightforward in a religious context.[27] It would continue a denominal *h_2ise-$\underset{\frown}{i}e$-*ti*. The semantics of the root suit the use of the present tense well. Note that the root only survives in Insular Celtic in the MIr. vbl. n. *escaid* 'searching for lice'. The unattested Irish verb perhaps was a denominal < pre-Celt. *$iskā$-$\underset{\frown}{i}e$-.

15. Ṭị ilus Ṗọṛḳọṣ ⟹ (BG·41.15)

Despite all of the damaged characters, the reading of this inscription is certain.[28]

Ṭị

See the discussion under inscription (14).

ilus

Under the assumption that this form is a third plural preterite verb – cf. **KarniTus** (e.g., RIG E-1 = NO·21.1) –, there is little that is straightforward with it. The root *h_1elh_2- 'go' would yield /i:l/- < an inner-Celtic *h_1e-h_1lh_2- (Transponat), but whether the semantics work is in doubt, and we would need to assume that 3. sg. perf. *-*e* was replaced by -$\bar{u}$.

In Eska 2007/2008: 115, I propose that 3. pl. pret. -$\bar{u}s$ in **KarniTus** and iovrvs (RIG L-12 = RIIG CDO-02-01) continue proto-IE 3. pl. pret. *-*rs* via long distance dissimilation. Clearly, this solution does not work for **ilus** unless one were to presume that -/u:s/ had become generalised. An alternative is to posit that final *-/rs/ became detrilled. Ohala & Solé 2010: 86[12] discuss this change when /r/ is in syllabic coda and /s/ in syllabic onset, but word-final position seems a likely environment for such a change, as well.

[27] As a reviewer suggests.

[28] See Casini & Fossati 2013a: 391 fig. 14 (viewable on-line at https://www.academia.edu/8824272/INCISIONI_RUPESTRI_E_ISCRIZIONI_PREROMANE_A_CARONA_VAL_BREMBANA_BERGAMO_Stefania_Casini_e_Angelo_Fossati).

ṬọṛḲọṣ

Motta (in Casini et al. 2014a: 201) leaves open the possibility that **ṬọṛḲọṣ** is a Celtic form which preserves proto-IE */p/. In view of the probable loss of proto-IE */p/ in **aTerio** (1) and the change of proto-Celt. */k^{hw}/ > /p^{h}/ in **Penini** (39) and other forms of the theonym < */k^{hw}enno/-, this seems unlikely. I presume this form to be Celticised Latin or possibly Venetic (cf. Porcio at CIL V 480, V 2499)[29] in origin.

Beyond the doubts concerned with the forms in this inscription, the desinences do not make for a coherent clause. **ṬọṛḲọṣ**, thus, appears to be syntactically isolated from the apparent verb.

16. ⅃BCD||FGHIKLMNO⌈QRSTV𝍸 ⇒

This Roman alphabet includes the characters for ⟨**a**⟩ and ⟨**P**⟩ from the Alphabet of Lugano, and possibly that for ⟨**z**⟩, though perhaps the final character is intended to be Roman ⟨x⟩. It is studied in comparative perspective by Casini & Fossati 2013b, 2016.

17. PeKuśia isos · śuKsim ⇐ (BG·41.16)

PeKuśia

This form is taken to be a feminine *ā*-stem nominative singular idionym by Motta (in Casini et al. 2014a: 201). I am not aware of any good comparanda.

isos

Motta (in Casini et al. 2014: 201) compares **isos** to pronominal **iśos** at VA·6 < proto-Celt. */is-t^{h}o/-. It is not clear to me how a pronominal would fit into the syntax. I wonder whether this form could be a thematic nominative singular idionym.

[29] I should like to thank Michael Weiss for discussion on the potential linguistic identification of porcio.

śuKsim

This form is unusual, first of all, in beginning with ⟨**ś**⟩, which usually represents the tau Gallicum phoneme (though it could also represent a coronal plosive); and secondly in that inherited groups of dorsal + /s/ appear as orthographic ⟨**s**⟩ elsewhere in the Alphabet of Lugano, e.g., **esoPnos** (PV·1), which suggests assimilation to /ss/. But note the use of ⟨x⟩ in Latinised inscriptions, e.g., ꟼ+OBꟽA (VB·24). Either this form is of a foreign linguistic stock – cf. -⟨**Ps**⟩- in **saPsuTai** (VB·3.1) – or -[xs]-, unlike in this form, is normally spelt as -⟨**s**⟩- in the Alphabet of Lugano, which is certainly plausible. Motta (in Casini et al. 2014a: 201) takes the desinence **-im** to reflect the merger of *ā*- and *ī*-stem flexion as attested in later Transalpine Celtic. I remain agnostic about this idea.

The inability to read the text on the preceding line renders it impossible to attempt to make syntactic sense of this inscription.

18. Teụạ · asTuo ⇐ (BG·41.17)

Teụạ

This form is likely to be a feminine *ā*-stem nominative singular idionym; cf. Latinised deva (CIL XIII 6458) beside **Teu** /teːwuː/ at VA·6.

asTuo

This form is unexpected because proto-Celt. */st/ regularly becomes the tau Gallicum phoneme in Cisalpine Celtic. But cf. gen. sg. astvi (CIL XIII 10010[2967]), which suggests that **asTuo** is a thematic nominative singular idionym with loss of inherited nom. sg. -/s/. Though orthographic ⟨**sT**⟩ is not expected, it is not completely unknown in Transalpine Celtic, as in gen. sg. bristas (RIG L-74).

A definitive statement can hardly be made at this time, but this inscription appears to be composed of two idionyms in asyndeton.

20. PiPen ⇐ (BG·41.18)

This form, certainly an abbreviation, is very uncertain. For the initial sequence, other potential onomastic comparanda might be Latinised gen. sg. biborigi (CIL XIII 11127) and bibvlvs (CIL XI 5275).

27. anio · arPaTimoi · risi · riaśana · TanaTani · i[×××××]**uerioPoi · iKnoiso · oisenu e**[×××××]**eTiun ·· Piuos · uPi**[×××××]**aPauaTos · ase · KaTuTiniois · sionPiri** ⇐ (BG·41.19)

This inscription may well be made up mostly of onomastic forms. I cannot offer a completely coherent analysis, so limit myself at this time to the following observations:

a. Note the double word divider between]**eTiun** and **Piuos**.
b. Thematic gen. sg. **-oiso** would seem to guarantee that the inscription is Celtic.
c. Other Celtic desinences appear to be thematic nom. sg. **-os**, gen. sg. **-i**, nom. pl. **-oi**, and instr. pl. **-ois**.
d. **oisenu** may be an *n*-stem nominative singular, but this is not certain. Cf. OISENDINO[? (InscrAqu. III 2927)?
e. One wonders whether]**eTiun** is a thematic or *i*-stem genitive plural, with -/n/ < *-/m/ via feature loss or final 𐌍 = ⟨**n**⟩ for 𐌌 = ⟨**m**⟩ by epigraphic error. Should that be the case, it is important to note that a long vowel before a final nasal has not been shortened. In later-attested Cisalpine Celtic, one finds such a shortening in gen. pl. **Teuoχ**|**Tonion** 'of gods and men' (RIG E-2 = VC·1.2), which would suggest that it continues a speech variety of migrants from Transalpine Gaul.
f. In Cisalpine Celtic, nasals are effaced before /T^{h}/ < proto-IE */T/, e.g., **PiuoTialui** (TI·36.2) < *-/ont^{h}/-, while intramorphemic nasal + /D/ results in a presumed geminate nasal, e.g., **alKouinos** (TI·41) < proto-Celt. */windo/- (ESKA 2002). The orthographic sequence -⟨np⟩- in **sionPiri**, if not evincing an epigraphic error of 𐌍 = ⟨n⟩ for 𐌌 = ⟨m⟩, suggests that the nasal has been weakened, but is not yet effaced. That the effacement has been completed in **KoPenaTis** (5), however, suggests that **sionPiri** could possibly be of a foreign linguistic stock.
g. Clearly Celtic etyma in this inscription are **Piuos** < proto-IE *$g^{u}ih_{3}$-$u̯o$- 'live' as per MOTTA (in CASINI et al. 2014a: 200) and **KaTu-** < proto-IE *$\hat{k}atu$- 'fight' as per LexLep.[30]
h. **anio**: Cf. Latinised ANDIVS (e.g., CIL XII 2274).
i. **TanaTani**: Cf. gen. sg. DANNA|DINNIS (CIL XIII 260) for the first element.

[30] See https://lexlep.univie.ac.at/wiki/katutiniois (accessed 15 May 2022).

j. **iKnoiso**: LexLep compares the base of Latinised IGNIVS (e.g., CIL XII 4870).[31]

31. alie͡i̯s̯ ⇐ (BG·41.20)

MOTTA (in CASINI et al. 2014a: 200–201) compares the thematic nominative singular idionym **alios** (CO·73), but notes that the desinence is obscure.

32. Ti isiTi Pesọui ⇐ (BG·41.21)

Ti

See the discussion under inscription (14).

isiTi

See the discussion under inscription (14).

Pesọui

MOTTA (in CASINI et al. 2014a: 201) suggests that **Pesọui** is a thematic dative singular, but, as LexLep notes,[32] such a form would appear as *__Pesui__.

Formal possibilities for **Pesọui** are as the genitive singular of a thematic *__Pesouos__ or as dative singular ← locative singular *u*-stem *__Pesus__. I am not aware of any good comparanda for this form.

35. ześu · is(i)Ti neisu · K[⇐ (BG·41.22)

ześu

See the discussion under inscription (5).

[31] See https://lexlep.univie.ac.at/wiki/iknoiso (accessed 15 May 2022).
[32] See https://lexlep.univie.ac.at/wiki/pesoui (accessed 15 May 2022).

is(i)Ti

Given the large number of attestations of **isiTi** in the Carona inscriptions and the extreme rarity of ⟨st⟩ in Cisalpine and Transalpine Celtic, Casini et al. 2014a: 192, 201 are very probably correct that the engraver left out an ⟨i⟩ and **isTi** is an error for **isiTi**. See the discussion on this form under inscription (14).

neisu

This form is obscure. It possibly is an *n*-stem nominative singular idionym, as per Motta (in Casini et al. 2014a: 201). I am not aware of any good comparanda, but, under Motta's analysis, **neisu** would be the subject of **is(i)Ti**.

37. iluṣ ⟹ (BG·41.23)

The final ⟨s⟩ is marked as uncertain because it is turned at a 45-degree angle to the rest of the characters.[33] See the discussion under inscription (15).

39. Penini ⟸ (BG·41.24)

This form is the thematic genitive singular of the theonym attested as nom. sg. **Poininos** in (5) as per Motta (in Casini et al. 2014a: 201).

41. siś ⟸ or **śis** ⟹ (BG·41.25)

The direction of the ductus is uncertain, as the character for sigma is frequently reversed. For example, both ϟ and ϟ face leftwards in (5), while ϟ faces rightwards in (17); both inscriptions are engraved in sinistrograde ductus.

This form is likely the abbreviation of an idionym. Possible comparanda are sisiv (RIU III 923) and Latinised Transalp. Celt. sisservs (IPSTS 304) and sissvs (IPSTS 304).

[33] See Casini et al. 2014a: 186, fig. 6 (viewable on-line at https://www.academia.edu/29071203/Nuove_iscrizioni_in_alfabeto_di_Lugano_sul_masso_Camisana_1_di_Carona_Bergamo_).

43. Ti uPa ⇐ (BG·41.26)

Ti

See the discussion under inscription (14).

uPa

Motta (in Casini et al. 2014a: 201) takes **uPa** to be an *ā*-stem nominative singular idionym.

Given that **Ti** appears before an apparent verbal form in all of its other attestations (14, 15, 32, 54), it is worth considering whether **uPa**, likewise, can be analysed as a verbal form. One possibility would be a denominal second singular imperative to the root **u̯ek^{w}-* 'say', i.e., **upā-i̯e-*. Cf. the Latin denominal *vocāre* 'call; invoke; address' for the stem formation in -/a:/-.

45, 52, 53. Pe ⇐ (BG·41.27–29)

This form is almost certainly an abbreviation for the theonym which appears as **Penini** in (39), as per Motta (in Casini et al. 2014a: 201).

54. Ti ześu ⇐ (BG·41.30)

Ti

See the discussion under inscription (14).

ześu

See the discussion under inscription (5).

56–68. i͡siTi

See the discussion under inscription (14).

Some tentative comments in conclusion

Aside from the general remarks on the inscriptions at the beginning of this paper, a few other tentative comments may be made about the Carona inscriptions and their structure.

The numerous inscriptions composed only of nominative singular personal names, e.gg., **aTerio laniaKos** (1), **Timirios** (2), **rolios** (3), **solos** (6), **leTa** (9) & **Piu** (13), generally accord with the idea that we are dealing with a sacred site, as individuals wished to record their visitation. One can compare the numerous Celtiberian personal names at the sacred site of Peñalba de Villastar, e.gg., CALAITOS (MLH K.3.4–6 = Hesp. TE.17.03), TVR(R)OS (MLH K.3.8–9 = Hesp. TE.17.8–9), AIO (MLH K.3.13a = Hesp. TE.17.13a), GVANDOS (MLH K.3.13b = Hesp. TE.17.13b).

Those inscriptions composed only of a genitive singular idionym, **oisaPi** (8) and **Pusi** (10), may indicate the donor of a votive object.

Three of the verbs attested at Carona, if tentatively correctly analysed here, are consistent with those one might expect at a sacred site, **ześu** 'X offered' (5?, 35, 54), **i͡siTi** 'X seeks' (14, 32, 35, 56–68), **uPa** 'speak!' (43). **ilus** (15, 37), however, is not easily analysable.

The multi-word inscriptions with verbs usually do not appear to form a single syntactic unit. This is certainly the case in **ześu** · **is(i)Ti neisu** · **K**[(35), in which a third person singular preterite verb immediately precedes a third person singular present verb. In **za**/**eśu** · **Poininos** · **KoPenaTis** · **Tonoiso** (5), we may have a tripartite structure, **za**/**eśu** 'X offered?' vel sim., **Poininos KoPenaTis** '**Poininos** of the mountaintop', and **Tonoiso** '(made/donated') by **Tonos**' But **noṣarTi** · **K{P}[I]amuram Poinunei** · **oś** (11) potentially is a complete syntactic unit if **oś** is an abbreviation for an idionym that is the subject of the verb.

Finally, the absence of an overt subject for verbs in what is probably a votive site can be explained as the result of these being private inscriptions between the dedicator/engraver and the god, thus **i͡siTi** 'X seeks/prays', **ilus** 'X-PL Xed', **ześu** 'X offered?'. This structure is also attested in the Celtic inscription at the so-called *Mur d'Hannibal*, **Poenino ieur{e}u** (VS·2) 'X dedicated to **Poeninos**', which suggests that it is formulaic in private votive inscriptions.

Much remains to be elucidated about the Carona inscriptions both in terms of structural characteristics and orthographic practice in the employment of ⟨**z**⟩ and ⟨**ś**⟩. We can hope that work at the site can recom-

mence and be completed so that the full extent of the inscriptions can be made known. But, for now, we can welcome the data provided by these inscriptions from a genre not previously attested for Cisalpine Celtic.

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The Cisalpine Celtic (patronymic) suffix *-al-*, revisited

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Abstract

LexLep s.v. *-al-* provides a concise overview of the analysis of the suffix in Cisalpine Celtic, and the present paper aims to contribute to the line of discussion that considers its IE provenance. In addition to the suggestions already referred to in LexLep and elsewhere I will draw attention to the identical-looking patronymic suffix segmented in Thracian personal names by Vladimir Georgiev some fifty years ago. The Bulgarian scholar compared it with what he calls a "Hetto-Luwian possessive suffix" *-al-* and drew attention to some other parallels. The research into the Anatolian data, particularly recently, has offered valuable insights into the prehistory and functions of the suffix(es), and that, by default, justifies a re-visitation of the prehistory of the Cisalpine Celtic patronymic formations in *-al-*.

Thanks to the efforts of the editors and the team of *Lexicon Leponticum* (LexLep; cf. Stifter 2010: 361–366), we have at our disposal an extremely useful database and a valuable research tool for the study of the Celtic linguistic presence in the north of the Apennine peninsula and the adjacent areas in antiquity. The information provided by this resource also has historiographic value, and it is ultimately important that various views on a given problem are reflected there, even those which contradict each other or are mutually exclusive. LexLep s.v. *-al-* offers a concise overview of the analysis of the suffix *-al-* in Cisalpine Celtic, and the present paper aims to contribute to the line of discussion that considers its IE provenance. The vexed problem of the labels applied to the data – Lepontic or/and Cisalpine Gaulish – is not addressed in this paper; for that see the section "Cisalpine Celtic" in LexLep, which also

contains plenty of references, the fundamental discussion in Eska (1998), and most recently Stifter (2020a: 3–10; 2020b: 336–341).

1. LexLep s.v. *-al-*

The entry in LexLep starts with the following introduction: "[t]he suffix *-alo/a-* appears as second-name suffix, apparently forming patronymics; it is characteristic of archaic inscriptions and of inscriptions from the north-west of the Cisalpine Celtic area, for which reason it is usually considered to be Lepontic (in opposition to the Gaulish suffix *-ikn-* of the same function)". As for its functions, it is also added that the suffix is "[n]ot always certainly distinguishable from a North Italic onomastic suffix *-alo-*". There are several difficult cases where the analysis of the sequence *-al-* in given attestations may vary. Thus, Markey & Mees (2003: 143) note that "both **tunal** and **ualaunal** etymologically seem to represent cognomina or functional titles rather than patronymics, i.e. *Dun-al*, **dunon*, 'town, oppidum', *Valaun-al*, **velaunos*, 'qui règne'", while Eska & Wallace (1999: 139) admit that "in *ualaunal raneni* (S 19: Mesocco) and *Tunal Koimila* (S 125: Levo), it is uncertain how the forms in *-al* are to be analysed".[1] These opinions are not included in the discussion offered in LexLep s.v. *-al-*, but the section contains cross-references to these individual entries where further information is provided and these works are cited; see also Stifter (2020b: 355–356) for a concise survey of the problem. Apart from the texts written down in a Celtic dialect, sometimes disputable data is obtainable also from Venetic inscriptions. Thus, the status of *-al-* and hence the exact interpretation of the Celtic personal name in **boi-* in the text from Ateste *Es 127 **.e.go vhrema.i. bo.i.iia.l.na.i**[.] **rebeton**[-]**ia.i. votina.i. .e.petari.s.** still remains contested; see recently Falileyev (2021: 1144–1147).

It should be borne in mind that the quantity of *a* in *-al-* is unknown, and this is aptly noted in LexLep s.v. *-al-*, which briefly enumerates theories regarding its origins. As evident from the passage which contains bibliographic references, a vast majority of scholars have considered it

[1] On **tunal koimila** (VB·26) see also Falileyev (2019: 103–104) and Stifter (2020: 27), and on *-i-* in this and other attestations cf. Prosdocimi (2009: 84–86), de Bernardo Stempel (2011: 27); on]**nialui** (TI·33) see Falileyev (2019: 104–109).

to be historically not Celtic. The suffix *-al-* was viewed as a loan from Etruscan (cf. e.g. Pedersen 1924: 47, and on that see most recently Stifter 2020: 26), Raetic (for these two attributions see also a useful critical overview in Prosdocimi 1991: 163–164) or pre-Indo-European "Ligurian", and, as the editors formulate it, "[t]he formant has no clear IE/Celtic derivation". Nevertheless, LexLep also surveys theories that argue for its Indo-European (and thus Celtic) past. It starts with the assumption that it is "an inherited suffix of appurtenance from PIE **-l*", referring to the seminal historical grammar of Latin by Leumann, for which one may now add the meticulous research of Balles (2008: 1–155) on a considerable number of various suffixes, including diminutive, which contain *-l-* in Latin.[2] LexLep refers also to the classical article by Kretschmer (1905: 106), and the view of the renowned scholar will be echoed in this paper: "[d]ie gentilicische oder patronymische funktion des *l*-suffixes ist vielleicht aus der deminutiven und hypokoristischen entstanden, in der mit *l* abgeleitete namen in allen idg. sprachen verwendet werden".

Apart from Latin, Anatolian data is mentioned in several publications dedicated to Celtic studies. Already Pedersen (1924: 48–54) compared the suffix *-al-*, which he though to be a borrowing from Etruscan, with Lydian data. More recently, de Bernardo Stempel (1999: 226) briefly refers to Hittite *-ala-*, while Markey & Mees (2003: 143) note that

> "Hitt. *-iiali/a-* in agent nouns of possession or reference, particularly those with sacral functions: e.g. *harsiiala-* 'bread-offerer, bearer of the bread-offering' to *harsi-* 'leavened bread', *lahhiiala-* 'warrior, hero' to *lahhiiai-* 'to make war', *ualhhiiala-* 'bearer, caretaker of the cult drink' to *ualhi-* (*ualahi-*) 'cult drink', *tapariialli-* 'governor' to *tapar-* 'to lead, govern' [...]. Although *l*-elaborations in Indo-European are typically agentive, not patronymic, they do form patronymics in the thematised *-ilyo-* (**-el-yo-*) formations of Italic, as well as diminutives in *-il(V)-* such as Lepontic **amašilu**, **antešilu**, **atilonei**, etc."[3]

The scholars continue: "[n]evertheless, the Lepontic use of *-alos*/*-alā*

[2] See also Prosdocimi (1991: 163–176; 2009: 75–76 et passim).

[3] For the Celtic words mentioned in this quotation see LexLep s.vv., and for the letter san in some of them Stifter (2010: 367–374) and in this volume. Cf. also de Bernardo Stempel (2011: 27).

clearly mirrors the patronymic use of the Etruscan *l*-genitive (which itself is often argued ultimately to be of IE origin) and moreover the Northern Etruscan forms at Balone and Spina with their patronymics formed with *-alus*".[4] Below, I will survey some allegedly relevant Anatolian data with focus on Lydian, but the starting point for this discussion will be the article by Vladimir Georgiev (1908–1986) published some fifty years ago (1971).

2. Vladimir Georgiev on the patronymic suffix *-al-*

In his contribution to the *Festgabe für Anton Scherer zum 70. Geburtstag* published in German, the prolific Bulgarian scholar does not mention Celtic data at all. Instead he concentrates on the functions of the suffix *-al-* (and some other forms in *-Vl-*) in Thracian anthroponymy known from Latin and Greek inscriptions. Georgiev suggests there that not all recorded cases of this suffix have a diminutive or expressive function as had been proposed earlier, and some of them require a different explanation. Thus he thinks that the records, for example, of Επταλ- and Κοσωυλ- should be interpreted as respectively "der Epta-ische (Sohn)" and "der Kosou-ische (Sohn)", that is, as patronymics (Georgiev 1971: 165). On the next page of the same article the Bulgarian scholar also suggests that the Thracian suffixes *-il-* and *-ul-*, which he argues function in a similar manner to *-al-*, are secondary, while -ελ- (-ηλ-?) is a variant of them (ibid.: 163).[5] He also adduces examples where names with this alleged patronymic Thracian suffix are found combined with the Greek gen.sg. case endings, as in the inscription from Burdapa near Philippopolis (modern Plovdiv in Bulgaria) Ταταζια Επτελου; on patronymic/pro-patronymic suffixes cf. now Rau (2007: 61). This Greek

[4] For the onomastic formulae in these texts see the fundamental discussions in Prosdocimi (1991: 162–163) and Motta (2009); cf. Prosdocimi (2009: 74–75) for a broader perspective, and concise useful surveys published recently by Stifter (2020: 25–28; 2020b: 355–356). It has been rightfully acknowledged that this type of patronymic suffix in Continental Celtic is unknown outside of the area, cf. Eska (1998: 7).

[5] Cf. in this respect the discussion on *-i-* and *-a-* in the alleged 'Lepontic' patronymic suffix, e.g. in Prosdocimi (2009: 84–92), and note the discussion of suffixes used to form genitival relations in some other IE languages in Rau (2007: 59–60).

inscription dated to the 2nd–3rd century certainly exhibits the second anthroponym in a patronymic function, and the data was compared by Georgiev (1971: 165) with such Greek collocations as Δημοσθένης Δημοσθένους "Demosthenes (Sohn) des Demosthenes", etc. This discussion by Georgiev, hardly noticed outside of Palaeobalkanic studies, is crucial to the subject matter of this contribution, and certainly deserves attention. As other suffixes in *-l-* are treated there as secondary, one should take a closer look at the alleged function of the Thracian suffix *-al-* being used to turn names into patronyms. The article is furnished with a considerable number of examples known at the time of its composition, and this data also needs a certain amount of verification in view of the new readings and discoveries of Thracian (and Dacian) names brilliantly surveyed in the extremely useful catalogue of epichoric onomastics by Dana (2014).

For example, Georgiev (1971: 161–163) provides the list of the then known attestations of Επταλ-; see now Dana (2014: 180) for a definitive catalogue of the names *Eptala*, *Eptela*, etc., with further references, which also indicates a number of corrections to the readings used by Georgiev in the 1970s. This updated collection allows one to raise a number of questions and make some new observations. Firstly, it should be acknowledged that *Eptala*, *Eptela*, etc., with the alleged patronymic suffix are used as idionyms. Certainly, this is not an unsurmountable problem, and students of Celtic are well aware of similar cases in Gaulish, where the patronymic functions of the suffixes *-āko-* and *-gno-* are well examined. Thus, in the words of Russell (2013: 207), "the majority of the evidence [...] suggests that in other non-Gaulish contexts *-gno-*names became simple names, such as *Disocno Dulsonis f.*, *Catavigni Ivomagi f.*, where it is clear that the marker is not patronymic"; reviewing this volume, Eska (2015: 45), following suggestions by Russell, wittily renders Gaulish ΛΟΥΚΟΤΙΚΝΟΣ as 'Lukots Junior'. Apparently, we can see here a blend of patronymic and diminutive flavours, and, as Grandi (2011: 5) notes, "diminutives seem a dynamic and unstable linguistic strategy, which, in the course of ages, has undergone a wide (cyclic?) renewal"; for "semantic child as a source of the diminutive" see Jurafsky (1996: 561–564).[6] Also, in his definitive discussion of names with *-āko-*,

[6] Jurafsky (1996: 567) also observes: "I have assumed that some fundamentally diminutive senses like 'affection', 'hypocorism', 'contempt' and 'small' derive from

Russell (1988: 138) remarks that "[s]ome are likely to be patronymic and the same interpretation is possible for many others. But where the base of the PN corresponds to the first element of a compound name, we must also consider the possibility of hypocorism".[7] The quoted works analyse a number of examples relevant for this discussion, and their number is constantly increasing, see e.g. Falileyev & Kurilić (2016: 270–275) with further references. On the identical diminutive suffix in a number of IE languages (including Celtic) see the new approach by Jurafsky (1996: 565–569), and for Baltic cf. Ambrazas (1993: 50), where the corresponding formations are compared with Slavic nomina attributiva and nomina agentis; cf. also Matasović (2014: 133–134) for the reflexes of the diminutive suffix *-*ikā*- in Slavic. Important for the present discussion is a suggestion to connect hypocoristics, diminutives and patronymics historically, cf. e.g. Jurafsky (1996), Rau (2007: 61–62), or Grandi (2011: 15–19) with further references to earlier discussions.

Secondly, the name without the patronymic suffix is not registered, although its many derivatives – in compounds or hypocoristic names – are attested, cf. e.g. *Eptacenthianus*, *Eptacenthus*, *Eptaper*(*is*), *Eptapor*, *Eptasucus*, etc.; see the impressive catalogue in Dana (2014: 176–184). It may be recalled that its alleged Dacian counterpart *Apta* is known alongside a more frequent *Aptasa*, and also its derivative in *-l-* is found; see Dana (2014: 176 and 9–10). The latter is used as an idionym in its sole attestation in the Greek inscription from Moesia Inferior (Απτηλας Μενίσκου), and this was compared by Dana (2014: 9 and 180) with Thracian Επτηλας. It is worth noting that the Thracian name is recorded both as an idionym (e.g. Επτηλας Μ(ου)καζερεος) and also with the patronymic function (Δεντουπ[ης] Επτηλου). To be fair, most of these and similar discrepancies were noted by Georgiev himself. Thus, in his discussion of *Dizala*, *Disala*, etc., he (1971: 162) compared these with the Thracian name *Diza* uel sim. (Διζας, Δειζας, Διζζας, Δισζα, etc.), with scores and scores of attestations across the Balkans and else-

'related to' via the concept 'child'. The mapping from 'related to/approximation' to 'child' is presumably based on the idea that a child is modeled on or approximates its parents".

[7] On the suffix see a concise overview in LexLep s.v. *-āk-*, to which Lambert (2008: 133–137) should be added. In this article, Lambert tentatively suggests that "*-āko-* in the personal denomination may refer to a relation of adoption" (137); cf. Russell (2013: 202).

where; see now Dana (2014: 146–151). The meaning and prehistory of the name, as is quite traditional for Palaeobalkanic studies, is vague; see e.g. Georgiev (1977: 73–74), where it is compared with Greek Θεο- and Διο-, and Mircheva (2017: 94 and 115), where it is derived from PIE **d^{h}u̯eso-* and compared to Lith. *dvasiá* 'spirit' (sic!) – or a more balanced view presented in Dana (2014: 146). The form Διζαλας uel sim. is found in the place of a patronymic on quite a number of occasions (e.g. Μουκακενθος Διζαλου), but Georgiev (1971: 162) also notes its usage as the idionym; particularly illuminating is the collocation from an inscription in Moesia Interior, Διζαλας Διζαλου. On top of that it is worth noting that *Diza*, etc., on its own is quite often found as a patronymic (with the Greek gen.sg. ending), cf. attestations just from Thracia: Βειθυς Δειζου, Αυλουτραλις Διζου, Δειδις Διζου, Μόκας Διζου, Ωιτα Διζου, etc.; see Dana (2014: 146–147).

It goes without saying that any conclusions regarding a language like Thracian, known principally from onomastics, can by default only be tentative. With a few exceptions, etymologies provided for the Thracian lexicon are mostly conjectural, while morphological patterns at least may allow for some formal conclusions. Not always, of course – as I have shown on a number of occasions (see most recently Falileyev 2020), the traditional selection of morphemes in Thracian (and Dacian) may be faulty as well. It is obvious, nevertheless, that the sequence *-al-* can be segmented in Palaeobalkanic anthroponymy, but its exact interpretation is still lacking. Georgiev remained convinced to his last days of the correctness of his treatment of the suffix *-al-* in Thracian names as a patronymic formant (cf. e.g. Georgiev 1977: 179), and this approach won support from some academics. Others were more sceptical about this conclusion and either did not mention this hypothesis at all or considered it as an option, although differently. Thus, in the most recent manual of Palaeobalkanic studies, Mircheva (2017: 138–139 and 99–100) labels the suffix *-al-* as patronymic and derivational, with the same examples illustrating both usages. Mentioning Georgiev's theory, Dana (2014: 200) remains somewhat sceptical of it, and prefers to see in *-al-* in personal names a hypocoristic formant. It is perhaps worth noting that, in his treatment of Thracian Διζα-λας, which appeared later than his article, Georgiev (1977: 74) compared it with Greek Θεο-λας, which he himself interpreted as a hypocoristic. I remain of the opinion that the Palaeobalkanic data at our disposal does not speak in favour of the

interpretation of *-al-* as a patronymic formant. Nevertheless, Georgiev (1971) should necessarily be considered in the research of the prehistory of the Cisalpine Celtic (patronymic) suffix *-al-*, also insofar as it points to important parallels to the alleged Thracian cases. These, so far unnoticed by the students of Celtic, provide valuable comparanda for this study: the Bulgarian scholar bases his discussion of the Palaeobalkanic data on the comparison with the "lydischen Possessivadjektiva (Patronymika) auf *-alis*" and other forms in *-l-* (Georgiev 1971: 165), and one may be reminded that Cisalpine Celtic *-al-* was compared to its Lydian counterpart by Pedersen already in 1924.

3. Lydian comparanda

Georgiev (1971: 165) quotes a number of relevant Lydian examples, viz. "lyd. *Atalis* 'des Αττας', *Atelis* 'des Attes', *Kumlilis* 'des Kumli-', *Alulis* 'des Aluś'", and in the footnote offers his rendering of the first of them, "eigentlich '(der) At(t)a-ische (Sohn)'". He does not refer to the scholarly literature dedicated to Lydian in this rather short article, but there could hardly be any doubts of his awareness of it – the Bulgarian scholar himself contributed to the analysis of various Anatolian languages, see e.g. Georgiev (1962). Therefore, the following passage from the *Lydisches Wörterbuch* by Gusmani (1964: 45) was most probably known to him in the 1970s:

> "§ 31 Possessiva auf *-li-* (s. § 19) werden auch als Patronymika gebraucht, vgl. *timleś brdunlis* "Timleś (Sohn) des Brduńś". Nach dem Patronymikon erscheint manchmal ein zweites Possessiv, das eine Herkunftsangabe oder eher das Patronymikon des Vaters sein wird. Possessiva bleiben unverändert, wenn das Substantiv, bei dem sie als Attribut stehen, ebenfalls in der Form des Possessivs steht. Vgl. *eśś vãnaś atalis tivdalis tarvτallis* "diese Grabkammer (ist) des Ataś, (des Sohnes) des Tivdaś (des Sohnes) des Tarvτaś (?)"".

Two years after Georgiev passed away, Gusmani published his seminal article on personal names and onomastic formulae in Lydian inscriptions, where this approach was again presented (1988: 182), and it has been shared since by philologists and linguists alike, cf. Kearns

(1994: 13) and Dale (2015: 157). Furthermore, the standard grammar of the Lydian language now states: "[l]e lydien utilise un adjectif d'appartenance en *-li-* en lieu et place du génitif singulier" (Gérard 2005: 84), and thus Lydian data seems appropriate for the analysis of the Cisalpine Celtic (patronymic) suffix *-al-*, at least at face value. But superficial similarities could be a matter of sheer coincidence, and therefore some observations on the historical dimensions of this comparison are desirable.

Georgiev (1971: 165), who introduced Lydian data in order to explain the function of *-al-* suffixes in the Thracian anthroponymic system, compared Lydian *Atalis* 'des Αττας', etc. with Etruscan *Arnθal* 'des Arnθ', *Larθal* 'des Larθ', etc. Although Cisalpine Celtic counterparts were never mentioned in this article, this comparandum immediately rings a bell insofar as a borrowing of the Etruscan genitive is traditionally used for the analysis of the 'Lepontic' suffix; see the references in LexLep s.v. *-al-* and cf. also Stifter (2020a: 26) – and this Celtic-Etruscan-Lydian alleged parallel was considered in Pedersen (1924). It may be recalled that Georgiev was a great proponent of the Etruscan-Anatolian linguistic community, and his monograph on Hittite and Etruscan (1962) had *Die hethitische Herkunft der etruskischen Sprache* as its sub-title.[8] This view remains highly debatable and mostly unacceptable, while various strategies have been used to explain this alleged correspondence. Thus, in the words of Bachvarova (2007: 185), "[t]he Lydian gen. adj. in *-l* as opposed to *-s* remains the key-bit of evidence that Lydian did not evolve its genitival adjective under pressure from another Anatolian language, but from the Tyrsenoi with whom Lydian-speakers had such close contact", while Aslanov (2021: 14) formulates his vision of the problem as follows:

> "In the past, this similitude between the adjectival genitive *-al* of Etruscan and the Lydian and Luwian facts has been used as an argument to prove that Etruscan was a missing link between the Indo-European and the Caucasian languages or that it was an Indo-European language of the Anatolian branch, whose original type has

[8] Probably Georgiev was not aware of Pedersen (1924), where the Danish scholar had discussed this alleged Etrusco-Lydian parallelism and was himself of the opinion that "Lydian is akin to Etruscan" (48).

> been affected by various alloglottic influences [...]. In my opinion, however, Etruscan is an Indo-Europeanized language rather than a former Indo-European language that lost its original type".

This lengthy quotation also points to the fact that the phenomenon is not restricted to Lydian within the Anatolian sub-branch of the Indo-European languages. As Dale (2015: 155) notes, "while Lydian shares with Luwian the almost complete replacement of the genitive case with a possessive adj. (complete in CLuwian, almost complete in HLuwian), the Luwian possessive adj. is *-assa/i-*, and thus the Lydian use of *-l(i)-* for the same purpose can be seen as an areal feature of Western Anatolian".[9] Generally, common Anatolian factors are either considered or used in explanation of Lydian genitives, viz. patronymics in *-l-*; see e.g. Gérard (2005: 86), Bachvarova (2007: 181) or Aslanov (2021: 14).

The data of Hittite, which also preserves various formations in *-l-* in different shapes with various functions and different productivities, has been used directly for various explanations of the Cisalpine Celtic (patronymic) suffix *-al-*. Hittite suffixes in *-l-* (Hoffner & Melchert 2008: 54–55) and their prehistory have been thoroughly studied; see particularly Rieken (2008) and, for the rich Hittite data, Matzinger (2008: 37, 40–41, 59–61, 67–71 et passim); in a cross-Anatolian perspective cf. e.g. Hoffner & Melchert (2008: 55 and 62) or Sasseville (2014/2015). Their origins remain a battle-field of opinions. Thus, Rieken (2008: 239) begins her seminal discussion of the origin of the *-l-*genitive in Hittite admitting that "practically every **-l-* known from the inflectional or derivational morphology of Proto-Indo-European and its daughter languages has been compared" with it. In its turn and in a broader context, discussion of the (Cisalpine) Celtic data also brings to attention alleged parallels attested particularly in Hittite. As noted above, some of these works are considered in LexLep. Thus, Markey & Mees (2003: 143) consider here: "Hitt. *-iiali/a-* in agent nouns of possession or reference, particularly those with sacral functions". Although some of the examples they use are interpreted with more nuances nowadays (cf. e.g. Matzinger 2008: 50 or 68), the scholars aptly note that "*l*-elaborations in Indo-European are typically agentive"; for these formations in Anato-

[9] For the inflection of proper names in Luwian see now Norbruis (2022: 22–26 and 31–42).

lian see most recently Sasseville (2014/2015) and note the reference to the formations of nomina agentis in the discussion of the 'Lepontic' suffix, e.g. in Prosdocimi (1991: 170). Slightly earlier before Markey and Mees's article appeared, de Bernardo Stempel (1999: 226) also considered briefly Hittite *-ala-* in her discussion of the patronymic Cisalpine Celtic formant. The Hittite suffix is identified by her with that used "zur Bildung von Zugehörigkeitsadjektiven und Funktionärsbezeichnungen"; for Hittite examples see Matzinger (2008: 69–71). All these suggestions eventually bring us to the adjectival suffix (of appurtenance) **-lo-* uel sim.; see Rieken (2008: 253) or Sasseville (2014/2015: 120).

4. The appurtenance suffix in *-l-* and some similar formations

The scholars who dealt with the alleged Hittite parallels to the Cisalpine Celtic (patronymic) suffix *-al-* already noted further comparanda outside of Anatolian which may be beneficial for inclusion into the discussion in LexLep s.v. *-al-*. Thus, already Kretschmer (1905: 106) indicates alleged relevant data in Greek, Germanic and Slavic. de Bernardo Stempel (1999: 456; cf. de Bernardo Stempel 1998: 610) also refers to Greek *-αλος* (on that see Balles 2008: 303) and "altindischen Derivate auf *-ir/la-*"; for the latter see the discussion in Matzinger (2008: 260–261). In their paper Markey & Mees (2003: 143) make a reference to Italic, and note that "[a]lthough *l*-elaborations in Indo-European are typically agentive patronymic, they do form patronymics in the thematised *-ilyo-* (, **-el-yo-*) formations of Italic"; see also Prosdocimi (1991: 170–172) and cf. Balles (2008: 121–122) for Latin adjectival suffixes *-ālis*, *-īlis*, *-īle*. Data of many other languages may be considered in this connection as well. The rare suffix **-aljъ* < **-ālja-* "used to derive *nomina agentis* and nouns denoting persons" occurs in Slavic (Matasović 2014: 121), and semantically similar formations with the suffix *-al-* are attested in Baltic; see Endzelīns (1971: 110). Endzelīns (ibid.) also considers here diminutives with *-ãlis* in Samogitian dialects of Lithuanian and Prussian personal names such as *Petralle* or *Micalle*, and notes that in some Lithuanian dialects these formations "might have an augmentative or pejorative meaning"; cf. for the latter the discussion in Balles (2008: 121) of Latin formations with *-īlis*, *-īle*. On diminutive formations in *-l-* in Baltic (with various vowels preceding it) see the fundamental work of

Ambrazas (1993: 51–54), where it is stated that they are rooted in "the old root determinative *-l-*" (51).[10] See also Jurafsky (1996: 564) for the discussion of similar phenomena in some other languages. This list may be continued, of course.

In Celtic, quite a few inherited *-l-*derivatives are known (see already Pedersen 1913: 53–56). They share some nuances of semantics pertaining to *-l-*derivations as in other Indo-European languages, some of which are briefly surveyed above. What is important for the present discussion is that the appurtenance suffix in *-l-* is attested in Gaulish, and some of these formations were studied by de Bernardo Stempel (1998: 609–610; 1999: 226 and 455–456); cf. some problematic cases discussed in Falileyev (2014: 113–114). Their number can be easily multiplied by a search through the first volume of the recent dictionary of nominal formations in Gaulish by Delamarre (2019), which surveys (mainly but not exclusively onomastic) data from *Ab-* to *Iχs(o)-*. The author differentiates between suffixes in *-al-* and *-āl-*; for the latter he quotes e.g. the personal names *Cottalus* (from **cotto-* 'old'; Delamarre 2019: 250) or *Cusala* derived from **cūsso-* < **custo-*, *cudso-* 'treasure' (sic!) in Delamarre (2019: 268). The reasons for this differentiation are not altogether clear to me. Thus, the comparison of the anthroponym *Devalus* (derived from **dēu̯o-* 'god') with W. *dwyfol*, *dwywol* (Delamarre 2019: 286) certainly – judging by Welsh comparanda – points to *-āl-*. Moreover, this example definitely may be interpreted as containing the suffix of appurtenance. The major problem is presented by the treatment of the Welsh comparanda themselves, however. The Welsh suffix *-ol-*, in the words of Russell (2016: 2777), "seems to be derived from Latin *-ālis*"; for the discussion and examples see the section "5.1. *-ol*" in Zimmer (1990), where it is listed among Welsh suffixes both having a Common Celtic pedigree and those borrowed from Latin; a similar dual approach is offered, e.g., in Pedersen (1913: 54). It should also be noted that there may be cases of inconsistency in representation of morphological patterns involving the quantity of *a* in Gaulish examples. Thus, in Delamarre (2007: 153), *Rialus* is derived from *[*p*]*riyā-lo-*, while *Rialobranus* is analysed as **Rialo-branno-*. Ten years later, in another book by the same author, we find *Rialus* < **Rii-ālos* and *Rialobranus* < **Riiālo-brannos* (Delamarre

[10] Grandi (2011: 8) suspects that PIE **-lo-* alongside **-ko-* may have had diminutive meaning. Definitely diminutive for Jurafsky (1996: 561).

2017: 156), and I am very interested to see the decision on the anthroponym to appear in the much expected new part of his useful dictionary of nominal formations in Gaulish.

Nevertheless – and also taking into consideration the lack of clarity regarding the length of the vowel in the Cisalpine Celtic patronymic suffix – Delamarre's collection contains quite a few examples where his *-al-* with a short [a] is also used as an appurtenance marker. For example, just from the list of derivations in Delamarre (2019: 9, 181, 285) one may quote *Attalus*, *Attalō* from *attā* '(foster) father' (cf. anthroponymic *Atta*; see also Prosdocimi 2009: 105–131 for a wider perspective), *Candala* from **cando-* 'light', or *Dervali* derived from **deru̯o-* 'oak'. Some of the examples he uses should be removed, however. Thus, under **deg-* we find an *-al-*derivative *Degala* (in *Degalae Cannenafatium*; Delamarre 2019: 281). In the earlier publication, the same author suspects that the anthroponym may be Germanic in origin (Delamarre 2007: 83), but we deal here in fact with a ghost-name: the reading of this fragment of inscription is *dec*(*urio*) *alae*, see e.g. Matijević (2009: 88). Still, the list remains very illuminating, and it should be noted that among other derivations in *-al-* we find there 'Lepontic' *Kualui* (dat.sg.; Delamarre 2019: 269). The anthroponym is analysed as *cuu̯-alo-* from **cuu̯o-*, compared with W. *cyw* 'young bird'. The form is normally considered a patronymic, see LexLep s.v. *kualui*, where other etymologies are also presented, and note that in Delamarre (2007: 78) the name was suspected to reflect **Co-u̯alus*. These inconsistencies, however, cannot affect our judgement on the reality of the existence of the appurtenance suffix in *-l-* in Gaulish. One may also note that Pedersen (1913: 62) considered Gaulish *Teutalus* among *Keltische Kurznamen*; see also de Bernardo Stempel (1999: 456 n. 67). It should also be considered that differentiation between name- and word-forming suffixes can be sometimes extremely difficult; see e.g. Falileyev (2014: 130–133).

As we have seen, the appurtenance suffix in *-l-* is known in Anatolian. In Lydian it replaced the gen.sg.; this has not happened in other Anatolian languages. As we know, disputes still go on regarding some aspects of formation of genitival forms in Cisalpine Celtic; so far, unfortunately, the relevant section of LexLep has not yet been compiled, but see s.vv. *-ī*, *-oi̯so*, and cf. de Bernardo Stempel (2011). Nevertheless, it is apparent that they have common Celtic and PIE derivational pedigrees. Thus, typologically speaking, Lydian 'patronymics' in *-al-* correspond to

Gaulish patronymics in the genitive singular case, and – to put this in the context of Georgiev's article referred to above on many occasions – to Latin/Greek gen.sg. of Thracian names. The connection of patronymics with various realisations of genitival relations is known, and with Rau (2007: 59) I take the view here that "genitival derivatives are understood as having a basic meaning 'of *x*, belonging to *x*', possessive derivatives as 'having *x*'", although the two meanings may overlap. Generally, designation of a patronymic with a father's name in the genitive case is by no way restricted to Indo-European languages, cf. in this respect the formation of family names from patronymics in the Iberian peninsula, where we find *Fernández* in Castillan or *Ferrandis* in Catalan, from the personal name *Fernando*. Similar formations are attested outside of the Indo-European world, and the reasons for their emergence may be various. Thus, for example, in Basque the counterpart of the names listed above is *Fernanditz*, while for Mongolian cf. *Sodnomyn Sambu* 'Sambu son of Sodnom' or *Ayushiyn Namdag* 'Namdag son of Ayushi'. Certainly, that is not the only strategy, as Continental Celtic has already shown us; for example, in some Slavic languages patronymics were denoted by possessive adjectives – for these various strategies, see entries in Systems (1989).

5. Conclusions

It is apparent that the appurtenance suffix in *-l-* is known in Celtic, where – as in Anatolian and many other sub-groups of Indo-European languages – it was inherited. A suffix based on it did not replace the inherited form of the genitive singular ending in 'Lepontic' or elsewhere in Celtic, but we find it, and also in Gaulish in its broader sense, where it may be uncontroversially interpreted as performing the function of appurtenance marker. Therefore, *-al-* may be seen alongside other suffixes such as *-āko-*, *-io-/-eo-* or *-cno-/-kno-/-gno-* also used for patronymic formations; cf. already Kretschmer (1905: 106) or de Bernardo Stempel (1998: 610). The fact that it is used as such only in Cisalpine Celtic, and that some of its attestations even in that region may point to a different function, is not disturbing. One may think here of chronological and regional distinctions already observed for the listed suffixes (and also Old Irish *-án*, Ogam *-agna-*); see Russell (1988: 136–137), Lambert

(2008: 137), Russell (2013: 202–203 et passim); on their relevance for the discussion of the data from Cisalpine Gaul see LexLep s.vv. *-āk-*, *-ikn-*, *-ī*. In fact, the usage of some of them in patronymic functions is not universal, but restricted to certain areas, and has chronological limitations. Indeed, "naming patterns are a regional matter, and in as large a geographical area as the Gaulish dialect continuum must have encompassed, from Asia Minor to the low countries, considerable variation in naming practices can hardly be considered to be surprising" (Eska 1998: 7). Therefore, a possibility may be envisaged that in that area a local strategy emerged to denote patronymic relationships that was rooted in inherited morphology. The influence, or rather catalysing effect, of the Tyrsenian similar-looking tradition in establishing the model due to contact (cf. de Bernardo Stempel 1998: 610 and 1999: 456) should certainly be observed, too.

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Ligurian and Lepontic: the inscriptions from Lunigiana and the Prestino stone

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Abstract

Recent assessments of the inscription on the Prestino stone have invoked the archaic texts on the stele statues from Lunigiana (Massa-Carrara, Tuscany). Three of the stele statue texts have been argued to be linguistically Celtic as if Ligurian was a Celtic dialect. Yet the transcriptions of the Lunigiana texts as well as their linguistic interpretation are disputed. It is clear that the stele statue inscriptions are written in an Etruscan-derived alphabet very similar to that of the Lugano tradition and that the oldest date from the end of the seventh century B.C. Ligurian appears best understood as representing a separate Indo-European language from Celtic and all of the Lunigiana inscriptions can be interpreted as linguistically Ligurian. As funerary memorials, the texts on the stele statues also suggest a different interpretation of the Prestino inscription than those that have been argued for previously.

Since the first find of a *statua stele* in 1827 in Lunigiana, over 80 of the sandstone monuments have been discovered in north-western Italy. With the earliest dating to the late Chalcolithic period, the stele statues are generally associated with the ancient Ligurians, and most of them were found in what is now part of the Province of Massa and Carrara in Tuscany. The mountainous Lunigiana region derives its name from the Roman port of Luna (Luni) in the Gulf of La Spezia, and Lunigiana was subjugated by the Romans in the decades after the Second Punic War of 218–201 B.C. But the stele statue found in 1827 in the Val di Vara in the commune of Zignago was remarkable as it preserves an inscription in Etruscan-derived letterforms, and four more stele statues that preserve inscriptions in similarly archaic characters

have been found in Lunigiana since that date. The oldest inscriptions known from the territory of the ancient Ligurians, the stele statue texts date to the Iron Age and appear to be contemporary with the earliest Lepontic inscriptions.

Evidence for Etruscan influence in the form of imported pottery is known from many sites in Liguria, but inscriptions in Etruscan or Etruscan-derived letterforms are not as common and all date from before the Roman period. After the Romans had conquered Etruria and finally defeated Hannibal, they subsequently set upon subduing Liguria in a series of wars. The Magra valley had been the site of a Roman defeat in 186 B.C. at the hands of a Ligurian tribe called the Apuani, but six years later the Romans deported many of the Apuani to Samnium (Livy 39, 2; 40, 38; 41). Luna was founded at the mouth of the Magra river after another war in 177 B.C. between the Roman Republic and the Apuani (Livy 41, 13), but by 155 B.C. most Ligurian resistance had been crushed. Despite belonging to Liguria in Roman times, however, Lunigiana was later divided between the Republic of Genoa and the Grand Duchy of Tuscany. Zignago is in the modern Italian region of Liguria, but most of the stele statues were found in parts of Lunigiana that are in Tuscany.

The stele statues have largely been dated by means of the weapons depicted on them. The inscriptions are all found on stele statues that can be dated either to the end of the seventh century or the middle of the sixth century, with swords of a typical Hallstatt C2 type represented on the oldest inscribed stones (Dobesch 1989: 59–60; Paribeni in De Marinis & Spadea 2004: 268). The stele statue inscriptions are clearly funerary memorials, presumably recording the names of the men that the stele statues represent. Yet Strabo (4, 6, 3) records that the Greeks called the inhabitants of Liguria Κελτολίγυες (Celto-Ligurians) and it has long been suspected that the Lunigiana inscriptions may preserve linguistically Celtic names. The Lunigiana inscriptions have also often been connected with the long text on the Prestino stone (CO·48 = Morandi 2004: no. 180), the inscription whose decipherment led to Lepontic being securely identified as a Celtic language rather than a branch of Ligurian (Prosdocimi 1967; Lejeune 1971: 96–106). Assessing the Lunigiana inscriptions from a Ligurian perspective, however, suggests a different approach to the inscription on the Prestino stone.

Background

The earliest inscriptions from the Golasecca culture have been dated to the seventh century B.C. (De Marinis 2009: 158) and knowledge of the Etruscan alphabet evidently spread to the south-east of Liguria at the same date as it did to Lombardy. The oldest texts from Liguria are clearly not grammatically Etruscan, however. The oldest clearly datable evidence for linguistically Etruscan writing in Liguria is recorded on a stele from the end of the sixth century B.C. found in the eighteenth century in Busca, Piedmont (ET² Li 1.1), and two other Etruscan finds are known from near Busca: one inscription from further south at Mombasiglio (Colonna 1998) and another find from Morozzo (ET² Li 4.2). Some 32 brief and often fragmentary inscriptions in Etruscan characters are also known from Genoa, a port that appears to have been founded in the late sixth century B.C., although the earliest inscriptions from Genoa seem to date from the fifth century B.C. and represent linguistically mixed texts (Colonna 2004a). Two further inscriptions in Etruscan-derived characters are known from Ameglia on the right bank of the Magra near where it empties into the Tyrrhenian Sea, one of which has been taken to preserve what seems to be a linguistically Ligurian name (Giacomelli 1977: 69; Maggiani 1987: 438–440).[1]

Giovanni Flechia (1873: 333–346) demarcated Ligurian from Celtic and Italic, pointing to the common employment of the suffix *-asc-* in toponyms from Liguria, Piedmont and Lombardy such as *Airasca*, *Campasca*, *Giubasco*, *Marasca*, *Rovasca* and *Villasca*. Henri d'Arbois de Jubainville (1889: II, 46–118) developed Flechia's proposal further, contending that Ligurian was an ancient language that had formerly been spoken from north-western Italy and Corsica to the south of France and Spain. The suffix *-asc-* is not otherwise found in European toponymy, but it is paralleled in Armenian by the attributive formant *-ac^{c}i* < **-ask-* (Pisani 1941: 387; 1964: 291) and it appears to represent a remodelled form of the suffix **-isk̂-* attested in Germanic and Tocharian (Olsen 1999: 344–353). Jürgen Untermann's (1958; 1969: 105–107; 2006: 1762–1766) analysis of Ligurian personal names, however, provided clearer evidence

[1] Ostensibly Ligurian inscriptions in what has been proposed to be an alphabet derived from Umbrian have also been collected by Adolfo Zavaroni (2021), but no attempt to analyse them is presented here.

that Ligurian was a separate Indo-European language or language family. Untermann demonstrated that Ligurian names are characterised especially by the frequent appearance of a gentilicium-forming suffix *-anius* and that they are largely monothematic. Trinomina such as *Velacus Blaisicius Enici f(ilius)* (CIL V 7845) and *Parra Enicius Miranius* (CIL V 7850) appear to show the use of Ligurian praenomina as well as gentilicia and patronymics, and variations such as *Blaesus* (CIL XII 1203), *Blaesius* (CIL V 7686), *Blaesianus* (CIL XIII 1393) and *Blaisicius* (CIL V 7845) reveal how Ligurian names were derived. Onomastic elements such as *Blais-*, which is found in names from both Liguria and Gallia Narbonensis (Untermann 1969: 146–147), may themselves represent enlargements of Indo-European roots (cf. Greek βλαισός 'bent, distorted' and Latin *blaesus* 'lisping, stammering'), but they are often difficult to analyse etymologically.

Untermann's onomastic analysis is supported by epigraphic finds from Genoa. A fifth-century B.C. fragment of a bowl excavated in 1968–1970 from the San Silvestro cemetery preserves a partial text *plaiṣ*[----] (Colonna 2004a: 304; ET² Li 0.6) that seems to preserve the Ligurian onomastic element *Blais-*. Another fifth-century B.C. find from San Silvestro just reads *pla*, presumably an abbreviation of *Blais-* (Colonna 2004a: 304; ET² Li 0.7), and a fourth-century B.C. inscription on a spindle whorl excavated in 1914 from the Sant'Andrea necropolis at Genoa similarly features a text *la : plaisaś* (Colonna 2004a: 302; ET² Li 2.6) where the first element appears to be an abbreviation of the common Etruscan name *Larθ* and the second an *s*-genitive of *Blaisa*. Other names that feature a root *Blais-* are known from elsewhere in Italy, in Sabine (Im.It. Sabini 2), Oscan (Im.It. Cumae 8), Etruscan (ET² Vs 1.18, Vs 1.89, Li 0.6, Li 2.6) and Latin (CIL I² 254) epigraphy, but it is not clear if they are related.

A comparable employment of *Larθ* and a local name, however, appears to be recorded on the memorial from Busca, 116 kilometres west of Genoa. The inscription *mi suθi Larθial Muθikuś* on the Busca stone is clearly to be translated as 'I (am) the tombstone of Larθ Muθiku', where *Larθial* is an Etruscan *l*-genitive of *Larθ* and *Muθikuś* is compared by Sassatelli (2008: 337) to Celtic names such as *Motucus* and *Motucius* (Delamarre 2007a: 136). Another inscription from San Silvestro excavated in 1977 (Montanari 1979; Colonna 2004a: 303–304; ET² Li 1.2) is also a first-person or talking text, featuring a simpler Etruscan

mi Nemetieś 'I (am) Nemetie's'. *Nemetie* is usually thought to be a Celtic name[2] (De Simone 1980) featuring the Etruscan ending *-ie* also employed in the Mantua inscription's *Eluveitie* (for Celtic *Eluei̯ti̯os* 'the Helvetian') and the Valle Trebbia text's *Keltie* (for Celtic *Celti̯os* 'the Celt') as well, presumably, as the Pansdorf inscription's *Xuiiie* (Colonna 1993: 140; Mees 2020).[3] The Busca and the longer Genoa texts are also all evidently sinistroverse, and the Busca inscription is incised between guide rails that form a lop-sided horseshoe about the top and sides of one face of the only roughly hewn stone in a manner also known from Etruscan memorials from Tuscany (Gambari & Colonna 1988: 151–153).

Instead of an adapted Etruscan tradition, the stele statues from Lunigiana reflect a longstanding local memorial practice to which literacy was only applied at a relatively late date. Most are uninscribed and have been dated to earlier periods than their inscribed counterparts. The greatest number of stele statues come from the lands immediately about the Magra and its tributaries, between 150 and 350 metres above sea level, where many of the stelae were found together in groups – at Pontevecchio, Selva di Filetto, Sorano and Malgrate, and in smaller numbers at Minucciano, Filattiera, Canossa and La Spezia. They vary in height from under 30 cm to over 2 metres tall and have been discovered in valleys, on hills and also on mountain slopes up to 700 metres in altitude. Other archaeological finds from the area indicate that commercial routes passed through Lunigiana in prehistory, from the third millennium to the sixth century B.C., and the Lunigiana region is typically thought to belong archaeologically to the most easterly end of the ancient and prehistoric Ligurian cultures attested in southern France and north-western Italy (cf. De Marinis & Spadea 2004; Paltineri 2017). The stelae all bear anthropomorphic features and represent masculine and feminine figures in manners that often highlight some elements of their dress, accoutrements or jewellery. Carved from local sandstone, the stelae were classified into three different chronological groups (A, B, C) by Augusto Ambrosi (1972: 35–36; 1988: 36–37), with the C group all depicting

[2] A Ligurian onomastic root *Nem-*, however, is presumably represented by *Nemanius* (CIL V 7779), *Nemunius* (CIL V 7915) and in the Zignago inscription (see below).

[3] G. B. Pellegrini (in Stjernquist 1965: 124) took the Pansdorf inscription to be numeric marking, but numeric marks are never found on bronzeware from the same period or in other texts on manufactures from Ticino.

male figures. The inscriptions are all found on the more recent stelae and the five that are inscribed come from Zignago, Selva di Filetto (×2), Bigliolo and Sorano. The Zignago and Bigliolo inscriptions are the best preserved, but it has not always been clear how even the Zignago text should be transcribed. What language they preserve has also been contested, with attempts to etymologise the names they preserve as Celtic being the most commonly proposed.

The Lunigiana finds were taken by Michel Lejeune (1971: 142–143) to be linguistically Ligurian, but as at least partially Celtic by Aldo Luigi Prosdocimi (in Maggiani & Prosdocimi 1976: 265) and Patrizia de Bernardo Stempel (2006a: 47; 2006b: 49; 2009, 178; 2012 and in Arenas-Esteban & de Bernardo Stempel 2011: 129). Recent surveys of Ligurian by Alexander Falileyev (2011; 2020: 892–895) and Francesco Rubat Borel (2021) have come to different conclusions, with Falileyev supporting Flechia, d'Arbois de Jubainville and Untermann, and Rubat Borel (and cf. Rubat Borel 2008) concurring with Prosdocimi and de Bernardo Stempel. The Lepontic inscriptions had also been considered Ligurian by Paul Kretschmer (1905) and Vittore Pisani (1941: 391–393; 1964: 280–292) before the evidence for the reduction of **p* in the Prestino inscription's *Uvamokozis* (< **upm̥h₂o-gʰostis* 'having supreme guests') was elucidated by Prosdocimi (1967: 213). Hans Krahe (1936) had argued that the Lepontic inscriptions were Celtic, while Joshua Whatmough (in Conway et al. 1933: II, 65–165; Whatmough 1937: 134) characterised the earliest texts from the Golasecca culture as Ligurian influenced by Celtic. Several of the toponyms from ancient Liguria recorded in texts such as the *Sententia Minuciorum* on the Polcevera tablet (CIL V 7749) have been argued to be Celtic, with Strabo's description Celto-Ligurians being seen either as evidence for Celtic influence in Ligurian or an indication that (like Lepontic) Ligurian was a dialect of Celtic somewhat different than Gaulish.

Discovered in the sixteenth century, the Polcevera tablet records a judgement of the Roman senate regarding a border dispute from 117 b.c. between the inhabitants of Genoa and the Viturii Langenses, and it preserves a collection of Ligurian mountain and river names. Kretschmer (1905: 118) associated the Polcevera tablet's *rivus Comberanea* with Old Irish *commor* and Old Welsh *cimer* 'confluence' (< **kom-bʰer-*), but Magnus Olsen (1906) influentially compared the Polcevera form *flovius Porcobera* (i.e. the river Polcevera) to Old Irish *orc* 'perch, salmon' (< **perk̂o-*;

cf. Old High German *ferhana* 'trout') and Greek πόρκος 'a kind of fishing net' (< **porĥo-*). D'Arbois de Jubainville (1877: 229) linked *Genua* with Greek γένυς 'jaw' (and cf. Old Irish *gin* 'mouth'), and Xavier Delamarre (2007b: 36–37) takes this etymology, also supported by De Bernardo Stempel (2006a: 46; 2006b: 49; 2012), as evidence that Ligurian is an archaic form of Celtic. Yet the semantic development 'jaw(s)' > 'mouth' is attested in Greek as well as Irish, and as James Clackson (2015: 5) concludes in his survey of the evidence for Ligurian, "place-names are always fertile ground for unverifiable speculation, but do not provide a secure basis for assigning language identity".

In his survey of Continental Celtic toponymy, Patrick Sims-Williams (2006: 240–246) found relatively little support for a significant Celtic linguistic presence in Liguria. Giulia Petracco Sicardi's (1981) survey of 225 Ligurian place and ethnic names similarly found little evidence that Liguria was a Celtic-speaking region in antiquity. The *Tabula Alimentaria* (CIL IX 1455), which outlines the implementation of the Emperor Trajan's alimentary scheme in early-second-century Veleia, records toponyms such as *Caudiacis*, *Flania, Lubautinos* and *Taxtanalus* that do not look to be Celtic. The sequence *-pt-* recorded in the toponyms *Caeptiemam* (Polcevera) and *Poptis* (*Tabula Alimentaria*) is not expected in Celtic either; compare Middle Welsh *kaeth* 'slave' (< **kaxtos*) to Latin *captus* 'capture'. Pisani (1941: 389) also saw evidence for a Ligurian superlative formation in the oronym *Ballistam* (Livy 39, 2, 7) that he derived from a cognate of Ancient Greek φαλός and Lithuanian *bãlas* 'white' (in contrast to Celtic superlatives in **-isamo-* and **-tamo-*[4]), and a morphologically comparable toponym *Varisto* from the *Tabula Alimentaria* is interpreted similarly by Petracco Sicardi (1981: 77).

Petracco Sicardi's (1981) survey also reveals some further likely features of Ligurian word formation. The toponyms *Berigiemam*, *Blustiemelo*, *Caeptiemam* and *Lebriemelum* recorded on the Polcevera tablet suggest **-i̯o-* > *-i̯e-* before *-m-*, a development that De Bernardo Stempel (2006a) considers to be a regional feature comparable to a similar palatalisation apparently recorded in Gallo-Greek δεκαντεμ (RIG G-64). Some Ligurian place and ethnic names also appear as if they may be Celtic, particularly the tribal names in *-at-* (cf. *Brini-*

[4] A referee notes, however, that the ethnonyms *Caristii* (northern Spain) and *Tolistobogii* (Galatia) also have the look of preserving superlatives.

ates, *Casmonates*, *Celiates*, *Cerdiciates*, *Friniates*, *Genuates*, *Hergates*, *Iluates*, *Langates* and *Odiates*), although ethnonyms such as *Friniates* can scarcely be considered regular Celtic coinages. Petracco Sicardi (1981: 12) took the common employment of *Alb-* in Ligurian place-names, particularly in *Album Ingaunum* and *Album Intemelium* (Pliny, *N.H.* 3, 5, 48), settlements of the *Ingauni* and the *Intimelii*, as evidence for a pre-Indo-European influence in Ligurian toponymy and argued that the endings of *Ingaunum* and *Intemelium* indicated that the genitive plural of the *o*-stems in Ligurian was **-om* (< Indo-European **-oHom*). De Bernardo Stempel (2006a: 46; 2006b: 49; 2009: 164; 2012) takes *Ingaunum* to preserve an inherited **(p)ing-* 'paint' (cf. Latin *pingō*, *pingēre* 'to paint' < Indo-European **pineĥti* ~ **pinĥenti*) with *-u̯n-* < **-mn-* (cf. Gaulish *Vellauno-* < **u̯elna-mn-*), however, and Ligurian *Album* may be related to Sanskrit *arghá* 'worth, value, price' and Greek ἀλφή 'produce, gain' (< **h₂elgᵘʰ-*).

Ligurian names are also attested in classical sources. The Ligurian name of the River Po is recorded by Polybius (2, 16) as Βόδεγκος and as *Bodincus* by Pliny (*N.H.* 3, 16), and Pliny recounts that *Bodincus* meant 'of unmeasured depth' (*fundo carens*) in Ligurian. Karl Müllenhoff (1892: 191) duly connected *Bodincus* with Sanskrit *budhná-* 'bottom, ground, base, depth' (< Indo-European **bʰudʰmḗn* ~ **bʰudʰ(m)né-* 'bottom') whose cognates include Latin *fundus* and Middle Irish *bond* 'sole of the shoe'. Another Ligurian term has been proposed to be reflected by λεβηρίς which Strabo (3, 2, 6) records was a Massiliote word for 'rabbit' and that seems to have been loaned into Latin as *lepus* 'hare'. Josef Brüch (1914) associated λεβηρίς with Old Norse *lafa* 'to hang loosely, to dangle' (< **lob-*), but Michiel de Vaan (2008: 335) merely asserts that the term is "Not of Indo-European origin". Pliny (*N.H.* 37, 11) similarly records *langa* or *langurus* as the name of a type of lizard that inhabited the banks of the Po and Johannes Hubschmid (1968: 84) associated it with Latin *longus* 'long' (< Indo-European **dlongʰos* 'long'). Other Ligurian glosses, such as *asia* 'rye' (Pliny, *N.H.* 18, 141), which Whitley Stokes (1873–1875) corrected to *‹s›asia* and connected with Sanskrit *sasya-* 'corn, grain, fruit, crop' and Welsh *haidd* 'barley' are less certain, and Stokes's (1894: 292) connection of σαλιούγκα 'valerian' (Dioscorides 1, 7) with Middle Irish *sail*, Welsh *helygen* and Latin *salix* 'willow' is also problematic.

Ralph Haeussler (2013: 87) contends that "the existence of a Ligurian ethnos or culture is [...] extremely doubtful". But Untermann's demonstration that Ligurian anthroponyms are constructed in manners quite different than those attested in Celtic onomastics supports the contention of Flechia and d'Arbois de Jubainville that Ligurian is best considered linguistically separate from Celtic and Italic. Rubat Borel's (2021) analysis of many anthroponyms from Roman Liguria as Celtic entails phonological developments that are not otherwise attested in Celtic such as **upo-* > *uea-* and **o* > *a* in unstressed syllables, and the toponymic suffix *-asc-* and the retained **p* in *Porcobera* make claims that Ligurian was a Celtic language problematic. De Bernardo Stempel's (2012 and in Arenas-Esteban & de Bernardo Stempel 2011: 127–130) characterisation of Ligurian as an archaic Celtic dialect (Celto-Ligurian) that was in contact with a non-Celtic substratum may represent a way to explain the onomastic evidence. Yet Ligurian seems more obviously understood as a language that bore some phonological similarities to Celtic, but which was much different morphologically.

The Lunigiana inscriptions

With two different approaches being applied to Ligurian onomastics – one Celtic and the other non-Celtic – it is perhaps to be expected that a similar distinction has emerged in assessments of the Lunigiana inscriptions. The stele statues from Lunigiana are evidently funerary monuments and their inscriptions seem to preserve little more than the names of the deceased warriors depicted on the stelae. Attempts to explain the Lungiana inscriptions as Celtic have tended to invoke treatments of the inscriptions and their language that are not expected from a Gaulish or Lepontic perspective. The pre-Roman inscriptions from Lunigiana, however, record features that appear to be distinctively Ligurian and are preserved in two different written traditions. The earliest attested tradition is the alphabet employed on the stele statues which is of an unmodified Etruscan type, comparable to early Lepontic. But unlike in contemporary Etruscan inscriptions, the Lunigiana texts are executed in variable direction, with dextroverse inscriptions being commonest.

The Lunigiana inscriptions differ from Lepontic texts in not featuring ⟨o⟩, but they clearly feature ⟨z⟩ and ⟨v⟩, graphemes only attested

in the earliest Lepontic inscriptions such as that on the Prestino stone. The ⟨t⟩ employed on the stelae is of the St Andrew's cross variety and is comparable to the ⟨t⟩ employed in the Vergiate inscription (VA·6 = Morandi 2004: no. 106). The ⟨s⟩ employed has three strokes and can face in either direction, except for the letterform that has been read as a four-stroke ⟨s⟩ on the Filetto I stele. The two possible instances of ⟨ś⟩ are both disputed, but are assumed to be of the form M. The attested inventory of graphemes is ⟨a e v i k m n p r s t u⟩ and possibly ⟨ś⟩, and Maggiani (1987: 439) connects the stele inscriptions with the spread of the early Etruscan alphabet of the Chiusi type, which has ⟨t⟩ of the St Andrew's cross variety (cf. Gambari & Colonna 1986: 146–148), in contrast to the Busca inscription which appears to reflect an alphabet of the Volterra-Siena kind (Gambari & Colonna 1986: 154). The pre-Roman inscription unearthed from a necropolis in Ameglia is a much more recent find, however, and it appears to be written in a different alphabet, one that Maggiani (2004: 385) describes as "cursivised".

1. Zignago

The Zignago stele (SP·1 = Ambrosi 1988: no. 1; Morandi 2004: no. 272) was found by a farmer at the Villa di Novà in Zignago lying face down buried in the soil. Only the head of a man is represented on the stone (with part of the head broken away today) and the accompanying inscription is executed in large sinistroverse letterforms running down the left side of the face of the stone. The stele was first published by Francesco Inghirami (1828: 34) and it is conserved in the Museo di Archeologia Ligure di Villa Durazzo Pallavicini in Pegli, west of Genoa. The Zignago inscription (Fig. 1) was transcribed by Theodor Mommsen (1853: 215) as **mezunemunius** and it is rendered by Gerhard Meiser (ET² Li 1.3) as *mezu nemunius*, but this transcription has long been disputed. Francesco Orioli (1854) read the inscription as *Mezu Nemusus*, and Wilhelm Corssen (1874: 230), Carl Pauli (1885: 97), Henri Hubert and Joseph Vendryes (1913), Mario Buffa (1935: no. 16) and Lejeune (1971: 136) similarly took the Zignago text as *mezunemuśus*. There is no gap in the inscription after **mezu** and Mommsen's -**ni**- is plausibly taken as a slightly malformed -**ś**-; the gap that has often been seen in the -**ni**-/-**ś**- is very small and none of the other letters in the inscription are separated by such a small space. Maggiani (in Maggiani & Prosdocimi 1976: 258)

took an ambivalent view, as did Alessandro Morandi (2004: no. 272), but most analyses of the inscription have assumed that **mezunemuśus** is the correct reading.

Inghirami (1828: 34–35) interpreted the Zignago inscription as *me zune Munius* 'me consociavit Munius'. He noted that Munius is attested as a Roman name (Tac., *Hist.* 4, 18; CIL I² 632) and he took *zune* to be a cognate of Greek ξυνόω 'to cause to participate'. Orioli (1854) proposed instead to read *Mezu Nemusus* and connected the second sequence to the Gaulish toponym *Nemausus* (Nîmes). Hubert and Vendryes (1913: 419–424) analysed *Mezunemuśus* as a toponym **Medio-nemossos* comparable to that of the Arvernian metropolis Νεμωσσός (Clermont-Ferrand) mentioned by Strabo (4, 2, 2), and similarly, Morandi (2004: no. 272) takes *Mezu* to be a derivative of **medʰ-i̯o-* and *Nemuśus* to be a patronymic *Nemusu* (or perhaps *Nemonios*). De Bernardo Stempel (2006a: 47; 2006b: 49) initially interpreted the text instead as featuring a genitive patronymic *Mezu* (< **Med-i̯o-*) and a nominative given name *Nemuśus* (< **Nemausus*), but later (De Bernardo Stempel 2012) as **Međđ-ô(n) Némaus-i̯o-s* 'Lenker aus Nîmes' (cf. the Gaulish onomastic theme *međđu-* < **med-tu-* and Old Irish *mess* 'judgement, opinion'), while Filippo Gambari (2017: 67, n. 8) translated the inscription as a single dithematic name meaning 'he who judges inspired by heaven' inflected as an Etruscan *s*-genitive. Maria Grazia Tibiletti Bruno (1978: 159–160) also saw an Etruscan *s*-genitive in the Zignago inscription and Luciana Aigner-Foresti (1985: 81) agrees that Etruscan morphology could have been employed in an otherwise ostensibly Celtic text. If it

Fig. 1: The Zignago statue stele.

is to be read as -**nemuśus**, the place-name Νεμωσσός (< **nemos-to-*) suggests that the second sequence is better understood as a development of the Indo-European *s*-stem **nemos* 'holy place' (cf. Sanskrit *námas-* 'worship, honour', Greek νέμος 'forest', Latin *nemus* 'wood, forest' and Gaulish νεμητον 'holy place') rather than **nemos* 'sky, heaven' (cf. Indo-European **neb^{h}os* 'cloud, mist'). But most of the recent attempts to analyse the Zignago inscription have proceeded on the assumption that it is not to be read as **mezunemunius**.

An alternative to Orioli's interpretation is J. G. Cuno's (1878: 191) translation *Medius Nemonii* (*filius*) 'Medius son of Nemonius'. Morandi (2004: no. 272) also suggested an association with the patronymic *Nimonikna* 'daughter of Nimu' from the Cisalpine Gaulish Cureggio stone (NO·20 = Morandi 2004: no. 96). Yet a name *Nemunius* (CIL V 7915) is attested in an inscription from Tourrettes-Levens, Alpes-Maritimes, and a Ligurian gentilicium *Nemanius* is attested from Bergeggi (CIL V 7779). The legates whose names are given on the Polcevera tablet are recorded as *Moco Meticanio Meticoni f*(*ilius*) and *Plaucus Peliani*(*o*) *Pelioni f*(*ilius*), where the patronymics and gentilicia have the same root, but are distinguished by *o*- and *a*-vocalism in their suffixes, and if the Zignago inscription is accepted to read **mezunemunius**, it seems most obviously to be understood as featuring a Ligurian patronymic **Nemonius*. Interpreting *Mezu* is not as straightforward from a Ligurian perspective, however. Ligurian given names preserved in Roman sources do not obviously preserve dental affricates, but the names *Metela* (CIL V 7850), *Metilius* (CIL V 7375), *Mettius* (CIL V 7446) and *Mettania* (CIL V 7197) suggest that Ligurian had an onomastic root *met*-, and Petracco Sicardi (1981: 27) contended that the spelling -*st*- in the form *Rubacaustos* which varies with *Rubacotium* on the *Tabula Alimentarii* may reflect evidence of palatalisation of -*ti̯*- > -*ts*- in Ligurian.

2. Filetto II

The inscription on the Filetto II stele (MS·2 = Ambrosi 1988: no. 15; Morandi 2004: no. 274) is less simple to analyse linguistically (Fig. 2). Eleven stelae have been found in (or near) the Forest of Filetto (Selva di Filetto) in the commune of Villafranca, but it is only the one found in about 1870, the 'Stele Bocconi' (acquired in 1907 by Luigi Bocconi of

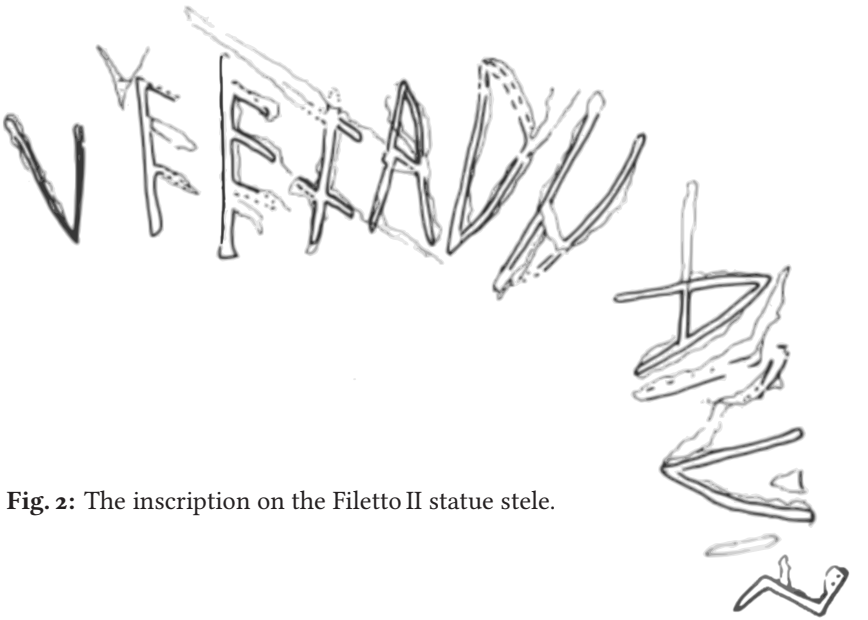

Fig. 2: The inscription on the Filetto II statue stele.

Pontremoli), that preserves a clearly lexical inscription. The Filetto II stele features a full representation of a man with a small beard, his feet facing left, holding two spears and an axe, and its inscription was at first deemed too weathered for much to be made of it (Mazzini 1908: 404). Its inscription begins between the axe-head and the left shoulder of the figure curving in dextroverse direction down towards his elbow, and it was first read by Giovanni Sittoni (1929) as **vezaruarus**. The Filetto II stele is conserved in the portico of the privately owned Palazzo Bocconi in Pontremoli.

The Filetto II inscription is weathered and difficult to make out, but Maggiani (in Maggiani & Prosdocimi 1976: 260) read it as **uṿezaṛṇapu.s**, Sittoni having missed the initial character and the apparent punctuation mark before the final **-s**. Maggiani links the spelling with **uṿ-** to **uvamokozis** on the Prestino stone and assumes it can be interpreted similarly as a Celtic *uve-* < **upo-*. De Bernardo Stempel (2006a: 47; 2006b: 49) rejects Maggiani's interpretation, taking the Filetto II inscription to preserve a genitive patronymic *Vezaru* (nominative singular **U̯edi̯-ar-o-s*) and a nominative personal name *Ab*(*b*)*us*, where Gambari (2017: 67, n. 8) saw a single dithematic name inflected

as an Etruscan *s*-genitive that he associated with the Gaulish onomastic elements *uesu-* 'good' and *uepo-* 'voice' (< **u̯ekᵘos*) and he translated it as 'he who speaks worthily'. The interpretations of de Bernardo Stempel and Gambari appear to assume that the initial sequence **uv-** is to be understood as a digraph representing *u̯*, much as Lejeune took **uv-** in the Prestino inscription to reflect *u̯*.

Gambari's analysis is irregular, however. He assumed that the **-z-** represents medial *-s-* (rather than *-đđ-* as it must in his interpretation of the Zignago inscription's **mezunemuśus**) and that a cognate of Gaulish *uepo-* is unexpectedly written as *-uapos*. De Bernardo Stempel's interpretation of **uẹzaṛụapu.s** as preserving two names, however, is supported by the manner in which the inscription is written as there is a clear gap after **uẹzaṛụ** and the following sequence **apu.s** is written at a slightly different angle. Her interpretation of both the Zignano and Filetto II inscriptions as featuring binomina is supported most strongly by the Filetto II inscription, although unlike the Zignago find where **-nemuśus** has long been linked with attested Celtic forms, de Bernardo Stempel does not cite a form similar to **uẹzaṛụ** attested otherwise as a Celtic name.

Abus is attested as a Gaulish potter's name (Delamarre 2007a: 10), but the second sequence **apu.s** on the Filetto II stone seems to be most obviously connected with the root of the Ligurian ethnonym *Apuani*. Petracco Sicardi (1981: 35) took *Apua-* to be a toponymic base to a root *ap-*, but did not propose an etymology. The first element of the Filetto II inscription is more difficult to explain as Ligurian, however, with the only personal names attested in later inscriptions that have evidently comparable roots being *Veianius* (CIL V 7672) and *Veustanius* (CIL V 7727). Stefan Zimmer (2000: 74) derives Welsh *heusor* 'herdsman' from **oṷi-stāro-* which given the lack of ⟨o⟩ otherwise in the Lunigiana inscriptions could explain **uẹzaṛụ**. But a river name *Ovidis* (i.e. the Ouvèze) is recorded in an inscription from Nîmes (CIL XII 3316), which suggests that a dental enlargement of a root **oṷi-* also existed in Ligurian. If Maggiani's reading **uẹzaṛụ** is correct, **uẹ-** may continue **oṷi-*, perhaps a reflex of Indo-European **h₃eṷi-* 'sheep' (cf. Old Irish *oí*, Latin *ovis*, Lithuanian *avis*, Greek ὄϊς and Sanskrit *ávi-* 'sheep').

3. Filetto I

A second stele was uncovered in 1908 in Malgrate, at a site adjacent to the Forest of Filetto, and it was immediately recognised to have a character comparable to reversed four-stroke ⟨s⟩ preserved on it (MS·3 = Mazzini 1908: 404; Ambrosi 1988: 57–60; Morandi 2004: no. 275). The stele was donated by the count Carlo Noceti di Bagnone to the Museo Civico Archeologico Ubaldo Formentini of La Spezia where it is still conserved, but Ambrosi (1988: 57–60) grouped it with the B-type of stelae and it was dated to the end of the seventh century B.C. (i.e. to the Hallstatt C2 period) by Gerhard Dobesch (1989: 60) because of the antenna short sword depicted on it. As an evidently older creation than the nineteenth-century find, it was catalogued by Ambrosi as the Filetto I stele, but it was not until Buffa (1935: 12) read additional characters on the stele that it became widely considered to feature an inscription. Buffa's reading **ś**[…]**is** is not upheld by Maggiani (in Maggiani & Prosdocimi 1976: 259), however, who only gives a transcription **ś**[-]××[-] for the text running vertically down from the only clearly attested letterform. Meiser (2014 Li 1.4) transcribes the Filetto I inscription as **----ṣi**[…]**ś**, but Giovanni Colonna (2004b: 12–14) speculated that the inscription may be an abbreviation of the name of the Etruscan god *Śuri*.

4. Bigliolo

The inscription on the Bigliolo stele (MS·1 = Ambrosi 1988: no. 48; Morandi 2004: no. 273) is not as problematic epigraphically as the Filetto II text (Fig. 3). The stele was found in 1975 by two farmers ploughing a field at a location called Belvedere, near Bigliolo in the commune of Aulla, and it features a full depiction of a man (albeit without legs). He is represented holding an axe and the inscription runs in dextroverse direction from the man's right shoulder down to the hand that holds the axe. The stele is conserved in the Museo delle Statue Stele Lunigianesi in Pontremoli and its inscription was first read, uncontroversially, by Maggiani (in Maggiani & Prosdocimi 1976: 261) as **vẹmetụvis**. Despite his interpretation of the Filetto II inscription as possibly featuring Celtic **uve**- < **upo*-, Maggiani proposed to take **vẹme**- as a cognate of the Prestino stone's **uvamo**- or a comparable form (with *ve*- < **upo*-) to

Fig. 3: The inscription on the Bigliolo statue stele.

the Gallo-Latin dative plural theonym *Comedovis* (CIL XII 2445, Vienne). De Bernardo Stempel (2006a: 47; 2006b: 49) instead takes the inscription to feature a binomen, with the first name continuing a genitive of **Upo-met-os* and the second **U̯ik-s*, both of which would be otherwise unparalleled Celtic names (although cf. *Viridovix*; Caesar, *B.G.* 3, 17).

The name of the commemorated warrior in the Bigliolo text seems most obviously comparable to the Ligurian form *Vimivinus* from Acqui Terme (CIL V 7504). As Untermann (1958: 186) and Petracco Sicardi (1981: 22) observed, Ligurian names often feature variation of *-e-* and *-i-* (especially before nasals) and the root **vẹm**- can be taken most straightforwardly as a reflex of Indo-European **u̯emh₁-* 'to vomit' (compare Greek ἔμετος 'vomiting, vomit' < **u̯emh₁etos*), although presumably with some semantic development, much as has evidently occurred with Gothic *wamm* 'a stain, a spot' and Old English *wamm* 'a spot, a mark'. Alternatively, a derivative of Indo-European **gᵘem-* 'to go' might be considered (with a similar enlargement by *-et-*) given the develarisation attested in Latin *veniō* 'to come'. If the final sequence **vis** represents a patronymic, it might be compared with *Veianius* (CIL V 7672) and taken to reflect *vii̯-* < **u̯ei̯-*. Alternatively, as Giovanna Rocca (2012: 90) suggests, the sequence may also be compared to the ending of the name *Veltovis* from Acqui Terme (CIL V 7540).

5. Sorano V

The most recently discovered of the Lunigiana stele inscriptions (MS·4) is from the church of St Stefano di Sorano in Filattiera and it is preserved on the fifth stele found at or near the church (Fig. 4). The Sorano V stele was discovered in 1999 in a wall of the Romanesque church while it was being restored. Much like the Filetto I stele, the figure on the Sorano V stone is armed with an axe, a pair of javelins and an antenna short sword thrust through the belt on the right side. A much-weathered dextroverse inscription on his chest was read only as]**vem**[by Maggiani (2001: 26) and it has been dated to the end of the seventh century b.c. (Paribeni in De Marinis & Spadea 2004: 268). Colonna (2004b: 14, n. 21) explains the sequence as a part of another name with the root *vem-* comparable to that on the Bigliolo stele and suggests that the lacuna to the left may have once featured the Etruscan pronoun *mi*. The stele is conserved in the alcove of St Stefano's in Filattiera.

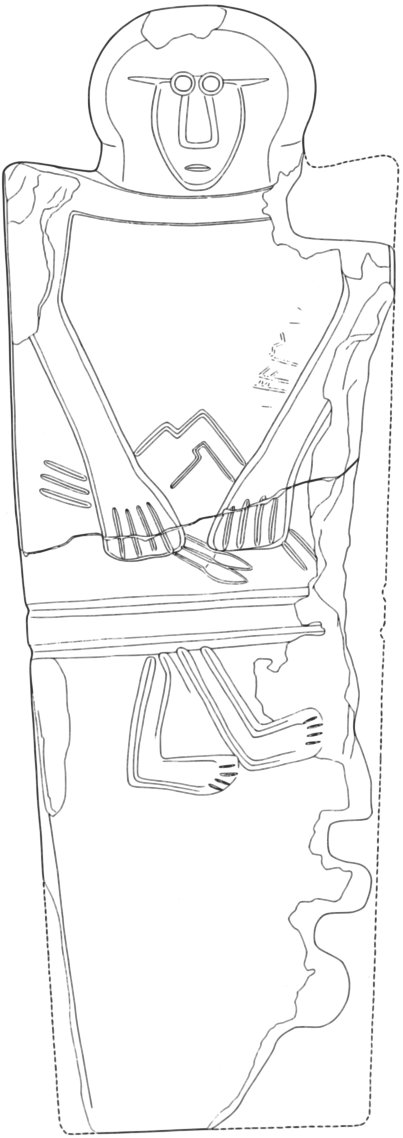

Fig. 4: The Sorano V statue stele.

6. Ameglia

The Apuani seem to have also employed Etruscan writing to indicate who owned personal items. In 1976, the first excavations were undertaken of a pre-Roman necropolis at a site called Cafaggio in Ameglia. Ameglia appears to have been the site of a Ligurian emporium where Etruscan and Greek goods were traded and two inscriptions are now known from the necropolis. Some 54 tombs were eventually

excavated from the site, the male cremation graves characterised by spears, swords and helmets, including sheaths decorated in a La Tène manner, the female burials by gold jewellery influenced by Etruscan designs (Durante & Landi 2022).

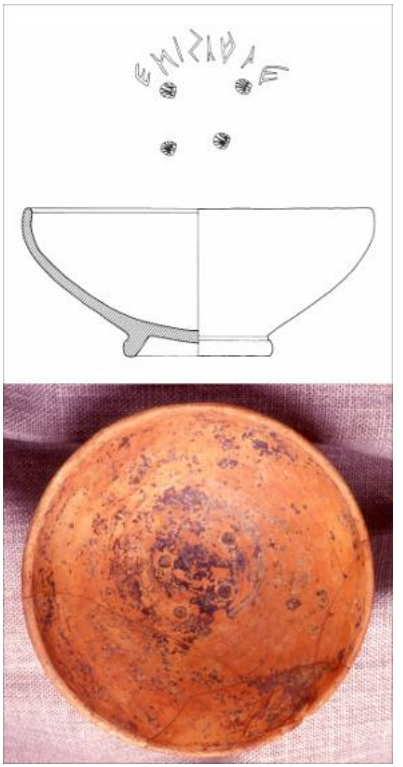

Fig. 5: The inscription on the Ameglia bowl.

In 1976, a sinistroverse graffito on a bowl from the late-fourth and third-century necropolis was excavated from tomb 6 that was originally read **enisuale** (Giacomelli 1977: 69), but by Maggiani (1987: 438–440) later as **enistale** (Fig. 5; SP·2). The inscription was at first presumed to be Lepontic, but Gambari & Colonna (1988: 154, n. 139) compared **enistale** to the name *Enistalus* recorded in a later Roman inscription from Busca (CIL V 7838), *Enistalius* from Nice (CIL V 7872) and *Enstalius* from Nozza (CIL V 8890). The ending *-e* seems to be best understood as grammatically Etruscan, reflecting the interlingual strategy whereby Indo-European names appear in Etruscan inscriptions in what seem to have been vocative forms (Stifter 2013: 49–52).

Other examples of names from Liguria featuring an onomastic element **eni-* include *Enica* (CIL V 7641), *Enicus* (CIL V 7850) and *Enicius* (CIL V 7850), and the name from Pollentia read as [*E*]*nicus* by Haeussler (2013: 248–249). Rubat Borel (2021: 223–224) interprets *Enistalus* as a Celtic name featuring a reflex of **eni-* 'in' and *Enicus* as a velar enlargement of *(*p*)*etno-* 'bird' (cf. Ogam Ena- and Old Irish *én* 'bird'). An anthroponym formed by a velar enlargement of **eni-* 'in' seems unlikely, but *(*p*)*etno-* 'bird' is proposed by Delamarre (2007a: 221) to be continued in Gaulish onomastics only as *Enn-* not *En-*.[5] The following sequence **-stal-** was compared by De Bernardo Stem-

[5] Cf., however, De Bernardo Stempel (2010: 79) on degemination in Gaulish.

PEL (2006a: 47; 2006b: 47) to that found in the name of the oppidum *Naustalo* mentioned by Avienus (5, 613) in southern Gaul and the ethnonym *Longostaletes* (Λογγοσταλετων) from Narbonensis that is only known from coins (RIG M-74, M-196). Blanca María PRÓSPER (2019: 26, n. 48) similarly compares *Naustalo* to Old Norse *naust* 'boatshed' (< **neh₂u-sth₂o-*) and *Longostaletes* to **long-* 'ship' and a "quasi-participial derivative **steh₂-lo-*" reflected in Old Irish *sál* 'heel' (PRÓSPER 2019: 28), while DELAMARRE (2015: 26–27) analyses *Enistalus* as featuring an element cognate to Old Irish *inis* and Welsh *ynys* 'island' < **eni-sth₂-ih₁* with **eni-sth₂-* signifying 'stands in (the sea)' as if *Enistale* was an Etruscanised Celtic name.

Middle Welsh *sawdl* 'heel', however, suggests that Old Irish *sál* 'heel' continues **stātlā* (MATASOVIĆ 2009: 354) and Eric HAMP (1974: 191–192) derived Old Irish *inis* and Welsh *ynys* 'island' from **ini-sth₂-* 'alone standing' which he also proposed was the base of Latin *īnsula* 'island'. Not only do both *-st-* and *-al-* appear to be recorded as suffixes in Ligurian names (e.g. in *Veustanius* and *Venialus*; CIL V 7713, V 7727), *Enistalus*, *Enistalius* and *Enistale* are all attested from locations that suggest they are distinctively Ligurian coinages.

The other inscription excavated later from the Cafaggio necropolis is preserved on a bowl from tomb 42, but its text, read by MAGGIANI (2004) as *mi ates*, seems most immediately comparable to an Etruscan inscription such as *mi ates qutum peticinas* 'I (am a) vase of (the manufacturer?) Atio, (the property?) of Peticeno' on a vase from Cerveteri (ET² Cr 0.2). The finds from the Cafaggio necropolis are conserved in Genoa by the Soprintendenza per i Beni Archeologici della Liguria, but only one of them appears to be linguistically Ligurian.

Ligurian morphology

Most of the names attested in the inscriptions from Lunigiana can be readily associated with names (or onomastic elements) recorded in Roman inscriptions from Liguria, with the Zignago inscription (if it is to be read as *Mezu Nemunius*) even seeming to record a form with a Ligurian derivational suffix. De Bernardo Stempel has interpreted the three clearly readable stele statue inscriptions as recording binomina, in each case with a first name ending in *-u* followed by a second ending in

-s. Her explanation of these endings as Celtic, however, is unexpected as taking the *-u* as a genitive marker (De Bernardo Stempel 2011) would require Ligurian to have a different word order for patronymics than that otherwise attested in Celtic. The second name in each inscription could be a nominative appositive following an *n*-stem, much as appears to be attested by Cisalpine Gaulish binomina such as *Minuku Komoneos* 'Minuku son of Komu' on the Stabio stele (TI·42 = Morandi 2004: no. 39) where *-eos* is a patronymic marker (Lejeune 1971: 408–409, Markey & Mees 2003: 138–139). Yet the Zignago inscription's *Mezu Nemunius* (if that reading is to be preferred) is the only text that appears to feature derivational morphology of a type widely attested in Ligurian onomastics, and it seems to record it for the second name as if the *-s* ending may mark the genitive, as in Etruscan; compare *Meticoni f*(*ilius*) and *Pelioni f*(*ilius*) on the Polcevera tablet. Sigmatic marking is typical of both the nominative and genitive singular in Indo-European languages, however, with the athematic genitive singular endings attested in the daughter languages continuing **-s* ~ **-os* ~ **-es* and the *o*-stem appearing to reflect an enlarged form **-osi̯o*.

Rather than both reflecting *n*-stems like Cisalpine Gaulish *Minuku* appears to, the statue stele forms *Mezu* and *Uvezaru* suggest that Ligurian may have lost the inherited Indo-European nominative singular marker **-s* and represented the resultant *-o* as *-u*, while it retained *-s* in the genitive, perhaps as a reflection of the *o*-stem ending **-osi̯o* (cf. the *s*-genitive of Germanic). This morphological interpretation relies on reading *Nemunius* (rather than *Nemuśus*) in the Zignago inscription, but it may represent another reason to distinguish Ligurian linguistically from Celtic, much as the widespread Ligurian use of the gentilicium-forming suffix *-anius* is not paralleled in the onomastic systems employed in Lepontic or in Gaul. Like the toponymic formant *-asc-*, the use of *-anius* and the *-us* (rather than *-oiso* or *-ī*) marking of the second names in masculine binomina appears to distinguish Ligurian from attested Celtic practice and to indicate that Ligurian represents an appreciably separate dialect grouping. The Romans did not consider the Ligurians to be Celts, and although there are some evident parallels between Ligurian and Celtic names, these can all be understood as reflecting inherited Indo-European features, not distinctively Celtic traits.

The Prestino inscription

Since the discovery of the Prestino stone, it has become increasingly common for linguists and archaeologists to treat the Lunigiana finds as if they were an offshoot of the Lepontic tradition. Emmanuel Dupraz (2015) has even invoked the Bigliolo inscription in his revival of Lejeune's phonological interpretation of the sequence **uv**- on the Prestino stone as a digraphic representation of a glide. But the comparable spelling on the Bigliolo stele seems best associated with an etymological **ou̯-*, not **u̯-*. Taking **uvamo**- as a regular Celtic derivative of **upamo-* has also been criticised by Joe Eska (1998; 2013) who contends that the spelling is best understood as representing *uφamo-*. Eska (2013) cites the hiatus-resolving typology proposed by Roderic Casali (1998) to argue that the complete loss of **p* would have meant **upamo-* > **uamo-* > **u̯amo-*. But Peter Schrijver's (1995: 103) analysis of Middle Welsh *keifn* 'third cousin' (< **kəμniu̯üh* < **koμniu̯ūs* < **kom-nepōts*) assumes that the loss of Indo-European **p* in **nepōts* similarly led to the insertion of a glide and there is no evidence otherwise for inherited **φ* surviving into the early Celtic dialects. Taking the Prestino spelling **uvamo**- in the manner it is most obviously to be interpreted is the Occam's razor approach to the early Lepontic inscription – there would need to be much better evidence than that proffered by Dupraz or Eska for it to be confidently assessed otherwise.

The Prestino stone also appears likely to represent a funerary monument. It was not found at a funerary site, but ancient stones were often reused, with funerary stones and altars often found in the walls of more mundane structures (which is where the Prestino stone was found). The monumental inscriptions from Lunigiana are all recorded on funerary stones, and contemporary texts like that on the Busca stele are also memorials. The Vergiate inscription is more clearly a northern reflection of a well-known Etruscan type of text, as horseshoe inscriptions are found not just on the Busca stone, but also in Tuscany (Gambari & Colonna 1988: 151–153) and seem likely to also be reflected by the horseshoe-shaped funerary stones from Bologna (Ducati 1912; 1943). All the horseshoe texts are Etruscan memorials, with the exception of the Vergiate inscription, which preserves a linguistically Celtic funerary epigraph. Just as inscriptions such as that on the Busca stone record a reference to a *suθi* or tomb, the Vergiate text refers to a *pala*, usually

thought to indicate 'tombstone'. Instead of a reference to a tombstone, however, the object of the Prestino inscription is **siteś** 'seats', perhaps in the sense 'seats of rest'. The Old Irish *s*-stem *síd* is used primarily to indicate a 'fairy hill' or ancient burial mound, but the Prestino inscription appears to refer to a plurality of 'seats' as if it were formerly situated in a graveyard. Etruscan *suθi* has been linked to **sed-* 'to sit' (Duhoux 2007) and **siteś** may be a gloss of the widely attested Etruscan funerary term.

The final issue raised by the Lunigiana inscriptions is the identity of the second part of the binomen **uvamokozis plialeθu**, apparently a cognomen or title. Ligurian also appears to attest anthroponymic reflexes of **g^{h}ostis* 'guest' in *Velagostius* (CIL V 7729), *Vilagostus* (CIL V 7837) and presumably *Velacosta* (CIL V 7853), but the analysis of Lepontic **plialeθu** has long remained unclear. Lejeune (1971: 59) suggested a connection with **b^{h}leiH-* 'to shine' (Pokorny 1959–1969: 155), just as the Ligurian onomastic element *Blais-* was written as *plais-* in pre-Roman Genoa. But no sure reflex of **b^{h}leiH-* is attested in Celtic.[6] Instead, the only empirically paralleled forms that could explain the root of **plialeθu** are the names *Pliammus* (from the 'Devil's chair' in Cavedine; AE 1992, 745) and that of the *Plinii* of Como (Markey & Mees 2003: 141–142). The Indo-European root that seems most likely to produce a Lepontic reflex *pli-* is **k^{u}elh$_{1}$-* 'to turn, to revolve', but Kim McCone (1991: 37) argues that **k^{u}elh$_{1}$-* is reflected in Middle Welsh as *pallu* 'die, perish, fail' (< **k^{u}l̥nh$_{1}$-*) with the full-grade preserved in Old Irish *imm-cella* 'surrounds' (< **k^{u}elnh$_{1}$-*). Nonetheless Eugen Hill (2010–2012: 163) observes that the development of **l̥* in Old Irish *tlenaid* (< **tl̥n-*) suggests that the expected development of **-l̥n-* in Proto-Celtic is **-lin-* and Welsh *pall-* might better be explained as a full-grade reflex of **k^{u}elh$_{1}$-* given the development of **-eRa-* > **-aRa-* in Insular Celtic (Hill 2010–2012: 172). Accordingly, the onomastic element *pli-* may reflect a (reanalysed) Lepontic nasal-present **pli-n-* < **k^{u}l̥nh$_{1}$-*. Lejeune (1971: 59) compared the second element of **plialeθu** to that found in the Gaulish name *Alle‹t›orix* 'other-king' (CIL XII 3396) and **plialeθu** (< **pli-i̯-all-et-ōn*) could similarly be interpreted as 'the one who turns others'.

[6] A reviewer suggests a zero-grade of **bel-o-* 'strike' (Matasović 2009: 61) as an alternative.

Conclusion

After the discovery of the Prestino stone, the Lepontic inscriptions could no longer be considered Ligurian. Ligurian had first been proposed to be a separate Indo-European dialect in the nineteenth century, and by the 1940s, a range of forms had been assembled as evidence for the Ligurian language. But all that seems to be left of Ligurian today are onomastic sources, classical glosses and the pre-Roman inscriptions from Genoa and Lunigiana. Although found some 180 kilometres to the south of Prestino, the Lunigiana inscriptions were analytically orphaned by the demonstration that Lepontic was a Celtic language. An epigraphic rump of what had previously been considered to be Ligurian, most of the attempts to analyse the Lunigiania texts since the discovery of the Prestino inscription have assumed that they, too, may have been Celtic. But the Lunigiana inscriptions appear to preserve elements closer linguistically to the Ligurian onomastic forms analysed by Untermann and to feature morphology that cannot readily be understood as Celtic.

The inscriptions on the stele statues from Lunigiana were evidently a Ligurian response to the Etruscan employment of writing on funerary memorials. They seem most simply taken as recording binomina, with a nominative given name followed by a patronymic inflected as an *s*-genitive. They can mostly be explained as preserving names derived from similar roots as are found in later Ligurian onomastics much as several of the pre-Roman inscriptions from Genoa can. But the use of writing to record the names of the deceased on funerary memorials was not the only employment the Ligurians had for literacy. Most of the inscriptions executed from the time have presumably been lost with only the texts recorded on stone monuments and ceramics surviving. The pre-Roman inscriptions from Lunigiana include both owner's inscriptions on ceramic and monumental funerary memorials, just as the Lepontic finds do. But rather than an outpost of early Celtic literacy, the stele statue inscriptions from Lunigiana are best seen as representing a typologically similar adoption of Etruscan writing by a linguistically distinct ancient people of Northern Italy.

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Lepontic *uvltiauiopos*, Roman *Ulpians* and other wolfine relatives

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Abstract

The article proposes an interpretation of *uvltiauiopos* in the Prestino inscription as referring to wolf ancestry, and compares canine-related cultural constructs in Celtic and Italic contexts.

Among the many things I learned about the *Meskwaki* 'the Red Earth People', a name related to their creation myth, during my decade or so of field work under the direction of Don Wanatee (1933–2021), a tribal elder, was that the tribe, a band of five or six politically allied central Algonquian speakers, was erroneously known to the French as the 'Reynards'. The French had first encountered but one clan of them in the Great Lakes Region in the mid-1600s and the French were told that they were 'the Fox'. By the time I caught up with them in the early 1980s they were known as the Meskwaki and living on land they purchased in central Iowa (near Tama) by selling horses. It is, of course, not unusual for indigenous American clans to be given animal exonyms. These names may or may not reflect certain clan traits, but they all require and observe certain taboos. The Meskwaki cannot, for example, relate tales about clan animals when the animals are 'alive', so such tales are only told during the winter.

Such restrictions were not imposed on the animal tales of Afro-American origin that were collected and recorded as the 'Uncle Remus Stories' in the post-Civil War American south by Joel Chandler Harris (1848–1908), tales such as *Bre'r Rabbit, stories of a notorious trickster*. My

belief is that, far back in pre-history, it was just such folk tales that generated animal names such as these of the Meskwaki fox clans. Even today sports teams are assigned animal mascots and names, e.g. the Arizona wildcats.

Here we recall the totemic Ulpian gens, best known from the emperor Marcus Ulpius Traianus. *Ulpius* is reliably metathetically derived from an Umbrian cognate of Latin *lupus* 'wolf', related to Latin *vulpes* 'fox' (see IEW: 1178–1179). Such names vary widely from related dialect to dialect and are often hard to etymologize, e.g. Sabine *hirpus* 'wolf' as in the *Hirpi Sorani* 'the wolves of Soranus' [= Etr. *Śuri*?]' (see Rissanen 2012).

Etymologizing these items is sometimes made more difficult by 'unstable' clusters such as **u̯l̥t-i̯-* in Lepontic *uvltiauiopos* 'descendants of the wolf' (uel sim.; CO·48, Prestino, ca. 575–500 B.C.) discussed below, which is not made any easier by the alphabet employed. Instability is indicated by the degree of proliferation of variants of an original word or even a cluster. Consider, for example, the striking proliferation of variants of intervocalic **-ḱu̯-* in reflexes of PIE **h₁éḱu̯os* 'horse': e.g. Lat. *equus* (*equos*), Gaul. *epos**, Skt. *áśva-*, Gk. ἵππος, Tajik *asp*, Av. *aspa*, Persian *æsb*, Wakhi *yaš*, Toch.B *yakwe*, and so on.

Note the garbled (hence unstable) legend VEPOCNAVOS found on a so-called 'Vepo' gold stater of the British Corieltauvi recently discovered in the Mansfield area of Nottingham. This legend is surely to be read as *u̯epo-cun-au̯os* and interpreted as a compound deriving from a conceivable PIE **u̯ekʷo-ḱun-h₂eu̯h₂os*, tentatively glossed as 'Vepo's whelp grandson/descendent' (or similar), the ruling member of the third generation of a Corieltauvian dynasty (see Markey, Briggs & Rudd 2022). Compare, for example, Welsh *Cwn Annwn* 'the hounds of hell', the Irish hero's name *Conchobar* 'lover of canines, dog lover', with *-chobar* 'desire' < Proto-Celtic **kubro-*, and *Cú Chulainn*, a warrior hero and demi-god of the Ulster Cycle.

From this we infer that Lepontic, too, reflected the Celtic dog-wolf (fox)-warrior construct (on which see McCone 1986); cf. Gk. κυναλώπηξ 'dog-fox', a 'mongrel' between a dog and a fox, the nickname of the ruthless Athenian general Cleon, a compound of κύων 'dog' + ἀλώπηξ 'fox' < Proto-Hellenic **alōp-ēk-*, ultimately from PIE **h₂lop-* 'fox'. This, plus numerous other shared cultural associations that cannot be detailed here, define Lepontic as stalwartly Celtic.

Bernard Mees and I failed to adequately address Prestino's *uvltiauiopos* in our earlier analysis of this inscription (Markey & Mees 2003: 149–152). Prestino has been photographed numerous times, e.g. in Zavaroni's *Ancient North Italic Inscriptions (Lepontii et Galli), Provincia di Como* (2001), and amply in Lejeune's *Lepontica* (1971: pl. XII). The inscription is sinistroverse, with its lexemes contained in a banded ribbon in which each unit is demarcated by three puncts: (sinistroverse) ƷO1OIVAI+ꓶꟻV **uvltiauiopos**, which we now see as a dat.pl. *i̯o*-stem masculine compound ending in *-bos*, which confirms Thurneysen's (1946: 182) suspected loss of final *-s* in Gaulish *-bo*. On initial *uvlti-*, note De Hoz's (2005: 81) connection of Celtiberian **ulTia** with **u̯l̥t-i̯-* and reference to Gaulish *uolto-* 'lock of hair', which Delamarre (2003: 328) compares with Gk. λάσιος (*ϝlatjos) 'shaggy' < PIE **u̯l̥t-i̯i̯os* (IEW: 1139). Even more pertinent, however, as Bernard Mees (pers. comm.) has pointed out, is McCone's (1985: 172) metathetic derivation of OIr. *olc* 'evil, bad, unlucky' < **ulkᵘ̯os* < **u̯ulkᵘ̯os* < **u̯l̥kᵘ̯os* 'wolf', which, if actually **u̯l̥C-* > **uu̯l̥C-* > *ulc-*, would yield a source for the Lepontic spelling *uvlt-* (cf. Gk. λύκος 'wolf' < **u̯lukᵘ̯o-*). Further on the derivational history, consult Lehrman (1987), Lejeune (1971: 130 and n. 455), and IEW: 1178–1179.

The second component of *uvltiauio-* is surely **au̯i̯o-s* 'descendant' (Stokes & Bezzenberger 1894: 22), cf. Ogham AVI 'grandson' (I-COR-014 = CIIC 66, Faunkill and the Woods, Co. Cork). This is presumably ultimately from PIE **h₂eu̯h₂(i̯)o-* > OIr. *auë* (cf. Qiu 2019). If this is correct, then Prestino's *uvltiauiopos* may be glossed as dedicatory 'to the descendents of Ultius (the wolf)', possibly invoking members of a top echelon of Lepontic society. Onomastic association with wolf-imagery might indicate highly aristrocratic use of Lepontic literacy; but see below. Prestino may now be translated as: '*Uvamokozis* [he who has the highest guest] *Plialeθu* [a patronymic or perhaps a title?] gave the tombstones (graves) to the descendants of the wolf, the *Ariuones*'.

Here we note the *Lupercalia* (lit. 'wolf-ritual'), a fertility ritual held each year in Rome on February 15th that was centered around the myth of the founding of Rome and the suckling of Romulus and Remus, the twins of Mars, by a she-wolf (Lat. *lupa*; but Skt. *vrkīs*, OIc. *ylgr*) in a cave known as the Lupercal. It is noteworthy that this ritual was described by Rome's leading authors, e.g. by Ovid in his *Fasti* (15), by Virgil in his *Aeneid* (8.342–844), by Horace in his *Ode 3*. The Lupercalia were

certainly one of the most memorialized and popular rituals of ancient Rome (see Wiseman 1995; Vuković 2016). It may exhibit possible connections between Faunus/Silvanus and Rudra (so Hraste & Vuković 2011). It appears that the Lupercalia were established and fostered as a ritual to repel women's sterility and ensure their fertility. That the ritual persisted throughout the Empire would seem to indicate a need for continuing fertility to ensure the survival of a once dominant Roman ruling class subsequently threatened by outsiders such as slaves, immigrants and intruders.

Evidence of class stratification in Lepontic is lacking as opposed to Venetic, where we have the term *e.kvopetari* (eqvpetars) < **ek^{u}opet*[*o*]- = *equitalis* 'mounted', presumably referring to an equestrian upper class (Lejeune 1974: 86, 324). A more definite meaning eludes us, but the previous interpretation as 'flying horse' has been rejected (Lejeune 1974: 86). A more fitting comparison might be Skt. *áśva-páti-* 'horse owner', particularly given the numerous Vedic compounds with a genitival initial and *-páti-* as the final.

Roman onomastic association with the venerable wolf persisted as a clan association among the aristocracy: e.g. *Lupio* (CIL III 1976), *Ulpius* (CIL XIII 11810), *Domitius Ulpianus* (170–228 a.d., writer and jurist); and some not so aristocratic such as *C. Iulius Lupio*, one of the concessionaires who worked in the brick-yards of Arria Fadilla, mother of the Roman emperor Antoninus Pius. The wolf/Ultius (Ulpius) association in Lepontic might, however, be an indication that Lepontic literacy and the development of its alphabet were at the outset highly aristocratic undertakings. It is only by use of such tangential information that we may hope to assess the early cultural position of nigh-prehistoric Lepontic literacy.

That wolves were associated with death is clearly shown by funerary imagery, not only among the Lepontic peoples but also among the Etruscans. Etruscan wolf-man imagery is too well known to detail here; the image of a man wearing a wolf's head from the tomb of Orcus II, *Aita* (Hades) (4th century b.c., Tarquinii) and the black-figured vessel with the dancing wolf god from the 6th century b.c. will suffice (Krauskopf 2006). Underworld ritual, imagery and deities/daemons (e.g. *Calu*, *Xaru*(*n*), *Vanθ*, *Tuχulχa*) evidence the prominence accorded death by the Etruscans. This prominence is also demonstrated in plastic art by

the Bologna stelae at the Etruscan necropolis of Marano di Castenaso (see Klinger 2013; Sacchetti 2011–2012).

Etruscan death cults, as well as those cults' terminology, could well have spread from the Etruscans to their neighbors. We note that Lepontic inscriptions are almost exclusively epitaphs. We would seem to have an instance of such linguistic diffusion in a Lepontic term for grave, namely *siteś* (acc.pl.) in the Prestino inscription (CO·48). This is surely a loan-blend from Etruscan *śuθi* 'place, seat, tomb', but cf. Lejeune (1971: 119) and Lambert (2003: 21), who both compare it with Lat. *sēdēs*. Embracing *siteś* as a loan-blend would, however, explain the apparently restricted use in Lepontic of *pala* < **k^{u}alā-* (?), probably a word for 'tombstone, gravestone', which occurs on the Vergiate stele (VA·6) and which lacks a clear etymology beside *pruia*, perhaps a synonym for tombstone on the same stele (cf. below). Moreover, seeing *siteś* as a loan blend based on *śuθi* avoids the issues associated with derivation from **sēdēs* (> Celtic **sītīs*) or an acc.pl. **sēd-n̥s* (cf. Lejeune 1971: 105).

An example of language mixture (Celtic and Etruscan) is, however, found in the 'talking text' inscription on the Busca stele (ET^{2} Li 1.1; Cuneo, Piemonte): *misuθilarθialmuθikuś* 'I am the tomb(stone) of Larθ Muθiku' in which *muθiku* is perhaps a Celtic name. The stone's archaeological culture is unknown. *Larθial* is the Etruscan *l*-genitive of *larθia*. The inscription dates from between the end of the 6th and the beginning of the 5th century B.C. Cuneo is 98 km south of Turin, and thus far outside the Lugano area. Comparably, we have *musu* (= **mussū* or **mūsū*) on VR·12 (Santa Maria di Zevio, Verona) and VA·30 (Gerenzano, Varese). We lack any immediate Celtic comparanda for *muθiku* and/or *musu*. Etruscan has *mute* that belongs to Lat. *mutus*.

A source for **k^{u}alā-* is lacking in IEW. One may perhaps compare Etr. *Calu*(*s*), a deity of the underworld; but see Lejeune (1971: 86–87), who suggests 'stone' for *pala*. Lejeune (1971: 35) aligns Vergiate's *pruiam … karite* with Todi's *karnitu lokan* (PG·1; ca. 150–100 B.C.), thereby associating *pruiam* with *lokan* 'grave' < **leg^{h}-* 'to be recumbent' (IEW: 658–659). We note that the Vergiate stele has the only 'horseshoe' text that is not in Etruscan.

It is out of the mists of prehistory, as alluded to at the outset, that wolf imagery and myth arose, those cunning animals who were supposedly both man-raisers and -eaters, as well as divine messengers (notably for

Apollo) and guides to the Afterlife. Like Romulus and Remus, the Irish king Cormac mac Airt was raised by a she-wolf. The south Gaulish mallet god Sucellos (Silvanus) sometimes wears a wolf-skin. Pausanias (8.2.6) specifically mentions a wolf transformation during a sacrifice to Zeus Lykaios ('Zeus of the Wolf'). Cernunnos is depicted on the Gundestrup cauldron accompanied by a wolf. Hector clad Homer's Dolon in the skin of a grey wolf (*Il.* 10.332–335, 454). Further evidencing the dog/wolf constellation we have British Celtic *Cunomaglos* 'dog/wolf-lord' and *Cunobelinos* 'strong as a dog/wolf', and so on. The association between humans and wolves, in both life and death, appears a constant. But one wonders where Lug is in this constellation of wolves and humans. Clearly the wolf mythology is more archaic.

One element that is found in classical (Greek, Latin and even Etruscan) epitaphs and that is arrestingly absent from the structure of Lepontic epitaphs is the eulogy, the *laudātio*/ἔπαινος (ἐγκώμιον). A virtually unique Etruscan example is supplied by the epitaph for Laris Pulenas, largely a catalogue of offices held (Belfiore 2012). A well-known example from Rome is the epitaph on the sarcophagus of Lucius Cornelius Scipio Barbatus: … *cuius forma uirtuti parissima fuit* … 'whose appearance was most in keeping with his virtue' (CIL VI 1285, ca. 280 B.C.). For Greece, we have the justly celebrated Simonidean epitaph for the Spartan dead at Thermopylae (480 B.C.): ῥήμασι πειθόμενοι 'obedient to (their) words (sayings, oaths)' (see Watkins 1995: 83). The obvious question that arises from this absence is: why? Why should a eulogy be lacking in Lepontic epitaphs? Is the absence due to a cultural attitude? Had appropriate formulae not yet evolved or been conventionalized? Did Lepontic lack commemorative festivals such as those in Greece (Pythian, Isthmian, Nemean) that occasioned celebratory *encomia* such as we find in Pindar? Was the cost of additional engraving prohibitive? We are left with empty speculation.

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ᗩ.Ɔ. ᴍᴍɪᴘᴘɪᴠ