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„Raetic and Runes.
On the North Italic Theory of the Origin of the Runic Script“

verfasst von / submitted by

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Contents

Chapters

Figures

Tables

Maps

0. Introduction

0.1 Preface

> "The chances are a thousand to one against this being all mere coincidence [...]
> and none of the assumptions are at all wild."
> Skeat 1890, 477

When setting out to research the derivation of the Runic script, the student soon finds that – even considering the appeal particular to questions about first beginnings and origins – the amount of literature dedicated to this problem exceeds expectations. Making this observation is in fact a commonplace of runology, serving as introduction to numerous studies concerned with the issue.

> "Die frage nach dem alter und dem ursprung der runen ist so oft aufgeworfen und auf so viele verschiedene weisen beantwortet worden, daſs man fast versucht sein könnte zu sagen, daſs alle möglichen, denkbaren und undenkbaren ansichten zu worte gekommen sind. [...] Es ist eine sehr groſse literatur, die hier vorliegt; aber die qualität steht leider im umgekehrten verhältnis zur quantität."

The above quote is a representative example – the fact that it dates from 1887, being a passage in Ludvig Wimmer's *Die Runenschrift* (p. 11), which is widely considered to mark the *beginning* of modern Runic studies, should serve to convey an idea of the present state of affairs. As observed by Düwel in the current RGA entry on *Runenschrift*, the remark that the matter is debated has become a "stereotype Eröffnungsattitüde" (2003, 579).

Curiously, the topic's popularity is due less to the pull of the challenge to find a plausible explanation, but on the contrary to the abundance of subtly different possibilities which suggest themselves. The difficulty lies not in constructing a (more or less) convincing argument, but, faced with a host of such, in comparing, assessing and ultimately choosing that path through the thicket which one considers least fraught with obstacles – for, after all, few models yet have been conclusively disproved, and none was so compelling that somebody else did not prefer another (Williams 1996, 121; 1997, 190).

Since the work of Jacob Bredsdorff (1822), the scientific community has been widely agreed that the runes are not derived directly from the Phoenician alphabet; the claim that they represent a Germanic or even Indo-European proto-script has also rather lost in appeal. Focussing on the Mediterranean alphabets, the debate moves within such a narrow field, that, for most aspects of the borrowing, there are a number of options which seem equally likely, especially when they all must necessarily involve a certain amount of speculation which is based on relative probabilities. Particularly the numerous possibilities for formal derivations are hard to prefer to each other – any rune can be argued to correspond to a daunting number of letters from various alphabets and alphabet variants, all the more if one is prepared – as many scholars are – to invent ad-hoc rules for the formation of rune shapes specifically or the borrowing of script in general. The many suggestions offered to this day work with a handful of alphabets which are derived from each other and are consequently so similar in many respects that the distinction between genetical and typological developments is as difficult as the identification of discrete geographical and diachronic variants (Wimmer 1887, 20; Mees 1999, 149.)

As the analysis of graphic forms and grapheme–phoneme relationships fails to lead to positive results, arguments are imported from various related fields – mainly linguistics, obviously, but also archaeology, ancient history and grammatology. Much hinges on the weighting of the different aspects – archaeological context, phonetics, historical sources, alphabet history, cultural history – as the starting point often determines the result (Heizmann 2010, 18). The relevance of all these different aspects also means that scholars are sometimes forced to dabble in fields which are not entirely their own, which in turn can result in inaccuracies in the argumentation – particularly when views which would be considered debatable by the respective fields' specialists are argumenti causa posited as facts. When numerous scholars base their models on different, sometimes even conflictive premises, this leads to an even greater diversity of opinion, and notably: comparing and weighing the models against each other becomes an almost hopeless endeavour (Barnes 1994, 12 f.)

To a certain extent, the possibility of a piece of data being assessed differently, its being considered relevant to the issue or not, is rooted in the methods proper to the humanities. Still, there are some recurring points in the discussion of the Runic origin-question which may be either cleared up or at least shown to involve issues too complicated currently to be used to build theories on. I will concentrate on alphabet history or, generally, on script history, which is regularly, yet often somewhat vaguely, referred to in the literature. The first part of this thesis will be concerned with the identification of such claims and premises referring to the history of writing as have been cited as arguments or counter-arguments to particularly the North Italic theory of Runic derivation, and with the attempt to find examples and counter-examples from other scripts to see whether these claims and premises are justified, whether they must be refuted, or whether their argumentative value is in fact nil.

The North Italic theory currently leads something of a shadowy existence, particularly in Scandinavian runology, not only because of certain general objections pertaining to alphabet history, but also because the edition situation of the North Italic material has until recently been inadequate, causing scholars not immediately concerned with the inscriptions in question – among them runologists – to refer to old, obsolete editions and analyses (Mees 2000, 54; Eichner 2006a, 102 f.). Even though much is yet to be desired, the situation has improved considerably in recent years. Prominently, the Raetic inscription corpus has been updated and (re-)published in an online edition in the course of a three-year project at the linguistics department of the University of Vienna. As a member of the project team, I have gained insights not only into the Raetic writing culture itself, but also into the problem of the spread of the alphabet among the peoples of Northern Italy. The second part of the present work will be devoted to the Raetic corpus, which is described and discussed in all aspects and detail according to the current state of research.

To make definite statements on the question of whether one or more of the North Italic alphabets provide models for Runic letters, the North Italic sources need to be analysed more systematically than has been done so far. The geographical and chronological alphabet variants, also within the major corpora, must be kept apart and considered independently. Based on the results of the analysis of the Raetic corpus in part two, the third part of my thesis will be concerned with the question of whether any aspect of specifically Raetic writing and/or epigraphical culture qualifies as a model for the Runic script.

0.2 Thanks

First and foremost, I want to thank my supervisor, project director, long-term mentor and friend Prof. Stefan Schumacher for a decade of support and advice and for his in-depth engagement with this thesis on all levels from linguistic methodology to the placing of commata. Valuable assistence was also provided by Prof. Heiner Eichner, who devoted some of his productive late evening hours to advise me on all things Etruscan.

This thesis would not have been possible without the data collected and experience gained in the course of the FWF-funded project *Thesaurus Inscriptionum Raeticarum* (TIR;

project no. P 25495). I owe thanks to my project colleagues Mag. Sindy Kluge and Mag. Gudrun Bajc for their input concerning readings and archaeological matters, and to the latter specifically for her drawings, many of which are reproduced in the present work. I would also like to take this opportunity to thank the many colleagues from museums and Denkmalämter/Soprintendenze in Austria, Italy, Germany and Switzerland, who often went out of their ways to enable us to examine Raetic testimonies – particularly Mag. Wolfgang Sölder of the Tiroler Landesmuseum Ferdinandeum.

Finally, many thanks to Mag. Michaela Wolfram for proof-reading the whole 448 pages. Any remaining mistakes, be they circular statements or minor typos, are of course my own.

0.3. Definitions and conventions

0.3.1 Transliteration

The transliteration conventions of the epigraphic traditions of the various corpora which are treated or referred to in this thesis are, unfortunately but expectably, not too well compatible. In keeping with runological usage, Runic inscriptions are given in transliteration (bold) and transcription (italics), following the standard editions (KJ) or original publications. See tab. 1 for all transliteration letters. The same conventions are used for Sabellic inscriptions.

For Venetic, the conventions are exactly opposite, viz. transliterations in italics, transcriptions in bold (thus in Pellegrini & Prosdocimi 1967). Seeing that I am not immediately concerned with the readings of Venetic inscriptions, the distinction need not be made in the present work; I transcribe Venetic forms in italics throughout. For Cisalpine Celtic, transliterations and transcriptions are not (yet) systematically kept apart; forms are also cited in italics. In Etruscan, the major issue in this respect is the rendering of the characters for sibilants, for which at least six different conventions are currently in use (see the overview in Eichner 2012a, 19–25; plus the system in ET 2). As, again, I am not con-cerned with the reading of Etruscan inscriptions, I transcribe Etruscan forms in italics, with *s* for underlying /s/, *ś* for underlying /ś/, with no reflection of Northern vs. Central/ Southern Etruscan spelling. Latin forms, exclusively names, will also be cited in italics, often transposed to underlying nominatives as common in the literature. Transliterations in capitals are only given for fully cited inscriptions.

The transliteration conventions for Raetic used in this work are the ones introduced for the TIR database. These conventions avoid all phonetic or even phonological interpretation and serve solely to represent distinct letters (archigraphemes). The archigraphemes of the Raetic alphabets are defined with a view to alphabet history: each archigrapheme of a letter either corresponds to a graphical unit which can be traced back to the Greek alphabet (e.g. alpha, sigma) or represents a completely new unit (e.g. the characters for the dental affricate). The units are defined by their graphical derivation, not by considerations of the grapheme–phoneme relations in Raetic writing. Hence, two different letters which (in some cases) happen to denote the same sound in Raetic (e.g., arguably, zeta and the new character for the dental affricate) are distinguished in the transliteration (*z* vs. *þ*); letters which can be argued to write different phonemes in different local traditions or inscriptions (e.g. zeta in the area of Verona and zeta at Steinberg) are transliterated with the same letter (*z*). On the other hand, letters which can be shown to be systematically distinguished in different traditions, but share a common derivation (e.g. different graphical variants of pi), are treated as character variants and transliterated with the same letter (*p*). Every archigrapheme is consistently transcribed with one letter, e.g. theta as *θ*, tau as *t*, without regard to the as yet insufficiently well understood phonetic realities of Raetic. Transliterations are given in italics – there is no transcription for Raetic forms; where the putative underlying sound values are relevant to the discussion, they are added in phonetic brackets. See tab. 13 for all transliteration letters.

Punctuation marks are transliterated with a colon *:* where it is clear that the element separates words, but with a single punct · where it functions as a syllabic punct or where its function is unclear. A space in the inscription appears as a space in the transliteration in ch. 2.5, which discusses Raetic writing; spaces (and dashes) are used to clarify the structures of texts in ch. 2.7 and 2.8. Further transliteration symbols include:

$	Symbols, i.e. characters which recur in the Raetic corpus, sometimes in combination with inscriptions, but do not appear to be letters.
§	Decorative elements and line fillers.
ạ	Doubtful identification of the archigrapheme.
?	Unidentifiable archigraphemes.
( )	Characters whose presence is doubtful (usually “(?)” in reconstructed parts of inscriptions).

[ ] (Potentially) missing parts of inscriptions.

| Line break.

Some of these symbols may be omitted when citing inscriptions for discussions of structure and content in ch. 2.7 and 2.8

0.3.2 Display and description of inscriptions and original characters

In reference to the abstract graphematic units, North Italic letters are always displayed in sinistroverse orientation; in the discussion of inscription, they are given as they appear in the inscription. Hastae are the equivalent of the Runic staves, viz. the full-length verticals in letters like 𐌀 or 𐌌. Bars ars the equivalent of the Runic twigs, viz. any short, oblique lines attached to a hasta (𐌀) or to another bar (𐌑). Long oblique lines are counted among the hastae, since the two are usually interchangeable (V vs. 𐌖); the same goes for short, straight lines, which are referred to as bars (𐌄 vs. ∃). Pockets are triangles of various sizes formed of a hasta and two bars or a curved line (𐌓).

Writing directions are sinistroverse (running from right to left), dextroverse (from left to right), boustrophedon (two or more lines which run alternately sinistro- and dextroverse) and false or reverse boustrophedon (two or more lines which run in the same direction in relation to their orientation, but are inverted in relation to each other). Individual characters may be retrograde (turned against the writing direction of the inscription; Runic: Wenderunen) and/or inverted (turned upside-down; Runic: Sturzrunen). As the Gullhornet font for Runic letters only includes dextroverse forms, arrows (←, →) are used to indicate the writing direction of Runic inscriptions.

0.3.3 Other terminology

Toponyms are almost exclusively those of the languages of the (or one of the) respective countries (e.g. Bodensee, Engadin). For place names in Südtirol I give the historical German names; for place names in the Trentino, the Italian ones.

I try to avoid the traditional term *Lepontic* for the Celtic corpus of Northern Italy, because it is a linguistic term. Using a language name for a corpus is permissible where either the corpus is defined by the language, or – if it is to some extent epigraphically defined – there is a (near-)congruence between the material in the corpus and the language's attestation (as in Raetic and Venetic). The "Lepontic" corpus is now known to include (apart from the host of linguistically dubious material) the testimonies of Cisalpine Gaulish. David Stifter's term *Italo-Celtic* is considered disadvantageous by some because it is already used in IE studies to refer to common features of the Celtic and Italic languages. In the present work, I refer to the Celtic inscription corpus of Northern Italy and Switzerland and to the writing tradition(s) associated with it as *Cisalpine Celtic*, which is accurate as a descriptive term and used, for example, by Joe Eska (e.g. 2017). The 19th-c. term *Lugano alphabet* will be used occasionally in default of more specific designations for alphabet variants, it being highly likely that the alphabet used in the inscriptions is not homogenous.

The term *Transpadania* functions as a cover term for the areas in which the North Italic alphabets are attested.

For terminology on scripts and writing, see section 1.3.1.

0.3.4 Other conventions

Quoted passages are given exactly as in the original, including internal quotation marks and various methods of emphasis. Any changes are marked by square brackets.

While some North Italic corpora feature distinctive sigla structures, some editions employ more than one strategy and/or the same one as another corpus. Therefore, when citing inscriptions, the corpus is usually indicated. Latin inscriptions are cited from CIL or EDH.

Sigla type	*Corpus*	*Reference editions*
Ad 1, *Es 120, Tr V	Venetic	Pellegrini & Prodsocimi 1967; Prosdocimi 1988
BZ-1; AK-1.1	Raetic	Schumacher 1992/2004; TIR
BG·1; AO·1.1	Cisalpine Celtic	Lexicon Leponticum
Na 1; FN 1	Camunic	Mancini 1980; Tibiletti Bruno 1990
Sp 2.102	Etruscan	ET (Meiser 2014)
Um 1	Sabellic	Rix 2002

Raetic sigla codes

SL	Slovenia
TV	Province of Treviso
PA	Province of Padova
VR	Province of Verona
TR	Trissino (site)

MA	Magrè (site)
AS	Val d'Astico (Astico valley above Piovene Rocchette with the Altopiano di Asiago)
SR	Serso (site)
CE	Val di Cembra (lower Avisio valley from the estuary to Castello di Fiemme)
FI	Val di Fiemme (lower Avisio valley above Castello di Fiemme)
SZ	Sanzeno in the Val di Non (site)
NO	Val di Non (basin north of Trento and west of the river Adige; excluding Sanzeno)
VN	Vinschgau (upper Adige valley between Meran and the Reschen pass)
BZ	Bozen basin (including Burggrafenamt, Unterland and Überetsch)
RN	Ritten (elevated plain north of Bozen between the rivers Eisack and Talfer)
SI	Seiser Alm and the Schlern area (submountainous area east of Bozen and the Eisack river)
WE	Wipptal and Eisacktal (valleys of the rivers Eisack and Sill)
PU	Pustertal (western Puster valley / Rienz valley)
IT	Tiroler Inntal (Oberes Gericht, Oberinntal and Unterinntal)
ST	Steinberg am Rofan (Schneidjoch; site)
AK	Achenkirch (site)
UG	Unterammergau (site)
AV	Bayerisches Alpenvorland (Northern Alpine foothills in Bavaria)
EN	Engadin (upper Inn valley)
HU	find place unknown
EX	excluded (see n. 371)

0.3.5 Abbreviations

Languages

Celt.	Celtic	NWG	North-West Germanic
D	Danish	OE	Old English
Du.	Dutch	OHG	Old High German
E	English	OI	Old Irish
Elam.	Elamite	OP	Old Persian
Etr.	Etruscan	ON	Old Norse
G	German	OS	Old Saxon
Gaul.	Gaulish	Osc.	Oscan
Germ.	Germanic	PC	Proto-Celtic
Goth.	Gothic	PG	Proto-Germanic
Gr.	Ancient Greek	PIE	Proto-Indo-European
IE	Indo-European	Raet.	Raetic
Ital.	Italic	S	Swedish
Kor.	Korean	Sabell.	Sabellic
Lat.	Latin	Skt.	Sanskrit
Lemn.	Lemnian	Sum.	Sumerian
Lep.	Lepontic	Umbr.	Umbrian
Lith.	Lithuanian	Ven.	Venetic
MHG	Middle High German	W	Welsh
N	Norwegian	WG	West Germanic

Literature

AAA	Archivio per l'Alto Adige
ANF	Arkiv for nordisk filologi
BzN	Beiträge zur Namenforschung
CII	Corpus Inscriptionum Italicarum
CIL	Corpus Inscriptionum Latinarum
ET	Etruskische Texte (Meiser 2014)
EWAhd	Etymologisches Wörterbuch des Althochdeutschen
EWDS	Etymologisches Wörterbuch des Deutschen
HD	Epigraphic Database Heidelberg (EDH)
IBK	Innsbrucker Beiträge zur Kulturwissenschaft
IBS	Innsbrucker Beiträge zur Sprachwissenschaft
IR	Iscrizioni retiche (Mancini 1975)
KJ	Runeninschriften im älteren Futhark (Krause 1966)
LexLep	Lexicon Leponticum
LIR	Le iscrizioni retiche (Mancini 2009–10)
MLR	Monumenta Linguae Raeticae (Marchesini 2015)
NOWELE	North-Western European Language Evolution
NotScav	Notizie degli Scavi di Antichità
NTS	Norsk Tidsskrift for Sprogvidenskap
PBB	Beiträge zur Geschichte der deutschen Sprache und Literatur
PID	Pre-Italic Dialects of Italy (Conway et al. 1933)
RGA	Reallexikon der deutschen Altertumskunde
RIB	Roman Inscriptions of Britain (Collingwood & Wright 1965)
RIG	Recueil des Inscriptions Gauloises
SE	Studi Etruschi
TIR	Thesaurus Inscriptionum Raeticarum
TS	The Temple of Sulis Minerva at Bath (Tomlin 1988)
ZcP	Zeitschrift für celtische Philologie
ZfdA	Zeitschrift für deutsches Altertum

1. Runes

1.1. Introduction

1.1.1 Etymology

Equivalents of the word _rune_ are known in all modern Germanic languages, and also, as loans, in a number of other European languages (e.g. French _rune_). While, in all modern languages, the word (D. N. Du. E _rune_, G _Rune_, S _runa_) is based on a Danish scholarly neologism of the 17th century (Morris 1985, 352), it was originally present in all branches of Germanic (Goth. _rūna_, ON _rún_, OS. OHG _rūna_, OE _rūn_, MHG _rûne_ < PG _*rūnō-_). The Gothic word translates Gr. _μυστήριον_, which is why it is assumed that the primary meaning is ‘mystery’, ‘secret’ vel sim. – cf. also Goth. _garūni_, OS. OHG _girūni_, G _Geraune_ ‘secret meeting’, ‘furtive talk’, ‘rumour’, G _raunen_ ‘to murmur (furtively)’. This indicates that the characters were originally called “secret”, thereby associating Runic writing with cult and/ or magical practices. A further comparandum is OI _rún_, W _rhin_ ‘mystery’ < PC _*rūnā-_, though the relation of the Germanic and Celtic words – cognates or a loan from either branch to the other – is unclear (Birkhan 2010, 52). Finnish _runo_ ‘song (of the Kalevala)’ must be a loan from Germanic.[1]

There have been efforts to dissociate the runes from the orbit of mystery. According to Morris 1985, 344, the connection of NWG _*rūn-_ ‘rune’ with Goth. _rūna_ and the ‘mystery’-group goes back to Grimm, who regarded the explanation of writing as a secret art as “a last resort” in the absence of phonologically plausible alternatives. The word was further connected with MHG _rienen_ ‘to wail’, OS _rêonian_ ‘to murmur’, OE _rȳn_ ‘bellow’, Lith. _runât_ ‘to chatter’, Lat. _rūmor_ ‘noise’, Gr. _ὠρύομαι_ ‘to complain’, with an onomatopoetic root _*rū-_ ‘to talk’ vel sim. (Hellquist 1939 II, 852 f.). Moltke 1976, 65 avoids “mysterious” runes by deriving the meaning ‘rune’ directly from the root, thinking of “signs that give sound, that speak” (1981, 4). Morris himself (1985, 346–356) argues an alternative etymology: while the ‘mystery’-words of Germanic and the branches cited above go back to a PIE root _*$h_3$reu̯h-_ ‘to talk (with a raspy voice$^?$)’ vel sim., NWG _*rūn-_ is a homonym which belongs with a PIE root _*reu̯h-_ → _*reu-n-_ ‘to dig’, ‘to engrave’. Lühr 2000, 216 derives the meaning ‘mystery’ secondarily from ‘letter’.

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[1] See Ebel 1963, 82–86 for attestations and more related forms. On the Anglo-Saxon semantics see Fell 1991. Antonsen (e.g. 2002, 180–185) and, following him, Morris (1985, 349 f.) argue that, initially, the singular referred to the entire message, not to the individual Runic letter; differently Mees 2013, 343 f.

1.1.2 The rune row

ᚠ	**f**	*f*	**fehu*
ᚢ	**u**	*u, ū*	**ūruz*
ᚦ	**þ**	*þ, ð*	**þurisaz*
ᚨ	**a**	*a, ā*	**ansuz*
ᚱ	**r**	*r*	**raidō*
ᚲ	**k**	*k*	**kaunan*$^{?}$
ᚷ	**g**	*g, ǥ*	**gebō*
ᚹ	**w**	*u̯*	**wunjō*$^{?}$

ᚺ	**h**	*h, x*	**haglaz*
ᚾ	**n**	*n*	**naudiz*
ᛁ	**i**	*i, ī*	**īsaz*
ᛃ	**j**	*i̯*	**jēran*
ᛇ	**ï**	*ī*[2]	**īwaz*
ᛈ	**p**	*p*[3]	**perþō*$^{?}$
ᛉ	**ʀ**	*z/r*[5]	**algiz*
ᛊ	**s**	*s*	**sōwilō*

ᛏ	**t**	*t*	**tīwaz*
ᛒ	**b**	*b, ƀ*	**berkanan*
ᛖ	**e**	*e, ē*	**ehwaz*
ᛗ	**m**	*m*	**mannaz*
ᛚ	**l**	*l*	**laguz*
ᛜ	**ŋ**	*ŋ*[4]	**ingwaz*
ᛞ	**d**	*d, đ*	**dagaz*
ᛟ	**o**	*o, ō*	**ōþalan*

Tab. 1: The normalised letter forms of the older futhark together with their transliteration, (supposed) phonetic values, and the (sometimes only tentatively) reconstructed PG rune names (following Düwel 2008, 198 f.).

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[2] The "yew rune" (so called after the rune name), while being included in all futhark-inscriptions, is missing from the early testimonies, and remains rare in the later ones (the attestations are collected in Sanness Johnsen 1974). Due to the sparse attestation and contradictory readings, its phonetic value and consequently its function in the row are a matter of debate (see Beck 2003 for an overview). The most widely accepted view appears to be that the two runes ᛁ and ᛇ reflect a distinction between the old monophthong *ī* and new *ī* from the monophthongisation of **ei*, as suggested by the rune names: ᛇ **īwaz* with an old monophthong vs. ᛁ **īsaz* < **eisaz* (Düwel 2008, 6; see also EWAhd s.v. *iwa*). The fact that the yew rune is used as a character for a palatal spirant in later inscriptions would then mean that it was put to a different use after the merger. However, it is not entirely clear that the *yew*-word has old *ī* – in fact, the same idea has been proposed the other way round, with the *ice*-word containing the old monophthong (cf. Krause 1966, 5; 1971, 25 f.). Furthermore, an alternative reconstruction of the name containing a spirant **īhwaz*/**īgwaz* (cf. Beck 2006, 66) provides a connection with the later consonantal readings, arguably indicating a reinterpretation of the rune based on its name, and raising the question of which way this interpretation went. Grønvik 2001, 46 f. (also Seebold 1991, 23) assumes that the consonantal value *ç* is the original one and the vowel was substituted according to the acrophonic principle. Antonsen 1975, 2–6 reads ᛇ *æ* based on purely linguistic arguments within the framework of his own theories. Beck himself also draws attention to Bugge's suggestion of an allophonic (lowered) variant of *ī* before *h* (2003, 80–82; 2006, 64–68). See also Beck 1972, Schrodt 1975 and Connolly 1979.

[3] The rune is first documented outside of futhark-inscriptions in non-lexical sequences on the Hogganvik stone (N).

[4] Attested only from about 400 AD onward and of doubtful phonetic value (*ŋ*, *ng*, *ing*?). See Schwink 2000.

[5] Writing the (non-anlauting) PG *z*, which is rhotacised in both North and West Germanic. The precise phonetic stage reflected by the rune at different times is unclear, but the sound must at least in the earliest phase have been distinct from *r*, with which it eventually merged. The rune is can also be transliterated as *z*.

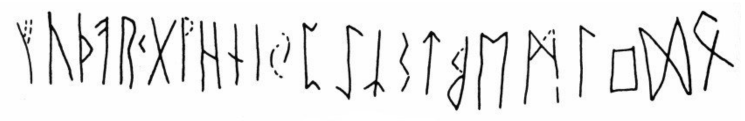

Fig. 1: The futhark-inscription on the Kylver stone (Gotland, S; 5th c. AD; KJ 1). Historiska Museet Stockholm, inv. no. 13436A (from Düwel 2008, 2).

The futhark, like numerous scripts, is named after the phonetic value of the first six letters in the original row. The *older futhark* is the twenty-four-letter script which is attested from the second half of the 2nd to the 8th c. AD; a number of younger versions are derived from it. The term *younger futhark* refers to the drastically shortened inventory of the Nordic Viking Age, which was expanded again in the Mediaeval Age. The British Isles have their own variant, the *Anglo-Saxon futhorc*, sometimes subsumed under the term *Anglo-Frisian* together with the related variant used in Frisia; these were independently developed from the older futhark. All younger rows represent adaptions to different language phases.[6] The older futhark writes North-West Germanic, Proto-Scandinavian (in Scandinavia), Gothic (in the eastern Germanic area) and Common West Germanic (in the western part of the continent).[7] This older rune row is documented in up to eleven “futhark inscriptions” from the 5th and 6th c. AD, most of them bracteates; the exact order deviates in some cases. Two bracteates suggest that the original twenty-four-letter row was separated into three groups (referred to as *ættir* in 17th-c. Icelandic manuscripts) of eight letters each, as reflected in tab. 1 (Düwel 2008, 9).

How well the futhark represents the phonemic system of the language(s) it writes, wrote initially, or was created to write, is still unclear. Some scholars are prominently in favour of what is called the “phonemic fit” (Barnes 1994, 21) or “perfect fit” (Derolez 1998, 109), arguing that the letters of the older futhark correspond exactly, or almost exactly, to the “distinctive speech sounds of the language or languages of the Runic inscriptions that predate A.D. *c*. 550–650” (Barnes 1994, 21). The qualifications of this postulate are due not only to the fact that vowel length is not reflected; certain runes (ᚹ and ᛜ, which are

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[6] On the different premises of these adaptions see Schulte 2015. The reasons of and processes behind the emergence of the younger futhark are not quite clear, see e.g. Barnes 1987; Grønvik 2001, 61–83; Schulte 2006.

[7] Broadly speaking – in fact, the question of how different the attested linguistic variants really are at different times of the documentation, and what terms should be used to refer to them, is still a matter of discussion (see Düwel 2003, 578 f.; Grønvik 2010, 115; Heizmann 2010, 10 f.; Barnes 2012, 22 f.). On the South Germanic corpus see Nedoma 2006, on the East Germanic corpus Nedoma 2010; the existence of a Runic supraregional written standard is claimed by Krause 1971, 15 and Makaev 1996, 23–48. See also Antonsen 1986; Seebold 1994; Nielsen 1998 (with literature), 2006 and 2010.

frequently replaced by ᚢ and ᛁ in inscriptions, ᛜ of dubious relevance, and particularly problematic ᛇ) call for explanation. Derolez 1998, 113 f. claims that the "runemaster" (in inverted commas also in the original) paid special attention to the word-initial position, while also being influenced by the Latin grapheme inventory.[8]

The view that the use of runes is uniform from the beginning – despite the early spread over a large area – is the widely held communis opinio (e.g. Heizmann 2010, 12). A different position is taken by Odenstedt 1990, who, based on his analysis of the precise rune shapes in the inscriptions until the mid-8th c., presents evidence for variation and development within the older futhark.[9] For some runes, Odenstedt determines original forms which deviate from the normalised forms in tab. 1 (Λ, possibly ᚢ and ᛊ). The runes which undergo the most pronounced changes are ᚲ (→ ᛦ, ᛉ, ᚴ), ᛃ (→ ᛄ, Ч, ᛡ) and ᛜ (→ ♀, ᛝ), i.e. those which do not originally reach full height are made to do so by adding staves or lengthening lines. Odenstedt also investigates the purely graphical differences between the Scandinavian, Southern Germanic, Frisian and Anglo-Saxon variants, concluding that the greater number of attested variants in Scandinavia demonstrates the futhark to be older in the north than on the continent and the British Isles. He argues that the continental lack of both early and late variants which are attested in Scandinavia means that the runes came to southern Germania from the north, but then developed in isolation, staying rather conservative, while the Anglo-Saxon tradition remained in contact with the Scandinavian one (129–135). A notable exception is the exclusively Southern Germanic ᚻ with two twigs.

Two more recent studies of the typology of rune forms and their usefulness for dating, though only for Scandinavia, are Seebold 2011 (shorter already in Seebold 1994, 58–61) and Imer 2011. Using only the securely datable and legible testimonies, Imer concludes that the chronology of rune forms is not as straight-forward as Odenstedt suggests, though she arrives at quite similar results. She names the **e**-, **s**-, **k**- and **j**-runes as those which show a definite development (also Seebold 2011, 91), the archaic (late Roman Iron Age) forms

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[8] See also Derolez 1952; Steblin-Kamenskij 1962; Musset 1965, 97; Haugen 1976, 119; Grønvik 2001, 29–50. The latter claims that the Runic grapheme system is "dem ältesten nordischen Phonemsystem genau angepaßt" (29), but then goes on to identify two runes (ᛜ, ᛇ) as characters for allophones. The most sophisticated model is probably that of Antonsen (1970; 1975; 2002), though his theory that the language which the runes fit perfectly is the Common Germanic of ca. 500 BC has not been generally accepted. Against a phonemic fit e.g. Krause 1971, 136; Seebold 1986, 572; Mees 1999, 147 and Beck 2001, 5 f. The question is still unresolved, a current project funded by the Akademie der Wissenschaften zu Göttingen (*RuneS – Runische Schriftlichkeit in den germanischen Sprachen*) being prominently concerned with it.

[9] See, however, the criticism – especially of the basis for dating – by Williams 1992.

of the first two being ᚢ and ᛊ (the latter also with even more bars), as opposed to later ᛖ and ᛃ; for **k** and **j**, the results also basically agree with Odenstedt.

1.1.3 Rune names

Rune names are known only from mediaeval manuscript traditions from the 9th c. onward (Düwel 2008, 190–202), but are generally considered to be as old as the runes themselves (rather than having been developed secondarily for mnemonic purposes). The often deviating names given in the various manuscript sources can be explained in different ways, e.g. as new names replacing old ones to maintain the acrophonic principle, as (near-) homonyms replacing archaisms, or as words with the same anlaut replacing original names which refer to pagan concepts.[10] Individual runes are used as logograms, i.e. representing not the sound value, but the entire name, in the manuscripts (Nedoma 2003b, 557 f.; Düwel 2008, 189); the identification of such Begriffsrunen in the inscriptions, which could demonstrate a high age for semantically transparent rune names, is fraught with difficulties. According to Düwel 2008, 8, the only certain case occurs in the inscription on the Stentoften stone (SE; 6th–mid-7th c. AD; KJ 96), whose third line reads ᚺᚼᚦᚢᚹᛟᛚᚼᚠᛦᚷᚼᚠᛃ→ **hAþuwolAfRgAfj** *haþuwolfr gaf j*(*āra*) ‘Haduwolf gave a good year’.[11] An older, more controversial candidate is the gold ring from Pietroassa (RO; first half of the 5th c. AD; KJ 41) with the inscription ᚷᚢᛏᚨᚾᛁᛟ ᚹᛁ ᚺᚨᛁᛚᚨᚷ→ **gutanio wi hailag** *gutanī ō*(*þal*) *wī*[*h*] *hailag* ‘property of the Goths, sacred [and] hallowed’ (arguably referring to the entire gold hoard), the rune ᛟ representing the word Goth. **ōþal* ‘(inherited) property’ (Nedoma 2003a, 156 f.)[12].[13]

Fig. 2: The inscription on the gold ring from Pietroassa. Muzeul Național de Istorie a României, Bucuresti (from Nedoma 2010, 27 [Abb. 6a]).

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[10] See Nedoma 2003b, 558–561 for an overview.

[11] ᛃ as a Begriffsrune maybe also occurs on the Skodborg bracteate (AD 440–560; KJ 105).

[12] The interpretation goes back to Krause (1937b, 172; 1966, 92–95); see also Nedoma 2010, 30 on the certainty of the reading ᛟ.

[13] See also Nedoma 2003b, 558. A list of further early inscriptions which might contain Runic logograms in Seebold 2011, 98, e.g. on the chapes from Illerup (retrograde ᚠ) and Thorsberg (KJ 20; ᛟ).

Another argument for pre-mediaeval rune names is furnished by evidence for sound change affecting the sound values of runes via their names. This phenomenon can be argued for certain runes in the development of the younger futhark and the initial phase of the emergence of the Anglo-Saxon futhorc. How important this factor was for the development of the younger rows is a matter of discussion;[14] the clearest cases are those of the **j**-rune ending up as a letter for *a* in the younger futhark (**jēran* > ON *ár*), of the **a**-rune (**ansuz*), whose value changed from *a* via *ã* to *o* (ON *ǫss*, OE *ōs*)[15], and of the **ʀ**-rune, which was used for the sound in the anlaut of the rune name (ON *ýr*) after its original value became obsolete. Also, new anlauts of the names of ᚹ **wunjō*, ᛖ **ehwaz* and ᛟ **ōþalan* may have been among the factors which led to the abandonment of these runes in the transition to the younger futhark (Düwel 2008, 88).[16]

1.1.4 Writing conventions

The direction of writing in the older futhark inscriptions is not fixed, though dextroverse writing predominates even in the oldest inscriptions (about 2:1 according to Seebold 2011, 97) and especially in the southern Germanic inscriptions. Retrograde runes (Wenderunen) and ligatures (Binderunen) occur frequently in the older futhark, but scarcely in the earliest testimonies – excepting ᚺ, ᛜ, ᚾ and ᛊ, which have a general tendency to be turned against writing direction, sometimes changing their orientation when occurring more than once in the same inscription.[17] The only proper Wenderune in a definitely language-encoding inscription from before AD 300 is **k** on the Frienstedt comb;[18] bind runes are found on the Thorsberg chape (ᚢ and ᛗ).[19] The earliest inscriptions do, however, feature a notable number of mirrored runes (Spiegelrunen), though only of ᚦ (ᛰ) and ᚹ (ᛩ). Nasals are often omitted before homorganic spirants and consonants, and the same consonant is hardly ever written twice, whether in geminates or at morpheme or word borders. Separators are rarely used before the 4th c. AD (⁝ on the Vimose plane [KJ 25]), but there are early instances of word separation by space and other layout choices.

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[14] See e.g. Barnes 1987, 37 and 2010, 201; Schulte 2015, 94–104.

[15] The latter case involves graphical adaptations, the fourth rune retaining its place, but changing to ᚩ, while the original form ᚨ *æ* and a third variant ᚪ *a* are treated as new letters and added at the end of the row.

[16] See also McManus 1989, who cites these cases as parallels for such developments in the Ogam script.

[17] They are consequently, together with ᛇ, considered “variierend” by Düwel (2008, 9), as opposed to the ones which indicate the writing direction (ᚠ, ᚢ, ᚦ, ᚨ, ᚱ, ᚲ, ᚹ, ᛒ, ᛚ, ᛈ).

[18] Retrograde ᚠ on the Illerup chape may be pseudo-script, but see n. 13.

[19] A list of bind-runes in the older futhark in MacLeod 2002, 41 f. (tab. 3).

1.1.5 Testimonies

Today, about six-thousand five hundred documents of Runic writing are known; more than six-thousand of these were found in Scandinavia. The area of distribution ranges from the Balkans in the south-east to Iceland and Greenland in the north and Ireland in the west. The typical funerary stone inscriptions are common in the north, whereas, on the continent, only movable objects were found. Less than four-hundred of the known inscriptions are written in the older fuþark; about a quarter of these is made up by the bracteate inscriptions of the 5th–6th c.

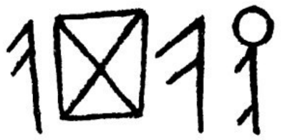

Fig. 3: The inscription on the Frøyhov statuette. Kulturhistorisk museum, Universitetet i Oslo, inv. no. C3704.

Three geographically and chronologically relevant documents qualify as candidates for proto-Runic inscriptions: a potsherd from Osterrönfeld (DE; AD 0–100 [Dietz et al. 1996, 183]), the Meldorf fibula (DE; first half of the 1st c. AD [Düwel & Gebühr 1981, 161]), and a bronze figurine from Frøyhov (NO; late 2nd c. AD; KJ 44). The potsherd bears two characters with a small horizontal scratch between them. As runes, the characters would be read ᚱ and ᚦ or ᚹ; in Latin script, they are R and $\mathrm{P}^{?}$. The latter is much more likely, especially as the inscription can be interpreted as a Roman weight designation (Imer 2010, 43 f.). The figurine from Frøyhov, found in a grave context, bears four characters: twice the potentially Runic ᚨ (sinistroverse), and two non-Runic characters. Both object and inscription are, when discussed, classified as imports: Høst 1976, 125 calls the figurine Celtic and the inscription “av fremmed opphav”; Moltke 1976, 102 judges the characters to be Venetic.

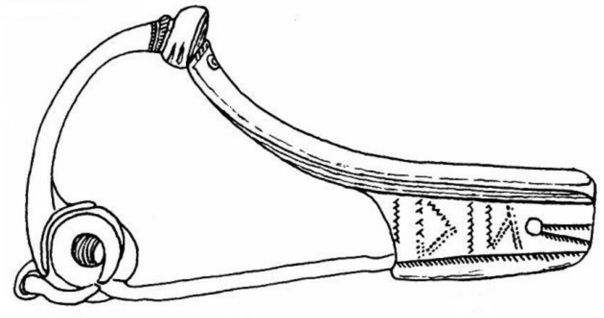

Fig. 4: The Meldorf fibula with inscription. Archäologisches Landesmuseum Schleswig, inv. no. KS o.Nr. (from Düwel & Gebühr 1981, 160 [Abb.1]).

The Meldorf fibula, the most prominent of the three documents, is read as Runic and linguistically Germanic ᚺᛁᚹᛁ (dextroverse with turned ᚹ with a large angle) *hiwi* (dative of an *i*-stem) 'for Hiwi' by Düwel in the original publication (Düwel & Gebühr 1981, 168–174; also Düwel 1981, 12). Antonsen 1986, 337 f. prefers a sinistroverse Runic reading. Odenstedt 1983, on the other hand, reads Latin IDIN *idin* (genitive) 'of Ida' or better (dative) 'for Idda' (Odenstedt 1989, 82)[20], while Mees 1997, champion of the North Italic theory, identifies ᚦ as North Italic/Proto-Runic rho and reads ᛁᚦᛁᛚᛁ **irili** *irilē* 'to the (rune) master'. On proto-runes in this context see Düwel & Gebühr 1981, 170–174 and Odenstedt 1989, 84 f. It is in fact not quite clear whether the inscribed marks can be considered to be language-encoding at all, though, even as a case of pseudo-script, they would constitute an important document for the level of literacy in 1st-c. Denmark. However, Düwel & Gebühr 1981, 166 also consider the possibility that the lines are ornamental.

The oldest indisputably Runic finds come from the moor deposits of Illerup Ådal (DK; AD 190–210), Thorsberg (DE; AD 210–240) and Vimose (DK; AD 210–260), as well as from other find places in Denmark, Southern Sweden and Southern Norway. They are inscribed mostly on tools, weapons and metal clothing accessories. Early finds also come from the Black Sea area and the Balkans, i.e. the Gothic area. Testimonies from the West Germanic area are only known from about AD 500 onward – a notable exception being a recently found comb from Frienstedt (DE), dated to the second half of the 3rd c., with a linguistically WG inscription ᚲᚨᛒᚨ→ (with retrograde ᚲ) **kaba** *kamba* 'comb' (Düwel & Nedoma in Schmidt et al. 2011, 139–164).

As concerns the early inscription types, the many problematic or uncertain readings make classifications difficult. The Illerup finds include three names ᚷᚨᚢᚦᛉ→ **gauþR** (on a fire steel handle), ᛊᚹᚨᚱᛏᚨ→ **swarta** and ᛚᚨᚷᚢᚦᛖᚹᚨ← **laguþewa** (on shield handle mountings), a writer's inscriptions ᚾᛁᚦᛁᛃᛟ ᛏᚨᚹᛁᛞᛖ← **niþijo tawide** 'N. made' (on another such mounting) and two inscriptions likely to be workman's inscriptions on lanceheads (ᚹᚨᚷᚾᛁᛃᛟ← **wagnijo**). The same workman's inscription, also on a lancehead and written with identical characters, is attested among the Vimose finds. Further, lengthier, but also more difficult inscriptions from Vimose are written on a chape, a buckle and a wooden plane; there is also another name ᚺᚨᚱᛃᚨ→ **harja** on a comb (KJ 26). From Thorsberg comes a lengthy inscription on a chape (KJ 20) which contains a name ᛟᚹᛚᚦᚢᚦᛖᚹᚨᛉ→

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[20] See also Rüger 1998, 373. Rix 1992, 440 f. files the Meldorf fibula as evidence for the existence of runes at the time, influencing the forms of Latin letters.

(o)wlþuþewaR. A number of fibulae from find places in Denmark and Sweden also bear names (KJ 9 ᚺᚨᚱᛁᛊᛟ **hariso**, KJ 10 ᚹᛁᛞᚢᚺᚢᛞᚨᛉ→ **widuhudaR**, KJ 11 ᛚᚢᚷᛟᛞ→ **alugod**, KJ 12 ᛖᚲᚢᚾᚹᛟᛞᛉ→ **ekunwodR** ‘I, U.’) and two writer’s inscriptions ᛚᚨᛗᛟ ᛏᚨᛚᚷᛁᛞᚨ **lamo talgida** ‘L. cut’ and KJ 13a ᛒᛁᛞᚨᚹᚨᚱᛁᛃᚨᛉᛏᚨᛚᚷᛁᛞᚨᛁ→ **bidawarijaRtalgidai** ‘B. cut’).[21]

Imer 2010, comparing the names on weapons to Danish attestations of Latin writing from the 1st centuries AD, interprets them, like the *wagnijo*-group, as workmen’s names, including the inscription on the lancehead from Øvre Stabu (NO; AD 210–240; KJ 31) ᚱᚨᚢᚾᛁᛃᚨᛉ→ **raunijaR**, which is generally assumed to be the weapon’s name (‘prober’). Two more potential weapon’s names on lanceheads belong to the East Germanic corpus: ᛏᛁᛚᚨᚱᛁᛞᛊ← **tilarids** ‘who moves toward/reaches the target’ (Kowel, UA; AD 210–290; KJ 33) and ᚱᚨᚾᛃᚨ← **ranja** ‘who makes [the opponent] run’ (Müncheberg-Dahmsdorf, DE; AD 210–290; KJ 32) (Nedoma 2010, 14–16 and 20 f., respectively).[22]

Notably, the Danish bog finds do not actually appear to be of Danish origin. Ilkjær interprets them as war booty deposits, i.e. weapons and implements which belonged to the members of attacking forces and were sacrificed after being defeated on Danish soil (e.g. Ilkjær 2003, 60 f.).[23] The archaeological typology of most find groups points toward the Scandinavian peninsula (Ilkjær 2003, 50 [Illerup],[24] 55 f. [Nydam] and 63), but the Thorsberg find (Ilkjær & Lønstrup 1982) and certain find groups from Vimose (Ilkjær 2006, 409) have been argued to be of continental origin. According to Ilkjær 1996, 74, almost all inscribed objects from Illerup and Vimose are Scandinavian; the Thorsberg chape may have been inscribed shortly before the deposition.[25] One thing that appears to be clearly established is that the inscriptions belong in the sphere of a Germanic military and social elite. The inscribed bog finds represent objects which would have been owned by members of the highest levels of command, while the fibulae come from the graves of women of high rank.[26]

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[21] Stoklund 1985; 1987; 1995, also for the later finds from the Nydam bog. On the names on fibulae see also Nedoma 2011.

[22] See also Grünzweig 2004, 29–31 and 34–36, respectively. On inscription types generally see Graf 2011 and Seebold 1994.

[23] A short overview of different interpretations of the bog finds is given by Lund Hansen 2003b.

[24] On the Illerup finds see also Ilkjær & Lønstrup 1983, 116 and Ilkjær 1984.

[25] See Stoklund 1995, 326 and Grünzweig 2004, 51; also Stoklund 1994, 96; 1995, 329; 2003, 173.

[26] Ilkjær 1996, 74; Lund Hansen 1998, 160 f.; Stoklund 2003, 174–176.

1.1.6 The origin of the runes in Germanic mythology

Like many other scripts, the runes were conceived of as a divine gift by the mediaeval users, or at least were by default included in the indigenous mythology. An account of the origin of the runes is given in the *Rúnatal* of the Eddic *Hávamál* (v. 138 f.):

138.	*Veit ek, at ek hekk* *vindga meiði á*	I know that I hung on the windswept tree
	nætr allar níu,	nine whole nights,
	geiri undaðr *ok gefinn Óðni,*	wounded with the spear and given to Óðinn,
	sjálfr sjálfum mér,	myself to myself,
	á þeim meiði *er manngi veit*	on that tree of which no man knows
	hvers hann af rótum renn.	from which roots it grows.
139.	*Við hleifi mik sældu* *né við hornigi,*	Neither bread they gave me nor drink from the horn,
	nýsta ek niðr,	I peered down,
	nam ek upp rúnar, *œpandi nam,*	I took up the runes, howling took them,
	fell ek aptr þaðan.[27]	then I fell off.

Apart from the curious circumstances,[28] the interpretation of the expression *nam ek upp rúnar* is problematic. That Óðinn, relentless seeker of wisdom, declares himself as the discoverer of runes seems obvious. According to Neckel in his 1936 edition, *nema* can have the meaning 'learn, remember' when used in combination with certain words (e.g. *lióð*) – Neckel also counts *rúnar* among these words, but still translates *nema upp* with 'aufnehmen' (vol. 2, 129). The 'taking up of runes' might be taken more literally – in this context suggesting the appropriation of one or more items connected with Runic writing, such as lot sticks inscribed with runes, whose existence is sometimes inferred from a comment made by Tacitus (1.1.7).[29] Verses 142 and 80 of the *Hávamál* refer to the runes as created by the gods; the attribute *reginkunnom* 'coming from/belonging to the gods' used in v. 80 is also documented on two rune stones from Västergötland (SE).[30]

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[27] Text from the edition of Evans 1986, 68 f.

[28] See Evans 1986, 29–34 on parallels and on the question of whether and to what extent verses 138–141 represent Norse or Christian mythological material. Evans mentions the possibility that *rúnar* does not refer to runes but is used in the meaning 'secrets', but (despite the fact that the verses of the *Rúnatal* are a somewhat inhomogenous collection) this is unlikely, as v. 142 clearly refers to writing.

[29] Agrell 1938, 41 f., who places the futhark in the context of Mediterranean script magic, suggests that the item picked up by Óðinn is some sort of oracular implement.

[30] *raginakundō* on the Noleby stone (KJ 67); *ræginkundu* on the Sparlösa stone (younger futhark, ca. AD 800); see Mees 2013, 341–345 with literature on the formulaicness of the expression (alliterating with *runar*).

1.1.7 Are runes magic?

The traditional etymology of the *rune*-word, establishing a connection with the sphere of the mysterious and secret, is probably one of the main factors responsible for the widespread notion of a magical character of the Runic script – thus Krause 1938, 355: "Geheimnis ist Name und Wesen der germanischen Runen." Another is the Scandinavian literary tradition, which testifies amply to runes being used to cast spells (Page 1999, 110). Yet, in the discussion following the presentations of Moltke and Düwel at the First International Symposium on Runes and Runic Inscriptions in 1980, Page observed that "the scientific justification for the magical use of runes is the Second Law of Runodynamics, which is that 'any inscription which cannot be understood is magic.'"

The stance of any individual scholar on the question must of course depend on their idea of what constitutes "magical character". On one end of the scale lies the notion of runes being inherently magic – i.e. symbols charged with the power to impart a magical character to any message or object. This comprises gematria (e.g. Olsen 1917) and different kinds of script magic including, but not limited to, runes as symbols constituting spells by force of their names,[31] the use of the complete row of characters or, metonymically, a part of it as a spell,[32] and intentionally wrong spellings[33] (see Düwel 2008, 209 and Seebold 1986, 550–574).[34] More comprehensive is the view that, even if letters per se do not constitute magical entities, writing – especially when its mastery is limited to an elite – may be regarded as a quasi-magical practice, embuing the written word with a force beyond the spoken. Under this premise, every act of writing is a small-scale ritual, and every owner's inscription is a sort of enchantment (e.g. Graf 2011, 220 f.; also Miller 1994, 61 f.). As pointed out by Seebold 1986, 533 – who postulates a parallel use of runes for profane use and as a full-fledged mystic script – it is difficult to judge "wie stark magische Vorstellungen im Einzelfall bei der Abfassung mitgewirkt haben".[35]

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[31] Allegedly e.g. on the Gummarp stone (KJ 95; 1.3.5.1).

[32] In detail Düwel & Heizmann 2006 – e.g. on the Kylver stone, which covered a grave with the inscription facing downward to ward off a revenant. So far, no futhark-inscription is older than the 5th c.

[33] See, for example, Düwel's interpretation of the Beuchte fibula, which bears an incomplete futhark argued to be directed against the danger of the buried person's return, as well as a name which Düwel assumes to be purposely misspelled to veil the rune master's identity (2008, 19). Cf., with a non-magical approach, Lüthi 2006, 177 f., who prefers to interpret examples of such Arkanisierung as spelling errors made by untrained writers.

[34] Also, e.g., Scardigli 1994, 174–182.

[35] What should be kept separate from both these notions is that of cryptic runes (as done by Düwel 2008; see also Barnes 1994, 18). While encryption may be one aspect of script magic, the tendency to mix the

Probably the most widely held stance today is to consider the runes a purely practical means of visualising speech, which could be used to write magical formulae as well as anything else: an enchantment written with runes has power only by force of the content, the written characters adding no element of magic of their own.[36] Finally, to claim a “magical character” of the Runic script may simply refer to a certain preponderance of inscriptions which lend themselves to an interpretation as spells or magical formulae. It is true that a comparatively large number of Runic texts appear to invite an interpretation as magical formulae of some description. This distinguishes the Runic corpus from most of the smaller Mediterranean corpora, where, at least among the comprehensible and classifiable testimonies, text types from the cultic sphere predominate next to profane inscriptions.[37] Nevertheless, scepticism toward the explanation of various types of inscriptions, features and individual words as being in some way magical has increased through the 20th c., culminating in the monograph of Bæksted 1952, who succeeds in explaining away everything from the literary evidence to the futhark-inscriptions. Bæksted concludes that the runes, from the earliest time, were regarded as a profane instrument, and that the prominence of rune magic in the mediaeval sources is in large part due to “romantic-historical ideas” (319).

Page (1973 = 1999, 12–14) coined the terms *imaginative* and *sceptical runologists*, distinguishing somewhat radically between scholars who are willing (or inclined) to accept interpretations which involve a magical aspect, and those who dismiss such interpretations as methodologically problematic or simply fanciful. Outspoken “sceptics” in this context are Moltke[38] and Antonsen (e.g. 2002, 179). An “imaginative” position is prominently taken by Flowers 1986 (though he rejects Page’s terminology; see also Flowers 2006, 67). Heizmann 2010, 10 (n. 6) warns that the “spätaufklärerische Gestus” of denying any

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two practices up is probably due to the fact that they have effects on the overall appearance of inscriptions which look the same to the modern scholar. Encryption can have other motivations – Düwel 2008, 88 names secrecy of the message, the wish to boast one’s skill and the joy many people take in creating and solving riddles. It is worth noting that, if the traditional etymology of the *rune*-word should be correct after all, its semantics may not point to the mystery of magic so much as the secrecy of a code – see 1.3.2.11 on the theory that the idiosyncrasies of the futhark are the result of a purposeful corruption of the model(s) to create a script unintelligible to foreigners.

[36] E.g. Nielsen 1985 (with an overview); Rausing 1992, 202; Nedoma 1998, 24; Stoklund 2003, 173.

[37] On the distinction between cult and magic see Nedoma 1998, 24 f. Clearly identifiable votive inscriptions are notably lacking from the Runic corpus.

[38] E.g. 1981, 4 f., where he calls the idea of magical runes “foolish” and “amusing”, and its proponents “magic-loving” “phantasts”. As has been observed before, the commercial and love letters, which, as Moltke derisively points out, would have been impossible to write with inherently magical letters, are undocumented.

magical function of runes does not take into account the importance of magical concepts "in allen Epochen der menschlichen Geschichte". Düwel, though a self-proclaimed sceptic (1988, 100 [n. 193]), favours interpretations involving actual rune magic in many cases, provided that they are arguable and not ad-hoc explanations for unclear sequences (2008, 209).[39]

It must be pointed out that, while many of the magical interpretations of individual inscriptions are plausible, not least due to parallels from the mediaeval literary tradition, none of the very oldest testimonies (from before AD 300) can be conclusively argued to have magical character (judgement being suspended on both the short and dubious and the longer and unclear inscriptions). This includes the alleged weapon's names, which might be considered to constitute enchantments, but may as well testify to a playful use of script.

1.2. Theories of origin

The contributions to the question of how, when, where and why the Runic script came to be are legion, and the approaches are as varied as the backgrounds and inclinations of the individual scholars. It is customary and indeed practical to assign scholars and their models to three camps: the Latin, the Greek and the North Italic theory, though each cover term encompasses a wide variety of models and there is a certain amount of overlap. Two other options are marginal: the notion that the runes are derived from "Ur"-Germanic symbols[40] or even from a Common Indo-European alphabet[41] was sometimes held in the earlier literature and experienced a short rise in popularity among German and Austrian scholars during the 1930s and 1940s.[42] The first of these notions also occurred in combination with the above-mentioned theories, usually supplying reasons for rune names and the arrangement of the row. Likewise, the Phoenician script as the (immediate) source of Runic script was proposed by early scholars, but rarely after Bredsdorff 1822 had argued that the reinterpretation of Phoenician consonant letters as vowel letters was unlikely to have happened twice, independently, in exactly the same way.[43]

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[39] With detailed argumentation in Düwel 1997 and Düwel & Heizmann 2006, 23–30. See also Nedoma 1998, 36–47. The bracteate inscriptions, the main source for alleged magic words such as *alu* and *laukaʀ*, are widely assumed to be associated with magic.

[40] E.g. Liliencron 1852; Meyer 1896.

[41] E.g. Stephens 1884; Schirmeisen 1911; Wilser 1912; Lichtenberg 1912; Bork 1924.

[42] E.g. Neckel 1929; 1933; 1938; Wirth 1936; Van Langenhove 1938; Pittioni 1942.

[43] Explicitly Wimmer 1887, 89–94; also Lenormant 1872. Some literature from the 17th and 18th c. can be found in Wimmer 1887, 11–20 and Krause 1937a, 286. For recent theories involving Semitic models see

1.2.1. The Latin theory

Although a Latin derivation was first proposed in some detail in 1854 by Kirchhoff, the Latin theory is tied to the name of the Danish runologist Ludvig Wimmer, who published his comprehensive paper on *Runeskriftens Oprindelse og Udvikling i Norden* in 1874.[44] In this paper, he discovered the chronological relationship between the three rune rows and thereby identified the archaic runes of the older futhark as the ones which must be primarily regarded when looking for precursors. Wimmer's work is considered to be the basis of modern runology. He introduced an idea whose apparent manifestness has made it a staple hypothesis of runology: the preserved records on metal and stone only represent a fraction of Runic writing, which was mainly carried out on wood. If the runes were created for being scratched on worked wooden sticks, it is evident how the Latin letters ended up with their characteristical rune forms: not only are angles easier to scratch than curves – which is the case also on other materials – but horizontal lines had to be avoided, because they would not be visible in the lengthwise grain of the wood (1887, 97–99).

Under this premise, the runes ᚨ, ᛒ, ᚲ, ᚠ, ᚺ, ᛁ, ᚱ, ᛋ and ᛏ can be fairly straightforwardly derived from Latin A, B, C, F, H, I, R, S and T. L and V, according to Wimmer's theory, were inverted (ᛚ, ᚢ) to be easier to scratch.[45] ᛗ was adapted from M to be distinguishable from ᛖ; the same happened with ᚾ from N with regard to ᚺ. Both ᚦ and ᛞ are developed from D, the latter reduplicated and mirrored, which is also the case for ᚷ as well as ᛜ from C. ᛟ came by its prolonged lines to be distinct from ᛜ. As far as Wimmer was concerned, the only real difficulties lay with ᛈ, ᛇ, ᚹ, ᛃ and ᛉ. He settled on deriving ᛈ from P (undergoing a number of graphic changes), ᚹ from cursive qoppa[46] and ᛃ from G. Finally, he assigned ᛉ and ᛇ to the secondary Latin letters Z and Y, using assumed rules for rune-formation and some ad-hoc explanations to justify the quasi-inverted letter forms (1887, 128–136). As concerns the context of the transfer, Wimmer suggested the Gauls as mediators between the Roman and the Germanic world (173–176).

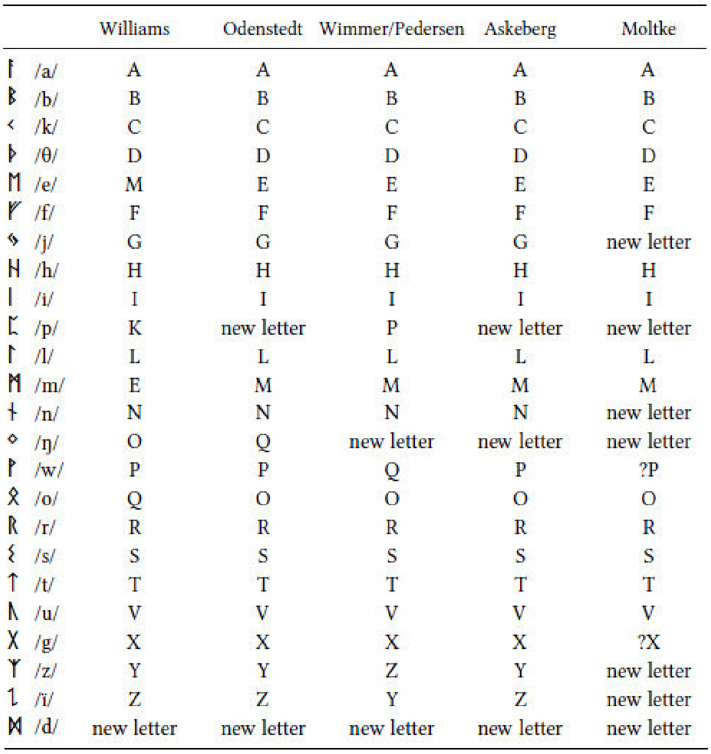
Troeng 2003 (1.3.3.1) and – unconvincing – Vennemann 2006. See Mees 2000, 34–43 for an illustrative and discerning (though decidedly angled) summary of the history of research. The overview in Morris 1988, 9–54 provides information on the various models' context in terms of material and datings available to particularly the earlier scholars.

[44] Wimmer's theory was more widely received when the Danish article was republished in an extended version and translated into German by Holthausen in 1887.

[45] Cf. Fridell 2015, 12.

[46] These explanations of ᛈ and ᚹ were only introduced in the 1887 publication; in the original article, Wimmer derived ᚹ from P and ᛈ from B.

Jónsson 1889 reviewed Wimmer's analyses with thorough approval and concluded that "[d]ie resultate, zu denen der verfasser gelangt ist, sind in allen wesentlichen punkten unbedingt sicher, und die zukunft wird sie nicht umstürzen können." (496) Unfortunately, he was wrong. The main attraction of the Latin theory, apart from the general dominance of Roman culture as the source of cultural innovations in Late Antiquity, is still the obviousness of Wimmer's first derivations, or more precisely the fact that there are a number of runes for which a Latin model can only be disclaimed with considerable argumentative difficulty. In fact, both the Greek and the North Italic theories tend to involve Latin influence to explain especially the runes ᚠ and ᚱ, as both waw for /f/ and rho with the additional line are particular to the Latin αβ. Problems are posed by the alleged archaisms of the Runic script, e.g. the inconsistent direction of writing and the lack of punctuation in the earliest testimonies. There is also the question of why a fully developed and highly standardised system like the Latin script should have been extensively reworked at all (Feist 1930, 5; Eichner 2006a, 102).

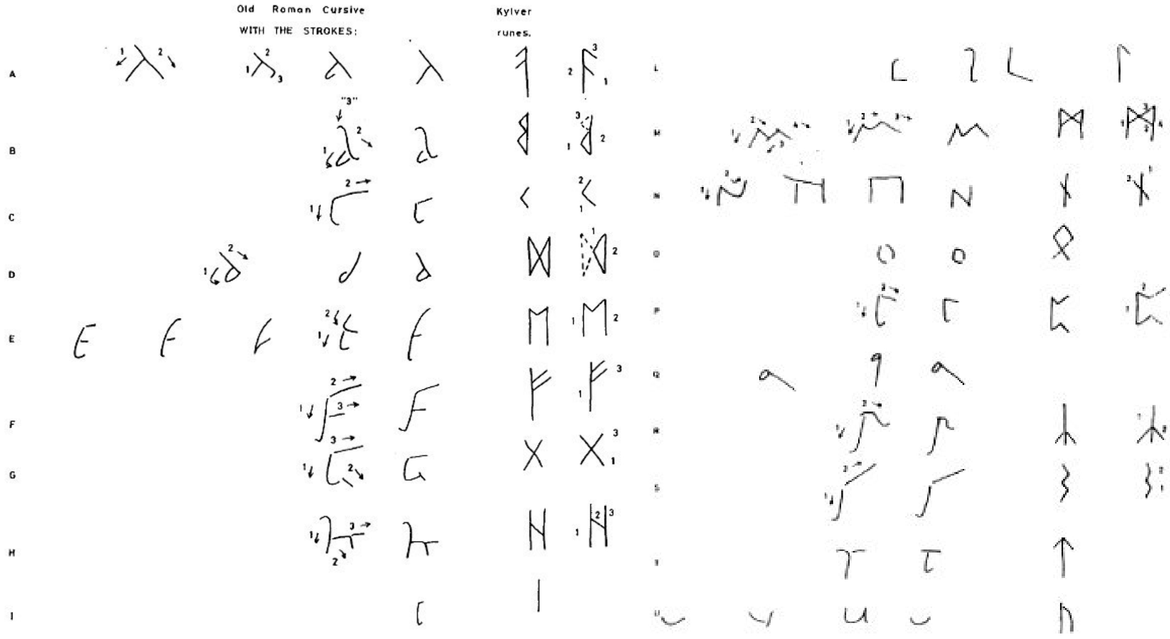


	Williams	Odenstedt	Wimmer/Pedersen	Askeberg	Moltke
ᚨ /a/	A	A	A	A	A
ᛒ /b/	B	B	B	B	B
ᚲ /k/	C	C	C	C	C
ᚦ /θ/	D	D	D	D	D
ᛖ /e/	M	E	E	E	E
ᚠ /f/	F	F	F	F	F
ᛃ /j/	G	G	G	G	new letter
ᚺ /h/	H	H	H	H	H
ᛁ /i/	I	I	I	I	I
ᛈ /p/	K	new letter	P	new letter	new letter
ᛚ /l/	L	L	L	L	L
ᛗ /m/	E	M	M	M	M
ᚾ /n/	N	N	N	N	new letter
ᛜ /ŋ/	O	Q	new letter	new letter	new letter
ᚹ /w/	P	P	Q	P	?P
ᛟ /o/	Q	O	O	O	O
ᚱ /r/	R	R	R	R	R
ᛊ /s/	S	S	S	S	S
ᛏ /t/	T	T	T	T	T
ᚢ /u/	V	V	V	V	V
ᚷ /g/	X	X	X	X	?X
ᛉ /z/	Y	Y	Z	Y	new letter
ᛇ /ï/	Z	Z	Y	Z	new letter
ᛞ /d/	new letter	new letter	new letter	new letter	new letter

Tab. 2: Derivations of the runes from Latin letters as proposed by the major proponents of the Latin theory (from Robertson 2012, 12 [tab. 1]).

Wimmer's approach was continued and adapted in various ways – of the three major theories, the Latin theory has the biggest scope. Already in 1896, Meyer, unconvinced by some of Wimmer's individual derivations, used Tacitus' reference to *notae* on Germanic lots (1.3.5.1) and the evidence of the rune names to identify symbolic Germanic “Urrunen” which were incorporated into a Latin-based futhark. The notion of a Celtic link to bridge the gap between Rome and Scandinavia was adopted by Pedersen 1923 and Seebold 1991.

The Latin cursive, sometimes referred to for problematic rune forms even in the earliest literature, was gradually accorded a potentially greater relevance than the Capitalis.[47] In 1979, the find of the Meldorf fibula with its debatable Latin or Germanic characters, together with the Illerup moor finds coming in bit by bit during the 1980s and excavations unveiling cultural centres at Himlingøje (Sjælland) and Gudme-Lundeborg (Fyn),[48] shifted the focus to Denmark. Moltke (1951; 1976, 53 f.; 1981; 1985) pronounced the runes to be a “Danish” invention. Like Askeberg 1944, who had argued that the Latin αβ served only as an inspirational model for a Runic script created originally by the Goths on the lower Vistula in the 2nd c. AD, he explained the notable differences between Latin and Runic script by assuming that the latter was “not a slavish imitation, but a free molding” (1981, 7).



Tab. 3: Comparison between the Older Roman Cursive and the runes in the Kylver stone futhark as drawn up by Rausing 1992, 202 f. (fig. 1 and 2).

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[47] E.g. Agrell 1938; Rausing 1992; Quak 1996; and see below on the Greek theory.

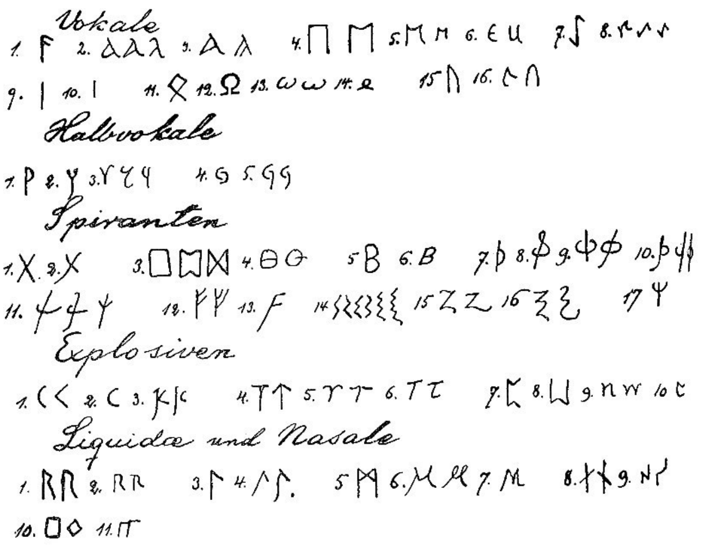
[48] See e.g. Grønvik 2001, 19 f., who favours Himlingøje as the power centre at which the runes were developed; Thrane 1998, 223 f. prefers Gudme. The intensive contacts between the Roman world and Germania Libera are emphasised especially in the works of Lund Hansen (e.g. 1987), Imer and Stoklund; see also Heizmann 2010, 21 f. A question which appears to be unresolved is whether Scandinavians were employed as mercenaries in the Roman army in the younger Roman Iron Age – assertive e.g. Lund Hansen 2003a, 395, while Mees 2000, 57 points out that there is no evidence from classical sources until a later period.

Today, the Latin theory tends to be preferred by Scandinavian scholars (prominently Stoklund, Grønvik, Williams and Spurkland, but also Düwel), with the inspiration assumed to have come either from Latin writing in the provinces and along the limes, or from imported documents. As put by Seebold 1991, 16:

> "Einige Indizien weisen mit Sicherheit darauf hin, daß die Runen von einem lateinischen Alphabet ausgegangen sind; andere zeigen mit großer Wahrscheinlichkeit, daß sie nicht von einem lateinischen Alphabet ausgegangen sein können – und der Rest sind Versuche, mit diesem Widerspruch fertig zu werden."

1.2.2. The Greek theory

The Greek theory really incorporates two quite distinct models. The original theory was proposed by Sophus Bugge in a lecture in 1898 (in writing 1913); its most important champion is Otto von Friesen (1904; 1919; 1931). Von Friesen ascribed the creation of the futhark to the Goths in the 2nd c. AD, who – he said – used the Greek cursive as a model, but also incorporated the Latin cursive (for ᚱ, ᚺ, ᚠ and ᚢ).[49] His main arguments were a connection of ◇ with the Greek practice of spelling the velar nasal with gamma before gamma, kappa and chi, and the rune names. As was the case with Wimmer's derivations, von Friesen could produce a number of immediately suggestive similarities between Runic and Greek cursive forms (e.g. for ᛖ, ᛇ, ᛟ, ᛃ, see tab. 4), but had to strain the argument for, e.g., ᚢ (from Latin cursive omikron), ᛞ (from theta), ᚦ (from phi) and ᛉ (from psi).



Tab. 4: Runes and their models according to von Friesen 1919, 10 (Abb. 1).

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[49] A similar model, but putting more weight on the Latin cursive, was put forward by Henning 1889, 152 f.

Von Friesen concluded from the use of cursive variants and the deviating arrangement of the letters that the runes were not created in a highly literate environment, suggesting a soldier learning to write from Greek and Roman comrades.

The model referred to a recently published work by the Swedish archaeologist Bernhard Salin (1904). Salin had examined the use zoomorph ornamentation in the Migration Period and deduced the existence of two Kulturströme – from Gothic Eastern Europe to the north and from there to the western continent – and speculated about a connection with the invention and spread of Runic writing. After Salin's work had become obsolete and new Runic finds turned out to predate the Gothic contact with the Mediterranean cultures, this version of the Greek theory lost in importance. Some of von Friesen's derivations were reiterated by Agrell 1927, who put them in the context of a creation of the futhark for Mithraic practices.

A reboot of the Greek theory, under entirely different premises, was effected in the 1980s by Elmer Antonsen (especially 1982). Antonsen argued that, from a purely phoneme-historical point of view, the futhark was ideally fitted to the phoneme system of Proto-Germanic as reconstruced by him. From this he concluded that the futhark was created around the middle of the 1st millennium BC, at a time when the archaic Greek αβ displayed all the specific letter forms and orthographic characteristics needed to explain those of the Runic script.[50] Antonsen managed to get by on early cursive Greek forms, completely avoiding the Latin αβ, e.g. by deriving ᚠ from waw before it was lost in most dialects of Greek. The "Mediterranean theory" (Miller 1994, 63) was taken up by Antonsen's student Morris, whose 1988 monograph represents its apex.

Today, the Greek theory in either implementation is widely considered obsolete, but see Giertz 1993, who tried to revive von Friesen's model by adapting it to more current views on possible historical and archaeological contexts. More recently, Fairfax 2014 presented an entirely new variant, attempting to establish the Greek αβ as used by the Gauls in the 1st c. BC as an inspirational model for Runic script.

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[50] A derivation from archaic Mediterranean αβs had already been proposed by the alphabet historian Taylor 1879 (Thracian Greek) and Hempl 1899. The latter attempted to demonstrate how the arrangement of the rune row could be explained through the assumption of a few simple mix-ups and rearrangements due to letter shape. Judging the sequence ᛗ[ᛚ]ᛜᛞᛟ to reflect a section of the alphabetical row, he deduced that the model alphabet must have been one which still featured a character for a dental (ksi) between nu and omikron, i.e. a Western Greek αβ at about 600 BC. See Hempl 1903 for further elaboration, and the following section. Kabell 1967 also favoured archaic Greek as a model, despite his low opinion of Taylor's methods, which he called "kühn" and "eigenmächtig" and requiring "gute Nerven" (101).

1.2.3. The North Italic theory

The third comprehensive theory works, like the Latin theory, with the Italic ("red" or Euboic) alphabet branch, but favours the αβs of Northern Italy (i.e. roughly north of the river Po). These αβs are derived from the Etruscan αβ (hence the 19th-c. term "North Etruscan", today usually "North Italic"). They comprise the Venetic, Raetic and Lepontic αβs; Camunic is usually included, though it can be argued to derive not from the Etruscan, but directly from a Greek αβ (2.1.5).

The earliest scholar to propose North Italic letter forms as possible models for runes was the German philologist Karl Weinhold, though it has to be said that his derivations in his 1856 work on *Altnordisches Leben* are not much concerned with detail. Weinhold, who worked with a 15-part rune row as the oldest one, drew up a table (409) comparing the different Runic shapes with the letters of various Greek, Italic (including Latin) and Etruscoid αβs as then known. The connection of runes and the "phönikisch-europäische" group being obvious, he derived individual runes from whichever Mediterranean αβ had the most similar form – it was the runes ᚨ and ᛊ which he connected particularly with their North Italic counterparts. He assumed the transmission to have happened via Italy and the Etruscan area (412). Bugge, who later switched to the Greek theory, originally favoured a derivation from Latin with North Italic elements (1871, 175 f.; 1874, 485).

Following Wimmer's work, Etruscoid letter forms were sometimes brought forth as more likely models in cases where Wimmer's explanations from Latin were considered strained. Luft 1898 specifically rejected the derivation of ᛃ from G, which allowed him to propose an earlier date for the borrowing: assuming that the runes came first to the Goths from the south-western Germanic area, he reckoned backward from Wulfila, deciding upon the last centuries BC as a likely time frame. Arguing that, at that time, no regular contact had been established between the Romans and the Germani, he opted to derive the futhark from the Greek and (North) Italic αβs used by the Gauls. ᚨ, ᚠ and ᚾ specifically are derived from North Italic (Lepontic) alpha, waw and nu.

Hempl 1896, criticising methodical flaws in some of the developments postulated by Wimmer, observed the general formal similarity of the archaic Mediterranean αβs with the runes and especially pointed to "Butterfly-San" ᛞ in the North Italic (Lepontic) and Sabellic αβs and to inverted upsilon Λ and lambda ᛚ in the Sabellic and Venetic αβs. (Cf. also Gering 1903, 12.) By 1908, Hempl had come to the conclusion that the Venetic αβ was the sole model for the futhark, having reached Scandinavia with the amber trade (105 f.), and found a follower in Feist (1910). Feist presented his own version of the theory in 1930, assuming a Venetic model and secondary influence from the Latin αβ during the second half of the 1st millennium BC. His proposition, partly relying on his own theories about the ethnogenesis of the Germanic people, was eclipsed by that of Marstrander, the first version of the North Italic theory which had a real impact on the field.

In 1928, the Norwegian Celticist Carl Marstrander published a lengthy paper, dealing with *Runene og runenavnens oprindelse* in all detail. He agreed with Wimmer and the proponents of the Latin theory insofar as he conceded that, with a number of runes being clearly derived from Latin, it was reasonable to try and derive the others from the same source. He pointed to ᚢ, ᚨ, ᚾ, ᛊ, ᛚ and ᛟ as forms deviating from the Latin ones, and considered the Latin derivations of ᚦ, ᚹ, ᛈ, ᛇ, ᛉ, ᛞ and ᛜ as highly problematic. Of the latter group, four letters (ᚦ, ᚹ, ᛉ and ᛜ) represent sounds not present or not written in Latin, leading Marstrander to conclude that the entire group must be additional characters taken from another αβ. Going by the shapes of ᚨ, ᚢ and ᛚ, and the general angularity of the forms, Marstrander opted for the North Italic group. Evidence for a mixed Latin and North Italic αβ was brought in via the recently discovered inscription from the Maria Saaler Berg in Carinthia, which Marstrander read as Runic. He concluded that the use of runes in 1st-c. AD Carinthia pointed to the Marcomanni, who created the futhark, pick-and-mix, from the αβs of the West Alpine region in their advanced state of Latinisation after the Roman Alpine campaign.

Tab. 5: Marstrander's comparison of the Lugano and Sondrio αβs with the futhark and his reconstructed model αβ (Marstrander 1928, 101 [fig. 4] and 103, respectively).

Marstrander focussed on the αβs of Lugano and Sondrio[51] and collected runoid letter forms in individual inscriptions. He included cursive Latin variants (for ᛗ and ᛈ) as well as

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[51] The former writes varieties of Celtic (especially Lepontic). The Sondrio αβ in Marstrander's time was associated with Lepontic (being attested on a number of isolated finds from western Transpadania, also believed to write Celtic) rather than the Camunic αβ of the Val Camonica petrographs, which were not widely known in the 1920s. See ch. 2.1 for details.

Greek characteristics (chi for a velar fricative, ᛜ from doubled ᚷ) from the Greek αβ as used by the Gauls. Like Hempl, he pointed to Lepontic san for Runic ᛞ. For ᚦ he suggested a variant of tau gallicum; ᚹ he derived from phi, ᛉ from zeta, ᛇ from standard epsilon. The major problem as seen by Marstrander was to explain the lack of early finds from the West Germanic area – he theorised that the Romanisation of the Germanic tribes in the south soon led to the Runic script being abandoned there, whereas it had opportunity to thrive in the remote north where it had spread. Not unlike Pedersen before him, Marstrander also attempted to support the Celtic–Germanic connection by showing that the arrangement of letters and the letter names in the futhark and in the Irish Ogam script go back to the same Gaulish practice of encrypting alphabets.[52]

Marstrander's North Italic theory was well received, though most scholars felt the need to improve upon various details. Most prominently, the classical philologist Magnus Hammarström earned his position as co-founder of the theory with a lengthy article from 1930, in which he elaborated on Marstrander's derivations and supplied additional arguments as well as alternatives for certain points. Hammarström relieved Marstrander's model of the heavy focus on Celtic, explaining nineteen runes from North Italic, partly influenced by Latin, and five (ᚷ, ᛃ, ᛜ, ᛇ, ᛈ) as new creations (the latter two based on ᛁ and ᛒ, respectively). He also suggested that certain features of the Runic script – i.e. the variable writing direction, optional interpunction and non-spelling of geminates – pointed to the North Italic epigraphical culture, which was the only one to retain such archaic features in the first centuries BC, at a time when the runes could conceivably have been created.

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[52] The Ogam script resembles the Runic one in certain aspects, being an epigraphic script used by a Northern European people which must be somehow based on a Mediterranean script, but features deviant letter forms, a rearranged letter row which is further divided into subgroups (four *aicmí* 'families' in Irish, to compare with the three Runic *ættir*) and semantically transparent letter names which could be used as logograms and whose phonetic development appears to have affected the sound values of the respective letters (McManus 1991, 34–39). In the mediaeval tradition, Ogam is a half-understood archaic system enshrouded in mystery preserved through interested individuals and as an element of indigenous stories. There are mediaeval texts which tell of Ogam-inscriptions on wood, so that it is assumed that the script was originally intended to be written on this material; a notion which is supported by the etymology of a term associated with the script, viz. OI *fid* 'letter', also 'tree' (Birkhan 2010, 33. 41–43). Furthermore, Ogam, just like Runic, has a character for the velar nasal, which has been pointed to as a common feature (e.g. Pedersen 1923, 43 f.; Seebold 1991, 28), though, in the case of Ogam, this sound value is questioned by McManus 1986, 18–24, who considers it to be secondary. While Marstrander assumed a kind of conceptual Urverwandtschaft (see also Musset 1956, 178 and Seebold 1986, 540 f.), others have argued a more immediate relation, e.g. Arntz 1935b, 394–401, who derived the Ogam script from the encrypted *hahalruna* as described in the Isruna Tract. (This view is now obsolete; see McManus 1991, 11.) See McManus 1991, 23–26 and Birkhan 2010 for a detailed treatment of the similarities and differences between runes and Ogam.

Baesecke 1934 (also 1940) ascribed the creation of the futhark to the Cimbri and Teutones in contact with the Celtic Helvetii and the Romans.[53]

In 1937, the prehistorian Richard Pittioni demonstrated incontestably that the inscription from the Maria Saaler Berg was a fake. Nevertheless, the North Italic theory stayed relevant among German scholars and was held up in both editions of Arntz' *Handbuch der Runenkunde* (1935a/1944). The combination of the North Italic theory with that of pre-Runic symbols being incorporated in the futhark proved particularly attractive. Krause 1937b prominently and influentially held that while most runes were borrowed as phonetic characters from Northern Italy, following Marstrander and Hammarström, they acquired their names and consequent logographic values through similarity with archaic "vor-runischen Begriffszeichen". ᛃ and ᛜ were explained as such symbols introduced into the row without foreign models.[54] A variant which did not catch on is Altheim & Trautmann's (1939) claim of a twofold connection between the runes and the rock inscriptions from the Val Camonica: the Cimbri, when coming into contact with the Southern European writing cultures around 100 BC, chose the already somewhat Latinised Camunic script over Latin or Celto-Greek as the model for their own script, because they recognised the remnants of an ancient Germanic inventory of symbols in the "decomposing" petrograph αβ.[55]

Despite Askeberg's attempt to re-establish the Latin theory (1944, 38–94), implying that the Maria Saaler Berg find's irrelevance rendered the entire model void,[56] the North Italic theory remained communis opinio for almost four decades. While some followed – with different emphases – Altheim, Arntz and Krause,[57] others constructed new models within the framework of North Italic writing. Haas 1965 made a case for the Venetic αβ of Este rather than the Lepontic or Camunic αβs, although he did need to bring in both the latter, and also some Greek influence, for certain letter forms. Allegedly Venetic features are ᛃ (derived from ⟫ *ij* as attested in Is 3) and ᛇ (from punctuated iota ᛂ); Haas stressed that the phase of Latinisation is very well documented in a great number of Latino-Venetic in-

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[53] Also Hempel 1935; Reichardt 1936, 51–56; Mentz 1937, 194.

[54] See also Arntz 1938, 8–14, and Krause 1938 and 1940; by the late 1960s (1966, 7; 1970, 36–45), the latter had lost confidence in his theory under the influence of Askeberg and Moltke.

[55] For contemporary criticism see Nordén 1939.

[56] According to Kabell 1967, 97, Marstrander had "brieflich mitgeteilt" that the Maria Saaler Berg find had not been all that important for his theory despite the prominent place it took in his 1928 article. Indeed, Marstrander was likely inspired by his work on his 1927 article on the Negau helmets and particularly his reading of the Negau B inscription as Germanic (3.1.2).

[57] E.g. Schönberger 1950; Rosenfeld 1956; Schneider 1956; Elliott 1959/1989; Jungandreas 1974.

scriptions. Haas also found the order of the futhark to be based on a Venetic model, i.e. the consonant alphabet attested on the Este bronze tablets (beginning with waw–zeta *vz* = *f*[*u*]*þ* with an epenthetic vowel and ending with omikron). He assumed that the runes were created for magical purposes around 100 BC, by which he explained the lack of finds in southern Germania (where script magic was allegedly punishable by death).[58]

With Moltke's update on the Latin theory and the renewed archaeological focus on Denmark, the popularity of the North Italic theory declined in the 1980s. Since the Etruscologist Helmut Rix took up the case in 1992 and again in 1997, champions of a North Italic derivation of the runes tend to come from among those scholars mainly concerned with the αβs of the Alpine area themselves,[59] rather than from among the Germanic philologists usually concerned with runology.[60]

1.3. Methodological remarks

In the following chapter, I will discuss five questions concerning basic issues of script history the answers to which have bearings on the origin problem. More specifically, they are questions which tend to be answered by various scholars in a sometimes quite decided, frequently off-hand manner, yet usually without sufficient argumentation. The ways in which they are answered can (pre-)determine the acceptance or rejection of a theory, usually by excluding one or more model αβs on methodological grounds.

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[58] Further scholars in favour of North Italic αβs: Musset 1965 (referring back to Marstrander); Pisani 1966 (with an unlikely model involving forms attested in the South Picene αβ; see n. 144); Höfler 1971 (identifying the Eruli as the rune masters; see n. 406); Schrodt 1975; Bonfante 1981.

[59] Marchese 1981; Prosdocimi 1985 and 2003; Scardigli 1993 and 1994; Morandi 1998, 124 (n. 37); Mees 2000; Markey 2001; Eichner 2006a; Schumacher 2007; Birkhan 2010 – a tradition going back to Whatmough 1944, 33. Cf. Rix 1997, 231: "Wer die 'nordetruskischen' Alphabete kennt, wird keine andere Lösung für denkbar halten, auch wenn noch nicht alle Einzelheiten geklärt sind." Symptomatic also the comments by Buck 1919, 46–48: having been asked to examine and publish an inscription which a colleague had purchased in Rome, Buck – a specialist in Italic philology – attempted a reading in an Italic alphabet, "the general style of the characters and also the majority of the particular forms" in the document being "identical with those to be found in one or another of these alphabets" (47). Only when finding that he could not identify all of the characters or one single alphabet to which all the forms could belong did he reach the conclusion that he was faced with runes, more precisely an Anglo-Saxon Runic abecedarium (see Page 2006, 219 f. 230 [n. 27] with literature on the doubtful authenticity). Buck explicitly draws attention to his initial mistake to support a derivation of the runes from an Italic alphabet as proposed by Hempl 1896 and 1899.

[60] For scholars unacquainted with the North Italic sources, the old designation "North Etruscan" has sometimes led to confusion, e.g. Morris 1988, 6 f. 151; Odenstedt 1990, 152 and 1991, 376, and Miller 1994, 63, who adduce void counterarguments because they equate the North Italic αβs with the Etruscan one (cf. Rix 1992, 416 f.; Mees 2000, 52 f.). More informed argumentation against specific derivations e.g. in Seebold 1991, 24. 27.

1. Is a theory only acceptable if it can demonstrate the derivations of the individual Runic letters – or can this be dispensed with under the assumption that a creator deliberately reworked the source αβ?
2. Is it permissible for a theory to involve more than one source αβ – or is this to be avoided on principle?
3. Does a theory have to explain Runic writing conventions – or are they irrelevant because they are typical of emerging writing cultures?
4. Is it permissible to postulate a gap between the earliest finds and the time and/or the place of borrowing – or is this methodically faulty?
5. Must a theory involve the αβ(s) of (a) culturally dominant people(s) as model(s) – or does any culture in possession of writing qualify as a source for runes?

As will be seen by the relative frequency with which certain scholars are cited in the following sections, some are more outspoken about such general premises than others, and/or more inclined to discuss or argue them. “Principles of alphabet history” are expressly adducted not only by alphabet historians like Taylor, but also by runologists like Wimmer, Moltke, Antonsen and Odenstedt. Methodological criticism is, of course, not new, having been practiced (sometimes more, sometimes less gleefully) from Bradley 1890 to Heizmann 2010. For example, Moltke’s method of postulating rules in alphabet history based on a handful of casually mentioned examples is criticised by Barnes 1994, 23 f., who – as a man perennially conscious of his own and others’ methodological slip-ups – calls on runologists to give more thought to their “types of argumentation [...] We must cease to make confident assertions about matters that appear extremely uncertain” (26). Barnes’ (repeated) admonitions have not gone entirely unheeded, but the tendency of scholars to cultivate any preconceptions which fit in well with their own views and theories is hard – probably ultimately impossible – to get rid of.

What needs to be kept in mind especially when citing examples and parallels from other fields is that these fields are usually no better ploughed than one’s own – and if they appear to be from one’s own side of the hedge, that is likely due to the distance. A scholar of Iberian, when informing himself/herself about the origin of the Runic script, may well, at any time since Wimmer, have got the impression that the matter was more or less settled save for some minor details – the answer they would take away depending on whether they consulted Sievers’ entry in Paul’s *Grundriss* in 1891, von Friesen’s entry in the *Encyclo-*

paedia Britannica in 1929, or Arntz' *Handbuch* in 1944.[61] The most easily accessible works do not always reflect the intricacies, the discussions and ambiguities and dissenting theories proper to areas of research with which one is not well acquainted, and it is ultimately pointless to support one's argument with a convenient alleged fact whose argumentative value is qualified by its own doubtful status. In short: a runologist ought to try not to be more certain about the Greek αβ than a Greek epigrapher. Comparative grammatology, despite having been selectively practiced by epigraphers and philologists of various fields for a long time, is a young discipline. At this point, the exercise is more methodologically than practically relevant, in that making comparisons between different scripts and between the processes through which they were borrowed does not so much allow one to support one's own theories with data from another field, but to compare one's own problems with those in other areas to establish common questions and be reminded of the need to tread carefully where data are scarce (cf. Houston 2004b, 4 f.).

1.3.1 Theory and terminology

The study of script has long been sidelined, considered an ancillary science of philology, and widely disregarded by general linguistics due to the primate of spoken language. Since the middle of the 20th century, it has increasingly been put into focus, especially with regard to methodology.[62] In 1952 (revised edition 1963), the orientalist Ignaz J. Gelb laid the foundation for the *Study of Writing* with linguistic methods. He established the definition of writing as a kind of visual communication which must refer to spoken language in order to be described with these methods.[63] Systems which are independent of speech, such as

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[61] In the second half of the 20th c., the discussion was shifted to papers; sections in handbooks and encyclopaediae are nowadays kept carefully unbiased, though the choice of contributors particularly in anglophone collective volumes may have effects on the dissemination of theories (e.g. Antonsen in Bright & Daniels 1996 and Senner 1989, Williams in Houston 2004).

[62] Collections of material and historical surveys have of course been published since the 19th century, e.g. Faulmann 1880, Taylor 1883. See Sampson 1985, 11–25; Daniels 1996a, 5–7.

[63] "The proper definition of 'writing' is that it is a system for representing utterances of a spoken language by means of permanent visible marks." (Sampson 1985, 26); "all full systems of communication are based on speech" (DeFrancis 1989, 7); "*writing is truly writing when it systematically represents speech*" (Robertson 2004, 20). Daniels defines writing as "*a system of more or less permanent marks used to represent an utterance in such a way that it can be recovered more or less exactly without the intervention of the utterer*", adding: "By that definition, writing is bound up with language" (1996a, 3). Coulmas prefers a list of obligatory properties to identify a system as writing: "1 it consists of artificial graphical marks on a durable surface; 2 its purpose is to communicate something; 3 this purpose is achieved by virtue of the marks' conventional relation to language." (1989, 17). Systems which have some, but not all of these properties can thereby be identified as related to writing. On the methodological necessity of defining writing via speech also Boltz 2003, 16 f.

petroglyphs and Inca quipus,[64] were classified as pre- or proto-writing.[65] The 1980s saw the publication of a number of monographs which tackled the study of writing via "history" and "typology"[66] – not only the genetic relationship of scripts, but also their typological categorisation, the mechanisms of the creation and borrowing of writing, and the processes of its development in general. In the 1990s, the standard works on the history of writing dating from the middle of the century[67] were replaced by comprehensive works[68] which reflect the methodological progress.

Gelb 1963, 23 coined the term *grammatology* to refer to the study of writing, based on Greek *γράμμα* 'letter' – the more eligible *graphology* being unavailable, because it traditionally refers to the analysis of handwriting. The association with *grammar* renders it somewhat counter-intuitive. The term *grapheme* is the grammatologist's equivalent of the linguist's *phoneme*, making a deliberate statement about the status of the character in the inventory and thereby about the inventory itself, e.g. Runic thorn. Accordingly, *allograph* refers to (graphical) variants of graphemes, e.g. the variants of Runic thorn ᚦ, ᚦ and ᛰ. The term *graph* is the default term, though I will tend to use the synonym *character*. The word *sign* will be avoided; *letter* is reserved for unambiguously alphabetic characters. A *symbol*, used purposely vaguely, is any written sign associated with writing, but not (demonstrably) language-encoding. The term *archigrapheme* describes characters in their diachronic continuity, e.g. the entity aleph in the Semitic scripts, the Greek αβ and its derivatives.

Some of the following terms are not necessarily important for the present work, as they concern writing systems far removed in time and type from the comparatively recent Runic script, but I think that they warrant mention for the sake of completeness. The use of the

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[64] Samples are collected in Gelb 1963, 24–51, but these have to be taken cum grano salis, as some of his material (which has made its way into more recent works) is taken from outdated literature (DeFrancis 1989, 35–42).

[65] There are scholars who do not subscribe to the narrow, linguistic definition of writing, e.g. Powell 2009, 11–18: "writing is *a system of markings with a conventional reference that communicates information*" (13). Similarly, Haarmann considers any systematic encoding of concepts to be writing. For Haarmann, the defining characteristic of writing is a one-to-one correspondence of sign and referent, the latter being a phonetic or a semantic entity. Haarmann refers to the notion that cognitive concepts are modelled on the ones expressed in speech. "This intentional fixation of information for reuse bears all the characteristics of what we understand as writing, regardless of the missing connection with language." (Haarmann 2009, 24). As noted by Cooper 2004, 93, such wider definitions are often proposed by scholars who are concerned with notation systems at the margins of writing who would prefer to see their area of study, as it were, accepted into the illustrious circle of writing systems. Cf. Trigger 2004, 43–46 and Boone 2004.

[66] Sampson 1985 (his terminology); Coulmas 1989; DeFrancis 1989.

[67] Février 1948; Cohen 1958; Jensen 1958; Friedrich 1966; Diringer 1968.

[68] Haarmann 1990; Hooker 1990; Bright & Daniels 1996.

old and freighted term *ideography* is so different and inconsistent in the various philological traditions that many grammatologists refuse to use it at all and advocate its being discarded (e.g. Sampson 1985, 34; Daniels 1996a, 9; Powell 2009, 2 f.). I am inclined to keep it in the function which is indicated by its etymology:[69] an *ideogram* is a character which represents a cognitive concept without the detour via spoken language. An *ideography*, therefore, is the equivalent of what Gelb called *semasiography* – a writing of meaning, a pre-script which is not linked to language and, according to the linguistic definition, is not (yet) writing (cf. Hill 1967, 92). The term *ideogram* can still be useful in the description of early writing systems in which the writing of semantic units plays a part. The characters referring to these units are usually called *logograms*, although this term – due to its tendency to be confounded with *ideogram* – does not enjoy general popularity either. In my terminology, it pertains to the (putative) next step in the development of a character: a *logogram* is a character which refers to a word, i.e. a lexical unit of speech, which, after the introduction of the rebus principle into a system, has the potential to be used ideographically (referring to the lexical content of the word) or phonetically (referring to its sound shape). A *syllabogram*, then, is a character which refers to a purely phonetic unit of speech – a syllable – without any relation to semantics independent of spoken language.

Phonogram and *phonographic* are problematic terms due to their inherent ambiguousness: they can be applied to any character which refers solely to units of speech or specifically to a character which represents a phone. The issue is not relevant for this work, but I would prefer to replace *phonogram* in its wider sense, e.g. with *glottogram* (to match *glottography*). The term *phonogram* is then free to be used in its narrow sense, so that characters which represent phones need not be called *alphabetic* – the latter term should be reserved for characters in actual αβs. Despite the fact that there is only one phonographic script in existence which is not part of the alphabetic branch of the world's writing systems (Korean Hankul), calling any character which represents a phone *alphabetic* is inconsistent (compared to the transparent construction of the other terms) and eurocentric. It must be pointed out, though, that there are two by now widely accepted terms, introduced (or appropriated) by Daniels 1990, which follow the same formation principle, i.e. *abjad* and *abugida*. *Abjad*, an Arabic numerological term, is based on the first four letters of the

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[69] I realise, of course, that it is precisely this approach which has given rise to the problem in the first place: over time, numerous scholars have chosen to interpret Greek *ἰδέα* or Latin *idea*, who together cover a wide semantic range, according to personal preference, and accordingly used the term for different types of characters.

Northwest Semitic row and refers to the (Egyptian and) West Semitic consonant αβs. *Abugida*, the Ethiopean name for the Geʿez script, is formed on the basis of the initial characters of the Ethiopean script, but is used to refer to all scripts of the same type.

The argument in Daniels 1990 which triggered the introduction of the two terms (mainly *abjad*) into grammatology is the refutation of a principle of the history of writing formulated by Gelb 1963, 198–205, who called it the "Principle of Unidirectional Development" (below abbreviated PUD): typologically, writing develops strictly along predetermined lines (which were implicitly alluded to in the previous section), from the writing of words via syllables to phones.[70] According to the PUD, an ideography/semasiography may turn into a logo-syllabic system, which may further develop into a phonography. The final stage need not necessarily be reached in all cases, but no stage can be skipped, nor can the development be reversed. A cursory glance at the history of writing makes this notion seem obvious, but its rigorous application poses problems in detail (Justeson & Stephens 1993, 2–4). Most prominently, it caused Gelb to claim that the Egyptian script and consequently the Semitic abjads could not be phonographic (consonant-alphabetic), but must be syllabic. This is necessary not only because a syllabic phase must be assumed between the Hieroglyphic logographs and, ultimately, the alphabet, but also because the abugidas with their syllabic aspect cannot have developed from phonographies.

The three major abugidas – the Indic Brāhmī and Karoṣṭhī, the Meroitic and the Ethiopean scripts – are syllabic systems which distinguish on the phonetic level also. Abugida characters write CV-syllables with different consonants but the same vowel (*ă* in the Indic, *a* in the Meroitic scripts, *ä* in Ethiopean Geʿez). When the syllable contains a different vowel, an additional mark is necessary (with a diacritic or a separate vowel character). Traditionally, abugidas are considered to by syllabaries: there is a graphical differentiation between CV-characters and diacritics (in the Indic and Ethiopean scripts), and the distinct concept of the graphical unit representing the syllable (*akṣara* in Indic). Some scholars argue that the abugidas are phonographic, because all sound combinations can theoretically be written and the systems therefore have "the analytic depth of an alphabet" (Coulmas 1989, 153). All three independent abugida systems must be derived from the alpha-consonantal script group: the Meroitic scripts (pictoral and cursive) from their respective Egyptian counterparts (Millet 1996, 85), Geʿez from a South Arabic variant (Haile 1996,

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[70] Similarly already Taylor 1883, 5 f.

569), and the Indic scripts from Aramaic (Salomon 1996b, 378).[71] Gelb removed the contradiction between his PUD and the realities of script history by postulating – contrary to the Egyptological communis opinio – that the Egyptian and derived West Semitic scripts are not phonographies (❬C❭) but defective syllabographies without distinction of vowels (❬Cx❭). Although he stressed that his definition was purely for purposes of systematic stringency and did not have any ramifications for philological practice, it was rejected by both Egyptologists and Semitists (cf. Baines 2004, 178 f.).

Daniels 1990 refuted Gelb's claims, pointing to the philologists' opposition and arguing that the theory was based on a slim set of data (a phonographic system having developed only once).[72] He defined *alphabetic* as denoting both consonants and vowels, and introduced the term *abjad* in an effort to break up the rigid taxonomy of logography, syllabography and alphabet, suggesting *abugida* to replace Févriers *neosyllabary* (1948, 330) as a side-note. While his concern to "restore to West Semitic writing the honor of the "breakthrough" status [for isolating the phonological segment] that followers of Gelb's systematization would deny it" (730) in favour of the Greek innovation of vowel writing appears a little petty, the two new terms – also explained in Daniels 1996a, 4 and used by many authors in the volume – took on well. However, Daniels' stance of calling only vowel-denoting scripts "alphabetic" is not well argued, and opposed, e.g., by Lehmann 2012, 22–27, who does not consider the distinction feasible: all phonographic systems are to a certain extent deficient in reflecting the sound inventories of the respective languages (13), and drawing the line between vowels and no vowels is "artificial" (24).

The term *defectiveness* is indeed problematic insofar as all scripts can be said to be defective (cf. Hill 1967, 93 f.). Apart from the fact that there is a practical limit to how many levels of linguistic encoding of information (lexemes, morphemes, phones, features, tone, etc.) can be mapped, even scripts which register all theoretically relevant elements of just one level in an unambiguous manner are rare (Trigger 2004, 44) – and even where they are created, language change soon alters the picture. For example, the comparatively young Finnish αβ was created to be and as yet still is completely phonematic, but it does not

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[71] Justeson & Stephens 1993, 10 argue for Indic influence on the Ethiopean system (see also Falk 1993, 138–142; Salomon 1998, 16 [n. 31]). The Greek αβ was known at the times and places of the emergence of all the systems in question and may have played a part in their development (for Geʿez Millet 1996, 84; De Voogt & Döhla 2012, 53; differently for Meroitic Priese 1973, 283 f.; debatable for Indic Falk 1993, 82 f. 111 f.).

[72] Daniels follows Sampson in considering Hankul not an "alphabetic", but a "featural" script (Sampson 1985, 120–144; Daniels 1996a, 4).

encode prosody. The Latin αβ would hardly be called defective, although it fails to provide an expression of vowel length. However, there are scripts which are defective to a notable extent, in that their character inventory is so restricted or their orthographic conventions so inadequate that a significant number of messages cannot be "recovered more or less exactly" (see n. 64). What is considered a significant number is of course up to the individual scholar; also it must be remembered that modern researchers lack circumstantial information (in the widest sense) which was available to participants in the writing culture, so that "unreadable" must always be a questionable verdict.[73]

Lehmann 2012 argues that any phonography, in order to function as a means of communication, must write "the important sounds" (25), the choice depending on the structure of the underlying language. It is frequently claimed that the abjad system fits the Semitic languages well (e.g. Daniels 1996b, 27; Coulmas 1989, 146).[74] See, however, Justeson & Stephens 1993, 11 f., who argue for affinities between consonant alphabets and syllabaries to the exclusion of full alphabets. While clear classifications with unambiguous terminology are indispensable, definitions should not be ends in themselves. Daniels' table of script types (1990, 730) includes "augmented" abjads and alphabets to account for scripts which mix syllabograms and phonograms and still does not account for all conceivable variants and combinations. The terms mentioned in the present section are best used to describe aspects of scripts and functions of (groups of) characters rather than entire systems (cf. Trigger 2004, 46), the latter leading to the unnecessary definition of numerous hybrid types which are represented by one example each.[75]

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[73] An example for a script which is widely considered defective is the younger or Scandinavian futhark, the sixteen-part rune row of the Viking age. At a time when extensive phonetic changes (e.g. umlaut) led to an actual increase in phonemes, the twenty-four-part archaic rune row was drastically reduced, resulting in a system where numerous characters represented up to five different phonemes. For today's scholars, reading certain inscriptions from this phase is a combinatory guessing game; how difficult it was for native speakers of the time to peruse the – often formulaic – texts is hard to judge. That the system was eventually found wanting by the users is indicated by the fact that the systemic load on individual characters was gradually lessened by the introduction of diacritic marks.

[74] See also Hill 1967, 97, who considers the derivational and inflectional strategies of the Semitic languages – viz., to encode lexical information in the consonantal "skeleton" of the word, and derive/inflect by changing the vowels in between – to be a "plain invitation" to only record the consonants, as the precise meaning of the word or its syntactical function are "often enough plain from the context". Having no competence in a Semitic language, this does not seem obvious to me – Schumacher (p.c.) argues that the ambiguousness resulting from the non-indication of, e.g., active vs. passive should be a detriment which at least outweighs the structural simplicity. Cf. Baines 2004, 178.

[75] For example, how should one classify the Algonquian syllabics, which were devised for Ojibwe and Cree by a learned missionary with a high level of sophistication? The basis of the script is formed by a complete set of CV-syllabograms writing fourteen consonants in combination with four vowels. Every four syllabograms containing the same consonant have the same shape, and are turned and inverted in a consistent pattern to indicate the vowels. This method is reminiscent of the abugidas, the difference being

Apart from the necessity to typologically redefine entire script families, there are further difficulties with the PUD. It is suspended in cases of unsophisticated borrowing, where a misunderstanding of the system which underlies the model script makes the new script essentially typologically independent (Trigger 2004, 65). This is suggested for the Indic abugidas and other PUD-violating scripts by Justeson & Stephens 1993: the two scholars explain the "backward" development through the script learners' misinterpretation of conventional syllabic letter names which are used in the recitation of the character inventory as the actual sound values. It must be pointed out, though, that, even in such cases, the PUD is inherently observed: in Justeson & Stephens' theory, the syllabaries and abugidas concerned emerged from syllabic inventories of characters, even if these were fictitious systems existing only in the heads of mystified learners – they emerged among people who were unaware of the notion of phonographic writing. Similarly, as observed by Daniels 1996e, 583, the executors of what he calls "unsophisticated grammatogenies" do not only tend to end up with a syllabography, but are in at least two cases documented to have gone through the stages prescribed by the PUD (the Cherokee and Bamum scripts; 1.3.2.8).[76]

The fact remains that there is some truth in the PUD, though not quite in the rigorous way in which it was applied by Gelb. Writing evolves from semasiographic codes (be they pictographic or not) and gradually discards its ideographic elements to develop along a parameter which can be described as the level of analysis, moving from superordinate to subordinate units – "the written sign tends to represent with greater precision the spoken sign" (Robertson 2004, 34; cf. also Trigger 2004, 41). The exact path taken arguably depends on the language structure, but it may be observed that there is no known phonography which demonstrably came into being entirely independently of at least some inspiration from a script which derives from the Egyptian-Semitic type – syllabographies

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that there is no default vowel and the graphical modification is character-internal rather than external (diacritic). The lateral consonants are written with phonograms in some varieties. In addition there are four vowel characters (also really one character turned and inverted) for anlauting vowels, diacritics to indicate vowel length and anlauting u̯ and phonograms which graphically have the character of diacritics to write syllable-final consonants. The extent to which diacritics and punctuation are used is dependent on local convention and even personal preference and context, leaving it up to the writer how closely they want to reflect their linguistic variety (Nichols 1996, 599–602 with details, variants and derived scripts). Scripts which mix syllabic and phonetic strategies in different ways are legion, and little is to be gained from enforcing classifications which gloss over profound differences in conception and use.

[76] Daniels 1990, 728 denies the relevance of this observation for Cherokee, as the originally projected logography did not actually develop into the eventual syllabaries, but was discarded. A gradual development via the rebus principle can be observed in the Bamum script, but – as pointed out by Justeson & Stephens 1993, 3 (n. 1) – logographic elements were reintroduced in later (syllabic) stages to deal with homophony.

on their own may in fact be incapable of developing into phonographies (Sethe 1939, 44. 52 f.). In any case, we consider “backward” developments to require explanations, and despite Daniels’ assertion that purely glottographic systems can spring up spontaneously, without a prior development out of systems featuring logographic elements, the notion that, e.g., the Rongorongo script of Easter Island was an indigenous invention from scratch would seem absurd to most scholars.[77]

Gelb likened the non-random development of writing to that of languages gradually changing from isolating to agglutinative to inflecting (201); the comparison is suitable insofar as language type change is circular, and the same may be the case for writing. Allegedly archaic logographic and even ideographic elements do not only lead a marginal existence in the glottographic world, they may even be reintroduced. Morphophonemic spelling in phonographies serves to distinguish homonymic morphemes in writing, i.e. the straight-forward mapping of phonetic sequences is partially abandoned in favour of unambiguous lexical identification (e.g. English *sight – site – cite*; see Haas 1967, 98 f.). The character ⟨&⟩ developed out of a mediaeval ligature of ⟨e⟩ and ⟨t⟩. Despite going back to phonographic units, in its current opaque form it is at least a logogram (representing the word ‘and’) and arguably even an ideogram representing the grammatical concept ‘coordinating conjunction’: it may be read as *and* or *et* depending on preference or context. Additionally, being used in a number of European languages, there are further associated sound shapes – if the main characteristic of an ideogram is transcendence of language, the ampersand must be considered an ideogram. This independence of language is the reason for the increasing use of ideograms in situations (potentially) involving speakers of different languages, from airport bathrooms marked 🚺 and 🚹 to emoticons in internet communication.

All the above terms refer to differences in *script type*: they describe the structure of a script, the way in which form and content relate to each other. The term *pictogram*, usually considered even less acceptable than *ideogram* and *logogram* (e.g. Sampson 1985, 35), can not be confused with either, as it refers to a different aspect of a character, viz., not its referent, but its graphical form. A character is *pictographic* (*iconic* in the terminology of Powell 2009, 3) when its shape is not arbitrary, but motivated by its referent, so that the form allows conclusions about the content. The danger of terminological confusion lies in

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[77] Its creation is thought to have been inspired by a shipload of Spaniards which had visited the island in 1722 (Macri 1996b, 183).

the realities of script history, as ideograms, logograms and pictograms all typically feature in ancient/primary scripts. Characters with a purely or partly semantic referent tend to be iconic (realistic, abstractified or metaphorical); the development toward syllabographic and phonographic writing is connected with a loss of iconicity. Still, the terms *can* be clearly kept separate; terminological inaccuracy will muddle any system, whether traditional or newly introduced. The association between ideography and iconicity is not universal – certainly not in theory, and neither in practice, as shown by the iconic phonograms of Hankul (1.3.2.2).[78]

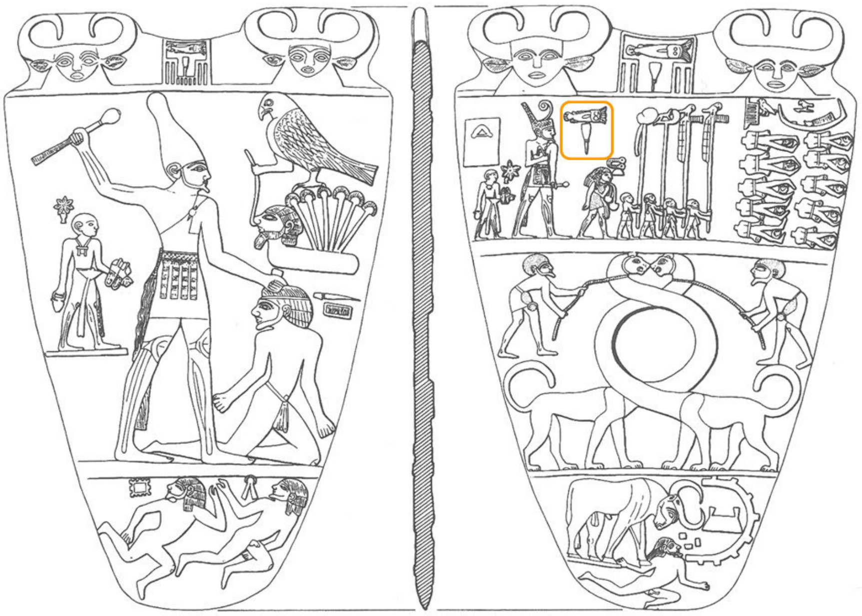

Fig. 5: The name of pharao Narmer written as a rebus on the Narmer palette: *n‘r* (ideographically: ‘catfish’) *mr* (ideographically: ‘chisel’) (from Powell 2009, 26 [fig. 2.8]; frame added by me).

One of the major unanswered questions of script history is how writing originates in the first place. Does glottography at some point naturally develop from some “precursor”, a pre-script communication system such as an elaborate form of narrative ideography or accountancy? Or does a single innovator take a conscious step to create a new, language-referential system more or less from scratch? Option 1, the gradual development of

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[78] Though neither is quite securely attested, a phonogram could be iconic via the rebus principle or via the acrophonic principle. The former may be attested in the Caroline Islands script (type 1), which features, e.g., a stylised fish for the syllable *pu* (also the lexeme ‘fish’). Justeson & Stephens 1993, 8 suggest that this approach to creating new characters was based on the similarity of the character for *ni* (also the lexeme ‘tooth’) with a tooth. The second option has been suggested for Runic ᚦ. The OE rune name *þorn* is usually considered to be secondary, having replaced the heathen **þurisaz* ‘giant’ in OE Christian manuscript tradition (Düwel 2008, 200), but is considered to be a newly created pictogram representing an actual thorn by Miller 1994, 68.

increasingly language-referential codes from concept-referential ones via the rebus principle, as assumed by Gelb,[79] is suggested by the fact that all known archaic/primary scripts contain ideographic elements which are gradually lost in their further development. Indeed, the general assumption that the rebus principle lies at the root of glottography implies an ideographical (semasiographical) pre-stage of some kind. The fact that there are no cases in which an evolution from an actually attested pre-stage to a language-referential system can be demonstrated[80] has made scholars wary of this notion, yet most are still inclined to assume that primary scripts were not conjured up out of thin air, but must be in some way dependent on prior semasiographic systems. The caveat often given is that such systems must not be imagined to have been "picture-writings" (Gelb 1963, 27), i.e. some sort of sophisticated cave painting code, but may have been any kind of convention capable of encoding meaning.[81]

Primary scripts are those which have originated without any kind of influence, whether indirectly through idea diffusion or directly through actual borrowing, from prior writing systems. Secondary scripts, accordingly, are those whose emergence is due to such influence. The scarcity of data on primary script emergence is due to the fact that the cases are precious few. Only two are absolutely certain, the respective systems being separated by oceans: Mesoamerican and Oriental writing. In the Americas, writing appears to have originated in the Zapotec culture (Macri 1996a, 174); in the Old World, Sumer is considered the ultimate source. The beginnings of Egyptian writing, although the script is somewhat dissimilar system-wise and completely independent in character forms, are so close to those of Sumerian cuneiform that the two systems have been considered to be connected, the emergence of Egyptian script having been stimulated by knowledge of early cuneiform (Daniels 1996b, 24; differently Cooper 1989, 321 and Baines 2004, 175–177). The origins of the Chinese script are obscure, but while no connection can be demonstrated with marks on neolithic pottery and while it is still sometimes claimed that its emergence

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[79] Also Sethe 1939, 15; Sampson 1985, 61; Coulmas 1989, 28.

[80] The only original script for which the data available from the earliest phases is sufficient to build models is Sumerian. Schmandt-Besserat's theory (1981), which explains the development of Sumerian writing from tokens used by traders, has found considerable support in its time, but is not generally accepted among orientalists (e.g. Daniels 1996b, 23; Michalovski 1996, 35 f.; affirmative Englund 2004, 100).

[81] E.g. Cooper 1989, 323 f.; Daniels 1996e, 585; Boltz 2003, 27 f.; Powell 2009, 38 f. The original impact of the Sumerian token-theory appears to have repercussions here – seeing as no cases of primary script origin are entirely transparent, it is not clear to me why it should be possible to specifically exclude a development from a pictographic "descriptive-representational device" (Gelb 1963, 29). The latter, a development from a previous iconography, is in fact a valid option in the case of the Mesoamerican scripts (Macri 1996a, 172).

was inspired by contact with Mesopotamia (e.g. Powell 2009, 4; Bottéro 2004, 259), there is nothing to suggest a dependency on western scripts (Boltz 2003, 34; cf. Bagley 2004, 226 f.[82]).[83]

Idea oder *stimulus diffusion* as a type of script borrowing (as suggested for the Egyptian and Chinese scripts) is a bit of a hypothetical category, seeing as it cannot be conclusively demonstrated (Houston 2004b, 10 f.). Stimulus diffusion is called upon in cases where no similarities can be established to show that one script is borrowed from another, but a dependency has to be assumed for circumstantial reasons – because no prior development is documented (e.g. Rongorongo) and/or because the new writing culture was in contact with an older one and must be expected to have been to some extent acquainted with the technology of writing (e.g. Egyptian).[84] De Voogt 2012 distinguishes seven (partly hypothetical) types of borrowing by whether the model's character shapes, character values and the structure are retained. Stimulus diffusion is represented by type L1 with none of the above aspects being reflected in the model.

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[82] See also Keightley 1989, 171 with n. 1, who implies that to assume Chinese writing to be derivative is an obsolete chauvinistic view.

[83] Daniels 1996e, 585 (more elaborately 1992) suggests that because syllables are the shortest segments which can be identified by speakers (who are not acquainted with phonographic writing), primary scripts only developed among speakers of languages with a significant number of one-syllable morphemes, facilitating the association of meaning with linguistic form. However, of the languages he thinks of, Sumerian and Mayan are not isolating or even predominantly analytic, but agglutinating – they may be called "syllabically organized" (with quotation marks in Daniels' own text) in that (grammatical) one-syllable morphemes were unambiguously associated with meaning, but things did not have "monosyllabic names" which made natural a correspondence of one meaning = one word = one syllable. This goes for morphologically complex words as well as for lexical bases (e.g. Sum. *dingir* 'god'). The syllabic phonetic values of the Sumerian characters are obtained via the acrophonic or rather acrosyllabic principle, i.e. the first syllable of the logogram's semantic referent provides the sound value. The same appears to be the case in Mayan (Robertson 2004, 30; cf. also Houston 2004b, 7). For Old Chinese, the communis opinio is indeed that words were predominantly monosyllabic; a correlation between language structure and script emergence is argued by Boltz 2000. Since the rebus principle can be seen to be productively used in early Egyptian writing, this case must be considered as well – notably, Egyptian was an inflecting language, and its script turned out not syllabic, but consonant-alphabetic. Cf. the discussion in Baines 2004, 177–184.

[84] Further candidates for scripts which developed through stimulus diffusion are, e.g., the Irish Ogam, Linear A and Hieroglyphic Luwian, all comparatively recent scripts from areas in close proximity to places inhabited by literate cultures, yet without obvious models (not counting Haarmann's claim [1995] that Linear A is the continuation of a very dubious neolithic script in the Balkans). For Ogam, the mere fact that Latin is likely to have been available to the Irish at the time of Ogam's (assumed) emergence provides one of the main arguments for its being the source (McManus 1991, 5), though further evidence of various kind has been adduced. For example, the arrangement of the Ogam characters into *aicmí* – particularly the fourth one containing all the vowels – has been argued to be based on Latin grammatical theory (see McManus 1991, 23 f.).

The default form of borrowing is De Voogt's type L2, which represents cases in which all aspects are borrowed (with minor changes being introduced secondarily). With the structure being copied, further types are L4 (borrowed characters, but entirely unconnected values – a rare strategy, possibly represented by the Carian αβ) and L7 (new set of characters, e.g. Ogam). L7 may be considered to be a type of stimulus diffusion insofar as no "tangible" elements of the model are retained. Cases in which the structure of the resulting script is different from that of the model are further represented by types L3 (retained character set, e.g. Meroitic) and L5 (retained character shapes with different values, e.g. Cherokee). For any individual case, an examination of the specific context may shed light on the question of how and why elements of the model were lost or abandoned. For example, in Egypt, the productive application of the rebus principle to a character inventory generated "in close conjunction with a nascent artistic tradition" (Ritner 1996a, 73) calls for an explanation – if glottographic writing could be observed in action in contact with Sumer, why imitate its organic development? Was the Sumerian cuneiform system so young that the inner workings of its emergence were obvious even to non-native speakers? May an ethno-nationalistic motive have played a part? Misunderstanding or ignorance of the model's structure can have a profound effect (Caroline Islands script, Cherokee), as can a sophisticated effort to create a system most suitable for the underlying language (Cree). As with script types, types of borrowing are necessarily simplistic, failing to reflect the complexity of the data. In fact, the many types and subtypes and hybrid types of writing are arguably due to the many different ways in which scripts can be borrowed, and the processes underlying their formation may make a more serviceable basis for the identification of types than a purely synchronic comparison of structures.

Finally, what makes a script? In the present work, I use *script* as the default term to refer to any system which can for any reason be considered discrete, whether it is distinguished by type, graphical features, orthographical rules, the language it represents or the cultural entity it is associated with. This is not a given, since – as discussed above – different scripts differ from each other to a different extent. The Iberian script deviates from its model(s) as a type L7 (in type, character shapes and grapheme–phoneme relationships), as well as in underlying language and cultural context. The German script, on the other hand, is also used for a language different from that which underlies its model, but it is of the same type, and the (ortho-)graphical features differ only slightly (L2). Is the German script a script in its own right or a variant of the Latin script; and if one distinguishes between different scripts and mere variants, where to draw the line?

Conceivably, one might base a distinction between adaption and new script on types like De Voogt's, viz. L2 representing adaptations, while all other types result in new scripts. Yet this would lead to counter-intuitive assignments, e.g. the Etruscan αβ as an adaption. A case in point is the arrangement of content in Bright & Daniels 1996: *The World's Writing Systems* has a section reserved for "adaptations" of scripts, which includes adaptions of, e.g., the Roman αβ, while the Etruscan and Latin αβs are treated as discrete writing systems. The section on the Roman αβ as a script contains treatments of mediaeval scribal hands as if they were alphabet variants. Daniels' introduction (1996f) suggests a distinction between new scripts created for vernacular languages vs. adaptions of the script associated with the liturgical language in missionary context, but this seems unduly historically specific. Both the graphical aspect and known contexts of emergence (e.g. the creation of the Slavic αβs by St. Cyril and St. Methodius) appear to play a part in the decision of what to consider distinct writing system or adapted variant of a system. The term *writing system* tends to be used as something of a non-specific cover term or synonym, but it may be convenient to keep apart scripts (in my above definition of any kind of discrete system) and writing systems as referring to "script families" such as the alphabet, the Cuneiform or the Brāhmī scripts, which are connected both historically and typologically, so that any one implementation – Hittite cuneiform, the Venetic αβ – is ultimately but a variant.

1.3.2. Adoption vs. adaption

Numerous models proposed by various scholars have been criticised and indeed rejected for what was considered an inadequate or even principally flawed handling of the establishment of graphical or systematic relationships between letters. The demand for a consistent approach which respects both character shapes and grapheme–phoneme relationships, and for the avoidance of ad-hoc explanations, is found regularly in the runological literature – as so often, it can be traced back to Wimmer 1887, who negated the relevance of mere graphical similarities between certain Latin and Runic letters,

> "da ich als hauptgrundsatz für die ableitung zweier alphabete von einander die forderung aufstelle, daſs die zeichen einander sowohl in form wie bedeutung entsprechen müssen, wofern man nicht, wo dies in der einen oder andern richtung nicht der fall ist, ganz evident die gründe der abweichungen nachweisen kann. Sonst wird man leicht zu den willkürlichsten und unbegreiflichsten zusammenstellungen verleitet" (120).

How hard it is to meet this requirement was demonstrated by Wimmer himself. The initial impact of his work was probably to no little extent owed to the favourable impression that his tidy presentation of well and elaborately argued derivations makes in comparison to earlier efforts. In hindsight, Wimmer heads a long and illustrious line of scholars who, starting from a few seemingly obvious letter correspondences, work their way through the Runic inventory by adducing increasingly problematic motivations for discrepancies, usually ending with a number of letters which can only be explained under a certain suspension of disbelief or are left unaccounted for. It is often attempted to support individual derivations by citing parallels from other alphabets, by positing principles of rune formation which are then circularly used to motivate the forms they were inferred from, and/or by making assumptions about the circumstances of the derivations, but ad-hoc explanations are equally numerous.[85] This is not the place to collect and compare all the models which involve complete derivations of the Runic letters; two examples are given in ch. 1.2, and more extensive discussions can be found, e.g., in Odenstedt 1990, 145–167 and Morris 1988, 9–54.[86]

In the following, I will focus not on what Morris 1988, 48 calls the "mental gymnastics" performed in the search for individual derivations, but on the question of whether such derivations are really, as claimed by Wimmer, necessary. There is a school of thought in runology which licenses sidestepping the problem of character correspondence on the basis of the claim that the futhark is more of an independent creation than an adjusted copy of its model αβ. That is, the futhark is not regarded as the result of an adoption whose deviating

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[85] One of the most interesting efforts to avoid the necessity of "usually quite fanciful" (212) explanations is Williams 1996, who suggests a model which explains both character shapes and sound values based on the claim that "*shape alone determines the formal origin of the runes*" (214). Williams derives twenty-three runes from the letters of the Latin αβ: A > ᚨ, B > ᛒ, C > ᚲ, D > ᚦ, E > ᛗ, F > ᚠ, G > ᛃ, H > ᚺ, I > ᛁ, K > ᛈ, L > ᛚ, M > ᛖ, N > ᚾ, O > ᛜ, P > ᚹ, Q > ᛟ, R > ᚱ, S > ᛊ, T > ᛏ, V > ᚢ, X > ᚷ, Y > ᛉ, Z > ᛇ. The graphical transformation must have happened in this order, as the forms of ᚠ and ᚾ are motivated by differentiation from ᚨ and ᚺ respectively. The rune row's last letter ᛞ is explained as a newly created character (possibly also based on D). Williams goes on to "speculate" about how the deviant sound values came to be: those letters which were superfluous or secondary even in Latin were appointed to denote sounds present only in Germanic (ᛈ *w*, ᛟ *ng*, ᚷ *j*, ᛉ *ï*, ᛇ *z*, and the new letter ᛞ for *þ*). Then, for some reason, there was a mix-up, the sound values of these reallocated characters being exchanged with each other or those of the other characters, pair-wise: ᛈ and ᚹ, ᛟ and ᛜ, ᚷ and ᛃ, ᛉ and ᛇ, ᚦ and ᛞ, and additionally ᛖ and ᛗ. The neatness of the proposal is immediately appealing, but Williams does have to resort to certain presuppositions (principles of rune formation, assuming the invention of letters for which no model is available); the second, speculative part of his theory is argued in a more elaborate manner by Robertson 2012 (with approval from Williams 2004, 267 f.).

[86] See also Williams 1996, 212 f. A more recent example for a series of derivations which starts well and deteriorates quickly is Mees 2000, who freely admits that "[o]f course a few of these derivations are still somewhat problematic" (68).

features must be reasonably accounted for, but as an adaption undertaken by a purposeful creator who made more or less random decisions about the treatment of character shapes and values (including the use of superfluous characters and the introduction of new ones), the level of orderliness, the overall style – in short, about every aspect of the new script he created. As a consequence, the modern scholar's attempt to derive each rune from a letter in a Mediterranean αβ must be "a fruitless endeavor" (Morris 1988, 150). This view was first advanced by Askeberg 1944, who opined that the futhark was not "en slavisk kopia", but "en tämligen fri omarbetning av förebilden" (78). His statement was echoed by Moltke 1976, 53 and features in a near-translation in Moltke's 1981 paper: the futhark is "not a slavish imitation, but a free moulding" (7). Moltke 1981 calls the focus on the letters and their sequence an infatuation (6), suggesting that an ethno-nationalistic motive lies behind the reworking. Similar positions are found in Prosdocimi 1985, 392–395 and 2003, 438; Scardigli 1993; Barnes 1997, 9–11; Stoklund 2003, 178; Williams 2004, 272; Spurkland 2010, 76; Heizmann 2010, 20 and Fairfax 2014, 217. Grønvik 2001, 58–60 explains the futhark's idiosyncrasies as the characteristics of a "Geheimschrift" (52) which was created specifically to be undecipherable to a Roman. As put by Miller 1994, 67: "There is no reason to accord the *fuþark* inventor(s) any less creativity or prerogative than known script designers."[87]

Many, maybe most runologists, though they often refer to an area, a tribe or a context without dwelling on the details of the borrowing process, think of an individual creator. In some works, he is only mentioned in passing, others include speculations on his identity or even words of praise. The notion of a rune master who created a script for his people is present from the 18th c., with Göransson 1747 observing that the futhark was the work of a "sehr weisen meister" (§3): "Die runen sind nicht von einem heiden, sondern von einem frommen und von gottes heiligem offenbartem worte hocherleuchteten und weisen gottesmanne erfunden" (§7).[88] Wimmer 1887, at the conclusion of his lengthy explications, "adds confidently", though curtly: "von einem einzigen manne" (176). Bugge 1913 is more specific, arguing that both the the runenames and the order of the row must be the work of "én Mand" (185) – but while the rune names must have been invented by a Goth, the order

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[87] See also Musset 1965, 47–49; Griffiths 1999, 193, and the somewhat defeatist view expressed by Odenstedt 1990, who expects that "the inventor's motives for allocating particular Germanic sound values to Roman capitals will probably never be fully clarified" (166). For a similar stance from outside of Runic studies cf. McManus 1991, 13, who ascribes the creation of Ogam to a "creative individual or school" and opines that the details of the derivation "can be safely left to the ingenuity of the creator".

[88] Cited from Wimmer 1887, 12 (already in translation).

was established by an Armenian, who also taught the Goths to write. The involvement of a speaker of Armenian was inferred from an apocryphal Armenian expression *p‘ut‘a-tark‘* ‘cursive letters’ (literally ‘letters of haste’); this personage remained confined to Bugge’s model. Von Friesen 1919, 12 suggests a Germanic soldier; Kluge 1919, 47 f. credits a Crypto-Christian from North-Western Germany with the invention of the futhark (arguing that the rune names reflected neither specifically heathen nor Christian ideas). Agrell 1938, 89 suggests an educated Germanic warrior or such a person’s son, Alexander 1975, 7 a Germanic noble in Roman service. Düwel 2008, 181 refers to “einem oder mehreren ›Intellektuellen‹”, Williams 1996, 213 to a “Germanic speaking inventor of the runes”. Jungandreas 1974, 366 praises the “altgermanische Runenmeister, den ich für eine der geistesgeschichtlich bedeutendsten Personen halten möchte”; Heizmann 2010, 20 calls him a “kreativer Geist”. Rosenfeld 1956, who identifies Harigast on the Negau helmet B (3.4.2) as a Germanic mercenary, points out that any one Germanic prisoner or traveller in the Alpine area could at any time have become acquainted with a Latinised North Italic αβ and expanded it with “germanischen Heilzeichen” (236). Rosenfeld’s explanation of the runes as a “Zauberschrift” (262), created specifically for the purpose of divination, leads him to exclude the possibility of diffusion. Miller 2004, 65 deduces that the futhark was “consciously designed” from the absence of variants; Antonsen 1996, 7 states quite decidedly that writing is never borrowed via diffusion, but always systematically adapted by an individual.[89]

That the assumption of an individual creator was considered communis opinio from early on is demonstrated by the emphasis with which this view is sporadically repudiated particularly in the older literature. Taylor 1879, who is of the opinion that the developments undergone by scripts are subject to laws akin to those governing language, rejects Wimmer’s derivations on the basis that they neglect the “fundamental principles of alphabetic change”:

> “His method assumes that the inventors of the runes arbitrarily discarded a certain number of the Latin letters, and then without any Sufficient Reason invented other letters to supply the vacant places. If his explanations are correct, several of the runes, instead of having been evolved, like the letters of all other alphabets, by the action of slow and natural processes, must have been invented off hand by some

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[89] See also Kluge 1919, 48; Baesecke 1940, 101; Jensen 1969, 129; Höfler 1971, 135; Morris 1988, 5 f.; Elliott 1989, 9; Rausing 1992, 202; Birkhan 2006, 89. Kabell 1967 also thinks of an “Erfinder der Runenschrift”, but assumes that that person intended to copy the model, any changes being secondary developments due to “in der Barbarei gegebenen Ursachen” (100).

> alphabetic lawgiver, [...] whose arbitrary behests were promptly obeyed over a vast region extending from the Rhone to the Baltic, and from the Baltic to the Danube." (27 f.)

Luft 1898, 1 f. also assumes that the runes were not created by an individual, but borrowed (like the Mediterranean αβs) by diffusion and developed in a century-long process. Hempl 1896, 17. 19 f. points out that Wimmer's notion of motivating rune shapes by their being cut in wood disagrees with the idea of a purposeful creator, because such a person could not have forseen which material the Germani would choose to write on. Schrader 1901, 736 dismissively writes:

> "Die Vorstellung von einem "genialen praeceptor Germaniae", wie man jenen Mann ernsthaft genannt hat,[[90]] der seinen Deutschen ein Alphabet zusammengesetzt haben soll, dürfte jeder kulturgeschichtlichen Analogie entbehren."

In more recent times, but also somewhat snarkily, Markey 2001, 84–86 comments on the notion that writing could be invented on the spot – in his opinion, script transfer exclusively happens by diffusion. In the case of the runes, this is demonstrated by the preponderance of owner's inscriptions, which Markey considers to reflect the first stage of the borrowing process: reproduction of the model without a specific purpose (88).

Odenstedt 1990, 163–167, following Pedersen 1923, 51 f., also expresses the opinion that all the peculiarities of the futhark can be explained organically and that the futhark does not deviate from its model (the Latin script) so far that a creative inventor needs to be brought in. The Runic script, he says, was not devised by a "single inventor (often described as "ingenious")" (1989, 84), but developed over a period of time out of an imitation of the Latin αβ. Odenstedt restricts the context of this gradual development, crediting either merchants or the military (1990, 169 f.). Other scholars who think of a smaller group of people within whose sphere the futhark originated, however, tend towards purposeful creation: Braunmüller refers to a "(zumindest kleinen) Elite" (2004, 25) of "‚Erfindern' der *Runenschrift*" (1998, 19) with Latin education, again either soldiers or traders. Moltke 1981, 4, referring to the context of the borrowing of the Greek αβ from the Phoenician, assumes that the runes were originally a means of communication in trade, developed by "Danish merchants" in contact with Rome. Spurkland 2001, 6 speaks of rune masters who took an "imaginative approach" toward their creation.

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[90] Namely Meyer 1896, 162.

If the involvement of a deliberate creator, who maybe even purposefully distorted the model, is a priori assumed, certain aspects of the relationship between model and, in the present case, rune row become irrelevant to the argument of derivation – most importantly, the problems pertaining to graphical forms, grapheme–phoneme relationships and the order of the futhark. Deviations from the model can be summarily explained as idiosyncrasies which are due to an individual's fancy and do not require or indeed do not allow for detailed argumentation. On the other hand, issues pertaining to the historical circumstances, to context and purpose of the borrowing are put into focus. It is therefore important to determine whether the premise that new scripts are always created by individuals is warrantable.

The runes are not a primary script, but a secondary one. Hence, our question does not concern the processes leading to the primary creation of script, but the mechanisms of script transfer. Despite the fact that the data situation is rather better here, there being a great deal more cases and the documentation extending into recent times, these mechanisms are not clear at all. Do scripts diffuse from one script culture into another, or are they adapted by individuals? If the borrowing happens between two specific groups of people, such as traders or priests, should this be considered a subtype of the first or the second case? How to assess cases in which a conscious creation undergoes secondary changes in use within the writing community, or conversely, a script which has already been in use to some extent and is only afterwards systematically adapted? Can we distinguish such processes in ancient times without the help of secondary sources, i.e. actual accounts of the borrowing? Can we posit rules for how writing is borrowed and associate them with different cases – assuming that different things happen to the original script in the different scenarios – and can we use these to identify the processes in cases where no historical information is available (or trustworthy)?

1.3.2.1 Creation vs. diffusion

De Voogt 2012, who adheres to the traditional view that primary scripts evolve gradually from precursors of some description, contrasts these cases with borrowings: secondary scripts cannot be expected to pass through the same stages of development as primary ones; their emergence happens "relatively sudden" (2) and they "need to be largely completed before the script can be put to use" (6). O'Connor 1996, 90, writing about the development of the Semitic script from the Egyptian one, observes that "there is a long-standing and plausible tradition of regarding writing as an invention, i.e. as something that reflects the work of one person at one time", but does not give examples. McManus 1991 in his treatment of Ogam paints a different picture – he repeatedly makes a point of how older theories about the origin of that script are faulty because they are based on the principle that developments must be natural, while he himself advocates, as a new approach, to "ascribe at least some of the peculiarities to the *creative* rather than the *natural* input" (13).

Daniels, in a short introduction concerning the invention of writing, expresses himself somewhat vaguely: in the context of "Scripts Invented in Modern Times", he exclusively refers to "grammatogenists" (1996d, 578), then writes: "The normal way for a society to acquire its own script is by evolving, adapting, or adopting an existing writing system" (1996e, 579), and contrasts this scenario with cases in which one person creates an original script which does not have much in common with the model. Daniels further distinguishes between "sophisticated" and "unsophisticated grammatogeny" (1996e), the first by a person who already knew how to write the language of the model script, the second by one who has only a vague understanding of the concept of writing. An act of creation of a new writing system is sophisticated if it is undertaken by a person who has competence in writing at least one foreign language and consequently has a minimal understanding of "phonetics" (579). Gelb 1963, 199 observes that

> "we must always reckon in the case of all great cultural achievements with the decisive intervention of men of genius who were able either to break away from sacred tradition or to transfer into practical form something on which others could only speculate".

However, he also admits that

> "[u]nfortunately, we do not know any of the geniuses who were responsible for the most important reforms in the history of writing. Their names [...] are lost to us forever in the dimness of antiquity".

Documented cases of the emergence of new scripts in recent times are almost exclusively cases of a purposeful, even if sometimes unsophisticated creation. The question is to what extent these apparently clear-cut statistics reflect reality – it might be argued that these cases are the ones which will be documented (usually by the creator), while examples for the unsupervised diffusion of a script into a previously illiterate society tend to go unnoticed. Even if this caveat should be uncalled-for, it is at least debatable whether the situation in antiquity (and earlier) should be judged on the basis of modern conditions. The abundance of historically documented creations of scripts is in large part due to the activity of Christian missionaries and their efforts to bring the text of the Gospel into the farthest corners of the earth.[91] It might be asked whether, since the onset of the Age of Discovery, scripts have even had much of a chance to diffuse anywhere (but see 1.3.2.4).

1.3.2.2 Creating a script: Hankul

Cases other than modern ones in which the process of development/creation can be retraced with some certainty are few and far between. A special case in all aspects is that of Korean Hankul,[92] whose creation in 1443 and promulgation in 1446 was obligingly accompanied by a contemporary proclamation (*Hwunmin cengum* 'Correct Sounds for the Instruction of the People') and a handbook (*Hwunmin cengum haylyey* 'Explanations and examples of the correct sounds for the instruction of the people', which was lost until 1940). In an effort to make literacy more widespread than was feasible with the complex systems of writing Korean with Chinese characters (*hanca*), King Seycong – or one or more of his scholars – created a purely phonographic script with characters which were designed to be easy to learn.

> 'Because our language differs from the Chinese language, my poor people cannot express their thoughts in Chinese writing. In my pity for them I create 28 letters, which all can learn easily and use in their daily lives.' (*Hwunmin cengum*, preface; translation from Taylor & Taylor 1995, 211.)

Hankul ('Han writing', a modern term) was constructed with considerable linguistic insight: five graphically simple consonant characters, whose shape reflects the position of the articulatory organs pronouncing the respective sounds (see tab. 6), are used as basis to systematically derive characters for sounds with a different manner of articulation (e.g. doubling for the tense plosives). There is a clear graphical distinction between consonants and vowels; tone is also marked. The great versatility arising from the combination of graphical elements which indicate features, theoretically allowing the denoting of considerably more sounds than necessary for Korean, has led Sampson 1985, 120–144 to introduce a special typological category for Hankul, viz. "featural" scripts. The (original) system is one of the most logical and symmetrical ever to be created for common use and represents a prime example of sophisticated grammatogeny by one person or a small group

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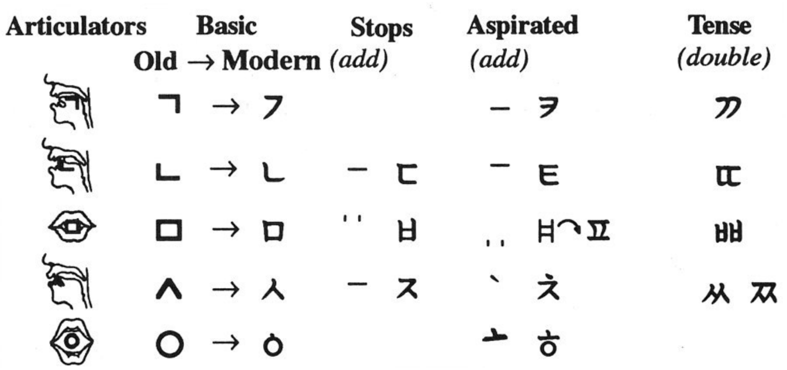
[91] Examples in Daniels 1996e, 580–585 and the following sections.

[92] In the present work, Korean names are transcribed according to the Yale romanisation.

of competent persons inventing a script for their language and perfecting it before making it available for use (Taylor & Taylor 1995, 211–216; King 1996, 219 f.).



Tab. 6: The five basic consonant characters of Hankul (on the left), whose shapes are modelled on the positions of tongue and lips, and the systematic graphical derivation of characters with different manners of articulation (from Taylor & Taylor 1995, 214 [tab. 13–1]).

1.3.2.3 Claiming to have created a script: Old Persian cuneiform

A historical document which has been considered to refer explicitly to the creation of a new script is also preserved for Old Persian cuneiform – the text in question is rather less detailed than the Hankul *Explanations*, but it was never lost, being prominently inscribed on a cliff of Mount Behistun (IR), accompanied by a huge relief. The trilingual Behistun inscription, applied some time after 521 BC by mandate of Darius I, consists in Elamite and Old Babylonian versions of the same text, both written in long established varieties of cuneiform, and an Old Persian version written in a new script which resembles cuneiform in style, but is of a different type and features unrelated characters and grapheme–phoneme correspondences. The text is concerned with the legitimisation of rule, and tells of how Darius prevailed over a series of pretenders after the demise of Cambyses II. The section in question, often instructively called "Schrifterfindungsparagraph" (DB/OP § 70 [IV 89–92] and its Elamite counterpart), has been taken to announce that Darius had commissioned the invention of the script then used for the first time in the present inscription. This was already suggested by Weißbach 1911 and elaborated by Hinz (1942, 346–349; 1952). The OP part is heavily damaged, a Babylonian counterpart is absent; it is the well preserved Elamite part, a secondary addition to go with the OP text, which contains the crucial reference to something which had not previously existed (which is missing from the OP version). Hinz 1952, 30 argues for a translation of Elam. *tup-pi-me* as 'script' and translates: "[...] machte ich eine andersartige Schrift, auf arisch, was es vordem nicht gab" (32 f.).

Though Hinz’ translation and interpretation of the paragraph were accepted by many scholars (e.g. Schmitt 1998, 458 f.), it is not at all evident. Most importantly, Elam. *tuppime* (*tuppi-* ‘inscription’ with an abstract suffix? *-me*) ~ OP IV 89 *dipiciça-* – may instead signify a type of text (Diakonoff 1970, 99; Tuplin 2005, 224), a version or copy (Huyse 1999, 47; Schmitt 2009, 87) or a part of the inscription (Vallat 2011, 266). As pointed out by Hinz 1973, 15, this does not preclude his interpretation: even without an explicit reference to script, the claim that the inscripion/text/... is the first in Old Persian (Aryan) implies that the OP script (which is not attested to write any language but OP) is used for the first time in the Behistun inscription. Still, of the numerous translations which have been put forward of both the Elamite and the reconstructed OP parts (see Rossi forthc. for an overview of recent attempts), many do not allow for an interpretation in Hinz’ sense – for example, Vallat 2011, 266 translates the Elamite text as “J’ai traduit autrement en aryen cette inscription. Elle [the OP part] ne se trouvait pas ici [on the rock face] auparavant”, doing away with both the reference to the script and the claim of writing Old Persian for the first time.[93] It is not even clear that OP *aryā* (Elam. *har-ri-ya-ma*) refers to the language (Rossi forthc., § 2.2.1). The lines OP IV 97–99 make mention of *tuppime*/*dipiciça-* being sent among the people – this was taken by Hinz 1952, 32 to mean that the new script was disseminated among Darius’ new subjects to be learned by them, but it may as well refer to the OP version of the text (Schmitt 2009, 87), to Darius’ titles and his lineage as mentioned in OP IV 93–94 (Vallat 2011, 268) or to “the political message conveyed by the whole monument” (Rossi forthc., § 2.1.3). As long as there is no agreement on the reading of the paragraph, Hinz’ popular interpretation cannot be considered disproved, but it should be borne in mind that the notion “daß Darius hier tatsächlich für sich in Anspruch nimmt, die altpersische Schrift eingeführt zu haben” (Hinz 1952, 24) depends on a very specific and uncertain translation.[94]

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[93] Cf. Schmitt’s translation of the OP text: “[...] (ist) dies die Fassung der Inschrift, die ich hinzugesetzt habe, (und zwar) auf Arisch” (2009, 87).

[94] The interpretation of the section as referring to OP cuneiform is considered to be supported by the fact that the Elamite and Babylonian parts of the inscription were inscribed simultaneously, whereas the Persian third of the trilingua was added belatedly (Mayrhofer 1978, 7). However, there are issues concerning the layout and the relative chronology not just of the three parts in their entirety, but of subsections. There appears to be wide agreement that the Elamite part takes precedence over the others (Schmitt 1990b, 300 f.), but this does not necessarily mean that the text was not originally composed in another language; if this was the case, further questions arise: are the words really those of Darius himself, and in which language would he have dictated it? (For example, Bae 2011, 152–154 argues for Old Persian, while Tuplin 2005, 221 suggests a Semitic original.) Was there more than one draft; if so, at what times and for which purposes were they produced? Which script(s) was/were used to take it/them down on what material(s), and who was responsible for any necessary translations? See section 1.3.3.4.

So, while, in the case of Hankul, the discovery of a document explicating on the origin of the script helped to clear things up, the matter turns out to be more complicated in Old Persian. Apart from the doubtful meaning of the Behistun paragraph, a major stumbling block for Hinz' theory are a number of inscriptions from Pasargadae, the capital of Cyrus II. As in Behistun, the three relevant inscriptions come in triplicate in Elamite, Babylonian and Old Persian. CMa, preserved five times on antae and doorways, reads 'I [am] Cyrus the king, an Achamenid'; CMc, three times on reliefs depicting Cyrus, reads 'Cyrus the great king, the Achamenid' – no OP versions are preserved of CMc, but a separate OP fragment may belong here (Schmitt 2009, 9. 36).[95] Hinz originally held that these inscriptions, like others from Pasargadae (particularly DMa as reconstructed by him), date from the reign of Darius, who had them inscribed to honour his predecessor (Borger & Hinz 1959). Nylander 1967, 151–170 adduces arguments to show that they are indeed of Cyrus' time, but suggests that only the Elamite and Babylonian versions were applied under Cyrus, whereas the OP versions were supplied under Darius (175–177) – a proposal followed by Hinz 1973, 19–21 to circumvent the problem of pre-Behistun attestations of OP and OP cuneiform. Others, however, take the OP inscriptions to be original as well (e.g. Diakonoff 1970, 100–103 with arguments).

Furthermore, a script invention under Darius has been questioned because of the logic (or rather the lack of such) behind the character inventory. Structurally, Old Persian cuneiform is basically an abugida, in which individual characters write a consonant plus one consistent standard vowel and different vowels are denoted by adding elements to the respective ‹CV›-characters. The graphs of OP cuneiform are newly invented; they imitate cuneiform characters, but are less graphically complex. OP cuneiform has a complete paradigm of twenty-two characters for CV-syllables with inherent *a* (also *ə*); the syllables' vowel can be modified by way of additional vowel characters for *i* and *u*. Beside these, there are also a number of characters for CV-syllables with *i* or *u*. Tab. 7 shows the uneven distribution of these bonus ‹Ci/Cu›-syllabograms (in transcription): only two consonants are provided with three characters combining them with all three vowels. Two more get syllabograms with *i*, but none with *u*, with five it is the other way round, and the remaining thirteen consonants come only with the modifiable ‹Ca›-character. In tab. 7, grey spaces mark gaps which are not only graphical, but also linguistical – for example, the syllables *ki*

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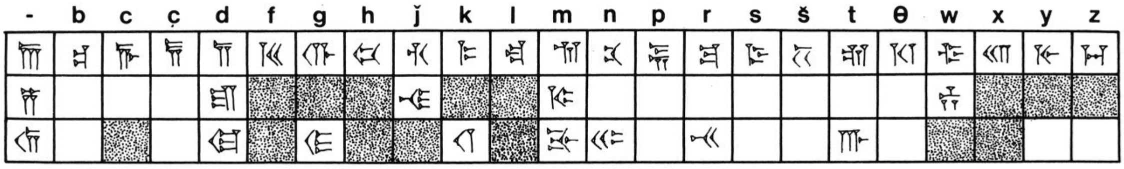
[95] Full texts and photographs of CMa and CMc in Nylander 1967, 144–149 (nos 1 and 2). In the older literature, the siglum CMb refers to a group of fragments which are now ascribed to Darius (DMa; often cited as CMb-DMa), but was reassigned by Schmitt 2009 to the single fragment which is listed as no. 5 by Nylander (150 f.).

and *gi* do not occur in OP; *ti*, *ni* etc., however, do. According to Mayrhofer 1979, 291, the C*i*/*u*-syllables which are represented by extra characters are no more frequent in OP than the ones which are not. Conversely, characters for certain C*i*/*u*-syllables, e.g. *ti* in inflection, might conceivably have been useful (Mayrhofer 1978, 8). A graphical reflection of assimilation processes is not plausible either: why should a difference in articulation between *d* in *da* and in *di*/*du* have called for notation, but not in the case of *t*? The existence of an OP palatalised *m* in *mi* is per se improbable (Hoffmann 1976, 625 f.). The selection of ‹Ci/Cu›-syllabograms appears not to be linguistically motivated.



	-	b	c	ç	d	f	g	h	ǰ	k	l	m	n	p	r	s	š	t	θ	w	x	y	z
a	𐎠	𐎲	𐎨	𐏂	𐎭	𐎳	𐎥	𐏃	𐎩	𐎣	𐎾	𐎶	𐎴	𐎱	𐎼	𐎿	𐏁	𐎫	𐎰	𐎺	𐎧	𐎹	𐏀
i	𐎡				𐎮	▨	▨	▨	𐎪	▨	▨	𐎷								𐎻	▨	▨	▨
u	𐎢		▨		𐎯	▨	𐎦	▨	▨	𐎤	▨	𐎸	𐎵		𐎽			𐎬		▨	▨		

Tab. 7: The character inventory of Old Persian cuneiform (from Justeson & Stephens 1993, 35 [fig. 4]).

The orthography is perfectly straight-forward from the writer's perspective: an unmarked ‹Ca›-character represents C*a*, C*ə* or C, an additional ‹a› indicates long *ā*. If ‹i› or ‹u› follows a ‹Ca›-character, for whose consonant a ‹Ci›- or ‹Cu›-character, respectively, is available, a diphthong must be read. If, in the same case, no ‹Ci›- or ‹Cu›-character is available, the spelling is ambiguous: ‹d[a]-i› is *dai*, because *di* would be written ‹di-i›, but ‹p[a]-i› is *pai* or *pi*. While all ‹Ca›-characters, as is normal for abugidas, can be modified by the characters ‹i› and ‹u›, this is not the case for the ‹Ci/Cu›-characters, which never represent only the consonant or are modified to represent, e.g., C*a* (†‹Ci-a›). They must therefore be considered to be syllabograms. However, the ‹Ci/Cu›-characters do not represent C*i*/C*u* on their own, as would be expected of syllabograms, but must still be accompanied by the respective vowel character (plene writing), so that long and short *i* and *u* cannot be distinguished: ‹Ci-i› is both C*i* and C*ī*. This redundant vowel marking also occurs sporadically with ‹Ca›-characters (‹C[a]-a› for C*a* rather than C*ā*), conceivably paralleling the rule for ‹Ci/Cu›-characters (Hoffmann 1976, 627).

According to Hoffmann 1976, 622, the redundant vowel marking in ‹Ci/Cu›-characters is a secondary development, due to an extension of the abugida-principle of modifiable syllable characters – the ‹Ci/Cu›-characters were originally "traditional" syllabograms. Hoffmann argues that relic spellings can be found in the Behistun inscription:[96] while the

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[96] The Behistun inscription differs from later ones in two more aspects: the separator and the character ‹ya› have a different shape (Hoffmann 1976, 622).

text generally follows the standard orthography as outlined in the preceding paragraph, there are instances of ‹Ci/Cu›-characters being employed without the redundant vowel character. Specifically, these exceptions occur in the spelling of the name of Darius' father Hystaspes, which is exclusively (nine times) spelled ‹vi-š[a]-ta-a-s[a]-pa-› *vištāspa-* – the first mention of the name in I 2 is also the first occurrence of a ‹Ci/Cu›-character. The sequence *viδ-* is always spelled ‹vi-δ[a]› (I 65 *viδbiščā*, I 69 *viδam*, III 26 *viδāpati*, IV 66 *viδiyā*). In other sequences, the syllable *vi* is spelled ‹vi-i›, in personal names as well as other words. The syllable *mi* spelled with the syllabogram alone occurs only in the toponym *armina*, but not consistently: in the first four occurrences (I 15, II 29, 30 and 32), the spelling is ‹a-r[a]-mi-i-n[a]-›, then (II 33 f., 39, 44 and 48, the latter a conjecture) it switches to ‹a-r[a]-mi-n[a]-›; the last six mentions are back to plene writing (details in Schmitt 1990a, 26). The name of Nebuchadnezzar, mentioned nine times, is spelled ‹na-b[a]-u-ku-d[a]-ra-ca-ra› *nabukudracara* in the first three occurrences of column I (I 78 f., 84 und 93), then ‹na-b[a]-u-ku-u-d[a]-ra-ca-ra›. Finally, in three mentions of the general *ərtavardiya-* the ‹i› after ‹di› is omitted once (III 36).

These inconsistencies could be explained as scribal errors (Werba 2006, 266) or as the consequences of lack of experience with writing the new-fangled script. Schmitt 1990a, 25–28 interprets these and other spelling variants as evidence for different hands. Hoffmann, as indicated above, explains them as the remnants of an older orthography, which obviously requires a pre-Behistun existence of the system. According to Hoffmann 1976, 621–623, there is general agreement that the script cannot be much older than the Behistun inscription and that it was not created for a different diachronic stage of Old Persian or even another dialect of Iranian (such as Median, as suggested by Diakonoff 1970), seeing as the spelling conventions do ultimately fit well with Old Persian as it can be reconstructed from other sources (but see Hoffmann 1976, 643–645 on a potential historical spelling).[97] An Iranian variety which has phonotactic restrictions fitting the gaps of the character paradigm is not known.

Mayrhofer 1979, following Hoffmann's lead, argues that the ‹Ci/Cu›-syllabograms are the remains of a defective writing tradition which predates Darius' reign. In reference to Hallock 1970, who connects the graphically simple characters ‹ku› and ‹ru› with the name *kuruš*, and Hoffmann's (1976) determination of the principles which (allegedly)

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[97] On the question of whether epigraphical Old Persian is a vernacular or an artificial language see Rubio 2006, 34 (n. 3).

govern the creation of the pseudo-cuneiform characters, he attempts to explain "die scheinbar so unsinnige Auswahl der i- und u-haltigen Zeichen" (1978, 8). Mayrhofer suggests that, during the reign of Cyrus II, the name of the king *kuruš* was already written with new, graphically simplified cuneiform characters, which represented syllables: ‹ku-ru-š›, using the syllabary-appropriate spelling conventions which, according to Hoffmann, can still be detected in the Behistun inscription. More characters for spelling frequent words followed – all with inherent *a*, until the names of Cyrus' sons became relevant: ‹ji› was created for *kamb*(*a*)*ujiya*- (Cambyses II), and ‹di› for *bardiya*- (Smerdis). The other ‹Ci/Cu›-characters, according to Mayrhofer, can be accounted for by the text of the Behistun inscription itself: to avoid having to give up the graphical rules for creating their simple character shapes, the scribes handled the creation of more ‹Ci/Cu›-characters economically. Unambiguous words such as OP *puça* 'son' could be written with an ambiguous spelling (‹p[a]-u-ca›), but ‹Ci/Cu›-characters were created for personal names, foreign names and other less commonly used words: ‹mi› for *armina*, ‹mu› for *mudrāya*, ‹tu› for *katpatuka*, ‹gu› for *δataguš* in the list of Persian dominions, ‹du› for the place names *kunduru*-, *gandutava*- and *dubāla*-, and ‹vi› for the king's father *vistāspa*-, who never reigned. The character ‹nu› was required for *anušiya*- 'confederate' (I 58) which, spelled ‹a-n[a]-u-›, might be misread for *anauša*- 'immortal'. A systematic character inventory, completely reflecting the phonotactic realities of Old Persian, did not come about due to the pressure of time under which the scribes of the Behistun inscription were working on their addendum.[98] Mayrhofer explains that his theory does not contradict the Schrifterfindungsparagraph (as such), if one reads *tuppime* as 'text' rather than 'script' so as not to exclude the existence of older documents in which certain characters were used to write names. He also believes, like Hallock, to be able to deduce the order in which the characters were created from their graphical complexity, assuming that the simpler a character, the older it is.

Mayrhofer's theory cannot satisfactorily explain all the data – particularly the lack of ‹Ci/Cu›-characters which would conceivably have come in handy: the lack of a syllabogram for the frequent inflectional ending *ti* can be accounted for, as common vernacular sequences did not have to be spelled unambiguously (1989, 180), but there are also syllables in (foreign) names in the Behistun inscription which are spelled ambiguously (Mayrhofer 1989, 182 f. with explanation attempts). The potentially archaic Pasargadae inscriptions do not support the theory: both CMa and the possible fragment of CMc use

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[98] Hoffmann 1976, 626 f. already suspects that a more sophisticated system had been planned, but could not be put into execution because of time pressure and the restrictions of the graphical rules.

standard orthography, also in the spelling of *kuruš* (‹ku-u-ru-u-š[a]›) (Schmitt 2009, 35 f.). Still, the theory is accepted by Schmitt 1981, 20 and Werba 1983. The latter suggests a more specific model to account for some problems, proposing that the invention of the new script had been commissioned by Smerdis, who would have had as good a motive as Darius for launching a prestige enterprise. Werba reconstructs a hypothetical monumental inscription written with a syllabary, in which the ‹Ci/Cu›-syllabograms ‹ku›, ‹ru›, ‹ji›, ‹di› and ‹nu› occur in Smerdis' name **Bərdiδanu-*. Darius, he suggests, had the monuments of Smerdis' rule destroyed and announced himself as the originator of the script in his own imperial inscription, wrongfully claiming the merit of having created a script for his people. It was only Darius' scribes, schooled in Aramaic, who introduced the abugida-principle of inherent *a* and reinterpreted some of the old syllabograms accordingly.

Whether the scenarios posited by Mayrhofer and Werba are correct in detail or not, it appears that the inconsistencies in the system are best explained as the consequence of the existence of a (defective?) version of the script prior to its wide dissemination under Darius. As far as this proto-version is concerned, we end up in the same situation as with any undocumented emergence of a new script, not knowing whether the syllabograms were a purposeful creation (as proposed by Werba) or a kind of inconsistently used shorthand which took over gradually before being taken care of by Darius' scribes.

1.3.2.4 Being credited with creating a script: The Slavic alphabets

Another case where the creation of a new script is commonly ascribed exclusively to an individual or small group of people who may in fact have not so much invented as reworked is that of the Slavic αβs. Despite the fact that the brothers and missionaries Constantine und Michael, later St. Cyril and St. Methodius, undoubtedly played an important part in the history of Eastern Europe, the chronology of the writing of the Slavic languages is still not quite cleared up. The Glagolica, whose character forms are more difficult to derive from a model, is generally held to be the older adaption, though the reasons for this assumption are not entirely compelling (Cubberley 1996, 346). The papal letter *Industriae Tuae* from 880 ascribes the invention of the Slavic script[99] to "Cyril the philosopher". The creation of the Cirilica by Constantine's disciples being dated to the 890s, the pope's remark must be taken to refer to the Glagolica, whose creation has accordingly been argued to be a completely independent effort on the part of Constantine (Cubberley 1982, 291). However, the

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[99] The now current names of the two alphabets are much younger than their implementation.

majority of scholars hold that enough Glagolitic characters can be derived from Greek cursive forms to demonstrate a dependence, even if some individual letter derivations are problematic (Cubberley 1996, 346). Cubberley 1982 suggests that the Glagolica predates Constantine's involvement, having arisen "more or less spontaneously" to fulfil "practical needs of commerce and militarism" (291), only to be reworked by Constantine, who expanded it by adding letters for the sounds not present in Greek.[100] Again, we are stuck with the question of whether this putative original version was the result of someone's purposeful adaption or whether Macedonian Slavic was occasionally and unsystematically written with Greek cursive letters before Constantine took the matter in hand (and maybe thereby checked a potential gradual spread and customisation).

The three cases outlined above have in common that their creation is ascribed to "culture heroes", self-proclaimed or established through history. While in the case of Hankul, a creation from scratch performed by King Seycong or at least under his aegis is made credible by the sources and the reconstructable circumstances, the men who are credited with the creation of Old Persian cuneiform and the Glagolica may be argued to have reworked pre-existing traditions of writing in the very languages for which they are supposed to have first created their new script. This is in direct contradiction to De Voogt's claim that new scripts must be created and completed before they can be used, and only undergo any gradual developments after they have been put in place. Unless one would claim that all the respective proto-versions were in turn invented by unknown individuals (as with Smerdis' original Old Persian cuneiform according to Werba),[101] we may in fact be concerned with cases of script diffusion, i.e. the employment of a foreign script for one's own language without any prior established adaptions, whose existence was obscured by the secondary intervention of individuals who were in a position to establish extensive changes. De Voogt himself provides a clear example for gradual, decentralised script transfer from a literary language to a previously unwritten one in De Voogt & Döhla 2012. Speakers of Nubian on Saï Island (Sudan) have recently taken to using the Arabic script to write their vernacular in public graffiti. There are only few changes from Arabic orthography and sound values, but those appear to have been agreed upon by convention in the small writing community – "in this case there is no clear inventor or teacher of the writing system whom we can immediately identify" (55).

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[100] Those of Cyril's disciples who later created the Cirilica considered the Uncial to be more suitable for a book script, but arguably retained the letters for non-Greek sounds which had been introduced in the Glagolica.

[101] Cubberley 1996, 346 ascribes the formation of this proto-alphabet to "some Slavs".

Historical examples according to De Voogt's theory do of course exist in quantities, being provided by the modern cases of scripts which were devised for missionary purposes. From times closer to the emergence of the futhark, two oft-cited ecclesiastical figures whose work as script inventors is also connected with spreading the Word of God are the Gothic bishop Wulfila and the Armenian vardapet Maštocʿ. The creation of the Armenian αβ in the early 5th c. AD by the learned cleric Maštocʿ is well established, even though he arguably did not work alone, and though the derivation of individual characters is still under discussion. However, though the αβ created by Maštocʿ appears to be original, there was an earlier script. The vardapet's disciple and biographer Koriwn tells of how the king sent an emissary to a Syriac bishop called Daniel to learn letters. The "Danielian" script referred to here may have been an adaption of the Aramaic αβ devised by Daniel, but Koriwn's assessment that the characters were a random collection of foreign letters, little suited to represent the sounds of Armenian, might indicate an older tradition of writing Armenian with Semitic scripts. Maštocʿ spent two years teaching this script before he got tired of dealing with its shortcomings and proceeded to create a better system with the help of a Greek scribe (Krikorian 2011, 65 f.).[102] It cannot be demonstrated that he used the Danielian script as a basis for his αβ, but see 1.3.3.3 on the mixture of Greek and Semitic models in the Armenian script.[103]

Also original is Wulfila's Gothic αβ, with nothing to contradict the notion that the man came up with an adaption of the Greek cursive specifically for his translation of the New Testament around the middle of the 4th c. AD. Wulfila is credited with the invention of the γράμματα γοθικά by various ecclesiastical historians in the 5th c. (Krause 1968, 63; Scardigli 1998, 455 f.) and their testimony is not usually called into question (Ebbinghaus 1996, 290).[104]

1.3.2.5 "Ingenious" or "natural": The Greek alphabet

The derivation of the Greek αβ from a North Semitic source – more precisely, the Phoenician abjad – is widely undisputed and fits neatly with the testimony of Herodotus,

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[102] More precisely, Maštocʿ was inspired by God; the work with the scribe concerned merely the arrangement of the letters.

[103] The possible existence of scripts for Caucasian languages prior to the ones known today is also discussed for Caucasian Albanian (Kananchev 2011, 61 f.) and Georgian (literature in Imnaishvili 2011, 51; critical Seibt 2011, 85).

[104] The preserved texts from the 6th c. at the earliest testify to two types (Krause 1968, 63), but this is due to circumstance, as the differences can be attributed to Latin influence on both orthography and letter forms (Ebbinghaus 1996, 291).

who states in the 5th c. BC that it was the Phoenicians who brought the knowledge of writing to the Greeks (see Voutiras 2007, 266 f.).

> *οἱ δὲ Φοίνικες οὗτοι οἱ σὺν Κάδμῳ ἀπικόμενοι, τῶν ἦσαν οἱ Γεφυραῖοι, ἄλλα τε πολλὰ οἰκήσαντες ταύτην τὴν χώρην ἐσήγαγον διδασκάλια ἐς τοὺς Ἕλληνας καὶ δὴ καὶ γράμματα, οὐκ ἐόντα πρὶν Ἕλλησι ὡς ἐμοὶ δοκέειν, πρῶτα μὲν τοῖσι καὶ ἅπαντες χρέωνται Φοίνικες: μετὰ δὲ χρόνου προβαίνοντος ἅμα τῇ φωνῇ μετέβαλλον καὶ τὸν ῥυθμὸν τῶν γραμμάτων.* [2] *περιοίκεον δὲ σφέας τὰ πολλὰ τῶν χώρων τοῦτον τὸν χρόνον Ἑλλήνων Ἴωνες, οἳ παραλαβόντες διδαχῇ παρὰ τῶν Φοινίκων τὰ γράμματα, μεταρρυθμίσαντες σφέων ὀλίγα ἐχρέωντο, χρεώμενοι δὲ ἐφάτισαν, ὥσπερ καὶ τὸ δίκαιον ἔφερε, ἐσαγαγόντων Φοινίκων ἐς τὴν Ἑλλάδα, Φοινικήια κεκλῆσθαι.* (Hist. V 58, 1–2)

> ‘These Phoenicians who came with Cadmus and of whom the Gephyraeans were a part brought with them to Hellas, among many other kinds of learning, the alphabet, which had been unknown before this, I think, to the Greeks. As time went on the sound and the form of the letters were changed. [2] At this time the Greeks who were settled around them were for the most part Ionians, and after being taught the letters by the Phoenicians, they used them with a few changes of form. In so doing, they gave to these characters the name of Phoenician, as was quite fair seeing that the Phoenicians had brought them into Greece.’ (Transl. from Godley 1920.)

The exact circumstances of the borrowing, however, remain obscure. Not entirely unlike the runological situation, there is debate about who precisely saw, learned or thought up what, where and in what context, and alternative models are still being offered.[105] A rough time frame is formed by the use of the Mycenean script (Linear B) on the Greek mainland until the end of the 12th c.[106] and the appearance of the earliest alphabetic documents around the middle of the 8th c. That the Greeks were closely engaged with the Phoenicians through trade in this phase is clear, but a precise dating or location is difficult. Careful comparison with Phoenician inscriptions with regard to type and character forms suggests a terminus post quem in the late 9th c.[107] The context of the transfer is generally thought to

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[105] See Heubeck 1979, 75–100 for older literature. More recently, Woodard 1997 connects certain arguably superfluous features of the Greek αβ as conditioned by Cypriote syllabic writing, suggesting that the people who first adapted the Phoenician script were scribes schooled in writing the Cypriote syllabary (see already Heubeck 1979, 85–87). Brixhe 2004 and van Dongen 2013, 60–65 argue for an original joint Greek-Phrygian αβ formed in Cilicia.

[106] Although it cannot be excluded that Linear B was too restricted geographically, socially or contextually to preclude the development of an independent writing culture. Also, the specifying term “Phoenician letters” may indicate that the Greeks were aware of (an) alternative writing system(s) at the time of the introduction of the alphabet (Voutiras 2007, 268).

[107] Heubeck 1979, 75–80; Jeffery 1990, 18; Swiggers 1996b, 267 f.; Woodard 2014, 3.

be trade relations, though very early metrical inscriptions are sometimes taken as evidence that the Greeks introduced the αβ in order to write poetry.[108]

In his extensive treatment of the matter, Wachter 1989 evokes a somewhat fanciful scenario featuring at least two Greeks and one Phoenician, all of them merchants, gathered together in “einer kleinen Tafelrunde an einem angenehmen Sommerabend” (37).[109] The Greeks, presumably provided with a document containing a Phoenician alphabetarium, memorised what Wachter calls the “Merkspruch”, i.e. the recited row of letter names to accompany written abecadaria. The fact that the Phoenician letter names, meaningless in Greek, were retained is taken by Wachter as indication that the creator of the Greek αβ was not an individual who knew both spoken and written Phoenician, as such a person would, he argues, have understood the significance of the Phoenician names and would have replaced them with semantically transparent Greek lexemes. Wachter’s views on the subsequent development and implementation of the archaic Greek αβ variants are expressed less clearly. Wachter bases his chronology of these variants upon the testimony of the preserved alphabetaria, arguing that graphical variation (as visible in regular inscriptions), being easily subject to fashions without profound consequences for legibility, is not reliable as a basis for determining the relationships between alphabet variants. The alphabetaria reflect the “Schriftsystem”, which can only be changed with a certain effort, as any changes affect the Merkspruch, upon which learners and users rely.[110] Precisely how such structural modifications are implemented is not made explicit – Wachter considers decrees (i.e. interventions from regulating bodies), but also pressure from a majority of writers who worked with a system based on a new Merkspruch (implying unregulated gradual developments). He stresses the importance of putative schools for the implementation of changes (24), but attributes certain variations to “spontanes und rasches Handeln im Zusammenhang mit dem praktischen Schreiben” (67).

Despite the many local variants attested in the archaic phase and despite the general assumption that the contact between Greeks and Phoenicians was extensive and not locally

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[108] See Voutiras 2007, 273 f. Powell 1991 goes so far as to claim that the Greek αβ was created specifically to record Homer’s epics.

[109] Similarly Voutiras 2007, 269.

[110] Wachter (24 f.) distinguishes between “Reduktionsreformen” (elimination of letters), “Additionsreformen” (new letters being added at the end of the row), “Funktionsreformen” (a minor modification of the Merkspruch, such as a letter which is not used in practice being assigned a new sound value), and rare “Substitutionsreformen” (eliminating a letter and putting a new one in its place to keep the Merkspruch intact).

restricted, a monogenesis of the Greek αβ as represented by Wachter is communis opinio because of the "auf jeden Fall genialen" (Wachter 1987, 11) reassignment of a number of Phoenician letters to write the Greek vowels: ʾālep – alpha, hē – ei (epsilon), yōd – iota, ʿayin – omikron. Unlike i̯, u̯ was phonemic in most Greek dialects at the time, so that wāw was initially retained as a consonantal character; a graphical variant to represent *u* was added after tau. ḥēt was initially used to write *h*, and only came to designate long open *ē* after psilosis eliminated anlauting *h* in Ionian dialects in the 6th c.; omega was subsequently introduced for long open *ō* to parallel this distinction between long and short vowel.

It seems clear that the introduction of the vowel characters is somehow connected to the letter names. The Phoenician consonantal anlauts of all corresponding letters except wāw (glottal stop, voiced and unvoiced pharyngeal fricative, palatal glide) were non-phonemic in Greek and may consequently be argued to have simply been lost to speakers of Greek. The resulting, effectively vowel-initial names could then have determined new sound values according to the acrophonic principle. While this works out for ʾālep, hē, ḥēt and yōd, the correlation between ʿayin and *o* is more difficult to argue phonetically. The Semitic voiced pharyngeal fricative did tend to occur in the context of *o* (Driver 1948, 179) and has been claimed to have a rounding effect upon *a* (Gardiner 1916, 11; Allen 1987, 171), but the motivation is dubious – the assignment of ʿayin to designate *o* may have been a conscious decision, coupling the last remaining "vowel-initial" letter name with the left-over vowel.

Wachter 1989, 37–40, dismissing the evidence of the Würzburg tablet alphabetarium which was presented by Heubeck in 1986 and assuming that upsilon was present as the first additional letter in all known alphabetaria, takes this to indicate that the letter was introduced at the first creation of the alphabet, as an amendment by a person who noticed the asymmetry – viz. the missing letter for one of the five vowels – conditioned by the different phonemic status of the Greek semivowels. However, despite the difficulty in deciphering the repeated alphabetaria on the Würzburg copper plaque, Heubeck's original assessment was correct: analysis with modern techniques shows that the Würzburg tablet as well as its two "sisters" (the Fayum tablets, cut from the same copper sheet) feature a Greek αβ without upsilon (Woodard 2014, 1 f.; X-radiographs on 9–14). Even if the plaques should be younger than the late 9th c. and the inscribed alphabets be ritually archaising (Woodard 2014, 3 f.), they testify to an archaic Greek αβ with the same number of letters as its Semitic model. That yōd was used with a vocalic quality, while wāw retained its consonantal value and the corresponding vowel character was only appended secondarily, points toward an unsophisticated interpretation of the letter names.[111]

Apart from ʿayin for *o*, there are a number of Phoenician letters whose Greek sound value is not self-evident (Heubeck 1979, 89 f.). The letter for the Semitic aspirated unvoiced stop (tāw) was not used for that sound's Greek counterpart, but for the Greek unaspirated *t*; instead, ṭēt (for the Semitic emphatic unvoiced stop) came to designate Greek t^h. This distribution, in itself surprising, is not even consistently executed: among the velars, kap (Semitic aspirated) designates Greek *k*, but qōp (Semitic emphatic) is not used for the aspirated unvoiced k^h, but displays the typical features of a retained superfluous letter. It appears to have not been used in practice in a number of αβ variants; where it is employed, it redundantly designates an allophone of *k* in certain contexts (again determined by the letter name). The question of how exactly the four Phoenician letters for sibilants were dealt with is unclear; their treatment (according to the theory of Jeffery, e.g. 1990, 25–28) is adduced as an argument for monogenesis by Marek 1993, 29. The use of zayin (*z*) for the Greek dental affricate is general, but different αβ variants chose šīn or ṣādē for the unvoiced sibilant.

Heubeck 1979, 94–100 prefers to think of a polygenesis, arguing that the above-mentioned distributions of sound values are not so odd that they could not have come about repeatedly and independently,[112] while the early variations are difficult to explain if a one-off authoritative creation is assumed. The latter argument is also adduced by Cook & Woodhead 1959, 178, who dismiss the notion of an Uralphabet, but allow for the possibility that the distribution of the vowels was determined only once and spread through the local variants. The naturalness of the mechanics of sound substitution, which explain the changes effected in the transmission, is stressed by Brixhe 2007, 282–285, who decidedly

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[111] That two of the reassigned characters (epsilon, omikron) did not retain their Phoenician names cannot be taken to point to an awareness of their being used differently than in the model, as the names ("light e" and "little o") are likely a secondary consequence of these letters acquiring counterparts which indicate length.

[112] Of doubtful relevance for the Greek vowel characters are the Semitic matres lectionis, i.e. consonant characters used to indicate vowels, sporadically, systematically, or only in certain contexts. The Phoenician abjad did not employ matres lectionis at the time of the borrowing by the Greeks, but the alphabet of the Old Aramaic inscriptions, itself derived from the Phoenician, did (since the middle of the 9th c.). Segert 1963, 48–54, arguing that the Greek vocalic values of ʾālep, hē, yōd and wāw correspond to the use of these letters in Aramaic matres lectionis, even suggests that the Greek αβ was entirely derived from the Aramaic (while the letter names are Phoenician). See also Marek 1993.

rejects the notion of a single creator.[113] The polygenesis theory does rather diminish the relevance of the ingenious creator, assuming instead that any number of Greek (or, for Brixhe, also Phrygian) merchants could at some point have had a Phoenician trade partner teach them to write the characters and say the Merkspruch, and come up with a full alphabet by simple sound substitution without a conscious effort to improve upon the system as they had learned it. The monogenesis theory obviously leaves room for the Greek culture hero,[114] but with regard to the possibility that the changes introduced are mechanical, it does not exclude the possibility of unsophisticated adoption (e.g. Marek 1993).[115]

Jeffery 1990 is also sceptical of the existence of a Greek εὑρετής (4), arguing that the less obvious innovations of the Greek αβ only indicate that it originated within a limited area (7). She devotes some space to the discussion of different models for script transfer and the diverging consequences as they are manifest in the resulting new scripts.

> "How does an illiterate people A normally achieve literacy? It may be in sufficiently close contact with a literate civilisation B to acquire the knowledge inevitably from mutual intercourse, particularly if there are intermarriages which produce bilingual speakers; this may be either because literate members of B are scattered throughout A or because in one particular area people of both A and B are in contact, whence the knowledge is spread to the rest of A. The diffusion of the Roman alphabet country by country throughout the Roman Empire illustrates the former method on a large scale; the spread of the alphabet through archaic Etruria from the original contact of the Greeks of Kyme with the Etruscans illustrates the latter. Alternatively, a script may be deliberately introduced into the illiterate country A by an individual or small group of persons, as happened in the cases of the Gothic, Armenian, and Cyrillic (or Glagolitic) scripts. A member of A or B, outstanding in position and personality, and with a thorough knowledge of the B script, creates a script for A by synthesis, basing it upon the existing B script and adding any extra signs felt to be necessary for the A language, either by borrowing from other scripts or by newly invented signs. The underlying motives for this may be either political or religious, or a mixture of both, but in either case they imply a more deliberate connexion between the two countries than is indicated by the more haphazard method of commercial contact, such as the contact between the Etruscans and the Greeks of Kyme" (1 f.).

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[113] Brixhe (284 f.) suggests that the value *o* for ʿayin results from the translation of this particular letter name into Greek (*ὀφθαλμός* vel sim.) on account of the letter shape being comparatively iconic. This seems to me somewhat strained; if, as Brixhe assumes, the confusion of the four Semitic sibilant characters results from the respective names all having been heard with the same anlaut in Greek (283 f.), two letter names with initial *a* should not have caused a stir.

[114] See Marek 1993, 27 and Heubeck 1979, 87 f. (n. 520) for a collection of epithets.

[115] Cf. Powell 1991, 42 f., who tries to accommodate his idea of an ingenious adapter with "a good ear", who "had sharply attuned his senses to finding distinctions of sounds" with the notion that most vocalic values are due to misheard anlauts.

As suggested in the introductory paragraphs to the present chapter, the critical difference is not so much the number of persons involved, as the degree of purpose.

Option 1: The knowledge of writing diffuses “inevitably” into a previously illiterate community. The system is adopted and then gradually adapted to circumstances in use in the same way that any new technology is; it is subjected to a – mainly phonetically conditioned – process of gradual change which eventually results in a more or less different system which may be considered “new”.

Option 2: System B (the source system) is purposefully changed and strategically adapted before being put to use.

Option 1 implies the involvement of a large number of people, a longer time needed before changes are established and a less uniform result (either only in the early phases, e.g. the Latin αβ, or ultimately leading to local variants only subsumed under one designation, e.g. the Venetic αβs). The emergence of the new script happens gradually, in step with actual practice; changes accrue due to problems which arise in use. The eventual result of a “new script” is not intentional: the model script is used to write a different language – the users would conceivably consider themselves to be using the model script even at a time when new conventions have created a system which differs notably and systematically from the source. Option 2 presupposes one person, or a small group of coordinated persons, who devise(s), in relatively short time, a new system, more or less closely modelled on an existing one, on the drawing board. This new script is immediately uniform, the formalisms and rules are binding, any variation is the consequence of secondary developments.

Jeffery associates option 1 with a lack of sophistication: (literarily) uneducated users do not demand a great deal from the system in terms of phonological consistency and precision; they initially adopt graphemes and their values without reflection. Changes and adaptions, such as the loss of superfluous characters or the substitution of foreign (sound) values with similar ones in the new language happen automatically. Jeffery names the creation and distinction of duplicates and the borrowing of individual characters from other sources as innovations which are typical of scenarios of this type. On the other hand, the recycling of unnecessary characters for phonetically dissimilar sounds, the creation of individual characters without a graphical model, as well as changes in script type, she assumes to be particular to sophisticated creations (4).

Certainly, and this is the point made by some runologists as mentioned above, it is the slow, unstrategic diffusion borne by many which is generally considered to lead to results that can be registered statistically, compared and used to determine what is called “principles of alphabet history”.[116] A single creator, on the other hand, while he may be equally inclined to make “natural”, i.e. phonologically or graphically obvious and comprehensible, choices in his work, must be expected to sometimes solve a problem in a completely arbitrary manner or even introduce purposefully unnecessary changes: a new script may be created to emulate all or certain aspects of the model if the latter is not only considered prestigious, but is also positively connotated. If an ethno-nationalistic motive is involved and the creator makes an effort to set his creation apart from the model, extensive redesigning may take place. Unstrategic diffusion does not provide a context for abrupt changes by which a system loses its tradition of transmission; even small-scale “creative” innovations would have a hard time getting established.

However, it is not evident that the differences between the effects of these two types of script transfer are quite as clear-cut. There are scholars who seek to account for changes even when assuming a single creator – e.g. Fairfax 2014, 217, who opines that assuming what he calls an “impressionistic” element in script transmission does not necessarily mean that letter derivations are unnecessary, as even the alleged creator must be expected to proceed with a certain amount of “procedural rigour”. A non-Runic example, referenced by Fairfax himself, is Ebbinghaus 1979 with his attempt at explaining how exactly Wulfila proceeded when he derived his Gothic letters from the Greek αβ (1.3.3.3).

Secondly, the distinction “unsophisticated diffusion” vs. “sophisticated creation” as implied by Jeffery is not universal. It is even debatable to what extent diffusion can happen without a certain level of sophistication: people who use the model script, however inexpertly, must either have at least an idea of how to write the source language (if there was extended contact between the groups) or must have been taught the basics without having literacy in the source language; in the latter case, even the most basic instruction (the teaching of the Merkspruch, or how to write one’s name) must involve an explanation of how the characters relate to elements of spoken language. The problem here is the definition of what one calls “sophistication”. Daniels’ own definition is maybe not only

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[116] Cf. Daniels 1996e, 583, who observes that insights into the process of script invention can only be got from the study of unsophisticated grammatogenies. There is no reason why it should not be possible to identify tendencies unspecific to script type which can be applied to different kinds of script; the usual reference to “alphabet history” is due to this script type being the best studied one.

unduly specific with its focus on alphabetic systems, but also imprecise in detail: there is a difference between a person having no understanding of how a writing system works beyond the notion of visual signs encoding meaning, a person having rudimentary competence in writing the source language, a person being bilingual or well trained in writing the source language, and a person having enjoyed an education which includes theoretical grammatological knowledge of some sort.

1.3.2.6 Adopting a script I: The alphabet in Italy

A fairly clear case of the gradual and unsophisticated diffusion of a script into a previously illiterate community, also cited by Jeffery, is that of Etruscan. The Etruscans learned to write from the Greek settlers (or traders) of Pithekoussai on Ischia in the 8th c., with whom they had likely been in contact since the founding of the colony/trading post. Pithekoussai is the find place of one of the oldest preserved Greek inscriptions, the Cup of Nestor, dated to the last quarter of the 8th c. BC (Jeffery 1990, 235). The oldest document of written Etruscan, a kotyle from Tarquinia (Ta 3.1), is dated to about 700 (Wallace 2008, 17).

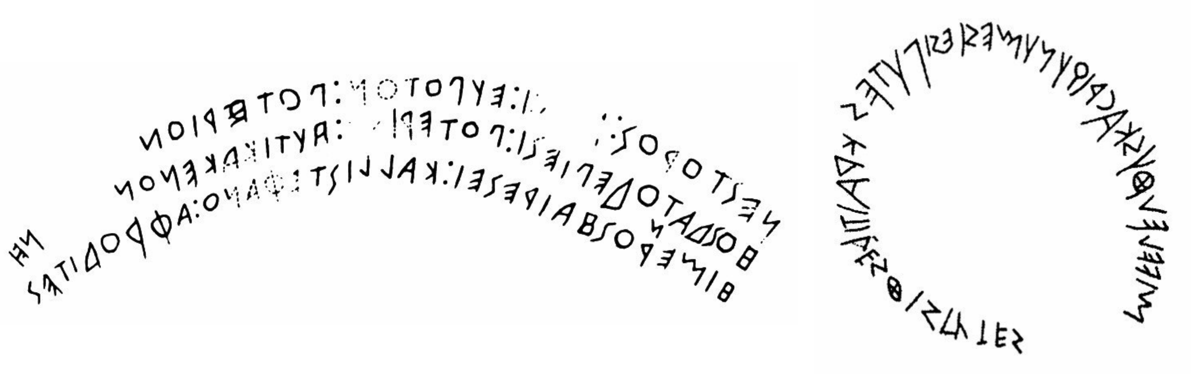

Fig. 6: The inscriptions on the Cup of Nestor and on the kotyle from Tarquinia (from Stroud 1989, 113 and Wallace 2008, 23, respectively).

There are hardly any formal differences between the two inscriptions (different orientation of sigma, asymmetrical vs. symmetrical alpha and slightly different forms of pi) – were it not for the different languages, the two testimonies would be considered to be written with the same script. The different language is reflected in the script by the non-occurrence of beta, delta and omikron in the kotyle inscription (the corresponding phonemes not existing in Etruscan), and indirectly also in the use of gamma to write not a voiced stop, but the palatal allophone of the unvoiced stop according to the *kacriqu*-rule.[117] However, as the

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[117] In archaic Etruscan inscriptions, kappa is used before *a*, gamma before front vowels, qoppa before *u*. This orthographic rule has been explained as phonetically motivated (distinguishing three allophones of

oldest Etruscan alphabetarium (on an ivory writing tablet from Marsiliana d'Albegna; AV 9.1; about 650) shows, the Etruscans adopted the Greek αβ, in its eastern Greek "red" variety as used in Euboia, without any changes with regard to the different phonemic systems of the two languages (Carpenter 1945; Jeffery 1990, 236–239; Wachter 1998, 1162).

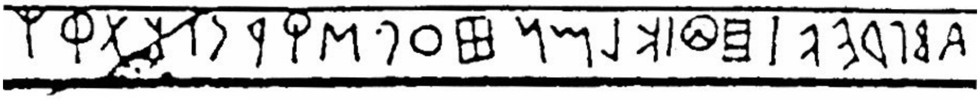

Fig. 7: The oldest Etruscan alphabetarium on an ivory writing tablet from Marsiliana d'Albegna (detail from Hartmann 2005, 235 [Abb. 180]).

Wachter 1989 treats the Marsiliana d'Albegna alphabetarium as a testimony for the chronology of the early Greek αβ.[118] Only by and by do the documented alphabetaria reflect a process of adaption to writing practice (see also Maras 2014, 77). A clear diagnosis seems possible: the archaic Etruscan inscriptions were written with a script that was, for all intents and purposes, Greek, and even the later adaptions came in such a piecemeal manner that it is hard to argue for comprehensive orthographic reforms – and if there were such reforms, they only officially implemented previous developments which had gradually established themselves in use. The existence of local varieties points in the same direction.

The emergence of the Latin αβ is not as well documented – notably, archaic alphabetaria are lacking.[119] However, the (partial) employment of the Etruscan *kacriqu*-rule in early Latin inscriptions suggests that no systematic adaption was made prior to the use of Graeco-Etruscan letters to write Latin: while the rule was merely unnecessary in Etruscan, it was detrimental in Latin, where it blocked the use of gamma for *g* (Wachter 1987, 19–21). One would expect a sophisticated inventor to realise the relevance of gamma next to that of beta and delta, whether the latter were available from the Etruscan model αβ or

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the unvoiced velar stop), e.g. Cristofani 1972, 471, or as conditioned by the Phoenician/Greek letter names (extending the Greek convention of the use of kappa and qoppa, e.g. Wachter 1987, 16–18; Wachter has to assume that the name of the third letter was *gemma* rather than *gamma*). Of course, the two explanations ultimately amount to the same thing, as the phonetic distinction, even if it was purposeful, must have been suggested by the letter names and the Greek practice.

[118] But cf. Prosdocimi 1990, 195–203, who stresses the difference between the "alfabeto princeps" (the attested alphabetarium) and the "corpus princeps" (the entirety of texts available for reference to the writer) and argues that orthographic rules ("regole d'uso") make the difference between scripts and, consequently, that the Marsiliana d'Albegna alphabetarium, belonging with an Etruscan "corpus princeps", must be considered an Etruscan document).

[119] The oldest known Latin alphabetarium, dated to the end of the 4th c. (Wachter 1998, 1165), comes from Monteroni di Palo and is the only one to still feature zeta rather than G with which it was replaced in the 3rd c. Why zeta was retained as part of the row, when theta, san, phi, chi and ksi were eliminated, is discussed in Wachter 1987, 43–50.

taken from the Greek original. (See 1.3.3.2 on the relation of the Latin script to that of the Greeks and the Etruscans.) Again, variations in writing practice support this view. Wallace 1989, 123 f. suggests that ritual exchange of gifts – sometimes inscribed – across ethnographical/linguistical boundaries provided the context for a diffusion of writing into the early Roman culture.[120]

The North Italic Venetic αβ, also derived from the Etruscan one, lacks beta, delta and gamma, but features omikron. The Venetic writing culture is special insofar as there is ample evidence not merely for institutionalised writing, but for a writing cult (see Marinetti 2002, 40 f.). The oldest Venetic testimonies demonstrate an early break in the tradition: there is evidence for an archaic Venetic αβ that shows similarities with that of the Northern Etruscan city of Chiusi, while the younger variants are clearly connected with the writing cult of the Portonaccio sanctuary in Southern Etruscan Veii (see 2.1.2 for details). The Venetic case may be compared with the above-mentioned ones, where an early unsystematically adopted script was superseded by a sophisticated and institutionalised adaption.[121] All in all, the North Italic αβs (excluding Camunic), which are used for at least three different languages, are so similar that they are treated as one αβ with minor local variants by some researchers, e.g. Stifter in LexLep.[122] Indeed, the ascription to one of the three corpora is in many cases performed on the basis of linguistic, archaeological, frequently even just geographical observations. A palaeographically motivated ascription can only be performed if an inscription contains one of the precious few diagnostic letter forms.

Wachter 1987, 8 emphasises the importance of the Merkspruch for the spread of the αβ in Greece and Italy. Where alphabetaria demonstrate that the order of the row was preserved, they testify to the art of writing being taught and learned – the testimony of the Marsiliana d'Albegna alphabetarium is important not only because it is old, but also because it is inscribed on the rim of a writing tablet, presumably to act as a memory aid for the writer who used the tablet. This does of course not exclude the intervention of an individual adaptor, but the almost seamless adoption of the αβ in Italy by speakers of various languages in the two centuries following its establishment in Greece points to a

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[120] However, Wallace speaks of bilingual "authors" (126); at what point these people are thought to have set to their adaption work is not made clear.

[121] Maggiani (e.g. 2002, 56) goes so far as to identify one Pupon Rakos, named on the oldest phase-2 document from Padova, as the Etruscan responsible for establishing Southern Etruscan cult and writing culture in the Veneto.

[122] http://www.univie.ac.at/lexlep/wiki/North_Italic_Script. See also Mees 2000, 52.

“mechanische und ganz auf die Praxis ausgerichtete Methode [...] und eine theoretische Verfeinerung normalerweise erst in zweiter Linie” – thus Wachter 1987, 13 despite his conviction that acts of script creation were performed in Italy (24) as well as Greece.

The more or less problematic examples of Hankul, Old Persian cuneiform and Glagolitic, the Gothic and Armenian αβs (purposeful and sophisticated script creation) and that of Etruscan (gradual script transfer) can be juxtaposed with cases where a succession of learned users take a long time to adapt a foreign script to their own language (gradual sophisticated borrowing) and with such where illiterate grammatogenists produce perfectly acceptable systems which have only a passing similarity to the model (purposeful unsophisticated script creation). Examples for the two latter cases will be presented in the following sections. Widespread literacy in the source language, coupled with a high level education associated with the prestigious foreign culture, can have the result that the employment of the script for the vernacular happens rather late. Professional scribes who, once the notion becomes popular, begin to spell their native language with the well known characters must be assumed to make decisions and come up with solutions which are different from those of people who have only a cursory user’s understanding of how the script relates to the source language.

1.3.2.7 Adopting a script II: Writing Japanese

The transition from writing Chinese with Chinese characters to writing Japanese with Japanese kana did not happen suddenly. Chinese writing was first brought to Japan by Korean scholars in the 4th or 5th c. AD in the course of a general Chinesification of the Japanese culture. While the Chinese characters, called *kanji* in Japan, were soon used to write Japanese, adaption processes appear to have started only in the 9th c. All stages of the change from Chinese logo-syllabic to Japanese syllabic writing are not only attested, but still in use today.

The kanji in their original form are used as logograms, i.e. with focus on their semantic content (e.g. the kanji for ‘ten’ being used to write ‘ten’ in a Japanese text). For the pronunciation of a kanji, there are two options: on- and kun-reading. On-reading means that the kanji is read according to the Chinese pronunciation (e.g. the kanji for ‘ten’ being read *shi* ‘ten’ in Chinese). For kun-reading, the designated word is translated into Japanese (e.g. the kanji for ‘ten’ being read *tō* ‘ten’ in Japanese). Whether, for any one kanji in a text, on- or kun-reading is intended must be judged from context. The matter is further complicated by the fact that a kanji can have more than one meaning (e.g. literal vs. metaphorical), and more than one phonetic shape can be associated with a meaning in either language. Furthermore, the phonetic shape based on on-reading is variable due to the phonetic differences between the two languages (i.e. the Chinese phonetic sequence in an on-reading may come out in different ways when pronounced by Japanese), and kun-readings may only approximate the Japanese phonetic shape of the word. There are also conventionalised on-readings, whose pronunciation depends on when they were introduced from which Chinese dialect, resulting in multiple on-readings for one kanji (which can even include conventionalised misreadings). The two readings may be mixed in compound (two-kanji) words (Taylor & Taylor 1995, 299–303).

These multiple readings become especially relevant when kanji are used to write phonetically. Just like the Koreans, the Japanese saw the necessity to write not only lexical items, but also their grammatical morphemes. To represent a Japanese syllable, a writer could theoretically obtain a sound value via any of the readings described above, always ignoring the respective kanji's semantic content – *shakuon*/*ongana* is a phonetic character obtained through on-reading, *shakukun*/*kungana* is one which is based on kun-reading. So, the kanji for 'ten' could theoretically be used to write the syllables *shi*, *tō*, *to*, or any of the other sound shapes available through the various reading options mentioned above (examples in Tollini 2012). A reasonable preference for graphically simple kanji with convenient one-syllable readings did something to limit the plethora of options, gradually reducing the number of kanji which were habitually used to write phonetic sequences. By the 9th c., the preferred kanji formed a usable system called *man'yōgana*. This was then further simplified to two distinct syllabaries: *katakana* and *hiragana*. Katakana developed from the use of man'yōgana in interlinear or marginal glosses, with drastically simplified characters for small and quick writing. Hiragana sports more artful character shapes, being a cursive script used mainly for writing literature. Only a few corresponding hiragana and katakana characters have been derived from the same kanji (Taylor & Taylor 1995, 306–308).

Kanji	**Hiragana**	**Kanji**	**Katakana**
安	あ *(a)*	加	カ *(ka)*
乃	の *(no)*	千	チ *(chi)*
不	ふ *(fu)*	不	フ *(fu)*
天	て *(te)*	天	テ *(te)*

Tab. 8: Examples for the graphical development of kanji to kana (from Taylor & Taylor 1995, 307 [tab. 19–1]).

Though it cannot, of course, be excluded that, at one or different times, scribes who struggled with the use of kanji to write Japanese made coordinated efforts to reduce and systematise character use, the development of kana happened gradually, only governed by the needs of an uncoordinated writing community and the willingness to follow emerging conventions, however random. Tollini 2012, 171 refers to the importance of the early 8th-c. chronicle *Kojiki*, the first lengthy text in Japanese, which is prefaced by a passage explaining the difficulties in writing Japanese with Chinese characters and indicating the strategy used in *Kojiki* – such a seminal work may well have served as a reference text for scribes, not unlike the conventions of Luther's German Bible translation were used as a model by early printers. Still, the general predilection for culture heroes does not exclude Japan: the Buddhist monk Kūkai, founder of the Shingon school of Buddhism, who lived around AD 800, was the right man at the right time and place to be credited with taking the definitive step towards the purely phonetic writing of the Japanese language. Trained in reading the original Indic texts, he was acquainted with a phonetic writing system. The 11th-c. poem *Iroha uta*, famous for containing each of the archaic kana once, is ascribed to Kūkai, but this is not supported by historical sources (Taylor & Taylor 1995, 308). Kūkai's role in the development of phonetic writing in Japan, opposed to that of countless nameless civil servants and scribes taking one little step at a time, is highly questionable. This development may be considered to represent a case of "sophisticated diffusion", with a considerable number of competent users independently introducing changes which are discarded or adopted to gradually accumulate and form a new system.

A similar scenario must be assumed for the distribution of the Latin αβ in Europe. The persons who employed the Latin script for writing their native languages were ecclesiastical and lay scholars trained not merely in writing the model language with the associated script, but with a classical education – men who can be assumed to make informed decisions when applying themselves to the task of adapting a script. Yet the adaptions were introduced in a piecemeal manner to form the various national αβs with their special characters – often evolved from diacritics – and their different orthographies. The prominent difference between the development in Japan and in Europe is that in the former case, the results were scripts which typologically represent a writing system different from that of the model, precipitated by the fundamental difference in language type, whereas the European αβs keep the structural properties of the model. This observation harks back to the question of what constitutes a "new" script vs. a "variant" of the model: the Western European αβs are often identified as the Latin αβ ("Roman αβ") in minor local variants.

The converse case, viz. unsophisticated grammatogeny performed by men with a clear purpose, may seem marginal, but is in fact very well attested.

1.3.2.8 Unsophisticated grammatogeny: Sequoyah

The Cherokee script was invented by an ingenious tribesman between 1809 and 1821. Unfortunately, information about Sequoyah's life is sparse and partly unreliable; the accounts are collected in Davis 1930. It seems clear that Sequoyah was monolingual (Davis 1930, 155) and illiterate. He did, however, understand that shapes which he observed printed on paper (viz. Latin letters) reflected speech. After claiming before the patrons of his public house that he could come up with a tool which would allow the Cherokee to communicate by means of "talking leaves" in the manner of the foreigners, he set to work, initially attempting to invent a character for every word in his language. After realising that such an approach would require more characters than could easily be remembered, and that characters for concepts were not practicable either, he hit upon the notion of writing recurring sounds. According to Davis 1930, 160, he did not rely upon his own language competence, but also listened to others to make sure that all sounds would be represented. He "obtained an old English book" (ibid., 30) and used most of the character shapes he found there, modified some and invented the rest. Similarities of Cherokee characters with Latin ones and with Arabic numerals are entirely graphical – since Sequoyah did not read English, there is no correspondence in the sound values. Similarities with letters from the Greek and Cyrillic αβs (Scancarelli 1996, 587) are probably fortuitious. An early source stresses Sequoyah's lack of "sophistication":

> "A form of alphabetical writing invented by a Cherokee named George Guyst,[[123]] who does not speak English, and was never taught to read English books, is attracting great notice among the people generally. Having become acquainted with the principle, that marks can be made the symbol of sound, this uninstructed man conceived the notion that he could express all the syllables by separate characters, but for the specific purpose of writing his native language" (from *The Christian Observer* [London], vol. 26 [May 1826], 317; quoted from Davis 1930, 154 [n. 22]).

The result of Sequoyah's efforts, a syllabary of eighty-five characters, is better suited to write Cherokee that the adapted Roman αβ, though its creator's lack of linguistic training is reflected in the system not being able to write the language quite unambiguously. There are six vowel characters (including one for a schwa sound), and the according syllabograms.

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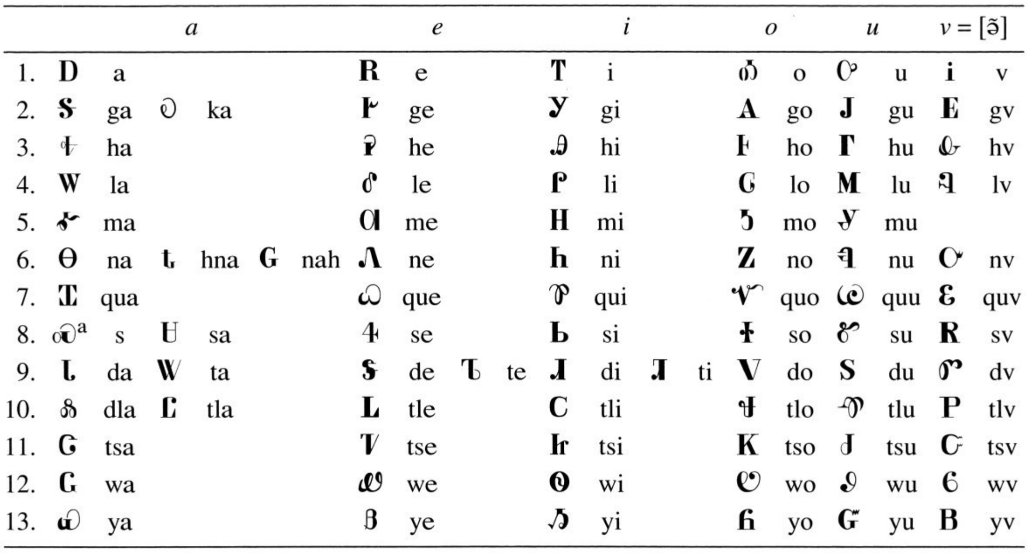
[123] Sequoyah's English name, inherited from his allegedly German father (Davis 1930, 153 f.).

Neither vowel length nor pitch are indicated; the phonemic glottal stop is not repesented. There are inconsistencies regarding the representation of *h*, *s* and of aspiration; the spelling of certain consonant clusters requires writing mute vowels (Scancarelli 1996, 590).[124] It would appear that Sequoyah, while paying particular attention to the realities of spoken Cherokee, did not go out of his way to make his system symmetrical.



	a						*e*				*i*				*o*		*u*		*v* = [ə̃]	
1.	Ꭰ	a					Ꭱ	e			Ꭲ	i			Ꭳ	o	Ꭴ	u	Ꭵ	v
2.	Ꭶ	ga	Ꭷ	ka			Ꭸ	ge			Ꭹ	gi			Ꭺ	go	Ꭻ	gu	Ꭼ	gv
3.	Ꭽ	ha					Ꭾ	he			Ꭿ	hi			Ꮀ	ho	Ꮁ	hu	Ꮂ	hv
4.	Ꮃ	la					Ꮄ	le			Ꮅ	li			Ꮆ	lo	Ꮇ	lu	Ꮈ	lv
5.	Ꮉ	ma					Ꮊ	me			Ꮋ	mi			Ꮌ	mo	Ꮍ	mu		
6.	Ꮎ	na	Ꮏ	hna	Ꮐ	nah	Ꮑ	ne			Ꮒ	ni			Ꮓ	no	Ꮔ	nu	Ꮕ	nv
7.	Ꮖ	qua					Ꮗ	que			Ꮘ	qui			Ꮙ	quo	Ꮚ	quu	Ꮛ	quv
8.	Ꮝ[a]	s	Ꮜ	sa			Ꮞ	se			Ꮟ	si			Ꮠ	so	Ꮡ	su	Ꮢ	sv
9.	Ꮣ	da	Ꮤ	ta			Ꮥ	de	Ꮦ	te	Ꮧ	di	Ꮨ	ti	Ꮩ	do	Ꮪ	du	Ꮫ	dv
10.	Ꮬ	dla	Ꮭ	tla			Ꮮ	tle			Ꮯ	tli			Ꮰ	tlo	Ꮱ	tlu	Ꮲ	tlv
11.	Ꮳ	tsa					Ꮴ	tse			Ꮵ	tsi			Ꮶ	tso	Ꮷ	tsu	Ꮸ	tsv
12.	Ꮹ	wa					Ꮺ	we			Ꮻ	wi			Ꮼ	wo	Ꮽ	wu	Ꮾ	wv
13.	Ꮿ	ya					Ᏸ	ye			Ᏹ	yi			Ᏺ	yo	Ᏻ	yu	Ᏼ	yv

Tab. 9: Characters of the Cherokee syllabary (from Scancarelli 1996, 588 [tab. 53.3]).

After a rough start, which almost saw the man executed for sorcery (Davis 1930, 161), Sequoyah's creation took on very well (Walker & Sarbaugh 1993; Cushman 2010) – and not only among his own people. According to Unseth 2016, the Cherokee example was emulated by a great number of illiterate societies, inspiring the creation of twenty-one scripts for over sixty-five languages. Sequoyah's case is indeed the first documented case of unsophisticated grammatogeny in Daniels' narrow sense (involving a single creator). More examples can be found in Daniels 1996e, 583–585, Singler 1996 (West African examples) and Ratliff 1996 (Pahawh Hmong script).[125] A recurring element is inspiration from a dream, which was claimed by the creators of the Vai script in West Africa (Singler 1996, 593 f.), of the Afaka script created for the Ndjuka creole of Surinam (Daniels 1996e, 584) and of the Bamum script (Schmitt 1963). The circumstances of the latter's creation are well researched: Njoya, head of the Bamum tribe of Cameroon, became aware of other peoples' ability to communicate via signs made on paper (Schmitt 1963, 14). He first conceived of about four-hundred and fifty iconic ideograms designed for mnemonic purposes

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[124] Details about the representation of Cherokee phonetics in Scancarelli 2005, 359–364.

[125] See also Walker & Sarbough 1993, 88 (n. 1).

(ibid., 110–112). Between 1896 and 1910, a series of six well documented revisions, in whose course Njoya and his scribes reinvented the rebus principle, introduced syllabic writing, which culminated in an eighty-character syllabary called *akauku*.

1.3.2.9 Misunderstood models I: The Caroline Islands script

Another, but very different, example cited by Daniels is that of the Caroline Islands script. In 1905, the missionary Alfred Snelling and a group of men from Chuuk island got lost at sea and ended up on the more westerly Eauripik island. A few months later they were transferred by the inhabitants to nearby Woleai island, where Snelling died. His fellow passengers returned home, but left their αβ behind. The Chuukese had been blessed with script, in the form of a minimally adapted variant of the Roman αβ, in 1878 by an American missionary who introduced regular syllabic letter names for consonants, all following the pattern C*i*. The inhabitants of the Eauripik and Woleai islands must have been taught the letter values through recitation of these names; the difficult circumstances of the transfer and subsequent breaking-off of contact made possible a misinterpretation: left to draw their own conclusions, the islanders took the C*i*-letter names to be the actual sound values, which resulted in a rather lopsided syllabary. The C*i*-characters were used to write all CV-syllables and word-final C; the correct vowel could only be indicated in syllables without an initial consonant (with the four non-*i* vowel characters). A couple of years later, the system was expanded to designate syllables with vowels other than *i*. The new characters were created mostly according to the rebus principle, i.e. stylised drawings of things whose names correlate with the syllable. Others are modifications of the corresponding C*i*-characters, and four appear to be modelled on Japanese characters. Riesenberg & Kaneshiro 1960, 295 assume that four to ten Faraulep islanders were responsible for the creation of this younger version (confusingly called “type 1”), though variants of both the old, defective system (“type 2”) and the new, expanded one indicate an “interactive and partly indirect mode of script transmission (and possibly development)” (Justeson & Stephens 1993, 9). Neither type appears to have been widely used; a standard (Roman) orthography for Woleian was created in 1951 (De Voogt 1993, 8).

According to Justeson & Stephens, a similar mechanism, viz. a misunderstanding concerning the actual sound values arising from a syllabic strategy of teaching (letter-value recitation, letter naming or syllabic spelling paradigms), caused the formation of a number of other syllabaries, alphasyllabaries and abugidas, including the Old Persian, the Indian and the Iberian script. Where the receiving group is not literate in the model script, what Wachter calls Merkspruch is “the only shared context of sign use” (Justeson & Stephens 1993, 6). In Old Persian cuneiform, the ‹Ci/Cu›-syllabograms would then originate from the character names of the Mediterranean area, whereas the ‹Ca›-characters would go back to the same Aramaic scribal school tradition as the Indic ones (ibid., 33–36).

1.3.2.10 Misunderstood models II: The Indic scripts

The details of the origins of Indic writing are not cleared up. A connection with the Aramaic abjad is evident for Karoṣṭhī, the older of the two scripts, which was used to write Gāndhārī in the north-western area of the Indian subcontinent and was ultimately abandoned in favour of Brāhmī. The area in which Karoṣṭhī was uses coincides with that which had been under Achaemenid rule; Aśokan edicts are attested in Aramaic versions. Furthermore, the majority of Karoṣṭhī characters correspond to Aramaic counterparts (Salomon 1998, 52). However, much like in the Runic script, some correspondences concern both character shape and sound value, while others are purely graphical, the Indic sound value being unconnected to that of Aramaic. For example, the Karoṣṭhī character which is graphically based on bēt represents the sound value *ba*, but a character which resembles tāw represents *pa* (Falk 1993, 103). Also reminiscent of Runic character derivations is the necessity to assume inversion, cursivisation and disambiguation. Of the Brāhmī characters, only about half can be associated with Semitic ones, but a derivation from the Aramaic script remains the best option (Salomon 1996b, 378; 1998, 28–30). (On the relationship between the two scripts see 1.3.3.4.) Strauch 2012 argues that Brāhmī was chosen over Karoṣṭhī because it was better suited to write Sanskrit – a language for which neither of the scripts was originally developed (Falk 1993, 134; Salomon 1998, 16).

This sheds doubt on whether the emergence of Indic literacy is connected with Brahmanic scholarship. Going by the extant data, India had a grammarian tradition at the time the Indic scripts (were) developed, whose representatives have been assumed to be responsible for the creation of both systems (see Falk 1993, 133 f.). The oldest inscriptions, which provide evidence for both Karoṣṭhī (in the north-west) and Brāhmī, are the Edicts of Aśoka, dated to the mid-3rd c. BC. Unless one considers the Indic scripts (or one of them) to be at least a century, maybe up to three centuries older than the Aśokan testimonies (depending on the preferred dating of Pāṇini), the grammarian tradition predates Indic writing (but see 1.3.5.2). However, Falk 1993, 134–136 argues against a profound understanding of phonology on the part of the creators, pointing to a number of imperfections and inconsistencies with regard to how the scripts represent the phoneme inventory of the respective underlying Prakrit varieties which he considers to be incompatible with the notion of highly sophisticated inventors.[126] He suggests the involvement of people who had some level of śikṣā training or a vague understanding of phonology as disseminated by such "Studienabbrechern" in Brahmanic circles.

An argument against specifically Karoṣṭhī as the work of grammarians is furnished by the character row. The varṇamālā, the standard order of the characters in Indic, which is insightfully arranged by place and type of articulation, was created in the 4th c. BC with regard to Sanskrit and does not originally have anything to do with writing. The characters of a script created by persons with Vedic schooling would be expected to be arranged according to the established varṇamālā sequence (as was indeed done later on, when Brāhmī was used to write Sanskrit). Yet, there is no evidence for this, or for an original arrangement which follows that of the abjad. Instead, there is evidence for a different original order of Karoṣṭhī – more in the Semitic style in its apparent randomness – called *arapacana* (after the first five letters). Mainly known in a Sanskritised version from Buddhist texts, the arapacana is epigraphically attested in four documents, none older than the first centuries AD (Salomon 1990, 258–268). It is not certain that this order is as old as Karoṣṭhī itself – it has been prominently, though tentatively, explained as a mnemonic device for a Buddhist text by Brough 1977, 93 f. Salomon 1990, 271 f. suggests the possibility that the arapacana is Karoṣṭhī's conventional character row, indicating that two of the arapacana-inscriptions, applied on writing boards, may be interpreted as the works of pupils and have parallels in inscriptions which have Brāhmī characters arranged according to the varṇamālā. He also points out that, where there is a connection between a character row and a text, it is usually the text which is arranged according to the established order, not the other way round. Salomon hesitates to fully commit to this interpretation because of the presence of twelve seemingly randomly selected characters for conjunct consonants in the arapacana, but Falk 1993, 237–239 does prefer an interpretation of the sequence as an original letter row; the presence of a few obsolete letters may be taken to speak for its being archaic (see also Strauch 2012, 136).

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[126] Similarly Norman 1993, 280, who argues for a higher age of the Indic script, and consequently attributes the inconsistency concerning the graphical correspondences between characters for similarly articulated sounds in Brāhmī to the script predating grammatical theory.

An argument in favour of a sophisticated creation of the Indic scripts is the alleged correlation between language structure and script type: an abugida is an expedient system for languages in which, as in the Indic ones, one vowel occurs considerably more frequently than the others. Yet it would have to be assumed that this consideration was of sufficient appeal to cause the inventor(s) of the Indic scripts to reintroduce the syllabic principle into a script which was modelled on an abjad, rather than to use certain characters as letters for vowels and create an alphabet, like the Greeks. The latter approach was indeed to some extent followed in Karoṣṭhī, where the graphical correspondent of aleph is the letter for initial *a*, all other letters for initial vowels being graphical variants of it. Salomon 1998, 16 (n. 34) suggests that the established "concept of the akṣara or syllable as the essential unit of language" was responsible for the development of a syllable-based writing system in India – a notion which would point to the involvement of grammarians. Falk 1993, 336 notes a few (general) advantages of the abugida over the alphabet, but in my view the alternative scenario suggested by Justeson & Stephens 1993 is altogether more attractive. Rather than being the result of profound linguistic insight, the system originated in "a basic misunderstanding of the principles of the parent system" (Justeson & Stephens 1993, 37). An imperfect knowledge of the model could also explain the shape-only correspondences between Aramaic and Karoṣṭhī characters; Falk 1993, 238 notes that the first eight characters of the arapacana-sequence are full or at least graphical correspondences with Aramaic characters, suggesting that the semi-literate creator of Karoṣṭhī started with those characters whose values he could remember, and only then began to invent values for familiar forms or entirely new character shapes.

1.3.2.11 Misunderstood models II: The Semitic abjad

Another prominent case of structural reinterpretation of a model script, and under equally nebulous circumstances, is the original Semitic abjad or consonant alphabet. While the details of the development are still unclear, the connection with the Egyptian hieroglyphs is well established. Theoretically, the step from the Egyptian system to a consonant alphabet is not big, and it is not a priori necessary to postulate a reinterpretation. The Egyptian scripts (including the somewhat simplified cursive hands Demotic and Hieratic) are logophonetic mixed systems, i.e. they combine ideographic and phonographic strategies. Such early systems, in which the workings of the rebus principle can still be recognised, are notoriously complex, and it can be observed that simplifications – more precisely, the drastic reduction or even abandonment of semantic strategies, and consequent focus on phonographic ones – are usually performed not by the original writing culture, but by a new one in the course of script transfer (cf. Gelb 1963, 196). Speakers of a different language, to whom the sound-meaning correspondences of the original language are irrelevant, are apt to drop the intricate interplay of semantic and phonetic content (especially if logographic writing is cumbersome for their language). This process is exemplified by the transfer of Sumerian cuneiform to Semitic languages, by the Egyptian script to Meroitic and by the above-mentioned changes introduced in Korea and Japan to deal with the Chinese script. Notably, Chinese as the world's only surviving primary script demonstrates the potential stability of logo-phonographic systems despite their complexity (Boltz 2003, 168–177). However cumbersome a system may appear to an outsider, established writing cultures resist any but the most imperceptibly gradual change (cf. Gelb 1963, 165).[127]

Simply put, any hieroglyphic character could theoretically represent either a semantic or the corresponding phonetic value, the latter meaning not a syllable, but the consonantal skeleton of the word. Accordingly, hieroglyphs represented either one, two or even three consonants depending on the length/phonetic complexity of the word. Naturally, it was the characters for words which contained only one consonant which were increasingly employed for phonetic spelling. In fact, the Egyptian script, particularly the cursive variants, at one time stood on the threshold of being turned into a consonant alphabet, though the intended drastic simplification of the system – in accord with what was said above – could not be established (Sethe 1939, 38 f.; Ritner 1996a, 75). Still, more than enough one-consonant characters would have been available to create an abjad, even – with some adjustments made necessary by different phoneme inventories – for a foreign language. That the first consonant alphabet was developed not by people who took what they needed from Egyptian and discarded the rest, but by people who had only a hazy notion of how hieroglyphic writing worked, is argued by Goldwasser 2010.

While the abjad was claimed to be derived from any and all of the available scripts used in the eastern Mediterranean – even Greek – by scholars in the 19th and early 20th c. (see Gardiner 1916, 1–3), the connection with the Egyptian script is historically linked to the finding of the first Proto-Sinaitic inscriptions from the turquoise mines of Serābîṭ el-Khâdem in 1905 (dated to the 19th c. BC by Goldwasser 2010, 43, to the 16th–15th c. BC by, e.g., Albright 1969, 6 and Sznycer 1975, 86). However, their ultimate relevance hinges

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[127] In the case of Chinese, the ability to distinguish homonyms in writing is a major stabilising factor which, for this language, trumps, e.g., the structural simplicity of an alphabet (cf. Trigger 2004, 51).

on Gardiner’s decipherment (affirmative Sethe 1939, 59 and Sznycer 1975, 90 f.; doubtful O’Connor 1996, 90 f.). Already the excavation leader Flinders Petrie, whose wife had discovered the inscriptions, which are written with what looks like poorly executed hieroglyphs inscribed mainly on crude stelae, suspected that he was concerned with a Semitic alphabet (Petrie 1906, 130 f.). Also Gardiner 1916, followed and elaborated by Albright 1969 (who proposed a complete and rather fanciful decipherment), read the inscriptions as documents of a Semitic language. Gardiner compared individual characters with abjad letter forms, particularly pointing to a recurring sequence of four characters (12–16). Identifying the proto-forms of bēt (‘house’), ʿayin (‘eye’), lāmed (‘goad’) and tāw (‘mark’), he read *bʿlt* = *baʿalat* ‘lady’ – the Canaanite epitheton of Hathor, referred to as ‘Lady of the Turquoise’, to whom the temple at Serābîṭ el-Khâdem was consecrated. One of the documents, on a miniature sphinx (no. 345), even serves as a bilingua, bearing Hathor’s name in a hieroglyphic inscription.

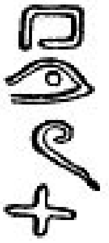

Fig. 8: The sequence of Proto-Sinaitic characters tentatively read as *bʿlt* ‘Baʿalat’ by Gardiner (from Gardiner 1916, 15 [no. 353]).

Gardiner pointed out that many of the Proto-Sinaitic characters could be regarded as – at least schematically – iconic, representing the item denoted by the Semitic letter name (e.g. tāw ‘mark’ or ‘cross’). While most can only be connected with their later, linear Phoenician shapes and (reconstructed) names, some correspond to hieroglyphs with a similar iconic shape (and, of course, semantic value), e.g. 𓉐 ~ 𐤁 bēt ‘house’, 𓁶 ~ 𐤓 rēš ‘head’, 𓃾 ~ 𐤀 ʾālep ‘ox’, 𓁹 ~ 𐤏 ʿayin ‘eye’; maybe 𓂝 ~ 𐤉 yōd ‘hand’ and 𓆓 ~ 𐤍 nūn ‘serpent’. In these cases, it would appear that the semantic content of Egyptian characters was translated into Semitic (quasi kun-reading), with the Semitic word then providing the sound value by the acrophonic principle. Goldwasser 2010, 43 deduces that the Proto-Sinaitic script was created “not by sophisticated scribes, but by comparatively unlettered Asiatic workers”.

> “I believe the inventors of the alphabet were illiterate – that is, they could not read Egyptian with its hundreds of hieroglyphic signs. Why do I think so? The letters in the Proto-Sinaitic inscriptions are very

> crude. They are not the same size. They are not written in a single direction: Some are written left to right, others right to left and some from top to bottom. This suggests that the writers had mastered neither Egyptian hieroglyphic nor any other complex, rule-governed script.” (43 f.)

Goldwasser suggests that the Proto-Sinaitic script was developed by or within the orbit of one Khebeded, a high-ranking Canaanite whose name and likeness appear in Egyptian inscriptions from the site – however, this specific identification appears to be mainly founded on the observation that Khebeded scratched decidedly inelegant hieroglyphs. She also points to misspellings in Egyptian hieroglyphic inscriptions which may be explained as mistakes made by Canaanites attempting to write standard hieroglyphs.

Egyptian characters for two- or three-consonant words could not be used to represent only the first consonant – the ascription of sound values through the acrophonic principle is an innovation of the Sinaitic script. What remains debatable is whether this is to be attributed, like Goldwasser does, to a misinterpretation of the model by Canaanites who did not grasp how phonetic writing was supposed to work and only deduced the semantic content of some hieroglyphs via their iconicity. The Canaanite workers in the mines must have known some spoken Egyptian, but unless the low-level organisation of the running of the mines required reading skills, they would have come into contact with the writing system only through the votive inscriptions in the temple. Semitic overseers like Khebeded (see Petrie 1906, 118), on the other hand, may well have been literate. It is at this point impossible to judge how well acquainted any one of them might have made himself with the complexities of the system. The phonographic aspect was an integral part of the Egyptian script; people who knew how to write it even just superficially would have known phonetic values as well as semantic ones. That the Canaanites chose a somewhat roundabout way to write the consonants in their language seems to suggest that they were not aware of the possibilities inherent in the system. Also some other features such as the amalgamation of certain hieroglyphs and the creation of some completely new pictograms may be taken to indicate that some of the Semites did not so much have reading and writing competence as a broad notion of the iconicity of the hieroglyphs. The fact that the character inventory of the Proto-Sinaitic inscriptions is notably smaller than that of the later abjad may indicate that the Proto-Sinaitic system was defective and therefore unsophisticated, unless one considers the number of preserved testimonies (a little more than thirty) too small to be representative.[128]

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[128] Another inscription which may belong here, though it also contains logographic elements, comes from the Wadi el-Hôl near Luxor, but it is secondary to the Sinai finds (Goldwasser 2010, 48). A handful of

On the other hand, the technique of translating the semantic value of a character into the target language and then basing the phonetic value on the word in that language rather than on the word of the source language has one decided advantage: the resulting characters reflect the phonetics of the target language and do not need to be in any way reinterpreted or redistributed to fit. It cannot be excluded that the abjad is the result of sophisticated grammatogeny, with an inventive mind making a conscious decision to create a script with characters whose iconicity would be relevant to speakers of Canaanite rather than Egyptian. In any case, the Egyptian–Semitic connection established by Gardiner through the Proto-Sinaitic testimonies remains the only window unto the derivation of the Semitic scripts, the earliest incontestably Semitic documents dating to the late 16th c. BC.

1.3.2.11 The rune master

As summarised above, runologists are inclined to think of a Germanic inventor not merely with competence in writing the source language, but often with some level of classical education. Braunmüller 1998 discusses the matter explicitly in a methodological paper: one must

> "wohl davon ausgehen, dass [the rune masters] über ein nicht geringes linguistisches Fachwissen verfügt haben, das sie wohl nur im Umkreis einer Sprache mit einer längeren Schrift- und Bildungstradition erworben haben können" (18) "Den 'Erfindern' der Runenschrift muss beispielweise bekannt gewesen sein, welches Abbildungsverhältnis zwischen Allophonen und Phonemen in der/den Entlehnungssprache/n bestand, wie dort die Zuordnungen von Phonemen und Graphemen aussahen sowie schließlich auch, ob es mehrere Grapheme für 1 Phonem […] und ob es z. B. 1 Graphem für 2 Phoneme […] gab. Darüber hinaus mußten die ersten Runenmeister […] die eigene Sprache dahingehend untersucht haben, ob es hier nicht Phoneme gab, für die im Ausgangs- oder Entlehnungsalphabet keine entsprechenden Grapheme zu finden waren. […] M. a. W., es ist, zumal nach der Analyse des sehr guten Phonem-Graphem-Abbildungsverhältnisses im älteren Fuþark, davon auszugehen, daß hier Leute mit einem fundierten Fachwissen am Werk waren und daß sie zweifellos die Absicht hatten, eine einheimische Gebrauchsschrift zu schaffen" (19).

In a paper from 2004, Braunmüller reiterates his opinion that the creation of the runes required a "sehr hohe intellektuelle Aktivität", which had to be expended by a "(zumindest

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very short inscriptions was also found in Canaan itself (ibid., 47). Satzinger 2002, 25 f. prefers to think that the Proto-Sinaitic or Proto-Canaanite abjad did not originate in the Sinai mines, but was created by Egyptian scribes, inspired by the above-mentioned near-phonographic systems, to facilitate communication and administration involving speakers of Canaanite. He finds it difficult to imagine that the abjad should have been created by "some non-Egyptians [sic] mining foremen or caravan leaders" who lacked the necessary "profound knowledge of the Egyptian hieroglyphs" (26).

kleinen) Elite” (25) in command of the Latin language. He thinks of mercenaries or traders and attempts to find evidence for bilingual transfer in early inscriptions. Similarly, Heizmann 2010, 18 stresses his conviction that “die Konzeption der Runenschrift eine herausragende geistige Leistung darstellt, die den involvierten Personen große intellektuelle Fähigkeiten abverlangte”. Such skills he only expects from people in close contact with the Roman civilisation.[129]

Düwel 2003, 582 is convinced that both “ein hohes Maß an intellektuellem Vermögen und eine gewisse Sprachkenntnis” are a prerequisite for the borrowing of writing, whether performed by an individual or by a group. Antonsen 1987, 26 also is of the opinion that, generally, the adaption of a script for another language requires a person who is not only bilingual, but endowed with an intuitive understanding of linguistics, who must learn the model script in all its aspects and then systematically rework it. For the runes, Antonsen needs to assume that the creator had an understanding of the intricacies of Greek orthography, as his argumentation involves a connection between ◇ and the Greek spelling of [ng] as ⟨gg⟩ (double gamma), and also the explanation of orthographic aspects such as inconsistent writing direction and the practice of omitting nasals before homorganic consonants directly from the same phenomena in the Greek writing tradition (1982, 15). Most of Antonsen’s points are reiterated in Morris 1988, 6:

> “a Germanic speaker must have known how to speak and write a Mediterranean language before he could make the association between a Mediterranean graph and a sound in the Mediterranean language. Being able to write also implies that a person can analyze and separate sound sequences into distinctive segments and then graphically reproduce them”.

A number of scholars who, like Antonsen, argue that there are elements of the Runic script which are created to specifically fit the phonemic system of the language also think of a sophisticated inventor.[130] Derolez, of course, who claims a “perfect fit” of the runes and

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[129] See also Odenstedt 1990, 169; Beck 2001, 6 f.; Stoklund 2003, 172; Spurkland 2010, 65 f. 76, Barnes 2012, 10, and Dillmann’s *Runenmeister*-entry in RGA (2003, 540 f.)

[130] This is not the place for an exhaustive discussion of the question of the perfect fit. At any rate, there are some problematic cases in the rune row which require particular attention, also in terms of motivating their existence despite the ruling hand of a creator. Basically, there are four options to accomodate these elements: 1. the script is older than the oldest preserved texts and consequently fitted to a different phoneme system (e.g. Antonsen’s explanation of ᛇ); 2. the script is tied to the model in more ways than one (usually theories involving script magic or gematria, e.g. Wimmer’s explanation [1887, 135 f.] of ᛇ as a filler to make twenty-four letters); 3. the creator failed to completely emancipate himself from the normative force of the model (e.g. Antonsen’s explanation of ◇); 4. the creator did not have a perfect grasp of the model (e.g. Williams 1997, 186).

the underlying phonemic system, also assumes a rune master who performed a phonemic analysis of both Latin and the variety of Germanic he intended to write. Also Grønvik 2001, positing that the runes never wrote Common Germanic, but were created for a North Germanic language, tries to show that the grapheme inventory of the futhark matches the phoneme inventory of Proto-Norse. From the excellent fit (as reconstructed by him), he deduces that the futhark did not evolve gradually, but that it was created “durch einen einmaligen, genau geplanten und in einem Zug durchgeführten Vorgang” (58 f.). The creator, probably a single individual, was

> “ein Mann mit eingehendem Verständnis des eigenen Sprachsystems, aber auch mit sicherer Kenntnis lateinischer Schrift und Kultur. Wir können ihn uns als einen bereisten und hoch kultivierten dänischen Häuptling vorstellen, der imstande war, das Prinzip der Buchstabenschrift zu übernehmen und es seiner eigenen Sprache anzupassen, der aber zugleich eine bedeutende soziale Position in seinem Heimatland hatte, so daß sein Alphabet sich bei seinen Standesgenossen schnell durchsetzen konnte” (59).

A certain level of sophistication must also be presupposed by runologists who regard the order of the rune row as phonetically motivated. Jensen 1969 explains the deviations in the order of ᛈᛇ (ᛇᛈ on the bracteates from the area of Vadstena and from Grumpan) and ᛟᛞ (ᛞᛟ on the Kylver stone) by postulating an originally two-part row, with the second part’s initial ᛈᛇ being adjusted to mirror ᚠᚢ (CV) and final ᛟᛞ to mirror ᛁᛃ (VC). The vowels are evenly distributed over the two parts, and also over the three aettir (two vowels per aett). Both vowels and consonants are distributed according to phonetic considerations: each aett contains one labial, one pair of consonants with a distinction of voiced vs. unvoiced, and three fricatives; one of the vowels always follows after the labial. A pattern in the distribution of vowels and consonants can even be observed when splitting the row into eights. Labials and dentals which have the same manner of articulation are grouped together, but velars are organised separately; the other consonants function as fillers. Jensen admits:

> “Whether such an abstract pattern can really have been in the mind of the inventor of the Kylver alphabet, is of course a highly debatable point. However, it is hardly possible to doubt that the distribution of the vowels in the complete row of runes is due to some primitive notion of symmetry” (133) “The hypothesis that so much abstract theory lies behind the alphabet of our shaggy forefathers may be hard to swallow for whosoever believes that new scripts arise only through corruption of other alphabets” (134).

Jensen further tries to demonstrate a similarly complex pattern for the Gothic αβ, concluding that Wulfila took the idea of alphabet symmetry from the Greek model, which allegedly can also be explained by a matrix. The aesthetic pretensions of the rune master indicate, according to Jensen, that he must in fact have been acquainted with the Greek αβ.

A similar theory is put forward by Miller 1994 in his monograph on the phonetic foundations of ancient scripts. Miller devotes a chapter to the runes, though he expressly avoids the question of their derivation. Instead, he attempts to show that the order of the futhark is based on a matrix similar to the one postulated by Watt 1987 for the abjads of Byblos and Ugarit. The characters are arranged with regard to their manner and place of articulation, in separate groups, always starting with a labial and ending with a velar, e.g. the first group: (labial) *fu* – (dental) *þ* – ("medial") *ar* – (velar) *kg*. Some positions are filled with more than one character, while many remain unoccupied, but "the leading idea must not get obfuscated among mounds of semi-irrelevant details" (75).

> "Based on their sophisticated phonological knowledge [...], it defies common sense to think that the creator(s) of the Runic alphabet did not know several languages AND THEIR SCRIPTS, at the very least, Latin and Greek, and probably also some Northwest Semitic language as well" (68).[131]

Expressly against a profound understanding of the model on the creator's part argues von Friesen 1919, who assumes that a Germanic soldier got acquainted with the art of writing through the basic tutoring of his comrades (whose competence, it is implied, was limited). Also Fairfax 2014, 215–217 thinks that the differences between the (in his case) Graeco-Gaulish script and the futhark are best explained as the result of the efforts of an adapter "not at home in written Gaulish or Greek (or any other written language)" (216). According to Fairfax, the creator of the futhark learned the letters and their Gaulish values from a Gaulish informant, but little more – apparently not even the Merkspruch, as evidenced by the rearrangement of the row – and was ignorant of or unconcerned about writing conventions. Fairfax explicitly makes the point that the retention of the script type (in opposition to unsophisticated grammatogenies of the Cherokee type) is no valid argument for a sophisticated creator in cases for which one assumes a minimal level of instruction.[132]

Connected with the question of whether the putative creator of the futhark must have been educated is the issue of why scripts are adapted (or adopted) in the first place, and

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[131] Miller also considers the possibility that the semantics of the rune names played a part in the arrangement, pointing to ᚠ *fehu* 'cattle' in first place like *aleph* 'ox'.

[132] Moltke 1981 remarks that the creators were "uninterested in phonetic problems" (4). See also Barnes 1987, 35 (on the creation of the younger futhark) and 2013, 23.

what they are used for. Typologically, it is effectively impossible to make generalising statements about what purposes scripts are borrowed or created for. Written communication, by being fixed to an item of some durability, transcends limits set to oral communication: sender and receiver of an oral message could, for most of the time that writing has been used up to now, not be separated by time or space. The basic functions of writing are therefore communication transcending time (recording), communication transcending space (messaging), as well as communication transcending sphere (magic and, to some extent, cult).[133] In practice, these three basic functions of writing intersect and are often hard to tell apart. In trade, recording and messaging are equally relevant; the same goes for magic practices, where the writing of a text can be necessary to address a spirit or to fix the spell. In cultic context, it is debatable whether votive inscriptions which mention the donors' names are messages directed at the deity or at other humans, or are intended as the records of concomitant donations.

In runology, record-keeping and cult do not feature as options; runologists oscillate between magic, trade and the military. A prominent representative of the first camp is Agrell (1927; 1938), who searches for the origins of the runes among the documents of ancient script magic and gematria. Agrell assumes the creation of the futhark to be founded on magical principles, allowing him to explain the rune names and the order of the row, as well as certain runes, as fillers to make twenty-four letters. The areas of trade and the military are often considered to be interchangeable options, antipodal to magical contexts which are viewed as out-dated (e.g. Quak 1996; Spurkland 2010). Stoklund 1991 puts the runes in the context of Roman import in Denmark (see also Spurkland 2005, 4); the military is favoured, for example, by von Friesen 1919; Rausing 1992; Rix 1992; Stoklund 2003, 174 and Troeng 2003.

A fourth important function of writing is the end in itself – what Sanders 2004, 44 calls "the most basic and the most touching form of communication — "I was here."" The concept of script as a prestigious art does of course play into this (cf. the adoption of writing by the Romans as a symbol of prestige according to Wallace 1989, 123), but countless

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[133] It can be observed that the contexts of the earliest testimonies of the three assumed original writing cultures of the world can be assigned each to one of the functions. In the Mesoamerican scripts, the keeping of records, particularly astronomical ones, plays a prominent part. In Sumer, writing belongs in the sphere of trade and economy – this includes accounting (transcending time); Schmandt-Besserat's theory refers specifically to invoices, i.e. letters sent with a charge of goods. In China, the earliest recorded phase of writing is exclusively tied to cult practices, though the communication with the numinous itself appears not to have been conducted through writing.

graffiti from all times, places and contexts document the application of characters for the sheer pleasure of creating something meaningful and permanent. Seebold 1994, 84 points out that the functions of the earliest Runic inscriptions are what he calls "Randfunktionen", viz. the written substantiation of situations which do not require such substantiation – naming oneself, objects or manufacturers, as opposed to missives or chronicles. While, indeed, the *wagnijo*-group (1.1.5) shows that name inscriptions could have a practical purpose in the earliest phase of Runic writing, and while it cannot be excluded that the other isolated names on weapons are also workmen's marks, the names on women's fibulae at least seem to document a more casual use of script, writing for writing's sake. As is known from both ancient and modern graffiti, the first choice in this situation is one's own name (cf. Lüthi 2006, 171–174).

This opens the question of whether illiterate communities only adopt scripts if they require the technology to serve a specific purpose. This is claimed, for example, by Düwel 2003, 583 ("[d]aß sie einem Bedürfnis entsprochen haben wird, liegt auf der Hand"), Stoklund 2003, 173 ("there must have been a strong wish for an independent written language"), Spurkland 2005, 3 ("a compelling need for a means of written communication due to an expanding economy and growing administrative structure") and Heizmann 2010, 16 ("[e]s bedarf auch eines konkreten Bedürfnisses"). Also Rausing 1992, 202 opines that the futhark was "devised by practical men to meet a practical need". The opposite position is held by, for example, Williams 1997, 181, who says that "[g]iven the contact with Roman culture, it would be a strange thing indeed if some Germanic individual had *not* been impressed by the Roman art of writing and tried to imitate it". Like Seebold 1986, 534 and Odenstedt 1990, 171. 173, Williams argues, that despite the existence of the futhark, the Germani were "functionally illiterate" (187), relying on oral transmission until well into the Middle Ages and using writing for marginal purposes (see also Bæksted 1952, 134–138. 328; further Williams 2004, 268–273 and Fairfax 2014, 187 f.). The scarcity of finds in the older futhark, if it is not misleading (see 1.3.5), supports the latter view.

The examples of communities which had writing bestowed upon them, nolens volens, are legion. This prominently includes the numerous examples of scripts created by Christian missionaries, whose primary objective was not to raise literacy levels, but to get natives to read the holy texts. Yet cases in which a script, once known, was not used in some way, must be rare, if they exist at all. Like any technology, and probably more than most, writing is a tool which has an immediate appeal, and can and will be used for its own sake, even if it does not serve any particular purpose. The knowledge of writing may also be tied to a cultural asset of high(er) appeal, such as a cult, and enter through the back door. Furthermore, there is the question of who, exactly, “needs” or “is ready for” script – a society as a whole? A specific group of professionals? Any one individual, reacting to a perceived latent demand – or to his own fancies? Hankul was a rather enlightened pet idea of King Seycong, aimed at educating the people – while he considered it useful, it was widely rejected by the members of court, who were classically trained in writing hanca and had no need for the new “proletarian” script (Taylor & Taylor 1995, 212). Förster 2011, 35 argues that the Greek-based Coptic αβ, which superseded the dying Demotic script in the first half of the 1st millennium AD, was vital for keeping the vernacular language alive in the face of Hellenisation, even if it failed to represent that language as well as the obsolete Demotic had, but it may be doubted whether this was the express purpose of its creators/ users. The divided Armenians of the 4th c., on the other hand, are said to have been in need of a script for political reasons (Barkhudaryan 2011, 17); the invention of that script, supported by the clerical leaders, immediately triggered the development of national historiography. The Cherokee also took to Sequoyah’s syllabary with considerable enthusiasm, with even the shamans putting their wisdom into writing (which they notoriously refused to do in any of the adapted European alphabets), but inhowfar they “needed” a script is open to debate. Are we to assume that the Etruscans would have rejected the Phoenician script, had it arrived at their shores two hundred years before the Greek one, because they could have found no purpose for it?

Ethno-nationalist motives are frequently referred to in the context of script creation. Rix 1992, 141 calls the notion that an attempt to set oneself apart from the culture which provides the model could be the cause for the otherness of the futhark “modern gedacht”, but the possibility must not be excluded for the runes. For example, De Voogt 2012, 5 books the Carian αβ as representative of his type L4 (borrowed characters, different values) on the assumption that a Carian creator purposefully rearranged the grapheme–phoneme correspondences to make his script unlike the Greek model – though why he allowed alpha, omega, upsilon and san to keep their Greek values, and why it should not have occurred to him to simply change all the letter forms, remains open to question.[134] The possibility of a

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[134] Adiego 2007, 230 f. doubts the “chaos hypothesis”. His own hypothesis (in detail Adiego 1998) suggests that the Carian letters do in fact go back to those Greek letters which their sound values indicate and that the graphical deviations are due to extensive formal changes introduced between the alphabet’s emergence and its attestation. Notably, the Carian αβ, like the early Greek αβ, is attested in a number of local variants which may or may not go back to one single proto-alphabet. — The Carian αβ

conscious effort to set oneself apart from the model was also suggested for Ogam – the drastic graphical and systematic deviance from traditional alphabets has been explained as “a rebuff to Rome, a deliberate expression of anti-Roman sentiment” (McManus 1991, 14) or as the features of a cipher specifically created to be illegible to people with literacy in Latin (see ibid. with literature). In the same vein, Justeson & Stephens 1993, 38 point to the potential role played by “script as an ethnic attribute” in the context of the theory of misunderstood models – the wish to establish the new script as a mark of ethnic identity may be a factor in perpetuating the results of misinterpretations in cases where contact with the model writing culture is maintained. The importance of creating original alphabets for the political and cultural identity of Caucasian speaker communities is stressed by Barkhudaryan 2011, Drost-Abgarjan 2011, Kananchev 2011, 63 and Seibt 2011, 85. The latter suggests that the Armenian letters were graphically changed so as not to look too Greek to avoid conflict with Persia.[135] The first Celtiberian documents, written in the structurally ill-suited Iberian script, date to ca. the middle of the 2nd c. BC, i.e. the time of the Numantinian War against Rome – Stifter forthc. attributes this delayed adoption of the Iberian script in favour of the Latin alphabet, which must have been known to the Iberian Celts, to “a deliberate political decision fraught with deep cultural symbolism”. Coulmas 1989 is right when he says that writing “creates social coherence” (8), that it

> “indicat[es ...] group loyalties and identities. [...] Language attitudes such as the desire to have an orthography which makes the language in question graphically similar to another or, conversely, makes the language dissimilar to another, may be irrational but they are social facts which often strongly influence the success of a proposed system” (226 f.).

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is in fact an excellent case for comparison with the Runic script. It has the same structure as its most obvious model, being one of a number of Greek-based αβs in Asia Minor, and thus can hardly be classified as a result of unsophisticated grammatogeny of the Cherokee type. Yet it deviates from the model in detail in a way which has so far proved inexplicable. It features a few letters which resemble letters of the obvious model and have the appropriate sound value, but also letters which resemble letters of the model but have seemingly random sound values, as well as letters which can be derived from letters of the model at something of a stretch, and some letters which really do not look like anything that might legitimately be compared with the model. The profound difference lies in the fact that the Runic script boasts a continuous tradition which connects the last phase of its use with the earliest scholarly treatments, so that it never had to be deciphered. A glance at the history of the decipherment of the Carian inscriptions (Eichner 1994), with an older tradition of scholarship adhering to the principle that the sound values of graphically similar letters must always correspond to the Greek values, may give an impression of the state the field of runology might be in today if it had started out assuming that ᛖ was *m* and ᚹ was *p*.

[135] Cf. also Granberg 2010, who argues that, of the alphabets which emerged in the 1st millennium AD in the context of Christianisation, those which wrote languages which had not been written before deviate from to the Greek model in both letter forms and order, while those which replaced and had to compete with previous traditions (Coptic with Demotic, Gothic with Runic, Cyrillic with Glagolitic) emulated the prestigious Greek script.

These considerations are of course tied to the presumptive creator's provenance and his native language. When assuming script diffusion, it is clear that the people who carry the process are speakers of the target language. When there is talk of a script creator, I believe, scholars also generally think of a member of the previously illiterate culture[136] – runologists definitely do (see Rix 1992, 412), and not unreasonably so, as examples abound. As far as I can see, only Troeng 2003, 290 thinks otherwise. Theoretically, the creator (or creators) could have been a member of the new writing culture (Germanic), a member of the model writing culture (Roman/Greek/...) or the member of an intermediary writing culture (Celtic/...) – examples can be found for most scenarios: grammatogeny by speakers of the source language who have attained an understanding of the target language (e.g. the Lisu script),[137] by speakers of the target language who are literate in the source language (e.g. the Armenian αβ) and by speakers of the target language with no literacy in the source language (e.g. Cherokee). While it is true that the first option draws its many examples from modern grammatogeny performed by missionaries, it must be observed that examples for the second option can be difficult to classify. There is a smooth transition from native speakers of the target language with an education in the source language via functionally bilingual speakers of both languages to thoroughly acculturated persons with only a remote connection to their native culture and language.

According to his pupil Auxentius, Wulfila was trilingual (Gothic, Latin and Greek); though not ethnically Gothic, the fact that he did not just invent the script, but translated the Scripture demonstrates that he was fluent in the language (Schäferdiek 2007, 319). The ethnicity of Constantine (St. Cyril), on the other hand, has long been a point of contention. Born in Thessaloniki to a Byzantine officer called Leo and a woman called Maria, he received a Greek education and relocated to Constantinople at the age of seventeen. That he and his brother knew at least some Macedonian Slavic is not improbable, as the region of Thessaloniki was Slavicised at the time, but it is not clear what this means for the upbringing of a Greek droungarios' children. The matter hinges on various issues, ranging

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[136] Not so Prosdocimi (e.g. 2002, 28), who makes the point that, in regard to script adaption, the teachers of writing whom he calls "maestri" always belong with the source language's culture in that, even if they should be members of the target language's culture, they can be literate only in the source language. While this is certainly true, Prosdocimi goes on to claim that these bilingual maestri must consequently have the same perspective on the adaption as their source-language-speaking colleagues, and that therefore a new script is never created to properly fit the target language, but must reflect the necessarily conservative point of view of the source language's maestri. Any kind of systematic analysis of the target language by anyone at all is, apparently, out of the question for Prosdocimi.

[137] The English missionary James O. Fraser created a highly systematic abugida-like script for the Tibeto-Burman language around 1915 (Daniels 1996e, 581).

from the unknown ethnicity of the mother to scholarly judgements of the quality of the Scripture translations which are ascribed to the brothers – see Ševčenko 1971, 341 f. for an overview. Ševčenko himself assumes that the brothers were Byzantine Greeks and collaborated with speakers of a Slavic language (n. 4). In any case, whether Constantine considered himself to belong to the language community for which he constructed an alphabet is questionable. His position as a missionary sent upon request by the Byzantine emperor to Great Moravia is similar to that of modern missionaries who are primarily interested in promulgating the Scripture; his grasp of Slavic may not even have equalled, for example, Fraser's grasp of the Lisu language, though the latter case would be considered an example of a foreigner bestowing a script on an illiterate community.

Also of interest in this context is the role played by the Armenian vardapet Maštocʿ in the creation of the Georgian and the Caucasian Albanian αβs. Hailing from the Byzantine part of Armenia, he must certainly have had a native speaker's competence in Armenian. However, Maštocʿ is also credited by early sources with the invention of the Georgian and the Caucasian Albanian αβs, though the accounts vary and are not equally reliable. For the Caucasian "Albanian" αβ (writing a Northeast Caucasian language unrelated to IE Albanian), two Armenian sources say that Maštocʿ created it with the help of Albanian informants (Kananchev 2011, 60). While there are no historical Caucasian Albanian sources to contradict the claim, it smacks of tendentiousness (59). Still, the Armenian αβ clearly served as a model for the Caucasian Albanian, just as the emergence of the Caucasian Albanian writing culture in general followed in the wake of the Armenian one – though the vardapet's personal involvement is probably a historiographic embellishment, it is highly likely that Armenian scribes aided in the creation of the Caucasian Albanian script. Only one of the above-mentioned sources ascribes the Georgian αβ to Maštocʿ, and the passage is likely an interpolation (Seibt 2011, 86 f.). Maštocʿ is said to have invented an alphabet for writing the Georgian language out of hand, but at the same time it is described how he needed an interpreter to present it at court. It is likely that the Georgian writing emulates the Armenian example,[138] but the alphabet is closer to the Greek αβ than the other Caucasian ones.[139] There are scholars who accept the historiographic testimonies for both the Caucasian Albanian and the Georgian αβ,[140] but the improbability of Maštocʿ knowing

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[138] The oldest Georgian Scripture translation appears to be based on an Armenian text (Seibt 2011, 90 [n. 48]).

[139] Seibt 2011, 89; see also Gippert 2011, 47 f. with an instructive table.

[140] Gippert 2011, 50; Drost-Abgarjan 2011, 26 f.

either language leads most to dismiss them.[141] A collaboration remains possible – cf. Wachter's ingenious Greeks working out their alphabet in the presence of a Phoenician informant. The Japanese characters in the Caroline Islands script are assumed to be partly due to the input of a Japanese involved in the extension of the system (Justeson & Stephens 1993, 8).

Closing the circle, one of the problems involved in Jeffery's distinction between creation and diffusion is the fact that one can imagine a considerable number of scenarios – as indeed demonstrated by runologists – which are hard to assign to either of the two options. Jeffery books as a subtype of option 1 the borrowing of writing within one particular group of people, with the script spreading to the rest of the population after a certain period of time. Yet in such a case, a fairly uniform and well thought-out system might develop before being passed on, especially if the number of people initially involved is not too large. If this earliest phase happens not to be attested, or to be attested so sparsely that the documents' relevance is dubiuos, the existing testimonies would appear to reflect a systematically created script, despite having evolved without the help of a purposeful inventor.

To sum up: very nearly every imaginable process of script transfer is attested or at least being discussed. Scripts are devised for a specific purpose by ingenious and educated men, on a whim by ingenious and uneducated men, by natives and by foreigners, by individuals, coordinated collaborators and uncoordinated groups of people. They evolve gradually out of systems when these are applied to a new language and are adapted secondarily, or not. They define a cultural entity, or are only used playfully until they are abandoned or superseded. They are created by kings, clerics or innkeepers to write literature, lists, or nothing in particular. They are learned, imitated or forced on people; they are purposefully made to emulate or to set apart, they are faithful to the model or accidentally revolutionary.

There is no doubt that in the case of the futhark, some aspects indicate that its formation did not happen in the same way as that of most other Mediterranean αβs. Most prominently, the deviating order of the row – provided that it is original – shows that the alphabet was not learned in the traditional way, by the Merkspruch. Numerous attempts to explain this idiosyncrasy use widely different approaches, from the phonetically motivated rearrangements mentioned above via graphical considerations (e.g. Kabell 1967, 114) and

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[141] Gamkrelidze 1994, 81; Seibt 2011, 87; Kananchev 2011, 61.

underlying texts (e.g. Skeat 1890) to the semantics of the rune names. All these presuppose the regulative hand of a creator; only explanations which work with transmission errors (e.g. Williams 1996) are reconcilable with diffusion. In the latter case, the question remains how a fairly uniform row emerged. The rearrangement is best explained as the intervention of a creator, even if his motives remain unclear.

Secondly, the perceived uniformity of the earliest Runic testimonies is frequently taken to speak for a one-off creation (e.g. Mees 1999, 145; 2000, 57). Diffusion should lead to a certain amount of inconsistency and variation in the early phases and be reflected in testimonies in which graphical forms and problematic character–sound relationships vary. However, the question of both phonemic fit and graphical homogeneity of the earliest testimonies is unresolved (1.1.2). The stance taken on the latter matter depends on how experienced the respective scholar is with epigraphic corpora, and with which one(s), and which standard of uniformity these data suggest to them. Furthermore, it is not even entirely clear whether the documents which are currently considered the earliest Runic testimonies really represent the initial phase of Runic writing. The potential precursors of runes (1.1.5), if they are to be interpreted as such, do not agree with the notion of a creator, unless one were to assume a scenario similar to that of the Slavic αβs: initial unsystematic attempts at using a foreign script for one’s own language being cut short by an inventor taking charge.

However, the mere fact that all these features have also been explained differently, be it by assuming an unattested intermediary alphabet or some specific context for the transmission, shows that it is far from clear whether a sophisticated creator of the runes ever existed. It is admissible to argue that certain differences between the Runic script and the Mediterranean αβs point to the existence of a “praeceptor Germaniae” (see n. 91), but this assessment is tentative, and must not in turn be used to explain those very same characteristics.

It may be observed that scholars who are concerned with scripts which are known to have been created by highly competent persons with a free hand, such as the Armenian αβ, still occupy themselves with the search for the models of individual letters, the assumption that the creator invented letters and rules and introduced changes off the top of his head being considered a last resort. This approach is methodologically sound. Thus Krause 1970, 41, who deems Moltke’s theory to be a non-explanation:

> “Eine solche Erklärung dieses oder jenes Runenzeichens ist freilich im Grunde keine Erklärung. Man wird daher doch bestrebt sein, auch bei zunächst als unableitbar geltenden Runen irgendwelche Vorbilder oder wenigstens Anregungsmuster aufzuspüren”.

Similarly, Cubberley 1982, 291 writes that theories which explain the Glagolica as a completely original creation are “quite unchallengeable in any formal sense”. If we assume that any irregularity or unexpected element in a derived script is due to the arbitrary decisions of an unknown figure lost to history, we move on methodologically dangerous ground. Furthermore, the example of the original Greek theory as proposed by von Friesen, which relied on the archaeological work of Salin, demonstrates that the focus on historical context at the expense of formal derivation puts the model at risk to become obsolete in very short time, if the proposed context is shown to be untenable. This does not mean that theories which include formal letter derivations according to the “naturalness”-approach, as alluded to in the beginning of this chapter, could not do with a higher level of methodical rigour.[142]

1.3.3. Source eclecticism in the borrowing of writing

This section is concerned with an issue which is closely connected to the one discussed in the previous chapter: the probability of a plurality of sources in the case of the runes, and elsewhere. Yet it is better examined separately – while there is a certain correlation between the acceptance or exclusion of source eclecticism and the preference for the adoption or invention of the runes, this correlation is not consistent. To include different models may be an approach which is associated only with a sophisticated creator, while it is considered an unnatural development in diffusion, or, conversely, eclecticism may be named as a feature typical of diffusion (as done by Jeffery), while a single person is not trusted to have the capacity or not expected to see the need to learn and make use of more than one system.

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[142] McManus 1991 passes valid methodological criticism on the “juggling and reshuffling” (25) of characters to make them fit with their putative models, writing that “[m]ost attempts to outline the successive stages in the development from the prototype to [in his case] Ogam amount to no more than exercises in anticipating what one knows became the alphabet in its final form” (22) – “[i]t is in effect a hit and miss approach which cannot miss since it has the benefit of hindsight and its arguments tend to become circular in nature” (26). He is also right when he writes that some scholars’ subscription to the kind of vague premises which are discussed in the present work may falter within the same theory: “When the evidence demands it [the script inventors] are mere dolts toying with a mechanical cipher and strait-jacketed by their prototype. If necessary, however, they can be raised to the dignity of grammarians with a keen instinct for phonetics and a refreshing independence of mind” (25).

1.3.3.1 In runology

Though it is not unusual for runologists to hunt for models of runes in more than one alphabet, some even explicitly justifying this approach, the method is more often criticised. Particularly referring to the North Italic theory, it is said that the arbitrary derivation of individual runes from any convenient alphabet or alphabet variant for reasons of graphical similarity or a suggestive grapheme–phoneme correlation is methodologically faulty. Marstrander, whose 1928 paper includes a collection of examples for rune-like shapes found in various North Italic αβs, does not actually postulate source eclecticism on the part of the borrowers. Instead, he accomodates the letter models from different alphabets by reconstructing an unattested alphabet variant which was conveyed to the Germanic peoples via the Gauls. Marstrander's unifying Celtic intermediary is also employed by Mees 2000 – Mees finds rune shapes in different North Italic αβs, but posits the existence of an αβ in North Italic tradition used by Alpine Celtic tribes in Vindelicia and Bohemia in the 2nd c. BC, who passed it on to invading Germanic peoples.[143] With a different approach, Markey 2001 compares forms from various North Italic αβs with runes, assuming intensive contacts between the epichoric writing traditions (94) and an "eastward shift" (83), which allows him to identify the Camunic αβ as a sort of all-in variant (103).[144] Such purely hypothetical alphabets proved rather unpopular, so that many versions of the theory – starting with Hammarström's – work more or less directly with the North Italic αβs.

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[143] See also Mees 1999, 155 (n. 61) and passim on the Celtic connection.

[144] Pisani 1966 represents an extreme example for the "pick-and-mix" approach, but also ultimately avoids source eclecticism by postulating the existence of an unattested alphabet. Pisani – under the premise that the North Italic theory was "allgemein anerkannt" (203) – compares runes with characters from a wide variety of Italic αβs. For example, he compares ᚦ, with a detour via Wulfila, to North Italic chi with a dental sound value, discovers Runic ᛈ in South Picene inscriptions (where it supposedly represents /f/) and a form ᛟ in the Etruscan bilingua from Pesaro (ET Um 1.7). However, Pisani repeatedly refers to an archaic Etruscan αβ from which all the variants included in his theory are supposed to derive. — The theory of Agrell 1927 offers yet another take on avoiding source eclecticism, assuming a twofold creation of the futhark on the basis of different alphabets. Agrell distinguishes an older script for everyday use, borrowed from the Latin αβ and containing only those characters which were useful for writing a Germanic language, from the later twenty-four-part futhark, which was created on the basis of the Greek αβ in the form of a Mithraic magical row. The first stage is tentatively connected with the Marcomanni. This proto-futhark contained A, B, C, D, E, F, H, I, L, M, N, O, R, S, T and V – ᚦ and ᛞ are both formed from D, ᛒ represented both voiced and unvoiced stop. Only by the end of the 2nd c. AD was this purely practical script (unattested because mainly written on wood) enlarged by Germanic mercenaries in Roman service. These men became acquainted with practices of script magic which were based on the Greek αβ; the additional characters which were needed to turn the secular proto-futhark into an appropriately mythical twenty-four-part row were consequently modelled on Greek letters and can be identified by being unnecessary for writing a Germanic language: ᛜ from double gamma, ᛃ from a cursive ligature of ⟨ει⟩, ᚹ from a variant of beta, ᛈ from pi, ᛇ (for a fricative) from zeta, ᛉ from psi. Together with some further adjustments and the rearrangement of the row based on the rune names, Agrell arrives at a mixed inventory without having to assume source eclecticism. Agrell later (1938) preferred to derive the futhark in one go from a cursive oracular Latin αβ, which was in turn based on a Greek one.

While the method of deriving individual runes from characters in different alphabets is indeed commonly used by proponents of variants of the North Italic theory, it has also proved useful for derivations which focus on the Latin or Greek αβs. Von Friesen originally (1904) suggested that the futhark was first created with only the Greek αβ as model and secondarily supplemented with Latin letters. He later assumed source eclecticism, working with the Greek and Latin αβs. Von Friesen argues that in the time and area reconstruced by him – around AD 200 among Goths by the Black Sea – both these scripts would have been known. From the Greek, von Friesen derives ᛖ (cursive heta), ᛇ (cursive epsilon), ᛟ (cursive omega), ᚹ (upsilon, possibly simplified from a digraph ᛟᚹ reproducing Greek ⟨ου⟩), ᛃ (from a cursive ligature of epsilon and iota, see tab. 4), ᚷ (chi), ᛞ (cursive theta), ᛒ (beta), ᚦ (cursive phi), ᛋ (cursive zeta; the variants with more lines from cursive ksi), ᛉ (psi; with an original value *hs*), ᛚ (lambda), ᚾ (cursive nu) and ᛜ (from a ligature of geminated gamma). From the Latin, he takes ᚢ (cursive omikron), ᚺ, ᚠ and ᚱ. No decision is made for ᚨ, ᛁ, ᚲ (from Latin C or Greek kappa with the stave lost in ligature), ᛏ, ᛈ and ᛗ. Von Friesen explicitly states that he thinks a plurality of sources to be altogether more likely than a restriction to one single prototype and points to Wulfila’s Gothic αβ. His Gothic soldier learned to read and write from his comrades, some of whom knew Greek, others Latin, and mixed up the characters. Kluge 1919 rejects von Friesen’s theory, but concedes that it is admissible to derive a number of runes from the Greek αβ, as the latter was sufficiently well known also in the western Roman Empire.

Towards the end of the 1930s, a notion which goes back to the 19th c. and was reintroduced by Krause caught on: a composition of the futhark out of a Mediterranean αβ and “pre-Runic symbols”. Krause 1938 (also 1940) sees the old ideograms combined with an unattested North Italic αβ similar to that on the Castaneda flagon (GR·3, written in the Sondrio αβ). His theory found followers in Arntz 1938, Altheim & Trautmann 1939[145] and Baesecke 1940. The latter connects the runes with a North Italic divinatory tradition, but explains ᛉ, ᛃ, ᛇ, ᛈ and ᛜ as Germanic symbols. Later, the proto-Runic ideograms feature in the models of Rosenfeld 1956, Schneider 1956, Elliott 1959/1989 and Jungandreas 1974, while Krause himself lost faith in the theory (1970). Still, he eschewed a single prototype, now favouring a Latinised Alpine αβ together with an Oscan αβ, from which he took ᚢ, ᚨ, ᚺ, ᛊ and ᛚ, tentatively also ᚲ, ᛉ, ᛏ and ᛟ.

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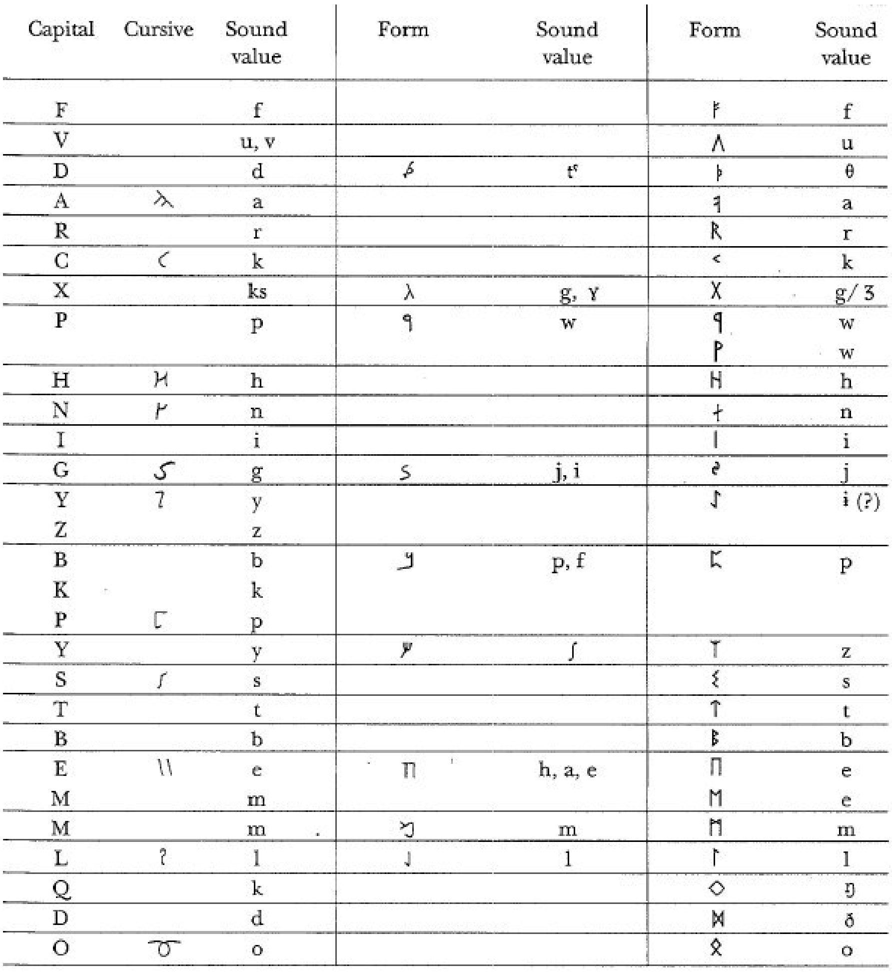
[145] Altheim & Trautmann claim that it was the Camunic script itself which was already interfused with a northern (Germanic) “Sinnbildschrift” (62).

Also in the context of the North Italic theory, Höfler 1971 and Alexander 1975 work with more than one model alphabet. Rix 1992 is specifically concerned with explaining the use of different models for the Runic script. He derives runes from six of the alphabets used in Northern Italy: Lepontic, Camunic, Raetic type Bozen (Sanzeno), Raetic type Magrè, Venetic (in variants) and Latin. There are a couple of new ideas in his theory, such as the explanation of ᚠ from a Venetic variant of ᚨ (waw) with upturned bars. The velar value of ᚷ is explained as the consequence of translating Venetic ᚷ *d*, used as an abbreviation for *donom* 'gift', as Germ. *geba*; ⊠ in the square frame of the Venetic votive tablets is also suggested as the source for ᛞ. ᚹ he takes from Venetic phi 𐌘 (see also Rix 1997, 245), writing *b*. From Latin, Rix derives ᚱ, ᛒ and ᛗ (the latter from the cursive variant ǁ); he does not find explanations for ᛜ and ᛇ. (Rix 1997 focuses on the explanation of ᛉ as a graphically simplified derivate of zeta$^?$ in its Camunic form Ɏ.) Rix' scenario – declared "the silliest invention hypothesis" by Markey 2001, 89 – is the following: Germanic mercenaries involved in the local struggles among the peoples of Northern Italy and of the Alps, testified to in the Harigast-inscription on the Negau helmet B (3.4.2), brought back with them numerous objects – weapons, clothing accessories and the like – which bore inscriptions written in various North Italic αβs. They memorised the texts on these prized possessions by using Germanic words as acrophonic memory hooks. Some of these documents found their way to a sanctuary in Northern Germany or Southern Denmark, where Germanic priests were inspired to create a script from the scraps. Rix' model, though doubtlessly far-fetched, serves to explain the plurality of sources as well as the rune names, and also the deviant order of the row, as the priests never got to see any alphabetaria.

An innovative suggestion, though harking back to pre-Wimmerian models in its inclusion of a Semitic αβ, comes from Troeng 2003, who notes that "[i]t would not be unique for the Runic alphabet to be based on more than one alphabet" (291). According to Troeng, Nabatean archers in the Syrian Canatha cohort were stationed on the Limes in Bavarian Straubing from after the annexation von Nabatea to the Roman Empire in AD 106 (Arabia Petraea) until about AD 166. Troeng assumes that the Runic script is basically modelled after the Latin cursive, but that the usual problematic runes can be explained from characters of the Nabatean script: ᚦ from ‹tˤ›, ᚹ from ‹w›, ᛉ from ‹ʃ›, ᚷ from ‹g›/‹ɣ›, ᛃ from ‹j›/‹i›, ᛈ from ‹p›/‹f›, ᛖ from ‹h›/‹a›/‹e›, ᛚ from ‹l› and ᛗ from ‹m›. Of these derivations, Troeng considers those of ᚹ, ᚦ and ᛃ the most compelling, as no Latin letters were available for the respective Germanic phonemes. Regarding ᛈ, ᛉ and ᛗ, Troeng surmises that the characters for the respective sounds could not be taken from Latin, as the obvious models were too similar to other runes (ᚹ, ᛇ and ᛗ, derived from the Latin cursive).



Capital	Cursive	Sound value	Form	Sound value	Form	Sound value
F		f			ᚠ	f
V		u, v			ᚢ	u
D		d	ɓ	tˤ	ᚦ	θ
A	ʎ	a			ᚨ	a
R		r			ᚱ	r
C	ᑕ	k			ᚲ	k
X		ks	λ	g, ɣ	ᚷ	g/ʒ
P		p	ᑫ	w	ᑫ ᚹ	w w
H	ⲏ	h			ᚺ	h
N	ᚴ	n			ᚾ	n
I		i			ᛁ	i
G	ʆ	g	ς	j, i	ᛃ	j
Y Z	ʅ	y z			ᛇ	i (?)
B K P	ᒥ	b k p	ʖ	p, f	ᛈ	p
Y		y	ᚡ	ʃ	ᛦ	z
S	ʃ	s			ᛊ	s
T		t			ᛏ	t
B		b			ᛒ	b
E M	\\	e m	Π	h, a, e	ᛖ ᛗ	e e
M		m	ɔ	m	ᛗ	m
L	ʔ	l	ɺ	l	ᛚ	l
Q		k			ᛜ	ŋ
D		d			ᛞ	ð
O	ʊ	o			ᛟ	o

Tab. 10: Comparison of Latin capital and cursive variants and Nabatean letters with runes as drawn up by Troeng 2003, 295 (tab. 1).

Some scholars argue for script mixture without offering specific derivations. Musset 1965, as already mentioned in the previous section, exercises some caution when talking about premises concerning alphabet history. Hence, he advises against the categorical exclusion of the possibility of source eclecticism (48). Jensen 1969, 128 points out that the dissimilarities between the Mediterranean αβs on the one hand and the futhark on the other suggest multiple sources, as the acquaintance with more than one script and consequently the awareness of the arbitrariness of written characters would help, maybe even be a prerequisite for making a creator independent of his model. Miller 1994, 66 states that “the requirement of a single source-alphabet seems naive and obsessive”.[146] Wimmer, despite his

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[146] See also Spurkland 2005, 4.

ultimate rigid derivation assigning each of the twenty-four runes to one letter of the Latin αβ, considers multiple sources an option (1887, 21), though his model does not require them. Similarly, Moltke 1981 points out the possibility of different sources being used to supplement the main one to illustrate that new scripts need not be "slavish imitation[s]" (6) of existing ones, though he ultimately considers all runes to be either from Latin or "innovations" (7).

In contrast, Meyer 1896, 173 (although he derives runes from both the Latin αβ and the putative divination symbols mentioned by Tacitus [1.3.5.1]) observes:

> "Dem gelehrten bibelübersetzer der zeiten [Wulfila] darf man eine compilation aus dem griechischen, lateinischen und runischen alphabet wol zutrauen; für den unbekannten erfinder des dritten jahrhunderts hat sie keine glaublichkeit".

Odenstedt 1990, 146 calls the involvement of more than one alphabet a "last resort", claiming that script mixture is a rare phenomenon (156). Williams 1996, 213 does not categorically exclude the possibility, but refers somewhat dismissively to the notion of "picking and choosing in a leisurely fashion"; similarly, Düwel 2003, 579 points out that it fosters "Beliebigkeit und Willkür". Comments critical of source eclecticism are also made by the Latin champions Seebold 1991, 17 and Rausing 1992, 204, as well as by Rüger 1998, 358. Heizmann 2010, 20 concedes that the runes might be "aus unterschiedlichen Traditionen geschöpft", but stresses that he does not consider this to be the same as source eclecticism:

> "Im Unterschied zum vielfach kritisierten, reinen Formeneklektizismus, bei der [sic] Zeichen aus unterschiedlichen Alphabeten zusammengeklaubt worden sein sollen, handelte es sich hier um unterschiedliche Schrifttraditionen aus einer Hand." (20 [n. 47]).

Here it is important to distinguish between methodological criticism and an actual opinion on the mechanisms of script transfer: does one negate the possibility that a script may have more than one model, or does one caution against the practice of comparing characters to possible models from different systems without explaining how and why the script mixture could have came about in the particular case? That is, does one object to eclecticism on the part of the borrower or on the part of the scholar? This is not always made plain in the literature. Some runologists do appear to distinguish between theories which allow for supplementary characters whose existence can be motivated (usually phonetically) on the one hand, and outright eclectic theories which fail to identify one basic alphabet altogether, or such as involve dubious strategies for constraining the randomness implied in pick-and-mix derivations, such as hypothetical intermediary alphabets which combine the relevant forms and traits (Marstrander) or a high affinity between the scripts which provide model characters (Markey). For example, Moltke sees no problem in citing source eclecticism as an example for how script creators take liberties with their models, but comprehensively rejects the North Italic theory for functioning on that basis. In the discussion following his talk at the First International Symposium on Runes and Runic Inscriptions, Moltke

> "dismissed the Etruscan theory as "stupid," pointing out that […] in order to create the runes from Etruscan letters the inventor would have had to wander from one Alpine tribe to another, borrowing one here and another one there" (Michigan Germanic Studies 7.1 [1981], 16).[147]

Fairfax 2014 excludes what he calls the blending of alphabets both for script diffusion or unsophisticated grammatogeny (because that, allegedly, is not how literacy was taught) and for sophisticated grammatogeny (because there is "little in the way of supporting parallels" [180] and it is not clear how the adaptor should have come to know all the North Italic αβs).[148] He calls the "cherry-picking approach" (179) "decidedly wrongheaded" (180), referring specifically to Mees 2000 (despite the latter's attempt to argue for an intermediary alphabet) and distinguishes it from "inadvertent" script mixture, e.g. Etruscan writing practice and Greek sound values finding their way into the Latin αβ together (1.3.3.2). Fairfax calls this phenomenon an "alphabetic substratum, wherein an adapter has been influenced [...] by the intermediary's usage" (200). He equates the Etruscans' passing on of the Greek αβ to the Romans with the Gauls' passing it on to the Germani (as suggested by him).

1.3.3.2 "Pick-and-mix" in the transmission of the alphabet

From a typological perspective, the present issue is not really a problematic one: a short overview over cases of script transfer shows that borrowing from two or even more models is well attested – involving both formal and structural aspects. Particularly in the alphabetic sphere, there are few scripts which cannot at least be argued to contain characters intro-

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[147] Markey 2001, 94 asserts precisely that. Curiously enough, Moltke and Markey, two scholars with a penchant for harsh criticism and mockery, completely agree on the process of the invention – partly modelled and partly invented – but not on the model alphabet.

[148] Conversely Prosdocimi 2003, 437. 439, who argues that a writing school is the very place where to expect people to be acquainted with different writing systems.

duced from other sources than the principal one. The Greek αβ is one of the specimens which may only feature characters from one model, depending on one's opinion on certain letters. The Ionian αβ variant knows a character sampi Ͳ, attested between the middle of the 7th and the 5th c., which writes a sibilant consonant cluster. Its origin is unclear – it was long thought to be a variant of san, but the fact that it takes a position after omega in its earliest attestation in an alphabetarium and also in the Milesian numeral system speaks against this theory. Jeffery 1990, 38 f. assumes a borrowing from the Carian αβ (letter no. 25 𐊸 *ś*), originally writing a Carian sibilant in loan words or foreign names.[149] In any case, if this character is foreign, it appears to have been introduced secondarily, in the same way as Greek upsilon and zeta were introduced in the Latin αβ to write Greek sounds in the 1st c. BC. The origin of the additional characters phi, psi and chi, also secondary, though older and of more consequence, is also disputed (Swiggers 1996b, 265). They have been derived from other scripts (e.g. from the Cypriote syllabary by Jeffery 1990, 36 f.), but have also been argued to be doublets based on alphabetic characters[150] or newly created (Wachter 1989, 34–36).

Due to the fact that the Greek and Etruscan αβs were highly similar in the archaic phase, it is hard to determine which of the two should be regarded the primary model of the Latin αβ – that both played a part is widely accepted. The Greek αβ as the principal model is argued for by, e.g., Morandi 1982, 45 f., mainly on the basis of circumstantial reasons such as the vicinity of Rome and the Greek colonies.[151] That beta, delta and omikron, which represented phonemes not present in Etruscan and were therefore not used in Etruscan inscriptions, are used with their Greek values in Latin also seems to suggest that the Latin αβ was primarily modelled on the Greek. Yet Morandi has to allow for influence of Etruscan writing practice because of two graphical conventions which can only be explained with reference to the Etruscan αβ. These conventions have led most scholars to hold that Etruscan is the principal model – cf. Wachter 1987, 14, who states that (much as in historical linguistics) it is irregularities which are of primary importance as diagnostic factors in determining relationships. The derivation of the Latin αβ from the Etruscan one was established by Hammarström 1920, based on the observation that the non-employment of gamma to write the voiced velar of Latin can only be explained as a consequence of the

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[149] See also Adiego 1998, 70 f.

[150] Literature in Jeffery 1990, 36 (n. 3).

[151] See also Devoto 1968, 89 f.

Etruscan *kacriqu*-rule (see n. 117).[152] Whether beta, delta and omikron made their reappearance in the Latin αβ based on the complete Greek row as hypothetically used by the Etruscans and conserved in the alphabetaria (e.g. Meiser 1998, 48) or whether these lettres mortes were indeed dead to the Etruscans, and the Romans knew their significance and reintroduced them through direct contact with the Greek αβ, is impossible to determine. In any case, while these letters were used to write the appropriate Latin sounds, gamma was blocked from being re-established in its Greek function, because it was employed as a letter for *k* in Etruscan inscriptions. In addition to this, archaic Etruscan and archaic Latin share the digraph spelling ‹fh› for *f*, a convention which is unlikely to have developed twice independently – considering that the Etruscan αβ is demonstrated to be the model of the Latin one by the use of the characters for velars, it must be an Etruscan convention adopted in Latin writing. As observed by Wachter 1987, 21 f., we should expect intensive contact between speakers of Latin, Etruscan and Greek in the late 8th c.

Similar questions are to be resolved for those North Italic αβs, also based on the Etruscan one, which write IE languages, viz. Venetic and Lepontic. The Venetic αβ variants use phi, theta and chi beside pi, tau and kappa to distinguish between the voiced and unvoiced plosive rows, but feature omikron. This letter's position at the end of the row, as attested on one of the alphabet tablets (Es 23), indicates that it was reintroduced from the Greek αβ, maybe through contact with Greek merchants in Adria and Spina, but some scholars (e.g. Prosdocimi 1988, 23; see 2.1.2 for his argumentation) prefer to avoid bringing in another model and argue that omikron could have been known from the Etruscan alphabetaria and reactivated. The Lepontic αβ also has omikron; whether from Etruscan, Greek or Venetic is unclear. In my opinion, the notion that lettres mortes could have been reactivated in their original function without recourse to the original model is problematic – even if unused characters were retained in an alphabet row, the transmission of the sound values would be down to the speakers of the intermediate language, which by definition does not have phonemic distinction of these very values. I find it hard to see how speakers of Etruscan could have reproduced sound values which to them were allophones at best so accurately that speakers of Latin or, at an even later date, Venetic and Lepontic, could salvage the original grapheme–phoneme correspondence intact.

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[152] See Hartmann 2005, 424 f. for a more recent treatment of the *kacriqu*-rule in the archaic Latin αβ – Hartmann shows that it is in fact hard to demonstrate a consistent adherence to the rule in all but one inscription. The rule appears to have been badly understood, though the use of different characters within the same inscription demonstrates that there have been attempts. The use of qoppa before *o*, which is not phonemic in Etruscan, can be argued to have been passed on from Greek practice via Etruscan in theory or to have been inferred from acquaintance with Greek inscriptions.

The details of the derivation of most of the alphabets in Asia minor is still problematic. The Lycian and Lydian αβs, writing Anatolian languages, are derived from a red Greek variety, but both feature characters – mostly for non-Greek sounds – which may be explained as borrowings from other scripts or as original creations (Swiggers & Jenniges 1996, 282–284). As for the Carian αβ, Adiego's hypothesis (see n. 134) attempts to account for all Carian letters as derived from Greek, either straightforwardly or through modification; Adiego 2007, 232 f. holds that to bring in other scripts would be to explain "obscurum per obscurius". Graphical similarities of Carian letters with characters of the Cypriote syllabary have been noted (Jeffery 1990, 37; Swiggers & Jenniges 1996, 285), but their relevance hinges on whether any correspondences can be made to fit with the new letters' values according to the Ray-Schürr-Adiego decipherment (see Adiego 2007, 197). Clearer is the case of the Coptic αβ, which contains all twenty-four letters of the Greek αβ, but also retains a number of characters from the abandoned Demotic script. These letters, based on Demotic one-consonant characters, write non-Greek sounds and were graphically adapted to resemble the rounded Graeco-Coptic letters, which are based on the Greek Uncial script (Förster 2011, 33 f.). One of them represents a CV-syllable. Interestingly, their number (six in standardised Sahidic) differs between early alphabet variants for Coptic dialects (Ritner 1996b, 288).

1.3.3.3 "Cherry-picking" by sophisticated creators

Historically recorded inventors of alphabets also drew on multiple sources, though one oft-cited case is actually debated in this respect. The traditional opinion on the Gothic αβ is that it is based on the Greek one, but incorporates letters from other scripts, viz. Latin and/ or Runic. The candidates for a derivation from another tradition are 𐌵 (*q*) from Latin Q, 𐌷 (*h*) from Latin H or Runic ᚺ, 𐌾 (*j*) from Latin G or Runic ᛃ, 𐌿 (*u*) from Runic ᚢ, 𐍂 (*r*) from Latin R or Runic ᚱ, 𐍃 (*s*) from Latin S or Runic ᛊ, 𐍆 (*f*) from Latin F or Runic ᚠ, and 𐍉 (*o*) from Runic ᛟ. Problematic 𐌸 (*þ*) and 𐍈 (*hv*) are generally interpreted as reused Greek characters (psi and theta, respectively) (see e.g. Arntz 1944, 117–119 and Krause 1968, 64 f.; the latter also files 𐌸 as Runic, but derives 𐌵 from Greek). While some of the correspondences do seem obvious, Ebbinghaus 1979, 16 f. is right when he says that the arguments adduced are often faulty and lack scientific rigour. It is not evident what caused some of these letters not to be modelled on Greek or to acquire a similarity with a Latin/ Runic variant (𐍂, 𐍃).[153]

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[153] For example, Jensen 1958, 456 brings in the "danger of confusion" argument, but with the dangerously similar forms being not Greek, but Latin and Runic. Krause adduces various ad-hoc explanations for

Ebbinghaus 1979 derives Wulfila's αβ in its entirety from a Greek model. He excludes the Latin αβ on the observation that *m*-suspension, useful in Gothic but pointless and therefore absent in Greek, does not feature in both types of the Gothic script, when it could easily have been introduced from a Latin model (17). As concerns the runes, Ebbinghaus doubts that Wulfila knew them at all[154] and points out that runes like ᚹ and ᛜ, conveniently writing Germanic sounds, are supposed to have been ignored in favour of Greek approximations, while, for example, ᛟ might as well have been taken from Greek (20). Ebbinghaus agrees with certain runologists that script creation does not have to be systematic and hence comprehensible to the modern scholar (20 f.) – he nevertheless attempts a complete derivation, whose best asset is that it accounts for the positions of the letters in the row (𐌸 in the place of theta, 𐌿 in the place of omikron, 𐌾 in the place of ksi, 𐍆 in the place of phi).[155]

𐌰	𐌱	𐌲	𐌳	𐌴	𐌵	𐌶	𐌷	𐌸	𐌹	𐌺	𐌻	𐌼	𐌽	𐌾	𐌿	𐍀	𐍁	𐍂	𐍃	𐍄	𐍅	𐍆	𐍇	𐍈	𐍉	𐍊
a	*b*	*g*	*d*	*ē*	*q*	*z*	*h*	*þ*	*i*	*k*	*l*	*m*	*n*	*j*	*u*	*p*	–	*r*	*s*	*t*	*w*	*f*	*χ*	*ƕ*	*ō*	–

Tab. 11: Standardised Gothic letters in the order attested in the Alcuin-MS Cod. 795 (Vienna National Library) with transliterations; dashes indicate numerical value only.

The major drawback of Ebbinghaus' model is the assumption that Wulfila established certain principles before setting to his task, which serve to explain some choices, but have to be suspended for others. The notion that Wulfila kept the numerical row intact and filled vacant positions is credible; that he should have filled these vacancies with Germanic sound values at random and still hit heta for *h* is not. As concerns letter shapes, Ebbinghaus rightly criticises the practice of comparing 5th–6th-c. manuscript forms with 4th-c. Greek letters, arguing that certain Latinoid features (such as the "tail" of 𐍂) might in fact be due to secondary influence from that quarter (28).[156] He is convinced that Wulfila worked with

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different letters, including danger of confusion, as well as a wish for greater distinctiveness, lack of a Greek model or insufficient phonetic closeness of the potential Greek model, a desire for graphical simplicity, and even the customariness of certain runes (namely ᛟ).

[154] See also Ebbinghaus 1990, Luft 1898, 64 f. and Marchand 1959. The latter discusses the major arguments for Wulfila's acquaintance with the futhark: the Gothic inscriptions, the Gothic rune names, certain terms used by Wulfila which are supposed to derive from Runic (epigraphic) writing practice and the alleged influence of rune forms on Gothic letter forms. He concludes that none of them are convincing. An overview of the Gothic-runes question is given in Mees 2004.

[155] For alternative explanations, or rather non-explanations, cf. Scardigli 1998, 457, who claims that theta and psi switched places, but psi received the value *þ* more or less appropriate to displaced theta.

[156] See also Krause 1968, 64 and Scardigli 1998, 456.

a cursive Greek variant, which, together with supposed style principles, can to some extent support the phonetically random pairings and make some of the Runic connections less compelling. The fact remains that the retention of the Greek digraph ⟨ου⟩ for *u* is common to the majority of alphabets based on the younger Greek αβ (Glagolitic, Cyrillic, Armenian, Caucasian Albanian, Georgian, Coptic); Gothic 𐍆 from phi, cursive or not, ending up to look just like Latin F is suspicious as well. The entire argument is highly reminiscent of theories for the origin of the runes, again demonstrating that scripts whose derivation is also under discussion should not be used to exemplify borrowing processes.

In any case, it may be observed that Runic letters did make their way into Roman manuscript hands, in the form of ᚦ (thorn þ) and ᚹ (wynn ƿ) being used to write non-Latin sounds in the Old English αβ. Thorn appears at the end of the 8th c. – a secondary introduction, as far as this can be said in the context of a gradual adoption of writing – and lasted longest (until the 15th c.), while wynn disappeared around 1300, both being ultimately superseded by Latin-based digraphs (Scragg 1974, 1–8; Freeborn 2006, 29 f.).

For the Armenian αβ, Maštocʿ, whose focus on the Greek αβ is demonstrated not only by the order of the Armenian characters, but also by the use of the digraph ⟨ou⟩ for *u*, created some rather idiosyncratic letter shapes, which makes detailed derivations difficult. Only twenty-two of the original thirty-six characters can be derived from the Greek cursive. Unless one wants to assume that Maštocʿ invented the other shapes freely, the best models are found among Semitic scripts. A number of possible sources present themselves, but the best candidates are Pahlavi, used in Armenia before the Christianisation, and the Syriac script, which was like Greek used to write biblical and liturgical texts (Sanjian 1996, 356 f.).

In the above examples, the assumed motivation for the inclusion of additional sources is mostly a phonetic one: the principal reference alphabet was found lacking, so that the characters required needed to be (or were in any case chosen to be) introduced from other traditions (see also De Voogt 2012, 3). Other considerations can also play a part – for example, a script can be structurally oriented on a (typologically suitable) script, but graphically modelled on a more prestigious one.

1.3.3.4 Prestige vs. practicability

Old Persian cuneiform, whose lopsided character inventory was discussed at length in section 1.3.2.3, is so called because the look of the characters, though formally simple and freely invented, is intended to resemble the characteristic clusters of wedges of the traditional variants of cuneiform. In this case, the derivation of individual characters is therefore indeed not an issue. As often postulated for the runes, the OP characters appear to be created following a style principle: they consist exclusively of pockets opening toward the right and horizontal and vertical wedges in different sizes (Hoffmann 1976, 621). The only exception is the character ‹la›, which is only used in four loanwords, *l* not existing or not being phonemic in Persian – ‹la› is the only OP character which can be traced back formally to the original cuneiform grapheme ‹la› (Paper 1956). Also from cuneiform tradition are the five logograms used in OP for frequently recurring words. Structurally, the script is a curious mixture of logography, syllabography and abugida. This condition may be attributed to the fact that, beside the ancient cuneiform traditions, the Aramaic script – a Semitic abjad – was used in the whole Near East and also in the Persian Empire as the vehicle of the Aramaic lingua franca, the language and script of administration, correspondence and everyday use. The scribes tasked with the creation of the new script (whether under Cyrus or Darios, whether they worked with an already existing character inventory or not) would have been acquainted with Aramaic and with the concept of writing phon(em)es rather than syllables – they may in fact have been more familiar with the Aramaic abjad than with cuneiform writing. The formal orientation on cuneiform ensues from the wish for representativeness: cuneiform was the medium of the ancient empires of Elam and Babylon – now conquered by the Persians – whose languages and scripts were employed in the original two versions of the Behistun trilingua. The Aramaic version is only known from transmission on papyrus (Schmitt 1991, 19). The new script was intended for monumental use and was supposed to be set apart from the everyday writing of clerks and accountants.[157]

Keeping in mind the various detailed theories about how exactly the Old Persian system came about, the concurrence of two structurally different scripts is likely to have conditioned its unusual configuration. While the theory advanced by Justeson & Stephens 1993 manages without a structural influence from cuneiform syllabic writing, the Hoffmann-

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[157] Interestingly, the combination of cuneiform and abjad led to a similar, though less asymmetrical result in the case of Ugaritic cuneiform which, like the Old Persian one, uses cuneiform characters, but is structurally an abjad and knows three additional syllabograms for CV-syllables starting with the glottal stop (plus *a*, *i*, *u*) (Daniels 1996c, 153; Lehmann 2012, 22 [n. 20]).

Mayrhofer model works with an original cuneiform-style syllabary which was later amplified with functionally phonographic elements. If neither hits the right thing, the curious mixture of writing strategies may be due to the scribes' exposure to two script types. The strategic and formal basis was a syllabary, but the people in charge were trained in writing a script which reflected consonantal phonemes and, at that time, already included matres lectionis for optional vowel writing. While the question of the distribution of the syllabograms remains, it is possible that the hybrid state of the script stems from the efforts of Persian scribes to find a compromise between two structurally different models (see also Mayrhofer 1979, 293). The avoidance of ‹VC›- and ‹CVC›-characters can be ascribed to Aramaic influence, while the syllabic structure harks back to cuneiform (Hoffmann 1976, 632).[158] Paper 1956, 26, conversely, suggests that the Persian scribes randomly added syllabograms to an inventory based (structurally) entirely on Aramaic to create a pseudo-archaic effect. Interesting in this context is the theory of Bae 2001, 34 f., who argues that the original text of the Behistun inscription was not Elamite, as usually assumed, but Persian, taken down in Aramaic writing on papyrus to be translated into the ancient languages (cf. also Falk 1993, 78. 80). Such a document would conceivably have furthered the influence of the abjad on the new script.[159]

Although the Indic scripts are also derived from Aramaic, no syllabic model can easily be argued for their semi-syllabic structure.[160] While Karoṣṭhī is almost certainly derived from Aramaic in its entirety (1.3.2.10), the derivation of Brāhmī is still under discussion. It appears to be independently based on Aramaic as well, but the type is not altogether likely

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[158] There is also a discussion of Old Persian ‹a› as a character for a consonant like aleph; see Paper 1956, 25 and Mayrhofer 1978, 6.

[159] With all this, it must be kept in mind that the abugida as a syllabo-phonetic hybrid poses a classificatory problem. Hoffmann 1976, 625 defines all the OP characters (except the handful of logograms) as syllabograms. Gelb 1963, in accordance with his Principle of Unidirectional Development, classifies the OP script as an oriental forerunner of the alphabet, i.e. as an intermediate stage between syllabary and alphabet, and interprets the characters somewhat idiosyncratically: the ‹Ca›-characters in group 3 also represented the respective C*u*-syllables, the ‹Ca›-characters in group 4, accordingly, also the respective C*i*-syllables. The ‹Ca›-characters in group 5 could represent C*a*, C*i* or C*u* (172 f.). These latter ‹Cx›-characters would then correspond to the letters of the abjad, which Gelb also interprets as syllabograms. He observes that the OP script "would seem to be a concoction based on two foreign systems" (173). On the other hand, Lenz loco obscuro conceives the Old Persian script as typologically a "reine Buchstabenschrift", whose "graphischem System als Ganzem das Prinzip der aramäischen Buchstabenschrift zugrunde liegt" (cited in Hofmann 1976, 631). Similarly, Testen 1996, 134 holds that "the Old Persian script is essentially an alphabetic writing system", and distinguishes ‹C›-characters whose form is independent of the following vowel from those whose form is determined by it.

[160] As mentioned in 1.3.2.10, Salomon 1998, 16 (n. 34) thinks of an influence of the grammatical concept of the akṣara, though this grammarian focus on the syllable is, in turn, unexplained. A connection of the Indic scripts' syllabic elements with the Indus or Harappa script of the mid-4th to early 2nd mill. BC, which has been argued to be a logo-syllabic system inspired by a cuneiform model, is highly unlikely.

to have developed twice independently. That Brāhmī developed among or was developed by people who were acquainted with Karoṣṭhī and that its formation was influenced by the earlier script, is therefore hard to deny. The position of the postconsonantal vowel diacritics (⟨i⟩, ⟨e⟩ and ⟨o⟩ at the top, ⟨u⟩ at the bottom) corresponds (Salomon 1998, 54). However, Salomon 1998, 54 refers to the possibility of secondary (mutual?) influence; why a second script should have emerged in the first place is unclear (ibid., 28). Brāhmī improves upon Karoṣṭhī in that it distinguishes between long and short vowels, which is interpreted as a feature imported from Greek by Falk 1933, 111 f. Falk also points to graphical correspondences (mainly *tha* ⊙ with theta) and to Brāhmī's angular ductus and argues for additional influence of Greek writing on Brāhmī (sceptical Salomon 1998, 22).

In terms of script mixture, the case of Korean Hankul shows some similarities with that of Old Persian cuneiform. The scribes of King Seycong created a completely phonemic script under the influence of one or more phoneme-oriented writing systems. They were acquainted with the Indic abugidas and its derivative, the Mongolian ʾPhags pa script. A reference to "old seal (characters)" in *Hwunmin cengum haylyey* has been taken to refer to the latter. While actual character correspondences are hard to establish, ʾPhags pa may have inspired the notion of writing phonetic elements (Taylor & Taylor 1995, 225–228; King 1996, 225; van der Kuijp 1996, 439) The Chinese prestige script is emulated in the manner of arranging the characters: though the sounds of one syllable are written with individual letters, the letters whose values make up one syllable are assembled into a block, replicating the mostly monosyllabic characters of the Chinese script. Also, in these combinations, the graphically simple Korean characters end up resembling the complex Chinese characters – despite the entirely different structures, texts in Chinese and Hankul look superficially similar to a person who is not literate in either script.

Fig. 9: *Hankul* (Kor. *hangeul*) written in Hankul.

A coaction of more than one model is also considered for the Iberian script (in its variants for different languages), another case which involves unexpected syllabic elements. The Iberian system knows characters for vowels and continuants, and for CV-syllables containing a plosive. The syllabic elements have been explained through influence from an Aegean syllabary (see Justeson & Stephens 1993, 21; critical e.g. Untermann 1962); the question of whether only the Phoenician abjad, only the Greek αβ or a mixture of both furnished the basic model is also debatable (Swiggers 1996a, 111). According to De Hoz 1983, the Iberian system is entirely based on a Semitic model, vowel designation having (been) developed independently of Greek; Justeson & Stephens 1993, 21–30, who suggest a transmission error of the kind discussed in the previous chapter, basically agree with De Hoz, but allow for (maybe secondary) Punic and Greek models for a number of characters (21 f.).

To summarise, the notion that more than one model lies at the base of a new script is not at all absurd. Heterogeneity of structure does of course not come into question for the futhark, all the potential models being alphabetic; it is the drawing on multiple sources for characters to compensate for incongruities due to differences in phoneme inventories which may be considered. The traditionally large number of examples for source eclecticism in script transfer has lately been reduced (at least in theory) by efforts to derive well-known candidates such as the Iberian and the Gothic scripts from only one model – this testifies to a tendency to regard script mixture with a critical eye also outside of runology. Yet, clear cases like the Coptic αβ remain. New alphabets which do not only contain a number of extra characters from a second source, but which are pick-and-mix combinations of two or even a larger variety of models, are, however, not well supported. Whether this should therefore be categorically excluded is debatable. Alphabetic "substrata", the concurrence of models, character supplementation and secondary influence from another script than that which provided the original model may be hard or even impossible to tell apart in practice, especially when the model alphabets are highly similar. It is therefore important to consider, concerning particularly the North Italic αβs, to what extent traditions which are distinguishable for – and therefore dutifully distinguished by – the modern scholar were considered to be different scripts by the users, and also by the foreigner. The North Italic αβs, as a case in point, are – much like the modern Western European αβs – in large part identical; local variants, discounting language and context, are distinguished by a handful of characteristic graphical forms and a small number of idiosyncratical grapheme–phoneme relationships. A new script which combines features of these variants is the equivalent of a modern new alphabet containing both German ⟨ä⟩ and Slovak ⟨ž⟩. We have ample evidence for contact between writers from different traditions, not only in the form of spelling interferences (which are hard to argue conclusively), but also from documents in different scripts from the same sanctuary (2.5.1.2) and even on the same object (2.8.1.10).

A plurality of models must be reckoned with, particularly in cases where the context of the borrowing is unclear – and especially when this context may have been one which makes the acquaintence with different scripts likely. The question is not so much why more than one source should have been utilised, but what circumstances should preclude such an approach, provided that more than one model was available. This is particularly pertinent for scholars who assume that the runes are created as a purposefully deviant alternative to the Latin script: Jensen's consideration that the possibility of wilfully changing the model script may not be obvious to people who are only acquainted with one specimen of writing strikes me as highly significant. A person who knows only one script is likely to equate this system with writing per se, while acquaintance with more than one script introduces them to the concept of arbitrariness of grapheme–content correspondences. Someone who is adventurous enough to tamper with a perfectly functional system to improve its phonemic fit or to make it more appealing to the prospective users should be trusted with enough mental flexibility to combine characters from different traditions. In any case, keeping in mind what was said in the previous chapter about the plethora of possible contexts for script transfer, preconceptions about what may and may not have happened should be kept out of the actual line of argument. Still, to argue for supplementary characters or even outright script mixture, the ability to demonstrate a logic underlying the developments/choices should be a minimal requirement.

1.3.4 "Archaic" or "primitive" properties of writing systems

A whole section of runological origin-related literature is based on the assumption that certain circumstantial properties of scripts are borrowed along with the more obvious or "core" properties (viz. character forms and their values). Depending on the individual scholar, this can encompass all kinds of writing conventions: rules governing orthography, text organisation (e.g. writing direction, interpunction) and usage (e.g. writing materials, text types). The converse position is that these circumstantial features are secondary, in that they are easily changed without effects on the system, and therefore not reliable as indicators of script relationship and dating – cf. De Voogt 2012, 6, who factors them out of his scheme of types of script borrowing. In the case of the runes, the discussion centers around certain features which are associated with archaicness. For scholars who take the first standpoint, these features are "archaic" in an alphabet-historical sense, in that they belong only to the early phases of alphabetic writing as a whole. From the second point of view, which treats them as secondary, these features are either entirely irrelevant to the question or of little diagnostic value specifically because they are naturally occurring features of young scripts, typical of the early phase of any individual writing culture. They are regarded as "primitive" (e.g. Moltke 1985, 63) or, better, "protoliterate" (Mees 1999, 146).[161]

The former stance can be used to support both the North Italic and the "Mediterranean" version of the Greek theory, in that such "archaic" features of the Runic script are claimed to be connected with similar features in archaic alphabets (archaic Greek) or younger alphabets which preserve archaic traits (North Italic) – in opposition to the "evolved" and sophisticated Latin script of the Imperial Age. Troeng 2003, 291 refers to such features to justify an involvement of a Semitic script; Seebold 1991, 18 favours an archaic Latino-Faliscan αβ. Hammarström 1930, 53–58 and Mees 2000, 68–70 point to inconsistent writing direction and interpunction, the orthographic features and the angular letter shapes as archaic parallels between Runic and North Italic writing. Most prominently, the Greek theory according to Antonsen (especially 1996) and his student Morris is partly founded on certain similarities in script use between the archaic Greek and the Runic script.[162] Morris 1988 dedicated a monograph to the topic, in which he discusses seven "archaic features" of the early Greek, early Latin and Runic script:

- certain spelling conventions (no notation of geminates[163] and of nasals before homorganic consonants),
- use of ligatures,[164]
- inconsistencies concerning direction of writing and interpunction,
- letter names,[165]

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[161] See also Knirk 1993, 546; Williams 1992, 201 and 2004, 262; Odenstedt 1991; Fridell 2015, 13–15.

[162] See also Hempl 1899 and Kabell 1967.

[163] The non-spelling of geminates is a wide-spread feature in various scripts, e.g. the Indic abugidas.

[164] Morris 1988, 129 f. connects the existence of bindrunes with ligatures in the pre-classical Greek and Latin αβs (where they are much more frequent from 200 BC onward). Another alphabet which makes use of ligation is the Oscan αβ; the Etruscan αβ, on the other hand, does not know ligatures. While the Venetic and Lepontic corpora do not feature ligatures either, the Raetic one has at least two (2.5.9), both without identifiable models. Ligatures also occur in Latin cursive writing of the Imperial Age (Quak 1996, 174), and, of course, mediaeval manuscripts provide ample evidence.

[165] Morris 1988, 143 compares the rune names to the Greek "long" letter names, in opposition to the Etrusco-Latin "short" names whose origin is unknown. The comparison is flawed, as the Greek letter names are not lexically meaningful beyond their function as letter names, while the rune names are semantically transparent Germanic lexemes – Morris acknowledges this and suggests that the "original rune-writers", not knowing Greek, might not have understood that the Greek names were semantically opaque to the Greeks themselves (155). Troeng 2003, 291 uses the transparent rune names to support a Semitic element in the Runic script. Moltke 1981, 6 books the rune names as an independent "primitive feature". There is ample literature on the question of how, when and why the rune names originated (e.g. Jungandreas 1974; Seebold 1986, 536–541; Polomé 1991; see Nedoma 2003b, 561). Many theories

- certain types of inscription technique and type,
- a certain vocabulary related to writing.

To analyse all these points would go beyond the scope of this work. Some points pertaining more directly to grammatology – orthography, writing direction and punctuation – will be discussed in the following sections.[166]

1.3.4.1 Omission of nasals

The matter of the non-representation of nasals before homorganic obstruents was first discussed by Makaev 1965, 58 f. and is covered by Williams 1994, though the latter is more concerned with the question of whether the practice was due to phonetic analysis or to a spelling convention in Viking Age inscriptions. That the omission of nasals in certain positions in the older inscriptions is linguistically motivated – i.e. a consequence of the nasalisation of the preceding vowel – is considered communis opinio (Williams 1994, 217). Morris 1988, 126 f. claims that the omission of nasals has no basis in Germanic phonetics and therefore the practice must be an orthographic rule. Since a merely orthographic rule without a phonetic basis, he argues, would not have developed without a model, it must be an imitation of a corresponding practice in the source alphabet, viz. the Greek αβ. When assuming such a spelling convention, attestations of words with nasals written before homorganic obstruents can be interpreted as scribal errors which reflect the linguistic realities of the target language; when arguing for a phonetic basis, these spellings may be explained as the consequence of linguistic variation (Williams 1994, 221).

A tendency to omit nasals in certain positions can be observed in many scripts. Syllabic scripts for IE languages, awkward for writing consonant clusters in any case, have a tendency to skip inlauting syllable-final nasals, e.g. the Hittite, Linear B and Cypriote syl-

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involve magical motivations of some kind, but even when one regards the rune names as profane mnemonic devices, the connection between Runic and Greek letter names is tenuous. Also, while the rune names appear to go back to at least the 4th c. AD, it is not certain that they were introduced at the inception of the futhark. Meaningful letter names are also part of the Slavic and Ogam writing traditions, both apparently unconnected with any archaic writing traditions. While the question of the Ogam letter names and their doubtful cultic or magical significance is freighted, the Slavic names, possibly introduced by Constantine himself, appear to be a simple memory aid in the form of everyday words which form a series of short mnemonics.

[166] The angularity of the runes, which makes them superficially similar to the North Italic letters, has been added to the list of allegedly archaic features (Seebold 1991, 29 f.; Rix 1992, 414). Some scholars claim that a purely epigraphical writing culture cannot be derived from one which has progressed to writing on materials which are produced specifically for being written on (e.g. Odenstedt 1990, 146, 170 f.) This is connected to the question of whether epigraphical scripts may be derived from cursive variants (e.g. Williams 2004, 266).

labaries – see Woodard 1997, 74, who suggests a phonetic reason. Woodard connects the Cypriote Greek evidence with that in alphabetic Greek, viz. the occasional omission of syllable-final nasals, both auslauting, and inlauting before a stop.[167]

The phenomenon is best attested in Pamphylian, where it is almost exclusive and has a phonetic basis. In writing, the nasal character is omitted in medial position before homorganic stops (in all but two cases) and in the auslaut (with the possible exception of two cases before vocalic anlaut of the following word) (Brixhe 1976, 64). In the inlauting cases, the stop which follows the nasal is written with a letter for a more sonorant consonant when the nasal is omitted (e.g. *δ* instead of [*ν*]*τ*, *τ* instead of [*ν*]*θ* in Brixhe's examples). This, together with the apparent dependence on phonetic context in the auslauting cases, strongly suggests that the omission reflects a phonetic reality rather than a spelling convention. Brixhe concludes that auslauting *n* is lost and inlauting nasals before consonant are weakened (33); it is unclear whether the preceding vowel or the following consonant were at some point nasalised. These circumstances could obviously not provide a basis for an orthographic convention in Runic – not writing a nasal because there is no nasal is just regular spelling; unless the Germani studied historical Greek linguistics, there was nothing noticeable here.

In Attic, cases of the omission of a nasal character are generally assumed to reflect preconsonantal nasal weakening in vulgar speech, as they occur mostly in painted vase inscriptions rather than in engraved official ones – attestations from elsewhere are found mainly on curse tablets and magical papyri (Méndez Dosuna 2007, 361 f.).[168] Méndez Dosuna 2007 argues against this conclusion: nasal weakening is usually accompanied by nasalisation, which should be reflected in the spelling by more than the dropping of the segmental nasal marker (361. 366). More importantly, the non-Pamphylian evidence is scanty: only fourty-nine attestations from Attic. Méndez Dosuna interprets these omissions as spelling mistakes, citing examples of dropped nasals whose absence does not reflect ongoing sound change in informal writing of Spanish.[169]

Méndez Dosuna also points out that the Latin evidence for nasal omission before homorganic stop in the Pompeii inscriptions and in Visigothic inscriptions from Spain, which

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[167] The cluster *ns* was summarily simplified by elimination of *n* in most dialects.

[168] In Modern Greek, auslauting nasals have been dropped, but they are still present in the inlauting position before unvoiced stops (though they are in the course of being dropped) (Méndez Dosuna 2007, 358–361).

[169] Critical e.g. Hawkins 2012, 133–138; see also Wachter 2001, 234.

has also been taken to indicate nasal weakening, has left no trace in the respective descendants (362 f.). (Otherwise in Latin writing, *n* is sporadically omitted before *s* with nasalisation of the preceding vowel.) In both Oscan and Umbrian writing, nasals are omitted, but in different contexts. In Umbrian spelling, both *n* and *m* are frequently omitted before homorganic stops and fricatives (e.g. Um 1 **ustetu** *ostendu*, **kupifiatu** *combifiatu*, Va 6 **sis** *sins*), which is taken to indicate that nasals were not fully sounded in these positions (Buck 1979, 70). In Oscan texts, on the other hand, the nasal weakness concerns exclusively *n* in the sequence *ent*, regularly in the auslaut (e.g. Cp 24 **set** *sent*), but also in medial position (Cm 6 **aragetud** *aragentud*). Buck 1979, 71 points out that *n* in *ent* is always written in Umbrian; conversely, Oscan always spells out final *ns*, which in turn is often simplified to *s* in Umbrian. It is hard to argue phonetic reasons for these data.

Nasal suspension in European manuscripts is common practice, though this should probably be seen in the context of suffix abbreviation. Still, nasals in syllable-final position and/or consonant clusters lead a precarious existence in IE languages, as Méndez Dosuna says, in both language and writing ("the weakness of codas is not just articulatory" [2007, 367]). That they were not ultimately deleted in Germanic does not necessarily mean that they were not weakened at some point; yet even if there was no such intermittent phase of nasal weakening to explain the non-representation of nasals before homorganic stops in Runic, their omission appears to be to some extent intuitive. It is certainly not clear that the phenomenon requires a precedent in the source alphabet. In any case, while it is not unreasonable to suggest, as Morris does, that an orthographic rule in the source alphabet would find its way into the new script even when it has no phonetic basis there – cf. the universally pointless *kacriqu*-rule (see n. 117) –, the omission of nasals in writing was never an outright orthographic rule in Greek: it is either irregular or phonetically conditioned. Also, the Greek evidence includes omission of auslauting nasals, which is not found in Runic inscriptions.

1.3.4.2 Writing direction

Taylor 1979 was the first to derive the runes from a Greek αβ still in a phase of transition between boustrophedon and dextroverse writing, concluding that the borrowing happened in the 6th c. BC. Also Hempl 1896 and Elliott 1959, 6, to name just a few, exclude both alphabets and datings by pointing out the incongruity of fixed vs. variable writing direction. Antonsen 1996, 8 argues ontologically, claiming that children, when learning to write, get the orientation of individual letters wrong, but never consistently change the writing direction; that, consequently, turned letters, provided that they remain unambiguously identifiable, are natural, whereas changing the established writing direction of the model is not.

Wimmer 1887, 143–161 considers the writing direction to be irrelevant to the issue, adducing alphabet-historical evidence: in the pre-classical Greek αβ, the writing direction is variable, although the Phoenicians wrote exclusively sinistroverse. Inconsistency in writing direction, so Wimmer, is not an indication of a high age; boustrophedon writing is such an obvious technique that it can develop at any time (presumably with the inherent consequence of enabling also the previously unused writing direction on its own). Similarly, Quak 1996, 173 calls Antonsen's argument weak, claiming that writing direction is a matter of habit and a negligible factor for the Germanic learners. He adduces the example of a sinistroverse Latin inscription from Bonn (D). Moltke 1976, 26 f. quite specifically postulates that writing direction (and other archaic features, including letter names) is incidental, being peculiar to any "primitive" writing culture, and therefore does not have to be explained by a model of derivation.[170]

The North Semitic abjad variant used to write Phoenician is generally considered the model for the Greek αβ. Wimmer's assertion that this variant was only written sinistroverse is correct. It is assumed that the Greeks initially imitated the Phoenician writing direction, then began writing the first line sinistroverse, the rest of the text boustrophedon, which lead to a variable writing direction until dextroverse writing emerged as a standard in 6th-c. Athens. Jeffery 1990, 43, however, points out that the dating of the earliest Greek inscriptions is not sufficiently precise (or the inscriptions are simply not long enough) to allow a clear assessment of the situation. In any case, it seems clear that the Greeks abandoned the Phoenician rule for sinistroverse writing very early on.[171] From the perspective of runology, Wimmer's argument is weakened by the fact that the debate about the diagnostic relevance of writing direction is also conducted in Greek epigraphy. Cross 1989 turns the argument around and writes that in the Phoenician abjad, the direction of writing was only fixed by and by, and that the Greeks must have borrowed it before this standardisation – hence the variable direction in Greek. Cross' article, being an introductory chapter, does not provide a discussion, but it appears that his reason for claiming variable writing

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[170] Similarly Odenstedt 1990, 151 and 1991, 383 f.; Schulte 2015, 19.

[171] The early Greek inscriptions also have isolated retrograde letters equivalent to Wenderunen.

direction in Phoenician is in fact that this is the situation in Greek. Cross seems to be of Antonsen's camp in presuming that this feature in a new borrowed script must have been present in the model. Swiggers 1996b, 267, then, is with Wimmer and Moltke: he assumes that variable writing direction is typical of the earliest phase of a borrowed script and argues against the theory that, because of the incongruity between the Greek and Phoenician practice, the Greek αβ must be based not on the Phoenician abjad, but on the Proto-Canaanite script – a variant closely related to the Phoenician one, but multi-directional.[172]

Staying with the alphabet, it is hard to deny that tendencies and even rules in writing direction are subject to variation. The Etruscans followed the Greek example and wrote sinistroverse; yet for a short time around 600 BC, dextroverse writing was the norm in the Southern Etruscan cities Caere and Veii (Wallace 2008, 24). Dextroverse writing in Etruscan inscriptions in the late phase is due to influence from Latin, the Latin αβ having established an inviolable rule for dextroverse writing despite being based on the Etruscan (and Greek) αβ. The North Italic αβs tend toward sinistroverse writing, but are far from being consistent; boustrophedon writing (also rare in Etruscan) occurs infrequently. In some subcorpora (e.g. Magrè, see 2.5.7), they display a certain nonchalance toward the orientation of individual letters which is also lacking in the Etruscan αβ.[173]

Concerning Antonsen's attempt to draw conclusions from the comparison of phylogeny and ontogeny, it is not established that ontogeny mirrors phylogeny when it comes to the acquisition of literacy, and neither is it clear inhowfar it is important to distinguish between systematic learning in school and playful, unguided imitation (see Olofsson 2008). If one considers this approach viable, it does not actually support Antonsen's view. The observation of children before the phase in which they learn to write shows that they frequently perceive the direction of writing as arbitrary. In the case of the Latin αβ in modern Europe, the input is exclusively dextroverse, yet children, before and even while they are systematically and explicitly taught what the letters and texts are and are not supposed to look like, do not only turn individual letters and display a generally liberal handling of layout – they also change the orientation of entire texts, complete with mirroring of letters. Ex-

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[172] Swiggers 1996b, 269 makes a number of observations of the kind which are discussed in the present work concerning the reasons for and processes of the borrowing of script without providing argumentation.

[173] A non-alphabetic example for a change of writing direction is ʾPhags pa, which is written vertically rather than dextroverse like its Tibetan model (van der Kuijp 1996, 438); this may be due to influence from the Chinese script. On sporadic sinistroverse writing in India and the various explanations for it see Falk 1993, 216–218.

amples can be found in Hagland & Lorentzen 1997, 54–62 (B4, B6, and notably B8 written by a literate child). The lack of consistency in writing direction displayed in the earliest Runic testimonies has little force as an argument against a derivation of the futhark from a model with fixed writing direction.

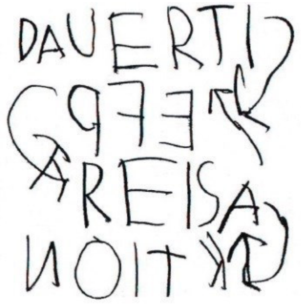

Fig. 10: Spontaneous boustrophedon writing (with exegetical arrows) in the copy of a dextroverse original, performed by a five-year-old without prior schooling (private source). The text reads DAUERTIEFPREIS-AKTION, copied from an advertising leaflet.

1.3.4.3 Interpunction

In keeping with his views on writing direction, Wimmer 1887, 167 f. considers the use of interpunction to be of minor importance, the use or omission of marks for word separation being an aesthetic decision left to the writer; again, the Greeks provide an example by failing to do as the Phoenicians did. The earliest Greek inscriptions do not or only sporadically feature interpunction; word separation begins to crop up more frequently during the 7th c. in certain areas (Jeffery 1990, 50),[174] but falls out of use in the 5th c. One of the few early inscriptions which does separate words is the Cup of Nestor (⁚), but archaic Etruscan inscriptions do not use interpuncts at all (Wallace 2008, 25). In Latin, on the other hand, word separation is used even in the earliest inscriptions, e.g. on the Fibula Praenestina (CIL I^2 3) MANIOS:MED:FHE:FHAKED:NUMASIOI and in the Forum inscription (CIL I^2 1; ⁚ and ⁝), but not consistently (scriptio continua e.g. in the Duenos inscription [CIL I^2 4] and on the Lapis Satricanus [CIL I^2 2832a]). The practice becomes standard quickly (in the form of a single punct) and lasts into the 2nd c. AD – Seneca points it out as a distinguishing feature from Greek writing (Wingo 1972, 15–17; Parkes 1992, 10). Scriptio continua makes a forceful comeback in Late Antiquity[175] and early mediaeval European

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[174] It is therefore unlikely that the concept of word separation reached alphabetic Greece via Mycenean writing, as suggested in Wingo 1972, 14, as interpunction in Linear B is even more prominent than in Phoenician.

[175] Saenger 1997, 9 f. links the dropping of word separation to the introduction of vowel characters, though why the reaction should have been so much delayed in Latin (where scriptio continua was introduced in imitation of Greek writing) is not made clear.

manuscripts. Eventually, word separation in the context of increasingly elaborate punctuation systems – probably conditioned by the shift to silent reading and the needs of non-native speakers (Parkes 1992, 1)[176] – was introduced on the British Isles and spread to Continental Europe, to be finally established in the age of printing. Notably, the Irish scribes who first separated words by spaces in the late 7th c. did not extend a marginal practice found in Latin manuscripts, but effectively reinvented interpunction (by space) based on the knowledge gained from the works of the ancient grammarians (Parkes 1992, 23 f.).

As for the Etruscan αβ, word separation only became common in Neo-Etruscan times, probably under the influence of Latin. In 6th-c. Veii, scribes in a writing school came up with syllabic punctuation (2.1.2). While it was initially thought that the notion of isolating CV-syllables must result from the acquaintance with a syllabary (e.g. Vetter 1936, 132 f.; Pfiffig 1963; Rix 1968), Prosdocimi 1983 (also 1990, 170–187) and Wachter 1986 agree that the system was entirely homemade and reflects a syllable-based teaching method (see also Justeson & Stephens 1993, 6). This has nothing to do with word separation per se,[177] but, in the context of the stability of punctuation conventions, it may be observed that syllabic punctuation was not a stable convention either. While the Veneti – who adopted the script and its conventions together with its entire context of cult and schooling system – kept the complex rules intact and even applied them more consistently than the Etruscans (Vetter 1935, 132; 1939, 159), the Venetoid Raetic inscriptions display a scaled-down version of syllabic punctuation, punctuating less in terms of which letters are marked, and also less consistently (2.5.8.2). This either is a consequence of script mixture (with influence from non-punctuating archaic Venetic/Etruscan varieties) or shows that orthographic rules which apply to the model script may be dropped. Arguably, this may be a secondary development within Raetic writing, but there are at this point no Raetic inscriptions with full Venetic syllabic punctuation. It seems simplicistic in light of the non-linear development of interpunction in the Mediterranean αβs to call the lack of consistency a primitive or proto-literate feature of the less sophisticated Raetic writing culture.

Ontogenetically, lack or inconsistent use of interpunction is clearly a proto-literate feature, as children first acquire segmental writing. They start by reproducing what they

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[176] See Saenger 1997 on the connection between word separation and silent reading.

[177] There are Etruscan inscriptions, though few, which have both word separation and syllabic punctuation (Rix 1968, 87).

hear; “Schreibungen, die sich der auditiven Wahrnehmung entziehen, wie [...] Wortzwischenräume, Worttrennung am Zeilenende oder Interpunktion werden nicht realisiert” (Bredel et al. 2011, 89). According to Küttel 2006, 385, children (learning modern Western alphabetic scripts) acquire the ability to separate words fairly early, but where scriptio continua does occur, it often concerns synsemantic words. Both in children’s writing and in scripts without consistent interpunction, one encounters the separation of larger semanic units rather than of words, in Runic inscriptions most frequently as *ek* ‘I’ not being separated from the name in inscriptions which do otherwise employ word separation (e.g. Horn A of Gallehus [KJ 43] **ekhlewagastiʀ : holtijaʀ : horna : tawido** ‘I, H., son of H., made the horn’ – the patronym *holtijaz*, which is also part of the agentive phrase, is separated).[178]

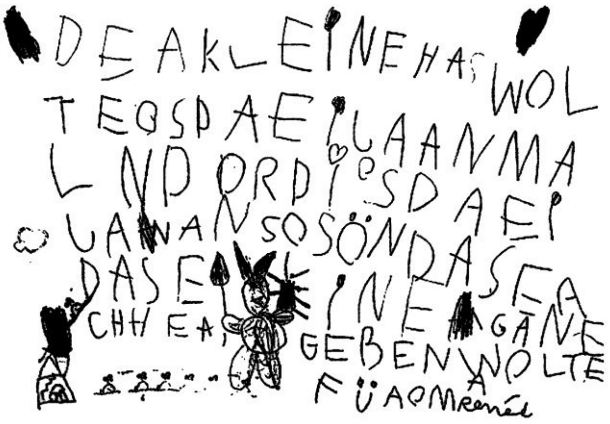

Fig. 11:Scriptio continua (and retrograde ‹J›) employed by a five-year-old (from Bredel et al. 2011, 87): DEA[ ]KLEINE[ ]HAS[ ]WOL | TE[ ]OSDAEIJA[ ]ANMA | LN[,]DOR[ ]DI[ ]OSDAEI | JA[ ]WAN[ ]SO[ ]SÖN[ ]DAS[ ]EA | DAS[ ]EINE[ ]GA[ ]NE | CH[ ]HEAGEBEN[ ]WOLTE[.] | FÜA[ ]OMA[ ]Renée

To summarise, the case for writing conventions which identify the Runic script as an archaic script (in the chronological sense) is rather weak. Circumstantial features of writing systems do appear to be subject to variation, innovation and indeed scribal preference to a much larger extent than the core features, viz. distinctive letter forms and values. Unless it can be shown that there is an uninterrupted tradition governing any one feature through its entire history from its first (explainable) emergence up to today or to its gradual abandonment in all branches (e.g. an identification of the origins of letter ligation, and the demonstration that wherever ligatures occur, they are inspired by models in the source alphabet), this feature cannot serve as an indicator for script relationship.

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[178] See also Saenger 1997, 6; Morris 1988, 137 f.

Especially for models which involve a creator, the issue of archaic circumstantial features again ties in with the question of how bound the creator feels to his source material in different contexts of borrowing, or how far his knowledge of the actual writing culture extends. The idea that circumstantial features are an intergral part of a writing system, and that characters and their values are not borrowed without the rules which govern their use, is only relevant to the praxis of borrowing if the borrower has access to these rules. Antonsen's model involves a sophisticated creator who was literate in the source alphabet and therefore well acquainted with its conventions of use. Contrast this with, for example, the model of Fairfax 2014, which involves transfer of letter shapes and grapheme–phoneme relationships via the Merkspruch only – Fairfax' creator of the runes had no access to documents from which he could have deduced writing conventions (Fairfax makes this point for the writing direction on p. 215).[179]

1.3.5. The evidence of absence

1.3.5.1 Runes on wood?

It has been pointed out (Derolez 1981, 19 f.; Heizmann 2010, 15 f.) that the number of preserved Runic inscriptions is so small in comparison with the output which would be expected even from a restricted, elitist writing culture that the documents cannot in fact be considered representative.[180] However, Bæksted 1952, 134 thinks that it should not be expected that the lost documents are unlike the ones which have come down to us.

Nevertheless, a still popular notion,[181] as so often going back to Wimmer (1887, 97–99),[182] is that the runes were created to be cut in wood – more precisely, wooden sticks cut

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[179] Cf. Wachter's theory for the creation of the Greek αβ and the failure of the Greek writers to adhere to Phoenician rules for writing direction.

[180] See also Thrane 1998, 221. This observation is of course true for many, if not most epigraphic corpora of ancient Europe. There are roughly four-hundred inscriptions written in the older futhark, spanning about six centuries. For comparison, large corpus languages like Etruscan and Iberian are attested much better, there being more than two-thousand Iberian inscriptions from ca. four centuries, and more than ten thousand Etruscan texts from more than six centuries. Less substantial, but also considerably larger than the Runic corpus is that of Celtiberian, containing around five-hundred inscriptions over only about two centuries (though this includes documents written in both the Iberian and the Latin script). On the other hand, there are corpora which are as small or even smaller than the older Runic one – the Cisalpine Celtic corpus contains about four-hundred inscriptions from ca. five centuries; Raetic is attested with about three-hundred texts over ca. four centuries – in both cases this count includes a host of para-script documents, so that the number of actual script documents is considerably smaller. Then again, the Runic script is spread over a much larger area than the latter two alphabets.

[181] See, e.g., Moltke 1981, 3; Antonsen 1982, 9 and 2002, 49; Odenstedt 1990, 158 f.; Rausing 1992, 203; Grønvik 2001, 50; Heizmann 2010, 16; Seebold 2011, 96; Fairfax 2014, 205 f.; dismissive e.g. Düwel 2008, 7 and Williams 1992, 200, the latter calling the reasoning circular.

from twigs. Wimmer's idea was that this could explain the typically angular Runic shapes, horizontal lines being bound to disappear in the grain of the wood.[183] The theory, ultimately not provable without appropriate finds, is supported by five arguments – one being that it can explain the scarcity of finds, wood being highly perishable. A writing culture which relies on predominantly wooden supports (for any kind of writing from spells to accounting) would be in grave danger of sinking forgotten into the depths of prehistory, save for the odd inscription on an object of use which happened to be made of metal. Inscriptions on wooden objects do survive – we have up to nine such testimonies written in the older futhark, three of them from the early moor finds, e.g. on the plane from Illerup – arguably a special environment in which wood is preserved well, as in Bergen (below). All but one are written on wooden objects of use (handles, planes, a little chest, a stool), and many, as pointed out by Williams 1994, 200, include runes with rounded elements. It must be remembered, however, that the wood theory refers specifically to rune sticks of the Bergen type with a lengthwise grain, not to any wooden support which may make different technical demands. The only potentially archaic rune stick was found in Frøslev (DK) in – arguably – the context of a cremation grave; if this is correct, it can be dated by its context to the Roman Imperial Age. Epigraphically, the inscription might as well be written in the younger futhark (KJ 36).

Another indication that wood as a writing material was more common than is reflected in the preserved material is given by the mediaeval finds from the Bergen harbour (N). The over six-hundred finds, dated to the 12th–15th c., are mainly rúnakefli, i.e. wooden sticks of about 10–15 cm in length, worked to provide four plane sides for writing. The inscriptions include a wide variety of texts "vom Sakrament bis zum Exkrement" (as succinctly put by Düwel 2008, 157), including prayers, spells, saucy Latin poetry, private and commercial letters, price tags and shopping lists. The objects are preserved due to the unique circumstances in the harbour area (Bryggen), which burned down repeatedly, providing a milieu which preseved organic material; it may therefore be speculated that, unless Bergen was a mediaeval oasis of high culture and literacy amid a desert of Runic ignorance, a host of kefli from all over Scandinavia is lost to us. Whether this conclusion can be made all the way back to the earliest phases of Runic writing – at least a millennium earlier – is of course debatable.

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[182] Before Wimmer, similar observations were made by Bredsdorff 1822, 8 and Weinhold 1856, 415.

[183] A curious early variant of the wood theory was advanced by Meyer 1896 and Schirmeisen 1911, who assumed that, initially, the runes were not so much cut in wood as made out of it: the lot twigs themselves (see on Tacitus below) were chosen for being shaped like runes, which (if nothing else) would serve to explain the absence of curves.

The term *kefli* ‘stick’ itself is only attested in Icelandic sources from the 13th c.; its age in connection with Runic writing cannot be determined with certainty. The same applies to ON *stafr* ‘stave, letter’, which as a simplex is only known from the North Germanic tradition. OHG *rūnstab* and OE *rūnstæf*, according to Kuhn 1938, 56, were formed in opposition to *bōkstæf* to distinguish between Runic and Latin letters,[184] which indicates the use of the simplex for ‘(Runic) letter’ also in West Germanic. However, the word does not appear to have corresponding semantics in Gothic (Kuhn 1938, 56). In the older Runic inscriptions, the word *stafr* can be shown to designate the Runic letter (e.g. on the Gummarp stone [KJ 95] **(h)AþuwolAfA[| sAte | (s)tA(b)Aþr(i)a | fff** ‘H. set down three staves: fff’), but later it appears to refer to the inscribed object.[185] The precise semantic scope of the word and its relation with *kefli* is unclear, but both words connect the runes with wood. See Kuhn 1938, 67–70 – cautiously – on the further connection with lot sticks, which brings us to the fourth argument frequently adduced for wood as the original Runic support.

At the end of the 1st c. AD, Tacitus furnishes information about the practice of divination among the Germani:

> *auspicia sortesque ut qui maxime observant. sortium consuetudo simplex: virgam frugiferae arbori decisam in surculos amputant, eosque notis quibusdam discretos super candidam vestem temere ac fortuito spargunt; mox, si publice consuletur, sacerdos civitatis, sin privatim, ipse pater familiae, precatus deos caelumque suspiciens, ter singulos tollit, sublatos secundum impressam ante notam interpretatur; si prohibuerunt, nulla de eadem re in eundem diem consultatio; sin permissum, auspiciorum adhuc fides exigitur.* (Germania X)

> ‘Augury and divination by lot they observe most diligently. The practice of the lots is simple: they chop a twig cut from a fruit-bearing tree into splinters, and these, distinguished by certain marks, they scatter randomly as it happens over a white sheet; then – if counsel is held in public, the priest of the community, if it is private, the father of the family himself – praying to the gods and looking toward heaven picks up three individually, which, when lifted, he interprets according to the marks previously impressed; if they forbid, no more counsel about this matter on the same day; if they are permissive, the confirmation of augury is still required.’

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[184] Ebel 1963, 88 assumes that the composite with *bōk-* is Anglo-Saxon and reached the continent with the missionaries. The word *bōk-* itself, though problematic, has no ligneous relations, being unconnected with the *beech*-word (Kuhn 1938, 59–61). On a possible connection with Skt. *bhāgá-* ‘lot’, ‘fate’ see Mees 2006, 215–217 with literature.

[185] Attestations in Ebel 1963, 87–92. See also Seebold in EWDS, 111 s.v. *Buch* and *Buchstabe*, who asserts that *stafr* etc. refers to the writing material, not the “stave” of the individual runes (in detail Seebold 1981, 290–292).

It has been argued that the *notae* which mark the lots are Begriffsrunen – runes used logographically, representing their names – in which case Tacitus would testify to runes being inscribed on sticks of wood in the 1st c. AD.[186] While rune names like **jēran* 'good year' and **haglaz* 'hail' seem suggestive in this context, a more complex symbolic framework would have to be assumed for the less obviously relevant concepts like **algiz* 'elk'. The use of *interpretatur* may indicate a necessity to be able to read and explain a message which is conveyed through metaphors like **fehu* 'cattle' for 'wealth' (cf. the three ᚠs on the Gummarp stone – a spell for prosperity?) or **ūruz* 'aurochs' for 'strength'. On the other hand, if the result was either forbidding or permissive, the marks may have simply been signs for "yea" or "nay" (so that picking up three would guarantee an unambiguous result).[187] It cannot be conclusively shown that the *notae* have anything to do with runes. In any case, the logic of a continuity from runes used as logograms on lot sticks to secular language-encoding inscriptions on worked wooden sticks is not evident.

The fifth argument is also based on a comment made by a literary source – this one later, but less difficult to interpret. In the 6th c., the Merovingian court poet Venantius Fortunatus, biographer of the Thuringian princess Radegunde (Seebold 1986, 528) observed that

> *barbara fraxineis pingatur rhuna tabellis*
> *quodque papyrus agit virgula plana valet* (Carmina VII 18, 19 f.)
>
> 'The foreign rune is inscribed on ashen tablets[188]
> and for what the papyrus does, the plane stick [or twig?] can serve.'

While statements made by foreigners in poems must not necessarily be trusted, it is hard to argue that Venantius conjured up the notion of runes carved on wooden sticks out of thin air. As documented by the Vindolanda finds, wooden tablets, as mentioned in the first line, were used in the Roman military, but the phrase *virgula plana* is decidedly reminiscent of

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[186] See Mees 2006, 208–210 for a summary of the research history.

[187] Mentz 1937, by examining the use of the word *nota* in Isidore, Suetonius and Probus, tries to show that Tacitus must have meant notae publicae/vulgares, i.e. the publicly used acronyms, which he takes to indicate the acronymic rune names. See also Much 1967, 191 f.; Mees 2006, 210–218; Mees 1999, 146, as well as Seebold 1986, 537 on how to imagine the practice of drawing lots with runes which represent their names and 554–571 on the evidence for and connections between Germanic and Mediterranean oracular practices involving script. See Mees 1999, 148 on evidence for such practices among the Celts.

[188] Seebold 1986, 528 translates *tabellis* 'letter [missive]' [sic].

the rúnakefli with their evened sides, whose existence – and on the continent no less – can therefore be inferred for at least the 6th c., i.e. a time from which none are preserved.

The use of runes is referred to frequently in the mediaeval sources of Scandinavia, see Düwel 2008, 203–207. Wood being used specifically as writing material, as opposed to inscriptions on objects which happen to be wooden, is for example mentioned by Saxo Grammaticus in the *Gesta Danorum* (toward the end of book 3): the story of Amleth features *literas ligno insculptas* 'letters engraved in wood' which are erased by scraping off the uppermost layer of wood and replaced by a different message. For further references to Runic missives, also two more problematic early ones, see Seebold 1986, 527–529.[189]

The stance taken on the tenability of the wood theory has an immediate bearing on the dating and localisation of the emergence of the Runic script. Lost inscriptions on perishable materials can account for postulated gaps in the record – that is, a diachronic gap between the oldest attested inscriptions and an earlier time of borrowing, as well as a geographical gap between the findplaces of those inscriptions and a reconstructed place of borrowing. The two frequently go hand in hand, e.g. in Antonsen's Greek model and notably in the case of North Italic models, the North Italic αβs not being attested farther north than the Bavarian Alpine foreland and no later than about the beginning of the Christian era. Numerous scholars adhering to different theories – e.g. Krause 1937a, 293 and Odenstedt 1990 (passim) – have used the wood theory to predate the creation or emergence of the Runic script. Askeberg 1944, 83 belongs to those who have rejected this approach – he points out that the similarly angular North Italic characters were scratched in metal and that the rune shapes could thus not be explained as determined by wood as primary writing material.[190]

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[189] The situation is similar for Ogam: mediaeval literary references whose reliability is debatable indicate that Ogam was originally used to write short messages on twigs and wooden sticks. According to McManus 1991, 11–14, it is now assumed that the Ogam system combines the alphabetic fixation of language (known from the Latin alphabet) with notation strategies borrowed from number writing, the latter aspect providing a connection with such wooden supports via tally sticks.

[190] While wood is indeed very rare as a support in the North Italic corpora, the situation is ultimately no different from the Runic one: we cannot exclude that large numbers of documents on wood have perished, and that our records are unrepresentative. That North Italic writing culture is tied to metal and stone seems obvious (cf. Williams 1997, 184; Scardigli 1993, 221); however, the find situation concerning votives is sometimes pointed out to be unrepresentative in absence of much of the organic material (including wood, but also fabric, leather and wax; Gleirscher et al. 2002, 199 f.). See also Prosdocimi 2002, 32–35 on the situation in the Venetic Baratella sanctuary, where the existence of a writing school is documented only thanks to votive imitations of writing tablets in bronze, while not a single wooden tablet is preserved.

1.3.5.2 Argumentum ex silentio

While the recourse to the wood theory allows for larger time spans without attestations, it is not absolutely necessary for postulating gaps between emergence and first testimonies – there is a robust tradition of making educated guesses about how much time may be expected to pass on average between borrowing and first testimony. It is based on the observation that, in light of the comparatively sparse documentation of epigraphically attested languages, one must not take the first document preserved as the first one written. Arntz 1935a was so sure of the matter that the following observation made it into his table of contents: "Die ältesten Denkmäler sind nie so alt wie das Alphabet selbst" (XIII). Taylor 1879, 14 f. elaborates on the method, claiming that if evolutionary biologists can make an informed estimation about the time which elapsed in the development from hipparion to horse, grammatologists can do the same for scripts. Yet the extent of the postulated gap, as may be expected, is highly variable. Taylor himself posits at least four-hundred years for the Runic script. Luft 1898, 10–13 reckons backward from Wulfila (assuming that he knew runes), calculating a hundred years for the runes to get established among the Goths, and another two hundred to allow for them to make their way from the south-western to the eastern Germanic area. This lands him around the beginning of the 1st c. AD; rejecting the wood theory (5–10), he explains the absence of finds with only sporadic use of writing. A time span of about a hundred years is judged appropriate by, e.g., Hammarström 1930, 15 f. and Krause 1966, 6 (also Krause 1970, 32). Moltke 1976, 19. 54 reckons with roughly two-hundred years based on the comparison with other emerging alphabets; he observes that factoring in such a gap (specifically the time span of about two centuries) is "common practice" and "a sort of safety valve" (1981, 7).[191]

Accordingly, there is no uniformity to what is considered "long" and "too long" in this context. Askeberg 1944, 74–77 argues for a preparatory period of a couple of generations and considers this a short time (holding that the early Runic inscriptions could not be testimonies of an evolved writing culture). A similar result is reached by Odenstedt 1990, 168, but with opposite reasoning: presupposing a systematic creation with an initially uniform result, Odenstedt concludes from the formal variation in the earliest testimonies that the undocumented phase of development was "comparatively long" – by this, he means rather less than one or two centuries. Barnes 2012, 3 considers "a hundred years or so" to be a

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[191] See also Mentz 1937, 194; Kabell 1967, 103 f.; Marchese 1981, 24; Seebold 1986, 555; Rix 1992, 438 f., Rüger 1998, 358.

“[c]areful” estimate. Williams 1996, 213 somewhat randomly assumes “some time around the birth of Christ, give or take a century or so” – though expressly as a working hypothesis – but has changed his mind by 1997: calling the necessity for assuming such a phase “evident” (179), he observes that he fails to see a reason for expecting one of any notable length. His result is a time of borrowing in the middle of the 2nd c.[192] Haas 1965, whose model involves runes created for magical purposes from Venetic, dates the borrowing to ca. 100 BC (236) – considering this a “«mittleren Wert» zwischen extremen Schätzungen” – and justifies the lack of early finds from southern Germania by claiming that (alphabet) magic was punishable by death in the provinces, wherefore the practice only flourished once it had reached Germania libera (217). Düwel 2003, 579 points out that the necessity to explain chronological and geographical gaps results in “notgedrungen angreifbare[n] Konstruktionen” – this caveat appears to be adressed only to gaps which he considers unreasonably big. Similarly, Fairfax 2014, 174 finds it “reasonable to assume that a number of decades would pass between the invention of a script and its first attestation” (see also 187 and 189), but agrees with Düwel that “the longer the findless period, the more unlikely the theoretical timeframe becomes” – he draws the line at “around four hundred years”, a longer gap being “excessive” (174).

Bugge 1913, 95, Antonsen 1982, 5 and Grønvik 2001, 26 f. expressly criticise the practice of randomly reckoning with a leadtime of widely arbitrary length. In the same vein, Heizmann 2010 observes: “Letztlich ist das eine Art Freibrief, eine beliebige Zahl, die gerade ins eigene Konzept passt, einzusetzen” (17).[193] Indeed, seeing as even the earliest period of attestation yields a fair amount of finds (as observed by Williams 1997, 179), it is not clear why this abrupt wealth of testimonies should not be considered the immediate consequence of the borrowing. The critics are right insofar as any one random estimate is as useful as the other.

It was Carpenter 1933, concerned with the Greek αβ, who introduced the argumentum ex silentio from historical studies into epigraphy – the term is, in my opinion, not ideal. While, in both fields, the sources can be said to be silent, the context in historical studies is more specific, referring to a particular source failing to refer to an event it would be expected to mention, and the question of whether this serves as evidence that the event did

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[192] See also Rausing 1992, 202.

[193] Heizmann specifically cites Antonsen as an example, disregarding the fact that Antonsen’s own very early date for the creation of the runes is not based on informed estimation, but motivated linguistically and grammatologically.

not happen. In epigraphy, we are dealing with the absence of evidence as evidence of absence in its wider sense. This is not the place for an in-depth methodological discussion of the argumentum ad ignorantiam – the assumption that something (the non-existence of runes) is true because it has not yet been proven false (by the appearance of finds) – and the validity of the evidence of absence – allowing the drawing of conclusions from an absence of positive data – as the scope of these logical problems is much bigger than that of the present work. Even in the context of historical studies, the usefulness of the argumentum ex silentio is debated and must be assessed for each case individually. It is also the prerogative of any scholar to accept this kind of approach or not. That it is logically fallacious does not mean that anything goes – we do not act on the assumption that some script or other was used throughout Europe before the coming of the alphabet on basis of the fact that its absence cannot be positively demonstrated.

Carpenter, pointing out that, for Greek, new finds appear regularly, but fail consistently to be older than the oldest known ones, observes that "the argument ex silentio grows every year more formidable, and more conclusive. A negative argument is not valueless if the negative is universal." (1933, 27) This oft-cited statement is reasonable enough, and, as far as I know, still holds true for Greek.[194] For Runic, the Meldorf fibula plays a major part in the discussion. The claim of Morris 1988 that "older and older inscriptions are found" (157) and "[w]ith each new Runic find, our dating of the birth of the runes must be pushed further back in time" (150) is motivated by his acceptance of the Meldorf fibula as Runic (47), following Antonsen (in a letter to Miller 1994, 64). The same goes for Mees 1999, 149, whose interpretation of the fibula leads him to think that "continued archaeological field work pushes the date of the adoption of the runes further back". Markey 2001, 84 claims that between the (questionable testimony of the) Meldorf fibula and the (highly dubious)[195] "Noric" finds from the Magdalensberg, the gap between North Italic and Runic shrinks to nothing. While the fibula's evidentiary value is low, the Frienstedt comb (1.1.5) is a case in point: frequent references in the literature made to the absence of evidence for continental runes before the 6th c. (e.g. Odenstedt 1990, 150) are made obsolete by the 2011 find.

The comparison with other emergences of alphabets (especially such as are not referred to by literary sources) is not helpful in this case – our knowledge of this aspect is much too

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[194] New inscriptions on potsherds were only recently found in Methoni, but are no older than 730 BC (Μπέσιος et al. 2012, 556).

[195] See Stifter 2009, 363–367.

vague to allow for the drawing of statistical conclusions. A possible unattested existence of writing for a considerable time prior to the earliest testimonies is discussed, for example, for the Indic scripts. Regarding the first attestation on the Aśokan stelae, the situation is similar to the Old Persian one in that the first documents are proclamations made by a historical ruler. While for OP cuneiform, a one-off creation of the script has always been the starting point of argumentation because of Darius' own claims of script creation (but see 1.3.2.3), Aśoka's edicts make no meta-reference to the scripts in which they are written. Some scholars have ascribed the creation of one or both scripts to Aśoka himself or his scribes – see Falk 1993, 162–165, affirmative and with arguments for the scripts being no older than the Aśokan testimonies (e.g. the quick development of Brāhmī during Aśoka's time and the fact that the edicts refer to a proclamation of the texts rather than to reading or copying, which suggests restricted literacy).

On the other hand, there is a school of thought which denies the possibility that the large Vedic and grammarian text corpus (especially Pāṇini's grammar) could have been passed down orally (see Bronkhorst 2002, 798–808 with literature). This position is hard to argue conclusively; putative evidence for a writing tradition prior to the time of Aśoka, including archaeological finds as well as literary references by vernacular and Greek sources, is inconclusive (Salomon 1998, 11–13). For example, Pāṇini, datable to the mid-4th c. BC at the latest, makes reference to scribes (*lipikara*, Aṣṭādhyāyī 3.2.21), but this may well refer to foreigners, probably Aramaic scribes (von Hinüber 1990, 58; Falk 1993, 258). There is, however, epigraphic material in the form of a group of potsherds, inscribed with proper names, from Anurādhapura (Sri Lanka), which appear to come from strata ^{14}C-dated to the early 4th c. BC at the latest (Salomon 1998, 12). Also, the existence of a "fully fledged writing system [...] available for Aśoka to use" (Norman 1988, 14 f.) as well as alleged graphical variants in the Aśokan inscriptions (Norman 1993, 279) have been used as arguments for a somewhat higher age of the scripts. Norman 1993, 279 explains the absence of older testimonies, much like his runological colleagues, to their being mere administrative records written on perishable supports, assuming that the Aśokan imperial stelae owe their existence to inspiration from Achaemenian monumental inscriptions.[196] Salomon 1998, 13 f. is inclined to accept an emergence of both Indic scripts in the 5th or 4th c. BC, suggesting a scenario with which we are by now well acquainted, viz. that older, rather unsophisticated systems were "revised and standardized" to make a ""national" script, developed under Aśoka for purposes of governing his vast pan-Indian empire" (14).

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[196] He pertinently points out that Aramaic documents are also unattested in pre-Mauryan times.

The precise age of the Greek αβ, despite Carpenter's assertions, is also still under discussion, and even for later borrowings of writing we lack definitive data on the exact amount of time which elapsed between the acquaintance with script, its immediate or gradual transfer and the appearance of the first testimonies – rough estimates do nothing for a scale of options like the one outlined above. For the Greek αβ, Jeffery 1990, 18 observes that it would be bold to assume that the Greeks should have refrained from inscribing even their pottery for as long as one or two centuries; correspondingly, even if one accepts the wood theory for the Runic script, one should expect that at least one odd lancehead was preserved from a time when writing on wood was general practice.

Conversely, Brixhe 2007, 279 is of the opinion that both the Greek and the Phrygian writing cultures are older than their first documentation; he cites the Mycenean script as an example for one whose attestation is dependent on chance, the preserved clay tablets being those which happened to be hardened in palace fires. A similar point is made for numerous other scripts. For example, Cooper 2004, 72 explains the difference in early text types between Mesopotamia and Egypt with the writing material, administrative records being written on "virtually indistructible" clay in cuneiform tradition, while corresponding Egyptian documents perished with the papyrus they were presumably written on. Houston 2004b, 300, concerning Mayan writing, suspects that a "large part" of the texts were written on, e.g., palm leaves; wooden supports are, as in Runic, sporadically preserved under special conditions and point to "a vanished corpus of similar texts". See also Bagley 2004, 190. 217 f. 245 (n. 69) on the earliest Chinese documents, where characters on bone and bronze imitate a cursive brush ductus of which there is no material evidence. In these cases, considerations concerning the materiality of writing supports do not merely motivate gaps in the evidence, they justify the assumption that these gaps are not due to chance and will not be closed in time simply by the increase of finds from archaeological excavations. Here, Carpenter's universal negative is considered non-significant.

1.3.6 The cultural gradient

I shall deal with the matter of cultural predominance as an argument in the Runic origin debate very shortly, both because it is not used often and because it is a bit fatuous. In reference to the North Italic theory, it has sometimes been stated by scholars that the notion of the Germani borrowing a script from a writing culture which happens not to be in the focus of ancient history is not credible. Askeberg 1944 ridicules Hammarström's version of the North Italic theory, which leaves out Marstrander's Celtic intermediary and includes the Raetic and Venetic αβs, saying that the creator of the runes must have been "en vittberest man", who had "genomströvat de otillgängliga alptrakterna från väster till öster" without ever descending into the Padan plain or going to Rome, and learned to write from "bergsmän, bönder, herdar och stigmän" (62). Odenstedt 1990, 150, heavily indebted to Askeberg, observes that

> "the idea that some obscure, culturally stagnating tribes in the Alp regions (some of whom did not even speak an Indo-European language) provided the inventor(s) of the *futhark* with the impulse to create the new script is absurd",

referring to the North Italic scripts as "insignificant alphabets in the Alps" (152). Similarly, Rausing 1992, 201 speaks of "conservative mountaineers in some forgotten valleys in the southern Alps", Grønvik 2001, 11 of an "isoliertes und rückständiges Alpenvolk", Barnes 2012, 11 of "small groups of mountain dwellers". Indeed, Marstrander 1928, 100 himself excludes the Raeti on the grounds that they resided in "isolerte fjelddaler" – being a celticist, he finds a Celtic writing culture as a source of civilisational technologies more credible that one he knows little about, much like the nordists are inclined to summarily discount anything that is not a classical culture of Antiquity. Fairfax 2014, 177 combines the two points of view, stating – though rather less flippantly than most of the above-mentioned scholars – that

> "[i]t seems most unlikely that a would-be adapter would have chosen as his source a marginal alphabet in serious decline, one, moreover, used to represent a shrinking minority language, when the more prestigious Latin alphabet – the script associated with the language of Roman government, army, law, and doubtless much trade in the Italian peninsula and even beyond – was current and indeed toted throughout all Roman-occupied lands",

only to eventually derive the runes from the Graeco-Gaulish script via a single Gaulish informant.

Disregarding the good reputation enjoyed by the Gauls concerning their civilisational relevance in Imperial-Age Europe (which ultimately goes back to Caesar's tendentious accounts in *De Bello Gallico*), the argument strikes me as void and pointless. Without even going into the issue of defining cultures and the difficulties involved in identifying groups which would have been recognised as such at the time by members and/or outsiders, it seems obvious that we have little grounds on which to judge Germania's opinion of the Alpine area's cultural appeal – much less the viewpoint of any one particular tribe or even person of unknown occupation and background. Of course literate cultures tend historically to be prestige cultures, dominant politically and militarily, and consequently to take the position of donors in the Kulturstrom which necessarily ensues in contact with less advanced cultural entities. The vast majority of cases of script transfer involves a writing culture which is also more developed in other areas and a preliterate group which stands in some kind of political and cultural dependency. This does not mean that such a constellation is a precondition of script transfer. In fact, we must be wary of a vicious circle, deducing that script is always borrowed from a culturally dominant group when our main reason for regarding a group as culturally dominant is the fact that it possessed and passed on the technology of writing. Also, specific contexts for the transfer may render the overall dominance of the Latin αβ irrelevant or even turn it into a counter-argument – cf. Scardigli 1994, 176, who suggests that the North Italic writing culture was chosen as a model for Runic writing specifically to introduce an archaising/mystifying element in contrast to Roman writing, which was associated with a politically threatening power. It must also be observed that, unless we do indeed lack the majority of documents (1.3.5), the prestigious Latin script's wide scope of application left little trace in early Runic writing (Barnes 2012, 11) – if the Germani had been that impressed with the superiority of the literate culture's political and military organisation, art, etc., one might have expected them to have found more to do with their own letters than to inscribe fanciful names on weapons.

In short, having or not having the technology of writing creates a cultural gradient between two groups, even if only in this one respect. Technologies, when they are recognised to be useful or even just interesting, may be actively adopted – they do not have to, as it were, "fall down" from a generally superior level of civilisational development. Compare Rix 1992, 416:

> "Zweifellos bedeutet die Übernahme der Schrift die Anerkennung einer gewissen kulturellen Überlegenheit des Schriftgebers, die eben im Besitz der Schrift bestand; doch in dieser Hinsicht waren die norditalischen Völker den Germanen ebenso überlegen wie die Römer, und die Vorstellung, daß die Germanen vor der Übernahme der Runen Überlegungen über die politisch-militärische Bedeutung der schriftbesitzenden Völker angestellt hätten, scheint mir absurd."

These considerations are even more relevant, again, when one prefers to think of a single creator. The existence of such a person, as we have seen in some of the previous chapters, introduces an element of randomness not only into the matter of individual letter derivations, but also into issues of context.

1.3.7 Conclusions

I hope to have shown that the attempt to support models for the origin of the runes with examples from alphabet or script history is fraught with difficulties. The hermeneutic spiral is an unescapable reality of humanistic method and our theory-building must start somewhere, but premises which are not sufficiently backed by evidence should at most be adduced as additional support to an argument, they should not form its basis – the more important a premise such as "all scripts are created by single inventors" or "the runes were made to be cut in wood" is to the functioning of a model, the more tenuous is its relevance in the field, as any colleague is justified to differ and to reject the entire model together with its premise. To quote one of runology's tireless advocates of methodology: "I cannot see the value in throwing out ideas which are unlikely to persuade anyone who regards them with even a half-critical eye" (Barnes 1994, 12). Indeed, the sheer mass of literature on the origin of the runes is to some extent due to the fact that many contributions consist in scholars registering their opinion on various aspects of the matter, rather than in genuine efforts to argue a specific point to colleagues who hold a different view. "We should abjure ideas and interpretations that only have the power to convince those who want to believe them" (Barnes 1994, 26). In respect to the issues discussed in the present work, "those who want to believe them" means those who happen to take the same stance on certain points which cannot (at this time) be conclusively demonstrated, like the relevance of writing direction to the problem. I agree with Barnes in that I think that, rather than building a model on a basic assumption which cannot be argued, we should "freely admit the limits of our knowledge" (Barnes 1994, 26).

In my opinion, stances taken on any of the issues discussed above do not serve to decide questions of Runic origin; this includes a categorical rejection of the North Italic theory. Gaps in space and time are relative. The standard estimation for a findless period of about one- or two-hundred years for the futhark is essentially unfounded and more random than, say, Antonsen's extreme, but extensively argued seven-hundred year gap. There are numerous writing cultures in which large parts of especially the early documentation are considered to be (sometimes even irretrievably) missing. While it is up to each scholar whether they want to factor in the potential loss of incalculable numbers of testimonies on wooden sticks or whether they find such considerations futile, the wood theory does provide an argument for the assumption of a gap in the documentation. There seems to me to be a certain inconsistency, exemplified by Moltke, in allowing for a findless period, but at the same time assuming that the sites of the earliest finds must be the same as the place of emergence. Moltke's insistence that the runes are a "Danish" invention because that is where the bog finds are from conflicts with his two-hundred-year gap. Cf. also Barnes 2012, 9 f., who, in his list of what he considers fairly well established reference points for the origin-question, observes that "it would be something of a coincidence if the oldest extant examples were the first to be made" and that it is therefore "common to place the creation of the runes at some time between the birth of Christ and the first half of the second century AD", and at the same time considers Southern Scandinavia "the cradle of Runic writing". A gap is a gap – I would argue that, in the course of two-hundred years, the knowledge of writing could have travelled to Southern Scandinavia from far, and the absence of finds which testify to its advance should be no more surprising than their lack on the spot.

If there was no purpose- and wilful creator of the futhark, we cannot dispense with letter derivations and the search for consistent correlations on the graphematic and orthographic level; a search which has proved fruitful, though not (yet) conclusive, in the area of the North Italic alphabets. If, as often and with good reason assumed, there was such a rune master, it would still be a singular move, in my view, to sweepingly resign the possibility of a fully comprehensible development. As concerns the matter of source eclecticism, I do not think it can be discounted in either circumstance, whether one chooses to involve a hypothetical unattested intermediate alphabet or not. Indeed, it seems to me that the notion of a sophisticated creator who has a specific idea of what he wants to create, and maybe even a political agenda, renders the option particularly relevant. However, as said in the respective section, the concept of a cherry-picking creator does not legitimise a cherry-picking scholar. Alphabets which incorporate letters from different models in a comprehensible manner are attested, but one can observe tendencies in various philologies to replace (often older) theories which explain alphabets as mixtures of models with theories which involve only one model. I suspect that this is frequently a reaction to lack of stringency in the argumentation of script mixture.

In order to be able to argue individual letter derivations, possible script mixture and adoption of orthographic rules etc. in a manner which is, if not a hundred percent compelling, then at least consistent, it is necessary to have maximally detailed information about the selection of available models and their respective characteristics – including character inventories, grapheme–phoneme relationships, orthography, and the contexts of script use. The alphabetic landscape of the Mediterranean is considerably more fragmented than is suggested by the terms with which we commonly refer to its larger sections; that two alphabet variants are superficially similar and are used to write the same language does not mean that they could not exist as systems independent from each other. So, after part one was dedicated to the "cultivation of the subjunctive" (Barnes 2013, 16), part two will be concerned with a detailed material-based examination of one of the North Italic corpora.

2. Raetic[197]

2.1. The North Italic alphabets[198]

2.1.1. Transmission of the alphabet to Italy

In the 8th c. BC, the island of Pithekoussai (modern Ischia) off the coast of Campania was colonised by Greeks from Euboia. While it is not quite clear whether the settlement was a proper colony or just a trading post, it spawned the foundation of Kyme around the middle of the 8th c. on mainland Italy. Pithekoussai itself seems to have lost importance at the turn of the century. The alphabet used by the colonists was that of the Euboic mother-cities Chalkis und Eretria. As detailed in section 1.3.2.6, the acquisition of their script by the Etruscans was not a long time coming.

2.1.1.1 The Etruscan alphabet

Etruscan had a plosive system consisting of two rows, written with the Greek characters for the unvoiced unaspirated (pi, tau, kappa [/gamma/qoppa]) and unvoiced aspirated (phi, theta, chi) rows. A phonetic realisation very much like the Greek is communis opinio among Etruscologists (Wallace 2008, 30 f.). In any case, the obsolete characters for the voiced stops dropped out – all except gamma, which together with kappa and qoppa became part of a curious orthographic rule for writing allophones in Central/Southern Etruria (see n. 117; the north initially used only kappa) and only by and by replaced both the other characters as the exclusive one for the velar stop. Due to the lack of a phoneme /o/ in Etruscan, omikron fell away. In the 6th c., an additional character 8 was created for /f/, after a phase of writing the sound with a digraph ‹vh› or ‹hv›, and added to the end of the row. As concerns the writing of sibilants, a certain confusion on the part of the Greeks (Jeffery 1990, 25–28; Swiggers 1996b, 266 f.) appears to have been propagated to the Etruscans: the Etruscan language had – apart from a dental affricate written with zeta – two sibilants /s/ and /ś/ (probably [ʃ]) which were written with sigma and san – in the south sigma for /s/, san for /ś/, the other way round in the north.[199] In the southern cities Caere

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[197] Some of the sections of this chapter are reworked and extended versions of my texts published in TIR.

[198] See appendix I for a map of the find places of North Italic inscriptions (including Etruscan inscriptions from the Padan plain).

[199] Agostiniani 1992, 43 suggests that sigma was originally used for both sibilants; in the south, sigma continued to be used for the more frequent dental sibilant, while san, a lettre morte in the Greek alphabet of Pithekoussai, was introduced for the rarer palatal sibilant. In the north, various palatalisation processes increased the frequency of the palatal sibilants, thus also [s] > [ʃ] in the letter name *sigma*, so that sigma was allocated to write the palatal and san was preferred for the dental. Agostiniani also considers the

und Veii, where a number of divergences from general Etruscan writing practice can be observed over the course of time, sigma with more than three strokes appears instead of san. At Cortona, at a later stage, a (probably) long *e* was consistently written with retrograde E (Eichner 2006b, 218).

In the early phase, the writing direction is not fixed; from around 600 BC onward Etruscan inscriptions are generally sinistroverse, until Latin influence triggers a switch to dextroverse writing in the 1st c. BC. Unlike in Greek practice, boustrophedon writing is rare. The archaic Etruscan texts often dispense with word separation, which only establishes itself in neo-Etruscan time (from the 4th c. onward). Syllabic punctuation is used for a short time (ca. 600–470) in the south (Rix 2004, 946; Wallace 2008, 17–19).[200]

As things present themselves to us now, the Etruscan script found its way to the peoples north of the river Po more than once, but not from the Etruscan settlements in Padania. Archaic Etruscan inscriptions in the very north are known from Liguria, from the areas around Reggio Emilia and Mantova, the environs of Bologna (ancient Felsina), and from Adria and Spina. The oldest testimonies come from the Reno valley (Fe 2.1, Fe 3.1, Fe 6.1, Fe 2.2, Fe 2.3, from around 600 BC) and from Rubiera (the stelae Pa 1.1 and 1.2, dated to the end of the 7th c.). In both cases, the traditions only resume some hundred years later, i.e. at the end of the 6th c. in Marzabotto, in the 5th c. around Reggio Emilia and Mantova. The great ports and commercial cities Adria and Spina only became relevant as Etruscan settlements around 500 BC. A number of gravestones from Liguria, especially around the Magra river and its tributaries, are dated to the second half of the 6th c.; most of them are filed as being written in a North Italic alphabet in *Lexicon Leponticum*.

2.1.1.2 The Feltre inscription stones

The inscription or inscriptions of Feltre are written on two slabs of sandstone. The early literature provides conflicting data on the find circumstances; Alpago Novello, who was involved in the restauration of the new building of the Museo Civico di Feltre, appears to be the most reliable source. He published an overview of archaeological findings in Feltre in 1963/1964, including a map which shows both slabs A and B (no. 21, in the first part) to have been found behind (immediately north of) the Convent of San Pietro in Vincoli, later

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possibility that the Greek sibilant which was spelled with sigma was in fact closer to Etruscan /ś/ than to /s/ (44 f.).

[200] A collection of Etruscan alphabetaria in Pandolfini 1990, 19–94.

the Canossian convent. He writes that both slabs were discovered during restauration works in a tunnel system (a hypocaust; the slabs appear to have been reused as building material), at a depth of 3 m, in 1893. The find date is at variance with that given by Lattes 1901, 1137 in the publication of slab A's inscription. Lattes, citing from Francesco Pellegrini's letters (written in 1896), writes that slab A was found in early May of 1886, and makes no mention of slab B. Alpago Novello's information is rendered more plausible by the fact that 1893 is indeed the year in which the former Convent of San Pietro in Vincoli was restored to receive the Madri Canossiane. Based on accounts of bishop Mons. Mario Zanin and fellow historians Mario Gaggia and Antonio Vecellio, Alpago Novello stresses his conviction that slab B, which was only published in 1911 by Cordenons without any information beyond a drawing of the object (228, no. 117 = slab B, 118 = slab A), was found together with and in the same spot as slab A. Morandi 1999, 91 took the pains to research the matter anew; the index cards consulted by him record for slab A the year 1893 "in un muro delle Canossiane", for slab B only "in Via Cornarotta". The latter, however, may be an indication not of the find spot, but of the depository, cf. Dal Zotto 1940, who states that slab B was for some time kept in a house in the Via Cornarotta (about 300 m north-west of the cathedral). Alpago Novello 1963, 120 doubts this and points out that both slabs were brought to and preserved in the Canossian Institute in the nearby village of Fonzaso (see also Lattes 1901, 1137), but the slabs having initially been separated may serve to explain why they were not published together. Both slabs are likely to have been installed in the Museo Civico di Feltre upon its foundation in 1903, or on the occasion of its being moved to its new seat in the Palazzo Villabruna in 1922.

The details of when and in what circumstances the slabs were found are relevant to the question of whether (or how closely) they – and the letters they bear – belong together. Generally, the two sequences are assumed to be parts of a single inscription (Buonamici 1927; Pallottino 1954; Rix in ET), but seeing as they were not found in the original context, this is not a given. They were even suspected of being forgeries due to what was conceived as clearly Etruscan linguistic content in a document found so far north, and especially because of the occurrence of the Etruscan name for Jupiter *tinia*. This name is also documented on a column-shaped altar base bearing an inscription *tinia tinscvil* from ancient Volsinii, which had only been found a few years earlier (in 1880), also under the mediaeval cathedral (Vs 4.10 = CIE 4919; cf. also Vs 4.11 = CIE 4920 and Vs 4.13 = CIE 5168) (Morandi 1999, 91). Despite the easterly findplace (left of the river Brenta), the Feltre finds were eventually included (as one inscription) by Whatmough into the Raetic corpus (PID 243 bis) in regard of both alphabet and language. Due to the clearly Etruscoid character of the language, the inscription was used as evidence for the connection of Raetic with Etruscan, then included by Pallottino 1954 in the Testimonia Linguae Etruscae (no. 718). Pellegrini declared it to be Etruscan in 1954 (1954a, 463) and again in 1979 (apud Tibiletti Bruno 1979, 132); Rix was equally convinced and filed it as Etruscan in the first edition of ET (Pa 4.1), with-out the qualifications added by Pallottino. Based on Rix' opinion, it was not included by Schumacher 1992, but again by Mancini (LIR, 281 f., no siglum) for the Raetic character of its letters.

Slab A measures about 34 cm in length and 19 cm in depth. It is broken at both ends; at the end where the inscription appears to start, it is 10 cm high, tapering slightly towards the other end, which measures 9.5 cm in height. There is a space before the first letter 𐌊, which suggests that the inscription is complete in the beginning. Slab B, also broken at both ends, measures about 26 cm in length and 6 cm in depth. The letters are roughly aligned on the edge; after final 𐌄, a space indicates the end of the inscription. At this end, the slab is 10 cm high, at the other, 9.5 cm. On that side of both slabs on which the characters are applied, the stone is a different colour (a lighter layer of about 2.5 cm thickness, which can be clearly discerned on both pieces). Although the height of the slabs and the corresponding discolouration suggest them to be part of one original slab which narrowed slightly in the centre, the fact that they are of different depth makes the possibility of them having originally been one piece unlikely.

As shown in fig. 12, the letters on both slabs are aligned on what was most probably the upper edge of the slabs when they were in use – although some of them are inverted, the orientation of the inscriptions can be determined with some certainty. If the inscriptions are read sinistroverse (with the characters inscribed in the upper part of the slabs), only alpha is inverted, whereas the other way round, both nu and epsilon would be upside-down. Furthermore, an examination of the slabs by my TIR colleague Sindy Kluge and myself in the autumn of 2014 showed that there are remains of red paint to be seen in those parts of the lines that are closer to the edge; the paint is clearly visible on slab B, but only faint traces are left on slab A (mostly in the serifs). Seeing as the slabs appear not to have been displayed in the open since their finding, the colouring is unlikely to be modern, but may be assumed to be original. If this is the case, its condition can give a clue to how the slabs were put up: on an architrave, the elements would do greater damage to the lower parts of the letters, the upper parts being shielded by the entablature.[201] Indeed, the photographs in Mayr 1961 (taken by a Mr Facchin, presumably from the Museo Civico) show that the stones were originally put up as shown in fig. 12 in the museum, while today, both are turned over (as displayed in, and possibly as a consequence of, Pellegrini & Prosdocimi 1967, 445 f., who simply flipped the photos upside down).

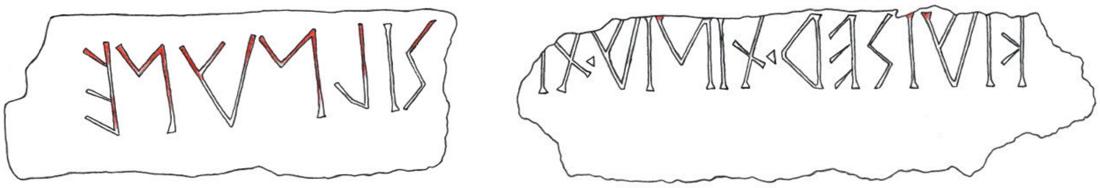
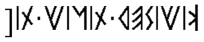


Fig. 12: The Feltre inscription stones B (left) and A in their probable original orientation. The red colour indicates where remains of red paint can be seen, though the traces are not as pronounced as in the drawings. Museo Civico di Feltre, inv. no. 38.

The characters, though basically similar, exhibit decided differences. The letters on slab A have a consistent height of 4 cm, all reaching the edge of the slab. All recurring letters are written consistently (inverted alpha, lopsided St. Andrew's cross). All lines are equipped with neat serifs, the punctuation marks are appropriately shaped like triangles pointing in writing direction. In contrast, the execution of the sequence on slab B must be called sloppy. The letters are taller than on slab A (5.5–5.7 cm) and none of them reaches the edge, indeed the distance grows as the inscription progresses. Serifs are only executed sporadically (or indistinctly), and final epsilon is inverted. No trace of a punctuation mark can be detected before sigma, though there is a small space available. The two sequences are either, as Mancini (LIR) observes, "incise da 'mani' differenti", or at least on different occasions. If they are parts of the same inscription, the question of why the quality of craftsmanship deteriorates rather drastically remains open to conjecture – maybe the work of master and apprentice? All in all, the two sequences must be expected to belong together in some way, but are hardly fragments of one inscription (cf. Mayr 1961 and Morandi 1999, 91 f.).

Pa 4.1 A  B 
kiaiser:tinia:ti[ ]*silnane*[202]

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[201] Of course, the slabs could also have been part of a rostrum or pedestal; see Malnati 2002, 127 f. for North Italic comparanda.

[202] Non-phonetic transliteration following the Raetic standard; sigma writes /ś/ according to Northern Etruscan orthography.

Rix, regarding the sequence on slab A as the beginning and the one on slab B as the end of one and the same inscription, reads Etr. *ki aiser* ‘three gods’, followed by the names of these gods, viz. *tinia* ‘Tinia [Jupiter]’, *ti*[‘?’ (possibly ‘Tiv/Tiu’) and *silnanz* ‘Silvanus’. The last name he conjectures to be spelled incorrectly, with 𐌍 instead of 𐌄 anticipating the second-to-last letter. He interprets the last letter as a form of zeta, arguing that a reading as epsilon could be excluded because the letter would be inverted; disregarding the medial bar as being “offenkundig” due to surface damage (Rix 1998, 58 [n. 83]). The bar, however, is definitely intentional. Colonna 1997, 175. 183 (n. 47–49), following Rix’ reading, but assuming three lines in all (*kiaiser.tinia.ti* | ... | [-?-]*silnanz*), compares *kiaiser* to the Venetic theonym *tribusijat*°, with has been analysed as containing a prefix *tri-* ‘three’, naming a trifold goddess (Pellegrini & Prosdocimi 1967, 184–187). For the sequence on slab B, he suggests an emendation to [*u*]*silnanz*, an epithet derived from the Etruscan theonym *uśil*. This it taken up by Maras 2007, 111, who, discounting Colonna’s hypothetical second line, considers [*u*]*silnanz* to be an epithet of *ti*[*u*(*r*)].

Seeing as the sequence on slab B is unlikely to represent the end of the inscription on slab A, *silnane* need not necessarily be a theonym, and remains opaque. The presence of the Etruscan words *ki*, *aiser* and especially the theonym *tinia* can hardly be contested. In a letter to Schumacher (22 March 1990), Rix concedes the possibility of Etruscan and Raetic being so similar as to have identical words and theonyms, but doubts this. Compare, however, the Raetic inscription SZ-4.1 with a numeral and plural morpheme identical to the Etruscan equivalents (2.7.3.2). For the evidence for Etr. *ais*° see Eichner 2012a, 12–16 (on Feltre sub Beleg B, with n. 72).

As concerns palaeographic peculiarities, the inscriptions feature sigma in an orientation typical of Raetic, as well as shapes of nu and rho (and maybe zeta) not quite typical of late Etruscan. Tau (or theta?) appears in a curious shape halfway between Etruscan tau 𐌕 and North Italic X, which is attested on the Venetic alphabet plaque Es 23 and maybe at Magrè (2.5.5.1). Colonna 1997, 175 considers the script to be Raetic, but sigma in *aiser* (Northern Etruscan [aiʃer] according to the *lariś*-rule; 2.7.1.2) and, if Rix’ reading should be correct, *silvans* (Northern Etruscan [ʃilvans] according to the Lex Wallace; 2.7.1.2) is in accordance with Northern Etruscan orthography.

The dating 2nd–1st c. BC given by Meiser 2014 in the revised edition of ET (changed from the beginning of the 5th c. BC in the 1991 edition), however, is far from certain.

Morandi 1999, 92 and Maggiani in Gambacurta et al. 2002, 185 date the slabs/inscriptions to the 3rd–2nd c. BC without giving reasons. A high dating (before 400) could be supported with the observation that an Etruscan inscription in Transpadania is even more surprising after the Celtic invasion and expulsion of the Etruscans; low datings, on the other hand, consider the style of the letters, especially the serifs and the form of the separators (Colonna 1997, 183 [n. 46]).

To conclude, the epigraphic and linguistic position of the Feltre inscriptions between Etruscan, Raetic and other local traditions cannot at this point be determined. There are, to my knowledge, no Etruscan finds otherwise from Feltre, and neither do we have any Raetic material, although Pliny calls ancient Feltre a Raetic oppidum (2.2.1). The only other (arguably) Raetic inscription from east of the river Brenta, apart from the Slovenian helmet inscriptions (2.8.1.10), is the isolated and enigmatic Castelcies inscription (TV-1.1).

2.1.2. Venetic

The Veneti are speakers of an Indo-European language close to, but not necessarily part of the Italic branch. The Venetic inscription corpus is, so far, the most extensive of the North Italic corpora, including a large number of Latino-Venetic testimonies from the last centuries BC. The inscriptions are dated between the early 6th and the 1st centuries BC; the find area extends from the Po delta to the Isonzo valley and the Gailtal. The standard edition is still Pellegrini & Prosdocimi 1967, whose sigla are used in the present work; collections of more recent finds can be found in, e.g., Prosdocimi 1988 and Marinetti 2004b.[203]

For the "traditional" view on the origin of the Venetic alphabet (from the Etruscan alphabets of Adria and Spina) see Pellegrini 1959. According to the more recent theory of Prosdocimi (e.g. 1988), we have to distinguish two phases of Venetic writing. The first version of the Venetic script ("phase 1"), attested securely only in one inscription (*Es 120, dated to the beginning of the 6th c. at the latest) and arguably in two further inscriptions (Es 1, *Es 122), was based on a model from northern Etruria, while a separate tradition lies at the basis of most of the younger, locally diverse alphabets (Este, Padova, Làgole di Cadore, etc., "phase 2"). The archaic Venetic alphabet seems to have featured a

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[203] Prosdocimi 1988 introduced the custom of adding an asterisk to sigla added after the 1967 edition, but this is not followed by all scholars – not, indeed, by himself in later papers, nor by Marinetti, who announced a follow-up volume including all new inscriptions in Marinetti 2004b, 389. So far, nothing has been forthcoming; a host of new inscriptions, among them finds from Altino, appears to await publication.

rare form of theta ×, which is found in a handful of inscriptions from 6th-c. Chiusi and Volsinii,[204] as seen in *Es 120. *Es 122 shows that the digraph ‹vh› was used to write /f/ rather than the new character 8, which was introduced in Etruscan no sooner than the middle of the 6th c. Pi is missing, but note that *Es 122 has 𐌐, read as lambda by Prosdocimi 1988, 328 (despite clear lambda 𐌋 in the other two testimonies); cf. pi in the form 𐌐 in Chiusi. Syllabic punctuation is absent.

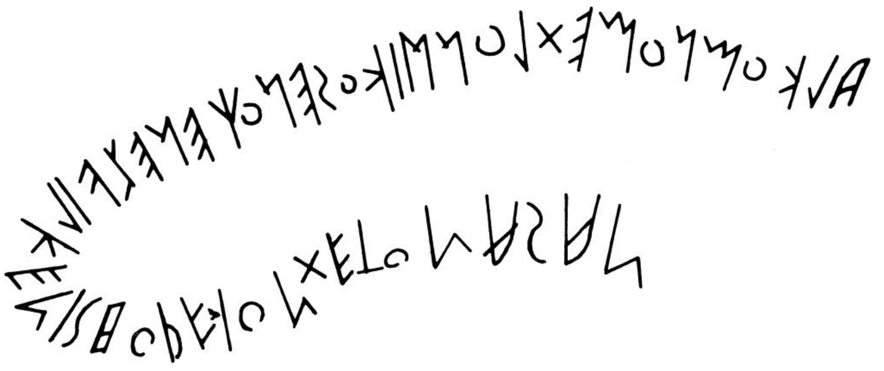

Fig. 13: Inscription *Es 120 on a kantharos from Scolo di Lozzo (from Prosdocimi 1988, 329 [fig. 297]). Museo Nazionale Atestino, inv. no. unknown.

The younger alphabet of Este is unusually well documented on a number of votive writing tablets from the Reitia sanctuary-cum-writing school and distinguished by syllabic punctuation,[205] both of which phenomena connect it with the 6th-c. writing tradition of the Portonaccio sanctuary in Veii in the south of Etruria. Syllabic punctuation became the key feature of Venetic script, though alphabets from other parts of the Venetic area deviate from the Este alphabet, most prominently in the writing of the dental stops. Prosdocimi argues that the various younger phase-2 alphabets represent different solutions for reconciling the archaic Venetic alphabet with the younger Southern Etruscan one and particularly the theoretical grid on which the writing instruction was based.

Whether the Veneti still had access to the characters for voiced stops (as lettres mortes through Etruscan teaching) is hard to judge, but they did not use them to write their own.

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[204] Cl 2.8, Cl 2.6, Cl 2.5, Vs 1.23 and Vs 1.14; see Colonna 1972, 470.

[205] The system of syllabic punctuation revolves around the concept of the basic syllable (CV), by which writing appears to have been taught in the scribal schools of Veii and Este. All letters for sounds which are not part of a simple CV-syllable are punctuated, i.e. marked by medial dots put before and after the respective letter. This concerns syllable-initial vowels and consonants in the syllable coda. Clusters of a certain structure (obstruent+*r*/*n*/*l*, also *kv*) qualify as simple onsets and are not punctuated. For details see Prosdocimi 1988, 336–342.

Instead, they employed the superfluous letters for the Etruscan aspirated row.[206] While in the case of labials and velars, this transition appears to have happened smoothly (pi = /p/, phi = /b/; kappa = /k/, chi = /g/), the characters for the dentals were shifted around. *Es 120 clearly demonstrates the use of tau for /d/ (in *donasan*, the plural form of the well attested *donasto* 'gave'); the above-mentioned Chiusi-style theta (× in Es 1 and *Es 122) must be expected to stand for /t/. This distribution is also documented for the phase-2 alphabet of Vicenza on a stela (Vi 2). In the younger Este alphabet (and also in the sanctuaries of Làgole and Auronzo di Cadore), /t/ as in the archaic inscriptions is written as (large) St. Andrew's cross, but zeta is employed to write /d/. A third combination is used in Padova, where first Etruscan tau, later St. Andrew's cross are in use for /d/, while /t/ is written with a more traditional framed form of theta ⊙ (rounded or angular).

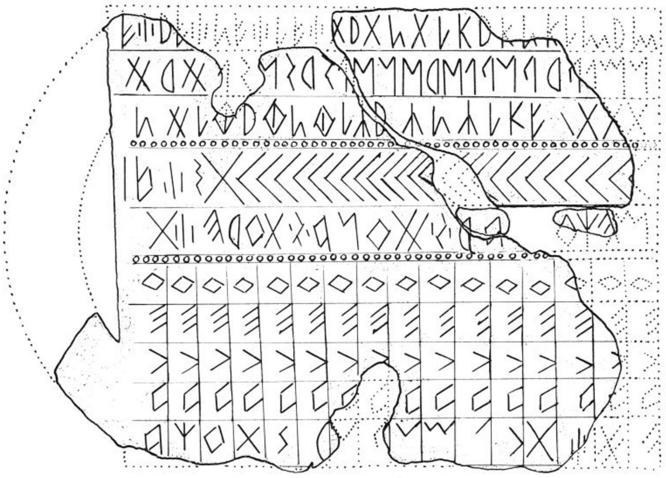

Fig. 14: The writing tablet Es 26 from the Baratella sanctuary at Este (from Pellegrini & Prosdocimi 1967, 112).

The origin of the letter in the shape of St. Andrew's cross is somewhat obscure. Prosdocimi 1988, 332, regarding the archaic distribution, explains tau for /d/ and theta for /t/ by assuming a developing homography of ᚾ and ×/X. The phonetic values were swapped before the characters were differentiated again, which led to St. Andrew's cross being used for /t/ henceforth. He points to the Lugano alphabet and the Este alphabet tablets for evidence of a tendency of tau to develop towards a cross-shape. To further avoid homography in this area, tau was substituted by zeta in Este; in Padova, the form of theta was changed

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[206] Prosdocimi's considerations on p. 331–333 – he argues that the Veneti used the characters for the Etruscan aspirates because they preferred superfluous active letters, despite the wrong sound value, over lettres mortes (whereas they reactivated the "dead" omikron because there was no alternative available among the active letters). Differently Rix 1997, 244, who – assuming that the second Etruscan obstruent row was not aspirated, but fricative – holds that phi, theta and chi were in fact the obvious choice, because the Venetic voiced stops were articulated as spirants in the intervocalic inlaut (see 2.5.5.1).

to ⊙ (the variety of theta used in Padova was the standard form in Chiusi, not Veii, as Prosdocimi asserts), which allowed tau to turn into X. In other words, according to Prosdocimi, X has two separate origins: from theta in Este, from tau in Padova. On the Este writing tablets, where the letters can be unambiguously identified by their position in the consonantal alphabetaria, tau appears – with Prosdocimi: is retained as a lettre morte – in the shape of a cross, similar to, but clearly distinct from, theta: while tau is small and sometimes lopsided (e.g. in Es 23, see fig. 15), theta is a large X whose tips reach into the corners of its panel. Since the the grid lines of the rectangular panels into which the individual letters were inscribed are regularly used as hastae, it has been argued that the entire frame around the St. Andrew's cross representing theta is supposed to be part of the letter, forming a large, but otherwise inconspicuous ⊠. Theta would then have come to be reduced to only the cross through reinterpretation. This explanation, however, predating Prosdocimi's distinction of older and younger Venetic alphabets, does not account for the early appearance of × and its apparent connection with Chiusi; note also that of six preserved tablets, two (Es 24 and Vi 3) lack engraved grid lines and feature theta without a frame. On Es 25, where the grid lines are not used as parts of the letters, theta is missing due to object damage, but the document serves to corroborate Prosdocimi's theory by having zeta in the place of tau, probably due to a scribal error.

The Venetic script features omikron, which in the younger Este alphabet is situated not in its original place, but at the very end of the row, as evidenced by the votive tablet Es 23, the only one which bears a complete row (in addition to the usual consonant-only row).[207] While omikron is usually assumed to have been acquired directly from the Greek alphabet (Pellegrini 1959, 191–193), probably through contact with Greeks settling in and south of the Po delta, Prosdocimi 1988, 329 favours the theory that it was taken as a lettre morte from the Etruscan alphabet in phase 1, and retained in phase 2, where it was appended be-

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[207] Another possible piece of evidence is the four rows of characters which accompany the consonant alphabets on the bronze plaques, viz. of alpha, kappa, epsilon and omikron. This part of the tablet inscriptions is usually interpreted as *a ke o* 'a and o' as in Greek *ἄλφα χαὶ ὦ*, i.e. a cultic formula referring to the entire alphabet as a metaphor for completeness. Compare, however, Marinetti's alternative interpretation (2002, 49) – which I find more plausible – according to which the alleged kappa is really iota (represented by the grid lines) and upsilon. The two letters are argued to have to share a row because the grid was created for the Etruscan character inventory with only four vowel letters. The rows of vowels would then supplement the consonant alphabet and represent an element present on the real writing tablets which served as models for the bronze votive versions, rather than an element of the votive text. If this is the case, the letters are not arranged according to either variant of the alphabetical order, which would be expected to be either alpha – epsilon – iota with omikron inserted – upsilon (according to the original Etruscan row) or alpha – epsilon – iota with upsilon inserted – omikron (with omikron added at the end like as secondary character).

cause the Etruscan phase-2 model had already discarded omikron, so that the letter had no place in its original position. The Venetic use of sigma vs. san follows the Southern Etruscan use, sigma being the character used for the default sibilant and san leading a marginal existence. This is also the case in one of the archaic inscriptions (*Es 120); for possible explanations see Prosdocimi on p. 330 f., who suggests that the unmarked Venetic sibilant was closer to the Etruscan marked one and was therefore written with sigma, while san was sporadically used to represent dental clusters with fricative features. Finally, one of the distinctive features of the Venetic script is the frequent inversion of lambda and upsilon, which, according to Prosdocimi 1971, 33, is due to a “regolarizzazione del ductus” with preference for tip-up orientation, minimising distinctive features (especially in relation to pi with two bars 𐌐).

Fig. 15: The writing tablet Es 23 from the Baratella sanctuary at Este (from Prosdocimi 1988, 271 [fig. 256]).

2.1.3. Raetic

The term *Raetic* refers to some four-hundred inscriptions on about three-hundred objects found in the Trentino and the Veneto, as well as in Nord- and Südtirol, Southern Bavaria, the Engadin and – on travelling objects – in Slovenia. These inscriptions are roughly dated between the late 6th and the 1st centuries BC and are the only testimonies of the Raetic language, a non-IE language of the Alpine region. Archaeological research has shown that the distribution area and archaeological context of the inscriptions correlate with archaeologically defined areas, viz. the Fritzens-Sanzeno and the Magrè groups. Furthermore, a genetic relationship between the language of the inscriptions and Etruscan could be ascertained. The sigla used in this work are the ones established by Schumacher 1992/2004 and used in *Thesaurus Inscriptionum Raeticarum* (TIR); for other editions see section 2.3.7.

According to Schumacher 2004, 312–316 and Rix 1998, 48–56, the Raeti learned the art of writing from the Veneti rather than directly from the Etruscans. While Raetic inscriptions are only known from, at most, the late 6th c. onward, the writing tradition beginning just at the time when contact with Etruscan culture was established via the Padan plain, some features of the Raetic script are supposed to suggest a Venetic source:

1. employment of phi, chi and tau for lenes/voiced stops rather than for the second obstruent set,
2. non-employment of zeta,
3. St. Andrew's cross for the unvoiced dental stop,
4. use of sigma for the dental sibilant, while san is marginal,
5. rudimentary syllabic punctuation,
6. inverted lambda and upsilon.

As in Venetic, different αβs are used for writing the Raetic language. Some of the similarities with Venetic (points 5 and 6) can only be demonstrated for a subset of these. These Venetoid αβs appear to be close to the archaic Venetic αβ, although the sporadic use of (somewhat idiosyncratic) syllabic punctuation indicates an acquaintance with phase-2 Venetic sources. It is not yet clear whether or inhowfar all Raetic αβs are derived from the same model. It cannot be excluded that different Venetic varieties, and also Etruscan or even Celtic writing practices, have influenced Raetic writing. One common feature of the Raetic αβs, three-bar mu 𐌌, is also found as the standard form in the Venetic αβs of Vicenza and the Isonzo area (3.1.2), both of which are unfortunately represented by only few documents. The lengthy inscription Vi 2 demonstrates the closeness of the Vicenza αβ to the archaic Venetic αβ by the use of 𐌗 and 𐌕 for /t/ and /d/. For further considerations on the derivation of the Raetic αβs see ch. 2.5.

2.1.4. Cisalpine Celtic

While, in the east, language groups and script provinces can, with the exception of a couple of problematic exceptions, be brought into correspondence surprisingly well, the situation west of the river Adige is less evident. The alphabet which is used in the western part of Northern Italy is called the Lugano alphabet; it writes Celtic languages which were spoken in Northern Italy and South-Eastern Switzerland. Inscriptions in a Cisalpine Celtic language called Lepontic begin to appear in western Transpadania somewhat before 600 BC; the

Lepontic core area lies between Lago di Como and Lago Maggiore, later in the Ticino, and coincides with the archaeological Golasecca culture of the late Bronze and early Iron Age. Cisalpine Gaulish is the language of the Celtic invaders from the 5th c. BC onward; on the Celtic presence south of the Alps and the distinction between Lepontic and Cisalpine Gaulish see Uhlich 1999 and 2007. The inscriptions are collected in *Lexicon Leponticum* (LexLep), including all North Italic testimonies which may contain Celtic language material, as well as all inscription finds from west of the Adige even if the ascription is doubtful: a considerable number of documents, mostly short/fragmentary inscriptions of a low date, cannot be shown to be linguistically Celtic, or even to be written in the Lugano alphabet.

The Cisalpine Celtic corpus being accordingly large and varied, it is hard to determine how the usual schibboleth characters for obstruents are used. Pi, kappa and St. Andrew's cross are the standard letters for stops, and can be shown to be used for both unvoiced and voiced stops. While phi does not occur at all,[208] chi is employed for /k/ in the oldest inscriptions, but for /g/ in at least two younger ones (PV·4, VC·1.2) and in coin legends (NM·6.1, NM·6.1). In the latter, chi appears together with theta ⊕ in the name [segetu:] or [segedu:], which is also attested on four ceramic bowls from Prestino (CO·57, CO·58, CO·59, CO·60) – here with kappa for /g/ and zeta ǂ for the dental.[209] Theta appears two more times, in the shape ⊙, in the archaic VA·3 (possibly Etruscan) and the Prestino inscription (CO·48). The latter, a lengthy inscription on a stela, is the only Lepontic text in which a systematic use of the characters for dentals can be observed: tau in the shape + demonstrably stands for /d/ (*tetu* [dedu:] 'dedicated'), so that theta ⊙ appears to stand for /t/ (*plialeθu* [blialetu:] with the same ending as [segetu:]?). Zeta ‡ represents the dental affricate (more precisely, the tau gallicum phoneme in *uvamokozis* [uφamogot^{s}is] or [uu̯amogot^{s}is] < **upamo-g^{h}ostis* 'having the highest guests'); St. Andrew's cross is absent. Pi and kappa are used for /b/ and /g/. Tau appears twice in later inscriptions (TI·36.3, NO·21.1), both times in the shape +, and both times together with St. Andrew's cross. While this suggests that the Lugano αβ's St. Andrew's cross is theta, the combined use of the two characters cannot be shown to be systematic (/t/ vs. /d/). Tau-, zeta- and chi-like shapes crop up a number of times in dubious and/or uninstructive contexts (see LexLep); another instance of lexical use of zeta occurs in NM·16. Beta, delta and gamma are absent until the appearance of Latin(oid) inscriptions from the Roman Imperial Age, but omikron

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[208] The possible attestation in the inscription BG·20, discussed by Maras 2014, 83 f., strikes me as highly dubious.

[209] See Maras 2014, 85 with n. 76 for details.

is pres-ent from the earliest inscriptions. On the use and formal development of san see LexLep and Stifter 2010, 367–374. Pi and lambda are distinguished systematically as 𐌐 vs. 𐌋; upsilon appears tip-down V, though inverted forms Λ do occur. Alpha is closed (A and similar) in the archaic inscriptions, later changing into 𐌀. See Motta 2000, 183–186 and Stifter 2015 for overviews.

The Celtic languages being of Indo-European descent, just like Venetic, it is at this point difficult to determine whether or in which cases the similarities of the alphabets are the result of parallel developments which are due to speakers of similarly structured languages adapting similar (or identical) models, or whether the Lugano alphabet is derived from or was influenced by the Venetic writing tradition or vice versa. The chronology is not helpful, as the oldest Lepontic inscriptions[210] can be dated to the late 7th c. BC (Maras 2014, 73 f.), i.e. they are about the same age or only slightly older than *Es 120. Apart from three ceramic pieces (VA·5, CO·53, CO·54) bearing the sequence *aev* – arguably the beginning of the Etruscan post-reduction alphabet (without beta, gamma and delta) – we have no alphabetaria from the Cisalpine Celtic corpus. As in Venetic, omikron may have been available from an Etruscan model (Gambari & Colonna 1988, 144 f.) or introduced from (in this case Massilian) Greek (Pellegrini 1959, 193–195). St. Andrew's cross could be Chiusi-style theta, or it could be the Transpadanian lopsided tau which features in Prosdocimi's theory about the Venetic dentals. For the allocation of sigma (for the sibilant) and san (for sibilant-containing clusters and, apparently, the lenited allophone of /d/), Prosdocimi's considerations for Venetic apply.

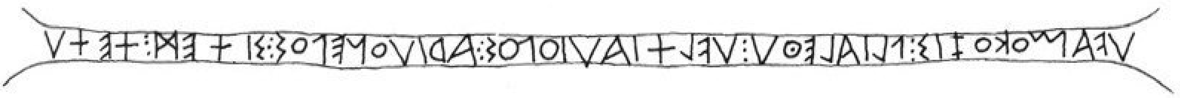

Fig. 16: The Prestino inscription CO·48 (from Morandi 2004, 642 [fig. 30, no. 270]). Museo Archeologico Paolo Giovio Como, inv. no. 8777.

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[210] VA·3, VA·4 (Sesto Calende), NO·1 and an unpublished inscription on stone (Castelletto Ticino), a bowl from Golasecca (Maras 2014, 76; all from the southern end of Lago Maggiore) and the outlier JU·1 on the fragment of a vase of local Hallstatt manufacture from Montmorot (FR). The latter object is not datable through typology; the layer in which it was found dictates as terminus ante quem the second half of the 6th c. (Verger 1998, 271 f.). Verger arrives at a more precise time frame: end of 7th to beginning of 6th c., by palaeographic comparison with Etruscan and early Lepontic (VA·3) inscriptions (275–278). With regard to the palaeographic archaisms he concludes that the knowledge of writing in the area is old, and suggests two possible scenarios: either the find is older than the layer in which it was found or archaic features have been preserved longer in the remote area than in the core domain of Transpadanian writing (280 f.). The short text *priś* is not demonstrably Celtic, but see Verger 1998, 285–287 for possible interpretations.

Rix 1997, 232 books the presence of omikron, St. Andrew's cross and especially the evidence of the Prestino inscription with tau for /d/ and theta ⊙ for /t/ (i.e., Padovan orthography) as evidence for the Cisalpine Celtic alphabet(s) being derived from Venetic. The evidence of the Prestino inscription's dentals is qualified by the theory of Colonna/Maras, who posit an archaic Golaseccan alphabet in which not only the dental letters (as in Venetic), but the entire rows for obstruents are transposed, i.e. pi, tau and kappa write the voiced stops, (phi), theta and chi write the unvoiced stops. Colonna (Gambari & Colonna 1988, 144 f.) argues for a derivation from a recently reduced Etruscan alphabet, from which omikron could still be revived, but the active letters for the aspirates were chosen over the discarded letters for voiced stops; Maras 2014, 77 suggests the possibility that the letters for aspirates were in fact preferred for phonetic reasons, viz. the aspiration or spirantisation of the Celtic unvoiced stops. However, Maras (82 f.) considers St. Andrew's cross to be not tau, but theta, to account for the letter's appearance in places where we would expect /t/ (e.g. the verbal form [karite] in VA·6), assuming that after original theta ⊙ had been replaced by X, the opposition between tau and theta was neutralised.[211] The use of sigma for /s/ is explained by Colonna by assuming that the use of the two characters was not determined phonetically, but that sigma was always used for the most common sibilant – the alveolar sibilant in the southern Etruria and in Celtic, the palatal sibilant in the Etruscan north. Maras (77 f.) prefers to think that the Celtic situation with only one sibilant was so unlike the Etruscan one that sigma may have been chosen at random.[212] According to Maras (73 f.), the spread of writing to the area of Golasecca at the end of the 7th c. BC belongs in the context of the general transmission of writing to the Etruscan north via inscribed prestige gifts exchanged among members of the elite.[213]

2.1.5 Camunic

The corpus of the so-called Sondrio alphabet ("Camunic script"), conspicuous for its obvious graphical peculiarities, comprises the rock inscriptions of the Valcamonica and a

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[211] Maras makes no mention of Prosdocimi's homography of lopsided tau and St. Andrew's cross theta in Venetic, which seems to me an obvious addition to the theory, turning the otherwise unmotivated extension of the function of theta into a case of graphical merger.

[212] For the further development of the Lugano alphabet in the 4th c. BC see Maras 2014, 87–90. The apparent inconsistencies in younger inscriptions (notably NO·21.1, TI·36, VC·1.2) remain to be explained; both Venetic influence and the different phonetics of Cisalpine Gaulish are likely to play a part.

[213] Cf. Verger 1998, 312 f., who argues for a transmission of the Etruscan alphabet to western Transpadania via the area of Genova and the Scrivia valley. A number of inscriptions from the area of La Spezia/Massa-Carrara (displayed as Etruscan on the map in appendix I) are filed as linguistically and/or epigraphically Celtic/North Italic in LexLep.

handful of testimonies from other places whose characters bear resemblance to those of the petrographs, though the alphabets cannot be said to be identical. Indeed, different systems seem to have been employed within the Valcamonica itself. Preliminary collections are provided by Mancini 1980 and Tibiletti Bruno 1990. The language of the rock inscriptions, called "Camunic" after the demonym *Camunni* documented by the ancients, has not yet been convincingly analysed or connected to any of the surrounding languages. The other testimonies have been argued to encode diverse languages. While the two inscriptions on stelae from Montagna in Valtellina (PID 252) and Tresivio (PID 253) feature endings similar to those commonly found in Camunic rock inscriptions, the non-Latin part of the Voltino bilingua (BS·3.2) has been read Etruscan as well as Raetic and Celtic. Celtic has also been suggested for the inscription on the Castaneda flagon (GR·3), datable to the 5th–4th c. (see LexLep for literature). The dubious inscription AV-1, included in TIR as linguistically Raetic, appears to be written in a variant of the Sondrio alphabet (2.8.2). Finally, the fragmentary inscription on a stela from Cividate Camuno (BS·22) in the Valcamonica itself is utterly enigmatic.

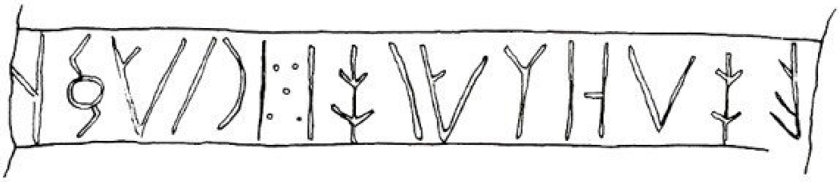

Fig. 17: Inscription BS·22 from Cividate Camuno (from Morandi 2004, 694 [fig. 30, no. 270]). Museo Camuno CAMUS, Breno, no inv. no.

The main problem with the reading and interpretation of the inscriptions lies in the identification of the letters: rock inscriptions from different localities, alphabetaria and the (possibly idiosyncratic) testimonies from abroad appear to exhibit substantial differences in the use of some characters, which could so far be neither conclusively sorted out individually, nor reconciled. The picture presented by the twelve alphabetaria, or fragments of such, from the Valcamonica (first edited in Tibiletti Bruno 1990; see also Tibiletti Bruno 1992) in particular demonstrates the Sondrio alphabet to be the odd one out among the North Italic alphabets. See ch. 3.1 for a table (tab. 23) which shows the characters as they appear in two distinct groups of alphabetaria. The presence of a complete Greek row may suggest that the Sondrio alphabet was derived directly from a Greek source, without Etruscan intermediation. What is more, the Greek model can be argued not to have been of the "red" variety like the Euboic alphabet from which the other Italic alphabets ultimately derive (Tibiletti Bruno 1992, 374–378; Schumacher 2007, 335). Even under such a premise, the shapes of the letters are highly unusual.

There are two possible points of connection between Camunic and Raetic, viz. that both graphical variants of the Raetic character for a dental affricate appear in the Sondrio αβ: the character 𐌔, which takes the position of san in alphabetaria from Piancogno, is reminiscent of the Magrè character 𐌔/𐌔; an arrow-shaped character like the Sanzeno character ↑ appears in the overcrowded and problematic end sequences of the Piancogno alphabetaria and on the Castaneda flagon – see section 2.5.3 and ch. 3.1.

2.2. Ancient sources

2.2.1 Historiography and geography

Concerning the origin and affiliation of the Raeti, we have two roughly contemporaneous statements from Pompeius Trogus and Livy (second half of the 1st c. BC), who agree on an Etruscan ancestry.

> *tusci quoque duce raeto avitis sedibus amissis alpes occupavere et ex nomine ducis gentem raetorum condiderunt* (Pompeius Trogus, transmitted in Justin XX 5)
>
> ‘The Etruscans also, under their leader Raetus, after they had lost their inherited seats, occupied the Alps and, after the name of their leader, founded the tribe of the Raeti.’

Pompeius Trogus may have been the source for Pliny’s statement (around AD 80):

> *raetos tuscorum prolem arbitrantur a gallis pulsos duce raeto* (Nat. Hist. III 133)
>
> ‘The Raeti are considered descendants of the Etruscans, expulsed by the Gauls under their leader Raetus.’

Livy does not mention the mythical Raetus, but provides information about the Raeti’s language:

> *alpinis quoque ea gentibus haud dubie origo est maxime raetis quos loca ipsa efferarunt ne quid ex antiquo praeter sonum linguae nec eum incorruptum retinerent* (V 33, 11)
>
> ‘This [Etruscan] origin is without doubt also that of the Alpine tribes; mostly so of the Raeti, whom the area itself has imbruted, so that they retained nothing of the old ways apart from the sound of the language, and that not unadulterated.’

The data on the localisation of the Raeti is less unanimous. Polybios (2^{nd} c. BC), in his description of the Alps, mentions them in his list of Alpine passes (Hist. XXXIV 10, 18):

> *τέτταρας δ’ ὑπερβάσεις ὀνομάζει μόνον διὰ Λιγύων μὲν τὴν ἔγγιστα τῷ Τυρρηνικῷ πελάγει εἶτα τὴν διὰ Ταυρίνων ἣν Ἀννίβας διῆλθεν εἶτα τὴν διὰ Σαλασσῶν τετάρτην δὲ τὴν διὰ Ῥαιτῶν ἁπάσας κρημνώδεις* (Strabo, Geogr. IV 6, 12)
>
> ‘He [Polybios] names four passes: that via the Liguri nearest the Tyrrhenian Sea, then that via the Taurini, which Hannibal crossed, then that via the Salassi, and the fourth that via the Rhaeti, all of them precipitous.’

The first three passes are located in the Alps between Italy and France; the fourth one is likely the easternmost one, but remains unidentified – according to Lunz 1981b, 24, it may refer to the Julier or Septimer pass (Graubünden).[214]

The earliest literary reference to a group of Alpine dwellers called *Raeti* dates back to Cato the Elder (234~150 BC), who, according to Servius (Virgil Georg. comm. II 95), praised the Raetic grapes in his *Praecepta ad Filium*. Raetic wine as also mentioned by Suetonius (Div. Aug. LXXVII) as a favourite of the emperor Augustus. Remarks by Pliny (Nat. Hist. XIV 16 and 67) and Strabo (Geogr. IV 6, 8) tell us that Raetic wine was grown in the area of Verona – they appear to refer to Valpolicella (Frei-Stolba 1992, 359).

> *ante eum raeticis prior mensa erat uvis ex veroniensium agro* (Pliny, Nat. Hist. XIV 16)
>
> ‘Before him [the emperor Tiberius], the highest place at table belonged to the Raetic grapes from the area of the Veronese.’[215]

Pliny also provides information about the inhabitants of Verona, which he calls an oppidum “raetorum et euganeorum”[216] (III 130), while the Feltrini, Tridentini and Beruenses inhabit “raetica oppida” (ibid.), viz. Feltre and Trento – the localisation of the Beruenses, who are otherwise only attested in inscriptions (Frei-Stolba 1992, 659 with n. 14) is more difficult.[217] Pliny further reports that the Raeti and Vindelici, neighbours of the Norici, are “omnes in multas civitates divisi” (III 133; see also III 146), and locates two

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[214] Cf. Heuberger 1932, 3 f.

[215] See also Nat. Hist. XIV 67.

[216] The Euganei are a nebulous entity which at times crops up in ancient sources. The term appears to refer to a layer of population even older than the Veneti, Raeti and Celts; Cato (via Pliny, Nat. Hist. III 133 f.) counts the Trumplini and Camunni among the Euganei.

[217] The oppidum Berua has been identified with settlements in the Val di Non, the Valsugana, the Alto Vicentino, the Cadore, and recently with Montebelluna (Luciani 2016).

Raetic tribes (Vennonenses and Sarunetes) at the sources of the Rhein (III 135). Strabo (Geogr. IV 3, 3) has Raeti and Vindelici settling at the Bodensee, dwelling in and partly beyond the Alps. He later elaborates that these peoples occupy the entire Eastern Alps beyond Verona and Como from the above-mentioned vineyards in the south to the Alpenrheintal, counting the Leponti and Camunni among them. He locates the Vindelici (and Norici) on the north side of the mountains, together with the "Illyrian" Breuni and Genaunes (IV 6, 8). However, he also mentions Raeti and Vennones northeast of Como, while claiming that Tridentini (Trento) and Stoni (Stenico) settled "on the other side" together with the now separated Leponti (IV 6, 6). Concerning Como, Strabo reports that the Raeti are responsible for the sack and destruction of the Celtic oppidum in 94 BC (V 1, 6).[218] Strabo's inconsistent testimony is due to the fact that he used different sources and sometimes failed to resolve discrepancies (Frei-Stolba 1992, 660).

Cassius Dio (Hist. Rom. LIV 22), chronicling the Roman Alpine campaign under Augustus, reports the Raeti settling

> *μεταξὺ τοῦ τε Νωρίκου καὶ τῆς Γαλατίας πρὸς ταῖς Ἄλπεσι ταῖς πρὸς τῇ Ἰταλία ταῖς Τριδεντίναις*
>
> 'between Noricum and Gaul near the Tridentine Alps which are close to Italy',

where they were defeated by the emperor's stepson Drusus. According to Dio's propagandistic reports, the Raeti had been raiding Gaul and even Italy and hindering passage over the mountains, killing all male captives, including children. After the Raeti had been repelled from Italy, they allegedly kept making a nuisance of themselves by raids into Gaul, so that ultimately Drusus, together with Tiberius, attacked Raetia proper in the summer of 15 BC – a lake crossed with ships by Tiberius appears to be the Bodensee. Invading simultaneously at many points and taking on each tribe at a time, they managed to subdue the unruly Raeti.

Further mentions of the Raeti's name are made in various contexts, but none of them are particularly enlightening. In an ode extolling Drusus (IV,4), Horace makes mention of an "Amazonia securi[s]" wielded by Raeti and Vindelici – conceivably a Hellebardenaxt (2.4.1).[219] Pliny ascribes the invention of a new type of plough to them:

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[218] See further Geogr. VII 1, 5, VII 5, 1 and VII 5, 2.

[219] Fearsome Raeti also feature in Carm. IV, 14.

> *non pridem inventum in raetia galliae ut duas adderent tali rotulas quod genus vocant plaumorati* (Nat. Hist. XVIII 172)
>
> ‘Not a long time ago [it was] invented in Gaulish Raetia that they added to such [a coulter] two little wheels, which type they call *plaumorati*.’

Both the term *plaumorati* (plough of the Raeti? a Latinised Germ. compound word for *Räderpflug*?) and the precise meaning of *raetia galliae* are unclear (Salomon 2006, 40–43).

2.1.2 Epigraphic sources

The Raeti are named in the inscription CIL X 6087 on the mausoleum of L. Munatius Plancus, governor of Gallia Comata, who defeated a Raetic incursion around the middle of the 1st c. BC – this corroborates the historiographers’ accounts of a Raetic presence around the Bodensee and/or in the northern Bündner Alpen (Frei-Stolba 1992, 662 f.).

The north building of the Sebasteion in Aphrodisias (Asia Minor), erected in the first half of the 1st c. AD, featured about fifty statues of female figures representing tribes conquered by Rome; two of the preserved ones allegorise peoples from Northern Italy: the *ἔθνος Ῥαιτῶν* and the *ἔθνος Τρουνπείλων* (the Trumplini).[220] The inscription on the Tropaeum Alpium, a victory monument erected in 7/6 BC in La Turbie (Monaco), lists specifically the tribes which were defeated in the Alpine campaign (Lunz 1981b, 7–9).[221] The Raeti’s name is notably absent, but some of the tribes must be Raetic. The Trumplini – here apparently considered equivalent to individual Raetic tribes – and Camunni can be connected with the Val Trompia and the Val Camonica west of the Adige; the Venostes gave their name to the Vinschgau (Val Venosta). The Ambisontes (together with the Laianci [Lienz] and Saevates [Sebatum]) are mentioned as a Noric (Celtic) tribe in an inscription from the Magdalensberg (HD 018230). Ptolemy (Geogr. II 12, 2) identifies five

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[220] Images can be found on http://insaph.kcl.ac.uk/iaph2007/inscriptions/toc/location/Sebasteion.html (last accessed 1. 5. 2018).

[221] The inscription is only fragmentarily preserved in the original, but the text is transmitted by Pliny (Nat. Hist. III 136–138): TRUMPLINI · CAMUNNI · UENOSTES · UENNONETES · ISARCI · BREUNI · GENAUNES · FOCUNATES · UINDELICORUM GENTES QUATTUOR · COSUANETES · RUCINATES · LICATES · CATENATES · AMBISONTES · RUGUSCI · SUANETES · CALUCONES · BRIXENETES · LEPONTI · UBERI · NANTUATES · SEDUNI · UARAGRI · SALASSI · ACITAUONES · MEDULLI · UCENNI · CATURIGES · BRIGIANI · SOGIONTI · BRODIONTI · NEMALONI · EDENATES · ESUBIANI · UEAMINI · GALLITAE · TRIULLATTI · ECDINI · UERGUNNI · EGUI · TURI · NEMATURI · ORATELLI · NERUSI · UELAUNI · SUETRI (CIL V p. 906). It is not clear how the list is ordered (chronologically? geographically? by importance of the victory?) and whether the reference to four Vindelician tribes stands on its own, or whether the four names after the phrase name these tribes.

of the enumerated tribes as expressly Raetic: the Brixentes (Bregenz) are the ones settling furthest in the north; the Vennonetes and Suanetes (possibly identical to the tribes mentioned by Pliny), Calucones and Rugusci may be assumed to inhabit the upper valleys of the Rhein and Inn (Frei-Stolba 1992, 666). Ptolemy (II 12, 4) goes on to locate the Rucinates, Leunoi, Cosuanetes, Genaunes, Breuni[222] and Licates (from north to south) in Vindelicia; the Licates can be connected with the river Lech, the Breuni with the Inntal around Innsbruck (through Mediaeval sources), and the Isarci with the Eisacktal (Val d'Isarco; see also Gleirscher 1991, 5–7 and Anreiter 1997, 8–10). The respective parts of the Tropaeum inscript-ion's list may reflect the chronology of individual campaigns, e.g. that of Drusus, who marched over the Brenner pass via Innsbruck into the Swabian-Bavarian highland (Frei-Stolba 1992, 664 f.; Lunz 1981b, 10).

The Tabula Clesiana (AD 46), found on the Campi Neri near Cles in the Val di Non, further records the Anauni, Tulliassi and Sinduni, three tribes who are described as being closely associated with the Tridentini (and therefore entitled to Roman citizenship); they are thought to have settled in the Vallagarina and/or the area around Trento. As the Anauni can be connected with the Val di Non (Lat. *anaunia*), the other two tribes may be expected to have settled in the vicinity – the area in question includes the Val di Fiemme, the Ultental, and the Adige valley between Rovereto and Meran (Gleirscher 1991, 5 f.). The Raetic tribes south of Meran were peacefully integrated into the Roman Empire, and therefore do not feature on the Tropaeum Alpium (cf. the evidence of Republican coins adduced by Demetz 1992, 633 f. with Abb. 1). Also attested epigraphically are the Arusnates (CIL V 3915, 3928, 3928 from Fumane), who inhabited the Valpolicella (*pagus arusnatium*; Frei-Stolba 1992, 660). A Latin Imperial-age inscription, also from Fumane, refers to a "pontifex sacrorum raeticorum":

CIL V 3927 P · OCTAUIO · P · F · UERECUNDO | PONTIF · SACR · RAET | CAPITO · PATRUUS

The information provided by the classical authors, even apart from confusion arising from conflicting sources, has to be taken cum grano salis, as we do not know inhowfar the

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[222] Breuni and Genaunes are sometimes set apart, being counted among the "Illyrians" (Strabo, Geogr. IV 6, 8) or the presumably Celtic Vindelici (Horace, Carm. IV 14, 8–13), which may be reflected in their material culture (2.4.1). Anreiter 1997, 10 f. suggests that Strabo's choice of the term *Ἰλλυριῶν* can be explained as referring to the custom district publicum portorii Illyrici, which included the province Raetia. In light of the fact that a considerable number of toponyms from the assumed areas of settlement of the Breuni, Genaunes and Focunates in Nordtirol can be explained as Indo-European, Anreiter considers these tribes, as well as the Venostes, Isarci and Saevates, to be non-Celtic speakers of IE dialects (also 150).

ancients' (or any individual author's) definition of *Raetic* coincides with our modern, archaeologically, epigraphically or linguistically determined one (Lunz 1981b, 26–32).[223] Earlier theories which assume that the Raeti were an inhomogenous conglomerate of tribes, such as Menghin's theory (e.g. 1970, 141 f.) of a cult community, which is based on the notion that the name *Raeti* is derived from the Venetic goddess Reitia (see n. 379), is made obsolete by the linguistic and archaeological unity of the core area, but this does not mean that tribes especially in the periphery were not considered (or considered themselves) to be Raetic on other than linguistic grounds. Gleirscher 1991, 60 points out that the fact that the Raetic tribes could be subdued successively suggests that they were not politically unified, as indeed reported by Pliny; that the southern tribes appear never to have been at war with Rome in the first place points in the same direction. Marzatico 2001, 484 also raises the question of the "livello di omogeneità e di autoidentificazione" of a Raetic people. While it is tempting to think of the ethnic situation in the pre-Roman Alps in terms of "Ureinwohner", we must expect reality to have been much more complex – already in the middle of the 1st millennium BC, but even more so with the later Celtic expansion into the east and consequent intermixture of tribes and their names, which must also have muddled the picture for the ancients.

Yet the evidence for the localisation of the Raeti is, all in all, surprisingly coherent and fits with the extension of the province Raetia et Vindelicia, which was created around the middle of the 1st c. AD. The province included modern Graubünden and the cantons to its north up to the Bodensee (with the Alpenrheintal and the sources of the Rhein, the Engadin and Münstertal), the Vinschgau, Passeiertal and Wipptal, the Inntal down to about Wörgl, and the Alpine foreland west of the Inn to the Donau. Its northern border was originally constituted by the Donau and the limes, from the middle of the 3rd c. AD by the Donau-Iller-Rhein limes (Lunz 1981b, 22). The province appears to include the lands of the Celtic Vindelici in the Alpine foreland and those of the Raetic tribes which were subdued by force, while the southern parts of the Raetic area became part of Italy proper (regio X Venetia). See appendix II for a map showing tribes associated with the Raeti and their possible areas of settlement.

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[223] Pertinent methodological remarks (and full quotes) in Marzatico 2001, 484–492.

2.3. Research history[224]

2.3.1 Early finds and compilations in the 19th century

Modern research on the Raeti and Raetic based on both the classical sources and archaeological data begins with the work of Conte Benedetto Giovanelli, mayor of Trento, who published his book *Trento. Città de' rezj e colonia romana* in 1825. Giovanelli referred to the information given by the classical historiographers (53 [n. 43]) and, following Pompeius Trogus and Livy, assumed kinship of Raeti and Etruscans – though he argued a differing view concerning the connection between the two peoples, holding that it was the Etruscans who migrated to Central Italy from the north (1844).[225] Giovanelli associated the historical Raeti with two inscriptions found in places which lie in the area indicated by the ancients: the inscription(s) on the Situla di Cembra (CE-1) – also called Situla Giovanelli – which he bought in 1825 and published in 1844, and WE-1, on the handle of a situla, which was found in 1845 during excavations prompted by Giovanelli himself, and published by him in the same year. The latter would remain the most northerly Raetic inscription find for more than a century.

As early as 1853, the ancient historian Theodor Mommsen found occasion to lament "die über alle Begriffe elende Schrift" (199) encountered in the inscriptions of Transpadania generally. He published a collection of all such inscriptions then known, including those on coins, which contained Giovanelli's finds, as well as the Negau helmets A and B (SL-1, SL-2.1–4) which had already been put into Raetic context by Giovanelli himself (1845), and the then lost Spada di Verona (VR-3). Mommsen perceived the alphabets to be closely related to the Etruscan script and hence coined the term *Nordetruskische Alphabete*. Mommsen's work is distinguished by great methodological care and repeated caveats against drawing hasty conclusions from insufficient data. Considering this, it is even more baffling that in spite of his small database – forty-four items in all – Mommsen succeded in correctly discriminating between different alphabets, among them a *Swiss alphabet* in the west, an alphabet of Padova/Este, a *Styrian alphabet* on the Negau helmets, an *alphabet of Verona* on the Spada di Verona and a *Tyrolian alphabet* on Giovanelli's finds. Concerning the latter, he agreed with Giovanelli that the association of the finds with Livy' Raeti

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[224] The following chapter is intended as an overview to give the reader an impression of the scope of raetology, the level of investigation and the most important issues. It also serves as a publication history of the inscriptions. A detailed resume of the history of research on Raetic, including summaries and discussions of seminal works, can be found in Schumacher 2004, 19–108.

[225] See also Niebuhr 1811–32 I (sub "Die Tusker oder Etrusker") and Mommsen 1854–85 I (ch. 9).

suggested itself, but observed that a relationship of alphabets did not prove a relationship of the underlying languages (201. 230). For the identification of languages, Mommsen considered the available data insufficient.

Only two years later, Sulzer 1855 published drawings of the inscriptions on the warrior statuette from Sanzeno (SZ-16) and the stela from Pfatten (BZ-10), found in 1846 and 1854, respectively. In 1867, Fabretti included all the North Etruscan inscriptions in his *Corpus Inscriptionum Italicarum*, adding, amongst a number belonging to other alphabet groups, Raetic BZ-4, which had been published by Conestabile in 1863. Corssen discussed the North Etruscan inscriptions in *Die Sprache der Etrusker* (1874, 919–954), interpreting the lot as documents of Etruscan, which in turn he took to be an IE language of the Italic branch. This view was echoed in Oberziner 1883, who considered all the documented languages of Northern Italy to be related to Etruscan and the other languages of Italy.

It was the philologist Carl Pauli in his 1885 edition *Die Inschriften des nordetruskischen Alphabets*, who, relying on a corpus increased twofold, continued Mommsen's groundwork and laid the foundation for detailed research. The largest and most important new group of documents at Pauli's disposal were the alphabet tablets from Este; as concerns Raetic, the only addition was the horse from Dercolo (NO-11).[226] Pauli distinguished four script provinces and assigned them new, non-interpretative names according to the main find places: the alphabets of Este, Bozen, Sondrio and Lugano (46–58). While in at least two cases the epicentres of the alphabet provinces have shifted in terms of the number of finds, these names are still used today, even though they were intended only as provisional (58) – Pauli himself wanted to change *Bozen alphabet* into *Trient alphabet* a few years later (1891, 189), but could not establish the new name. While he regarded the Bozen and Lugano αβs as daughter alphabets of the Etruscan script, he believed the alphabets of Este and Sondrio to be derived from a Greek source on the Adriatic coast, and consequently distinguished between *North Etruscan* and *Adriatic alphabets* (58–68; see also 1891, 231). Based on the increased data, Pauli also attempted to identify the languages of the inscriptions and correctly perceived the Indo-European affiliation of those written in the Este and Lugano αβs, coining the terms *Venetic* and *Lepontic*. The languages of the Bozen and Sondrio αβs he connected with Etruscan, and suggested – combining his findings with both conflicting theories about the origin of the

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[226] The inscription on the key from Dambel, included by Corssen 1874, was judged by Pauli to be an imitation of CE-1 on a mediaeval object (37–41).

Raeti – that while the latter was used by the population which was left behind when the Etruscans moved into Italy, the first was the script of those Etruscan tribes who were later dispersed to the north by the Gaulish invasion (96–112; see also 1894, 181–199).

2.3.2 A growing corpus and the *Proto-Italic Dialects of Italy*

The late 19th and early 20th centuries saw a number of new inscriptions found, which were only published separately and sometimes rather obscurely. Luigi Campi di Montesanto conducted excavations in and around the Val di Non, which brought to light NO-1, NO-3, NO-4, NO-5, NO-6 and NO-10, published between 1887 and 1905. A propos of his comments on the Meclo inscriptions, Pauli 1888 mentioned VR-1 and VR-2, the former having been published by Cipolla in 1884. Pauli was also consulted by von Wieser 1891 about marks on two cists from Moritzing (BZ-7, BZ-8). In 1889, von Wieser reported the discovery of BZ-2 and BZ-3 at a meeting of the Anthropologische Gesellschaft in Vienna. Menghin published RN-1 in 1914. A particularly important find came from the south: the Paletta di Padova (PA-1), found in January 1899 during the extension of a church and published by Ghirardini 1901. In 1918, the archaeologist Giuseppe Pellegrini published the considerable find of Magrè. He defined an *alphabet of Magrè*, distinct from Pauli's Bozen αβ and with similarities to the Venetic αβs, documented on the twenty-one pieces of antler, and also considered the southern inscriptions VR-3, which Pauli had not been able to place, and PA-1 to belong in this group. He did, however, perceive the similarity of the linguistic forms recorded in the Magrè and Bozen αβs, and tentatively suggested a difference between a northern and a southern Raetic population, where the former had mixed with the Gauls, whereas the latter, termed *Euganei*, was heavily influenced by (but not necessarily related to) the Etruscans.

Only in 1933 were the Transpadanian inscriptions again published together in the copious edition of the British philologist Robert Seymour Conway and his student Joshua Whatmough, *The Pre-Italic Dialects of Italy* (PID). Conway, who had been working on this project since 1907, limited himself to editing vol. I, which contains the Venetic inscriptions, so that the other inscription groups (vol. II) were effectively attended to by Whatmough alone, though he drew heavily on Conway's notes. PID was a very ambitious project, both in scope and in method: the editors attempted to examine all the inscriptions themselves, or at least to have them autopsied by a trustworthy colleague. The subcorpus presented as Raetic by Whatmough, in addition to the inscriptions already listed by Pauli as written in the Bozen alphabet and the ones mentioned in the preceding paragraph, include RN-2 (found in 1924) and thirteen inscriptions on various objects from Sanzeno preserved in the Ferdinandeum (SZ-17 to SZ-29). Whatmough also republished BZ-9, which had already been published loco obscuro by Orgler in 1866. Of inscriptions previously assigned to other groups, he included the inscriptions from the Val d'Astico (AS-1 to AS-14), which had been published as belonging to the Venetic corpus, but which he associated with Pellegrini's Magrè αβ, as well as VR-5 (filed as Lepontic by Pauli 1885). He also counted the inscriptions in the Sondrio αβ among the Raetic ones, but considered them both alphabetically and linguistically deviant. HU-1 and BZ-17 were mentioned in the appendix. Whatmough, who had basically finished his volume by 1925 and published a preliminary paper in 1923, agreed with Pellegrini that the language connected the Magrè with the Bozen group. In opposition to Pauli he argued that this language was not Etruscan or Etruscoid, but

> "the remnants of the speech of some tribe, the chief constituent of whose population was Western Indo-European, probably of mixed Kelt-Illyrian stock, which had been at some period of its history affected by considerable Etruscan intermixture and influence" (1923, 69).

Whatmough assumed that the inscriptions were mainly votives, and accordingly read almost exclusively anthroponyms and theonyms, which he explained by comparing them to established names, mainly of Celtic or "Illyrian" origin. As concerns the alphabet, Whatmough also dissented from Pauli in that he saw all the Transpadanian αβs as directly derived from the Etruscan, with the Magrè αβ very similar to the Venetic αβs, and the Bozen αβ particularly close to the original Etruscan.

2.3.3 The Räterfrage

The discussion of Raetic has long been impeded by nationalistic feeling on both the Austrian/German and the Italian side, because the question of Raetic identity and affiliation was regarded as relevant to the political, linguistic and ethnic situation of what used to be the Habsburg Kronland of Tirol up to 1918. The debate has centered on the "Räterfrage" – the origin and composition of a hypothetical Raetic people. The profusion of usually fuzzy and sometimes contradictory propositions which were put forth on this topic lay rooted in the muddling of the classical name *Raeti* and the various doubtful informations provided by the ancients with the epigraphic finds which were defined, inconsistently over time, as linguistically or alphabetically Raetic. The Italian side has traditionally favored the Etruscan theory, proposing a Mediterranean drift into the Alps since pre-Roman times as suggested by the classical historiographers, while the Austrian camp preferred to identify the Raeti with the omnipresent Illyrians: with regard to Pauli's results concerning the Etruscan character of the inscriptions found in the Bozen area and as far north as Matrei am Brenner, Stolz 1892, 37 conceded that Etruscans dwelled "im südlichen Theile des Landes" – that is, where an Italian-speaking population existed in his own time.[227] Stolz regarded the name *Raeti* as a cover term, which allowed him to look for other ethnicities with which to identify the northern population. He introduced into the discussion Strabo's comment (Geogr. IV 6, 8) which mentions the Inntal tribes of the Breuni and the Genaunes as being Illyrian, thereby mitigating the controversy: the Illyrians were associated with neither Italy nor Central Europe, but with the Balkans. Stolz then channeled the problem into toponymy, with the pre-Roman toponyms of Tirol being widely regarded as Illyrian in the first place. Stolz' writings influenced prehistoric research in Austria and Germany until the cessation of "Panillyrism" in the 1950s (e.g. Menghin 1911 and Haug 1914). Even Pauli, who had identified the Venetic tribes with the Illyrians, acknowledged the relevance of Strabo and had his Illyro-Veneti settle in the greater part of north-western Tirol, with the Etruscans only migrating along the valley of the river Adige to Matrei (1891, 242 f.).

The 1920s and 1930s witnessed a linguistically based argument between the leading philologists in the field, conducted mainly in the journals *Glotta*, *Studi Etruschi* and the nationalistic *Archivio per l'Alto Adige*. Whatmough's opinions (also 1934) were accepted by Bonfante 1935, who took the Raeti for Illyrians. They were opposed by Thurneysen 1933, who put forward a lexical equation between Raetic *þinaχe* and Etruscan *zinace* 'made', and by Cortsen 1935, 181. Kretschmer (1932, 1949), Pisani (1935) and Ribezzo (1934a, 1934b) also recognized similarities between Raetic and Etruscan, but argued a common ancestor: while Kretschmer and Pisani saw Raetic as an autochthonous pre-IE language related to Asia Minor Etruscan, which at the time of the inscriptions was already being Indo-Europeanised, Ribezzo preferred to have speakers of a pre-IE substratum including Raetic and Etruscan immigrate from Central Europe. Italian nationalism was represented by Battisti (in numerous books and papers, especially 1944 and 1947), who stuck with the ancients by identifying the Raeti with Etruscan fugitives and fit this theory into an overall picture of migration from the south (and east) into the Alps. On the other end of the

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[227] Literature on the ethnicity of the Raeti before Stolz can be found in his n. 14.

scepticism spectrum, Vetter, who was responsible for the bibliographic reviews concerning Italic languages in the journal *Glotta*, joined the debate in 1935 by remarking that he did not consider the Raetic–Etruscan equations compelling (205). He maintained his sceptical outlook in 1943, suggesting that the Sondrio inscriptions ought to be kept apart from the Raetic ones and that possibly even the Bozen and Magrè groups were not as close as generally assumed (70 f. and 77, respectively), but later reverted to Kretschmer's position based on the finds of the 1940s and 1950s.

2.3.4 New finds and findings and the *Iscrizioni retiche*

After 1945, excavations conducted in Südtirol and the Trentino brought important new finds to light. The bronzes of Sanzeno in the Val di Non (inscriptions SZ-1 to SZ-15), found in 1947, shifted the epicentre of Pauli's Bozen αβ to the west of the river Adige. They were published in 1950 by Roberti, and again in 1951 with a linguistic focus by Pellegrini (1951a), who also mentioned SZ-38, SZ-39 and the inscriptions on bronze handles SZ-40 and SZ-53. Pellegrini also published SZ-31, which had come to light two years later (1954b), as well as two inscriptions from the Pustertal: the inscription on the Lothen belt plaque (PU-1; 1951b) and, together with Calzavara Capuis (Calzavara Capuis & Pellegrini 1970), one on a stone amulet (PU-4). Another find from the eastern border of the distribution area, the inscription of Castelcies (TV-1.1), which had been known among archaeologists for two centuries, was edited and assigned to the Raetic corpus by Lejeune 1951. Vetter 1943 discovered BZ-11 on a cist which had been published a few years earlier (Ghislanzoni 1939). Throughout the 1950s and early 1960s, Leonhard Franz and Karl M. Mayr of the Tiroler Landesmuseum Ferdinandeum added a number of finds. Mayr published separately another inscription (though less relevant) from the Puster Valley (PU-2; 1954), the first inscription from the Vinschgau (VN-1; 1953), and from Bozen, besides BZ-6 (1962a) and BZ-14 (1947), the first inscription which displays a mixture of Raetic and Roman features (BZ-24; 1956a). The Val di Non corpus was augmented by NO-2 (Franz 1958) and NO-7 (Mayr 1957a). Franz as the museum's Fachdirektor made an effort to unearth all the relevant material preserved in his house, publishing not only the possibly Latin SZ-68 (Franz 1953), but also a fair number of objects which bear rather doubtful characters, mainly from Sanzeno (1957 and 1959).

In 1957, the discovery of inscriptions displaying Raetic affinity in both script and language in Nordtirol – the petrographs of Steinberg (ST-1 to ST-6), published by Vetter 1957, and two inscribed objects from the Himmelreich, published by Kasseroler 1957 – extended the domain of Raetic to the north of the Brenner pass. The Steinberg find especially made an impact, since it was the first inscribed rock wall in the Raetic area. Also, both the Steinberg and the Lothen inscriptions displayed yet more alphabet variants, apparently akin to the Venetic αβ. The "stagshorns" from the Montesei di Serso, on the other hand, found between 1962 and 1964 and published by Pellegrini & Sebesta 1965, represented a subcorpus very similar to that of Magrè, and established the inscribed piece of antler as a typically Raetic artefact.

While there was still some doubt as to the linguistic affiliation of Raetic (e.g. Pulgram 1958, 209), some progress was made in detail: Pellegrini 1951a, 321 restated and expanded Thurneysen's *zinace*-equation and observed that the absence of omikron could be interpreted as an Etruscan feature (1959, 192).[228] He also reintroduced the inscription on the Vače helmet (Pellegrini 1969), which had been put into Raetic context on graphematic grounds by Marstrander in the original publication (1927), and now had linguistic comparanda from the Montesei di Serso. Vetter 1954 identified the patronymic suffix *-nu*/ *-na*; his theory was underpinned by Untermann 1959 in the course of his reevaluation of the name material of Northern Italy. In 1968, Risch, who had been invited as the token linguist to speak at an archaeological symposium on the Raeti at Chur, gave an overview of the current state of research (1970). He addressed methodological problems such as the doubtful homogeneity of ethnicity and language in Alpine regions and apparent linguistic and epigraphic variants in the inscription, but tentatively presumed a genetic relationship of the surmised Raetic dialects with Etruscan. Furthermore, he definitively excluded the rock inscriptions of the Val Camonica and the other testimonies written in the Sondrio αβ from the Raetic corpus.

Risch's tackling of basic questions of method and definition was pursued by Prosdocimi 1971, who adressed himself to methodological criticism, especially of the popular practice of interpreting inscriptions whose reading is not certain. He took an important step by explicitly defining the denotations and limitations of the term *Raetic* (in Mancini & Prosdocimi 1976, 116–118). Prosdocimi defined the term *Raetic* by the script only – applying it to those North Italic (North Etruscan) inscriptions that are written in neither the alphabets of Este nor in those of Lugano or Sondrio – and pointed out that while the area of distribution could be reasonably well demarcated in this manner, there are overlaps with

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[228] Though he later (1969, 47 f.) lost his faith in the Etruscan theory.

neighbouring script provinces, and also offshoots on the margins. He stressed that there are alphabetic variants, and that the Raetic alphabet(s) may accommodate different languages, possibly including those customarily written in neighbouring alphabets. Accordingly, a language or dialect associated with the Raetic script could occasionally be found in an inscription in a non-Raetic alphabet. Furthermore, Prosdocimi cautioned against vague associations of Raetic elements with Etruscan comparanda, as the undeniable "sapore etruscoide" (116) of the Raetic inscriptions could be due to a common ancestor, to one being a younger stage of the other, to secondary influence of one on the other, or result simply from the narrow view of Indo-Europeanists, to whom all non-IE languages look vaguely similar.

In 1973, Prosdocimi's student Mancini produced a list of questions that he deemed most urgent, including issues of phoneme–grapheme-relation, forms of graphemes, and also the still doubtful role of the Sondrio alphabet. Two years later, he published a lengthy article entitled *Iscrizioni retiche* (IR) in which he strove to update and amend the Raetic corpus as presented by Whatmough in PID. Mancini's is not a corpus as such, it merely serves as a supplement to PID. Where he considered the readings of Whatmough or earlier scholars to be wrong or in some way amendable, he gave alternative interpretations by himself or others according to the 1975 state of the art. He also collected the new inscriptions, including (besides most of the finds mentioned in the preceding section) entirely new material which he found in museums, mainly the Tiroler Landesmuseum Ferdinandeum and the Castello del Buonconsiglio Trento. Apart from the sizable, if fragmented, inscription on the Sanzeno situla (SZ-30), the short, but significant NO-13 and a number of minor testimonies, he augmented the corpus with "sigle" similar to the marginal material in Franz 1959, thereby being responsible for a good portion of the doubtful inscriptions and script-like scratchings which inflate especially the Sanzeno subcorpus (e.g. on Sanzeno bowls, scythe rings and various other iron implements). The work's great virtue, especially compared to the unillustrated PID, is the abundance of photographs and drawings. Professional modern researchers have largely heeded Prosdocimi's advice. The revised version of Risch's 1970 paper, which appeared in the second edition of the proceedings of the Chur symposium (1984), shows the author back-pedalling on the matter of Raetic–Etruscan cognation.[229]

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[229] Like all epigraphic riddles, the Raetic inscriptions have attracted the attention of numerous fringe scholars and laymen, who are responsible for some of the more curious theories and also a couple of

2.3.5 Raetic archaeology

The above-mentioned symposium on Raetic held in 1968 at Chur had an archaeological focus and was mainly concerned with the problem of establishing a methodologically sound connection between the historical Raeti, the inscriptions and their potential archaeological context. Its results were published in 1970 as *Der heutige Stand der Räterforschung* (Frei 1970), and again in 1984 under the title *Das Räterproblem in geschichtlicher, sprachlicher und archäologischer Sicht* (Frei et al. 1984). It gave a fresh impetus to research and presented some innovative ideas on the Räterfrage. Lunz 1981a, 198 f. asserted that, nebulous though the Raeti as a people remained, the domain of the inscriptions coincided with an archaeological group of the Tyrolean younger Iron Age, the Fritzens-Sanzeno group. This view is now widely accepted by the community, the Fritzens-Sanzeno group being referred to as *retico* in the Italian literature (Marzatico 2001, 484).

2.3.6 Breakthrough and *Die rätischen Inschriften*

After Mancini's update, new finds were uncovered in Südtirol, the Trentino and the Veneto, where the Spada di Verona (VR-3), which had gone missing three-hundred years prior, was recovered and republished by Marinetti in 1987 – an important work, where, for the first time, a segmentation of a Raetic text on purely structural grounds was attempted. Marinetti also published a new inscription from Castelrotto near Verona (VR-4) in 1991 and a group of potentially Raetic inscriptions from Montorio and San Giorgio di Valpolicella, both near Verona, in 2004. Four inscriptions from Trissino (TR-1–4) were published by Mancini 1995. Carlo Sebesta published FI-1 in 1981. From the northern area, inscriptions from the Eisacktal (WE-3) and the Pustertal (PU-3) were published by Dal Rì 1987; while the latter is illegible, more utilisable finds from that site (PU-5–PU-11) were published by Marinetti 1992. In 1999, Morandi submitted a comprehensive study of the Castelcies opisthograph (TV-1), which included new readings of many inscriptions.

In 1992, Stefan Schumacher's *Die rätischen Inschriften*, intended as a preliminary work to a proper corpus, sought to combine the data from PID and IR and contains a collection

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"decipherments". They have been the cause for no little confusion and mystification about Raetic matters in fields that are only marginally concerned with the problem, and also among the public. Bravi 1979, in a book entitled *La lingua dei Reti*, made a brave attempt at a complete edition, but his readings are bogus. The classical philologist Brunner, who published various papers throughout the 1980s, believed the inscriptions to encode a Semitic language (e.g. Brunner & Toth 1987); the chemist Zebisch (1988), who also put forward decipherments of the Phaistos disc and Linear A, preferred to read Iberian.

of all inscriptions then known. Schumacher introduced a sigla system in which the inscriptions are sorted by find spot, following the example of Pellegrini & Prosdocimi 1967 for the Venetic corpus. New material presented by Schumacher includes additional finds from the Inntal, the Eisacktal and the Vinschgau (VN-2 to VN-4),[230] minor inscriptions from the Val di Non, a number of finds from Bozen and a ceramic fragment bearing characters from the Engadin west of the distribution area (EN-1), which had already been mentioned in Risch 1984.

Schumacher's work made possible an overall view of the inscriptions and the language they encoded (Schumacher 2004, 293) and laid the basis for new insights which were published by Schumacher himself (1993; 1998a; 1999; 2004, 293–318) and by the Etruscologist Helmut Rix (1998), whom Schumacher had consulted on the question of Raetic–Etruscan parallels (Schumacher 1998a, 90 [n. 1]; Rix 1998, 8 f.). Schumacher and Rix could not only demonstrate the language of the Raetic inscriptions to be more homogeneous than expected, they also established its genetic relationship with Etruscan based mainly on the grammatical endings of the pertinentive case and of the deverbal noun. Raetic was shown to employ a syntactic construction also found in archaic Etruscan, and to have a patronymic name system which can be connected to that of Proto-Etruscan. The language from which both Raetic and Etruscan, and also Lemnian in Asia Minor, derive was termed Proto-Tyrsenian by Rix 1998, 59 f.

In 2004, Schumacher updated his collection for a second edition, augmenting it with a summarisation of the recent findings and a couple of newfound inscriptions. Apart from yet more bone objects with short inscriptions from the Vinschgau, he published the substantial IT-4 on an elaborately carved piece of antler and included the alphabetically Latinoid inscription on a stone from Bozen which had been published by Mayr (BZ-I, now BZ-24) and an inscription on a silver ring from the very north of the distribution area (AV-1), published by Ziegaus & Rix 1998. He also decided to finally introduce the Slovenian helmets (SL-1, SL-2) into the corpus. Based on new drawings traced from a cast which had been made in 1993 as well as on Zavaroni's 2004 reevaluation of the letter forms, Schumacher reread and conclusively interpreted the Steinberg petrographs (342–356).

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[230] Schumacher later published more bone objects from the Vinschgau and two newfound bronzes (HU-5 and HU-6; 1994a; 1994b).

2.3.7 Recent finds and editions and the *Thesaurus Inscriptionum Raeticarum*

In 2009–10, Mancini put forward a new edition entitled *Le iscrizioni retiche* (LIR), which presents no progress in the field of Raetic epigraphy. The focus of the work lies on "producing an edition of inscriptions rather than on language issues" (transl. p. VII) – accordingly, Mancini included almost all the relevant testimonies with complete lists of references and previous readings, but no further commentary.

In recent years, the Raetic corpus was augmented by a number of linguistically relevant finds. Marinetti 2004a published at least partly Raetic inscriptions from the area of Verona (VR-6–17); the inscription on the Situla in Providence (HU-7) was conclusively shown to be Raetic by Schürr 2003a. From the Inntal come the considerable inscription IT-5 on a bronze tablet, published in detail in De Simone & Marchesini 2013, as well as the shorter IT-6, IT-7 and IT-8 (TIR [publication date 2014]; Salomon forthc.). Rocks which bear Raetic inscriptions comparable to the ones at Steinberg were found at two locations in the Inntal (AK-1, AK-2) and in the Ammergau in Bavaria (UG-1, UG-2, UG-3; published in Schumacher 2015) by ANISA. Three new inscriptions from the Val di Non (NO-15, NO-16, NO-17) were published by Marchesini 2014a. Marchesini also provided the most recent printed corpus, the *Monumenta Linguae Raeticae* (MLR, 2015), which includes the new inscriptions and tackles the long-neglected question of dating.

An online edition was created under the aegis of Schumacher between 2013 and 2016: *Thesaurus Inscriptionum Raeticarum* (TIR)[231] is a continuously updated collection of all matters Raetic. In the course of the project, all inscriptions (except those which are currently untraceable) were autopsied and documented with photos and/or drawings. A complete edition of the inscriptions including my own readings and commentaries is available online on TIR and does not need to be included here, as it would unduly inflate the present work. A complete list of inscriptions in the Raetic corpus as of May 2018 can be found in appendix III for quick reference.

The Raetic epigraphic documents cover a considerably smaller area than that suggested by the ancient sources. The term *Raetic area*, which will be used frequently in the following chapters, is here defined as that part of the Alps which has yielded Raetic inscription finds: the Bavarian Alps and Alpine foreland, the Nordtiroler Inntal and (argu-

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[231] http://www.univie.ac.at/raetica/wiki/Main_Page.

ably) the Unterengadin, the Wipp- and Eisacktal, the Adige valley, the Val di Non, the Val di Cembra/Val di Fiemme and the Alpine foothills between Adige and Piave, including tributary valleys and surrounding highlands. Referring back to the informations provided by ancient historiography, the question of inhowfar this area represents the sphere of settlement of the Raeti must remain open. While Strabo's extension of the name *Raeti* to the demonstrably Celtic Leponti is likely an over-generalisation of the term (seeing that there was a notion of a specific Raetic language among the ancients), speakers of Raetic may well have settled in the Oberrheintal and at the Bodensee; as long as the affiliation of Camunic and/or the language(s) attested in the Sondrio alphabet is not clear, the tribes which settled between Adige and Oglio can also not be excluded to have been linguistically Raetic. For the present work, I will disregard these areas, focussing exclusively on those parts whence we have epigraphic Raetic material.

2.4. Archaeology and chronology

2.4.1 Material culture and archaeological groups in the Raetic area

Within the area of settlement which has yielded Raetic inscription finds, three major parts must be kept apart from an archaeological perspective:

1. the northern East Alpine area, i.e. the Inntal and its tributaries north of the Brenner pass (maybe including the Wipptal down to Franzensfeste),
2. the southern East Alpine area, including the Unterengadin, the Eisack- and Pustertal, Osttirol and the Adige valley from the river's source down to Rovereto,
3. the Alpine foothills between Trento and the Padan plain.

The local middle Bronze Age culture of the eastern Alps is the Inneralpine Bronzezeitkultur, an inhomogenous group formed by the input of various migrant groups in the Late Neolithic and Early Bronze Age (Sperber 1992, 79) which extends roughly over the Inntal (Nordtirol), the Engadin and the Alpenrheintal (Graubünden) and possibly parts of Südtirol (Sperber 1992, 55; Rageth 1992, 196). In Nordtirol, this culture is succeeded by the late Bronze Age Nordtiroler Urnenfelderkultur. In Südtirol, the Nordtiroler Urnenfelderkultur triggers the emergence of the Laugen-Melaun culture, extending from the Unterengadin and Münstertal over Süd- and Osttirol and the Trentino to Rovereto. During the late Bronze Age, the archaeological groups of the Alpine area are unified by the common source of their wealth, their richness in copper. While Laugen-Melaun A reflects the dependence on the northern Urnfield cultures, Laugen-Melaun B and C (early Iron Age) show a reorientation toward the southeast Este culture (Gleirscher 1992, 119): in the 10th c. BC, the mining of copper, and with it the inner-Alpine populations, lost in economic importance with the rise of iron working (Gleirscher 1991, 12). The Venetian Alps and Alpine foothills between the rivers Adige and Brenta in the late Bronze Age belong with the southern Proto-Villanova culture (Leonardi 1992, 136).

A slow convergence of the three areas can be observed from around the turn of the early (Hallstatt C–D) to the late (La Tène) Iron Age, though they never consolidate to form a homogenous Raetic culture. From the late 6th c. BC onward, triggered by the Etruscan and Greek presence in the Padan plain, a new horizon emerges, first manifest in the Southern Alps: the Fritzens-Sanzeno group. By contrast, in the early Iron Age, the north remains more closely associated with the northern Alpine foreland; Marzatico 1992, 224 f. sees a reorientation toward the south indicated by the ceramics already in the middle of the 5th c., but more recently Gamper 2006, 32. 85 argues for a later date at the turn from the early to the middle LT period around 300 BC. In the south, the Venetian Alps and foothills see an increase in settlement in the 6th c., the relations with the Fritzens-Sanzeno culture becoming more evident in the course of the 5th c. (Lora & Ruta Serafini 1992, 267).

The term *Fritzens-Sanzeno* was introduced by Frei 1959, 38, using (as in *Laugen-Melaun*) the names of type sites of ceramic index fossils: Fritzens bowls, bowls with S-shaped profile and Sanzeno bowls, which form (with intermediate and sub-types) an evolutionarily continuous line of pottery types distinguished by an omphalos (Marzatico 2001, 510–512; Gamper 2006, 13–17 and passim).

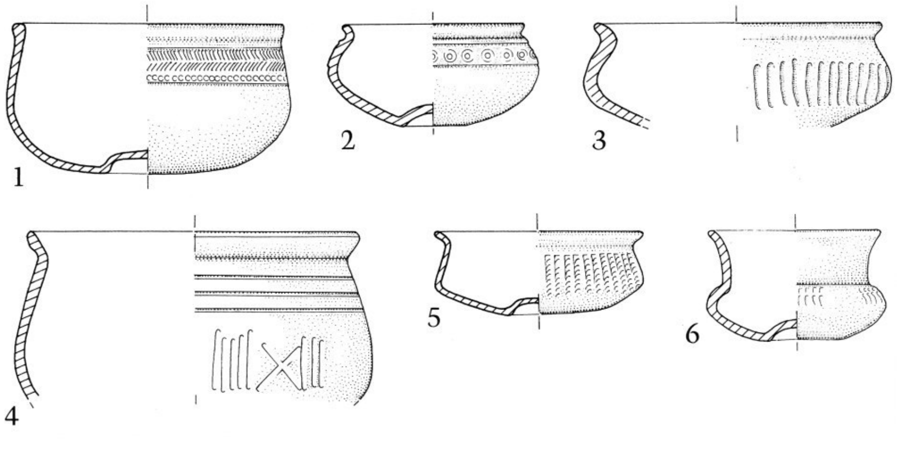

Fig. 18: Fritzens-Sanzeno ceramics (from Marzatico 1992, 217 [fig. 2, 1–6]). 1. Fritzens bowl, 2–4. bowls with S-shaped profile, 5. bowl with Z-shaped profile, 6. Sanzeno bowl.

Apart from the typical ceramics, the Fritzens-Sanzeno culture is characterised by a number of features pertaining to dress, buildings, armament and cult. A concise overview of the relevant fibula types can be found in Marzatico 2001, 516–519. The typical structure of the Fritzens-Sanzeno culture is the casa retica, a house characterised by a lowered floor which is protected from the surrounding moisture by drywalls. The interior was reached via an L-shaped entrance corridor with a slope or steps (Sölder 1992, 384 f.). The houses could have two storeys, in which case the living quarters were situated in the upper storey, while the basement was likely used as a stable (Gleirscher 1991, 24; Sölder 1992, 388–394). On weapons in the Fritzens-Sanzeno culture, e.g. the Sanzeno shaft-hole axe and the Hellebardenaxt,[232] see Egg 1992, 418–430. A number of helmets of the Negau type, sometimes inscribed, were found in the Raetic area (2.8.1.19). The type is of Etruscan origin, but it was locally produced, adapted and used in the Alpine area far longer than its model (Egg 1992, 423–426).

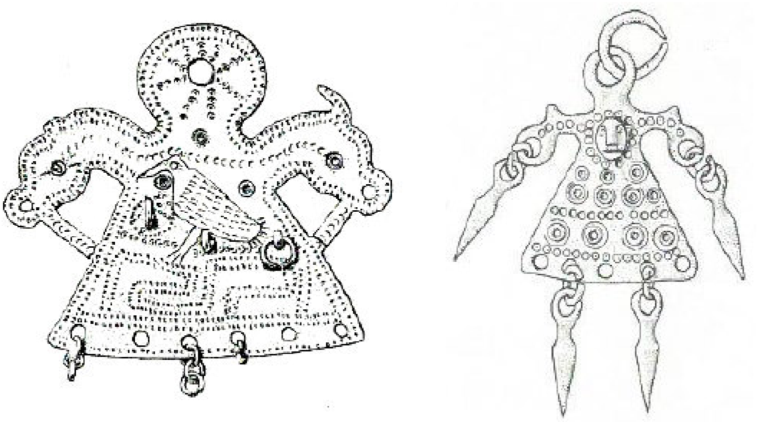

Fig. 19: Depictions of the πότνια θηρῶν, one with arms ending in horses' heads and a bird on the chest, cut out of bronze sheet, found in Sanzeno and Meclo, respectively (from Marzatico 2001, 538 [fig. 62,5 and 7]).

Particularly in the cultic sphere, the dependence of the Fritzens-Sanzeno culture on influence from the south is manifest in the ornamentation and imagery on situlae and other luxury items (Gleirscher 1991, 51 f.; De Marinis 1999, 648 f.). Of particular importance in this context are the bronze votive figures, cast or cut from bronze sheet, which prominently represent (stylised) horses and female figures (Gleirscher 1986a). While it is likely that these figures, particularly the specimens with arms ending in horse's or bird's heads, are representations of a female deity with ties to Mediterranean goddesses, the popular equation with the Venetic Reitia, who was worshipped at the Baratella sanctuary in Este, is

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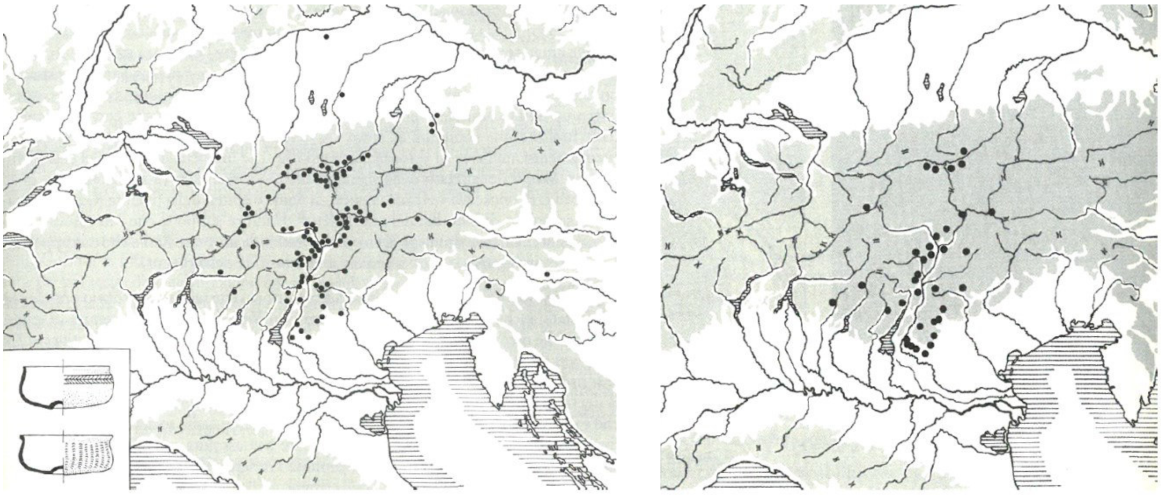
[232] Probably the weapon referred to by Horace; see 2.1.1 (Marzatico 2001, 526).

tenuous. Finally, the use of script is a central feature which distinguishes the Fritzens-Sanzeno culture from its predecessors (Gleirscher et al. 2002, 202–207). While examples from Mediterranean cultic practice can be adduced to explain the antler piece as an object of cult (ibid., 207), the inscribed "Hirschhornvotiv" is almost exclusive to Fritzens-Sanzeno contexts and the Raetic corpus. Also specific to the Fritzens-Sanzeno culture are perforated "bone points" (2.8.1.5) and bronze batons which come in sets of four (2.8.1.2). They are sometimes marked or even inscribed and assumed to belong in the sphere of lots and divination (ibid., 208).

The Mediterranean element is generally attributed to the Etruscan presence in the 6th-c. Padan plain (Marzatico 1992, 233; in detail Gleirscher 1993, 77–95). The Etruscans founded – among other proto-cities and emporia – Marzabotto, Forcello (near Bagnolo San Vito) and the harbour city of Spina, and took control of the Veneto-Greek harbour of Adria between 540 and 525 BC (De Marinis 1999, 624). Direct contacts between the Padan Etruscans and the inhabitants of the Central Eastern Alps, without Venetic or Celtic mediacy, are demonstrated, for example, by objects of Alpine make found in Forcello (De Marinis 1999, 624–626); a list of Etruscan imports found in Fritzens-Sanzeno context – not as many as might be expected, because much was manufactured locally on Etruscan models – can be found in Nothdurfter 1992, 60–62. De Marinis 1999, 628 stresses the importance of Forcello for the Etruscan–Raetic connection, which is notable insofar as the route of transit from that settlement into the north would conceivably not have led up the Adige valley, but along the Mincio to the Lago di Garda, via its influent, the Sarca, and over the plateau between the Adige and the Brenta mountains to the Noce and into the Val di Non, then over the Gampen pass to Meran. Particularly Sanzeno's evident role as a centre of metal working, trade and cult is difficult to reconcile with a main transit route passing it by in the Adige valley (Nothdurfter 1992, 51). That trade also flowed through the Adige valley is demonstrated by Etruscan finds from the Vallagarina and Pfatten (Nothdurfter 1992, 50; Marzoli & Wiel Marin 2013, 26), but, according to Nothdurfter 1979, 105, the valley in antiquity was swampy and "monatelang unpassierbar" after heavy rains. Gleirscher (Gleirscher et al. 2002, 124) hesitates to decide between Mincio and Adige as the main inlets for Etruscan culture into the Central Eastern Alps; he points to ties between the Val di Non and the Golasecca culture in the west. In any case, the major trade routes between Italy and the European mainland are thought to have bypassed the Raetic area entirely, making use of passages in the Golaseccan area (De Marinis 1988, 120; Gleirscher 1991, 13. 20; Schmid-Sikimić 2000, 215–219).

The Fritzens-Sanzeno culture appears to have flourished in the 5th–4th c. (Marzatico 2001, 493) – i.e. during its intensive contact with the Etruscan culture. Celtic influence, which can be detected in both the Fritzens-Sanzeno and the Magrè group, largely replaces that of the Etruscans from the 4th c. onward, when the Celtic migration put an end to Etruscan dominance in the Padan plain (Lang 1999, 375–379; Gleirscher 1993, 97–100; Marzatico 2001, 527–537), though Etruscan elements do not disappear completely (Marzatico 2001, 521 f.). While Celtic enclaves seem to have existed in the Veneto, an actual Celtic presence in the Central Eastern Alps is thought to have been restricted to individual craftsmen[233] (Marzatico 2001, 531 f.). Eventually, Celts from Noricum (the Saevates) took over the Pustertal; the Germanic Cimbri's march over the Alps around in 103/102 BC may be reflected in the settlement structures of certain valleys (Gleirscher 1991, 21; Gamper 2006, 348 f.). Gradual Romanisation begins to make itself felt around 200 BC (Marzatico 2001, 537–541; Demetz 1992, 631). The Roman expansion marks the end of the indigenous Iron Age cultures of the Alps, though there are sanctuaries which were active well into Roman and even early Mediaeval times (Gleirscher et al. 2002, 196–199). The transition appears to have happened more peacefully in the southeast than in the militarily subdued inner Alpine areas (Marzatico 1992, 225 f.).



Maps 1 and 2: Find places of Fritzens-Sanzeno ceramics and sites with case retiche (from Marzatico 2001, 481 [fig. 1] and 504 [fig. 8]).

The Fritzens-Sanzeno culture extends over the area of the precursory Laugen-Melaun culture and beyond. Its border in the west lies in the Unterengadin between Scuol and Susch, in the east somewhere along the Puster- or Drautal, probably including Osttirol

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[233] Though Pompeius Trogus (via Justin XX 5) lists Trento as a town founded by the Gauls.

(Stadler 1992, 560). In the north, the Inntal, despite its clear affinity with the Fritzens-Sanzeno group, retains some distinguishing characteristics (Gleirscher 1999, 259. 261; Gleirscher et al. 2002, 173). The Montesei di Serso settlement displays intermediate features, suggesting a gradual transition into the peninsular cultures (Gleirscher 1999, 259; Gleirscher et al. 2002, 124 f.): the region south of Trento is considered part of the Raetic area (Marzatico 1999, 503), but kept apart archaeologically, its material culture being designated the *Magrè group*. Find places in the Valli Giudicarie south-east of Trento (Stenico, Monte San Martino) yield different types of ceramics, some typical for Fritzens-Sanzeno, others for the Breno-Dos dell'Arca group associated with Camunic (De Marinis 1992, 155–161). Burnt-offering sites with altars of stacked stones, female votive figures and antler votives may indicate a cult community within the Fritzens-Sanzeno culture which excludes the Unterengadin, the Inntal and the areas east of Brixen and south of Trento, though the above-mentioned bronze batons commonly interpreted as lot sticks are found throughout the Raetic area (Gleirscher et al. 2002, 184. 213).

Throughout the developments outlined above, there are no sudden breaks of traditions which would indicate drastic changes in the population (Gleirscher 1991, 58). The Fritzens-Sanzeno culture, identified as the material culture of the Raeti (Marzatico 2001, 483 f.), developed gradually from its precursors: Fritzens-Sanzeno pottery can be shown to be developed from local types, with new inspirations drawn from the south (De Marinis 1988, 117; Lang 1992, 98–100; Marzatico 2001, 511); Marzatico 1992, 232 points to the continuity of the places of worship. The emergence of Fritzens-Sanzeno can hardly be connected with an immigration of the non-IE Raeti into the area; Gleirscher 1993, 95 f. 102 and Marzatico 2001, 485 stress the absence of any indication for Etruscan immigration into the Alpine area during their intensive contacts or at the time of the Celtic invasions. Yet it is also difficult to reconcile the excellent fit between the archaeological Fritzens-Sanzeno group and the distribution of a linguistically homogenous inscription corpus with the fact that Fritzens-Sanzeno is the result of the incremental consolidation of two areas which can be clearly distinguished in the Bronze Age, which leads Gleirscher et al. 2002, 173 to use the term “Koine”. Should we expect the bearers of both the Nordtiroler Urnenfelderkultur and the Laugen-Melaun culture to be speakers of Raetic or did one group impose its language upon the other? Lunz, who is generally inclined to think of cultural expansion in terms of migration (1973, 10; 1974, 124–129), associates the expansion of the Fritzens-Sanzeno culture to the north with population movements (1974, 129; 1981a, 20; 1981b, 38; also De Marinis 1988, 119), but Nothdurfter 1992, 49 (with n. 12) points out that the continuity of burial rites in the Inntal speaks against Lunz' "südalpine Unterwanderung", arguing that the main connective factor was trade. Gleirscher 1991, 20 suggests that the Fritzens-Sanzeno extension into the area of the Magrè group "auf venetischem Substrat" may be connected with immigration from the middle Adige valley (also De Marinis 1988, 119).

From an archaeological perspective, speakers of the Raetic language or of Raetic dialects must have been settling somewhere between the Inntal and Rovereto since the Bronze Age, or have immigrated so unobtrusively that their presence and ultimate dominance left no clear marks on the material culture of the previous inhabitants. Although it could account for the paucity in onomastic material which can be compared to that of Etruscan (2.6.1.2), a mere shift in language is unlikely, as it is not evident why an indigenous Alpine population should have decided to adopt a Tyrsenian language (i.e. Etruscan or a language related to it). That the inscriptions reflect not the indigenous language(s), but a literary language which was adopted together with the script and cult from the neighbouring Etruscan prestige culture of the 6th c. is hardly possible (Schumacher 1998a, 113 [n. 33]) – see 2.7.4 on the differences between Raetic and Etruscan. The assumption is also unattractive in light of the fact that Livy (who was born ca. 59 BC in Padova) specifically refers to the Etruscan sound of the Raetic language.

2.4.2 Epigraphic material and dating

When talking about the dating of Raetic inscriptions, the usual caveats apply: archaeological dating on the basis of excavation context and typology is sometimes uncertain, and time frames of different extent make it hard to establish a chronology even where datings are available. Particularly in the Raetic corpus, we have a great number of old findings which cannot be dated, because their archaeological context is unknown. When dating an object through context, it must be observed that objects which have a short life span, such as ceramics, are likely to date from about the time which is determined by that context, whereas objects with a longer life span (especially if they are valuable), such as fibulas, may be considerably older (Gamper 2006, 43). Moreover, the time of production or even use of an object does not necessarily determine the time when the inscription was applied. A date for production or widespread use of objects gives a terminus post quem; a date for a grave or deposit gives a terminus ante quem (Schumacher 2004, 246; MLR, 10). The following paragraphs give an overview of the dating of objects with Raetic inscriptions which is strictly based on the archaeological data as presented in the literature. The possibility of dating inscriptions based on palaeography will be addressed in ch. 2.5.2.[234]

The oldest objects bearing Raetic inscriptions appear to be two of the more remarkable items in the Raetic corpus: the Situla in Providence and the Paletta di Padova. The situla with the inscription HU-7 is dated to the third quarter of the 6th c. on the basis of typology (Frey 1962, 46)[235]. Unfortunately, the find place of the vessel is unknown, it having emerged from the Italian art market. In the museum's announcement of the situla in 1934, the Etruscan necropolis at the Certosa di Bologna was given as find place, but the reliability of this statement was already qualified by Frey 1962, 1. The fact that a similar object – the Situla Certosa – was found there can either support the claim or challenge it (in that it makes the necropolis a plausible find place to make up for a decorated situla). The find place of the ritual spatula which bears the inscription PA-1 is known quite precisely, as it was found during excavations in a courtyard of the Basilica di Sant'Antonio in Padova, but no Bronze- or Iron-Age context came with it. The piece is dated typologically to the 6th–5th c. (Gambacurta et al. 2002, 186 [no. 20]). The testimonies are similar insofar as the objects are atypical (the situla being the most elaborately decorated one in the Raetic corpus), and come from places to the south(-east) of the Raetic area proper, which have not yielded any other Raetic inscriptions: Bologna was Etruscan, Padova was a Venetic site.

The so-called Spada with the inscription VR-3 – definitely not a sword – is dated to the 6th–5th c. by Marinetti 1987, 138 f. (n. 5), following Salzani's (1984, 793) identification of the object as a skewer of the sort which was used in ritual feasts and his comparison of the piece to similar ones from Padova and Magdalenska gora. Salzani himself, however, gives the early 4th c., to which the Slovenian specimen can be dated by context (Salzani 1984, 181; also Gambacurta et al. 2002, 185 [no. 19]). De Marinis 1988, 121 lists the Spada among inscribed objects dated to the 5th c. The find place is indicated as Ca' dei Cavri, a fraction of Bussolengo, in the original publication (Rossi 1672, 404 ["Campagna Caudina"]); if this is accurate, VR-3 is the only Raetic inscription find from the right bank of the Adige in the area of Verona.[236]

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[234] See appendix IV for a list of the archaeological sites which have yielded Raetic inscriptions, including additional references.

[235] The RISD museum (http://risdmuseum.org/art_design/objects/95_pail_situla; last accessed 1.5.2018), where the situla is housed, is even more specific, giving a dating of 530–525.

[236] Generally, find places of Raetic inscriptions lie east of the river, while all the known Celtic epigraphic material, where the exact find spot can be determined, is from the west side.

Some of the above-mentioned characteristics are shared by the Lothen belt plaque (inscription PU-1), which can be dated typologically to the 5th c. by its figural decorations – two deer – which are known from the iconographic programme of situlae (Lunz 1981a, 22). No other inscriptions are known from the Burgkofel, but there are finds from the immediate vicinity of St. Lorenzen. The settlement on the Steger hill, whence come three bones (inscriptions PU-5–7) and three potsherds (inscriptions PU-8–10), is dated principally to the 5th–4th c. by Constantini 2002, 41, though individual finds may be younger. The settlement on the Sonnenburger Weinleite, which yielded a stone plaque with inscription PU-4 and a loom weight with marks, is dated to the 5th–3rd c. (ibid., 48); another loom weight comes from the Puenland settlement, dated to the 5th–4th c. (ibid., 22).[237]

The oldest document from the Raetic core area between Trento and the Bozen basin appears to be NO-13 on an astragalos from the Ciaslir on the Monte Ozol, the only high-altitude site to yield Raetic inscriptions. The place was in use, originally and probably throughout, as a burnt-offerings site from the late Bronze to the early Iron Age, possibly even into Roman times; highly diverse finds in combination with nearby fundaments of buildings make further interpretation difficult (Gleirscher et al. 2002, 247 [no. 133]). According to Perini 2002, 767, the inscription find comes from a layer dated to Retico A (middle of the 6th–middle of the 5th c.).

The material from Sanzeno is difficult to interpret and date. Of the seven find spots, only the northernmost, Casalini, has demonstrably yielded inscribed objects, most importantly the bronzes, which were found by chance in a sand pit in the late 1940s.[238] While the other find spots, dated to Retico A, testify to a large settlement (for an overview see Gamper 2006, 334–337 and Marzatico 2001, 496–501), the function of the excavated buildings (case retiche) at Casalini, dated to Retico B–C (LT A–B), is unclear – they are arranged in neat lines, sharing walls, as if planned out (Marzatico 2001, 496). A projected settlement is a possibility, even though a settlement clearly lay just to the south: the Casalini site may have been a replacement. One may also consider an emporion with rows of studios and shops (in light of the numerours iron finds) or, like Gleirscher et al. 2002, 251 (no. 155), a temple district with treasuries (regarding the votive objects). Nothdurfter 2002, 1136 thinks of cult buildings with bothroi in the basement and space for attaching

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[237] A fifth peculiar and isolated object is the silver ring from Bavaria with inscription AV-1 (written in a Sondrio-style αβ), one of a number of stray finds without known context. The very tentative dating to the 5th c. depends on the association with a fibula and a coin (Ziegaus & Risch 1998, 295–297).

[238] Pellegrini 1951a, 304; SZ-14 and 15 were purchased from “privati” in 1951 (Pellegrini 1951a, 315).

votive gifts to the walls on the upper storey, together with administrative buildings and workshops which produced the votives. See also Marzatico 2001, 494 f. on the question of indoor sanctuaries. The large number of finds, many of them old findings without a precise context, is yet to be systematically reviewed in its entirety.

The oldest document from Sanzeno which can be dated independently of its context is SZ-16 on the warrior statuette, dated typologically to the second half of the 5th c. (Walde-Psenner 1983, 108 [no. 85]). The half-plastic votive bronzes, which are typical for the Raetic area and therefore difficult to date through comparison with models from the south (Gleirscher et al. 2002, 207), are still likely to belong in the context of Etruscan-style bronze votives and to be from the same time or not much younger. Gempeler 1976, 51 f. argues for the 4th–3rd c. (specifically for the horse bronzes with SZ-9 and 14, and HU-5 and 6) with regard to Venetic and Etruscan influences (also Dal Rì 1987, 174 f. [no. 722 and 723] and De Marinis 1988, 122). Gleirscher apud Schumacher 2004, 247 (and impicitly in Gleirscher et al. 2002, 207) gives the 5th–4th c. He points to the fact that that the bronze with SZ-14 – the Cavaliere di Sanzeno – features a rider who wears a Negau helmet[239] and to the similarity of the bronze with inscription SZ-3 with the more securely datable Dercolo bronze (see below). The bronze pieces with inscriptions SZ-87 and SZ-96 can also be compared with pieces included in the Dercolo hoard. Following the common dating of situlae, the situlae (SZ-30 situla and SZ-82 cist) and situla handles (with SZ-17, SZ-19 and SZ-31) can be dated typologically to the 5th–4th c. The iron helmet with SZ-73 is datable to LT A/B1 through typology (Nothdurfter 1992, 56). Nothdurfter 1979, 97–103 dates most of the iron material with marks to between the 5th and the end of the 2nd c., the phase which is thought to be the time in which the settlement flourished. The bulk of the pottery appears to belong in the later phase, the prominent Sanzeno bowls being dated to the 3rd–2nd c. (Marzatico 2001, 511, but see Gamper 2006, 13–17 about the issues of bowl chronology). The youngest inscribed object from Sanzeno is a Roman Imperial Age iron knife (inscription SZ-38; Nothdurfter 1979, Beilage 2).

The major sanctuary of Valemporga (Meclo) was in use from the late Bronze to the late Roman Imperial Age, with a bulk of finds from Retico A demonstrating an increased frequency in the early La Tène period. The stratigraphy being destroyed, individual finds can only be dated through typology (Gleirscher et al. 2002, 236). The miniature shield with

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[239] Similarly Marzatico 2001, 526, who dates the Cavaliere di Sanzeno to the end of the 5th–beginning of the 4th c. See Egg 1986, 116 f. for another depiction of a Negau helmet dated to around 400.

inscription NO-3 and the fragment of a bronze-plaque figure with inscription NO-19, both from the sanctuary, are the only two inscribed specimens of the typical bronze plaque votives which belong in the context of situla art and are dated to LT A–B1 (Tschurtschenthaler & Wein 1998, 243; Gleirscher et al. 2002, 205 f.; Marzatico 2012, 320–324), though a later date cannot be excluded (Gehring 1976, 161). The fragment of a situla with inscription/mark NO-8 may be assumed to belong in the same time frame. The neighbouring site of the Campi Neri south of Cles, also a sanctuary with an even longer duration (Gleirscher et al. 2002, 236 [no. 81]), yielded a number of bronze objects, none of which can be securely dated. The bronze baton with inscription NO-15 can be compared with similar objects from the Dercolo hoard; the horse bronze with inscription NO-16, which was found together with the baton in a pit, can only contingently be compared to the Sanzeno bronzes, as it is worked in full-plastic (cf. the horse statuette with SZ-71), yet rather crudely made. The strainer with inscription NO-2 dates to around the birth of Christ (Gleirscher apud Schumacher 2004, 248). The slab from Tavòn with inscription NO-10, a stray find, cannot be dated.

Most of the find places of inscriptions in the Val di Non are situated in the northern part of the valley. The only outlier is the more southerly Dercolo, where a hoard find of unclear function (Schindler 1998, 222–224. 232 f.) contained the horse-headed bronze with inscription NO-11. The hoard was deposited around 400 (Lunz 1974, 83; Schindler 1998, 231); seeing that the objects deposited in the situla appear to have been comparatively new (Schindler 1998, 231), the bronze may be dated to the late 5th c. Two unassociated Sanzeno bowls are younger (LT C–D; Schindler 1998, 224). The Fritzens bowl sherd with the marks NO-14, an old finding from somewhere in the Val di Non, dates from the 5th–3rd c. based on typology.

The valley of the Adige between Salurn and Meran and the immediately adjoining mountainous areas have yielded a fair number of inscribed objects. While many finds come from well researched archaeological contexts, no homogenous group finds of inscriptions like the Sanzeno bronzes have so far been made in the area. The oldest settlement complex in the area was situated on the east side of the Mitterberg, facing the Adige, southeast of modern Pfatten in the Unterland. It yielded the oldest object in the corpus, a bronze Hallstatt-age axe from a hoard found above the grave field (Lunz 1974, 211 f.), dated to the 7th or early 6th c. (Marzatico 1997, 453). Like many of its kind, the bronze axe bears marks, but these are not Raetic characters;[240] the testimony of BZ-17 has no bearing upon the chronology of Raetic script. The associated grave field of Stadlhof dates from the Hallstatt to the early La Tène period; the fragment of a cist with inscription BZ-11 from grave XVIII (Ghislanzoni 1939, 514 f.) and the slab with inscription BZ-10.1 from grave A (Franz 1951, 130) must therefore be dated to LT A or B. For the bronze key with inscription BZ-12, possibly from the potential bothros near the Leuchtenburg (Gleirscher et al. 2002, 261 [no. 198]), no dating is available. The potsherd with inscription BZ-13 from the settlement of Laimburg may be younger (3rd–2nd c.; Schumacher 2004, 211). Finally, the precise find spot of the fragmentary miniature vessel with inscription BZ-25, a museum find, is unknown, but the votive situlae belong typologically with the miniature shields and bronze plaque figures, and are, like these, well represented in the Meclo sanctuary.

Four inscribed objects come from Überetsch. The only sporadically excavated site on the Putzer Gschleier west of St. Pauls near Eppan yielded three finds (none from the casa retica), which cannot be dated. The inscribed slab from Maderneid (Eppan) with inscription BZ-24 can be dated to the Late Roman Republican period by the style of its decoration (Stefan Demetz p.c.).

The area in the Bozen basin between the Bozen district of Moritzing and Siebeneich in the west is called the "sacred corner" (Heiliger Winkel/Sacro angolo) for the numerous find spots (see Tecchiati 2002); unfortunately, it has not so far been systematically excavated. Four finds from the Moritzing grave field come not from excavated contexts, but from chance finds in the 19th c. Two – a situla handle with inscription BZ-9 and a fragment of a bronze vessel with inscription BZ-4 – are from a grave context dated to the second half of the 5th–first half of the 4th c. (Steiner 2002, 258)[241]; two cists with marks come from a context dated to the 4th–early 3rd c. (ibid., 254). On the dating of the helmet hoard found on the Kosman property (Jenesien; inscriptions BZ-26 to BZ-29) see below. The handle of a cist with inscription BZ-5, found during one of the minor excavations on the Greifensteiner Hang, can be dated typologically to the 5th–3rd c. through typology (Lunz 1985, 145); the handle of a simpulum with inscription BZ-3, an old finding from the area of the Großkarnell property, is dated by typology to the 5th–4rd c.

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[240] A substantial collection of bronze axes bearing diverse marks are preserved in the Archäologisches Museum Fliess (collective TIR siglum: EX-82); four more pieces are kept in the Castello del Buonconsiglio (EX-32, EX-33, EX-34, EX-83; a fifth axe with inv. no. 2.790 is missing). They are too old to be considered in any way connected to the Raetic script proper, but may be of relevance for the interpretation of non-script marks contemporaneous with it.

[241] If Steiner is right in assuming that the latter fragment belongs with the lost fragment of a Stierkopfhenkel vessel from the same context, it can also be dated via typology (Steiner 2002, 256).

Further up the Adige valley, the bronze axe with inscription BZ-2, a stray find from the vicinity of the church St. Christoph near Tisens, is dated typologically to the 5th c. (Zemmer-Plank et al. 1985, 165 [no. 34]). The three potsherds with marks from the settlement of St. Hippolyt near Tisens and the iron sickle from the hilltop can not be securely dated, but the ceramics partly bear resemblance to material from the nearby sanctuary on the Hochbichl near Meran, which appears to be no younger than LT A–B (Lunz 1974, 193).

A single antler piece with inscription VN-1 comes from the Tartscher Bichl near the place where the Münstertal meets the Adige valley. The major settlement appears to have been most important during the early and middle La Tène period, but must be expected to have been in use until LT C2, when it was essentially replaced by the Ganglegg settlement (Gamper 2006, 290 f.). The latter site, situated somewhat to the south on the northern flank of the valley, had already been settled in Ha D/LT A, and appears to have been constructed within a rather short time at the end of the 2nd c. and abandoned again just as suddenly at the end of LT D (ibid., 254). Among numerous perforated bones and bone needles of unclear (original) function which were found on the floors of houses and apparently deposited there during the ritual abandonment are numerous pieces with marks and some with inscriptions (VN-2–19).

No inscription finds come from the Münstertal, and only one from the Engadin: the potsherd with inscription EN-1 from Suotchastè near Ardez is dated to LT A–B through context and typology (Caduff 2007, 16). The ceramics from the sanctuary on the Pillerhöhe near Fliess, of which three pieces bear inscriptions or script-like marks (IT-8–10), date to the early La Tène period (Tschurtschenthaler & Wein 1998, 247).[242] To my knowledge, no datings are available for the settlement on the Hörtenberg near Pfaffenhofen. The Demlfeld sanctuary, part of a larger complex around Ampass, was in use throughout the younger Iron Age, but no precise dating is known for the bronze plaque with inscription IT-5. The settlement on the Himmelreich near Volders in the Inntal yields a great number of potsherds bearing marks (including IT-2) which are dated to the middle and late La Tène period (Gamper 2006, 265 f.). The carved antler with inscription IT-4 comes from house 2 of the Pirchboden settlement near Fritzens; the house was destroyed by fire in the late Iron Age, possibly in the course of the Roman Alpine campaign (Tomedi 2001, 32).

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[242] The bowl with the quasi-script marks IT-9 may be datable to the 5th c. by its ornamentation (Gleirscher 1985, 57–59).

A stray old finding in the form of a bronze handle with inscription WE-1 comes from Matrei am Brenner – being the handle of a situla, the object can be dated to the the early La Tène period. The ceramics from the settlement on the Kronbichl near Sterzing, which yielded a potsherd with marks (WE-2), is dated to the early Iron Age by Lunz 1974, 167, but Gamper 2006, 316 also mentions a middle and late La Tène period find group. From the large settlement of Stufels near Brixen come an isolated and undated antler piece with inscription WE-3 and a potsherd with inscription WE-4; the latter is dated to the 4th c. through both context and typology (Tecchiati et al. 2011, 50). No secure datings are available for the potsherds from the Melaun grave field (marks WE-5–8) and the burnt-offerings site on the Rungger Egg (marks SI-1 and 2), and for the finds from the settlement on the Piperbühel (inscriptions RN-1–3).

The find complex of the settlement near Tesero in the Val di Fiemme is dated mainly to the early La Tène period (Marzatico 2001, 498), but younger finds make a later dating for the antler handle possible (Gamper 2006, 329) – Dal Rì 1987, 176 suggests the 4th–3rd c. The Situla Giovanelli (CE-1), an isolated find from Caslir – arguably a burnt-offerings site – in the Val di Cembra, is dated to the 4th c. (Marzatico 2001, 512; Oberosler 2004, 646).

From the meeting point of Valsugana and Valle dei Mòcheni come twelve pieces of antler (inscriptions SR-1–10, 12 and 13) and three other objects bearing marks, found scattered in house 2 of the settlement on the Montesei di Serso (Perini 1965, 35 [fig. 2]). The excavation report (Perini 1965) lists eight of the ten antler pieces as found in the two older layers C''' and C'' in the north-western corner of house 2, while two more (unidentified, I believe) were found in the eastern part in the layer C' (58). According to Marzatico 2001, 505, the settlement dates to the 5th–4th c., with only house 3 yielding younger finds (3rd–2nd c.). Thus, the dating given by Gleirscher apud Schumacher 2004, 247 (5th–4th c.) is to be preferred to that of Dal Rì 1987, 176, who, for reasons not evident, gives the 3rd c. for the antler pieces (but cf. Gamper 2006, 332). De Marinis 1988, 121 gives the 5th c.

The settlement of Bostel near Rotzo in the western Altopiano di Asiago, above the Adige valley, has been yielding inscribed objects, mostly pottery, since the 1880s. All but one of the finds from before 1920 (AS-1–13) are currently untraceable and probably destroyed. The more recent finds (AS-15–23), which were found during systematic excavations, fit in well with the descriptions of the older material. The settlement, and with it the finds, is dated to the 4th–2nd c.; the most recent ceramic finds with inscriptions AS-15–

23, retrieved from structures C1 and 2, can be dated more specifically to the end of the 4th–3rd c. (De Guio 2011, 176). No dating is availably for the isolated potsherd from Piovene Rocchette with inscription AS-14.

The bothros of the burnt-offerings site of Magrè near Schio contained one of the most important Raetic inscription finds, the twenty-three antler pieces with inscriptions MA-1–23. The site was in use throughout the late Iron Age (Ruta Serafini 2002a, 258). Pellegrini 1918, 175 f. dates the complex to Este IV (LT B–D); his specification of 4th c. is based on palaeography (206), as is that of De Marinis 1988, 121 (5th c.). The dating given by Gambacurta 2002b, 122 (3rd–2nd c.) requires substantiation – cf. Markey 2006, 147, who assumes that the antler pieces date from different phases of the sanctuary's existence. Four bones with inscriptions TR-1–4, among about thirty uninscribed ones, were found in a large (cult?) building in the settlement of the Colle di Castello (Trissino), the only find place in the Agno valley. The site was inhabited from the middle of the 5th c. to Roman times, but the bones are dated to the end of the 2nd–beginning of 1st c. through context (Ruta Serafini 2002b, 259).

From the cult building at Casaletti near San Giorgio di Valpolicella come two bronze objects of unknown function (inscriptions VR-10 and 11) and a number of bone objects (inscriptions VR-12–17). Associated with the building's second phase, the material can be dated to the 2nd–beginning of 1st c. (Salzani 2003, 96–100; Marinetti 2004a, 412). The isolated bone with inscription VR-4 from Castelrotto is dated to the 1st c. via context (Marinetti 1991, 42). The four inscribed objects (inscriptions VR-6–9) from a settlement near Montorio Veronese can be dated by context to the 4th–3rd c. (Marinetti 2004a, 409). The site near San Briccio di Lavagno has yielded two antler pieces (inscriptions VR-1 and 2), datable by context to the 5th–4th c. (Gambacurta 2002b, 122 [n. 22]). No dating is available for the opisthograph with inscriptions TV-1.1 (Raetic) and TV-1.2 (Latin), which was found built into the outer wall of the Chiesa di San Martino di Castelcies near Cavaso di Tomba.

Negau helmets can be dated typologically: the Slovenian type, variant Vače, of which both the Vače (inscription SL-1) helmet and the Negau helmet A (inscriptions SL-2.1–2.4) are specimens, was in use between the second half of the 5th and the early 4th c. (Egg 1986, 82. 129); however, the presence of two younger helmets indicates that the helmet-only depot in which Negau A was found was laid down at the end of the 2nd c. at the earliest

(Egg 1976, 302). The Kosman hoard from Jenesien can be dated to the first half of the 1st c. through the included coins (Lunz & Morandi 2003, 344). The Vače helmet, a stray find, lacks a datable context.

2.5. Script

2.5.1. The Raetic alphabets

2.5.1.1 Distinguishing and unifying features

Within the Raetic corpus, two different αβs are usually and have been distinguished since 1918 – one as encountered in the earliest inscription finds, and a second one as found on the Magrè antler pieces (2.3.1). These αβs differ from each other in the use of graphic variants of a handful of letters, but share certain features which set them apart from the other North Italic αβs and can therefore be considered typically Raetic. They are traditionally named after the most important find places, i.e. Sanzeno and Magrè. The Sanzeno αβ was formerly termed *Bozen alphabet* for some early finds from the area; after a suggestion by Mancini 1975, 306 (n. 42), Sanzeno has replaced Bozen as the eponymous site to reflect its larger output of finds.

	pi	lambda	upsilon
Magrè αβ	ᑫ	ᒣ	Λ
Sanzeno αβ	ᒣ	⅃	V

Tab. 12: The characteristic letters of the Magrè and Sanzeno αβs.

Pi, lambda and upsilon are the shibboleth characters which primarily distinguish the Magrè and Sanzeno αβs (Whatmough 1933, 507; Prosdocimi 1971, 31–34). The Magrè αβ employs forms which are identical with or similar to those used in the Venetic αβs: pi with a pocket ᑫ (sometimes opened 𐌐 or similar),[243] lambda with a bar on top ᒣ and tip-up upsilon Λ. The Sanzeno αβ bears a closer resemblance to the Etruscan and Lugano αβs (Pauli 1885, 58–60): pi with a single bar ᒣ,[244] lambda with the bar at the bottom ⅃ and tip-down upsilon V correspond to the forms in those groups. According to Prosdocimi 1971, 33, the Venetic system of distinction is a variation of the archaic Etruscan one (2.1.2),

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[243] The pocket is almost always open in Venetic, more similar to archaic Etruscan 𐌐.

[244] See Salomon in Kluge & Salomon 2015 and 2.5.4.4.

while the Sanzeno-forms (especially pi with a single bar) correspond to younger Etruscan ones. However, pi 𐌐 is already found in 7th-c. Chiusi (e.g. Cl 2.1, 2.4).

The orientation of lambda and upsilon is not quite consistent in the Venetic αβs (e.g. √ in Es 16, V in Es 22), but it is in the Raetic script, where the two systems are rarely ever mixed. The only inscriptions in which Sanzeno-forms co-occur with Magrè-forms are two Magrè-context inscriptions, AS-17.1 (Bostel di Rotzo) and MA-6 (Magrè).

AS-17.1 
esipa?ịaṛeθuluva

MA-6 
piθiemetinu | *θriahiṣ·*

AS-17.1 has hyper-distinctive √ next to ᑫ and Λ. MA-6 has V in combination with ᑫ, which may be attributed to the tendency to invert letters (especially alpha and epsilon) which can be observed in the Magrè inscriptions (2.5.7).

In addition to the above-mentioned letters, three others appear consistently in different graphic variants in the two αβs. Tau always appears with the bar rising in writing direction, and usually not crossing the hasta, in Sanzeno-context (←ᛐ).[245] Heta, though not common, always features three bars 𐌇 in Magrè-context, but two ᚻ in Sanzeno-context (single-bar ᚺ is as yet undocumented). Both αβs feature graphically innovative characters for the dental affricate: ↑ in Sanzeno-context (not only at Sanzeno itself), ǂ exclusively at Magrè (otherwise absent from Magrè-type inscriptions). On the question of whether the character ¡ is associated with the Magrè αβ, see 2.5.4.5. Lastly, vestiges of Venetic syllabic punctuation are found only in Magrè-context, while word separation is only employed in Sanzeno-context (2.5.8).

While the forms of pi, lambda and upsilon as well as the instances of syllabic punctuation connect the Magrè αβ with the Venetic αβs, the Sanzeno αβ has an Etruscan look to it. The similarities between the two αβs concerning the use of the characters for obstruents, allegedly demonstrating a dependence on a Venetic model for both, will be discussed in section 2.5.5. The most evident feature unifying the Raetic αβs is a negative one: the absence of omikron. Seeing that it is linguistically motivated (2.7.1.1), it does not provide a strong argument for the epigraphical correlation of the two αβs. Purely epigraph-

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[245] For argumentation in favour of this new reading see 2.5.4.4.

ical characteristics connecting the two are 𐌌 with only three bars, as well as two characteristics pertaining to writing direction: ←𐌀 with the bar slanting downwards against writing direction, and ←𐌔 with the upper angle opening against writing direction. Both the latter features are prevalent in Magrè-context and almost exclusive in Sanzeno-context.

	alpha	epsilon	waw	zeta	heta	theta	iota	kappa	lambda	mu
M	𐌀	𐌄	𐌅	𐌆	𐌇	X	𐌉	𐌊	𐌋	𐌌
S	𐌀	𐌄	𐌅	–	𐌇	X	𐌉	𐌊	𐌋	𐌌
	a	*e*	*v*	*z*	*h*	*θ*	*i*	*k*	*l*	*m*

	nu	pi	san	rho	sigma	tau	—	upsilon	phi	chi
M	𐌍	𐌐	𐌑	𐌓	𐌔	𐌕 𐌕	𐌚	Λ	𐌘	𐌙
S	𐌍	𐌐	𐌑	𐌓	𐌔	𐌕	↑	V	Φ	𐌙
	n	*p*	*ś*	*r*	*s*	*t*	*þ*	*u*	*φ*	*χ*

Tab. 13: The characters of the Magrè (M) and Sanzeno (S) αβs (standardised) with transliteration letters.

2.5.1.2 Distribution

The areas in which the Magrè and Sanzeno αβs are used are neatly separated. The Sanzeno αβ is used in the central area, i.e. the Val di Non, the upper Adige valley (including the Unterland, the Bozen basin and the Vinschgau) and the Eisacktal, with tributary valleys and the surrounding highlands. Its area of distribution mostly coincides with the core area of the Fritzens-Sanzeno culture, i.e. Südtirol and the Trentino. The single fragmentary inscription from the Unterengadin, EN-1, is too short to be ascribed to either of the αβs.

EN-1]?𐌙𐌀
aχ?[

Although the lower parts of the letters are missing, 𐌙 and 𐌀 (curiously small in comparison, maybe offset) can be identified. The scratch to the very left is definitely intentional and must be the remains of another letter. Risch 1989, 1580 argues that the sherd plus inscription, together with some more typically Raetic objects with scratchings (viz. two antlers with marks, MLR 6 and 7) found at Ardez and Scuol, belongs in Frizens-Sanzeno context and should therefore be considered part of the Raetic corpus. Pellegrini 1985, 98 (n. 14) remains sceptical. As, archaeologically, the site lies in an area of interference between a number of cultural groups which are considered Raetic and/or Celtic, an attribution to Raetic is disputable. The two identifiable letters are not quite decisive palaeographically: 𐌙 is rarer, but does occur in the Cisalpine Celtic corpus; 𐌀 is typically Raetic only when read sinistroverse – as a dextroverse character it occurs in archaic Lepontic inscriptions. The remaining scratch which is left of a third letter looks like part of a curve, which in this orientation would be hard to account for in Raetic, but may be dextroverse rounded 𐌃 or even Lugano-αβ omikron. Generally speaking, properly inscribed pottery (as opposed to quasi-script scratchings on Sanzeno bowls and the like) is characteristic of the area west of the river Adige; those finds are usually assigned to the Cisalpine Celtic corpus. The northernmost Cisalpine Celtic finds from Graubünden, however, are two gravestones (GR·1 and GR·2), neither one from the Engadin.

The Pustertal inscriptions are difficult to judge as a group.

PU-4	𐌄𐌔𐌓𐌀𐌙 *χarse*
PU-5	ᚠAKV *ṿakụ*
PU-6	]𐌄(?)?VA[ ]*ạụṃ*(?)*e*
PU-11	KVA *kụa*

The lengthy inscription PU-1 shows both Venetoid and Etruscoid characteristics (2.5.2.1, 2.5.5.5). The only other certainly language-encoding inscription PU-4 on a stone plaque lacks the shibboleth letters, unless one counts the sequence 𐌀𐌀ᛚII, inscribed on one of the narrow sides, whose function and relation to the main inscription on the flat side is unclear. The two hypothetical alphas are orientated differently, the three scratches on the left are clearly inclined, the bar of the alleged Venetoid ᛚ is very doubtful; we are probably concerned with non- or pseudo-script. The remaining inscriptions from the Pustertal are difficult to read and of doubtful status, but they show an affinity to the Sanzeno αβ in that some of them have Sanzeno-style upsilon V.

The northernmost Sanzeno-type inscription (WE-3) and the southernmost Magrè-type inscription in the Wipptal (WE-4) both come from Stufels (Brixen). The Wipptal lies outside the reach of the Sanzeno αβ, which may account for the fact that the Pustertal, which opens into the valley of the Eisack at Brixen, takes part in both traditions. This border is not random, being frequently cited in the archaeological literature (e.g. Lunz 1981b, 43) as a point of transition between the northern and southern Alpine area (beside the Alpine divide at the Brenner pass), as it marks the point where the narrow Wipptal opens into the comparatively easily accessible Brixen basin.[246]

Magrè-type inscriptions, as may be expected from their affinity with the Venetic script, come from the area of the archaeological Magrè group, i.e. the Alpine foothills south of Trento between Adige and Piave. This includes the inscriptions from the area of Verona and stray finds from the Padan plain. Just like in the north, we are faced with alphabetically ambiguous finds in the boundary area: the inscription(s) on the Situla Giovanelli are/is written in the Sanzeno αβ, with V, ↓, and consistent ←Ѧ and ←ʃ, but one of them has syllabic punctuation, another Magrè-style tau (2.8.1.6). The other inscription from the valley of the Avisio, FI-1 on an antler handle, cannot be ascribed to either of the αβs due to the many inverted and retrograde letters (2.5.7).

The Serso antlers, from a find place which still belongs to the core area of the Fritzens-Sanzeno culture, make up a somewhat varied group, though with some notable shared features. The inscriptions are basically written in the Magrè αβ; only SR-2 has V, not accompanied by pi or lambda, but ←A and – apparently – syllabic punctuation.

SR-2 ΛᛉIXᚤ?ᚤ[I ≀VXᛉᚤʃ⁝AᚲVᛘʃ
sφurạ·senθus I]*ẹ?eθinụ*

At Serso, both ←A and ←A occur (4:7), though never in the same text; sigma is also turned in both directions (in about equal distribution), once in the same inscription. SR-1 and SR-7 have Magrè-heta Ħ (in the same sequence).

SR-1 ᚲΛĦѦXIᚤѦᛉᛗIΛ≀ᛉ[? I]IʃKᚱʃѦYᚠIᛚ'ʃKᚱ
?]*nsu·mnaviθahuṛ·* I]*ịṣkesaχviliṣke*

SR-7 ᚲΛĦAXIᚤѦᛉ[
]*naviθahur·*

---

[246] Symptomatically, the German toponym *Wipptal* (from the Roman settlement Vipitenum near Sterzing), originally only for the upper Eisacktal, today refers to the valleys of the Sill (running north from the Brenner pass into the Inn) and of the Eisack, running south, down to the Franzensfeste at the opening of the Brixen basin (called *Alta Valle Isarco* in Italian), while *Eisacktal* only refers to the valley of the Eisack between Brixen and Bozen.

Three of the other inscriptions contain the letter ¡; see 2.5.4 on inscriptions from the Val di Non and the Montesei di Serso which show an affinity with each other and with a potential archaic tradition. Seven of the twelve inscriptions feature some sort of punctuation, three of these have punctuated letters, which is singular in Raetic context (2.5.8.2).

Generally, we find a considerably larger extent of local (and diachronic?) variation within the province of the Magrè αβ than in the Sanzeno inscriptions; see section 2.5.2.1 on alphabet variants used in a number of early, isolated finds. The inscriptions from Magrè itself, more homogenous in appearance than those in other subcorpora, are notable for the employment of the Magrè character for the dental affricate, which appears nowhere else, and for a tendency to invert individual letters (2.5.7). Syllabic punctuation is only employed in inscriptions from Magrè and Serso, in a subset of petrographs and arguably in inscriptions from the area of Verona (though this practice may have an entirely different basis; 2.5.3.3).

VR-6]?Λ↑A1ˈᛐA[
]*ạṭ·laþu*?[

VR-7 IᗡΛꓘ
kaṛi

The inscriptions from the area of Verona are particularly difficult, though Marinetti's (2003, 2004a) decision to present them as Raetic rather than as Venetic or even Etruscan was certainly the most reasonable one, as the bone supports point toward the Raetic sphere. In Montorio Veronese, VR-7 lacks any characteristic letters, whereas VR-6 contains too many: Venetoid upsilon Λ indicates the Magrè αβ, as does tau – if so, 1 is lambda. The occurence of the Sanzeno character ↑, however, is surprising; also note that tau is retrograde. Though all three inscriptions on antler and bone are reminiscent of Raetic material as far as objects and characters are concerned, and *kari* lends itself to an interpretation as a Raetic individual name (2.6.1.3), none can be definitely connected to the Raetic sphere.

VR-12 ᑫ1Λ
ạlp

VR-13 ƎIᐊΛ1
laṛiẹ

VR-14 ΛM.ᑫΛ1
ḷaṿ·ṣ́a

VR-17 ѦⲘ.IѦⲘ[
]*mai·ma*

The epigraphical status of the San Giorgio inscriptions is somewhat less dubious. VR-12 could be classified as epigraphically Raetic (with Magrè-style lambda and pi, and Raetic Ѧ), but VR-17 has mu with four bars, otherwise unknown in Raetic inscriptions. VR-12 is also the only inscription with standard alpha, all the others having Ѧ (with the bar not touching the hastae). VR-13 and VR-14 both have ꟼ, which might theoretically be pi in the absence of linguistic parallels (especially in combination with possible, though unlikely, ⅃ in VR-13; see MLR 123), but *larie* formally qualifies as a Raetic name (2.6.1.3), and *lavśa* may be considered a variant of the individual name *lavise* (2.6.1.2). Both the slightly longer inscriptions on bronze fittings (VR-10 and 11) contain Magrè-style Λ and can be argued to have linguistically Raetic content, but while the dental affricate is written with tau in VR-10 – an expectable compromise spelling in the absence of a special character – VR-11 has zeta, which may be an Etruscan element (2.5.3.3).

Though a large part of the testimonies from Bostel di Rotzo is still constituted by workmen's marks, the recent new finds have fully corrobrated Whatmough's decision (PID 216–220) to ascribe the older inscriptions to the Raetic corpus: they display typically Raetic letter forms (←A, ←ᛊ) and a well-attested name in Raetic spelling (*piθamne*; 2.6.1.2). The αβ used is that of Magrè (ꟼ, Λ), but lambda, occurring only once in AS-17.1, has Sanzeno-shape.

AS-15.1 AIᛊAꟼAƎᛊIꟼIXXI
iθθipiseapasia

AS-16 ΨᛗIꟻAꓘ Aꓘ
ka kavinχ

AS-17.1 AꟻΛJΛXƎDAI?AꟼIᛊƎ
*esipa*ʔ*ịaṛeθuluva*

AS-17.2 ƐᛊIPA?KƐXAᛗAFA
*eṣịpạ*ʔ*ḳẹθanava*

AS-18 PIXAᛗᛗ[?
piθạmn[?

AS-19.1 PIX?ᛗᛗ[
p̣ịθạṃṇ[

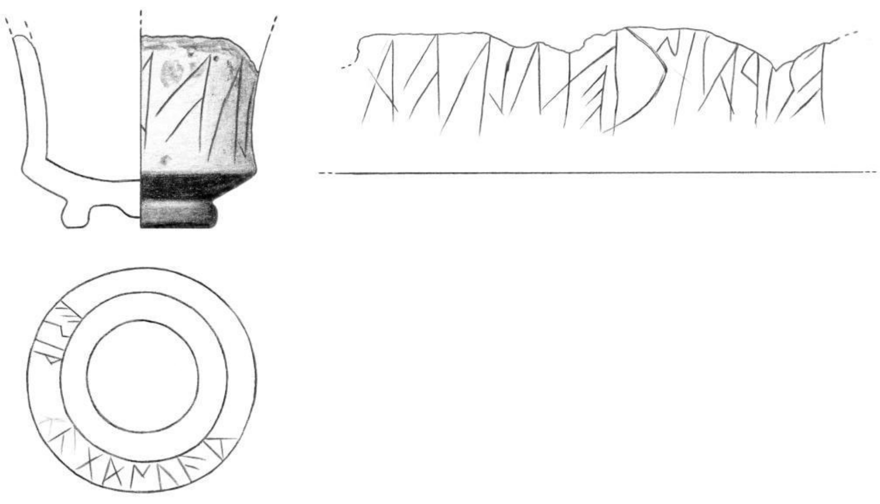


Fig. 20: Beaker with inscriptions AS-17.1 (wall) and 2 (bottom) from Bostel di Rotzo. Museo Archeologico dell'Altopiano dei Sette Comuni, inv. no. 320448. Drawing by Gudrun Bajc for TIR.

Of the Trissino inscriptions, two (TR-1.1, TR-3) lend themselves to some extent to interpretation as Raetic words; the other two (TR-2, TR-4) display similarities in the characters used (including punctuation marks) and are obscure. All four employ the Magrè αβ (𐌖, 𐌀, 𐌐$^{?}$).

TR-1.1 𐌖𐌀𐌉𐌔𐌄
esiau

TR-2 𐌄ˈ𐌈𐌄𐌈𐌖
uθeθ·e

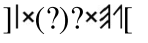
TR-3 𐌐𐌉𐌈𐌉
p̣ịθ̣ị

TR-4 𐌈ˈ𐌖𐌈
θu·θ

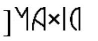
As already hinted at above, and contrary to what is generally asserted in the literature, the Wipptal and Inntal inscriptions, as well as the petrographs, where this can be determined, are not written in the Sanzeno αβ, but in a variant which shows clear similarities with the Magrè αβ.

IT-2 𐌔𐌖𐌓𐌖𐌔𐌉𐌀𐌙
χaisurus

IT-4 𐌄𐌋𐌉𐌅𐌓𐌖𐌙𐌉𐌔𐌄𐌂𐌀𐌉𐌈𐌉𐌐
piθiạγẹṣịχụrṿịle

IT-7 

]*leθ?(?)θ̣ị*

IT-8 

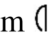
piθan[

WE-1 

lavises

WE-4 

?]*niχesitaeluku*(?)*θ̣e*[

Tip-up upsilon clearly appears in WE-4 and IT-4. IT-2 on its own is problematic because of inverted chi, but the orientation of the other letters (especially alpha) and the comparison with the other testimonies from the Inntal indicates an orientation as rendered above. The graphically ambiguous  must be identified as Venetoid lambda in the well attested words WE-1 *lavises* and WE-4 *eluku* (2.6.1.2, 2.7.3.1); a reading as *l* is also preferable in IT-7 and especially IT-4, where it is part of the frequent pertinentive ending -(*a*)*le* (2.7.2.2).  being *l*, the associated pi with a pocket may be found in IT-4 *piθiạṿẹṣị* and IT-8 *piθan*[(2.6.1.2). Both times the letter appears in a peculiar form  with a large angle which reaches the bottom of the line, which makes it even easier to confuse with rho than  at Magrè, which has been and is sometimes still read as rho (e.g. MLR, Markey 2006). However, in both instances a gap between the lower ends of the hasta and the angled or curved line which forms the pocket can be clearly seen. On the possibility of an equivalent form in the petrograph ST-2, as well as generally Venetoid letter forms in the rock inscriptions, see 2.8.1.9. Tau is  in WE-4; heta is absent, as is a specific character for the dental affricate (which does not appear in any Magrè-type inscriptions except in those from Magrè itself). Syllabic punctuation of any kind is absent from inscriptions on portable objects, but interpuncts appear in certain petrographs.

The recently found inscription IT-4 is engraved on a large and elaborately carved, but sadly fragmentary piece of antler found in the cellar of a house in the settlement on the Pirchboden near Fritzens (Nordtirol). With a length of 31.5 cm, the object is carved out of a single unusually large piece of a red deer's antler (cervus elaphus; not an elk's, as ascertained by Tomedi 2001, 31 in consultation with a palaeozoologist). Curved in a slight S-shape, it is partly decorated with radial-eye pattern and ends in the abstractified shape of a horse. In the centre it is pierced by a thick iron peg; protruding on the same side as the peg are the remains of seven smaller bronze pegs. Tomedi 2001, 31 suggests that the piece is part of a musical instrument, for example an angle harp; also possible is a Scythian lyre. However, attempts at reconstructing such an instrument by a specialist for historical instruments have not yielded any elucidating results.[247] Today, the object is restored from the available parts.

The inscription, first published in Schumacher 2004, is engraved on the side opposite the metal pegs, starting at the non-horse-shaped end. The sequence is sinistroverse and about 9 cm long, with the letter height varying slightly between 0.9 and 1.3 cm. It is damaged by one vertical and two horizontal cracks and abrasion (most heavily in the lower part of the middle section). Two lacunae after the first five letters and after the vertical crack before the last three letters.

Most of the letters before the first lacuna, notwithstanding a crack along the upper parts of the first three letters, including pi 𐌐, are legible without difficulty. Partly damaged by abrasion on the left, the next letter could be 𐌀 or 𐌄 with the third bar gone. Alpha is more likely, also to completely fill the space before the next letter, traces of which are only visible on a smaller fragment fitting on top of the abraded main one. In succession, we have the two upper angles of letters, the lines of the second one being continued clearly on the main fragment, showing 𐌄 or 𐌋, the lower part damaged by abrasion. Like this one, the following characters are damaged both at the top by the crack between the main and the smaller upper fragment and by abrasion in the lower part of the main fragment. Next, an oblique scratch slanting down from right to left – possibly the upper third of 𐌔. The following scratch could then only be read 𐌉, since the next group of scratches can be identified with reasonable certainty as 𐌙. After chi, the small fragment which completes the characters at the top breaks off. Of the next two letters, only the very tips of which are missing, two large angles are left: the first with two oblique scratches – probably Λ, as in case of alpha a trace of the bar should be left –, the second with one straight and one curved line, which could be upsilon or, considering the preceding vowel, more probably 𐌐 or 𐌐. Right before the vertical crack the remains of a hasta with the trace of one bar (𐌄 or 𐌋), then the second lacuna. On the next fragment a single vertical line which can hardly be anything but 𐌉, and finally only slightly damaged 𐌄𐌋.

Assuming that the last two letters represent the pertinentive-II ending *-le*, *-si* (pertinentive I) in the middle of the sequence serves to mark the ending of the first word:

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[247] Thanks to Albin Paulus for sharing his expertise.

piθia?esi χurvile. (The latter part of the reading, from chi onwards, is supported by the identical outcome of Marchesini's independent examination [MLR 43]). What is left of the illegible letter can qualify as the remains of 𐌅, which yields the individual name *piθiave°*, also attested in CE-1.3. With sixteen letters, the inscription is the second-longest one on a portable object from the Inntal, after IT-5 on a bronze tablet from Ampass.

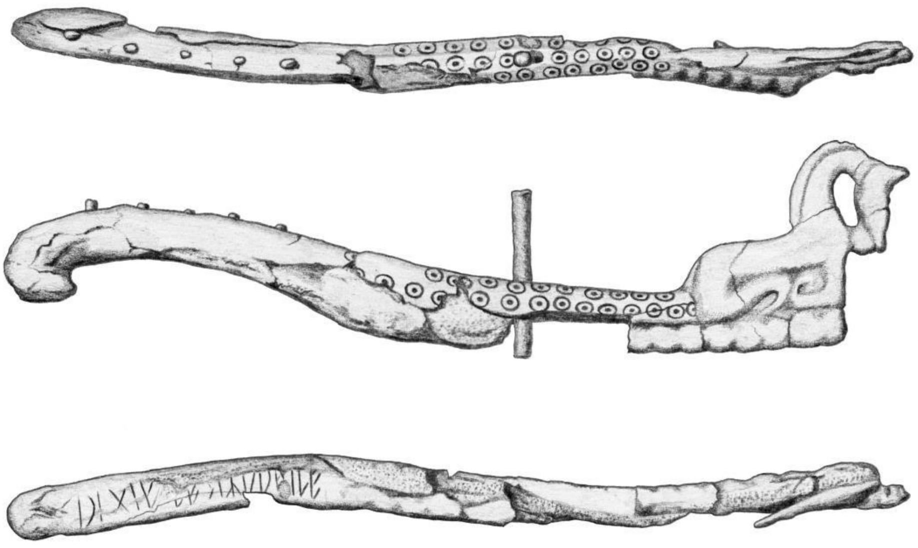

Fig. 21: Antler object with inscription IT-4 from the Pirchboden near Fritzens. Museum Wattens, no inv. no. Drawing by Gudrun Bajc for TIR.

While the above testimonies consistently show the use of the Magrè αβ, one inscription from the Inntal clearly belongs in Sanzeno-context:

IT-5 𐌉𐌇𐌉⁞𐌉𐌔𐌀𐌓𐌄𐌖𐌑𐌀𐌅𐌀 | 𐌔𐌉𐌄𐌈𐌍𐌖𐌌𐌉𐌄𐌋𐌊 | 𐌔𐌉𐌊𐌖𐌀𐌈⁞𐌖𐌊𐌉𐌕𐌖 |] 𐌀𐌉𐌀𐌊⁞𐌈[ ] 𐌈[|] ⁞?[
]?:[|]θ̣[ ]θ̣?kaịa[? | *utiku : θaukịṣ* | *kleimunθeis* | *avaśuerasi : ihi*

Found at the burnt-offerings site Demlfeld near Ampass, the perforated bronze plaque with its inscription may be compared to the inscribed votive objects from the Val di Non. While we do not have any other bronze tablets in the Raetic corpus, such votives are well attested in Venetic, both uninscribed and inscribed, though no documents resemble the Demlfeld find.[248] In light of a Venetic inscription found at the same site (*It 1; Schumacher 2009), IT-5 may be judged as an import or the work of a travelling dedicant (see fig. 37).

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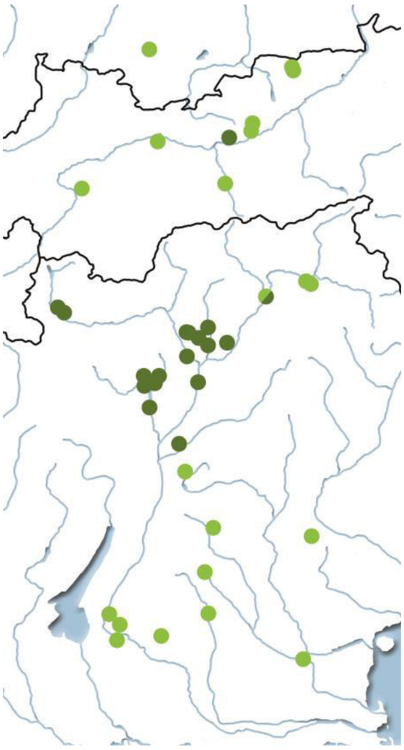
[248] Inscribed specimens come from Este (alphabet plaques, where the dedication itself is not inscribed into the alphabet grid), the Cadore (Làgole and Auronzo) and the Gailtal (at the latter sites with the text inscribed not in grid lines, but around the rim or frame, sometimes with an image in the centre; see Gambacurta 2002a, 104–107 and Marchesini 2013, 45 f.). See 2.8.1.9 on the question of whether such a plaque may have been attached at the petrograph wall of Steinberg.



Map 3: The distribution of the Magrè (light green) and Sanzeno (dark green) αβs.[249]

So, to be quite precise, there are three Raetic script provinces, but in light of the affinity between the Venetoid variants of the north and south, and also considering that the southern Magrè area is not homogenous in any case, I will stick with the established term *Magrè alphabet* as a cover term. The three provinces coincide to a large extent with the archaeologically determined subgroups within the Fritzens-Sanzeno horizon (2.4.1). However, the difference between the αβs also involves chronological parameters.

2.5.2. Chronology

From the overview given in section 2.4.2, a rough history of Raetic writing culture can be inferred.[250] However, any chronology and the conclusions drawn from it – including potential palaeographic indicators for dating – must remain provisional and may have to be revised or dismissed, depending on reassessments of the material from archaeological side. Apart from the uncertainties imported from archaeology, it must at all times be remembered that an inscription is not necessarily as old as the object it is written on. This seems obvious, but with a material base as small as the present one, different evaluations of the

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[249] Not on the map: the Slovenian helmet finds.

[250] The following section, being a part of the chapter on script, is exclusively concerned with language-encoding inscriptions. For “marks” and other dubious inscriptoids, see section 2.8.1.1.

function of a single group of inscriptions may lead to vastly different results for the assessment of the entire corpus. It must therefore be attempted to determine the relation which various types of objects bear to the inscriptions which are written on them, even though – as may be expected – it is rarely ever possible to argue this conclusively.

2.5.2.1 Archaic Venetoid inscriptions

The above caveats apply already to the first group of testimonies, the notably lengthy (and mostly opaque) inscriptions on unusual bronze objects from unusual places with a (potentially) early dating. The Situla in Providence (HU-7), the Paletta di Padova (PA-1), the Lothen belt plaque (PU-1) and the Spada di Verona (VR-3) are all dated typologically, so that the inscriptions do not have termini ante quos. As pointed out above, bronze objects – particularly valuable pieces like the ones just mentioned – were used for much longer than objects of everyday use, so that inscriptions written on them may theoretically be considerably younger than the objects themselves. HU-7, PA-1 and VR-3 can be argued to have votive character, containing the word *utiku* (2.7.3.1). All four inscriptions are linguistically indubitably Raetic and written in Venetoid αβs, but the αβs used differ from each other. HU-7 and VR-3 both feature Venetoid inverted Λ and 𐌋, but there are typically Raetic features in three-bar mu 𐌌 and HU-7's →A, and notably İ. PA-1 shares the inverted letters, but otherwise appears to work with a restricted character set (2.5.5.4). It also employs punctuation for auslauting consonants – unless this is merely marking the end of the lines (which would be quite unnecessary with the given layout), the punctuation system may be considered to be in line with that used in Raetic inscriptions, with its somewhat relaxed rules (2.5.8.2).

PU-1, which, unlike the other three testimonies, was found rather far north in the Raetic area, also fails to fit in with them epigraphically. Upsilon and lambda (here together with angled pi) are inverted Magrè-style; certain peculiarities in ductus – the forms of sigma, heta and san – are assumed to be archaic by Pellegrini 1951b and Vetter 1954, 78. Four-stroke sigma occurs elsewhere only the more peculiar type of prevalently dextroverse Raetic rock inscriptions (2.8.1.9). It is very rare in the Venetic corpus, only occurring in the south, but less so in the Lugano αβ; Pellegrini considers it an Etruscan feature. Heta 𐌇 with three bars is archaic only in Venetic terms; in Raetic context, it is the variety typical of the Magrè αβ. Double-pennon san 𐌑 is isolated in the Raetic and Venetic corpora (the alleged parallels from Magrè and Verona mentioned by Pellegrini are non-existent), but it is the most common form of san in the Lugano αβ (see LexLep).[251] Pellegrini's assessment that the αβ used is particularly close to the Etruscan one cannot be confirmed, but the inscription does display some unusual features. On the function of zeta, see 2.5.5.5.

2.5.2.2 Central Raetic inscriptions

Chronologically, the next point of focus is the Val di Non with its large amount of bronze material dated to LT A–B1 by its association with situla art and Etruscan cultic traditions. However, it is notable that the potentially oldest document from there, the only inscription from the Monte Ozol sanctuary (NO-13), is reminiscent in form (⫯) and content (*terisna*) not of the Sanzeno-type material discussed in the following paragraphs, but of the Serso inscriptions and SL-1. The only other inscription from the Val di Non which features ⫯ is NO-3 on the miniature shield from Meclo, otherwise written in the Sanzeno αβ (2.5.4). The little shield belongs with the group of bronze votives from the Val di Non dated to the early La Tène period. We are here mainly concerned with objects that were manufactured specifically for the purpose of being offered; the inscriptions should therefore be assumed to be contemporary with the objects. This includes NO-3 as well as NO-19, the only inscription on a bronze sheet figurine, NO-15, SZ-87 and SZ-96 on bronze batons, the statuette inscriptions NO-16 and SZ-16, and the inscriptions on half-plastic bronzes NO-11 and SZ-1–15. The case is not as clear for the inscriptions on (parts of) situlae. SZ-17 and SZ-31 on handles look more like workmen's inscriptions than votive ones. SZ-17 *ṣχsi* is almost identical to an inscription on an iron knife (SZ-38); if this is indeed a factory mark (2.8.1.1), it may indicate an equally early dating for at least some of the iron tools – or, otherwise, a considerably lower dating for the bronze material.[252] See 2.8.1.6 on the question of when SZ-30 on the Sanzeno situla was applied.

From along the Adige and the Bozen basin, associated bronze objects come more from grave or problematic contexts than clearly identifiable sanctuaries. The only certain votive object is the miniature situla (BZ-25); the other objects are items of use, even though mostly associated with orientalising cult (cists, situlae, simpula). It cannot be excluded that some of the inscriptions on the Bozen material are younger than those from the Val di Non.

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[251] http://www.univie.ac.at/lexlep/wiki/Ś.

[252] As concerns the inscribed iron and ceramic material and the various obscure shortish sequences on antler and bone objects from the area, its assessment is further complicated by the fact that not a single piece can be shown to bear a language-encoding inscription, so that its relation to and relevance for Raetic script is debatable (2.8.1.1). Cf. Gamper 2006, especially 353–355, who arrives at considerably lower datings for various Raetic find groups and, by consequence, the Raetic script culture.

However, the grave contexts provide reliable early datings for some of them, so that it is not unreasonable to assume LT A–B1 or at least B2 datings for these inscriptions, including BZ-2 on a bronze axe and BZ-14 on a piece of bronze sheet (probably a fitting of some kind).[253]

Of particular interest, though ultimately not helpful, are the dated gravestone inscriptions BZ-10.1 and the BZ-24. With the one's high and the other's very low dating, no conclusions can be drawn for the dating of the other inscriptions on slabs in the Raetic corpus, BZ-6, NO-10 and RN-1. The latter belongs with the testimonies from the Eisacktal and surrounding plateaus up to Stufels, inscriptions which are written in the Sanzeno αβ, but undated (RN-2, WE-3).

It may tentatively be assumed that the writing culture in the Raetic core area flourished in the early La Tène period, viz. roughly the 5th and 4th centuries, as did the Fritzens-Sanzeno culture as a whole under Etruscan stimulus. More than that, the Sanzeno αβ may (originally) have been linked to a Sanzeno sanctuary. Alphabets which are specific to sanctuaries are known from the Venetic sphere; the evidence of Este-Baratella shows that writing schools could be appended to major sanctuaries (although an outright writing cult as in Portonaccio and Este is not in evidence elsewhere). In light of the concentration of finds and the homogeneity of the Sanzeno αβ (especially on the votive bronzes; 2.8.1.3), it may be speculated that it was developed in and emanated from a sanctuary (at Casalini?) during the first half of the 5th c. How long this αβ was in use is hard to say. A high dating is generally assumed for the outlier IT-5 (Marchesini 2013, 53).

Of the few demonstrably young inscriptions from the Raetic core area, one is Latin (SZ-68), one, in accordance with its dating, shows alphabetically Latin features (BZ-24; 2.8.3). In the latter case, it cannot be decided whether V is a Sanzeno-style or a Latinised letter and which epichoric αβ was mixed with the Latin one. Important in this context is NO-2 on a broken strainer from Roman times. The inscription is clearly Raetic and written in the Sanzeno αβ, but peculiar also for reasons other than its low dating.

NO-2 
tianusataṇ

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[253] Language-encoding inscriptions on undated objects from the Val di Non and the Bozen area include SZ-18 (on an unidentified bronze object), BZ-12 (on a key), SZ-22.1, SZ-24, SZ-97, SZ-98 (on antler grips), SZ-94 (on a bone) and BZ-6 (on a slab). The remainder of the inscribed bronze objects (vessels, simpula) bears mostly three-to-four-character inscriptions, some of which might be linguistically relevant.

The final letter (or fragment of such) consists in a small tip-down chevron in the upper part of the line. While Franz 1958 read *pianusapau* in spite of the oddly misaligned 𐌖, Mayr 1960a, 389 proposed *pianusapan* with the hasta of nu missing due to a scribal error, citing as a parallel SZ-16 *laθurusipianusapanin*. Schumacher's idea (2004, 336), suggested by Gleirscher, that NO-2 might be a forgery based on SZ-16 relied on his original, incorrect segmentation of SZ-16, but cannot be completely dismissed. While NO-2 starts with the second word of SZ-16 (*tianus*), which indicates a correct segmentation and therefore understanding of the text, it ends with half a letter in the middle of the third word ([*a*]*tanin*). If the last part were complete, the inscription might make sense as a votive text ('gift for Tianu'?), though the absence of a donor's name would be unparalleled among Raetic inscriptions (2.7.2.2). Even if one does not want to think of an outright forgery, the fact that NO-2 is completely identical to the middle part of SZ-16 strongly suggests a (Roman-age?) imitation. In any case, NO-2 does not make a strong case for an actively used Sanzeno αβ in the Roman-age Val di Non.

The Ganglegg inscriptions are not as easily dismissed. The bones and bone points were laid down during the abandonment of the houses at the end of LT D2 – depending on the nature of their previous function, which is unclear (2.8.1.5), they may be older, but hardly much.

VN-2	]𐌐𐌄𐌌𐌖[ ]*umep*[
VN-3	]𐌐𐌄𐌌𐌖[ ]*umep*[
VN-9	𐌄𐌔𐌉𐌅𐌀𐌋 *lavise*
VN-10	𐌓𐌖𐌗𐌀𐌋 ꞁ 𐌄𐌍𐌄𐌌𐌖𐌋 *laθur* ꞁ *lumene*
VN-11	𐌄𐌍𐌄𐌌𐌖𐌋 *lumene*

All inscriptions can be argued to be written in the Sanzeno αβ. 𐌋 appears in VN-9 and VN-10; the function of 𐌐 (not damaged 𐌌) cannot be determined in the fragmentary inscriptions VN-2 and VN-3, but in light of 𐌋 it must be pi. Upsilon is 𐌖 in all instances. How this find group fits in with the chronology of Raetic writing is yet to be determined.

2.5.2.3 Magrè-type inscriptions

During the time in which the central Raetic area writes Sanzeno-style, Magrè-type inscriptions appear sporadically both to the north and to the south. Early La Tène documents come from the Pillerhöhe (IT-8), from Matrei am Brenner (WE-1), from Stufels (WE-4), from Serso, and from San Briccio di Lavagno in the very south. Both inscriptions from the latter site are Venetoid, though apart from this basic characteristic and the fact that they are both inscribed on unusually large pieces of antler, they do not appear to be associated. VR-1 is conspicuous for the occurrence of ı̇, which may connect it with VR-3, while VR-2 arguably has similarities with much younger testimonies from San Giorgio di Valpolicella and Castelrotto (2.5.3.3). The two linguistically usable Montorio Veronese inscriptions (VR-6, VR-7), chronologically and geographically in between, fail to constitute a link. The inscribed potsherd (VR-9) may belong in a Roman context; cf. the two potsherds with Latin inscriptions from the same find spot (Marinetti 2004a, 409).

Finds dated to the middle and/or late La Tène period, apart from the above-mentioned ones from the area of Verona, are the Magrè antler pieces, the inscriptions from Bostel, IT-2 from the Inntal and the Trissino bones. IT-4 is dated by context and may be older than the 1st c. BC.

To sum up, we are faced with at least two distinct traditions of Raetic writing. The homogenous Sanzeno αβ was used in a specific time and area, with a chronological irregularity in form of the Ganglegg subcorpus; there are no local variants and there is only a small range of variation in the letter forms and their use, which may indicate that the tradition goes back to a single centre of literacy in the Val di Non. Outside this core area, the situation is less tidy. A Venetoid writing tradition for Raetic makes its appearance as early as the late 6th c. and remains active during the early and middle into the late La Tène period in both the south and the north. It is to some extent marked by group finds of similar objects (Serso, Magrè, Bostel, Trissino, San Giorgio), some of which display idiosyncratic features (⫞ at Magrè, syllabic punctuation). Despite the affinity with the Venetic αβs, some inscriptions or subcorpora may show influence from Etruscan writing (2.5.3.3). The earliest Venetoid testimonies particularly stand apart; PA-1 and PU-1 may represent isolated attempts at writing Raetic with foreign alphabets. On the petrographs and helmet inscriptions, see sections 2.8.1.9 and 2.8.1.10.

Regarding what was said above about the common and distinguishing features of the two Raetic αβs, it remains yet to be determined how the two traditions relate to each other. The Venetoid αβs of the south and north of the Raetic area, subsumed under the term *Magrè alphabet*, clearly suggest a Venetic source; the Sanzeno αβ on the one hand shares features with them, on the other hand displays Etruscoid characteristics. The most important common feature pointing to a Venetic model is the appearance of graphically innovative characters to write a sound which was not spelled with a particular letter in the Venetic αβs: Raetic, like Etruscan, had a dental affricate /z/ (2.7.1.2). While the Etruscan αβ uses zeta to write this phoneme, Raetic inscriptions feature two graphically distinct characters, both of which appear to have been newly created. The fact that zeta was not used to write /z/ in any of the Venetic αβs can explain this discontinuity – if the Raeti did not know Etruscan writing, they could have no notion of zeta as a letter for their affricate (Rix 1998, 48–56; Schumacher 2004, 312).

2.5.3. The Raetic characters for the dental affricate

There are two characters in the αβs used for Raetic which cannot be readily identified with Mediterranean archigraphemes. These characters do not seem to be graphically related to each other; instead, it is more likely that  and ↑ were created independently in two different places in order to represent a sound for which the Venetic αβs had no character. Following Whatmough 1933, 508, both are transliterated here with the letter *þ* to distinguish them from and to avoid confusion with characters for dentals which go back to the Greek αβ.[254]

2.5.3.1 At Magrè

At Magrè, and only there, the character  occurs six times in six different inscriptions.

MA-2 
piθanmelkaθ̣ụṛịẹþụ

MA-5 
piθieikuśiþu

MA-8 
reiθemuiuþinaχe

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[254] Whatmough's choice was suggested by the notion that Runic ᚦ is derived from the Magrè-variant , to which I do not necessarily subscribe (3.1). Still, the graphical similarity makes *þ* a convenient option for transliteration.

MA-9 
pitalelemaisþinake

MA-10 
piþiekerpinake

MA-23 
usθiþu I *zezeve*

Twice (MA-8, MA-9) the letter is used in the anlaut of the preterite verb form *þinaχe*, which forms a full equation with the Etruscan verb form *zinace* (2.7.3.1). As a consequence of this equation, the phonetic value can be determined as a dental affricate [t^s] vel sim. (2.7.1.2). In MA-2, MA-5 and MA-23, the letter seems to be part of an ending *-þu* (2.6.1.4); in MA-10, it is probably used mistakenly to write the dental of the individual name *piθie* (in the same inscription, *þinake* is written with graphically similar pi in the anlaut).[255] The character shapes  and  (only in MA-5) have a graphical parallel only in Camunic alphabetaria, where a character  occupies the position of san – san writes the tau gallicum phoneme in the Lugano αβ, but  cannot be the Magrè αβ's san, as Raetic standard san  is attested in the Magrè inscriptions (MA-4]*eiluke*[?]*śu*, MA-14 *esiumninuśur*, maybe MA-5). There is a slight possibility that both a Camunic san  vel sim. and standard san are used to write the affricate at Magrè, imitating Lugano orthography – *śur* is opaque, but for]*śu* cf. the ending *-þu* (2.6.1.4). Rix 1992, 420; 1998, 47 and Markey 2001, 93. 2006, 155 consider  to be developed from a digraph of tau and sigma or san; Whatmough 1933, 509 f., assuming that  was the original form to which a third angle was added "as a flourish", prefers to derive the character from theta via tau gallicum .

2.5.3.2 In the Sanzeno alphabet

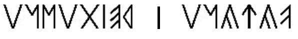
In the context of the Sanzeno αβ, the character  occurs twelve, possibly thirteen (SZ-19) times in as many inscriptions; six of these are certainly language-encoding.

SZ-1.1 
lasta φirimaþinaχe I *χikaśiχanu*

SZ-4.1 
kativates I *kalitis þal φuter suχ*

---

[255] It cannot be excluded that *pinake* is a different word of dedication, but this is unlikely considering the other misspelling and the frequent occurrence of *þinake* at Magrè; see n. 359.

SZ-5.1 
vaþanu I *reiθuśnu*

SZ-30 
ka[ ]*isθi:puχe:ṭumis:p*[ ]*θiaḳ*[ ]*auþile:ẹḷuku:*

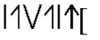
NO-15 
esumnesi nuþnualeutikutianus

BZ-10.1 
tnake viθamu I *laþe*?

The letter's identification with the Magrè variant hinges on the one-off attestation of *þinake* written with ↑ in the anlaut in SZ-1.1 (Schumacher 2004, 304). The equation is supported by SZ-4.1 *þal*, which, being accompanied by a plural form (*φuter*), is highly likely to correspond to Etruscan *zal* 'two' (2.7.3.2), and the onomastic elements *vaþ-* and *nuþ-* (2.6.1.2).

SZ-33 
þine

SZ-74 
þine

SZ-32 
]*þipupi*

SZ-34 ?]↑
þ[?

SZ-94 
veþa[256]

The attestations on SZ-33 and SZ-74 are qualified by the fact that we are probably concerned with factory marks (2.8.1.1); SZ-32, SZ-34 and SZ-94 are unclear. Additionally, the letter occurs in a Sanzeno-αβ inscription on one of the Slovenian helmets (SL-2.1) and, incongruously, in an opaque inscription from the area of Verona (VR-6).

The "arrow sign" is reminiscent of tau, but tau does not occur in this shape in the Etruscan αβ or regularly in any of the Transpadanian αβs, all of which have a single unbroken bar. A character ↑ appears in the variable and problematic codas of the Camunic

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[256] Possibly  *vepa*.

Piancogno alphabetaria (see tab. 23) and in the Sondrio-αβ inscription on the Castaneda flagon (GR·3), but it is not clear whence it is derived and which sound value it represents, and whether there is a connection with the Raetic letter. If ↑ on the Castaneda flagon is a variant of tau, it is the only such form in the North Italic αβs. The letter of that shape also appears in two dubious inscriptions from the Gailtal (Gt 20, Gt 22, ascribed to the Venetic corpus). Rix 1992, 420 suggests that ↑ is simply tau 𐌕 with a broken bar.[257] Both the Magrè and the Sanzeno character may be creations from scratch (Schumacher 2004, 311), but a connection to some (marginal?) Camunic tradition cannot be excluded.

2.5.3.3 Zeta in the area of Verona

In a handful of inscriptions from the area of Verona, zeta can be argued to denote the dental affricate, as it does in Etruscan. The argument is based on two comparatively recently published inscriptions on bronze fittings from San Giorgio di Valpolicella (Marinetti 2003, 112 [no. 1 and 2]).

Fig. 22: Bronze from San Giorgio di Valpolicella with inscription VR-10. Soprintendenza Archeologia del Veneto – Nucleo Operativo di Verona, inv. no. IG VR 65197.

VR-10 𐌄𐌙𐌀𐌍·𐌕𐌀𐌋𐌖𐌑𐌄𐌉
ieśulat·naχe

The sequence *ieśula* is unclear. The final part of the inscription *t·naχe* may be taken to represent the preterite verb which usually appears as *þinaχe*, here spelled with tau for /z/ rather than either of the Raetic characters. Tau testifies to some uncertainty concerning the spelling of the dental affricate, probably in the absence of a specially created character. The short vertical stroke after tau can in the present case be either short iota (thus Marchesini MLR 122; cf. securely in SZ-30, also debatable in SR-1.2; 2.5.8.2) or some kind of punctuation mark – iota would be expected, but appears as a full-length letter in the

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[257] His later (1998, 47) suggestion works with an incorrect form (a misconception apparently caused by the transliteration sign used in Schumacher 1992). The Sanzeno variant is graphically identical with the Faliscan letter for /f/ (attested already in the oldest inscription in the 7th c.), whose origin is equally obscure (Giacomelli 1961, 32 f.).

beginning of the inscription. Another short scratch instead of expected iota occurs in VR-14  *ḷav·ṣ́a* or *ḷaviṣ́a* (cf. WE-1 *lavise*?) on a bone, also from San Giorgio.

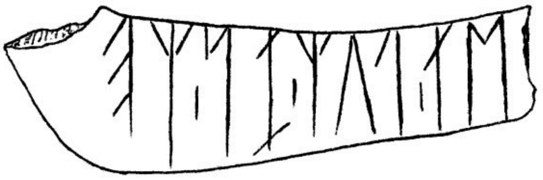

Fig. 23: Bronze from San Giorgio di Valpolicella with inscription VR-11. Soprintendenza Archeologia del Veneto – Nucleo Operativo di Verona, inv. no. IG VR 65196.

VR-11 
]ś͡t·luχ·zn·χe

Just like *ieśula* in VR-10, the sequence *śt·luχ·*, probably incomplete in the beginning, is unclear. Comparison with VR-10 suggests that the final part of the inscription *zn·χe* represents the same verbal form, here spelled with zeta for /z/ and punctuated somewhat idiosyncratically. In contrast to VR-10, where syllabic punctuation can be argued to be correctly employed, the present case is less clear: all three puncts in the inscription are per se correct, but san and zeta ought to be punctuated as well. Generally, the scarcity of vowels is conspicuous; the sequence before putative *zinaχe* may well be abbreviated too. An abbreviation convention, apparently based on the concept of replacing vowels with puncts, is altogether more likely.

Similar possibly abbreviated attestations of the verb may be found in two more inscriptions from the area of Verona which have been long known.

Fig. 24: Inscription VR-2 on an antler piece from San Briccio di Lavagno. Museo di Storia Naturale Verona, inv. no. 5027.

VR-2 
malav·zn

The surface of the antler piece from San Briccio di Lavagno, known since the 19th c., is hardly damaged; the lines are perfectly well distinguishable. The first four letters are unambiguous, as is final nu. For the group of lines in between, various readings have been suggested. Waw seems clear;[258] the upper bar of waw is, with a slightly misaligned second scratch, prolonged to cross the lower tip of the following, slightly oblique hasta. This latter, with its bar on top, is usually read lambda ⅂.[259] The short vertical on top is likely a punctuation mark, though secondarily inserted iota cannot be excluded (Mancini & Prosdocimi 1976, 122). Marchesini (MLR 45) reads a ligature with (inverted) alpha (*-valn*), which is so far unparalleled in the Raetic corpus (but cf. her reading of VR-6 = MLR 258). The scratch which appears to connect waw with the following hasta may be considered to belong with the following letter, which can then be read 𐌆 zeta. In this case, the letters 𐌍𐌆 *zn* may again be (even further) abbreviated *zinaχe*. *malav* remains unclear.

The sequence *zn* also occurs in the currently untraceable inscription VR-4 on an antler piece from Castelrotto, associating this inscription with the *zinaχe*-group discussed above.

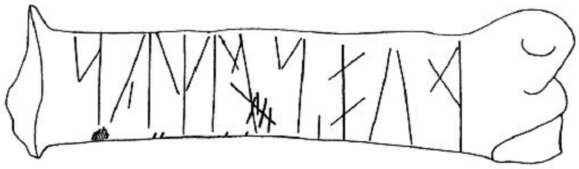

Fig. 25: Inscription VR-4 on an antler piece from Castelrotto (from Marinetti 1991, 39).

VR-4 𐌍𐌀𐌙?𐌍.𐌆Λ𐌐
puz·n?χan

Judging from Marinetti's drawing (fig. 25), the greater part of the inscription is unproblematic. The only dubious bit is the group of lines after *z·n*: 𐌑 or I𐌍. (The short line which crosses the first hasta apparently represents an unintentional notch.) *puz·nniχan* is unlikly, as the same letter being written twice is rare in Raetic; *puz·nśχan* resembles the inscriptions discussed above in its richness in consonants, but does not lend itself to interpretation either. If it belongs here, the present inscription is the only one of the group which has the sequence arguably representing the verbal form *zinaχe* in the centre rather than at the end.

As mentioned in section 2.4.2, VR-2 from San Briccio is considerably older (5th–4th c.) than the material from Castelrotto (VR-4, 1st c.) and San Giorgio (2nd–1st c.), which makes the treatment of these inscriptions as a group very problematic. As concerns content, the

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[258] Definitely not alpha, as suggested by Pauli 1888, 148 and Mancini (IR 13), as the bar would be turned the wrong way.

[259] Whatmough's upsilon (PID 246) is groundless.

Veronese epigraphic material from east of the river Adige – as opposed to the inscriptions in the west, which belong to the Cisalpine Celtic corpus – is most likely Raetic. Epigraphically, a number of alphabetic traditions appear to play a part. Typically Raetic features include ᛏ in VR-1 from San Briccio and VR-3, and retrograde alpha and sigma in a number of testimonies. The shapes of pi, lambda and upsilon are Venetoid, as befits the area, but VR-17 also has four-bar mu 𐌌, which is unknown in Raetic writing. It is hard to judge whether the putative local practice of abbreviation of recurring words is somehow connected with Venetic syllabic punctuation, or whether it is an unrelated phenomenon. The use of zeta for the dental affricate points to Etruscan influence. It may be observed that san appears comparatively frequently in the San Giorgio inscriptions, which might be considered to reflect Northern Etruscan writing practice (2.5.6).

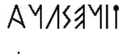
Another argument adduced by Schumacher 2004, 131 f. and Rix 1998, 50–53 to support a derivation of the Raetic script from the Venetic one is the employment of phi, chi and tau for voiced stops (or phonemes interpreted as voiced stops by speakers of IE languages). Before this problem can be tackled, some clarifications concerning the identification of variants of tau in the Raetic αβs are in order.[260]

2.5.4 The letter ᛏ

2.5.4.1 Material

The letter ᛏ, in the following paragraphs provisionally transliterated as *t*^{i} (following Schumacher 2004, 307), is attested in eight inscriptions:

HU-7 
?ẹḳiesiuti^i*kut*^{i}*anin met*^{i}*lainile*

VR-1 
t^i*inesuna*

VR-3 
t^i*aniniut*^{i}*ikuremieshirat*^{i}*asuvakhikvelisanes*

SR-4 
θul·t^i*e?·sạ[* | \$ *t*^{i}*eris·ṇ[*

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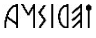
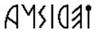
[260] The following section is, with minor differences, published in Salomon 2017.

SR-6 
aṛuseθar·nat^{i}*eris·nạ*

NO-3 
φe$\overset{\frown}{lt^{i}}$*uriesi:φelvinuale ut*^{i}*iku*

NO-13 
t^{i}*erisna*

SL-1 
t^{i}*erisna*

All in all, thirteen sequences which can be identified as words are written with this letter; these thirteen tokens represent eight types: *t*^{i}*erisna* (3x), *ut*^{i}*iku* (3x), *t*^{i}*anin*(*i*) (2x), *t*^{i}*inesuna*, *hirat*^{i}*asuva*, *θul·t*^{i}*e*, *met*^{i}*lainile*, *φelt*^{i}*uriesi*.

2.5.4.2 Arguments for a dental sound value

The letter ¡ was already pointed out in the inscriptions on the Vače helmet (SL-1) and on the Spada di Verona (VR-3) by Marstrander 1927, 19–24, who read it as a dental. In 1975, Mancini (IR, 256 [n. 17]) compared ¡ in SL-1, VR-1 and the then new inscription NO-13. He also indicated corresponding characters in "alcune iscrizioni di Serso" (SR-4 and SR-6, first published in Pellegrini & Sebesta 1965), but assumed that these forms had no graphematic function. After Marinetti 1987, 139 f. (n. 14) had emphasised the relevance of the Serso testimonies, Mancini 1992, 82–84 judged the letter to be a "notazione specifica di un fonema dentale" (84); see also Mancini 1999, 311–313 and Rix 1998, 47 f.

The inscriptions on the antler votives from the Montesei di Serso serve as a starting point for Schumacher's (2004, 307–309) identification of ¡ as a third new character for the dental affricate, as already suspected by Mancini. The above-mentioned Serso inscriptions SR-4 and SR-6 contain the word *t*^{i}*erisna*. The sequence *-erisna* occurs also in SR-9, but without ¡ in front of it. According to Schumacher, a compromise spelling in this inscription shows that the anlaut of *t*^{i}*erisna* is a dental affricate. The hasta before epsilon does not feature a dot on top – even under the microscope, no marks, let alone a clear indentation as in the other two inscriptions, are visible. Schumacher reads the group of lines preceding the hasta in question as theta and san *θś*-, i.e.]*θśierisna*, and suggests that *θśi*- represents an attempt to write a dental affricate – executed by a writer who did not have a specially created character at their disposal, either due to lack of competence, or because none was in use at that time or in that place (cf. the possible compromise spelling in CE-1.4; 2.7.1.2).

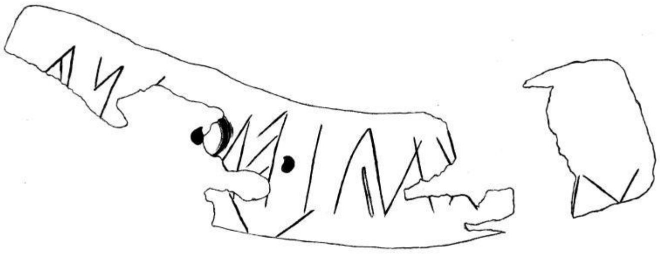


Fig. 26: Inscription SR-9 on an antler fragment from Serso. Museo delle Scienze di Trento, inv. no. PEGO 45 (reconstructed).

However, the reading *θś*-, which goes back to Pellegrini (Pellegrini & Sebesta 1965, 15), is in itself problematic: Pellegrini reads the first letter after the break as theta X based on the three preserved traces of lines. Due to the fragmentation of the object, the original state of affairs is hard to ascertain today; the small fragment in the lower right may have been attached slightly lopsidedly when the antler piece was reconstructed. If this is the case, ˋ and ˎ may indeed align to form ╲ . The breaking edge to the right of ˋ , however, appears to follow a vertical line which cannot align with ˏ in the left bottom corner. The next sequence of lines also presents difficulties: the two chevrons read M by Pellegrini do touch, but the second one might feature a bar ˎ inside it – this bar is curiously different in appearance from the other lines, and possibly just a crack, but a reading ΛΛ cannot be excluded, especially regarding the unusual shape of alleged san (𐌑 in Raetic; M being only attested as part of a factory mark; 2.8.1.1).

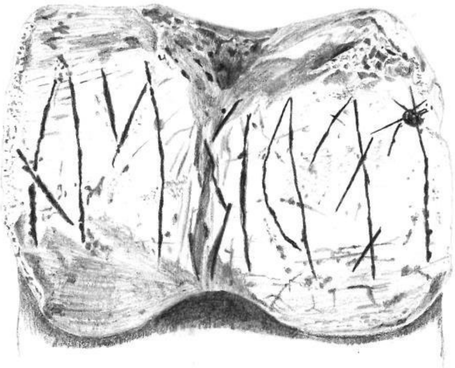


Fig. 27: Inscription NO-13 on an astragalos from Revò (Val di Non). Museo delle Scienze di Trento, inv. no. PEGO 45).

A second argument for the identification of ¡ with the characters for the detal affricate in Schumacher (309 f.) is the execution of the respective letter in NO-13. Despite the difficult surface of the astragalos, the inscription is fairly neatly executed, but the first letter has an untidy look to it: on the upper end of the hasta, both a clear dot and some intersecting bars can be seen. This is interpreted by Schumacher as the writer's take on a compromise between ¡ and the Sanzeno character for the dental affricate ↑. However, an arrow tip is the one shape that fails to emerge. The most pronounced of the bars is a line ˊ, which appears to cross the hasta in a slight curve. Two more scratches cross the hasta – one somewhat fainter scratch, inclined the same way, but more level than the first, and another very faint one, inclined the other way, which might be unintentional. The result, a sort of lopsided asterisk, is distorted by a very clear and pronounced indentation in its centre (slightly removed to the left, but touching the hasta). Mancini (IR 77), who acknowledges only the two more clearly visible scratches inclined to the left, originally read the letter as ↑, with the assymetry of the arrow's tip assumed to be due to the difficulty of writing on a rounded surface. Based on the comparison with SL-1, he later (LIR OZ-1) read ¡ (also as a dental). It is doubtful inhowfar all the scratches are intentional parts of the character – at the margin, all three "bars" could be traces of the tool slipping during the execution of the indentation.

In my opinion, both cases, SR-9 and NO-13, are epigraphically too difficult to carry the burden of proof; a possible Tyrsenian etymology for t^{i}*erisna* which supports a reading with an anlauting dental is equally problematic (2.7.3.2). However, there are two or three more testimonies which indicate a reading of ¡ not necessarily as an affricate, but as a dental.

The first piece of evidence is not particularly conclusive: the inscription VR-1 t^{i}*inesuna* may be argued to feature a compromise letter similar to the alleged one in NO-13. The letters on the unusually large antler piece are deeply and tidily scratched. In addition, some more slightly scratched, but hardly unintentional lines, which are not part of letters, can be seen above nu, between epsilon and sigma, and under alpha. A short horizontal scratch crosses the hasta of the first letter ¡ at about half its height, but it is even more indistinct than the other additional lines. The dot, in contrast, is a deeply engraved little hole, clearly intentional, as it disturbs the natural ridges and cavities on the surface. A reading as a combination of ¡ and tau is highly doubtful – tau may be used to write the dental affricate once in the area of Verona (VR-10; 2.5.3.3), but a form † of tau is unattested in Raetic. Regarding the linguistic aspect, the word t^{i}*inesuna* could formally be interpreted as a patronym or individual name in -*na* (2.6.1), but lacks Raetic, Etruscan or Transpadanian comparanda; a connection with *þine* (SZ-33, SZ-74), probably a workman's inscription on heavy iron tools from Sanzeno (2.8.1.1), is unlikely.

A more useful datum is the fact that the grammatically transparent word *ut^{i}iku* (2.7.3.1), repeatedly attested with ¡, is once spelled with an unambiguous dental character: it appears as ΛꓘIXΛ *uθiku* on the Paletta di Padova (PA-1). Finally, a re-examination of the miniature shield from Meclo has shown that the inscription NO-3 – beside *ut^{i}iku* – features another word with ¡. The first word in the inscription contains an element which can be analysed as a ligature Ŀ, i.e. retrograde lambda sharing the hasta with ¡ (2.5.9). The resulting reading of an individual name *φelt^{i}urie* is supported by parallels in SZ-14 *φeliturie* and PU-1 *φelzuries* (gen.).

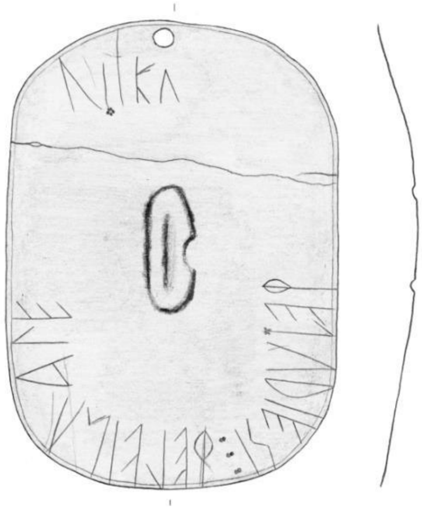


Fig. 28: Miniature bronze shield from Meclo (Valemporga) with inscription NO-3. Castello del Buonconsiglio Trento, inv. no. 4525. Drawing by Gudrun Bajc for TIR.

The other attested forms with ¡ do not offer any clues. Two of the inscriptions with *ut^{i}iku* also contain the opaque word *t^{i}anin*(*i*) (2.7.3.2). Three of the sequences are hapax legomena: SR-4 *θul·t^{i}e*°, HU-7 *met^{i}lainile* (2.6.1.4), VR-3 *rat^{i}asuva* (2.7.2.2), all likely personal names.

2.5.4.3 Dental vs. labial

The arguments produced for a reading of ¡ as a letter for a dental are seemingly opposed by the fact that, opposite *t^{i}erisna*, *ut^{i}iku* and *t^{i}anin*(*i*), there are very similar forms attested in numerous inscriptions which differ only in (allegedly) having pi instead of ¡: *perisna* (BZ-4, BZ-26), *upiku* (NO-15, NO-17, BZ-3, BZ-4, IT-5) and *pani*(*u*)*n* (SZ-16, NO-2, NO-16, BZ-3). These latter words are written with ᛚ in place of ¡, a letter which is traditionally read as *p* in Sanzeno-context. This discrepancy has been widely disregarded in the past, mainly because some of the testimonies concerned have only recently been published or read correctly.

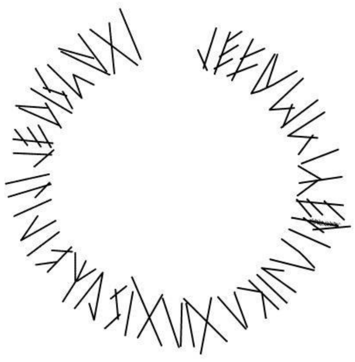


Fig. 29: Inscription BZ-4 on the fragment of a bronze vessel from Moritzing. Staatliche Museen zu Berlin – Antikensammlung, inv. no. Fr. 1810. Drawing by Gudrun Bajc for TIR.

The accepted reading of ⫯ as a letter for a dental, as seen above, is founded mainly on the attestations of *t*^{i}*erisna*. The inscription BZ-4, which has AᛘϟI◁ᛖ↾, has been known since the 19th c.; however, the word is not marked as such, but has to be segmented out of a lengthy sequence – only Marstrander drew the obvious conclusions from the similarity with *t*^{i}*erisna* (see n. 275). More recently, Morandi 2000, 70 drew attention to the suspect pair *t*^{i}*erisna*/*perisna*, emphatically so in his publication of BZ-26 (Lunz & Morandi 2003, 345–348), which attests isolated *perisn*[*a*].[261] On the other hand, the generally assumed phonetic forms of the other two words in question are *upiku* and *pani*(*u*)*n*(*i*)[262] with a labial, because the attestations with ⫯ were pointed out only recently: Schumacher 1998a, 104 first suggested to read *ut*^{i}*iku* in NO-3; the inscription HU-7 on the Situla in Providence was only read correctly by Schürr 2003a. The latter (250–252) accurately points to the parallels with ↾, and interprets ⫯ as a "Kümmerform" of phi – in reference to VR-3, which is generally read with ⫯ = phi.

Fig. 30: Inscription VR-3 on the Spada di Verona (from Rossi 1672, 407). Museo Miniscalchi Erizzo, no inv. no.

The letter ⫯ appears three times in VR-3, and it has an otherwise unattested shape: always in the form of a full-length hasta with a perfectly round circle on top, and additionally a smaller dot in the centre – at first glance a hybrid form of ⫯ and ⚲ (phi). The words written with the letter are *t*^{i}*anini*, *ut*^{i}*iku* and the opaque sequence (*hi*)*rat*^{i}*asuva*. The early com-

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[261] Morandi's conclusion is to prefer a reading *perisna* also in NO-13 (with ↿, which is well within the possibilities as far as the arrangement of the bars is concerned).

[262] See 2.7.3.2 on the question of whether the forms *taniun*, *tanin* and *tanini* can really be grouped together.

mentaries on the testimony have to be taken cum grano salis – despite the fact that all participants in the discussion had to refer to the same drawing of the then lost inscription in the original publication (Rossi 1672, 404–407), some of them found reason to amend it in various points, which led, over time, to a combinatory variety of readings. Pauli 1885, 19 (Nr 38) identifies the letter in question as phi, as does – after extensive discussion – Marinetti 1987, 133–135.[263] Like Schürr, Marinetti bases her argument on the attestations of *upiku* und *paniun*. Consequently, this reading won recognition; only Mancini (LIR VR-3) offers an alternative reading with ¡ as a dental.

To keep apart the attestations of ¡ accordingly, distinguishing a dental character in the attestations of *t^ierisna* from phi with a small head in *upiku*/*uφiku* and *pani*(*u*)*n*/*φani*(*u*)*n*, is hardly feasible. Four points can be put forward against it. Firstly, such a distinction could not be justified graphically. The standard form of ¡ is a hasta with a dot on top in both groups of attestations; deviating shapes are found on the one hand on the Spada di Verona (*ut^iiku*, *t^ianini*), on the other hand on the Vače helmet (*t^ierisna*).[264] Secondly, *uθiku* on the Paletta di Padova would remain isolated beside †*upiku*/*uφiku*.[265] Thirdly, the two attestations of *t^ierisna* with ᛚ (BZ-4, BZ-26) would have to be considered unrelated or explained as scribal errors. Finally, the testimony of NO-3 is opposed to the equation of ¡ and phi, as it has unambiguous phi ⫯ twice beside ¡. The graphical similarity between the two characters ¡ and phi is coincidental.[266]

2.5.4.4 The letter ᛚ

If, in reference to the arguments brought forward in the first paragraphs of the present section, the interpretation of ¡ as a dental character is to be retained, the discrepance between the attestations with ¡ and ᛚ can be suspended by also identifying ᛚ as a dental character. Tab. 14 displays the system of shibboleth characters of the Magrè and Sanzeno αβs as accepted to date.[267]

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[263] A concise overview can be found in PID (no. 247). Rossi's drawing turned out to be exemplary and correct in every detail.

[264] In the latter case, a small circle is executed instead of a single dot. It may be assumed that the technique of application is the reason for the deviating form: the inscription is embossed with a point-shaped tool, so that a single dot would not make for a particularly distinctive feature.

[265] A coexistence of two words *ut^iiku* = *uθiku* and *upiku*/*uφiku* is assumed by Rix 1998 (passim).

[266] The first three arguments also hold against a theoretically possible identification of ¡ with pi, which happens not to appear in any of the inscriptions which contain ¡.

[267] See, representative, Prosdocimi 1971, 33 and Mancini 1999, 299–304. The earliest instance of a reading of ᛚ as *p* is Conestabile's original publication of BZ-4: *teva'snicheriupikutiutivachvilipiperisnati* (1863,

	pi	lambda	upsilon		pi	lambda	upsilon
Etruscan αβ	↿	⇃	V	Venetic αβs	↿	↿	Λ
Sanzeno αβ	↾	⇃	V	Magrè αβ	ᑫ	↿	Λ

Tab. 14: The traditional view on the forms of upsilon, lambda and pi in the Raetic αβs.

The only irregularity in this scheme is the bar of Sanzeno-pi, which, for reasons not evident, extends from the hasta against writing direction. Such a turning of pi would be redundant, i.e. not enforced by the graphical development of any other character. It might be compared with that of alpha and sigma, which, in their typically Raetic and especially Sanzeno-forms, also have an orientation different from that usual in the related αβs, but there are no parallels for such a consistent turning among the characters which consist of a vertical hasta and lateral bar(s) (ᛅ, 𐌀, ⋊, ⇃, ↿, ᛗ, ᛘ, ᑫ, ᛞ) – neither in the Raetic αβs, nor, to my knowledge, in any of the related αβs. The Etruscan E cortonensis E, for example, is not randomly retrograde, but denotes a phonologically different vowel in direct opposition to Ǝ (Wallace 2008, 199; Eichner 2006b).

The expected (Etruscan or Lugano) form of pi ↿ is not absent in inscriptions from Sanzeno-context. It occurs in over thirty inscription and is definitely a variant of pi, not lambda as in Magrè-context (Kluge & Salomon 2015, 89–92). This variant, whose existence beside ↾ requires explanation, is most easily accounted for not as an archaic form, nor as an allograph writing an allophone of *p*, but as the standard form of pi in the Sanzeno αβ. In nine, possibly ten definitely language-encoding inscriptions, ↿ is attested thirteen times (CE-1.3 *lup·nu piθiave*, SZ-15.1 *pitie kapaśunu*, SZ-22.1 *perkusiale*, SZ-30 *puχe*, *p*[ ]*θiak*[, SZ-87 *pitis*, SZ-98[268] *piθi*[, NO-11 *piri*, BZ-9 *piθame*, WE-3 *piθamnuale*, maybe BZ-10.1 *piθamu*[269]); the thirteen tokens represent six to ten types: *kapaśunu*, *lupnu*, *perkusiale*,

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41). In Sulzer's publication of SZ-16 (1855, 308), the letter is transliterated as (IE) *d*, but Fabretti in CII (1967) reads both SZ-16 and BZ-4 (no. 23 and 60) with *p* (with reference to Sulzer's dental p. 133). Already in 1874 Corssen explicitly names retrograde pi as a common feature of the two inscriptions. According displays in alphabet tables are found, e.g., in Pauli 1885, 55, Whatmough 1933, 502 and Pellegrini 1959.

[268] Not included in Kluge & Salomon 2015.

[269] In BZ-10.1, the first letter of the second word consists of a hasta surrounded by three bars: one on the left side extending from the tip of the hasta, one on the left side in the lower area, almost touching the hasta, and one on the right side at half of its height, at a little distance from the hasta. The letter is traditionally read 𐌀 *v*, taking into account only the more convenient one of the lower scratches; the scratch on the right is either ignored or interpreted as a punctuation mark. I would prefer to exclude both the lower scratches from the reading and read ↿. A word *piθamu*, in contrast to unparalleled *viθamu*, can be compared to well-attested *piθamne*, probably a patronym *piθam*(*n*)-*nu* with simplified nasal cluster to accompany the individual name *tnake*. This interpretation is opposed by Schumacher (p.c.), arguing that

piθam(*n*)*e* (with derivations and inflected forms), *piθiave*/*p*[ ]*θiak*[/*piθi*[, *pitis*, *piri*, *puχe*.[270] Of these, two are attested in Magrè-context with clear pi (*piθam*[*n*]*e* vel sim. in MA-1, MA-2, AS-18, AS-19.1, SR-5, IT-8, *pitie* vel sim. in MA-5, MA-6, MA-9, MA-10). In contrast, none of the many words written with ↾ has a parallel in Magrè-context which could support the reading as *p* or any labial.

Furthermore, it has to be pointed out that under the assumption that ↾ is pi, tau is missing from the Sanzeno αβ, while phi and chi are well attested. The only inscriptions from Sanzeno-context containing a character ᚿ are CE-1.4 and NO-17. The latter is notably read as having two pis rather than taus by Marchesini in the original publication (MLR 31). In both inscriptions, the bar of tau rises in writing direction, just as it does in ↾, which is counterintuitive. Indeed, the variant ᚾ predominates in Magrè-context (twelve attestations); ᚿ only appears twice at Magrè (MA-6, MA-9) and once in the area of Verona (VR-6). The same goes for other letters which feature centric bars, viz. heta (six times with falling vs. three times with rising bars) and zeta (five times with falling vs. once with rising bars). Only alpha tends to be written with a rising bar in Raetic, especially in Sanzeno-context, where this orientation is exclusive. Conceivably, the variant of tau with rising bar ᚿ was preferred in the Sanzeno αβ to increase distinctness from pi ↿ with its single bar, which subsequently made the graphical development ᚿ → ↾ possible.

For a collection of all inscriptions with ↾ in the new transliteration (↾ = *t*) see appendix V. The new readings of the inscriptions concerned do not have any far-reaching consequences for Raetic philology in the area of onomastics. A handful of names/name bases which contain a dental (usually) spelled with theta in Magrè-context may be considered to find parallels in names attested in Sanzeno-context with ↾, if one is prepared to accept variation of theta and tau (2.5.5): *pitie*/*piθie*, *lasta*/*lauste*/*lasθe*, *tarie*/*θar*°, *φelturie*/*φelzurie*; tenuous *sleti*°/*sleθu*° and *tite*, which is formally identical with the Etruscan individual name (2.6.1.2). The potential theonym *tianu* is no clearer than †*pianu* (2.6.2). Two of the sequences concerned lose possible comparanda by being read with *t*

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the scratch on the left is intentional. Indeed, both short scratches do look intentional; their (or, with Schumacher, the right one's) function is unclear. The form is listed above among the attestations for pi for the sake of completeness, but I shall cite the form according to the traditional reading *vitamu* in the other parts of this thesis.

[270] Cf. also SZ-94 *vepa* or *veþa*. Additionally, six tokens in inscriptions of doubtful linguistical relevance (NO-8, NO-9, SZ-32, SZ-86, VN-2, VN-3) and the putative factory mark *upi* (SZ-27, SZ-39, SZ-43, SZ-79, SZ-88, SZ-92, SZ-93, SZ-95; 2.8.1.1).

instead of *p*: BZ-12 †*śupris* with Etruscan Vt 4.5 *śupri* (fem. PN); SZ-11 †*vepelie* with Venetic Es 67 *vebele·i* (dat.), Etruscan Sp 0.4 *vepele*.

2.5.4.5 Distribution and derivation

It has been argued that both ¡ and ᛚ are best considered characters for dentals. That the two are equivalent follows from frequently attested words which are consistently written with either of the two letters. The distribution of the letters is complementary on the level of individual inscriptions; furthermore, the use of ᛚ is restricted to the Sanzeno αβ, while ¡ occurs in Venetoid contexts, with the exception of NO-3 and NO-13. When regarding the chronological aspect, it can be observed that ¡ tends to occur in the more archaic inscriptions. The Situla in Providence (HU-7) and the Spada di Verona (VR-3) are discussed in section 2.5.2.1 among the oldest Raetic testimonies; the antler piece with VR-1 belongs in the oldest stratum of testimonies from the area of Verona. The astragalos with NO-13, though from the Val di Non, is an isolated inscription find and comes from a context which appears to predate the Sanzeno writing tradition. NO-13 does not contain any characters which connect it to the Sanzeno αβ and can be compared in form and content to the testimonies from Serso and SL-1 (the latter being identical down to the ductus of the letters). The Serso antler pieces are also comparatively old (for Magrè-type group finds) – if they do not all date from the same time, at least the testimonies containing ¡ may date to the earlier phase of the settlement. However, the older testimonies from elsewhere preclude an explanation of ¡ as a local Serso variant of tau which only sporadically found its way abroad.[271] Given the geographical proximity, though, its rogue occurrence in the Sanzeno-type inscription NO-3 might be due to interference from Serso. No testimonies containing ¡ are dated later than the 4th c. BC.

As concerns the formal development of ¡, the development of tau ↿ to ¡ in the Old Sabellic αβ of the South Picene inscriptions can be cited as a parallel (both forms are attested, see Marinetti 1985, 55 and the tables 59 f.). While this graphical development is systematic in Old Sabellic (zeta I → İ, omikron ∘ → •, /f/ 8 → ⁚), it would be isolated in Raetic; as far as I can see, none of the other peculiarities of the Raetic script can be compared to those of Old Sabellic. An alternative derivation is proposed by Marstrander

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[271] Tau ↿ in its "regular" (Etruscan and Venetic) form is particular to other local subcorpora. It appears at Magrè, at San Giorgio di Valpolicella and in the Alpine petrographs of Steinberg, Achenkirch and Unterammergau; outside of those find groups, it only occurs in the isolated inscription WE-4 from Stufels.

1927, 20–22, who identifies ꜝ with the "dumbbell" character in SL-2.3 on the Negau helmet A.

The helmet bears four separate inscriptions; at least one of them (SL-2.1) is linguistically and epigraphically Raetic (2.8.1.10). SL-2.3, embossed with a point-shaped tool on the chamfer, features four characters which can be read as ꜝ or phi ⫯. The characters in question consist of a vertical hasta with a circle (or circloid) on top (letters 1, 3, 6 and 13). The first character features two circles, one on each end of the hasta. While the bottom circle is as lopsided as the circles in the other letters, the top one is perfectly circular and made of more, but shallower and not easily visible indentations arranged around a single particularly deep one. It seems to have been executed with much care.[272] Letter 3 does not much resemble no. 1: the circle is irregular and distinctly bigger, taking up more than half of the length of the hasta. The circle on top of letter 6 is considerably smaller, though still bigger than in letter 1; letter 13 features a circle almost as small as the two of letter 1, with the uppermost of the indentations which form the hasta sitting above it.

Fig. 31: Inscription SL-2.3 on the Negau helmet A. Kunsthistorisches Museum Wien – Antikensammlung, inv. no. VI 1659). Drawing by Gudrun Bajc for TIR.

It is theoretically possible that all four characters are intended as the same letter – Mommsen in the original publication (1853, 208 [no. 12]) read *ð̣uðnıðanuaðı*. By the same token, all the respective characters in SL-2.3 could be identified as phi ⫯, because in all cases the hasta continues into or all the way through the circle. ⫰ could be explained as a mistake of the writer, who may have started applying the inscription the other way round.[273] However, the circles of letter 1 are much smaller, and the appearance of the top circle seems peculiar – especially the prominent dot makes it reminiscent of ꜝ. It might be

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[272] Cf. the detailed description in Marstrander 1927, 7 (A 3). The view that the first character is not a letter but some sort of symbol, decoration or punctuation mark, as held by Pauli 1885, 36 (no. 99b) and, following him, Olsen 1903, 25, is obsolete.

[273] See 2.8.1.10 on the question of how SL-2.1 and SL-2.2 were applied.

due to an effort of the writer to distinguish the letter more clearly from the other three letters, which are best identified as phis, as an afterthought when realising that his circles had become continually smaller and his ⫯ looked much the same as his phis.[274] Contrariwise, the upper circle may be an amendation for clarity, if the deep indentation at its centre was originally intended as the top element of ⫯; the second circle might also be explained this way. Alternatively, the dumbbell shape may represent an otherwise unattested variant of a graphically innovative character. In any case, the reading with one anlauting dental and three labials is the one usually favoured, because it is the basis for Marstrander's interpretation of the inscription as a Celtic personal name *dubni banuabi* 'of Dubnos Banuabios' (1925, 45–51).

SL-2.3 𐌉𐌘𐌀𐌖𐌍𐌀𐌘𐌉𐌍𐌘𐌖ꟾ
zuφniφanuaφi

In regard of the formal similaritiy of SL-1 and SL-2.3 (find area, object, place of application, execution, letter forms), Marstrander 1927, 20–22 assumes that the two inscriptions are written in the same αβ, maybe even by the same hand, and hence that SL-1 ⫯ (executed as ⟟) and SL-2.1's dumbbell character ꟾ (executed as ꟾ) are meant to represent the same letter.[275] He judges ꟾ/ ꟾ to be the primary form, viz. a variant of Venetic zeta used to write /d/, matching his interpretation. As mentioned above, such a development is also documented in Old Sabellic. ⫯ would then be a simplified version of ꟾ, writing /d/ as zeta does in the Este αβ – possibly the sporadic evidence for secondary interference from the cultural centre that must have been the Reitia sanctuary. Note, however, that the assumed primary form would be attested only here (except maybe ⌶ in *Od 7b, see Prosdocimi 1988, 303–306; sceptical Eska & Wallace 1999, 123 f. [n. 10]). Also, in light of the neat parallel ᛚ → ⫯, the detour via zeta rather inelegantly violates the principle of parsimony.[276]

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[274] Cf. SL-1, also embossed with little dots, where the head of ⫯ is not a single dot, but a small circle consisting of eight dots applied against the clock executed around one of the uppermost dots which make up the hasta. A single dot belonging to the hasta is visible above the circle. (Cf. again the description in Marstrander 1927, 18.)

[275] It should be mentioned that Marstrander (23 f.) proceeded to deduce the correct readings not only for VR-3 (with ⫯ as a dental character rather than phi), but also for BZ-4: in view of *derisna*/*terisna* in SL-1, he concluded that ᛚ in BZ-4 had to be a letter for a dental as well. He read *tevaśniχesiutiku* XIVXIᛋ *aχvilititerisna* XI, with St Andrew's cross as an element in non-letter sequences. Indeed, as observed by Marstrander, hasta and bar of ᛚ/ ᛐ intersect distinctly in two of the three instances of the letter, while they touch neatly in nu, rho, san and alpha (see fig. 29). BZ-4 may bel considered to show the intermediate form ᛐ like NO-17.

[276] The forms of the other letters in SL-2.3 agree with both Venetic and Raetic epigraphy: alpha with its bar rising in writing direction is typically Raetic, but also attested in Venetic, notably in testimonies from

2.5.5. The use of the Etruscan characters for obstruents

2.5.5.1 Obstruents in Etruscan, Venetic and Raetic

The diverging phoneme systems of Etruscan and Venetic brought about differences in the use of the letters for the respective sets of obstruents. Etruscan had two sets opposite the Greeks' three, and chose the characters for the Greek unvoiced stops and aspirates, which is generally taken to indicate that the Etruscan sets were close to the respective Greek ones in articulation, while voicedness was non-phonemic. Latin spellings of Etruscan names with ‹b›, d› or ‹g› where Etruscan writes pi, tau or kappa (e.g. ‹pergomsna› for ‹percumsna›) indicate that the unvoiced stops were articulated as fortes in the anlaut, but as lenes in the inlaut (Wallace 2008, 30 f.; Rix 1985a, 219 f.). An alternative analysis, which is rather more complex and questionable from a typological perspective (Agostiniani 1992, 49 f.; Rix 2004, 947), is put forward by Rix 1985a, 219–222 (also Rix 2004, 947 f. with a convenient table). According to Rix, Etruscan – in addition to its unvoiced plosives – has not aspirates, but palatalised labial and dental plosives /p'/ and /t'/, while the palatalised velar plosive /k'/ became /z/ already before the time of attestation. In addition to its two sibilants /s/ and /ś/, Rix supposes Etruscan to have a complete set of fricatives /f/, /þ/, /χ/ and possibly labiovelar /$\chi^{\text{u̯}}$/, which appear in the anlaut (only /f/ and /χ/), and in the inlaut next to nasals and liquids. While theta does double duty for both dental stops /t'/ and /þ/, phi is reserved for /p'/ because a digraph ‹fh› (later 8) is used for /f/, and chi, alternating with heta, is free to denote the velar (and labiovelar) fricative (because /k'/ > /z/ is spelled with zeta).

IE Venetic, having two sets of unvoiced and voiced stops, respectively, adopted the reasonable solution to use the superfluous Etruscan letters for the aspirate/palatalised stops to write their voiced stops, but the characters for dentals got mixed up: apparently due to a temporary near-homography, theta ended up being used for /t/, tau for /d/ (2.1.2). As a consequence, it is hard to determine whether St. Andrew's cross is, genetically speaking, (lopsided) tau or (frameless, Chiusi-style) theta × – even in Venetic outside the more well established and homogeneous local αβs, and all the more so in alphabet traditions which

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the Isonzo area (Is 1–3 in Pellegrini & Prosdocimi 1967, *Is 4–6 in Eichner & Nedoma 2009). Likewise, V is not the Venetic standard, but well attested (though not in the Isonzo testimonies). Prosdocimi 1976, 225–227 (also 1988, 321) books I as a variant of zeta to write /d/, complementing tau for /t/ in the alphabet type Idrija (3.4.2), and assigns SL-2.3 to the Venetic corpus. The lack of syllabic punctuation can be explained by the potentially early dating and/or the geographical remoteness (Prosdocimi 1978, 220 f.; Nedoma 1995, 25 [n. 36]).

may be derived from any of those. In Raetic, it is preferable to identify St. Andrew's cross as theta, as reflected by the transliteration used here, because it appears beside tau in MA-6 and ST-1, possibly in WE-4, and in numerous Sanzeno-type inscriptions in consequence of the new reading of ᛚ. Yet doubts remain – it is not a given that St. Andrew's cross has only one origin in all Raetic αβs, local traditions or even individual inscriptions. Moreover, at Magrè, it is sometimes difficult to distinguish between St. Andrew's cross and regular tau, as many crosses are lopsided in exactly the way which Prosdocimi suspected to have caused the dental confusion in the first place (e.g. MA-1 *piθ*$^{?}$*amne*, MA-6 *θ*$^{?}$*riahis*). In any case, the fact that St. Andrew's cross is also the unmarked dental character in Cisalpine Celtic writing – whether tau or theta – shows that the letter does not have to be from Venetic.

That St. Andrew's cross appears to be the character for the unvoiced stop is one of Rix' three main arguments for deriving both Raetic αβs from the archaic Venetic αβ (1998, 50–57):[277]

1. the absence of zeta for the dental affricate (2.5.3),
2. what he calls "venetische Dentalvertauschung" (51 [n. 70]), i.e. theta for the unvoiced stop,
3. the use of the characters for obstruents.

Explicitly leaving aside the question of a second set of obstruents in Raetic to correspond to the Etruscan (in his case palatalised) one (52. 55 f.), Rix argues that the Raetic use of the characters for obstruents can be explained from archaic Venetic writing, as it has St. Andrew's cross for /t/, but none of the later Venetic phase-2 solutions for distinguishing dental stops (viz. zeta for /d/ in Este or standard theta for /d/ in Padova). Venetic pi, theta (St. Andrew's cross) and kappa, so Rix, could straightforwardly be used for the Raetic unvoiced stops, while phi, tau and chi, representing non-phonemic sounds in Raetic, were not reallocated to write the stops of the hypothetical Raetic second set, but were employed true to their Venetic sound value: according to Rix, phi, tau and chi could represent inlauting fricative allophones of the voiced stops in Venetic.[278] This is allegedly reflected in Raetic using phi, tau and chi to write the spirants /f/, (/θ/) and /χ/, whose existence Rix postulates based on his analysis of Etruscan, in the anlaut – notwithstanding the fact that

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[277] Rix also derives the Lugano αβ from the Venetic.

[278] Rix himself supports this notion only with problematic evidence derived from comparison with Camunic and Runic (1997), but Marinetti 2002, 47 adduces the Venetic spelling ‹maisteratorfos› for the dative plural *maisteratorbos* in Auronzo.

the Tyrsenian spirants are supposed to be unvoiced, while the putative Venetic allophones are voiced, which Rix justifies with the absence of a phonemic opposition of voicedness. The thus available full set of characters for spirants supposedly allowed for the scrapping of the digraph ‹fh› for Raetic /f/. With their Venetic anlauting sound values [b], [d] and [g], phi, tau and chi are argued to represent lenited allophones of the Raetic unvoiced stops in the inlaut (whose existence Rix also infers from the Etruscan evidence).

	pi – theta – kappa	phi – tau – chi	
Venetic	*p – t – k*	*b – d – g* (anlaut)	*β – δ – γ* (inlaut)
Raetic	*p – t – k*	*b̥ – d̥ – g̊* (inlaut)	*f – θ – χ* (anlaut)

Tab. 15: The characters for obstruents in Venetic and Raetic according to Rix 1998.

As evidence for a Raetic use of phi, tau and chi in the manner proposed, Rix adduces the possible equation Raet. *φrima* ~ Ven. *frema* – phi for an anlauting fricative – and the observation that tau appears in the anlaut only before /r/, which Rix assumes to indicate a lenited articulation. The latter argument is weak, seeing that the two taus concerned are in MA-6 *triahis*, one of the lopsided Magrè crosses which may in fact be theta, and in CE-4.1 *trinaχe*, which Rix himself takes for a compromise spelling for the dental affricate (2.7.1.2). In any case, it is obsolete at least for the Sanzeno αβ with the new reading of ᛚ.

Rix' main argument for the assumption that phi, tau and chi denote lenited allophones in the inlaut is constituted by spelling variations in the inlaut. Rix (1998, 54) cites PA-1 *akvil* ~ BZ-4, SR-1 *aχvil* (2.7.3.2) and MA-13 *esstθua* ~ MA-11 *esθuva*; we may add the name bases *piθ-* ~ *pit-*, *lasθe* ~ *lasta*, and maybe *θarna* ~ *tarie* and *kari* ~ *χari* (2.6.1.2) The most important case is kappa vs. chi in the spelling of the preterite ending *-ke*, mainly in attestations of the verb *þinaχe* (2.7.2.1). In Etruscan, there is a morphological distinction between the preterite endings *-ke* (/ke/) and *-χe* (/k^{h}e/), the first being the active, the second the passive form (in inscriptions of the type 'I was made by X'). In Raetic, we have no indication that such a grammatical distinction is made. There seem to be only active verb forms, as verbs in *-χe*/*-ke* (at least in transparent texts) are accompanied by names in the casus rectus and can hardly be part of passive constructions (which use the *ku*-participles; 2.7.2.2). If kappa vs. chi, so Rix (55), is not morphological, the irregular variation must be due to the optional spelling of an allophone, with kappa the standard letter for the phoneme, chi the optional designation of the lenited allophone [g̊].

Schumacher 2004, 312–316, who does not specifically settle on the archaic Venetic αβ as a model, notes that foreign sounds in loan names must also be factored in, thinking particularly of IE voiced stops. He points to evidence for phi for [b], chi for [g] and zeta for [d] (Este orthography), mainly via loan names from IE languages, but doubts Rix' more problematic notion of phi, tau and chi for spirants in the anlaut, pointing out that the only real evidence, the equation *φrima* ~ *frema*, is not conclusive (2.5.5.2). Concerning allophonic lenes in Raetic, Schumacher (315 [n. 199]) notes that tau occurs frequently in the position after /s/, another phonetically plausible context for lenition (and better attested than Rix' *tr*).

2.5.5.2 The Raetic evidence

In light of what was said in the previous sections about different αβs within the Raetic corpus, and especially regarding the Etruscoid characteristics of the Sanzeno αβ, it is advisable to examine certain groups of inscriptions on their own to avoid mistaking variation between αβs for orthographic variation within one system. Unfortunately, most of our subcorpora are too small to allow conclusions about the rationale which underlies the representation of obstruents. Appendix VI provides an overview of spelling variants in forms which are attested more than once, and/or attested in Celtic, Venetic, Etruscan or (alphabetically) Latin inscriptions. The reader may refer to that table and to ch. 2.6.1.2 and 2.7.3 for the complete lists of forms, sigla and references.

The situation is most clear-cut for the characters for labials, where there is no spelling variation between pi and phi (i.e. no attested forms which are sometimes written with the one letter, sometimes with the other) within the alphabets or even within the entire Raetic corpus, and the comparison with forms in other corpora yields evidence which is, if not unambiguous, then at least not inexplicable.

Pi [p]: The only words attested with pi in both Raetic αβs are names in which the letter appears in the anlaut. A certain and comprehensive piece of evidence is provided by the name *piθamne*, which is (in various forms) attested spelled with pi in Sanzeno-context, Magrè-context, in Venetic and in Etruscan (where it must be a loan, as might be expected at the find place Spina). The large group of names in *piθ-/pit-* is problematic, as it is not quite clear that they are all derived from the same base, but a connection of at least the simple names *piθi*(*e*)/*piti*(*e*) with, e.g., *pitta* from Sanzeno and maybe the Etruscan name *piθes* (gen.), can hardly be disputed. The comparison of once-attested onomastic *perk-* with the identical Etruscan element is tenuous.

Pi [b]: Evidence for pi (again only in the anlaut) representing IE [b] comes from *piri* ~ Celtic *birakos* (attested in the Cisalpine Celtic corpus, where the labial is also spelled with pi). Any number of the *piθ-*/*pit-*names may also be connected with IE bases in *bit-*, especially *pitale* with a full parallel in **bittalos*. Inlauting pi in *lupnu* is inconclusive, as there are comparanda both with [p] and [b].

Phi [b]: Phi can be shown to denote an IE voiced stop in the anlaut in both Sanzeno and Magrè-context (*φausu* ~ *bauso*; *φutiχinu* ~ *butijakos*, and maybe the names in *φel-* ~ *bel-*). Schumacher 2004, 316 counts *φ*(*i*)*rima* (also in both Sanzeno- and Magrè-context) among the loan names with anlauting [b], arguing that the name could be a loan from a neighbouring IE language in which IE */b^h/ became */b/ vel sim. (**b̥rima*), not /f/ as in Venetic.

Phi [b̥]: The only case of phi appearing in a place where a comparandum has [p] is in the Tyrsenian lexeme *sφuras* ~ Etr. *spura*; this may be evidence for the unvoiced stops' lenited allophones as posited by Rix, here [b̥] conditioned by preceding /s/ as observed by Schumacher.

The characters for labials appear to be used quite uniformly in the various Raetic writing traditions; the evidence available supports Rix' theory of optional allophone marking. As indicated above, the assessment of the characters for dorsals/velars is more difficult due to spelling variations within the corpus.

Kappa [k]: Anlauting kappa representing [k] is amply supported by numerous names, even if some comparisons are uncertain. For the inlaut, there is the questionable equation of *perk-* with Etruscan *perk-*, as well as the complex suffix *-ku*, which is spelled with kappa in all its Raetic attestations in the Sanzeno αβ and in the Venetoid archaic inscriptions (for the Magrè αβ proper, no attestations are available).

Kappa vs. chi [g̥]: In six certain attestations, the velar element in the preterite ending *-ke* is spelled four or five times with chi (twice or thrice in Sanzeno-context, twice at Magrè), twice with kappa (only at Magrè). Three more possible attestations from the area of Verona (2.5.3.3) are also spelled with chi. Rix' theory of optional allophone marking is well suited to explain these data; still, seeing that the velar element in -*ke* is morphologically the same as that in -*ku*, it is surprising that only -*ke* is variably spelled with kappa and chi, whereas -*ku* is always written with kappa. In Sanzeno-context, there may even be a systematic distinction between -*ke* ‹χe› and -*ku* ‹ku›, despite the fact that the velar element in the two suffixes always occurs in the same phonetical context, viz. between vowels. More evidence for Rix' allophone spelling comes from a group of names derived with a *k*-suffix (2.6.1.2): *enikes* and maybe also *laseke* in Sanzeno-context, *valθikinu*, *φutiχinu* and]*θiχinu* at Magrè, with three instances of a spelling with kappa vs. two with chi – maybe two more for chi, if the two names in °*niχesi* (one from Sanzeno-, one from Magrè-context) belong here. In this group, spellings with kappa dominate in Sanzeno-context, while Magrè has almost exclusively chi. The Latin-script examples for names formed with this suffix in Untermann 1959, 136 all have ‹C›, but Schumacher 2004, 313 suggests that *tenagino* in a Roman inscription from the Val di Non (2.6.1.1) contains the same suffix. This is not unproblematic, as Untermann's suffix is always -*ik*- (‹IC(C)›, though he himself includes *laseke*; 2.6.1.2), but if the name is formed with the same suffix as the names listed above, the Latin spelling of the velar with ‹G› indicates that it was indeed articulated as a lenis in Raetic.[279]

Chi [g]: Evidence for chi for an anlauting IE voiced stop comes from *χaisurus*, if it can be connected with Celt. **gaiso*- as suggested by Schumacher 2004, 315.

Moving on to the dentals, the situation becomes more difficult – so much so that a survey of the evidence arranged by letter and value seems futile. Theta (St. Andrew's cross) consistently denotes an unvoiced stop, as evidenced by Celtic, Venetic, Etruscan and alphabetically Latin parallels, in both Magrè- and Sanzeno-context in the names *reiθe* and *piθamne*, maybe also *piθiave* (from the same base?). Otherwise, there is a high level of variation, alphabet-internally, but also to a certain extent seemingly systematically between the two alphabets.

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[279] The connection of names with a base *χar*- and *kar*-, as suggested by Marinetti 2000, 75, is tenuous; we may be concerned with two distinct onomastic bases. Rix' connection of a*χvil* with Etr. **acvil*/*aχvil* is not useful because of the apparent variation in Etruscan.

2.5.5.3 The Magrè alphabet

In Magrè-context, theta for [t] dominates. Tau in Magrè-context occurs at Magrè, at Serso, in the area of Verona, at Steinberg and in the isolated inscription WE-4 from Stufels; the other Venetoid inscriptions and subcorpora (Bostel di Rotzo, Trissino) lack tau. Two inscription groups have tau to the exclusion of theta: those of the area of Verona, and the petrographs written in the type-2 alphabet (2.8.1.9). Disregarding the problematic VR-6, tau at San Giorgio di Valpolicella has been argued to be employed to represent the dental affricate in VR-10; its function in VR-11 is unclear (2.5.3.3). It may be observed that St. Andrew's cross is not attested among the inscriptions from the Veronese area – could tau denote [t] at San Giorgio? Cf. 2.5.6 on the absence of sigma and the possibility that san writes the dental sibilant; Raetic writing around the multicultural centre Verona, specifically at San Giorgio, appears to show heavy influence from Northern Etruscan writing practice. However, if the two abbreviated sequences in VR-10 and 11 do represent *zinake*, the velar in the preterite ending is spelled with chi, which must be due to Venetic orthography.

The type-2 petrographs (ST-5 and 6, AK-1.11 and 17) constitute an even smaller set of data. The initial sequence in ST-5 contains tau – when segmented into a name formula, tau represents the anlaut of the patronym, whose base finds a comparandum in *tula*; the position of the dental in the anlaut would make a lenited allophone of /t/ unlikely, so that tau must stand for [t]. If the sequence is one name (*h*)*estulanuale*, the dental is preceded by /s/ and is likely a lenis. ST-6 *estuale*, which may be compared with with *est/θu°* at Magrè, supports the latter reading; the context in AK-1.17 is opaque, but the dental written with tau is preceded by /r/, which may have a leniting effect like /s/. A Venetic orthographic tradition is more likely at Steinberg, not only because, unlike the area of Verona, the sites are far removed from the Etruscan writing culture, but also because the type-1 petrograph alphabet shows further Venetic characteristics (2.8.1.9).

The short sequence WE-4 *-ta* has been identified with the Etruscan postposition *-ta* (2.7.3.3), but without associated inscriptions, the case is hard to judge – tau may well denote the lenited allophone. At Magrè, *pitale*, *metinu* and *φutiχinu* have parallels which show [t], but all occur between vowels and may, again, denote lenes. The onomastic base *est/θu°* appears once with tau, twice with theta; parallels are only available from uninstructive inscriptions in the Raetic corpus, but the position of the dental after /s/ makes a lenis likely. All in all, Rix' optional allophone spelling seems well applicable to the Magrè αβ, as it can account for the spelling variants especially at Magrè proper. It must be pointed out, though, that, even for an orthographic feature whose implementation depends on the phonetic sensibilities of individual writers, the spelling of allophones is practiced rather eratically, as the marking of lenes or voiced IE stops in loan names is not consistent even within individual inscriptions. MA-9 contains *þinake* spelled with kappa and the anlaut of the name *pitale*, arguably IE [b], with pi; only the dental lenis in *pitale* is marked. Conversely, MA-11 has *þinaχe* (‹θinaχe›) with chi for the lenis, but *esθuva*, which is elsewhere spelled with tau, is written with theta. MA-19, rich in letters for obstruents, uses phi for IE [b] and chi for the dorsal lenis in *φutiχinu*; tau may be assumed to also represent a lenis, but *lasθe* with a sequence *s*T – apparently a context for lenition – is written with theta.

2.5.5.4 The archaic Venetoid inscriptions

Despite their comparative length, the longer, potentially archaic Venetoid inscriptions in the Raetic corpus are only partly instructive as far as systems of obstruent spelling are concerned.

PA-1 
eθsualeuθikukaial· | *nakinaθarisakvil·*

PA-1 stands out in that it does not contain any of the “secondary” characters for obstruents. Indeed, it appears not to have these characters at its disposal – the spellings of (usually) *utiku* with X and of (usually) *aχvil* with kappa are unique in Raetic. Though the absence of any characters for labial obstruents only allows for a tentative analysis, it is possible that the writer employed only one set of letters for obstruents, (pi), theta and kappa. In this case, the inscription’s affinity to the Venetic sphere is confirmed by the use of theta as the dental equivalent of kappa (unless, of course, we are faced with Prosdocimi’s lopsided tau).

Fig. 32: Inscription HU-7 on the Situla in Providence. Rhode Island School of Design Museum, inv. no. (Mary B. Jackson Fund) 32.245. The red lines represent the secondary strokes which are meant to efface the letters, as ascertained by Schürr 2003a.

HU-7 
?*ẹḳiesiuṭikutanin metḷainile*

VR-3 
taniniutikuremieshiratasuvakhikvelisanes

HU-7 and VR-3 may be written in the same αβ, but both display an inconvenient shortage of characters for obstruents, having – apart from ⫯ – only kappa[280] and giving little clue as to what system they employ for writing obstruents, but it may be observed that both lack phi and chi. The same is true of SR-4 and 6, which otherwise have only theta. None of the other Serso inscriptions has (standard) tau, while theta features in almost every inscription and must represent [t]. The instances of phi and chi at Serso can be explained as spellings of unvoiced or lenited stops without much difficulty; tau in *θulte* does not pose a problem either (cf. *lt* in *φelturie* below), but the sound value of the anlauting dental in *terisna* is not evident. SL-1 and NO-13 are not helpful, and neither is NO-3, which apart from ⫯ only contains phi [b].

According to Rix, the model αβ is Prosdocimi's archaic Venetic αβ, not least for chronological reasons, but this is not a given. Apart maybe from HU-7 (if the inscription is as old as the object), the Raetic testimonies appear at a time when the Venetic phase-2 αβs were well under way. PA-1 has St. Andrew's cross for /t/; HU-7, VR-3, VR-1 and NO-13 are associated with the enigmatic (early?) αβ variant which features ⫯, as are SR-4 and SR-6, but the latter already have syllabic punctuation. The combination of St. Andrew's cross theta and tau as observed in most Sanzeno and (younger) Magrè inscriptions – in a Venetoid inscription, the earliest attestation of (standard) tau † in combination with St. Andrew's cross is WE-4 (4th c.)[281] – excludes both the Este and the Padova αβ, but the

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[280] Schürr 2003a, 247 reads the first letter of HU-7 as tau (*tekie*), but this is doubtful. The discernible elements are a short vertical stroke in the upper part of the line, a longer, oblique bar in the lower area on the right and a shorter one left centre (see fig. 32, made for TIR in consultation with Rex Wallace, who kindly undertook the examiniation of the document, and the drawing by Borromeo and Leveque in Schürr 2003a, fig. 2 c). According to Emily Egan of the Rhode Island School of Design Museum, the longer diagonal stroke is part of the letter, whereas the shorter one is one of the secondary strokes meant to efface the inscription. Schürr settles on a small, inverted tau whose bar fails to cross the hasta, which is too much of a stretch, even if no other letter fits the evidence better. The first letter must be considered illegible, though *tekie* would find an excellent parallel in TI·39 *tekialui* from **tek̯i̯o*/**dek̯i̯o*- (cf. Lejeune 1971, 65 [n. 224]).

[281] Tau is quite clear in -*ta*. After *eluku*, the fragment is broken at the top, but for another 2.5 cm, the remains of letters can still be seen (see fig. 33). A space of about 5 mm separates the last letter from a crack going towards the bottom right; then the tip of a line pointing bottom left. This is followed by the lower part of what can only be 𐌄 (bottom of hasta plus lowest bar, looking exactly like the other two instances in the inscription). It cannot be excluded that the above-mentioned line is part of ᛊ (despite ᛋ in this inscription), but it is most plausible to assume that the crack obscures another line, and that the letter

archaic system of dental spelling lived on in Vicenza. A Venetic alphabet tradition working with swapped dental characters could have been borrowed at any date. Notably, the most easily identifiable characteristic connecting the Magrè αβ with the Venetic ones – the inversion of upsilon and lambda and consequent adding of a third line to pi – is only present in archaic Venetic inscriptions in *Es 122, while Es 1 and *Es 120 have lambda √ (pi and upsilon are not represented; but see 2.1.2).

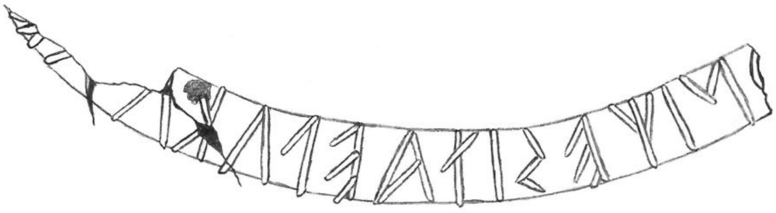

Fig. 33: Inscription WE-4 on the fragment of a ceramic vessel from Stufels. Amt für Bodendenkmäler Bozen, no inv. no.

2.5.5.5 Zeta at Magrè, Steinberg and Lothen

In a few Raetic inscriptions, there is evidence for zeta being used to represent the dental lenis, which establishes a connection to the Venetic phase-2 αβ of Este. Schumacher 2004, 312 mentions MA-23, VR-4 and ST-2, 3 and 4 as inscriptions in which zeta appears, but does not write the dental affricate. For VR-4, I have tried to argue that it does in fact do exactly that in the context of a group of inscriptions from the area of Verona which may show influence from Etruscan writing practice (2.5.3.3). MA-23 is problematic – it is not clear how homogenous the Magrè inscriptions really are, and influence from Este in this inscription cannot be excluded, but the use of the Magrè character for the affricate would be surprising in combination with Este orthography.

MA-23 ᚽᚽᚽᚼᚽᚼ | ΛƎIXᛊV
usθiþu | *zezeve*

The respective part (line 2) of MA-23 can be read as containing zeta, as per Pellegrini 1918, 188, but the script character of the line is somewhat doubtful. Epsilon seems clear in all three cases, but the bars in the first two instances are unusually prolonged. The first putative zeta has a straight hasta with two long oblique bars. The second one's hasta is oblique, making it closer in form to Este-style Ж. Supposed waw has a straight hasta again

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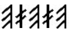
was X (the distance between line and crack is exactly the same as that between the two lines of preceding Λ). Alpha, as read by Morandi, is impossible.

and the bars do not cross the hasta more pronouncedly than in the epsilons. Para-script sequences do not occur in any of the other Magrè inscriptions; still, the sequence is suspicious for the repetition and graphical similarity of the characters (?). Para-script cannot be excluded (cf. FI-1 *kakaka*). Should *zezeve* be a word, it is opaque, but seeing as line 1 contains the special character, zeta would indeed have to be assumed to represent another sound than the affricate (*dedeve*?). More pertinent is the case of the Steinberg petrographs.

ST-1 
kastriesieθunnuale

ST-2 
pitau?esikaszrinụalet[

ST-3 
esimnesikaszrinuaḷ[?

The three inscriptions, which belong together, all contain the name *kastrie* vel sim.: ST-1 as the individual name, ST-2 and 3 as part of the patronym – ST-2 and 3 appear to name the sons of the person mentioned in ST-1 (2.8.1.9). However, the spelling of *kastrie* is inconsistent: the dental is written with tau in ST-1, but with zeta in ST-2 and 3. ST-1 has an opposition of theta (St. Andrew's cross) and tau – no parallel attestations are available, but seeing that the inscription is Venetoid, the letters may be assumed to be used as in archaic Venetic, here to write [t] and [d̥]: tau appears after *s*, a context suggested by Schumacher 2004, 315 (n. 199) to trigger allophonic lenition. In ST-2 and 3, the name is spelled with zeta, which could be reconciled with tau in ST-1 by assuming that ST-2 and 3 are written in the αβ of Este. However, ST-2, instead of St. Andrew's cross, which would again be expected for the unmarked dental, also has tau – in the individual name, which, unfortunately, cannot be securely read, so that no parallel attestations can be used for comparison, and possibly as the initial letter of a fragmentary word following the name formula. Zeta in combination with tau is not known from any Venetic system, and would only be expected in a full Etruscan system (with theta coincidentally absent) – but why ‹kaszrie›? If the base of *kastrie* is the same as in Venetic Gt 9 *kastikos* etc., it does not contain an affricate.

Zeta could be explained as the result of an unsystematic ad-hoc spelling, or simply orthographic confusion, by a non-professional writer who may have been cursorily acquainted with different systems. Zavaroni 2004, 50 reads  instead of  also in ST-1 to at least avoid the spelling variation between ST-1 and ST-2/3, but, though a potential lower bar can be made out, it is thinner and longer than the upper one and does not seem to be intentional. In ST-2, the upper bar of ǂ is much fainter than the lower one, while in ST-3, it is the lower one which is less pronounced, but both are much clearer than the dubious one in ST-1. See section 2.8.1.9 on the question of whether the inscriptions were applied at the same time/by the same writer.

ST-4 ƎΓΑΛϒ·ꟻΙΧΑЖƎΓΙǂΑ
ạzileθaθiỵ·nuale

ST-4 is spatially removed from ST-1–3 and does not share any of those inscriptions' onomastic material, but it also appears to have zeta for a stop. The individual name *azile* must be a pertinentive *azi-le*, despite the unusual use of the allomorph *-le* in an individual name, to agree with the patronym. It may be compared with names like the Celtic *ateci*, *atilius* or the Venetic *atto*, which indicate a stop, apparently lenited in Raetic. It also contains St. Andrew's cross, so that it would qualify as being written with Este orthography, but in light of the inconclusive evidence of ST-1–3, the logic behind obstruent spelling at Steinberg must be considered unclear.

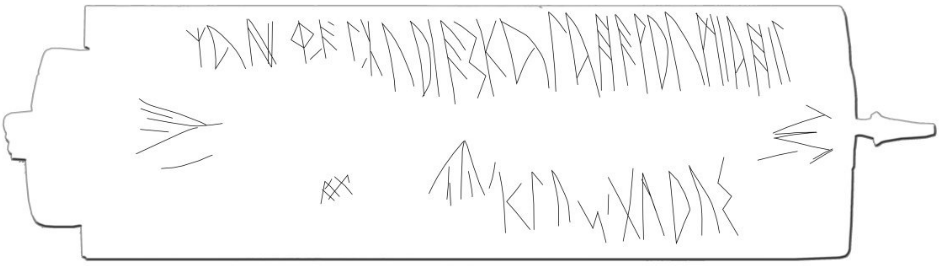


Fig. 34: Inscription PU-1 on the Lothen belt plaque. Museum Mansio Sebatum, no inv. no. Drawing by Gudrun Bajc for TIR.

PU-1 ΨΑ?ᛘᛒΓᛚΛDΙᛒᛊKΑΓΑᚻᛒPDΛMΙΑᚻΙΓ(?) | KΓΛ? ΧΛDΛᛊ
χa?φelzurieskalaheprus̀iahil(?) | *klu?θurus*

Also relevant in this context is *φelzuries* in PU-1. The inscription is epigraphically notably different from any other in the Raetic corpus. It is written in two lines on the back of a girdle plate (upside down when the plate is worn). The letters are uniformly tall and slender, bars tending to be applied close to the top, with prolonged hastae towards the bottom. They are slightly inclined to the right, but tidily scratched.[282] In line 1, Ψ is very

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[282] The inscription is in very bad condition; according to Pellegrini 1959, 194, the object had been polished since his original publication (1951b), which led to the characters being "quasi svanite" – while the

faint, but clear; 𐌀 is rather broad and comparatively well visible. The following character is not as tall as the others, being written in the upper part of the line: a short hasta, two parallel lines slanting down, another two slanting upwards again, intercrossing with the first pair. Pellegrini 1951b reads 𐌌, misinterpreting the upper one of the first pair of bars as a third bar. If anything, 𐌍 is more likely, and no other letter suggests itself, but there is no evident reason for the shortening of the hasta, and lines crossing or being repeated do not occur anywhere else in the inscription. After a comparatively wide gap 𐌓ᚨ; lambda ᛚ is all but vanished, but may be seen using the right light. The next letter can be confirmed to look as Pellegrini drew it (ᚾ), but the identification as sigma is not plausible: the central vertical is full-length and perfectly straight, the two bars – not meeting in the centre – reach neatly up to it. The letter looks too neat to be a miscarried ⌇, quite apart from the fact that sigma appears in its four-stroke variant twice in the inscription. As already observed by Schürr 2001, 214 (n. 30), an identification of the letter as an otherwise unattested variant of zeta is much more likely. An identical form is attested in a linguistically Celtic, but alphabetically isolated inscription from Ptuj (Eichner et al. 1994, 135). Pellegrini saw a punctuation mark ⁄ at the bottom of the line, parallel to the lowest bar of ⌇, which could not be certainly confirmed in autopsy; the distance between ⌇ and kappa is not bigger than average. Kappa is damaged by a vertical crack, but unambiguous, as are the following letters. From the first heta on the letters get thinner and slightly shorter – the writer obviously got into difficulties with the remaining space. This begs the question of whether more letters might be found after lambda: Pellegrini 1952, 542–544 saw the trace of another hasta, opting to read sigma; no opinions can be offered today, as the area appears to have been polished particularly thoroughly.[283]

In line 2, the lower bar of kappa is very faint. The third letter is definitely ᚢ, not 𐌀 as originally read by Pellegrini – the bar, even if it could be detected, would have the wrong orientation. The following letter is another eccentric assembly of lines (see fig. 34). Pelle-

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situation is not quite that bad, a reading is difficult without the help of the drawings made before the cleaning, provided by Pellegrini. His 1952 facsimile (Pellegrini 1952, 542 = 1959, 194) is more reliable than the original drawing by Frescura (in Pellegrini 1951b, 11), which features some curiously angular letters; the overall best representation, however, is the one by Lunz (1981a, Taf. 86).

[283] In any case, the group of scratches right below the last letters of line 1 is not a continuation of the line (pace Mayr 1960b, 495), but an independent character, probably a para-script element (Vetter 1954, 79). It has two almost identical counterparts, situated at the centre of the other short side and in the centre of the plaque, respectively. Pellegrini interprets them as the Etruscan numeral 50 ⋁I (inverted) ‘51’ (or ‘53’, due to the varying number of small scratches in the chevron: two in the central character, one in the left-side one, none in the right-side one), and compares the last group of strokes in SZ-15.2. Ribezzo 1953, 470, Mayr 1960b and Mancini (IR 99, LIR SLO-1) read them as (various) letters.

grini reads 𐌍, for the sake of obtaining a sequence *klan* to compare with Etruscan *clan* ‘son’, but as with the third character in line 1, the identification of the character is far from certain (unless one opts to assume that the writer just couldn’t master the letter nu). The rest of the line is unambiguous; 𐌔 is retrograde in opposition to sigma in line 1.

The inscription’s linguistic content is mostly opaque – Pellegrini’s complete, though tentative, interpretation of the text as an Etruscoid sepulchral inscription certainly goes too far. We have auslauting -*s* twice in the text, probably marking genitives; both sequences (*φelzuries*, *kluʔθurus*) are best interpreted as individual names. The ending of line 1 might be compared to that of PA-1 *akvil* – even if *ahil* is not the same word, the ending suggests a noun; Mancini (LIR SLO-1) identifies the trace after lambda as a punctuation mark on the basis of this parallel. Pellegrini suggests Etr. *avil* ‘year’ (to go with his numerals).

Apart from four-stroke sigma 𐌔 and double-pennon san 𐌑, the inscription features a wealth of relevant letters: pi beside phi, kappa beside chi and St. Andrew’s cross beside zeta. If tau just happens to be missing, zeta would indicate the Etruscan αβ, but with inverted upsilon and lambda and angled pi, a reading according to the Este αβ, where zeta writes /d/ and tau is absent, is more likely. This means that the name in line 1 *φelzuries* is most probably [belduries] or [bel̥duries], belonging with other names from a base (IE) *bel*- in Raetic (2.6.1.2). This reading has consequences for the reading of the characters for dentals in the Sanzeno alphabet.

2.5.5.6 The Sanzeno alphabet

Apart from the forms mentioned above, evidence for theta for /t/ in Sanzeno-context is restricted to two clear and one possible onomastic correspondences in Celtic, *kaθiave* ~ **kati̯au̯os*, *vinuθalina* ~ **u̯innotalos* and *laθur* ~ *lat*-. When considering the Sanzeno αβ on its own, the statistics would suggest that tau belongs in a row with pi and kappa: tau is the more frequently occurring character for a dental, even with repeated words like *utiku* and *tani*[*u*]*n* factored out. This might be taken to indicate that tau is the letter for the unaspirated dental stop in the Sanzeno αβ, as it is in the Etruscan αβ, while phi, theta and chi denote a different set of sounds. The phonetic contexts of pi, tau, kappa and phi, theta, chi, respectively, are not complementary, which makes a phonemic distinction between the two sets possible.

Three groups of attestations show a series of spellings which could support the hypothesis that the Sanzeno αβ employs its dental characters in the Etruscan manner (tau for the unvoiced stop, theta for the aspirate), while only the Magrè αβ uses them inverted, as in archaic Venetic (theta for the unvoiced stop, tau for a lenis). Always supposing that the forms (the onomastic bases) belong together and are phonetically equivalent, the individual names *lasta* ~ *lasθe*, *piti*(*e*) ~ *piθi*(*e*) and *tarie* ~ *θarna* (patronym) are consistently spelled with tau in Sanzeno-, with theta in Magrè-context. In all three cases, parallels in other corpora indicate an underlying unvoiced stop, though, as said above, the *piθ-*/*pit*-group is full of pitfalls. The fact remains that *piθamne* and *piθiave* are spelled with theta throughout, and there are clear cases of theta for IE [t] in Sanzeno-context. To complicate things further, there is the possible parallel from Etruscan *piθes* (gen.), which has an aspirate – evidence for a Tyrsenian filum? Tau in Sanzeno-context also corresponds to Etruscan theta in the postposition -*ti* ~ -*θi* (2.7.3.3), provided that this segmentation of BZ-4 and interpretation of the element is correct. Conversely, Etruscan tau in the postposition -*ta* corresponds to theta in Sanzeno-context -*θeis* (abl.), but to tau in Magrè-context -*ta* (2.7.3.3).[284]

In the end, there is nothing to suggest that phi, theta and chi write aspirates, as they would be expected to do in a system imported directly from the Etruscans. As said above, phi, attested only in the anlaut, can be shown to write IE /b/, just as it does in the Magrè alphabet; the preterite ending is spelled with chi in SZ-1.1 *þinaχe*, maybe also RN-1 *maieχe*, though the suffix -*ku* is at all times spelled with kappa. A reading of PU-1 *φelzuries* according to the Este αβ means a sound value [d] or [d̥] for both Sanzeno-tau ↾ and ꜝ via the parallel attestations SZ-14 *φelituriesi* and NO-3 *φelturiesi*.[285] Both theta and tau correspond to unvoiced stops in Celtic, Venetic and alphabetically Latin attestations and reconstructed forms, but alternate spellings only occur in two debatable cases: SZ-15.1 *θianu* might be connected with the putative theonym *tianu*, but the form appears in the casus rectus beside individual names and can hardly be anything else than a patronym. *pitie*, again, might be kept separate from the base of *piθiave* and *piθamne*.

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[284] The cases of tau in Sanzeno-context ~ tau in Etruscan are problematic. Rix' connection of Raet. *utiku* with Etr. *utince* is very tentative; the reading of BZ-11 *tite* is uncertain and cannot be verified as long as the object remains lost. The graphical simplicity of the proposed characters together with the location on the rim of a cist make the inscription suspicious of being a mark like BZ-8 and NO-8 (2.8.1.1). Also, Etr. *tite* is generally not considered to be inherited Tyrsenian onomastic material, but to be a loan from Italic (Lat. *titus*; but see 2.6.1.2); the name would have to be assumed to have found its way into Raetic secondarily as well.

[285] In my opinion, an affricate value of ꜝ can be excluded. The letter is equivalent to ↾, which appears together with the Sanzeno character for the affricate ↑ in six inscriptions (SZ-1.1, SZ-4.1, NO-15, SL-2.1; also with St. Andrew's cross SZ-30 und BZ-10.1).

All in all, the Sanzeno alphabet does appear to depend, at least to some extent, on the Venetic writing tradition, optionally spelling voiced stops in IE loan words and inlauting lenited allophones of unvoiced stops with phi, tau and chi, just like the Magrè alphabet. Whether a second phonemic row of obstruents is concealed behind the orthographic variety in either alphabet remains an open question. What also remains to be explained is ⫯ and ᛚ occuring frequently in the anlaut, where we would not expect lenes – not in potential loan names with imported voiced stops like *bausu* and *χaisurus*, but in repeatedly occurring words which could well be Tyrsenian names and lexemes (*terisna*, *taniun*, *tianu*).

Otherwise, I cannot make any sense of the material in respect to the use of the characters for obstruents. The fact that, as pointed out by Schumacher, loan names make up a considerable part of the documentation (2.6.1.2) probably contributes to the difficulties. Many – indeed most – of the parallel attestations from Celtic, Venetic and Etruscan are not indubitably relevant; the same goes for etymologies of names. It must also be remembered that the documentation spans half a millennium – we must reckon with diachronic as well as dialectal variation, which may again be obscured by standardised/historical spellings in formulaic texts. All these factors, together with the uncertainties concerning many Raetic readings and datings and the ongoing analysis of the potential model αβs, add up to a number of variables which may be too high to allow reliable conclusions at this point.

I should like to say that I also consider the possibility of an influence of the Lugano or Old Golaseccan αβ on the formation of the Sanzeno αβ quite viable. There is currently no consensus concerning the system(s) of obstruent spelling in various phases of Cisalpine Celtic writing, but among the many (apparent) variants in spelling, it may be possible to find models for Raetic, specifically Sanzeno, orthography. The underlying language being Indo-European and/or influence from Venetic writing on Cisalpine Celtic traditions might account for certain seemingly Venetoid features (e.g. absence of zeta), while the more traditional letter shapes could explain the Etruscoid look of the Sanzeno αβ.

2.5.6 Sigma and san

Concerning the characters for sibilants in Raetic, the frequency of sigma indicates that it spells the dental sibilant /s/ as it does in Central/Southern Etruscan. Sigma – usually with three bars 𐌔, with four ⌇ only in PU-1 and some petrographs (2.8.1.9) – occurs about one-hundred and ten times in language-encoding inscriptions. About forty instances are /s/ in genitive and pertinentive endings, corresponding to Etruscan /s/. San – standard 𐌑, once ᛗ (PU-1) – occurs about twenty times: sporadically in the Val di Non, at Bozen, Serso and Magrè, as well as in PU-1, IT-5 and CE-1, repeatedly in the opaque TV-1.1, and at San Giorgio di Valpolicella. At San Giorgio, san occurs in three of six language-encoding inscriptions, while sigma is absent. If VR-14 *lav*[*i*]*śa* can be compared with *lavise*, this might indicate that san writes /s/ at San Giorgio ([lau̯(i)sa]), following Northern Etruscan practice (see sections 2.5.3.3 on possible zeta for /z/ and 2.5.5.3 on the absence of theta), unless the sibilant is palatalised after (syncopated?) /i/. VR-10 *ieśula* and VR-11]*śt·luχ* are both unclear. See section 2.7.1.2 for phonetic considerations.

That Central/Southern Etruscan practice (sigma for /s/) appears to govern the letter's use is hard to explain, though not actually surprising – the situation is the same in both the archaic Venetic and the Cisalpine Celtic αβs, also assumed to derive from Northern Etruscan varieties, which have san for /s/. In the Celtic corpus, sigma writes the inherited (dental) sibilant /s/, occurring three times as often as san. In the absence of an inherited second sibilant, san is used to write dental-sibilant (and maybe also other sibilant) clusters, and in later phases also /d/ (Stifter 2010, 367–374 with a list of attestations). In Venetic writing, san is still less frequent, but it does occur in the archaic inscription *Es 120 (*śikos* – probably an onomastic element, see Prosdocimi 1988, 283). Prosdocimi 1988, 330 f. suggests that the inherited Venetic /s/ was phonetically closer to Etruscan /ś/ and was therefore written with sigma, while san was sporadically used to represent dental clusters with fricative features. Should the Venetic distribution of the characters for sibilants be indeed based on the phonetic characteristics of Venetic, their inversion in Raetic (and indeed in Cisalpine Celtic) may – just like that of tau and theta – depend on the Venetic use.

Prosdocimi also considers the possibilities that Central/Southern Etruscan writing practice generally had an influence on the formation of Transpadanian αβs including archaic Venetic, or that the Northern Etruscan variety concerned was not too consistent in its use of the two characters. Either of these options, though not favoured by Prosdocimi, would allow for the independent allocation of the two characters in the Central/Southern Etruscan manner also in Raetic and Cisalpine Celtic. For the second one cf. ET p. 12 f. on sigma for /s/ in Northern Etruscan writing: these cases can be due to influence from Southern Etruscan or Latin writing practice or to imported spellings in loanwords, but it must be remembered that the dialectal differences involving palatalisation processes in

Northern and Central/Southern Etruscan are not yet so well understood that individual cases can be judged with certainty. In any case, Central/Southern Etruscan orthography was the dominant variety, so that an influence on the formation of the North Italic αβs is not out of the question.

It may also be considered that the use of san in Raetic is not uniform. The frequency of san before /n/ and in the vicinity of high vowels indicates that it was used to denote the equivalent of the Etruscan palatal sibilant, but seeing that the neighbouring traditions for IE languages employed the letter for various dental/sibilant clusters, it cannot be excluded that it was also put to such a use in Raetic. Two cases might indicate that san could denote geminated sibilants in loans from IE: the name SZ-15.1 *kapaśu*°, possibly with a suffix which usually appears as -*ass*- in Roman inscriptions; comparanda with ‹SS› can be found for the name BZ-3 *laśa*(*nu*) (2.6.1.2). See 2.5.3.1 on the unlikely possibility that san is used to spell the dental affricate at Magrè.

2.5.7 Writing direction

About three quarters of those Raetic inscriptions whose writing direction can be determined are sinistroverse, the rest is dextroverse. Dextroverse inscriptions occur more frequently among the type-2 petrographs (2.8.1.9), as well as at Magrè. Real boustrophedon writing, i.e. the lines of one inscription being written alternately running towards the right and the left, is not attested, but a handful of inscriptions are written in reverse or false boustrophedon, which means that all lines have the same orientation, but are inverted in relation to each other (e.g. WE-3). For a few inscriptions it can be argued that the writer changed the way he held the object during the application of the characters, which lead to a change in writing direction (FI-1, MA-13, MA-17).

MA-13 
es·sθuaθel·pa?inua

MA-17 
klevieval·θikinuasua

MA-13 and MA-17 look as if the writer turned the piece of antler at some point, conceivably so that he could support his hand on the object. In MA-17, a turn somewhere between the tenth and the thirteenth letter is indicated by inverted nu and upsilon – alpha is not decisive, as specifically the letters alpha and epsilon tend to be inverted at Magrè, thus in

MA-1, 6, 8–11, and arguably in MA-13. The first five letters of MA-13 are a little offset toward the edge – the writer started writing in dextroverse direction, then turned the object probably after upsilon. Both other Magrè inscriptions which contain the word *esθu*° are dextroverse, MA-11 also with inverted epsilon. Inverted upsilon V at Magrè (also MA-6) might be considered a Sanzeno feature, but is more likely due to the changes in writing direction and the general inadvertence concerning letter orientation. At least in some Raetic writing traditions, the choice of writing direction seems not to have been of prime importance. On the other hand, single retrograde letters are rare. Alpha and sigma are systematically turned against writing direction in the Sanzeno αβ and in the majority of cases also in the Magrè αβ, so that the retrograde forms should in fact be considered the norm. However, sigma notably tends to change its orientation when occurring more than once in the same inscription (e.g. WE-3, IT-5, PU-1).

Fig. 35: Inscription WE-3, written in reverse boustrophedon, on an antler piece from Stufels. Amt für Bodendenkmäler Bozen, inv. no. St. 6992.

In the isolated inscription FI-1, a determination of the writing direction is particularly difficult.

FI-1 X∀ᗡ∀ꓘI[? I ≀AΦAꓘA I XAᐅAꓘI[I KAKᖇKA[? I ≀ ∀[
θ̣]*arani*[? I *saφạṇa* I *θarani*[I *kakaka*[(?) I *ṣ* *a*[

Five irregular lines are inscribed along the blackened and fragmented handle, starting at the outer end. The lines are complete in the beginning; the original length of object and lines is hard to determine. The handle is broken into numerous fragments and restored; while the restoration of the piece has been well executed and does not distort the characters, the reading is impeded by the breaks. The three well legible ones of the five lines do definitely start at the preserved end, but it is not clear which way the characters ought to be looked at. Option 1 (end of handle to the right, sinistroverse) means inverted alpha in three lines; option 2 (end of handle to the left, dextroverse) means inverted nu. Rho is once written retrograde in either case. The lines being repeatedly scratched, the position of the writer can be inferred from their shape in only about seven contradictory cases. Considering this together with the inconsistencies in letter orientation, the wryness of lines and size of the object, it is likely that the writer repeatedly turned the object in his hand while applying the inscription, maybe even held it vertically (cf. Mancini [LIR TES-1], who, however, settles on a consistent writing direction for each separate line). A determination of writing direction may here be meaningless. The above representation (option 2) and counting of lines is arbitrary, following the literature (cf. Sebesta 1981, 198: "Tale bordo si fissa convenzionalmente essere quello di sinistra" without giving reasons).

2.5.8. Word separation and syllabic punctuation

2.5.8.1 Word separation

Word separation by punctuation marks is only employed in a handful of inscriptions from Sanzeno-context (SZ-30, NO-3, NO-10, BZ-3, BZ-26, SL-2.1), using one to (most often) three vertically arranged dots.

BZ-3 
taniun : laśanuale | *utiku : terunies : sχaistala*

PU-1 would be the only Magrè-αβ inscription with separators, but the existence of the respective scratches is highly doubtful (2.5.5.5). A space is used to separate words on some of the Sanzeno bronzes (SZ-1.1, SZ-2.1, SZ-2.2, SZ-4.1, SZ-11), as well as in other inscriptions from Sanzeno-context (BZ-10.1, BZ-12, CE-1.3, CE-1.5) and once at Magrè (MA-1).

2.5.8.2 Syllabic punctuation

Apart from the small space in MA-1, word separation does not exist in inscriptions from Magrè-context, but syllabic punctuation (absent in Sanzeno-context) is employed in some subcorpora. The practice of syllable punctuation is a speciality of Venetic writing, where the rules are highly complex and the letters are usually marked on both sides (2.1.2). In Raetic inscriptions (as indeed in some marginal Venetic traditions), the rules appear to have been somewhat relaxed, or were not fully understood. In Raetic inscriptions, isolated vowels at the beginning of inscriptions are not punctuated, and neither are the second elements of diphthongs – the second vowel is either considered part of the preceding CV-syllable, or a syllable in its own right, which is more likely in regard to the treatment of anlauting vowels. Certain consonant clusters also appear to be exempt from punctuation. In the same vein, the letters are only marked with a single punct placed behind (or inside) it rather than with one on either side. See 2.5.9 on inscribed puncts.

At Magrè, all of the five (or six) inscriptions (of twenty-two) with syllabic punctuation can be argued to be correctly executed, in that they consistently follow the basic rules outlined above.

MA-6	*pi - θi - e - me - ti - nu* ǀ *θri - a - hi - s·*
MA-12	*e - stu - a - le - a - φi - ṛ·[*
MA-13	*e - s· - sθu - a - θe - l· - pa - ?i - nu - a*
MA-14	*e - si - u - m· - ni - nu - śu - r·*
MA-16	*va - l· - θe - r· - nu*
MA-17	*kle - vi - e - va - l· - θi - ki - nu - a - su - a*

MA-14 and MA-17 are exemplary (according to the Raetic rules). The existence of the punct at the end of MA-6 is not entirely certain, but it would be correctly placed. MA-12 and MA-13 are correct if clusters with *s* as first element (here *st*/*sθ*) are assumed to be exempt from punctuation, which is not in line with the Venetic rules, but phonetically plausible. (Why the writer of MA-13 felt compelled to repeat sigma remains open to conjecture – maybe he was unsure about whether to punctuate *s* in the cluster?) MA-16 is more difficult. With deeply incised letters on a well preserved object, the inscription is in excellent condition and very well legible. The only point of contention is the sixth letter, which consists of two slightly curved verticals forming an ellipsoid with a short vertical scratch in the centre ⏀. It is read as theta by Pellegrini 1918, 181 (no. 6). 196 f., whereas Whatmough (PID 236), followed by Schumacher 2004, 164 and Mancini (LIR MA-16), prefers phi. The latter option is more likely, as theta in the shape ⏀ is unknown in Raetic, while phi in this shape is not unusual; however, it does not occur elsewhere in the Magrè inscriptions (⫯ in MA-12 and MA-19). With regard to correctly punctuated lambda, a third possibility is to read punctuated rho ᚦ as in MA-12 and MA-14. No other lines in MA-16 are unduly curved, but any consonant in this position should be expected to be punctuated like lambda; if rho, the anomalous shape may be the result of a corrected scribal error.[286]

Seven of the twelve inscriptions on antlers from Serso have syllabic puncts. SR-4, SR-6, SR-7 and SR-10 have correct punctuation according to the putative Raetic rules:

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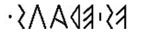
[286] Whatmough interprets the letter in question to be a misspelling for chi (*valθeχnu*), in regard to MA-17 *valθikinu*. The onomastic base must be the same, but neither *valθeφ°* nor *valθer°* have any comparanda suffix-wise.

SR-4 *θu - l· - te* [...] *te - ri - s· - n*[
SR-6 *a - ru - se - θa - r· - na - te - ri - s· - na*
SR-10]*ịa - l·*

SR-1 is difficult to judge due to some verticals of varying length, which may be interpreted as puncts or short iotas:

SR-1  [|] 
?]*nsu·mnaviθahuṛ·* |]*ịṣkesaχviliṣke*

In line 1, the short scratch between upsilon and mu is long for a punctuation mark, but, being squeezed in between the two letters, not reaching the bottom of the line, it must mark mu, though it precedes that letter. Iota in *viθahur* is full-length. No remains of a mark can be seen before nu, which ought to be punctuated as well, but the last letter rho features a very faint inscribed punctuation mark in the shape of a small circle, whose existence is supported by the similar fragmentary SR-7 [with a clear dot. In line 2, both kappas and chi and the second sigma should be punctuated, but are not, so that the interpretation of any of the verticals in the line, which get continuously smaller, as a punctuation mark is unlikely. Cf. also SZ-98][with full-length iotas. If the first vertical in line 1 is not a punctuation mark after all, we may be concerned with a very reduced form of punctuation which only marks auslauting (or even sequence-final) consonants (cf. PA-1 below). Cf. SR-8, which features a clear dot after final sigma, while the short line after the first sigma, where a punct would be misplaced under any set of rules, is probably iota.

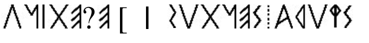
SR-8 
vsieraus·

The only isolated find with (correct) syllabic punctuation in the manner of the Magrè and Serso inscriptions is the only punctuated inscription on the Situla Giovanelli, although its letter shapes associate it with the Sanzeno αβ.

CE-1.3 *lu - p· - nu pi - θi - a - ve*

2.5.8.3 Other punctuation practices

In SR-2, the punct has an unusual shape and appears to mark a morpheme rather than an element determined by the phonetics-based rules of syllabic punctuation. Despite some cracks and abrasions on the edge above the letters, the reading of line 1 is clear apart from the alleged punctuation mark.

SR-2 
sφurạ·senθus ǀ *]ẹ?eθinụ*

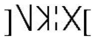
Pellegrini & Sebesta 1965, 9 f. (no. 2) saw only a space between *sφura* and *senθus*; Mancini (IR 84) drew a short vertical scratch in the area, but did not alter the reading. Schumacher 2004, 156 emends to *sφura·senθus*, declaring that a dot was clearly visible, and reads a genitive phrase *sφura·s enθus*. Indeed, a vertical row of very faint short scratches can be made out; one of these in the upper area is slightly more pronounced than the others. However, if syllabic punctuation was employed, the punctuated *s* would be considered part of a CV-syllable with following *e*. If we grant that the writer may have treated the last letter of *sφuras* as an auslaut despite scriptio continua, theta, final sigma and phi (unless *sφ* is exempt) ought to be punctuated. Punctuation only of word-final consonants, as suggested above, is contradicted by the lack of a discernible punct before or after final sigma. The punct must be taken to mark the genitive ending -*s*.

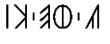
Suffix punctuation is also found in type-2 petrographs (2.8.1.9). In ST-5, ST-6 and AK-1.11, the suffixes of the syntagma -*nu*-*ale* are marked by puncts.

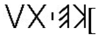
ST-4	*ạzileθaθiṿ·nuale*
ST-5	*hes·ṭulanu·aleker·akve*
ST-6	*sạ?aḷ·esta·nu·aleφakaḷẹ*
ST-8	*arisae·ki*
AK-1.11	*]ẹ?ḳer·(a)ṇu·aḷekas?*

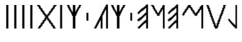
The rules which underlie the punctuation in these inscriptions is not clear to me, but the puncts after nu can hardly mark the following *a*, as syllabic punctuation is not performed with any semblance of regularity anywhere else in the inscriptions. We appear to be concerned with some sort of morpheme marking; the puncts around the sequence which represents the patronymic suffix -*nu* may also draw attention to the ligature (2.5.9). In ST-5, it is not clear whether the scratch after the first sigma is a punct or iota (2.8.1.9); rho ought not to be punctuated. The same goes for the first lambda in ST-6, whereas the non-punctuation of *st* is in contradiction to ST-5 (if that is a punct); the punct between *ta* and *nu* is superfluous. The first punct in ST-6 might even be a word separator, if *estanuale* is connected with *estu*° at Magrè (2.6.1.2). The same goes for the last punct in ST-5 – cf. *ker*, also followed by a punct, in AK-1.11, as well as MA-10. The reading of AK-1.11 is too uncertain to draw any conclusions. The punct in ST-4 could be syllabic, but its position before the suffix -*nu* points to the abovementioned type-2 inscriptions. The single punct in the opaque ST-8 does not work as a syllabic punct, at least not according to the rules applied at Magrè, and is more reminiscent of the Ganglegg puncts, especially VN-14.1.

The punctuation practices employed on the Ganglegg are equally incomprehensible to me. A number of inscriptions, some of dubious linguistic relevance, feature single medial puncts or short lines which isolate two-character sequences at the end of inscriptions. In the language-encoding VN-11, the puncts appear to separate the inscriptions from para-script elements.

VN-7.1 
]θ·ku[

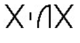
VN-14.1 
]a·φe·ki

VN-17 
]ḳe·θu

VR-11 
lumene·χa·χiθiiii

Something not entirely dissimilar is found in two inscriptions from Trissino, though they are hardly language-encoding.

TR-2 
uθeθ·e

TR-4 
θu·θ

In the area of Verona, we find a number of inscriptions where puncts in the shape of short verticals, often in the upper or lower area of the line rather than in the middle, appear not so much to mark consonant clusters, but to effectively replace vowels (VR-2, VR-4, VR-10, VR-11, VR-14). For the inscriptions in question and a discussion see section 2.5.3.3 – whether this phenomenon is linguistical or graphical is unclear. Apparently unconnected with this group, VR-17 seems to display syllabic punctuation according to Venetic rules (with marked *i* in a diphthong), which together with its four-barred mu indicates Venetic writing.

VR-17 *]ma - i· - ma*
PA-1 *e· - θ· - sua - leu - θi - ku - ka - ia - l·* | *na - ki - na - θa - ri - sa - kvi - l·*

PA-1 may only have punctuation of final consonants, or even end-of-line markers, but syllabic punctuation, as analysed above, is also possible. The beginning of line 1 looks messy: initial epsilon is upside-down, St. Andrew's cross is very close to it, touching its bars. Two slighter, but well visible short strokes or scratches are situated between the two letters and inscribed into X, respectively, judged to be slips of the writer's tool by Ghirardini 1901, 320 (n. 2). Furthermore, letters 2 and 3 appear to be permuted (cf. *estuale* etc. at Magrè). It seems clear that the writer had some difficulties here, though what they were is not evident. Inverted epsilon could be explained by assuming that this line was the continuation of the other, and that it only belatedly occurred to the writer to turn the object around, but the order of the lines is determined by the layout, line 1 starting right at the shoulder, line 2 starting opposite the end of line 1 and not filling the entire space available. Kretschmer 1943, 174–176, reading one of the two dubious short scratches at the beginning of line 1 as an inscribed punctuation mark (into X), suggests that all the punctuation marks in the inscription represented syllabic puncts. If one includes the other scratch between ⱻ and X, all four do indeed occur in positions where punctuation would be correct according to a set of rules halfway between the proper Venetic and the reduced Raetic ones, or according to the Raetic rules, if initial epsilon is not considered to be punctuated. The puncts are all inscribed save in the case of ⱻ, where this is not possible.

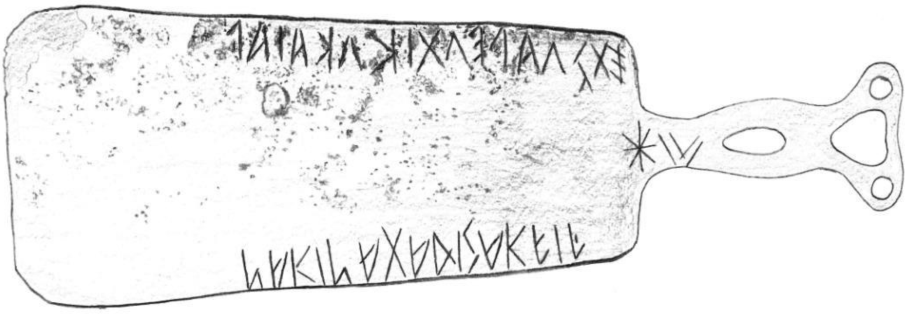


Fig. 36: The Paletta di Padova with inscription PA-1. Musei Civici di Padova – Museo Archeologico, inv. no. XIX-90.

A special case is TV-1.1 on an opisthograph from Castelcies off the Piave valley.

TV-1.1]IAϺ·AXADE |]ADϺ^AXAϺ· |]?? ES·MADAM·? ·|] ᚨS·SAΓΛ≷DAM·Ϻ?(?) |]? ADϺ^A[
]*iaṇ·aθare* |]*armataṇ·* |]??*eṣ·śaruṣ́·?·* |]*ḷ·s·salusruṣ́·n*?(?) |]?*ạṛmạ*[

The lack of word forms which can be securely identified or compared to forms documented elsewhere in Raetic testimonies makes the ascription of the text to the Raetic corpus doubtful. Single letters appear between punctuation marks, which reminiscent of the

Roman practice of abbreviating names. However, the inscription appears to have nothing to do with the Latin text on the reverse side (2.8.3). The identification of Latin-style abbreviations can be avoided, at a stretch, by interpreting the puncts as syllabic punctuation rather than separators:

TV-1.1]*ia* - *n*· - *a* - *θa* - *re* |]*a* - *rma* - *ta* - *n*· |]??*e* - *s*· - *śa* - *ru* - *ś*· - ?· |
]*ḷ*· - *s*· - *sa* - *lu* - *sru* - *śn*?

In addition to unpunctuated isolated vowels, one would also have to accept *rm* as an irregular tautosyllabic cluster. With the reading as difficult and the text as obscure as it is, judgement had best be suspended.

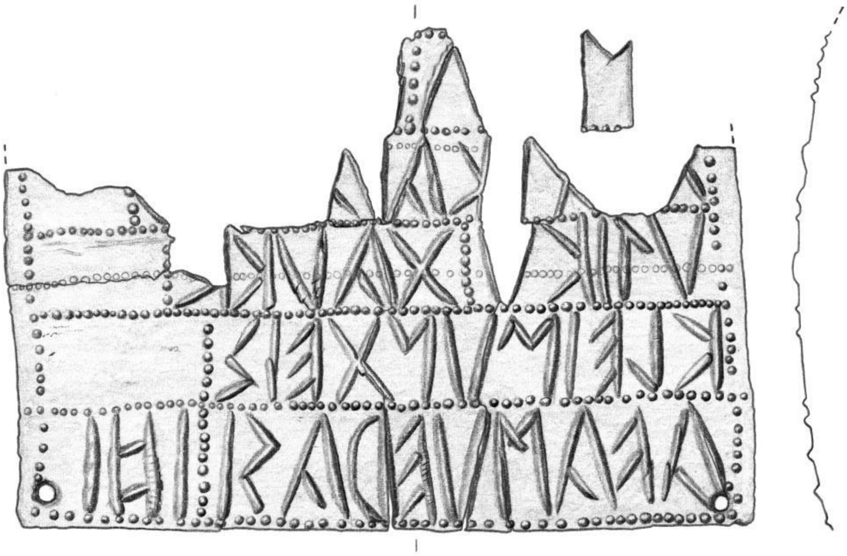
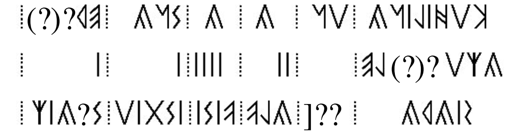


Fig. 37: Bronze plaque from the Demlfeld with inscription IT-5. Abteilung Ur- und Frühgeschichte Universität Innsbruck, no inv. no. Drawing by Gudrun Bajc for TIR.[287]

In two inscriptions, the text is written into a grid. Unlike the tidy votive inscription IT-5, which has neatly drawn lines made up of dots and vertical connections which function as word separators, so that each word has a compartment of its own, RN-3 on a wooden stave is utterly mysterious.

RN-2



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[287] The reconstruction of the plaque as shown in this drawing differs from Marchesini's (2013) in the placement of some minor fragments. The fragment depicted on its own could fit in right above the left-hand lacuna in line 3; otherwise, it must be part of line 1.

The text is inscribed along one end of a wooden stave (considered the lower one on the stave used as a staff by Whatmough [PID 189 bis], the upper one by Battisti 1934, 193) in what appear to be three irregular lines about 22 cm in length. It is segmented by six vertical rows of short horizontal scratches running around the stave, the leftmost one marking its end. The scratches are not easy to be seen, as they tend to disappear in the grain of the wood. Whatmough mentions the possibility that these scratches do not primarily serve as separators, but represent "traces of former metal attachments" (10). The characters would then have been arranged between those metal parts. The sectors are between 2.6 and 5.6 cm long; not all of them are completely filled with characters – some of them appear to contain words, others contain only single characters or rows of vertical lines. It is unlikely that the incompletely inscribed sectors contained more characters, as Whatmough supposes, seeing that the remaining scratches are still rather deep. It cannot be established how the sectors relate to each other, or indeed where the inscription starts; a transliteration starting with *kuhilina* as the longest word is customary since Whatmough. I am inclined to think that the text should be read by sector, not by line, which could yield a name *siara kuhilina* in sector 1, but the content and purpose of the inscription remain entirely unclear. Irrespective of whether the stave was some sort of staff used in ritual (e.g. Pardeller 1960), the fact that we are not confronted with a homogeneous sequence of letters, but rather a tabular arrangement of characters, some of which cannot reflect spoken language, suggests that we have to expect an encoding of information on a metalinguistic level – a counting or measuring device?

2.5.8.4 Delimitation signs

A number of (arguably) language-encoding inscriptions feature in final position a character or mark which, though sometimes in the shape of a letter, can be demonstrated (or argued) to be a delimiter, i.e. a sign marking the end of a text (cf. Schumacher 2004, 319).

NO-6 ¦IᐊIᐊVᛗΛᛘ
]*χamuriri:*[288]

SZ-40]¦V⅃Λ
]*alu:*[

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[288] The first letter, damaged by the break, is most probably neither X nor ↾, as read by Conway (PID 213) and Schumacher 2004, respectively, but ᛘ: the breaking edge follows the hasta, then the right bar. The tiny line extending leftward from the hasta is unintentional.

NO-6 and SZ-40 appear to be delimited by a mark ¦ (with oblique strokes in NO-6), though it is not certain that the fragmentary NO-6 does not go on after the mark (cf. also VN-7.1). In NO-6, a faint scratch between the two oblique lines led Mancini (LIR ME-4) to read 𐌔 – the scratch can be verified, but seeing that the other lines are uniformly pronounced and clearly visible, it is unlikely to be relevant (though *s* would make sense as a genitive ending).

NO-7 𐌗𐌖𐌔𐌖𐌀𐌘
φausu.

CE-1.5 𐌗𐌀𐌍𐌉𐌋𐌀𐌗𐌖𐌍𐌉𐌅 𐌀𐌍𐌋𐌄𐌘
φelna vinuθalina.

A mark 𐌗 appears in final position in NO-7 and CE-1.5. In both cases, final *θ* would be most unexpected, as the texts are otherwise easily interpretatable as names, so that the crosses are best regarded as delimiters (Schumacher 1998a, 94. 101; 2004, 337). In BZ-10.1, a character 𐌑 appears after the last word. It has traditionally been read as san, but san never has this shape elsewhere among the Raetic inscriptions; more likely, this is a sign marking the end of the line or inscription (Schumacher 2004, 341 f.).

2.5.9 Ligatures

Ligatures are rare in Raetic, but considering that none (to our knowledge) are known from Venetic and Lepontic inscriptions, they may be considered a special feature of Raetic. We know both actual ligatures of letters, and punctuation marks which are inscribed into the letters they mark.

Inscribed punctuation marks are exclusively syllabic puncts (as opposed to word separators). The practice is known from the Venetic north, where puncts are sometimes inscribed into rho and omikron (e.g. Ca 10, Ca 28, Ca 67, Ag 1, Gt 14). In Raetic, they occur in the inscriptions of Magrè (MA-12, MA-13, MA-14, MA-16, MA-17) and Serso (SR-1, SR-6, SR-7, SR-10) as well as in PA-1 and possibly TV-1.1. The letters into which puncts are inscribed are mu 𐌌, lambda 𐌋 and rho 𐌓; the punct can be either a dot · or a short stroke ˈ. In the cases of 𐌌̣ and 𐌋̣, the punct is essentially just placed under the bar(s) of the letter, which need not necessarily be considered an inscribed punct, but may in some cases simply be due to the desire to space or to chance. Since 𐌓̣ is attested at both Magrè and Serso, 𐌌̣ and 𐌋̣ may be considered to be ligated there as well. As concerns the two isolated inscriptions, they both have only 𐌋 – while in PA-1, the punct seems quite deliberately placed inside the angle formed by hasta and bar (and see the preceding section on more possible quasi-inscribed puncts in PA-1), its position in TV-1.1 is probably accidental (ᛉ is twice followed by a punct in the inscription rather than having it inscribed).

Ligatures of letters only occur in the petrographs of Steinberg and maybe in those of Achenkirch, and once in the Val di Non. ST-5 and ST-6 both have an element ᑎ𐌍 = inverted and retrograde nu 𐌍 + upsilon ᑎ writing *nu*, more precisely the patronymic suffix -*nu*. In AK-1.11, the reading is doubtful. The sequence in the middle of the inscription is strongly reminiscent of ST-5 and 6. No angle in the lower area before upsilon can be made out with any certainty; instead, the small lacuna contains a round indentation, which is most probably natural (the other separators in the inscription appearing as ˈ). It cannot be excluded that the tall chevron identified as 𐌀 does not feature a bar and represents the angle of 𐌍 in the ligature.

AK-1.11]𐌄?𐌊𐌄𐌓ˈ𐌀 ᑎˈ𐌀𐌋𐌄𐌊𐌀𐌔?
]*ẹ*?*ḳer*·(*a*)*ṇu*·*aḷekas*?

AK-1.17 𐌄𐌔∿𐌄𐌔𐌙𐌀𐌓𐌕𐌀
es?*esχarṭa*

In AK-1.17, after 𐌔, there is a distinctly visible zig-zag line ∿ in the lower area (see fig. 38), which can best be explained as part of a ligature of mu (or sigma?) with either 𐌔 or (less likely) the following 𐌄 – the first option is suggested by the fact that the end of the zig-zag line meets the lower end of sigma; also the zig-zag-line is closer to 𐌔, in fact starting under it. In the second case, its end would touch the hasta at the height of the lowest bar.

Fig. 38: Inscription AK-1.17 (turned 90° clockwise). Drawing by Gudrun Bajc for TIR.

The only ligature so far attested elsewhere than on rock is found in NO-3: ᛚ = retro-grade lambda 𐌋 + tau ᛁ writing *lt* (or, unlikely, *lit*; 2.6.1.2). The hasta in question features both a bar ⁄ on the right and a dot on top. The dot is executed the same way as the other dots in the inscription (in the separators and ᛁ), viz. as a small patch with the upper layer of material carefully scraped off. As in the case of the *nu*-ligature, the bar of the first letter is attached pointing against writing direction. While, in the former case, this is enforced by the shape of the second letter, lambda in NO-3 being retrograde may be taken to specifically indicate the order in which the elements of the ligature are to be read, i.e. *lt* in the repeatedly attested name *φelturie*. It is not evident why only lambda and ¡ are ligated, and not also, for example, lambda and waw a little further on in the same way, as other consecutive pairs of letters would lend themselves to being combined in the same manner, viz. the bars of the first letter being attached against writing direction to the hasta of the second one. The same is true of the petrographs which contain ligatures.[289]

2.6. Onomastics

2.6.1. Personal names

2.6.1.1. The Raetic name system

A full personal name in Raetic, much as in prehistoric Etruscan, consists of two elements: an individual name and a patronym. The latter is derived from the individual name of the father (or the "titular head of the family" [Wallace 2008, 79]) by suffixation of *-nu* or *-na*. We have reason to believe that the Raetic patronymic system was productive at least at the earliest time of its documentation. In a system based on inherited family names (nomina [gentilicia]), the number of individual names (praenomina) is usually restricted; the majority of nomina are based on praenomina which are no longer used (Untermann 1961b I, 39; Rix 1998, 18 f.) – so in Neo-Etruscan, where the number of commonly used masculine praenomina is limited to seven, with about five more rarely used ones (Rix 1995a, 720; Wallace 2008, 82). In contrast, in a patronymic system, the individual names and the patronyms which are derived from them are attested side by side (Untermann 1995, 733). We know (overall) more than twice as many individual names as patronyms in Raetic. Up to seven names are attested both as individual names and as bases of patronyms in the Raetic corpus. There is no chronological pattern to these data, i.e. the individual names do not belong to an older phase than the patronyms.[290] Most important is the testimony of the rock

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[289] Marchesini reads ligatures with inverted alpha in VR-2 (MLR 45) and VR-6 (MLR 291) and a ligature of pi and sigma in VR-13 (MLR 123). However, these are ad-hoc readings of epigraphically difficult inscriptions without linguistical rationale.

[290] The last two pairs in the list are debatable; see 2.6.1.2 on *esθu*(*a*) etc. Maybe also *esimne* ~ *esminu* and/or *esumne* ~ *esiumninu*, see 2.6.1.2. See also 2.6.1.4 on *lavisie* ~ *lavisealu*.

inscription group ST-1–3 with the names of three related men: ST-1 *kastrie eθunnu*, ST-2 *pitau?e kaszrinu* and ST-3 *esimne kaszrinu*. The persons named in ST-2 and 3 may be assumed to derive their surname directly from the individual name of the person named in ST-1, while the latter bears a different surname: he is ‘Kastrie of Eθun°’, while the other two are ‘Pitau?e’ and ‘Esimne of Kaszrie’ – presumably Kastrie’s sons (see further 2.8.1.9). Unfortunately, the three inscriptions, being petrographs, cannot at this point be dated.

ST-1	*kastrie°*	~	*kaszrinu°*	ST-2, ST-3
MA-1, MA-2, etc.	*piθamne*	~	*piθamnu/a*	WE-3, SR-5
SZ-2.1, SZ-2.2, VR-3	*remi(e)*	~	*remina*	SZ-31
SZ-3	*visteχa*	~	*visteχanu*	SZ-2.1
SR-6	*aruse*	~	*aruśna*	SR-3.1
MA-11, MA-13	*es(s)θu(a)*	~	*estanu°*	ST-6
HU-6	*tarie*	~	*θarna*	SR-6

Tab. 16: Names attested both as individual names and as bases of patronyms in Raetic inscriptions.

Unambiguously identifiable patronyms in *-nu*/*-na* as parts of name formulae are absent from the stand-alone, potentially archaic inscriptions (2.5.2.1: HU-7, PA-1, VR-1, PU-1; the only possibly relevant form is PA-1 *nakina*). The earliest attestations of complete name formulae come from Sanzeno-αβ inscriptions, mainly from the Val di Non (see 2.6.1.4 for a list of attested name formulae). This lack of attestation is probably coincidental or due to different (or absence of) text formulae, as the form of the patronymic suffix shows that the patronymic system is connected with that of Etruscan: the suffixes *-nu*/*-na*, which derive patronyms from individual names in Raetic, can be connected with the Etruscan derivational suffix *-na*. Etruscan *-na* forms genitival adjectives and was the most widely used suffix to form the prehistoric adjectival patronyms, also mostly derived from individual names, which were eventually turned into family names (Wallace 2008, 93); it is the Etruscan equivalent of the Italic **-i̯o*-suffix (Rix 1963, 295).[291]

In Etruscan, the shift from the archaic patronymic system to the complex family-name system typical for Central Italy, triggered by urbanisation processes, occurred in the late 8th c. (Rix 1995b, 727–729; Rix 1998, 19 f.; Wallace 2008, 79). We do not know whether the same happened in Raetic at some point during the attestation. Beside the Steinberg

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[291] The archaic patronyms being used as nomina gentilicia, Etruscan introduced a new method of forming real patronyms (i.e. ones that were productively derived from the father’s name), giving the father’s name in the genitive, followed by *clan* ‘son’ or *seχ* ‘daughter’ (Wallace 2008, 84).

inscriptions, an argument for real patronyms may be furnished by a phenomenon noted by Schumacher 1998a, 110. 112, viz. that patronyms could apparently remain uninflected beside inflected individual names. Schumacher's examples are SZ-9.1 *kunina-si tauχrilina* and SZ-14 *sleti-le karataśna*. In both inscriptions, when read like this, the individual name stands in the pertinentive, while the patronym has no grammatical ending. SZ-14 is problematic, as it is not quite clear how the three or four name elements on the bronze relate to each other (2.8.1.3), but the two names in SZ-9.1 can hardly be anything other than a name formula. See section 2.7.2.2 on the question of whether SZ-87 *esminu pitis* and AV-1 *tipruχnu lavisez* can be analysed as further examples for name formulae with only the individual name inflected (here in the genitive). In any case, the practice is clearly marginal, but in SZ-9.1 at least the non-inflection of the second name may indicate that it was considered grammatically dependent on the individual name ('by Kunina of θauχrili°' rather than 'by Kunina θauχrilina'), which makes more sense for a genitival patronym than for a nomen (Untermann 1959, 81 f.).[292] On the other hand, if isolated names with an auslaut °*nu* or °*na* are to be interpreted as surnames (2.6.1.3), this would point to nomina, as the use of the surname in place of the complete name is more easily understandable in a family-name system – i.e., a person may refer to themselves only by their family name (cf. the increasing importance of the nomen at the expense of the praenomen in Central Italy), but would hardly be expected to give only their father's instead of their own name.

On the basis of the evidence from Roman inscriptions, Untermann 1959, 81 f. 91 (also 1995, 735 f.) identifies areas where vernacular second names are rendered by what he calls the genitival formula, i.e. the Roman patronymic formula *X* (gen.) *filius*, while elsewhere these names are turned into Roman nomina. The genitival formula is used between and south of Lago Maggiore and Lago di Como (the Milano namescape), between Lago d'Iseo and Lago di Garda (the Brescia namescape), in the Eastern Alps between the valleys of Sava and Mur, and west of Budapest (see Untermann's map 1 on p. 92). In Northern Italy, the geographical association of the first strategy with the Celtic (Milano) and Camunic (Brescia) areas and of the second one with the Venetic area, where the genitival formula in Roman inscriptions is almost absent, is evident; the integration of Venetic surnames as nomina in the Roman system is also seen in the Latino-Venetic inscriptions. Untermann

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[292] Though the interpretation of line 1 of SZ-2.1 as 'Φrima and Remi Visteχanu' is obsolete (2.7.3.3), *φrima* and *remi* could still share the surname *visteχanu*, which might support an interpretation of the latter as a nomen, under the assumption that the two were married and Φrima shared her husband's surname (but see 2.6.1.2 on whether *φrima* is feminine). However, in light of the numerous name conglomerates in inscriptions on Sanzeno bronzes whose segmentation into discrete name formulae is problematic, the case of SZ-2.1 can hardly bear the burden of evidence.

concludes that, at the time of Romanisation, Venetic second names were inherited nomina which could be smoothly transferred into the Roman system (see also 1961b I, 39–41), while Celtic and Raetic second names were patronyms, which had to be translated with the analytic genitival patronymic formula (89–91). In Celtic inscriptions, second names with patronymic suffixes like *-al*(*o*)- (whose etymology and linguistic affiliation is unclear)[293] or *-kno-*/*-gno-* correspond to the genitival patronyms in Roman inscriptions[294] and represent their vernacular models (Untermann 1959, 87–89; 1960, 308; 1995, 736 f.). However, the Raetic area does not at all coincide with the sphere of genitival patronyms in Latin inscriptions. Untermann's map 1 shows quite clearly that the area from which Raetic inscriptions are known corresponds to the gap in the attestations of the genitival name formula in the Alpine area, much as the Venetic area does in the Alpine foreland and the plains. The only exceptions are Verona, which partakes in various onomastic traditions (Untermann 1960, 309), and Trento. A single Roman inscription from Trento contains the genitival formula for the second name.

CIL V 5033 SASSIUS · REMI · F · LUBIAE · ESDR | AE · UXSORI · TURI | BARBARUTAE · F · (...)

Both name formulae include an individual name and the father's name in the genitive. Sassius' father bears a name which is attested in Raetic inscriptions (SZ-2, VR-3 *remi*[*e*] → Latinised *remius*) and may be vernacular (2.6.1.2).[295] Here, the analytic genitival patronym appears to translate a synthetic patronym of a vernacular Raetic name formula – *remi f.* ~ **reminu* 'of Remi'. Though this case indicates that the Raetic system was still productive at the time of Romanisation, it is isolated. As observed by Schumacher 1998a, 99 f., Untermann himself was not quite certain about the status of the Raetic second names. Four Roman inscriptions from the Val di Non attest Raetic patronyms which were integrated into the Roman name system as nomina (Untermann 1959, 86. 134 f.):

CIL V 5023	(...) L · LAUISNO | PATERNUS (...)	(Roverè della Luna)
CIL Suppl. I 715	Q · TENAGI͡NO | M͡AXIMUS (...)	(Cles)
CIL V 5067	(...)]OSICCINO | (...)]ATINO (...)	(Cles)
CIL V 5068	(...) LUMENNONES (...)	(Romeno)

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[293] See http://www.univie.ac.at/lexlep/wiki/-al. This suffix may be attested in Raetic VN-1 *lavisealu* (2.6.1.4). Lejeune 1971, 52 considers it a thematised version of the Tyrsenian genitive II *-al* (also Markey & Mees 2003, 138), but this is problematic – Lejeune seems to think of a loan from Raetic, where this allomorph is not certainly attested (2.7.2.2).

[294] Most clearly in the Todi bilingua PG·1, where Celtic *trutiknos* is rendered as *druti f.* in the Latin part.

[295] See 2.6.1.2 on the possibility of *turis* ~ MA-2 *θurieþu* and of *lubia* ~ CE-1.3 *lupnu*.

lauisno is a Latinised Raetic patronym **lavis*(*e*)-*nu* based on the well attested *lavise* (2.6.1.2). An individual name *tenaχi°*/*tenaki°* to compare with *tenagino* is not attested in Raetic inscriptions, but can be formally compared to names with a *k*-suffix (MA-19 *φutiχi°*, MA-17 *valθiki°*; Untermann 1961b I, 92 f.). A member of the familiy may be identified in Tenagino Probus, governor of Egypt in the 3rd c. AD (Schumacher 2004, 313 [n. 195]); the relevance of CIL Suppl. 695 *tenainus* (from Arco) and CIL V 3345 *tenigenonia* (from Verona) is uncertain (Untermann 1959, 86 [n. 15]). The names in V 5067 are too fragmentary to allow comparison with Raetic material. The *lumennones* in V 5068 are a group of more than fifteen people who bear the same name, showing that, unless they were all brothers, the Raetic patronym **lumen*(*e*)-*nu* ~ VN-10, VN-11 *lumene* was not derived from the individuals' fathers' names anymore, but functioned as a family name (Schumacher 1998a, 100). In all the above cases, the shift to family names may only have happened with the names' integration into the Roman system. Notably, all these inscriptions come from the Val di Non, whose inhabitants were granted Roman citizenship and therefore the right to bear Roman names in the Tabula Clesiana in AD 46 (2.2.2; Untermann 1959, 86 f.), so that the treatment of vernacular names in this area may be due to conscious efforts to create Roman citizen's names, and may not reliably reflect Raetic conditions. Two more inscriptions with nomina formed with an *n*-suffix come from west of the Adige (Untermann 1959, 134 f.), but there are no Raetic comparanda for the underlying names (**drūtos* is in fact Celtic):

CIL V 4204 L · TRUTINO | PROBUS (...) (Brescia)
CIL V 4014 (...) L · SAMMUC[I] | NO · IUSTUS (...) (Peschiera)

The uncertainty concerning the status of the Raetic patronym in different phases of its attestation is one of the reasons why onomastic elements which are (or may be) formally patronyms (i.e. which feature a suffix or auslaut -*nu*/-*na*) will not be translated analytically ('son/daughter of X'), but in their Raetic form. Furthermore, it is not entirely clear whether or how securely we can distinguish masculine and feminine names (2.6.1.4), so that the decision between 'son' and 'daughter' cannot always be made.

2.6.1.2. Onomastic material

A list of all sequences in Raetic inscriptions which can be argued to be onomastic elements is provided in appendices VII (index a fronte) and VIII (index a tergo), with the relevant sigla. Names are identified by their context (appearance as part of a name formula), by their grammatical form (appearance in the genitive or pertinentive case; 2.7.2.2) or by their typical vocalic auslaut (2.6.1.3); see Schumacher 1998a, 90–102 and Untermann 1961b I, 61 f. for methodological considerations. In a number of cases it is hard to determine whether similar names are spelling variants or unconnected forms; as long as the system(s) which underlie(s) the use of the characters for obstruents in Raetic are not fully established, one must at least consider the equivalence of forms with a variance of ⟨t⟩/⟨θ⟩ and ⟨k⟩/⟨χ⟩ (and, hypothetically, ⟨p⟩/⟨φ⟩).

Up to fourteen names are attested more than once, as individual names or as bases of patronyms (*aruse*, *esθua*, maybe *esθ/tuale*, maybe *esimne* and/or *esumne*, *visteχa*, maybe *θ/tar*° *kastrie*°, *lavise*, *laθur*, *lasta*, *lumene*, *piθamne*, *piθie*, *remie*, *φel*[*i*]*turie*°, *φ*[*i*]*rima* and *χari*). All in all, about seventy sequences may be identified as names with some certainty; another thirty or so may also qualify. A good many of these names can be analysed or even etymologised to a certain extent; Venetic, Celtic, Etruscan and Roman inscriptions also provide material for comparison. After early efforts by Kretschmer 1932 and Vetter 1954, the groundwork was laid by Untermann's studies of the personal names in Northern Italy (1959, 1960, 1961a, 1961b); the relevant material is put in an updated Raetic context by Schumacher 1998a.

A. Individual name bases

az- (*azi*°): See section 2.5.5.5 on the probability of zeta representing not the dental affricate, but a plosive in the Steinberg inscriptions. A connection with the Celtic *ate*-group (e.g. CIL V 4601 *ateci* [gen.] from Brescia, V 5774 *atilius* from Milano; Untermann 1960, 283. 288 f.; 1961b I, 144) and/or the Venetic *atto*-group (Pellegrini & Prosdocimi 1967 II, 58) may be considered. Pellegrini & Prosdocimi (ibid.) consider Gt 1 *atto* from the Gailtal to belong with the Celtic group, but assume a independent Italic filum which merged with the Celtic forms. The attestations from Celtic context may be analysed as hypocoristic names formed from composite names with a modifier **ate-* 'again' (e.g. Gaul. CIL XIII 11205 *atevrita* 'recovered'; Stüber et al. 2009, 253).

arus- (*aruse*, *aruśna*°): No parallels, as far as I can see, in Transpadania, but cf. various Etruscan names in *arus/ś-*, e.g. Vc 2.6 *arusia*, Pe 1.529 *aruśeri*, AS 1.431 *arusni*, and possibly their appellative base *arus* in the Liber Linteus X.5 (see also Rix 1963, 301 with n. 61). Maybe to be connected with the ethnonym *arusnates* (2.2.1)?

en- (*enike*°): Well attested in the areas of Brescia (e.g. CIL V 4966 *enna* from Rogno, V 4595 *ennissa* from Brescia; Untermann 1959, 138. 151) and Venetia (e.g. CIL V 1924 *ennius*; Untermann 1961b I, 146; Pellegrini & Prosdocimi 1967 II, 78–80). *enike*° with a *k*-suffix **enikos* as in CIL V 7845 *enici* [gen.] from San Lorenzo di Caraglio (Schumacher 2004, 300 [n. 181]; cf. Untermann 1961b I, 103).

vai- (*vaiθi*°): Schumacher 1998a, 102 compares the *vei*-group (e.g. Pa 2 *veignoi*, CIL V 1356 *veius* from Aquileia, V 3058 *veionius* from Padova; Untermann 1961b I, 169 and II, 64 f. [map 29]). *vaiθi*° with a *t*-suffix?

esθ/t- (*esθu*[*a*], *esθ/tuale*$^{?}$, *esta*°): It is not entirely clear how the attested forms (with various unusual spelling variants) relate to each other. Theta vs. tau must be a spelling variation, but we may be concerned with up to three names from the same base. MA-13 *essθu-a* must be considered a genitive II of *esθu*°, since it appears to agree with the patronym *θelpa?inu-a* (2.7.2.2). In MA-11, on the other hand, we would expect a nominative *esθuva* to refer to the dedicant beside the finite verb form (2.7.2.2), but just here the glide spelled out in hiatus may be taken to indicate a suffix (cf. NO-17 *ketanuvale*, VR-3 *ratasuva*; 2.7.1.1). In the same way, MA-12 *estuale* would be the only pertinentive form at Magrè and would be better interpreted as an individual name formed with the suffix *-al-*, but PA-1 *eθsuale* appears in combination with a verbal noun in *-ku* and is likely a pertinentive II. Parallels from other corpora are as yet missing. Whether ST-6 *esta-nu-ale* belongs here is also uncertain – if it does, the patronym indicates that we are concerned with an individual name; Rix 1998, 32 f. interprets *esθu*° (on the basis of PA-1) as a theonym. The case is unclear to me; to be on the safe side, all potentially inflected forms will be treated as such in section 2.7.2.2.

esimn°: Raetic inscriptions provide the following data:

ST-3	*esimnesi*
SZ-87	*esminu*
SZ-15.1	*esiunne*
MA-14	*esiumninu*

The testimony of ST-3 (with a case ending *-si*) is the only certain attestation of *esimne* in Raetic. *esminu* may belong here as a patronym, but both haplology (**esimnenu* → **esimnu*) and metathesis (**esimnu* → *esminu*) have to be assumed. While elision of a vocalic auslaut after *n* in patronyms is supported by, e.g., WE-3 *piθamnu* (2.6.1.4), the metathesis is ad-hoc, though phonetically plausible (nasal cluster assimilation); it cannot be quite excluded that *esmi*(*n*)° or *esminu* is a different name altogether. The two forms with ⟨iu⟩ in the stem are even more problematic. Stifter 2013a, 111 suggests that they belong with *esimne*, ⟨un⟩ being an attempt to reflect a Celtic bilabial nasal fricative, foreign to Raetic, in writing. The issue is complicated by the existence of the very similar *esumne* with *u* in the first syllable (see below). *esiunne* and *esiumninu* could theoretically belong with either or represent yet another superficially similar name *esiumne*. Both forms are conspicuous also in other respects, *esiumninu* without elision of the auslaut before the patronymic suffix (2.6.1.4) and *esiunne* with rare geminate spelling of the assimilated nasal cluster.

For *esimne*, Scheungraber 2014, 563 f. suggests an etymology which is structurally similar to that of *esumne*: **exs-imno-s* 'without compare' (see also Stifter 2013a, 104–110). The name is attested at least five times in Latin inscriptions from Central Europe (Schmeja 1996, 20 f.; Scheungraber 2014, 555–562; Stifter 2013a, 110–115).

HD 020949[296]	STERIO · EXI | MNII · F · F · MILES (...) EX · CHOR | RAET · ET · UENDEL (...)
HD 023311[297]	SURIUS · ESSI | MNI · F · CATTE | NAS · MILES · COH | I · UIND (...)
HD 001818[298]	(...) P · TENATIO · ESS | IMNO (...) DOMO | IULIA · TRIDEN | TUM (...)
HD 002063[299]	(...) T · ESSIMNI | US TERTIUS (...)
HD 042335[300]	(...) NOUELLA · ESSIBNI · F (...)
HD 065011[301]	(...)]SIMNI · F · COND[R]US (...)[302]
TS 37.6[303]	EXSIBUUS
TS 57.1[304]	EXSIB[UUS]

For the complete inscription texts, details and maps, see the discussions in Scheungraber 2014 and Stifter 2013a. While the testimonies from England, provided that they do belong here, support Scheungraber's formally unobjectionable Celtic etymology, the

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[296] Mainz, Rheinland-Pfalz; AD 1–70.

[297] Szekszárd, HU; AD 98–99.

[298] Passau, Bayern; AD 151–250.

[299] Osterburken, Baden-Württemberg; AD 171–231.

[300] Eggstätt, Bayern; AD 182.

[301] Eining, Bayern; AD 161–168.

[302] Reading according to Stifter 2013a, 115; differently EDH.

[303] Bath, GB; AD 175–275.

[304] Bath, GB; AD 175–275.

cumulation of attestations in the south-east – Sterius, though buried in Mainz, hails from southern Bavaria – as well as the chronology point towards an East Alpine core area. Surius of the Catenates could be a Vindelician Celt; the Celtic affiliation of Sterius of the Focunates is doubtful. P. Tenatius Essimnus is from Raetic Trento. Stifter therefore inclines toward a Raetic (or Camunic) origin of the name. Stifter 2013a, 115–118 also points to the fact that (excluding the British cases) the name is only once spelled with ‹X›, although ‹SS› for Celtic *ks* is rare in Latin inscriptions of the early Imperial period; he prefers one case of hypercorrect spelling (of a Raetic name with *s*) over the consistent misspelling of a Celtic name with *ks*.

Two more inscriptions have been adduced as attestations of *esimne*, but the readings and their relevance are very doubtful.

Bl 2	*es*[ ]*niiuikuru*
PC-16	*esi?msz?*

The Venetic attestation in Bl 2 is emended to *esiiumniuikuru* by Schürr 2003b, 385 f., which is quite possible, but cannot be conclusively argued. The Camunic testimony PC-16 from Piancogno, also adduced by Schürr (387 f.) in support of his "Euganean" derivation of the name, is even more doubtful – the reading given above is from Tibiletti Bruno 1990, 63, but Zavaroni reads *eu*^{3}*imu*^{3}*s* (2001, 740) or *eu*^{3}*kmu*^{3}*s* (2005, 1).

esumn°: Cf. the common Gaul. PN *exomnus*, *-a* (e.g. CIL XIII 8409 *exomna*; in Cisalpine Gaul. PV·1 *esopnos*, VB·24 *esopnio*, VB·24 *exobna*). The name has a straight-forward Celtic etymology **exs-obno-s* 'without fear' (Stüber et al. 2009, 255).

valθ- (*valθiki*°): Well attested in Venetic in various suffixed variants (*voltio*, *voltiomnos*, *voltigenei*, *voltignos*, *voltolarikos*) and in numerous Roman inscriptions from Venetia, Istria and Dalmatia (Lejeune 1953; Untermann 1961b I, 129–134 and II, 70 f. [map 32]; Pellegrini & Prosdocimi 1967 II, 203–216). From a Venetic lexeme *volti-*, possibly from IE **u̯el-* 'wish', 'hope' (Lejeune 1953, 49 f.; Untermann 1961b I, 131 f.). *valθiki*° is formed with a *k*-suffix.

vaþ- (*vaþanu*): Probably with the Brescia group of CIL V 4376 *vassa*, also Venetic Es 93 *vasseno* (Untermann 1959, 147. 152; 1961b I, 169), probably from Gaul. **u̯ass-* < * *u̯o-sto-*, in which /st/ > /z/ (tau gallicum phoneme) – this can account for the Raetic form, which would have been borrowed from a Celtic **u̯ats-* (Schumacher 1998a, 98 [n. 14]; see also Pellegrini & Prosdocimi 1967 II, 194). *vaþanu* with a suffix *-an-*?

vel- (*velθie*, *velχa*[*nu*], °*velisane*°?): Cf. maybe V 4924 *velia* from Zenano, V 4676 *vellia* from Brescia, V 3999 *velius* from Garda, V 2022 *velia* from Oderzo (Untermann 1959, 139), but the suffixes are unclear; if *velχa*° rather than *velχanu*, cf. *visteχa*°. The vernacular *vel-* is a major PN base in Etruscan (Wallace 2008, 92); cf. especially the archaic PN Cr 2.15 *velθies* (gen.; Steinbauer 1999, 496; ET index p. 306) and Cm 2.50 *velχaie* (Steinbauer 1999, 495; ET index p. 307 f.).

vinuθali°: From a Celtic composite name **u̯innotalos* < **u̯indotalos* 'having a white forehead' (with *nd* > *nn* typical of Lepontic and Cisalpine Gaulish; Schumacher 1998a, 102). *vinuθali*° presupposes not *vinuθale*, but *vinuθalie* (see 2.6.1.3) – with a secondary productive suffix *-ie*?

hel- (*hela*°): Cf. the Etruscan PN *hele*, *heli* in Chiusi (Steinbauer 1999, 425; ET index p. 232 f.).

θar- (*θar*°, *θari*°, *tarie*): The only reliable attestation is the patronym *θarna* in SR-6; the segmentations of PA-1 *nakinaθaris* (gen.) and HU-6 *taevvtarie* are uncertain. No comparanda are available from the neighbouring traditions, but cf. the Etruscan nomen *tarna-*, whose base cannot be explained from Etruscan nor Italic (Steinbauer 1999, 474; ET index p. 285).

θauχ- (*θauki*°, *θauχka*°, *θauχrili*°): The sequence *θauχ-* appears to be an onomastic element, though both longer (suffixed? composite?) variants look irregular.

θur- (*θurie*°?): MA-2 *θurie*° is uncertain, and the function of the ending (?) *-þu* which follows it is unclear (2.6.1.4). The reading may be supported by CIL V 5033 *turis* from Trento, which contains another Raetic name in *remi* (gen.; 2.6.1.1), and *turi* (gen.) in V 4881 from Tremosine and CIL V 2430 from Pomposa; also Venetic Ca 24 *turijonei* (dat.), etc. (Untermann 1961b I, 167. 108. 134 and II, 68 f. [map 31]).

kaθ- (*kaθiave*): Common in the area of Milano (e.g. CIL V 6092 *catto*, V 7224 *caturo*), also V 3528 *catio* from Zevio, V 4762 *cattavus* from Isola di Garda, and various nomina (Untermann 1960, 289), also in Venetic (Es 52 *katakna*, Vi 2 *katusiaios*; Untermann

1961b I, 152; Pellegrini & Prosdocimi 1967 II, 114 f.); from Celt. **katu-s* 'battle' (Schumacher 1998a, 94 f.). *kaθiave* with a suffix *-*i̯au̯o*- **kati̯au̯os*.

kan- (*kaniś*°): Attested in Latino-Venetic cognomina Es XXX *canus*, Tr V *canius*, also CIL V 322 *canalius* from Istria (Untermann 1961b I, 151; Schumacher 1998a, 98; Pellegrini & Prosdocimi 1967 II, 62). *kaniś*° with an *is*-suffix, probably **kanise* with the dental spelled with san because of palatalisation before *n* in the patronymic suffix (2.7.1.2).

kar- (*kara*, *kari*): Both names are somewhat doubtful because of difficult readings or segmentations, but cf. the nomen *cariassis* in CIL V 4266, 4278 (Brescia), 4924 (Zenano) and Venetic Es 24 *karanmns*, Pa 2 *karanmniioi* (Pellegrini & Prosdocimi 1967 II, 112 f.; Untermann 1961b, 109), probably from IE, most likely Celtic **kar*- 'loving' (*kara* hypocoristic from composite names with *-*karo*-/-*a* as second element, cf. Stüber et al. 2009, 257 f. 278; Lejeune 1953, 49). Marinetti 2000, 75 suggests to include *χari*° here; then maybe also *χarse* with an *s*-suffix?

kast- (*kastrie*): Possibly with Venetic Gt 9 *kastkos* or *kastikos* (Pellegrini & Prosdocimi 1967 II, 114) and the Milan/Brescia group of CIL V 4705 *casticus* etc. (Untermann 1960, 287; 1961b I, 152), though no other attested variant has an *r*-suffix.

klev- (*klevie*): An exactly corresponding IE form is attested in CIL V 4717 *cleuius* (Untermann 1959, 151), V 1816 *cleuia* (Schumacher 2004, 295 [n. 172]) with an IE etymology from **kleu̯*- 'hear' (**kleu̯i̯os*; Schumacher 1998a, 99) – Schumacher points out that *e* in the base would be unexpected if *cleuius* were Latinised Celtic, so that the name must be from Venetic or some unknown IE language of the area.

kluθ- (*klu*[?]*θuru*°): Highly speculative – assuming that the illegible element between upsilon and theta is not a relevant letter, but an abortive attempt at one (see section 2.5.5.5 on the difficult reading of the inscription), a base *kluθ*- could be compared with Venetic Pa 16 *klutiaris* (Pellegrini & Prosdocimi 1967 II, 118 f.). With a suffix -*uru*?

kuś- (*kuśi*°): The reading *śi* given by Whatmough for MA-5 (PID 224) is questionable,[305] but enables a comparison with CIL V 4891 *cussa* from Idro and V 5071 *cuseda* from

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[305] Rather *kuniiþu*, as read by Schumacher 2004, 162. 339. Repetition of letters does not usually occur in Raetic inscriptions and the phonetic context does not allow a semi-vocalic element; however, the first assumed iota is far removed from nu and not quite likely to be a hasta of san.

Revò (PID III, 16; Untermann 1959, 138 f.). On the function of the suffix *-þu* see 2.6.1.4.

lav- (*lavise*, *lavisie*, *lav*[*i*]*śa*$^{?}$): In addition to *lavisno* (CIL V 5023 from Roverè della Luna), which is likely a Romanised Raetic patronym (2.6.1.1), there are attestations in Venetic (Od 4 *lavskos*) as well as in Dalmatia (Untermann 1961b I, 156; 1959, 151). *lavis*(*i*)*e* with an *is*-suffix **lavisos* or **lavisi̯os*, respectively; for possible *lavśa* cf. Ven. *lavskos* with a vowelless suffix variant (Pellegrini & Prosdocimi 1967 II, 128). Cf. also archaic Etr. Fs 1.8 *lavśie* from the area of Bologna – a loan from the north?

laθ- (*laθur*): Cf. Etruscan Sp 2.53 *latur* (Schumacher 2004, 333) and Etruscan names in *lat*/*θ-* (ET index p. 244), or maybe formed from a hypocoristic Celtic **lat-*, cf. VB·3.1 *latumarui* (dat.) = **latu-maros* 'great ardour'? *laθur* with a suffix *-uru*?

las- (*lasθe*, *lasta*, *lauste*$^{?}$, *laseke*, *laśa*(*nu*)°$^{?}$): Well attested in the east (Istria and Ljubljana). Ven. **lastos* (or Latinised **lastus*) with a *to*-suffix as in *lasθe* etc. can be inferred from CIL Suppl. I 609 *lastulus* (from Arzignano; Untermann 1961b I, 111; Schumacher 1998a, 96); *laseke* with a *k*-suffix? For *laśa*(*nu*), if it belongs here, cf. CIL III 10723 *lassonia* from Šmarata; if *laśanu*, with an *an*-suffix?

lup- (*lup*°): Possibly with *lub-* (CIL V 5033 *lubia* from Trento [2.6.1.1], V 4757 *lubicius* from Brescia, etc.; from IE **leu̯b-* 'dear'? [Schumacher p.c.]) and/or *lup-* (e.g. CIL V 5551 *lupius* from Somma Lombardo; Untermann 1959, 131 with n. 15).

met- (*meti*°): Untermann 1959, 151 compares CIL V 5003 *medenasius* from Vezzano; alternatively with names in *met-* mainly from the area of Brescia and from Liguria (e.g. CIL V 4728 *mettasius* from Brescia; in the Cisalpine Celtic corpus: NO·18 *metelui*, *metelikna*; PID III, 13), also Venetic Ca 49 *metśo* < **meti̯o* (Untermann 1961b I, 158; Pellegrini & Prosdocimi 1967 II, 141). Cf. Etr. *metie-*, a loan from Italic (Steinbauer 1999, 444). *metlaini*° might belong here, but the elements which follow the base are unclear (2.6.1.4).

mun- (*munie*): Cf. Etruscan Vt 4.8 *munie*?

nak- (*naki*°): Whatmough (PID III, 32) compares CIL V 6003 *nacia* from Milano.

nuþ- (*nuþ*°): Cf. maybe various Etruscan names from a base *nuz*- (see ET index p. 261), e.g. the nomina Cr 2.1 *nuzinaia* (gen.), Vs. 1.190 *nuzarnai*.

perk- (*perkusi*°): Cf. the Etr. nomina *perknas* vel sim., *perknis* (gen.) repeatedly on 4th-c. vases from Adria, Spina and Liguria, Vt 3.5 *perkena* and various other onomastic derivations (see ET index p. 263); cf. also Steinbauer 1999, 453 on Cl 1.460 *perceθnei*. *perkusi*° with an *us*-suffix.

piθ- (*piθi*$^?$, *piθie*, *piθiave*, *piθamne*, *piθame*$^?$; also *piti*, *pitie*, *pitale*): Cf. *pitius* (CIL III 3128 from Krk; 4518, 4602 from Carnuntum), III 3112 *pitienus* (from Dalmatia), *pitta* (Untermann 1959, 138, from Sanzeno), V 5199 *pittiena* (from Clusone in the Camunic area; Pellegrini & Prosdocimi 1967 II, 152). **piti̯os* serves as a model for *piθ/tie*; *piθiave* with a suffix *-*i̯au̯o*- **piti̯au̯os*; *pitale* with an *al*-suffix. With the same suffix as *piθamne* Venetic Ca 14 *pittammnikos* (from **pittammnos* with a suffix -*iko*-; Untermann 1961b I, 161; Risch 1984, 31 f. [n. 31]; Schumacher 1998a, 96; Pellegrini & Prosdocimi 1967 II, 151 f.) and Etruscan Sp 2.102 *pitamn*[. *piθame*, if not a variant of *piθamne* with assimilated nasal cluster, with a suffix -*am*- (Schumacher 1998a, 96). Theta vs. tau is most probably a spelling variation, but the existence of separate bases cannot be excluded. Untermann 1958, 151 f. also considers the names in *bit*- from the area of Brescia (ibid. 130; from Celt. **bitu*- 'world'?), e.g. the nomina CIL V 4397, 4720 *bittalia*, 4755 *bittalius* from Brescia, which presuppose an individual name **bittalos* ~ *pitale*. Cf. maybe also *piθes* (gen.) in two archaic Etruscan inscriptions (Vs 1.42, Vs 1.102; Steinbauer 1999, 454)? While the Etruscan attestation of *piθamne* from Spina is a loan from IE, a Tyrsenian onomastic base may account for some of the variants.

pir- (*piri*): Tibiletti Bruno 1978, 220, following Whatmough (PID III, 36) compares Celtic NM·4 *pirakos* /birakos/ (Lejeune 1971, 127).

reiθ- (*reiθe*, *reiθuś*°): Attested in Venetic Es 52 *reitii* (gen.) and CIL V 3743 *reita* from Verona. Untermann (ibid.) posits an IE base **reitos* and takes the source to be Venetic rather than Celtic, though he assigns the masculine cognomen *reita* to the area of Brescia on account of its stem class (2.6.1.3). *reiθuś*° with an *us*-suffix, maybe **reituse*, if the dental spelled with san is the result of palatalisation after *n* in the patronymic suffix. Tibiletti Bruno 1978, 222 f. adduces *r*(*a*)*edonius*, attested four times in the Val di Non, Peschiera and the Valpolicella (Untermann 1959, 142); doubtful Schumacher

1998a, 98. See also n. 379 on the question of a connection with the Venetic theonym *reitia*.

rem- (*remi*, *remie*): Apart from CIL V 5033 *remi* (gen.), which reflects the Raetic name (2.6.1.1), a base *rem-* (for **remos* and **remi̯os*, respectively) is unattested in Transpadania. Possible comparanda are the Etruscan nomina *remne* and *remzna*, only attested at Chiusi, but here the base is borrowed from Latin *remus* (Rix 1998, 59; Steinbauer 1999, 460).

ruś- (*ruśie*): Cf. the Etr. PN Cr 1.202 *rusi* and/or the nomen *ruśina*, *ruśinei* at Chiusi (ET index p. 273).

tit- (*tite*): The reading is very uncertain (see n. 284); should it be correct, the comparison with Etr. *tite* seems obvious, but the Etruscan name is generally considered a loan from Italic **titos*/Lat. *titus*. However, the etymology of the name in Italic is unclear; Benelli 2011, 197 prefers to derive *tite* from the archaic nomen *titaie* and assumes a loan from Etruscan into Latin – cf. above *velχaie* > *velχe*.

tul- (*tula*°): See 2.8.1.9 on the doubtful segmentation; if correct, cf. the nomen CIL V 5070 *tula* from Vervò, which is taken for an incorrectly employed individual name by Untermann 1959, 147.

usθ- (*usθi*°): Whatmough (PID III, 52) and Untermann 1959, 153 (n. 65) consider a connection with the Venetic *ost*-group (e.g. Vi 2 *osts* < **osti̯os*, etc. Untermann 1961b I, 117–129. 160); see also Markey 2006, 157, and 2.6.1.4 on the function of the suffix *-þu*.

φaus- (*φausu*): Cf. *bauso* (nom.) in CIL V 5537 (Arsago) and III 4888, 4889 (Carinthia; Schumacher 1998a, 94).

φel- (*φeliturie*, *φeliturie*, *φelzurie*°, *φelui*°, *φelna*): The repeated attestation of a base *φel-* was already remarked by Schumacher 1998a, 109, but no obvious equivalent suggests itself in the neighbouring traditions – cf. maybe *belatulla* (CIL V 5273 from Como, III 4949 from Virunum), *bellicus* (III 5570 from Seebruck, III 4789 from Virunum), CIL III 4371 *beliabi* (gen.) from Györ (Untermann 1959, 95. 97. 98. 102). The various suffixes are equally unclear. *φelzurie*° is most likely a spelling variant of *φelturie* (2.5.5.5); whether *φeliturie* features an epenthetic vowel, represents a non-syncopated form or simply a different derivation from the base is not clear. All three inscriptions are dated to the 5th c. Schumacher (p.c.) argues against an epenthetic vowel on typological grounds and suggests that the ligature in NO-3 is meant to include iota, so that the name also reads _φeliturie°_ (2.5.9), but cf. _φirima_ (below).[306]

φeχ- (_φeχe_): Whatmough (PID III, 36) compares CIL XII 2514 _beccus_ from Ruffieux.

φrim- (_φ_[_i_]_rima_): Rix 1998, 19 compares Venetic Es 32, 94 _frema_ (Untermann 1961b I, 147). Pellegrini & Prosdocimi II, 94 f. compare Lat. _fremo_ and suggest an derivation from IE *_b_^{h}_rem-_ ‘growl’, ‘roar’; Schumacher 2004, 316 assumes a loan into Raetic not from Venetic, but from another (unattested) IE language in which the name had anlauting _b_ (2.5.5.3). The _i_ in _φirima_ appears to be epenthetic despite the frequency of anlauting clusters in Raetic.

φut- (_φutiχi°_): Attested in Venetic Ca 17 _butijakos_ (Pellegrini & Prosdocimi 1967 II, 61 f.), beside unaugmented CIL III 3801, 3819, 10598 _butto_ (nom.) from Pannonia and CIL III 5668 _buttus_ from Noricum; _b_ in Venetic indicates an non-Venetic source. _φutiχi°_ with a _k_-suffix.

χais- (_χaisuru°_): Analysed as a Celtic base *_gaiso-_ ‘spear’ by Schumacher 2004, 315; _χaisuru°_ with a suffix _-uru_.[307]

B. Individual name suffixes

-iav- (_kaθ-iav-e_, _piθ-iav-e_): Celtic suffix *_-i̯au̯o-_, typical for the areas of Brescia and Milano (Untermann 1959, 137; 1960, 289 [n. 71]; Schumacher 1998a, 94 f.).

_-al-_ (_pit-al-e_, _est/θu-al-e_$^?$): Suffix _-alo-_, typical for the area of Brescia (Untermann 1959, 131–134. 152). Difficult to identify in Raetic, where it is homophonous with the pertinentive II-ending. The bases of both _pitale_ and _estuale_ are attested in Raetic (_pitie_,

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[306] Markey 2006, 159 f. points to the superficial resemblance _φel_(_i_)_turie_ bears a to the Etr. PN _velθur_. The comparison is tempting, but it necessitates some questionable ad-hoc assumptions. While it is not entirely clear which sounds phi could denote in the anlaut (2.5.5), there is no indication that it could be used to write the bilabial glide _u̯_, which is written with waw in both Raetic and Etruscan inscriptions. Even when speculating that the gilde could be articulated labiodentally in the anlaut, three different writers (also PU-1 _φelzuries_) must be assumed to have felt the need to reflect this in writing in this particular name (while numerous words are spelled with anlauting waw in Raetic), and that they chose the same letter (phi) to do so. Also, what about _-ie_?

[307] See n. 280 on parallels for HU-7]_ekie_ as _tekie_ vel sim.

esθu[*a*]), but both names appear at Magrè, where no certain pertinentive forms occur. MA-9 *pitale* is part of an active construction, which necessitates the interpretation as a name with suffix -*ale* in the nominative; MA-12 *estuale* is not accompanied by an active verb form, but appears, like *pitale*, in the beginning of the inscription, which indicates an equivalent syntactical function. *esθuale* in PA-1, on the other hand, appears in a passive construction, viz. in combination with a verbal noun in -*ku*, which is usually accompanied by a pertinentive – *esθuale* is the only form in PA-1 which qualifies as such, but cf. VR-3, which contains a *ku*-form, but no pertinentive.

-*am*- (*piθ-am-e*): Unless *piθame* is *piθamne* with assimilated nasal cluster, it may be formed with the suffix -*amo*- typical for the area of Brescia (Untermann 1959, 127–131; Schu-macher 1998a, 98).

-*amn*- (*piθ-amn-e*): Venetic suffix *-*mno*-. Untermann 1961b I, 109 files the suffix among those forming verbal nouns; critical Pellegrini & Prosdocimi 1967 II, 151 f., who suggest that a non-IE suffix -*mn*- merged with the IE lexical suffix.

-*an*- (*vaþ-an-u*, *laś-an-u*, *velχ-an-u*$^?$, *ket-an-u*$^?$, *χevisi-an-a*$^?$): -*ano*-/-*a* is attested sparsely as a suffix forming individual names in Venetic (Untermann 1961b I, 135 f.), being – much as in Raetic – more common for forming second names (patronyms/nomina; Untermann 1961b I, 83 f.); a few instances are also known from the area of Brescia (Untermann 1959, 135). The suffix is rare, but may account for some of the Raetic names in °*nu*/*a* which must be interpreted as individual names rather than patronyms (Untermann 1961b I, 140; 2.6.1.3).

-*as*(*s*)- (*kap-aś-u*°): Typical for the area of Brescia; usually -*assi*-, in this particular case maybe -*assōn*- (Untermann 1959, 125)?

-*ik*- (*φut-iχ-i*°, *valθ-ik-i*°, *en-ik-e*°, *las-ek-e*; also BZ-3, WE-4 °*niχesi*): Common in the areas of Brescia and Dalmatia (Untermann 1959, 136. 152; 1961b I, 104; Schumacher 1998a, 96). Untermann (152) includes *laseke* despite -*ek*- instead of normal -*ik*-; Schumacher 2004, 313 also compares *tenagi*° (2.6.1.1).

-*s*- (*lav-is-e*, °*vel-is-ane*°$^?$, *kan-iś*°, *reiθ-uś*°, *perk-us-i*°): Common in Venetia and Istria, as -*is*- or -*us*- (Untermann 1961b I, 104–106; Schumacher 1998a, 98). The function of additional -*ane*- in °*velisane*° is unclear. *ś* in *kaniś*° and *reituś*°, both only attested as the bases of patronyms, may be from assimilation with *n* in the patronymic suffix. Cf. also *χarse*; forms with a vowelless suffix variant are not expressly mentioned by Untermann, but see Pellegrini & Prosdocimi 1967 II, 128 on *lavskos*.

-t- (*las-θ-e*, *las-t-a*, *laus-t-e*$^{?}$, *vai-θ-i°*$^{?}$, *vel-θ-ie*$^{?}$): Venetic suffix *-t-* forming (IE *to-*)participles (Untermann 1961b I, 107–111). Only *lasθe*/*lasta* has a clear parallel in **lastos*; a secondarily productive name suffix *-ie* would have to be assumed for the names in *°θie*.

-uru (*χais-uru°*, *klu?θ-uru°*, *laθ-ur*): Schumacher (p.c.) assumes a Tyrsenian suffix *-uru*, productive in Raetic – the bases of *laθur* and *klu?θuru°* have not so far found any parallels, but *χais-* is analysed as Celtic by Schumacher. As is the case with Etruscan suffixes which end in vowels, the suffix' auslaut was lost through apocope (Rix 1985, 217. 225) – *laθur* – but is preserved in the oblique cases – *laθurusi* (pert.), *χaisurus*, *klu?θurus* (gen.). Despite the similarity with the Etruscan collective suffix *-θur*(*u*) (e.g. *vel-θur*, gen. *velθurus*;[308] *larθ-θur*, gen. *larθuru*), the lack of a dental in *χaisuru°* makes a connection difficult.

As observed by Untermann (especially 1959), the Raetic inscriptions share a lot of their onomastic material with pre-Roman and Roman documents from the surrounding areas of Transpadania, viz. the Venetic and Celtic spheres, particularly the distinct onomastic group of the area around Brescia (2.6.1.1). The origin of shared onomastic elements may be determined with the help of convincing etymologies, or made likely on the basis of their distribution (both geographically, as done by Untermann, and chronologically). In the absence of compelling indicators of this type, the direction of borrowing is often uncertain, as illustrated by the case of *esimne*. Still, a considerable number of the names attested in the Raetic corpus appear to be loans from the other, mostly IE, language groups of the Southern Alpine area, while parallels with Etruscan name material are rare. Of the Raetic name bases, up to ten can be furnished with IE etymologies: from Celtic *esumn-*, maybe *esimn-*, *vaþ-*, *vinuθal-*, *kaθ-*, *kar-*, *χais-*; from Venetic *valθ-*, *usθ-*; unspecified IE *klev-*, *φrim-*. Another fourteen bases at least (*kan-*, *las-*, *met-*, *reiθ-*, *φut-*, etc.) find comparanda in Transpadania, among names attested in the vernacular corpora and/or in Roman inscriptions which contain vernacular onomastic material. Only a handful of bases have a better connection with Etruscan, though these comparisons are mostly superficial: *arus-*, maybe *vel-*, *hel-*, *θar-*, *mun-*, *nuþ-*, *perk-*, maybe *piθ/t-*, and *ruś-*. Apart from these latter

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[308] Eichner 2012b, 21 f. derives some of the Etruscan names in *-θur*, including *velθur*, from Italic.

names, the best candidates for etymologically Raetic names in the North Italic namescape are *laθur*, *lumene*, *esθu*(*a*), *remi*(*e*), and particularly names with anlaut clusters which are untypical for IE, viz. *knuse* and *tnake*.

Like the name bases, the name-forming suffixes which we can identify are mostly Transpadanian. Whether any particular onomastic suffix was productive in Raetic or only borrowed as part of one or more names is usually uncertain. Though some of the name formants typical for the area of Brescia may be Tyrsenian features, Raetic appears to have been on the receiving end of onomastic loans. So far, the only arguably vernacular onomastic suffix is -*uru*-, which does not, to my knowledge, appear in any of the surrounding areas.

The dissociation of the Raetic name material from that of Etruscan stands in contrast to formal similarities which concern the standard auslauts of names and the suffixes used to derive surnames.

2.6.1.3. Auslauts of individual names

It can be remarked that most of the individual names attested in Raetic end in a vowel, or, more precisely, in °*i*/°*e*/°*ie*. This is a notable parallel to Etruscan, but it may be typological rather than genetic (Schumacher 1998a, 95 and 2004, 295 f. [n. 173]). The corresponding Etruscan auslauts have been argued to be not vernacular, but imported from IE languages in names which were borrowed in the vocative: °*e* from *o*-stem vocatives, °*i* and °*ie* from vocatives of stems with a suffix *-*i̯o*- (onomastic suffix, for hypocoristic names? [Rix 1995b, 729]) or *-*ii̯o*- (patronymic suffix). See Stifter 2013b for a typological overview of vocatiuus pro nominatiuo – a fairly widespread phenomenon, because foreign names tend to be encountered in conversation in that case. The fact that Etruscan lacks a vocative and therefore the notion that forms of address can be systematically distinguished from nominatives supports this interpretation (Stifter 2013b, 50. 71).

A number of Etruscan praenomina in °*e* or °*ie* are derived from Italic, Greek and Celtic names in *-*o*- (voc. *-*e*) or *-*i̯o*- (voc. *-*i̯e*), e.g. Gr. *λύκανδρος* ~ Etr. *licantre*, Gr. *ἀσκλαῖος* ~ Etr. *asklaie* (De Simone 1970, 94 f. 142), Gaul. **nemeti̯os* ~ Etr. **nemetie* (De Simone 1980, 198 f.), Celt. **elu̯ei̯tii̯os* ~ Etr. *eluveitie* (Stifter 2013b, 49), Ital. **louki̯os* ~ Etr. *lavcie*, Ital. **popli̯os* ~ Etr. *puplie* (Rix 1995a, 720; Wallace 2008, 94). In Etruscan nomina, the auslaut °*ie* corresponds to Italic vocatives of nomina in *-*ii̯o*- (voc. *-*ii̯e*), e.g.

Lat. *petronius* ~ Etr. *petrunie* (Wallace 2008, 93). Nomina in °*i* are thought to be formed with a suffix -*i* derived from the Latin vocative ending -*i* of names in *-(*i)i̯o*-, e.g. Lat. *publius*, voc. *publī* ~ Etr. *pupli* (Rix 1963, 258 f.; 1994, 63 [n. 63]), representing a later layer of loans (Stifter 2013b, 49).[309] Loans from Italic are also numerous among Etruscan cognomina (and nomina which developed from them) ending in °*e*, e.g. Lat. *luscus* ~ Etr. *lusce* 'squinter', Lat. *mutus* → Etr. *mute* 'mute' (Rix 1963, 226–230).

As observed by Rix 1963, 230 f., Etruscan has common nouns in °*e* to provide models for cognomina and praenomina in °*e*. While there are many loans from Italic languages, the most common Etruscan praenomina are vernacular, and a number of them end in °*e* (e.g. *larice*, *śeθre*); two can be shown to be formed from Etruscan lexemes with a suffix -*e*: *aule* < *avile* from *avil* 'year', *uśile* from *uśil* 'sun' (the latter word a loan from Sabellic; Rix 1995a, 723; Wallace 2008, 92; De Simone 1970, 141).[310] In light of these native forms, De Simone 1970, 142 considers the loan names from Italic to have been transferred into a vernacular stem class (IE *o*-stem → Etr. *e*-stem), the similarity of the resulting forms with IE vocatives being coincidental. The existence of a vernacular *e*-class can be reconciled with the interpretation of names in °*e* as IE vocative forms in two ways (Adams 2003, 514). An inherited Tyrsenian *e*-class and the IE vocative endings may have had a reciprocal effect, the existence of a suffix -*e* supporting the choice of the familiar-sounding IE vocative forms, the resulting dominance of names in °*e* in turn making the vernacular suffix more productive in onomastics (Rix 1963, 231; De Simone 1970, 142; Stifter 2013b, 50). Alternatively, the *e*-suffix may itself be borrowed from IE languages; this would presuppose that Etruscan had been under considerable IE (Italic?) influence for some time, so that the imported suffix was productive at least at the time of the first literary attestation. Such an extension of borrowed suffixes to vernacular bases is indeed evidenced by -*ie* from the Italic patronymic suffix *-*i̯o*-, which became productive in Etruscan as a suffix for nomina only in the 7th c. (Wallace 2008, 93 f.).

As pointed out by Stifter 2013b, 52, the situation in Raetic is harder to judge, as we have far fewer names which can be connected with IE ones, and even in the majority of those cases it is not entirely clear which language the name originally belonged to and in

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[309] Eichner (p.c.) considers the suffix -*i* to be internally developed from -*ie* by analogy via the syncopated genitive (-*ies* > -*is*).

[310] Differently Eichner 2012a, 33 and 2012b, 28 (n. 83), who interprets both names as loans from Italic: *avele* (*avile* from weakening of posttonic vowels) ← **au̯elos* 'grandfather [diminutive]', *uśile*/*uśele* ← Sabell. **oselos* < **au̯sēlos* (cf. *aurelius*) 'manifestation of the sun' (← **au̯sōs* 'dawn'). Cf. Steinbauer 1999, 402. 493.

what form it was borrowed. Also, the Raetic names concerned are not nomina or cognomina, but only praenomina (individual names). Leaving aside names whose auslaut is uncertain because they are only attested in suffixed form, the best candidates for Raetic names in °(*i*)*e* borrowed from IE names in -(*i̯*)*os* are *enike*°, *esumne* and maybe *esimne*, *klevie*, *kaθiave*, *lavise* and *lavisie*, *lasθe*, *piθamne*, *pitale*, *piθiave*, *piθ/tie* and *reiθe*. As in Etruscan, these names in °(*i*)*e* with plausible IE derivations or at least connections stand beside such names without an established IE connection (e.g. *lumene*, *knuse*, *tnake*), and the same considerations apply: Raetic onomastic -*e* may be a vernacular name formans which happened to coincide with the IE vocative ending and supported the choice of vocative forms in IE loan names, or it may be an imported auslaut which became a productive suffix before the time of attestation.

There are five or six cases in which names in °*ie* appear with case endings (gen. *terunies*, *remies*, *φelzuries*, pert. *kastriesi*, *φel*[*i*]*turiesi*, maybe *θurie*°). This shows that the case endings at least of inflectional class I (2.7.2.2) do not mask more complex underlying auslauts. The only exception would be *pitie* ~ gen. *pitis*; it is therfore preferable to consider *pitis* the genitive of a name variant with a different auslaut **piti* (cf. possible *piθi* in TR-3). Unlike the case endings, the patronymic suffixes can be shown to be attached to simplified auslauts. The evidence of *piθamne* ~ *piθamnu*, *kastrie* ~ *kaszrinu* and *aruse* ~ *arušna* shows that auslauting °*e* may be or is regularly dropped in patronyms; there is no attestation of a patronym in °(*i*)*enu*/*a*.[311] It must therefore be considered that any number of those names which are attested with °*i* before the patronymic suffix (*meti*-*nu*, *φutiχi*-*nu*, etc.) may be names in °*ie*, not °*i*. Under this consideration, we may have around thirty-five names in °*ie*, which agrees with the high frequency of names in -*i̯o*- in the area of Brescia (Untermann 1959, 153).[312]

Raetic names in °*i* can hardly be explained as vocative forms borrowed from Latin. °*i* alternates with °*ie* in *remi* ~ *remie*°, *lavise* ~ *lavisie* and, arguably, *piθ/ti* ~ *piθ/tie*. It may be noted that those names which are attested in °*i* without suffixes are all short (*piri*, *χeli*, *χari*/*kari*, *remi*, maybe *piθ/ti*; the identification of *φanaχi* as a name is doubtful), so that -*i* might be a suffix for forming hypocoristic names. Alternatively, it may be a suffix for feminine names.

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[311] Cf. only MA-14 *esiumninu*. — Rix 1998, 30 (n. 41) mentions the possible relevance of the prehistoric Etruscan *uσelna*-rule, i.e. a vowel in third syllable being syncopated between continuants.

[312] The same appears to be the case for the irregular appearances of the class-II endings after auslauts other than °*u*, especially *azile*.

In Etruscan, feminine names could be derived from vernacular onomastic stems with vernacular suffixes (e.g. -*θa*, -*θei*) or from masculine names with the suffixes -*i*, -*ia* and -*a* (Wallace 2008, 92), all of IE origin. IE -*a* is also the standard suffix for feminine names in Transpadania. It is likely that any number of the Raetic names in °*a* are feminine names, though the only possible name pairs in Raetic to parallel, e.g., Etr. masc. *śeθre* ~ fem. *śeθra* are *lasθe* ~ *lasta* and *lavise* ~ *lav*(*i*)*śa* (provided that they do belong together). It must also be pointed out that we do not have any full equations of Raetic names in °*a* with demonstrably feminine names in other corpora (discounting Rix' direct equation of *φrima* ~ Ven. *frema*), but we do have such equations for masculine names in °*a*: Untermann 1959, 143. 147 remarks upon the frequency of masculine names in °*a* in the area of Brescia, citing, among others, CIL V 4376 *vassa* (cf. *vaþanu*) and CIL V 5070 *tula* (cf. *tula*°). He notes that none of the cited names contains *o*, which is generally rare in the onomastic material of the area of Brescia, and tentatively suggests a sound change /o/ > /a/. It might be considered whether this scarcity of *o* is in fact not a sound change within an IE language, but the reflection of Raetic sound substitution. In any case, some of the Raetic names in °*a* may belong here. If *a* should reflect the Raetic rendition of IE *o*, these names could be loans from IE *ōn*-stems with nominatives and vocatives in °*o*; however, some Raetic names in °*u* make a bid for the same position. The issue of distinguishing masculine and feminine individual names is at once aided and complicated by the question of whether the patronymic suffixes -*nu* and -*na* mark gender (2.6.1.4).

According to Rix 1963, 180–192, Etruscan cognomina in °*u* are common nouns formed with the lexical suffix -*u* (2.7.2.1), while in nomina, the suffix is introduced analogically from the cognomina or imported with Italic praenomina in °*o* (the two most frequent Etruscan nomina in °*u* being *petru* ~ Ital. *petro* and *pumpu* ~ Ital. *pompo*, both formed from IE numerals with the suffix *-*ōn*-). Again, both options are thinkable for Raetic individual names in °*u*. Untermann 1959, 153 considers the possibility that Raetic °*u* reflects the *ōn*-stems' long °*ō*; the only name in °*u* with a suitable parallel from another corpus is *φausu* ~ *bauso* – the name has no IE etymology; *bauso* may only be the Latinised version of a name borrowed into Raetic from another source, so that it is not certain that °*u* in the Raetic form reflects IE °*ō*, but it is certainly likely.[313] On the other hand, Rix 1998, 20 (n. 23) suggests that the patronymic suffix -*nu* may contain the suffix -*u*; we cannot at this point exclude that -*u* was productive in Raetic onomastics.

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[313] If Raetic °*u* does reflect IE °*ō*, this supports the derivation of the Raetic onomastic *e*-class from IE vocatives – *ōn*-stems could have been transferred into a vernacular stem class just as well as *o*-stems.

Leaving aside the genitives *χaisurus* and *klaʔθurus*, which may represent underlying names in °*r* (see below), auslauting °*u* is preceded by *n* in eleven of the max. sixteen remaining names: *vaþanu*, *laśanu*°, *ketanu*°, *velχanu*, *valθeʔnu*, °*estanu*°, maybe *lupnu*, *tipruχnu* and *esminu*, possibly *hestulanu*° (2.8.1.9).[314] Of these, only *vaþanu* can be conclusively argued to be an individual name, as it is part of a name formula. The others appear as single names, but see section 2.7.2.2 on whether *lupnu*, *tipruχnu* and *esminu* can be patronyms which precede the corresponding individual name. Of up to seven names in °*na* (*remina*, *χevisiana*, *kunina*°, *φelna*, *arusna*°, maybe also *nakina* and *tinesuna*), two (*kunina*, *φelna*) appear as individual names in name formulae; the others are single names.

The number of isolated names in °*nu*/°*na* is conspicious, but it is not clear whether some or all of these names are surnames in -*nu*/-*na* used as single names, individual names which were derived with these same suffixes or individual names which just happen to have that auslaut. The demotion of the praenomen in favour of the nomen (or cognomen) is a phenomenon typical for the Central Italian name system, and would not be expected in the context of a productive patronymic system (Untermann 1961b I, 41) – an interpretation of the isolated names in °*nu*/°*na* as surnames which are used as single names would serve as evidence for them being nomina rather than real patronyms. Also, we have ample evidence for individual names unaccompanied by surnames (e.g. BZ-2 *enike*°, WE-1 *lavise*°), and *vaþanu*, *kunina*° and *φelna* clearly demonstrate the existence of regular individual names in °*nu*/°*na*. Yet coincidental auslauts are equally hard to argue – the name-forming suffix -*an*- (2.6.1.2) suggests itself, but it is rare (conceivably on account of its similarity with suffixes for surnames, also in Venetic). There is variation in (or absence of) the thematic vowel – Untermann 1961b I, 140 mentions *vaþanu* and *velχanu* as Raetic names which might be formed with -*an*-, but the names in °*inu*/*a* and °C*nu*/*a* cannot belong here. It must also be asked why names in IE -*an*-(*i*)*os* should come out as Raet. °*anu* rather that °*an*(*i*)*e*. The forms concerned do certainly look like patronyms, and there is at least one case where a single name in °*nu* can hardly be an individual name with an *n*-suffix (MA-14 *esiumninu* ~ **esi*/*umne* or a similarly formed name). One might consider the possibility that the patronymic suffixes were still productive in Raetic in their original genitival functions and could as such derive individual names (Schumacher p.c. tentatively suggests *vaþanu* '[son] of a slave' from a Celtic base [2.6.1.2] as the name of a freedman).

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[314] Fragmentary inscriptions with (parts of) names in °*nu* are: MA-20]*θiχinu*, NO-1]*ukinua*, AK-1.1, AK-1.2, AK-1.7, AK-1.11]*eʔker*(*a*)*nu*, AK-1.19, AK-1.21. In SR-2]*eʔeθinu*, the last letter is damaged and can also be read *a*.

This would yet again point to productively derived patronyms. However, according to Untermann 1959, 135, Roman inscriptions from the area of Brescia, which have the advantage of distinguishing clearly between praenomina and surnames, provide five examples for individual names in °*no*-/°*na* at most (all in °*ino*-/*a* or °*eno*-/*a*).

Etruscan has numerous praenomina with consonantal auslauts in the casus rectus (e.g. *aranθ*, *venel*, *velθur*, *laris*) – they are the consequence of prehistoric apocope, as can be gathered from the fact that the original vocalic auslauts are preserved in suffixed forms (e.g. gen. *venelus*). In Raetic, only one individual name attested without suffixation ends in a consonant: VN-10 *laθur* appears as suffixed *laθurusi* (pert.) in SZ-16, providing a parallel with Etruscan. Though *laθur* can hardly be the only Raetic name with a consonantal auslaut, no other individual name which is attested unsuffixed ends in a consonant. While it cannot be excluded that such names do exist but are not recognised as names by circular reasoning, there must still be a decided statistical preponderance of auslauting vowels. As shown by *piθamne* ~ *piθamnu* and *aruse* ~ *arusna*, implicitly also *lavise* ~ *kaniś*°, *reiθuś*° (being formed with the same suffix), auslauting °*e* may be dropped before the patronymic suffix (just as in the case of °*ie*), so that, again, suffixed names which have a consonant before the suffix may really have a vocalic auslaut.

2.6.1.4. The patronymic suffixes

When used to form patronyms in prehistoric Etruscan, and later family names, the suffix -*na* appears in two forms: -*na* for masculine names, -*nai* (> -*nei*) in feminine names (Wallace 2008, 88 f.). As already suspected by Schumacher 1998a, 101 (also 2004, 296; Rix 1998, 19), the opposition between the Raetic patronymic suffixes -*nu* and -*na* may also reflect the bearer's gender. This is plausible, as auslauting °*a* is by far the most prominent feminine name marker in Transpadania. It must be pointed out, though, that the assumption is based on the evidence of CE-1.5 *φelna vinuθalina*, which is one of only two unambiguous name formulae which include both an individual name and a patronym in °*a*. Tab. 17 gives all potential name formulae with patronyms in -*nu*/-*na* attested in Raetic, without inflectional endings.

There is no overlap between individual names combined with -*nu* or -*na*, which supports the notion that the suffix variants are gender-specific. Of the twenty-four individual names which go with -*nu*, fifteen are certainly masculine names in °(*i*)*e*. One, maybe two names in °*u* (*vaþanu*, *esθu*°) may also be counted among the masculine ones. Of the four names at most in °*i*, one (*azi*°) may really end in °*ie* (2.6.1.3) and the relevance of another (*piti*°) is questionable. *piri* and *remi* are either masculine names in °*i* or feminine names which take a patronym in *-nu*. *remi* appears to share a patronym with *φrima*, which (discounting possible *esθua*) is one of three names in °*a*, with *lasta* and *χika* – the latter in a formula with questionable segmentation. *φrima* has been compared with the feminine Ven. *frema* (2.6.1.2), but Pellegrini & Prosdocimi 1967 I, 95 f. posit a nominal base **frema* which is homophonous with the hypocoristic feminine name – if this is correct, *φrima* could be a masculine name in °*a* (especially if, as assumed by Schumacher, Raet. *φrima* was not borrowed from Venetic, but from but an unidentified IE language). Note that *φirima* appears together with *lasta* and *χika* in SZ-1.1; it may be that all three share the one patronym *śiχanu* (2.8.1.3). *φrima* also appears as part of a name formula in SR-5 *φrima piθamn*[, but here the last letter of the inscription is damaged: only the rightmost tip of the last letter is left, so that it can theoretically be alpha or upsilon.

ST-1	*kastrie° eθunnu°*
ST-2	*pita??e° kaszrinu°*
ST-3	*esimne° kaszrinu°*
ST-4	*azi° ?aθivnu°*
ST-5	*he° tulanu°*[315]
MA-1	*piθamne helanu*
MA-6	*piθie metinu*
MA-13	*essθu°* (*θel*)*pa?inu°*
MA-17	*klevie valθikinu*
MA-18	*knuse susinu*
MA-19	*lasθe φutiχinu*
WE-3	*lasta° piθamnu°*
BZ-10.1	*tnake viθamu*
NO-3	*φelturie° φelvinu°*
NO-11	*piri kaniśnu*
NO-15	*esumne° nuþnu°*
SZ-1.1	*χika śiχanu*
SZ-2.1	*φrima remi visteχanu*
SZ-5.1	*vaþanu reiθuśnu*
SZ-15.1	*lasta θianu*
SZ-15.1	*pitie* (*ka*)*paśunu*
SZ- 87	*esminu piti°*
CE-1.3	*lupnu piθiave*
AV-1	*tipruχnu lavise°*
CE-1.5	*φelna vinuθalina*
SZ-9.1	*kunina° θauχrilina*
SZ-10.1	*χeli vaiθina*
SZ-14	*kara taśna*
SR-6	*aruse θarna*
RN-3	*siara kuhilina*

Tab. 17: Name formulae with patronyms in *-nu*/*-na*.

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[315] Doubtful – see section 2.8.1.9.

Of the six individual names going with -*na*, four end in °*a*, though *φelna vinuθalina* and *kunina*° *θauχrilina* are the only unproblematic examples. The analysis of the sequence *karataśna* as a name formula is, in my opinion, very likely (pace Schumacher 1998a, 109), but see 2.5.8.3 on the difficult reading of RN-3. The predominance of names in °*a* can hardly be coincidental, but *χeli* and *aruse* deviate. With regard to the fact that masculine names in °*a* existed beside the much more common feminine ones in the area of Brescia (2.6.1.1), I believe that it is admissible to assume that both masculine and feminine names could end in °*a* and °*i* in Raetic, and that the combination of either of these auslauts with patronyms both in -*nu* and -*na* does not constitute evidence against the suffix variants distinguishing gender. Only *aruse θarna* combines an individual name in °*e* with a patronym in -*na* – the reading and segmentation is hardly contestable, as *aruse* is also otherwise attested (SR-3 *aruśnas*). However, this name pair is also the only one which would contradict the assumption that the Raetic name system does not know metronyms. According to Untermann 1959, 143 (n. 43), metronyms are absent in inscriptions from the area of Brescia, though a few examples can be cited from the Milano area (1960, 300 [n. 99]). In Raetic, most surnames in -*na* are derived from individual names which are not otherwise attested; three have *i* before the suffix, which was above judged to be ambiguous as a gender marker (quite apart from the fact that the underlying auslaut could be °*ie*). *aruse* is the only individual name which occurs with a patronym in -*na* and also as base for a patronym *aruśna*° – unless the latter belongs with the individual names in °*na* discussed above, *aruse* is best taken for a masculine name.

The phonetic shapes of the suffix variants in Raetic deviate from the Etruscan ones in a manner which has not so far been convincingly explained. The Etruscan suffix' feminine variant is transparently derived from -*na* with a suffix -*i*, but this is an imitation of Italic conditions and dates to the time when the family name system emerged (Rix 1995b, 728); the suffix itself may be of IE origin (Agostiniani 1992, 54; Rix 1998, 20; 2004, 951).[316] Raetic -*na* may never have been subject to modification in the first place and represent the original form of the suffix. For -*nu*, Rix 1998, 20 (n. 23) tentatively suggests that the suffix -*u* (2.7.2.1) in its agentive function may have caused a recasting of the suffix in patronyms.

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[316] In Etruscan, this innovation is connected with a functional distribution of case allomorphs (genitive/pertinentive I vs. II), where masculine nomina take class-I endings, feminine nomina class-II endings (Wallace 2008, 88 f.). Originally, Etruscan had no grammatical gender (Rix 1994, 951). This appears to be true also for Raetic, where all patronyms are inflected in class II (-[*a*]*le*), so that this parameter cannot be used to determine gender. See section 2.7.2.2 on irregular allomorphs.

As said above, auslauting °*e*, both after *i* and after consonant, was eliminated in a patronymic derivation (*kastrie*° ~ *kaszrinu*°). In both attested cases where the consonant preceding *e* is *n*, the resulting geminate *nn* is reflected in writing (**eθune* → *eθunnu* and *lumene* → **lumennu* [only Latin *lumennones*, see 2.6.1.1]), unless *n* in the name is part of a nasal cluster (*piθamne* → *piθamnu*, maybe *esimne* → *esminu*). There is no clear evidence for how °*i*, °*a* and °*u* are treated; cf. maybe *esiumninu*, *χevisiana* and *kapaśunu*.

No patronymic suffixes other than -*nu*/-*na* have so far been identified, though the wealth of surname-forming suffixes in neighbouring traditions and in Etruscan strongly suggests that they must be there. Likely name formulae with surnames which do not end in -*nu*/-*na* are:

SZ-14 *φeliturie° sleti°*
HU-7 *ʔekie° metlaini°*
IT-4 *piθiave° χurvi°*
CE-1.1 *lavise śeli*

The first three formulae are inflected in the pertinentive case, and in all three cases the surnames end in °*ile*, i.e. probably an auslaut °*i* or °*ie* plus the pertinentive II allomorph -*le*. CE-1.1 is the most questionable of the examples, but may indicate a surname-forming suffix -*i*. Concerning *metlaini*°, Etruscan has a patronymic suffix -*ni*(*e*), a contamination of vernacular -*na* and borrowed Italic -*ie* (Rix 1995a, 723), but this is hardly an option for Raetic, where we have no evidence for a loan of the Italic patronymic suffix.

A word-final element -*þu* occurs three times at Magrè:[317]

MA-2 *piθanmelkaθurieþu*
MA-5 *piθieikuśiþu*
MA-23 *usθiþu zezeve*

The element is opaque and could also be a grammatical ending (though there are no Etruscan comparanda). Name formulae and single names occur in equal parts at Magrè, and the inscriptions from that find place abound in hapax legomena, so it is not obvious to expect surnames, but it may be observed that all three elements which are suffixed with -*þu* (*θurie*°, *kuśi*°, *usθi*°) may find comparanda in the Transpadanian onomastic pool – provided that the above readings are correct (2.6.1.2). In MA-2 and MA-5, the sequences

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[317] An unlikely fourth attestation in MA-4 (2.5.3.1) is fragmentary in any case.

concerned are preceded by individual names, with short and problematic sequences in between (*lka*ʔ isolated *i*ʔ), while *usθiþu* would be a single name (cf., at Magrè, MA-14 *esiumninu* and maybe MA-16 *valθe*ʔ*nu*), unless the dubious *zezeve* represents an individual name (2.5.5.5).[318]

As already suggested by Rix 1998, 18 [n. 18]), the surname in VN-1 *lavisie lavisealu* appears to be formed with the Celtic patronymic suffix -*alo*-, well attested in Cisalpine Celtic (Untermann 1959, 87;[319] see n. 293). If this is correct, it must be noted that, here, IE -*os* is reflected by Raetic -*u* rather than -*e* – assimilation to the typical Raetic auslaut of patronyms?

To sum up, our picture of the Raetic namescape today is fairly clear in its outlines, but most details require closer inspection. It is not clear whether alternations in auslaut are due to dialectal differences, independent loans of the same foreign name from different sources or at different times, or the use of different vernacular or imported suffixes, and quite how they reflect the bearer's gender; further patronymic (or other surname) suffixes are yet to be clearly identified and put into a Tyrsenian or Transpadanian context. As concerns the onomastic material, Untermann's admirable collection is very much in need of an update which takes our improved understanding of Celtic and Venetic morphology into account; a comprehensive presentation of Etruscan onomastics would also be much appreciated.

2.6.2 Theonyms

Despite the fact that most of the find places of Raetic inscriptions were sanctuaries, we do not know for certain the names of the deities. Unlike, for example, in Venetic, where the name of the adressee/recipient of the votive gift is regularly mentioned in the inscriptions,[320] the theonym does not appear to be an obligatory part of any Raetic dedication formula. We should expect theonyms to appear more often in the same find place or area, being an albeit optional part of a dedication formula (Schumacher 1998a, 92); also, if the

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[318] Markey 2006, 157, who considers ϟ to stand for /d/, reads Celtic names in -*edu*/-*idu* (e.g. CO·48 *plialeθu*, NM·6.1 *seχeθu*, VB·23 *kiketu*); see also Markey & Mees 2003, 140, where the cited Celtic names are explained as cognomina.

[319] Also http://www.univie.ac.at/lexlep/wiki/-al with literature.

[320] *reitia*, named at least thirty-one times at Este (Pellegrini & Prosdocimi 1967 II, 157–161) and *trumusijati*° (sometimes *tribusijati*°), named up to thirty-seven times at Làgole di Cadore (ibid., 183–187), who share the epithet *śainat*° (ibid., 163–166); three inscriptions from Auronzo di Cadore are dedicated to the *maisterator*° (pl.) (Marinetti 2004b, 397–399).

interpretation of the formulaic inscriptions given in section 2.7.2.2 is correct, theonyms ought to be found in benefactive genitives.

The best candidate for a Raetic theonym is *tianu*, which appears four times in the Val di Non. Leaving aside the problematic NO-2 (2.5.2.2), *tianu* occurs in the benefactice genitive *tianu-s* in NO-15 *esumnesi nuþnuale utiku tianus*, where an interpretation as the recipient of the donation is highly likely. SZ-16 *laθurusi tianus* [*a*] *tanin* is also transparent, but the significance of *a* after *tianus* is unclear. *tani*(*u*)*n* is well attested (2.7.3.2), and final -*a* could be a genitive II ending, which would mean a basic form *tianus*. However, a nominative *tianus* has no place in the passive construction of NO-15; also, the generally vocalic auslaut of names makes *tianu* more likely than *tianus*. One might consider a case of recutting, an unusual consonant-final name *tianus* being reinterpreted as a genitive form, but this is not only far fetched, but also too complex a theory to be based on two attestations. The third attestation also has *tianus*:

NO-16 
tianus ? | *taniun*

The text is inscribed on the two sides of a full-plastic statuette of a horse, line 1 beginning at the rump of the horse, line 2 running around the curve of its head. The letters being well legible despite corrosion, the reading itself does not pose any problems. In line 1, upsilon is wedged in before the bulge which represents the leg of the rider; sigma follows after the leg. A character  is inscribed not immediately after sigma, but on the front of the horse's neck. While it might be argued that the writer also avoided the slighter bulge which represents the horse's shoulder, the letter's ultimate position seems even more awkward, access being hindered by the horse's head. Single letter-like marks are often found on bronzes and statuettes, and frequently on the necks of animals (cf. SZ-20), so an interpretation of the character as a workman's mark must be preferred over a reading *tianusa*, despite the fact that – apart from the donor's name *laθurusi* in SZ-16 and *taniun* vs. *tanin* – the texts are identical: 'for Tianu (the gift?)'.[321]

The fact that the name is not attested outside the Val di Non, and its occurrence on three votive objects from sanctuary context (Casalini, Campi Neri), makes an interpretation as a theonym likely. The name is not attested as an individual name in a name formula, which would identify it as a personal name, unless one wants to compare SZ-15.1 *θianu*

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[321] Marchesini 2014a, 137 f. (also MLR 29) ignores the letter in her reading.

(individual name or patronym) – considering the inconsistencies in the spelling of obstruents (2.5.5), it cannot be excluded that the forms belong together. In Roman times, the deity worshipped in the Val di Non was Saturn, whose temple was erected over the Valemporga sanctuary (Gleirscher et al. 2002, 197).

Among the other various names which can be argued to stand in the benefactive genitive in votive inscriptions, two may occur more than once. *θiuθis* is attested in BZ-4 and also arguable in a recently found inscription from the Inntal.

IT-7]ǀ×?(?)×ᚼ1[
]*leθ?(?)θ̣ị*

Three vertical strokes of increasing inclination are damaged in the upper area after the first ×: Λ or Λ is unlikely, as the strokes would intersect at about twice the usual letter height; /‖ might be conjectured. The first two letters might represent the ending of a name in the pertinentive.

CE-1.3 *kusenkus*, the putative recipient of the Situla Giovanelli (2.8.1.6), can be compared to an isolated sequence ᛕΛϟᚼᛙ *kusen* in the petrograph UG-1.1 (2.8.1.9); it is not clear whether and how the two forms relate to each other. Concerning VR-3 *remies*, we are concerned with a well attested individual name, which contradicts the interpretation as a theonym despite the presence of *utiku*. In the absence of a pertinentive, the genitive may here have a different function (2.7.2.2). Attested only once are PA-1 *θaris*, BZ-3 *terunies*, MA-9 *lemais*, MA-6 *θriahis*, MA-14 *asua* – the latter is interpreted as a theonym by Schumacher 2004, 302, but the majority of these names probably refers to beneficiaries, rather than recipients, of the dedication.

The Celtic theonym *taranis* appears to be attested in FI-1 *s a*[| *kakaka*[(?) | *θarani*[? | *saφana* |]*θarani*[? (2.5.7). The name is repeated in lines 3 and 5; however, in line 3 surely, in line 5 probably, *i* is not followed by *s*. Marchesini 2012, 183 suggests that auslauting °*i* in FI-1 indicates an adaption to Raetic onomastics, where vocalic auslauts in the nominative are typical. It must be remarked that *taranis* as an *i*-stem is only attested in Lucan I 446, while Celtic epigraphic sources exclusively have a *u*-stem **taranus* (RIG G 27 ταρανοου [dat.]), also CIL III 2804 *taranucos*, CIL XIII 6094 *taranucnos* and maybe RIB 452 *tanaros*; Holder 1904, 1728; Lambert 1994, 60.87; Delamarre 2003, 290). Unless Lucan's *i*-stem preserves a genuinely Celtic stem variant, a Raetic auslaut in °*i* could not have come about by just dropping an auslauting consonsant, but only by transfer to a native stem class. The presence of at least one letter after *i* remains to be explained – *l* (or *p*) in line 3 cannot well be part of an inflectional ending (either Raetic of Celtic) and would have to be the beginning of another word. Marchesini (181 f.) interprets the sequence *kakaka* as a repetition of alleged Raetic *ka* 'here' (Etr. *eca*/*ca*; 2.7.3.3), and suggests *saφana* (Marchesini: sinistroverse *an/śaφ/tras*) to be a "magic word" (like *abracadabra*; 182). Her interpretation (183) of the whole inscription as an invocation (rather than the more usual dedication) is likely, considering the unusual form, especially the lack of a dedicant.

2.6.3 Toponyms

So far, only one arguable place name may be identified in the Raetic inscriptions: SR-2 *enθu°* (Schumacher 2004, 301). Its combination with *sφura* makes it clear that some sort of reference to a settlement is made, but it cannot be determined whether the genitive phrase *sφuras enθus* is congruent ('of the town Enθu°') or whether the genitive in *enθus* depends on *sφura* ('in the town of *enθu°*'). In both cases, *enθu°* may be a toponym, but in the second case, it may also be a lexeme (or personal name) which serves to specify the town (e.g. in Etruscan AT 1.108 *spureθi apasi* 'in the town[, in that] of the father'). A settlement called *enθu°*, conceivably the home town of the person who deposited the respective votive at the Serso sanctuary in its name, is not otherwise known.

2.7. Language

The Raetic language as documented in inscriptions written in the alphabets of Sanzeno and Magrè has turned out to be much more homogenous than expected (2.3.6). Yet, as is generally the case with fragmentary languages, our knowledge of Raetic is restricted by the limitations of the material, not only in quantity, but also in quality. The prevalent – indeed the only certain – Raetic text type is the dedicational votive inscription, which contains mainly names, beside a handful of formulaic terms. The existence of owner's inscriptions is debatable; in any case, they again yield only names. The same goes for possible funerary inscriptions. The handful of longer and more complex inscriptions remain mostly obscure due to lack of material for comparison; at the other end of the scale, a great number of inscribed characters do not appear to encode linguistic entities and cannot at this point be used for the purpose of investigating the Raetic language. As a consequence, we primarily know personal names, which were dealt with in the previous chapter.

The present chapter is based on the work of Schumacher and Rix,[322] whose publications (especially Schumacher 1998a and Rix 1998) provide progressive lines of argument for the various analyses and methodological commentary. I shall refrain from recounting the chains of argumentation which resulted in Schumacher's and Rix' findings, but instead state our current knowledge (or best guesses) about the Raetic language systematically, always against the backdrop of the Etruscan conditions. The identification of derivational and inflectional suffixes and of lexical items is usually owed to comparison with Etruscan. The nominal inflectional morphology is the best understood part of the Raetic language, though the range of functions of the various cases is often unclear. Apart from the case endings of nouns, our knowledge of Raetic morphology is limited to a few assorted inflectional endings, suffixes and particles.

2.7.1. Phonology

The following section provides an overview of Raetic phonology and, to a limited extent, phonetics. Knowledge of the phonology and phonetics of epigraphically attested languages without living descendants or relatives can be gained from five sources:

– graphematics,
– the spelling of foreign names and lexemes,
– the spelling of vernacular names and lexemes in other, maybe better understood, scripts,
– comparison with related languages,
– typology.

In the case of Raetic, the first source of information – the treatment of the model script, discarding and reallocation of characters and creation of new ones, changes of orthography – cannot be tapped with confidence as long as it is not clear which alphabet(s) did constitute the model(s) for the Raetic ones. All issues concerning particularly questions of phonetics are tied up with issues of spelling and spelling variation, which are discussed in section 2.5.5. As concerns foreign words in Raetic and the Nebenüberlieferung of Raetic language material, data are sparse; as seen above, a considerable amount of onomastic material is shared with neighbouring traditions, but few correspondences are certain, only a small number of elements can be ascribed to a specific language with certainty, and spelling variantion also in other writing traditions muddles the picture. Although it is also only fragmentarily attested, more can be gained for the related Etruscan language by virtue of

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[322] Earlier already Marinetti 1987, 136 f. with an attempt at segmenting VR-3.

the sheer volume of data (and the fact that the model script is known). At this point, it is advisable to use what is known about Etruscan phonetics and phonemics as a starting point for Raetic. Though we do not know exactly how Raetic and Etruscan are related, two demonstrable similarities in the phonemic system – the absence of /o/ and the presence of a dental affricate – indicate that the two languages do not deviate too far from each other at least on the phonemic level.

2.7.1.1 Vowels

Although omikron was a lettre morte in the Etruscan αβ, the αβs for IE languages in Northern Italy revived or acquired the letter from the Greek αβ to spell their /o/. This together with the evident role played by the Venetic αβ as a model for the Raetic ones strongly suggests that the complete absence of omikron from Raetic inscriptions (apart from one Latin-influenced document; 2.8.3) reflects a linguistic reality: Raetic had a four-part vowel system like Etruscan.

	front/unround	back/round
high	*i*	*u*
non-high	*e*	*a*

Tab. 18: The archaic Etruscan (and Raetic?) vowel system according to Agostiniani.

The lack of phonemic /o/ results in increased articulatory leeway for /a/ and /u/. For Etruscan, it has been argued that the archaic vowel system was symmetrical, featuring back/rounded /a/ [ɒ] or [ɔ], as shown in tab. 18, and that lowering and unrounding of /a/ during the 6th c. led to lowering of /u/ during the 2nd/1st c. (Agostiniani 1992, 48). Agostiniani's evidence is criticised by Wallace 2013, 335 f.; an alternative analysis is offered, e.g., by De Simone 1970, 48 f. on the basis of Greek loans into Etruscan. Different solutions for the rendition of non-Raetic *o* indicate that a shift took place in Raetic; whether it can be compared to that suggested for Etruscan by Agostiniani is hard to say. Tab. 19 lists names and name elements attested in Raetic whose (arguable) comparanda in other corpora or reconstructed forms contain *o*.

The onomastic base *volt-*, frequently attested in different names in Este and the Cadore, can be identified as a Venetic element. Seeing that the attestations in Raetic are from Magrè, the element may well be a loan directly from Venetic to Raetic; the spelling in

Raetic *valθ-* shows Venetic /o/ being substituted with /a/ in Raetic. The case seems clear, but is so far the only piece of evidence for IE /o/ ~ Raetic /a/. If *usθiþu* is a name and corresponds to the Venetic base *ost°*, we have Venetic /o/ ~ Raetic /u/ at the same find place. In all other correspondences, IE /o/ also appears as Raetic /u/. The loans from Celtic show /u/ for /o/ in various prosodic contexts: in the head of a composite form in **exoβnos*, as a composition vowel in **u̯innotalos*, auslauting in a suffix in *-alo-*. The evidence of *φausu* ~ *bauso* is not entirely conclusive, as the latter is attested in Latin inscriptions and may be transferred into an *n*-stem, so that it is not certain whether ⟨u⟩ reflects the auslaut of the name in theunidentified IE language whence the name was borrowed into Raetic.

MA-16, MA-17	*v***a***lθ-*	Ven. *v***o***lt-*
MA-23	***u****sθiþu*	Ven. ***o****st°*
NO-15	*es***u***mnesi*	Celt. **ex***o***βnos*
CE-1.5	*vin***u***θalina*	Celt. **u̯inn***o***talos*
VN-1	*laviseal***u**	Celt. *-al***o***-*
NO-7	*φaus***u**	IE *baus***o**
	*-n***u**	*lauisn***o** *tenagin***o** *lumenn***o***nes*

Tab. 19: The Raetic spelling of possible loan names/name elements containing *o*, and Latin-script renditions with ⟨o⟩ of Raetic names/name elements.

The data set is much too small to establish a reliable correlation to chronology, geography or donor language. The difference between Raetic spellings with alpha vs. upsilon may be rooted in the quality of the vowels in the donor languages, in dialectal differences within Raetic, or in the time of the borrowing. Schumacher 1998a, 102 points out that contact with Venetic is older than contact with Celtic, so that – if the Raetic phonetic development parallels that of Etruscan as posited by Agostiniani – names borrowed from Venetic (such as the *volt*-element) may feature /a/ for /o/ because they were borrowed into Raetic at a time when the latter language featured rounded /a/. The younger layer of Celtic loan names (and, coincidentally, Ven. *ost-*) would then have been borrowed at a time when the Raetic back vowels had been lowered, so that Raetic /u/ was now closer to [o] than /a/.[323]

That /u/ in the patronymic suffix *-nu* was rendered with omikron in Roman inscriptions may point in the same direction, though this substitution may also be due to morphological

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[323] See also Markey 2006, 161 f.

considerations – there are no non-neuter nouns in °*u* in Latin; the name *lummenones* shows that Raetic patronyms in -*nu* were inflected as *n*-stems in -*ōn*-. The single instance of omikron in a Raetic context is from an inscription which is strongly influenced by the Latin alphabet (BZ-24; 2.8.3) – the name *ossurie* may well be Raetic, but we have no Raetic-script attestation. Comparison with the rendition of the patronyms suggests that omikron reflects interpretatio latina of lowered Raetic /u/; the presence of upsilon in the same inscription may be taken to indicate allophonic variation of /u/ (stressed vs. unstressed?) – or that omikron does after all reflect a Raetic rounded /a/ in the 1st c. BC.

IE /e/ is regularly reflected by Raetic /e/, e.g. in *klevie* ~ *cleuius* (**kleu̯*-), *enike* ~ *enicus*, *esumne* ~ **exoβnos* (2.6.1.2). Only *φrima* may show IE /e/ rendered with iota, but the case is isolated; the IE language from which Raetic borrowed the name may already have had [i] rather than the [e] which appears in the Venetic form *frema*. The material is clearly too scarce (and the parallels and etymologies too uncertain) to draw reliable conclusions about vowel substitution in Raetic.

In archaic Etruscan, vowels were not distinguished by length, but length possibly became a distinctive feature after long vowels had emerged through monophthongisation (Wallace 2008, 33). There is no evidence for distinctively long vowels in Raetic. Certain diphthongs are also rare; we have evidence for both rising diphthongs known in archaic Etruscan: [ai̯] (PA-1, maybe IT-5 *kaial*, SZ-10.1 *vaiθina*, RN-1 *maieχe*) and [au̯] (SZ-30]*auþile*, SZ-9.1, SZ-87, IT-5 *θauk/χ*-, maybe ST-2 *pitauʔe*).[324] Sequences of *ie*, *ia* and *iu* are more frequent (SZ-8.1 *kaθiave*, SZ-11 *erikian*, SZ-18 *χevisiana*, *tianu* [2.6.2], *taniun* [2.7.3.2] and auslauting °*ie* in numerous individual names [2.6.1.3]), but it is not clear whether these are tautosyllabic falling diphthongs. *ua* only emerges at morpheme borders (-*nu*-*ale*, °*u*-*a*); spellings which graphematically represent the glide in the hiatus (NO-17 *ketanuvale*, probably VR-3 *ratasuva* and MA-11 *esθuva*) show that the syllables are not contracted.

2.7.1.2 Consonants

From comparison with Etruscan, which has two phonemic sets of obstruents – most likely unvoiced stops and unvoiced aspirates – two such sets should be expected in Raetic. Different opinions on the Etruscan articulation and the situation in Raetic are discussed in

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[324] Etruscan spells its [au] with waw ‹av› rather than with upsilon ‹au›.

section 2.5.5, because the situation is obscured by orthographic practice. We would also expect (mainly anlauting) /f/ as in Etruscan, but unless it is reflected by phi as posited by Rix (2.5.5.1), the phoneme is not in evidence. According to the analysis of the obstruent system by Rix, in which /z/ is developed from /k'/, the existence of a Raetic affricate /z/ vel sim. necessitates the presence of the corresponding labial and dental phonemes. That Raetic had a dental (or palatal) affricate to match the Etruscan phoneme is demonstrated by two cognates, *þinaχe* ~ *zinace* and *þal* ~ *zal* (2.7.3), and maybe also by a shared onomastic base *nuþ*° ~ *nuz*° (2.6.1.2). Spelling variations (e.g. ‹*ciz*› vs. ‹*cits*› 'thrice') and the sound's representation by zeta in Greek indicate a dental affricate [t^s] for Etruscan (Rix 1985a, 220; Wallace 2008, 31 f.). Agostiniani 1992, 51 f. argues for a palatal affricate [$t^ʃ$] on typological grounds.

In Raetic, three forms may be adduced for hypo- or hypercharacterised spellings of *þinaχe*: VR-10 *t·naχe*, MA-11 *tinaχe* and CE-1.3 *trinaχe*.[325] The material from the area of Verona, arguably including three instances of the affricate being spelled with zeta as in Etruscan, is discussed in section 2.5.3.3. The spellings with simple dentals indicate a dental sound value and support the equation of Raetic *þ* with Etruscan *z* (Schumacher 2004, 304 f.), but are not enlightening in regard to the phonetic realisation. For *trinaχe*, Rix 1998, 42. 46 suggests that ‹tr› is a compromise spelling for the affricate of a writer who did not have either of the new characters at his disposal. Though Rix does not argue his point, the rationale behind a digraph ‹tr› would be to assume a pronunciation of Raetic /r/ as an apical trill [r], used by the writer to convey affrication of the dental stop.[326] Rix 1998, 46 f. prefers to assume a realisation of the Raetic affricate as [$t^ʃ$] (with reference to SR-9 *tśierisna*, but see section 2.5.4.2) or [$t^θ$] (based on his assumption that the runes ↾ and ᚦ are derived from ↑ and ᛋ, respectively [3.1]). The only non-Etruscan comparandum for a word spelled with *þ* in Raetic is Celtic **u̯ats*- for SZ-5.1 *vaþanu* (Schumacher 1998a, 98 [n. 14]), the correspondence with the tau gallicum phoneme supporting an interpretation of the Raetic phoneme as a dental affricate.

The sibilants spelled with sigma and san are likely to correspond to the Etruscan dental and palatal sibilants, sigma denoting the dental phoneme (2.5.6). While sigma occurs in most possible contexts (#*s*V, #*s*C, V*s*V, V*s*C, C*s*V, C*s*C, V*s*#), san is restricted to positions

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[325] MA-10 *pinake* must be regarded as a scribal error (see n. 359), which sheds doubt upon the relevance of (retrograde) ᛋ in *piþie* – Schumacher 2004, 312 (n. 192) suggests that ᛋ reflects a recent palatalisation.

[326] Schumacher 2004, 306 rejects the notion of a compromise spelling and interprets *trinaχe* as a different verb with similar meaning.

in the anlaut before and between vowels (of no particular quality, though high vowels dominate), and before *n*. The latter context may indicate a palatalisation phenomenon *s* > *ś* / _*n*, which is also known from Northern Etruscan (Eichner 2012a, 25 [n. 43]). The only word attested in what could be considered the underlying and the palatalised form is the individual name *aruse* (SR-6), appearing as a patronym or individual name with suffix *-na* *aruśnas* (gen.) in SR-3.1. At least three more patronyms in *-nu*/*-na*, all attested in the Val di Non, have san before the suffix (*kaniś-nu*, *reiθuś-nu*, *taś-na*); in two cases (*kaniś-nu*, *reiθuś-nu*) the underlying individual name is formed with an *s*-suffix like *lavise* (2.6.1.2).[327] However, sigma also occurs before *n* (*terisna*) and other consonants. In Northern Etruscan, palatalisation of /s/ appears to have been widespread, including many contexts which have sigma in Raetic, for example *s* > *ś* / #_*p*, *t*, *k* and the Lex Wallace *s* > *ś* / _*i*, *j* (Eichner 2011, 69–77; 2012a, 24 f. [n. 43]; Rix 1983, 136–139). The tentative equation VR-14 *lav*[*i*]*śa* ~ *lavise* may be seen as evidence for palatalisation of *s* after *i*, corresponding to the *laris*-rule in Northern Etruscan (Eichner 2011, 76; 2012, 30 f.), unless san does in fact denote the dental sibilant in the area of Verona (2.5.6). Whether this would be a Raetic phenomenon or due to Etruscan influence is open to conjecture.

Raetic had two nasals /n/, /m/, two liquids /r/, /l/, and two glides /i̯/, /u̯/. Of the glides, only /u̯/ is reflected on the graphematic level, which is a relict from Greek writing (1.3.2.5) – according to Rix 2004, 948, the Etruscan glides are allophonic. Sporadic heta indicates the presence of a glottal fricative; the often uncertain segmentation of the inscriptions concerned allows no conclusions on whether it is predominantly anlauting, as in Etruscan. MA-1 *helanu* is the only clear anlauting case; cf. also enclitic *-hi* according to Rix' segmentation of VR-3 (2.7.2.2). SR-1/SR-7 *viθahur*, MA-6 *θriahis* and PU-1 *kalaheprusiahil* are opaque and may have to be segmented further. BZ-5 *lah* and RN-2 *kuhilina* are unclear, especially the former may be para- or pseudo-script.

2.7.2. Morphology and morphosyntax

2.7.2.1 Verbal and deverbal forms

The only identified verbal ending is that of the active 3rd preterite *-ke*, formally identical to its Etruscan counterpart *-ce*/*-ke*.[328] It is only securely attested in the word *þinaχe*/*þinaχe* (~ Etr. *ẓinace*; 2.7.3.1) and, indirectly, in *ku*-participles (below). All other possible attestat-

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[327] Cf. also BZ-4 *pevaśniχesi*.

[328] Etruscan verbs do not inflect for person or number (Rix 2004, 956; Wallace 2008, 71).

ions are doubtful, being hapax legomena of unclear syntactical function ending in °*ke*/°*χe*: RN-1 *laseke*, *maieχe*, SZ-22.1 *like*, possibly MA-4]*eiluke*[. As the two forms in RN-1 can hardly be two finite verbs, not least because -*ke* would be spelled differently, the initial *laseke* is best interpreted as an individual name, while *maieχe*, spelled with the allograph which is more frequently used for the preterite ending (2.5.5.2), may well be a verbal form: 'Laseke X-ed'. Unlike *maieχe*, *like* has the less commonly used kappa and appears beside a name *perkusiale* in the pertinentive, so that we would not expect an active verb form in any case. Of course, since the inscription may be incomplete (2.8.1.4), there is no saying whether further syntactic elements could not shed light on the construction. The spelling variation kappa vs. chi does not appear to reflect verbal voice, as it does in Etruscan. The fragmentary sequence]*eiluke*[is altogether more likely to be the remains of an individual name in °*ei* followed by *luke*°, and does not (pace Markey 2006, 151) provide an attestation of the preterite base for the *ku*-participle *eluku*.

ku-participles or verbal nouns are non-finite verb forms derived from preterites in -*ke* with a suffix -*u* (→ -*ku*), which, in the case of transitive verbs, function as passive preterites in nominal sentences (Rix 1998, 39). While the formation is well known from Etruscan (where such participles are also derived from other verb forms, e.g. *mul-u* 'given, gift'; see Rix 2004, 959 on the specific functions), neither of the two attested Raetic words in -*ku* (*utiku*, *eluku*) has a certain Etruscan cognate (2.7.3.2).

2.7.2.2 Nominal inflection and case functions

As shown in tab. 20, a considerable number of the nominal inflectional endings of Etruscan are attested in Raetic. The table gives three paradigmata: the endings reconstructed for Proto-Etruscan (pre-apocope, following Rix 1985a, 223–227), the endings attested in Etruscan inscriptions and the endings attested in Raetic inscriptions. While the casus rectus (nominative/accusative) has a zero morpheme and there is only one allomorph for the locative, the genitive, and consequently the cases which are based on it (ablative = genitiuus genitiui,[329] pertinentive = locatiuus genitiui in Eichner's terminology), have two allomorphs each.

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[329] Differently Steinbauer 1999, 71, who analyses the ablative's -*s* as a postposition.

	Nom./Acc.	Locative	Genitive	Ablative	Pertinentive
Etruscan reconstr.	*-Ø	*-i	I *-si	I *-si-s	I *-si-i
			II *-la	II *-la-s	II *-la-i
Etruscan attested	-Ø	-*i*	I -*s*	I -*s* (+uml.)	I -*si*
			II -*a*, -(*a*)*l*	II -*las*	II -(*a*)*le*
Raetic attested	-Ø	-*i*$^?$	I -*s*	I -*s* (+uml.)	I -*si*
			II -*a*$^?$		II -(*a*)*le*

Tab. 20: Case endings in Etruscan and Raetic according to Rix.

The casus rectus marks the subject, presumably also the predicate and direct object as in Etruscan (Rix 2004, 952). Personal names in the casus rectus appear quite frequently. Names on votive objects accompanied by finite verb forms (usually *þinaχe*) indicate that the casus rectus marks the subject, i.e. the donor of the votive gift (cf. Schumacher 1998a, 91–93):

SZ-1.1	*lasta φirima þinaχe χika śiχanu*
MA-8	*reiθe muiu þinaχe*
MA-10	*piþie ker pinake*

In SZ-1.1, the segmentation, number and interrelation of the onomastic elements is not quite clear (2.8.1.3); both inscriptions from Magrè contain short opaque elements.

SZ-1.1	‘Lasta, Φirima [and] Xika Śiχanu donated’ ?
MA-8	‘Reiθe donated *muiu*’
MA-10	‘Piþie donated[330] *ker*’

Inscriptions which contain names in both the casus rectus and the genitive are discussed below. Other inscriptions on votive objects (bronzes and antler pieces) omit the verb:

SZ-2.1	*φrima remi visteχanu*
SZ-5.1	*vaþanu reiθuśnu*
SZ-8.1	*kaθiave*
SZ-10.1	*χeli vaiθina*
SZ-15.1	*lasta θianu esiunne pitie kapaśunu*
HU-5.1	*lauste*
HU-6	*taevvtarie*
NO-11	*piri kaniśnu*

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[330] *pinake* probably misspelled for *þinake*; see n. 359.

NO-19	*velθie*
MA-1	*piθamne helanu*
MA-16	*valθe?nu*
MA-18	*knuse susinu*
MA-19	*lasθe φutiχinu*[331]
SR-5	*φrima piθamna*
SR-6	*aruse θarna terisna*
VN-1	*lavisie laviseal u*
NO-7	*φausu*
VR-1	*tinesuna*

Most of these are full name formulae, but some are single names, which suggests an interpretation as donor’s names also for the numerous single names in the casus rectus on assorted objects (cf. Schumacher 1998a, 93), though for some of those (particularly on the Ganglegg bones and bone points, whose function is somewhat obscure; 2.8.1.5) owner’s inscriptions cannot be quite excluded (cf. Rix 1998, 27).

SZ-31	*remina*
BZ-9	*piθame*
BZ-14	*ruśie*
PU-4	*χarse*
VN-9	*lavise*
VN-10	*laθur lumene*
VN-11	*lumene*
VN-13	*munie*
VR-7	*kari*
VR-13	*larie*
VR-14	*lav(i)śa*
AS-14	*φeχe*

Names in the casus rectus also appear on stelae and slabs, where they would be expected to name the deceased.

BZ-10.1	*tnake v*$^{?}$*iθamu laþe*
BZ-24	*ossurie*
NO-10	*rileke:sa*
RN-1	*laseke maieχe*

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[331] Maybe also MA-2 *piθanme lka θurieþu* and MA-5 *piθie* (*i*) *kuśiþu* (2.6.1.4).

In the latter two cases, it is not quite clear that we are concerned with gravestones; the presence of (probably) a verbal form *maieχe* in RN-1 may indicate a different text type.

In nominal lexemes, the null morpheme of the casus rectus can be conclusively argued in only one instance, where a plural ending marks the nominal base (SZ-4.1 *φut*[*e*]-*Ø*-*r*). Another possible case is *aχvil*, if correctly interpreted as a noun, and maybe *kaial* (2.7.3.2). The functions of these elements in the texts in which they appear cannot at this point be determined. Predicates may not be attested in Raetic, but *φut*[*e*]-*Ø*-*r* might be a direct object.

Locatives in -*i* have not so far been clearly identified, but *aχvil* occurs with following *i* three out of four times (SZ-98, BZ-4, SR-1 *aχvili*), unfortunately never in inscriptions with word separation. Another possible case is VR-3 *tanini* (2.7.3.2).[332] In Etruscan, the locative is not only the case of place and time, but has also directive and instrumental function (Rix 1985a, 224).

The genitive I -*s* is amply documented in Raetic;[333] the identification of the genitive II is more problematic. The existence of a genitive II in Raetic would be expected because of the use of the pertinentive II -(*a*)*le*, for which it historically provided the base. The genitive II poses some difficulties even in Etruscan. In archaic Etruscan inscriptions, the ending appears as -*a* (examples in Wallace 2008, 46), but from the first half of the 6th c. onward it gradually begins to appear as -*al*, later just -*l* with words in stem-final nasal + *s* (Wallace 2013, 331 f.). According to the system elaborated by Rix, in which the pertinentive and ablative endings are derived from those of the genitive, -*l*, being part of the pertinentive and ablative endings, must be historical; its interim disappearance remains to be explained. Rix 1985a, 126 f. proposes that *l* was lost in the auslaut (where it came to stand after prehistoric apocope of final *a*)[334] after back/rounded *a*, only to be later restituted on comparison with the ablative and pertinentive endings; he later (1998, 28) subscribes to Agostiniani's theory (1993, 26–28) that auslauting *l* was just not spelled and only reemerged in writing when *a* was unrounded in the 6th c. (2.7.2.2).[335] The second problem concerns the

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[332] Rix 1998, 27 also considers BZ-4 *ipi perisnati* [*iti terisnati*].

[333] E.g. SZ-87 *pitis*, BZ-2 *enikes*, BZ-3 *terunies*, BZ-4 *θiuθis*, VN-8 *χaris*, CE-1.4 *kusenkus*, VR-3 *remies*, *kvelisanes*, PU-1 *φelzuries*, *klu?θurus*, IT-2 *χaisurus*, WE-1 *lavises*, SR-2 *sφuras*, *enθus*, PA-1 °*θaris* (unclear segmentation).

[334] The prehistoric forms of the endings of both genitive I and II can, according to Rix, be inferred from the form of the secondary endings of the pertinentive and ablative.

[335] Differently Wallace 2013, 337 f., who suggests that final *l* may have been reintroduced on the basis of contexts in which it had been protected from loss by enclitic elements.

question of where the genitive II ending acquired the *a* which precedes *-l* in the first place – the context of the allomorph with *a* appears to be determined both phonotactically (stems in *-l*) and semantically (certain names); cf. the contexts of *-le* vs. *-ale* of the pertinentive II (below). Rix 1985a, 126 assumes that *a* is a generalised stem vowel.

The genitive II – in any form – cannot be quite as clearly identified in Raetic as the genitive I, but there are a number of plausible candidates in *-a*: NO-1]*ukinu-a*[(possibly pertinentive *-ale*), SZ-24]*θnasleθu-a* (probable segmentation]*θna sleθua*), BZ-3 *sχaistal-a*, and particularly VR-3 *ratasu*(*v*)*-a* (Rix 1998, 34; with the glide in the hiatus spelled out) and MA-17 *asu-a* (Schumacher 2004, 302).[336] In MA-13 *essθua* (*θel*)*pa?inu-a*, the two forms in *-a* would appear to agree (Schumacher 2004, 302). Rix 1998, 29 points out that the non-spelling of *l* must be conditioned by the same phonetic situation in Raetic and Etruscan, but that the latter may be due to parallel developments. The only possible case of a genitive in -(*a*)*l* is *kaial* in PA-1, but the base is opaque[337] – *l* may be a stem-final consonant (cf. *aχvil*). The distribution of the two genitive allomorphs in Etruscan is governed by a phonotactic rule for praenomina/individual names, viz. the genitive II was only used instead of I in names with an auslaut in a dental aspirate or fricative (Rix 1985a, 227; Wallace 2013, 330). The distribution of allomorphs in Raetic does not follow the same rules as in Etruscan, but in both languages, the genitive II is the less common class. In Raetic, the genitive II almost exclusively appears after *u*, which agrees with the context of the pertinentive II, which is mainly used for patronyms in *-nu* (below).

Functionally, the Etruscan genitive is the case of nominal dependence; Rix 1985a, 226 suggests that both allomorphic variants developed from adjectives of appurtenance, which allowed them to serve as bases for other cases. Beside possession and affiliation, the genitive can have benefactive function (Rix 1998, 226; Wallace 2008, 96 f.); according to Agostiniani 2011, 38 f., it can also mark the donor in passive constructions (much as in English, *Stephen's present* can refer to 'the present from Stephen' and 'the present for Stephen'). A benefactive function is most likely for Raetic, at least in the longer votive inscriptions. The semantics of the Raetic genitive will be further discussed below together with those of the pertinentive.

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[336] See 2.6.2 on the question of *tianus-a*.

[337] Schumacher (p.c.) suggests an individual name *kai*° ~ Etr. *cae* (a loan from Lat. *gaius*, or, with Benelli 2011, 197, developed from archaic *kavie* ~ Ital. **gau̯i̯os*).

The pertinentive is the most frequent oblique case in Raetic inscriptions, pertinentive I -*si* being used with individual names, pertinentive II -(*a*)*le* mostly with patronyms in -*nu*. The pertinentive is historically a locative to the genitive, hence the complex pertinentive endings reflect both those of genitive and locative. Pertinentive I is based on genitive I *-*s*(*i*), historically *-*si*: *-*si*-*i* > *-*si*; pertinentive II is based on genitive II *-*l*(*a*), historically *-*la*: *-*la*-*i* > *-*le*.[338] In this context, the auslauting vowels survived apocope (while being lost in the respective genitives). As might be expected, the use of the pertinentive I corresponds to that of the genitive I, i.e. it is the preferred allomorph for individual names.[339]

The pertinentive-II ending most frequently appears as -*ale* (cf. the Etruscan allomorph -*al* of the genitive II) after the patronymic suffix -*nu*[340] and maybe individual names which end in °*nu* (2.6.1.3). Otherwise, the allomorph with *a* occurs once with an individual name SZ-22.1 *perkusiale* (unless it is *perkusia*-*le*?) and possibly in MA-12 *estuale*, PA-1 *eθsuale*, if these are pertinentive forms (2.6.1.2). The allomorph -*le* is marginal, appearing in HU-7 *metlainile*, SZ-14 *sletile*, IT-4 *χurvile*, SZ-30]*auþile* and ST-4 *azile*. *azile* is an individual name in a two-part formula; it is not clear why the pertinentive II was chosen over the expected pertinentive I -*si*. The function of the other four examples is not quite clear, but *metlainile*, *sletile* and *χurvile* may be interpreted as surnames of a special (non-patronymic?) type (2.6.1.4). The context of]*auþile* is too fragmentary to allow conclusions.

In Etruscan, the pertinentive is attested in contexts which are in accordance with its morphological make-up – also in recent inscriptions, e.g. AT 1.108 *zilaχnce spureθi apasi* ‘held the praetura in the town[, in that] of the father’ and Ta 5.5 *zilci velusi hulχniesi* ‘in the praetura[, in that] of Vel Hulcnie’, the attribute in the genitive agreeing with the head in the locative. Also semantically transparent are pertinentives in agentive function in workmen’s inscriptions like Ta 6.14 *serturiesi* ‘[made] in Serturie’s [workshop]’. The term *pertinentive* was chosen by Rix in reference to a Greek “genitive of appurtenance” so named by Debrunner (Agostiniani 2011, 25 f.), since he assumed an extended meaning ‘in [the

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[338] See also Agostiniani 2011, 20–22.

[339] SZ-9.1 *kuninasi*, SZ-14 *φelituriesi*, SZ-16 *laθurusi*, WE-3 *lastasi*, NO-3 *φelturiesi*, NO-15 *esumnesi*, ST-1 *kastriesi*, ST-2 *pitaunesi* vel sim., ST-3 *esimnesi*, HU-7 ?*ekiesi*.

[340] NO-3 *φelvinuale*, NO-15 *nuþnuale*, WE-3 *piθamnuale*, ST-1 *eθunnuale*, ST-2, ST-3 *kaszrinuale*, ST-4 *θaθivnuale*, ST-5 (*hes*[*i*])*tulanuale*, ST-6 *estanuale*; with damaged or unsegmentable bases AK-1.1, AK-1.2, AK-1.7, AK-1.11, AK-1.19, AK-1.21.

sphere of] X' for the complex Etruscan case. However, the Etruscan locative being also a directive, the pertinentive could accordingly mean not only 'in [the sphere of] X' but also 'to [the sphere of] X' and thus function – like the IE dative – as indirect object and benefactive (Rix 1985a, 227[341]). While active constructions provide an identifiable agent in the nominative (e.g. Cr 3.15 *mini spuriaza °rnas muluvanice alśaianasi* 'Spuriaza °rnas gave me to Alśaiana'), the pertinentive is considered ambiguous in passive constructions, e.g. Fs 6.1 *mi zinaku larθuzale kuleniieśi* 'I was made by/for Larθuza Kulenie' (Rix 1985a, 227; Wallace 2008, 97–99; Agostiniani 2011, 23). According to Rix (ibid.), this inconvenient ambiguity in one of the main text types was the reason for the abandonment of the pertinentive after the 7th c. except in the aforementioned transparent functions.

The main reason for considering the possibility of an agentive function of the Etruscan pertinentive in the first place is that generally in passive constructions (without a pertinentive), a single person mentioned is the agent, referred to in the ablative (Agostiniani 2011, 32) – such an agentive function cannot, apparently, be clearly demonstrated for the pertinentive in any inscription. Agostiniani 2011, 26–40, objecting to the possibility of pragmatically opposite meanings for one morphological category, argues that a benefactive function of the pertinentive in texts which do not feature an unambiguously identifiable agent can be demonstrated in gift inscriptions of the type 'a beautiful thing for a beautiful person' (not 'from a beautiful person', assuming that the donors do not indulge in "autocelebrazione"[342]). He concludes that the pertinentive is not ambiguous, but always refers to the recipient or beneficiary in passive constructions, having systematically taken over one of the functions of the dative (which is absent as a morphological catergory) in marking the indirect object.

Unfortunately, Agostiniani's attractive proposal cannot easily be reconciled with the Raetic evidence. Unlike the widely secular Etruscan literacy, which may even have originated through gift exchange with Greeks (1.3.2.6), Raetic writing culture was rooted in the cultic sphere – the numerous and various two-part name formulae including a patronym in the pertinentive which dominate the votive inscriptions can hardly name so many deities, but must be expected to refer to the donors. The only name which can be argued to be a theonym with some semblance of certainty appears in the genitive (*tianus*; 2.6.2). How-

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[341] Differently Steinbauer 1999, 171–176.

[342] But cf. the archaic Latin Duenos-inscription: *duenos med feced* [...] *duenoi* 'a good one made me [...] for a good one', a playful variation of the formula referred to by Agostiniani (according to Rix 1985b, 197 f.).

ever, there are many exceptions and inconsistencies; also the possible inclusion of what De Simone terms “beneficiario”, i.e. the party in whose name or for whose sake the offering is made, complicates the situation. In the following, I will try to present the relevant material in groups to see whether the functions of pertinentive and genitive in Raetic can be to some extent determined. I will assume that these functions are consistent, both because I agree with Agostiniani about the implausibility of ambiguous categories (not, of course, in language generally, but in short established text formulae), and because we have little chance, otherwise, to reach any conclusions about the inscriptions’ meanings. Still, the possibility that the functions of the cases are different in different traditions, and/or that they changed over time, must be kept in reference.

We have five inscriptions which consist in passive constructions, including deverbal nouns in *-ku* (2.7.2.1) with the only actant referred to in the pertinentive:

WE-3	*lasta-si elu-ku piθamnu-ale*
NO-3	*φelturie-si φelvinu-ale uti-ku*
NO-17	*ketanuv-ale uti-ku*
SZ-14	*φeliturie-si elu-ku sleti-le*[343]
HU-7	ʔ*ekie-si uti-ku tanin metlaini-le*

Four of them (WE-3, NO-3, SZ-14, NO-17) are written on objects which are manufactured specifically for use as votives, one (HU-7) on an object of ritual practice, which is also unlikely to bear a secular gift inscription; all feature personal names in the pertinentive which, in comparison with the active constructions mentioned toward the beginning of this section (‘X donated’), must be interpreted as those of the donors:

WE-3	‘sacrificed by Lasta Piθamnu’
NO-3	‘given by Φelturie Φelvinu’
NO-17	‘given by Ketanu’

Also relevant are a number of petrograph pertinentives without any (de)verbal forms (ST-1, ST-4, AK-1.6, maybe also ST-2 and 3; 2.8.1.9), which are most likely of votive character, and contain some identifiable and etymologisable personal names, as well as IT-4 *pitiavesi χurvile*. The interrelation of the names in SZ-14 (2.8.1.3) and HU-7 is not entirely clear. The texts are structured similarly: an individual name with the pertinentive I-ending (*φelituriesi*, ʔ*ekiesi*), a deverbal noun (*eluku*, *utiku*) and an element with the pertinentive-II

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[343] See section 2.8.1.3 on *karataśna*.

ending which may constitute a name formula together with the individual name (*sletile*, *metlainile*; 2.6.1.4).

SZ-14 ‘sacrificed by Φeliturie Sleti’
HU-7 ‘given by ?ekie Metlaini *tanin*’

NO-17 *ketanuvale* is isolated; it formally qualifies as a patronym, but could also be an individual name (2.6.1.3). The same goes for BZ-3 *laśanuale*, also unaccompanied by a second pertinentive form. It cannot be entirely excluded that these names are theonyms like – probably – the formally similar *tianu* as long as the bases *keta*° and *laśa*° are not certainly attested separately, but other inscriptions show that donors can be referred to only by one name. BZ-3 is one of five inscriptions which have both pertinentive and genitive forms; the juxtaposition of the two cases suggests that the functions of pertinentive and genitive were systematically differentiated.

NO-15 *esumne-si nuþnu-ale uti-ku tianu-s*
SZ-16 *laθuru-si tianu-s* [*a*] *tanin*[344]
BZ-3 *taniun laśanu-ale uti-ku terunie-s sχaistal-a*$^{?}$
BZ-4 *tevaśniχe-si uti-ku θiuθi-s aχviliti terisna θi*
PA-1 *eθsu-ale uθi-ku kaial nakina θari-s akvil*[345]
WE-4]*niχesi ta elu-ku*[
SZ-30 *ka*[ ]*isθi puχe tumi-s p*[ ]*θiak*[ ]*auþi-le elu-ku*

Of these, all but one have only individual names in the pertinentive (SZ-16 *laθuru-si*, PA-1 *eθsuale*, BZ-4 *tevaśniχe-si* [segmentation?]). NO-15 is the only testimony which has a complete name formula in the pertinentive (*esumne-si nuþnu-ale*) in combination with a genitive *tianu-s*. *tianu*° is the best candidate for a Raetic theonym by virtue of the fact that it appears three, maybe four times in the same case in inscriptions on votive objects from the Val di Non (2.6.2). On this basis, the genitive can be identified as the case which marks the recipient or beneficiary of the gift (benefactive genitive). In SZ-16, the presence of, again, *tianus* in the genitive makes the above interpretation the only feasible one (despite the missing verb form).

NO-15 ‘given by Esumne Nuþnu for Tianu’
SZ-16 ‘by Laθur for Tianu *tanin*’

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[344] See 2.6.2 on the function of *a*.

[345] PA-1 is included conditionally; see 2.6.1.2 on the possibility that *eθsuale* is not a pertinentive, but casus rectus.

BZ-3, BZ-4 and PA-1 may be interpreted with the cases in the same functions as in the above inscriptions, though the more additional elements, the less certain the interpretation – texts which do not follow the short dedication formulae may be constructed differently.

BZ-3	‘*taniun* given by Laśanu for Terunie *sχaistala*’[346] ?
BZ-4	‘given by Tevaśniχe for Θiuθi *aχviliti terisna θi*’ ?
PA-1	‘given by Eθsu° *kaial nakina* for Θaris *akvil*’ ?

SZ-30 also has a genitive *tumis* beside a pertinentive]*auþile*, but the inscription is too fragmentary to give any clues about its syntactical structure; the same goes for WE-4.

Agostiniani 2011, 38 f. interprets a similarly constructed Etruscan inscription OA 3.10 *mi mulu araθiale θanaχvilus prasanaia* the other way round, viz. as ‘I was given to Ara(n)θ by Θanacvil Prasanai’ (claiming that the Etruscan genitive could do precisely what he refuses to believe for the pertinentive, viz. mark the donor or the recipient depending on context). As said above, I principally agree with Agostiniani in that I am hard pressed to think that a morphological category, even if it were multifunctional in everyday speech, should have widely different, even opposite meanings in short formulaic inscriptions. Still, the fact remains that the decision to allow only one function for the pertinentive results in opposite meanings in Etruscan and Raetic. Rix 1998, 30–33, in accordance with his ambiguous Etruscan pertinentive, allows for two different meanings in Raetic as well, and interprets the pertinentive forms in BZ-4 (*śniχesi* [his segmentation]) and PA-1 (*eθsuale*) as benefactives (and the respective names as theonyms), while the agents (donors) in these inscriptions are supposed to be referred to by the genitive forms (*θiuθis* and *aθaris* [his segmentation],[347] respectively). The latter assumption is problematic, as genitive forms appear beside names in the casus rectus and active verb forms, where they can hardly refer to donors (see below). The pertinentive, on the other hand, is never part of active constructions, which would be expected at least sporadically if it could refer to the recipient. An originally ambiguous complex case may have acquired more specific semantics in the two languages, with opposite outcomes maybe depending on the focus of different functions of the locative according to Rix (locative vs. directive).

One, possibly two names are attested in both genitive and pertinentive in Raetic: SZ-14, NO-3 *φel*[*i*]*turiesi* vs. PU-1 *φelzuries*; MA-11 *esθuva*, MA-13 *essθua* vs. MA-12 *estuale*,

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[346] If *sχaistala* is a genitive as well, it may agree with *terunies*, e.g. as an epitheton or title.

[347] Rix compares TV-1.1 *aθare*.

PA-1 *eθsuale*. On the latter group see 2.6.1.2. PU-1 stands out as one of the few longer inscriptions which do not have any recognisable syntactic structure – it being entirely obscure, no inferences can be drawn about the use of *φelzuries* and the other genitive form *kluʔθurus*. The inscription on the beautifully decorated belt plaque is indeed one of the few arguably secular inscriptions in the corpus – on an object of use, a votive inscription is not obvious (a profane gift?), but cannot be excluded (secondary use as a votive). Other inscriptions which feature genitives unaccompanied by pertinentives (apart from the ones with isolated genitive forms listed above) include the following:

CE-1.4	*kusenku-s trina-χe*
MA-9	*pitale lemai-s þina-ke*
MA-6	*piθie metinu θriahi-s*
MA-11	*esθuv-a θina-χe*
MA-17	*klevie valθikinu asu-a*
SR-2	*]eʔeθinu sφura-s enθu-s*

In MA-9, *pitale þina-ke* is a straight-forward sentence with a nominative and active verb form (2.7.2.1); the genitive element *lemai-s* can only refer to the recipient or beneficiary, showing that the genitive can appear in benefactive function also in active constructions (which, according to Rix 1998, 43, is not the case in Etruscan). CE-1.4 also has a finite verb form to accompany its genitive; the other four sequences on the situla all name persons in the casus rectus. Any or all of these can be taken to provide the subject(s) – a joint offering?[348] MA-6 and MA-17 probably have a similar meaning, but omit the verb. Schumacher 2004, 302 interprets MA-17 accordingly, with *asu°* as a theonym. The genitive *esθuv-a* in MA-11 remains doubtful (2.6.1.2) – if the form is a genitive, the inscription leaves out the actual donor in favour of the beneficiary, unless – as suggested by Schumacher 2004, 305 – the donor's name is lost with the missing fragment(s) of the antler piece to the left of *esθuva*.

CE-1.4	'donated for Kusenku°'
MA-9	'Pitale for Lemai°'[349]
MA-6	'Piθie Metinu for Θriahi°'

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[348] CE-1.5 *φelna vinuθalina* is the only complete name formula; the isolated CE-1.2 *velχanu* may be patronym or individual name, just like CE-1.3 *lupnu*, which would be expected to belong with the individual name *piθiave* if it were not for the fact that in all certain Raetic name formulae, the individual name precedes the patronym. CE-1.5 *laviseśeli* contains the well attested name *lavise*; *śeli* might belong with the putative surnames in *-i* (2.6.1.4). See section 2.8.1.6.

[349] Thus also Schumacher 2004, 303.

MA-11 ‘donated for Esθu°’
MA-17 ‘Klevie Valθikinu for Asu°’[350]

While *kusenku°* on the Situla Giovanelli might be a theonym (cf. UG-1.1 *kusen*?), the number of once-attested names in the genitive at Magrè renders an interpretation of the ones mentioned as deities not entirely likely. The formula might instead include a reference to other individuals as beneficiaries (‘in the name of X’; thus Schumacher 2004, 300–306, pace Rix 1998, 42); indeed, the same may be the case for any of the once-attested genitival names in passive constructions. A reference to the entity in whose name an offering was made is specifically assumed for the sequence SR-2 *sφuras enθus* by Schumacher 2004, 301: a phrase in the benefactive genitive, referring not to the recipient of the donation, but to the beneficiary, the township of Enθu. The structure of SR-2 is then basically the same as in those Magrè-inscriptions which omit the verb, here with the name of the donor damaged.

SR-2 ‘°e( )?eθinu for the township (of) Enθu’

This option would serve to explain the isolated genitives as well as the (potential) full name formulas in the genitive. Isolated genitives (BZ-2 *enike-s*, WE-1 *lavise-s*, IT-2 *χaisuru-s*, VN-8 *χari-s*) could of course be owner’s inscriptions (thus Rix 1998, 27); none of them are written on outright votive objects. The only exception is SR-3 *aruśnas* on an antler votive, which can hardly be anything other than the name of a beneficiary (especially since the underlying *aruse* features as an individual name in SR-6). If the others are also votives, the various names are as unlikely to refer to deities as the ones at Magrè and Serso. Venetic testimonies from sanctuary context provide parallels for votive texts which mention only the deity as recipient of a gift (in the dative, e.g. Ca 32). However, none of the respective Raetic finds comes from sanctuary context, and they all have comparanda in personal names within the Raetic corpus or otherwise (2.6.1.2). It may be considered that some of these inscriptions name only the beneficiary of the votive gift. Beside the single names, we have one fairly certain and two possible, though not altogether likely, name formulae in the genitive:

MA-13 *essθu-a θelpa?inu-a*
AV-1 *tipruχnu lavisez*
SZ-87]*esminu pitis θauχkaana*

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[350] Thus also Schumacher 2004, 302.

In the context of the Magrè inscriptions discussed above, MA-13 may also name only the beneficiary of the donation.

MA-13 ‘for Essθu° θelpa?inu’[351]

On the problematic reading of the Sondrio-alphabet AV-1, see section 2.8.2 – the relevance of ⟨z⟩ is uncertain, but if it belongs with the text, the inscription contains two name elements which do not agree: *tipruχnu* in the casus rectus, *lavisez* in the genitive. In SZ-87, *θauχkaana* is opaque (another patronym in the casus rectus?), but again two name elements *esminu* and *pitis* appear in the casus rectus and the genitive, respectively. Both inscriptions are conspicuous for containing one form in °*nu*, which qualifies as a patronym, with one oblique element – the formulae may belong with those in which only the individual name is inflected (2.6.1.1) and would then be interpreted as naming the beneficiaries. However, in both cases the patronym would precede the individual name, which would be unusual – the inscriptions are probably better interpreted as following the pattern of the other Magrè inscriptions:

AV-1 ‘Tipruχnu for Lavise’
SZ-87 ‘Esminu for Piti *θauχkaana*’[352]

The fact that the names which appear in the genitive are well attested individual names and hardly theonyms supports the theory that the benefactive genitive refers to the beneficiary rather than the recipient (deity), at least in the case of SZ-87 – a profane gift is as unlikely for a bronze as is an owner’s inscription. An interpretation as a profane gift inscription may be considered for AV-1 on a silver ring.

Even more difficult is VR-3, the only text which contains a *ku*-participle but no pertinentive,[353] and instead up to three arguable genitives:

VR-3 *tanin-i*$^{?}$ *uti-ku remie-s-hi ratasuv-a-k-hi kvelisane-s*

The three potential genitive forms are *remie-s*, *ratasuv-a* and *kvelisane-s*. Unless the agent (the donor) is for some reason omitted, at least one of these elements must have agentive

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[351] Thus also Schumacher 2004, 302.

[352] *esminu* and *pitis* are certainly onomastic; the rest of the text is opaque, but *θauχ-* does appear to be an onomastic element as well (2.6.1.2). The repeated alpha in *kaana* is unusual, but the effort made at accommodating the final characters in the available space on the baton excludes the possibility of them being line fillers despite the problems with interpretation. The sequence *θauχkaana* may well be another name.

[353] Except for maybe the fragmentary IT-5, on which see below on the ablative.

function.[354] Rix 1998, 34 (cf. also Schumacher 1998a, 111) analyses *-hi* as an enclitic particle with genitive: *remies-hi ratasuva-k-hi* (with *-k* 'and'; 2.7.3.3); such a particle is not known in Etruscan, but Rix suggests that, assuming it has locatival semantics, the construction can function qua pertinentive:

VR-3 '*tanini* given by Remie and Ratasu for Kvelisane'

So far, there is only one inscription in which an ablative (I) – certainly in one, possibly in two forms – can be identified.[355] The distribution of ablative allomorphs has not so far been made sense of in Etruscan; the same is true for the sparsely documented Raetic. Like the pertinentive, the ablative is built with genitive forms/adjectives of possession as base. According to Rix 1985a, 127, the prehistorical form is **-si-s*, with the genitive's *i*-element, protected from apocope, causing umlaut of the stem vowel before being syncopated. (Alternatively, the genitive's *s* was lost by regressive dissimilation and subsequent vowel contraction.) Hence, **-a-si-s* > **-ais* > *-es*, **-e-si-s* > *-eis*, **-u-si-s* > *-uis*, **-i-si-s* > *-is*; *-es* and *-is* are formally identical with genitives in *-s* to stems in *-e* and *-i*. Pronouns behave differently due to the different accent situation. The ablative prominently marks the agent in passive constructions (Rix 2004, 953).

The attestation in question is IT-5 *kleimunθeis*. De Simone 2013, 59 and Eichner 2013, 37 agree in analysing the word as a base *kleimun* + enclitic deictic pronoun *-θa* in the ablative *-θeis*, known from Etruscan (*ta*, *teis*). The regular ablative form of the enclitic pronoun being *-tis*, *-teis* is explained as an intermediate stage between *-tais* and *-tis* (De Simone 2013, 65; see also Eichner 2011, 81 [n. 35]). Eichner 2012b, 38 prefers to derive *teis* from a variant *te*. According to Eichner (p.c.), the construction is heteroptotic, with the pronoun in the ablative governing a base in the casus rectus or the ablative III (both -Ø), i.e.

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[354] A (rather weak) case for the absence of the donor's name can be made from the word order of Raetic inscriptions. In active constructions, Raetic has SV, probably SOV (MA-9), just like Etruscan (Rix 2004, 961; Agostiniani 2011, 18). Assuming that the above interpretations with the pertinentive forms as agents and the genitive forms as patients are correct, in passive constructions with *ku*-participles the verbal noun stands between subject and (indirect) object – additional elements can stand before the agent, between verb and patient, or at the end; only the enclitic pronoun in WE-4 appears between agent and verbal noun. The verbal noun can be inserted between the two parts of the donor's name (e.g. WE-3), but the patronym is never put after the patient. In VR-3, the verb form is only preceded by the additional element *tanini* (locative *tanin-i*?), which might be taken to indicate that no agent is named in the text. See, however, 2.8.1.6 on SZ-30, which may have the verbal noun in last place; also, the different morphology of VR-3 may entail different syntactical rules.

[355] Formally, MA-9 *lemais*, SZ-14.1 *kativates* and *kalitis* also qualify as ablatives. In the first case, this is unlikely in regard of the frequency of genitive forms at Magrè, but ablatives might be considered for the formally unusual SZ-14.1 (2.7.3.2).

(second option) ‘from that which is from the slope’; Eichner also provides an etymology for the base, connecting it with the IE root **ḱlei̯-* ‘incline’ (**ḱleimôn* via Celtic or Venetic; Eichner 2012b, 37). While Eichner assumes that *ta* refers to inanimate nouns; De Simone trans-lates (isoptotic) ‘by this kleimun’, the base being the name of a person or institution.[356] The second possible form is IT-5 *θaukis*,[357] standing right before *kleimunθeis*. With the meaning of the base unclear, it may be an ablative I to a stem in *-i* agreeing with *kleimunθeis* – e.g. ‘by/from Θauki from the hill farm’ (going with Eichner’s etymology, but isoptotic construction) – as well as a genitive I. The ablative II *-las* is not attested in Raetic; the apparently archaic ablative III (with null suffix) only if Eichner’s analysis of *kleimunθeis* is correct.

IT-5 also provides one of two attestations of the animate plural ending *-r*(*a*), in a morpheme chain with the pertinentive I (IT-5 *avaśu*[*e*]*-ra-si*), the other being SZ-4.1 *φut*(*e*)*-r*, whose analysis is supported by the preceding word *þal* ‘two’ (2.7.3.2). It corresponds to the Etruscan animate plural in *-r*(*a*) (Rix 1985a, 125 f.; Agostiniani 1992, 54 f.; Wallace 2008, 49–51) – as in Etruscan, auslauting *a* was lost through apocope, as shown by *φuter*, while it is preserved in the morpheme syntagma *-ra-si* in *avaśuerasi*. The Etruscan inanimate plural morpheme *χva*/*-cva* is not attested in Raetic.

Apart from the patronymic suffixes (2.6.1.4), all securely attested endings and suffixes of Raetic are formally identical to their Etruscan counterparts, having undergone prehistoric apocope (Rix 1985a, 117), though there appear to be semantic differences. The pertinentive plural form IT-5 *avaśu-*(*e*)*ra-si* demonstrates that Raetic, like (archaic) Etruscan (Agostiniani 1992, 53), inflected by agglutination.[358]

2.7.3. Lexicon

Due to the nature of Raetic inscriptions in terms of text type, we do not have much in the way of lexical material other than names. The best sources for non-onomastic material, the longer inscriptions, are notoriously hard to interpret and yield mainly hapax legomena. The identification of discreet sequences which may be lexical items is performed based on one

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[356] Against the above segmentation, but rather with an Etruscan suffix *-θe*/*-te* forming ethnic names, Marchesini, as mentioned by De Simone 2013, 68.

[357] Not *θauke* as read by Marchesini 2013. Toward the end of the line, a piece is missing in the upper area. The damaged part is not epsilon 𐌄 but 𐌔|, the middle bar of sigma being clearly visible along the bent breaking edge.

[358] On the agglutinative vs. inflecting features of Etruscan see Rix 2004, 951 and Agostiniani 2011, 19.

or more of four criteria: recurring sequences which can be segmented out of running text, sequences separated by word separation or layout (including one-word inscriptions), sequences which precede known suffixes, and sequences for which Etruscan comparanda can be adduced (cf. Rix 1998, 16 f.). For example, in the inscription BZ-3, word separation reveals five sequences. Of these, two (*taniun*, *utiku*) can also be segmented out of other inscriptions, three (*laśanuale*, *utiku*, *terunies*) are marked by identifiable endings, while one (*sχaistala*) is a syntactically unclear hapax. None of the lexical bases are certainly known from Etruscan. Indeed, only a small subset of recurring and non-recurring words can be identified with Etruscan lexemes.

2.7.3.1. Verbs and verbal nouns

The most convincing equation, already recognised by Thurneysen 1933, 1–8, is the frequently attested Raetic *ke*-preterite (2.7.2.1) *þinaχe* ~ Etr. *zinake*/*zinace*. The Raetic form is attested at Sanzeno (SZ-1.1), repeatedly at Magrè (MA-8, MA-9, MA-10, MA-11), arguably in the area of Verona (VR-2, VR-4, VR-10, VR-11; 2.5.3.3) and possibly in CE-1.4 *trinaχe*, if ‹tr› is a compromise spelling as suggested by Rix (2.7.1.2). The Raetic and Etruscan forms are lexically and morphologically equivalent. Yet again, it is the semantics of the equation which are problematic. Etr. *zinake* means ‘made’, ‘produced’, appearing in workmen’s inscriptions (Rix 1998, 44 f.; e.g. Ve 3.44/6.5 *mi*[*ni*] *zinace velθur ancinieś* ‘Velθur Ancinieś made me’), while the Raetic context is cultic.

MA-8	*reiθe muiu þinaχe*
MA-9	*pitale lemais þinake*
MA-10	*piþie ker pinake*[359]
MA-11	]*esθuva θinaχe*
SZ-1.1	*lasta φirima þinaχe χika śiχanu*

All five certain attestations occur on votive objects – pieces of antler and a bronze which were produced specifically for donation; we would not expect any of these inscriptions to say “I made this”. Examples for Etruscan votive texts with a similar structure can be found in Rix 1998, 43. Rix (44 f.) theorises that the two differing meanings ‘made’, ‘created’ vs. ‘gave’, ‘dedicated’ are derived from an original one ‘put’, ‘place’ → Raet. ‘put up’ vs. Etr.

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[359] Misspelling of ᚹ for ᛒ, conceivably due to the formal similarity; differently Rix 1998, 42, who assumes that the writer left out a few letters (*piþie kerpin*[*u þin*]*ake*).

‘produce’ (with IE parallels).[360] An alternative is hinted at by Agostiniani 2011, 34 f., who translates Etr. *zinace* as ‘ha inciso’.[361]

The verbal noun *eluku* has been compared to an Etruscan quasi-hapax *ilucu* ‘sacrifice’ by Rix 1998, 36–38.

SZ-14 *φelituriesi eluku sletile kara taśna*
SZ-30 *ka*[ ]*isθi:puχe:tumis:p*[ ]*θiak*[ ]*auþile:eluku:*
WE-3 *lastasi eluku piθamnuale*
WE-4]*niχesi-ta eluku*[

Three of these inscriptions (SZ-14, SZ-30, WE-3) are clearly votive texts; as for *þinaχe*, the expected meaning of *eluku* is something along the lines of ‘given’, ‘dedicated’. Etr. *ilucu* appears seven times on the Tabula Capuana (TC), a ritual calendar dealing with instructions for cultic ceremonies and holidays. In each section, *ilucu* can be interpreted as the subject of the introductory phrase for the description of the respective ritual, preceded by the name of the divinity in question, in the genitive. Rix proposes a translation ‘sacrifice’ or a similar meaning related to cultic practice: ‘ordinance [vel sim.] for X’ (e.g. TC 18 *laruns ilucu* ‘sacrifice for Larun [Mars]’). So, TC 8 *iśveitule ilucve apirase leθamsul ilucu cuiesχu perpri* ‘on the ides, in the month of April, the feast for Leθams is to be celebrated’ (see also Wallace 2008, 114). The locative form *ilucve* precedes known names of months and also occurs as *ilacve* in the bilingua Cr 4.4, where it can be argued to translate Phoenician *bjrh* ‘in the month’ (Steinbauer 1999, 203 f. 431) – Steinbauer suggests that the form belongs with *ilucu*, being a time measurement based on the ritual year (‘during the [time associated with a particular] ritual’).

Rix (1998, 38) also provides an Etruscan comparandum for the base of the second Raetic verbal noun *utiku*, though the connection is (even more) tenuous: a preterite *utince* appears in the Liber Linteus (LL II D9), where it can be argued to indicate an action in the context of a sacrifice. *utin-ce* is syncopated archaic Etr. **uti-ane-ke*, a preterite from a denominal base **uti-ane*, while the Raetic verbal noun in *-ku* would be derived from a preterite which in turn is derived directly from the root.

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[360] Cf. also the considerations of Mees 2013 on a similar development in Germanic and the mutual influence and interchangeability of fabricatory and dedicatory verbs in Runic.

[361] I could not find substantiation for this, but cf. maybe Cr 5.1 *mine zineke kavie* on the wall of an artificially created sunken road (Rix 1998, 44) – really ‘Kavie made me [the road]’, or ‘Kavie wrote me [the inscription]’?

HU-7 *ʔekiesi utiku tanin metlainile*
VR-3 *tanini utiku remies-hi ratasuva-k-hi kvelisanes*
PA-1 *eθsuale uθiku kaial nakina θaris akvil*
IT-5 *]θ̣ʔkaịa[ ]utiku:θaukis kleimunθeis avaśuerasi:ihi*
BZ-3 *taniun:laśanuale utiku:terunies:sχaistala*
BZ-4 *tevaśniχesi utiku θiuθis aχviliti terisna θi*
NO-3 *φelturiesi:φelvinuale utiku*
NO-15 *esumnesi nuþnuale utiku tianus*
NO-17 *ketanuvale utiku*

utiku appears in four inscriptions on outright votive objects (IT-5, NO-3, NO-15, NO-17), and on four which are associated with ritual (HU-7, VR-3, PA-1, BZ-3); whether Rix' parallel is relevant or not, a meaning pertaining to the sphere of ritual, much like that of *eluku*, can be assumed.

2.7.3.2. Nominal lexemes and numerals

While the rarer *eluku* is, as far as can be told, the only potential word in the respective inscriptions for that which is dedicated, and might therefore also be translated as a substantive ('sacrifice from X'), *utiku* tends to be accompanied by words which might well be substantives referring to the object: *tani*(*u*)*n*, *kaial* (PA-1, maybe IT-5) and *aχvil*. Of these, the first two are opaque, and are tentatively filed as nouns primarily for their con-sonantal auslaut and lack of inflectional endings, which may indicate an accusative (null morpheme). *tani*(*u*)*n* is particularly problematic, as the word appears in a number of variants.

HU-7 *ʔekiesi utiku tanin metḷainile*
VR-3 *tanin* [*i*] *utiku remies-hi ratasuva-k-hi kvelisanes*
BZ-3 *taniun:laśanuale utiku:terunies:sχaistala*
SZ-16 *laturusi tianus* [*a*] *tanin*
NO-2 *tianus* [*a*] *tan*
NO-16 *tianus taniun*

Three attestations occur in inscriptions beside *utiku*; BZ-3 and VR-3 (according to Rix' analysis; 2.7.2.2) name donors and recipients/beneficiaries, so that the only obvious actant left is the direct object. HU-7 lacks a reference to the recipient/beneficiary, while SZ-16 lacks the verbal noun and NO-16 both the verbal noun and the donor.[362] In the latter case,

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[362] See 2.5.2.2 on the dubious state of NO-2.

it may be justified to question the likelihood of the object being referred to instead of the donor, but in the other context, the word can hardly stand for anything else. The occurrence in similar context strongly suggests the forms to be variants of the same word, but the variation remains to be explained. Simple *tanin* occurs only once. In VR-3 *tanini*, *i* might formally be a locative ending – the unusual set of endings in VR-3 may allow for a different case here than in the other inscriptions, but neither locatival nor directival or instrumental semantics make a lot of sense for the assumed meaning. See, however, below on *aχvili*. The function of the rogue *a* in SZ-16 is utterly unclear to me – a genitival ending to *tianus* is highly unlikely (2.6.2). *taniun* occurs twice; no chronological or geographical patters allows for an explanation as an archaic or dialectal variant. I treat the forms as equivalent in the present work, but the issue must be considered unresolved.

For *aχvil* another somewhat precarious Etruscan connection is suggested by Rix 1998, 32 f. (with n. 45). Rix reconstructs an only indirectly attested Etr. *aχvil/acvil* ‘gift’ in *tinścvil* ‘donation’ (< **tinas-aχvil* ‘gift to Tinia [Jove]’), in the feminine name *θanχvil/θancvil* (< *θanaχvil/θanacvil* ‘gift from Θanr’; differently e.g. Wallace 2008, 92), and the family name *acvilna*.

PA-1	*eθsuale uθiku kaial nakina θaris akvil*
BZ-4	*tevaśniχesi utiku θiuθis aχviliti terisna θi*
SR-1	]*nsumna viθahur*]*iskes aχviliske*
SZ-98	]*aχvilisk*[ ]*piθi*[

The sequence *aχvil* is immediately followed by *i* in three of the four instances – as with VR-3 *tanini* this might be the locative ending, but the same semantical considerations apply.

kaial is considered to be “most reasonably explained as the name of the object” in PID III, 11 (there read *kaian*); cf. Schumacher 1998a, 108. However, *kaial* appearing beside assumed *aχvil* ‘gift’ in PA-1 makes an interpretation as a word for the votive gift unlikely – seeing that it is probably also attested in IT-5 (]*θ?kaia*[), it cannot refer specifically to the spatula as in ‘this spatula given as gift’ – maybe an adjective? A genitive (2.7.2.2)? Schumacher (ibid.) alternatively suggests a demonstrative pronoun. The form remains unclear.

Raet. *sφura*, attested only once, has been compared with the amply attested Etr. *spura* ‘township’, ‘community’ by Schumacher 2004, 301: SR-2]*e?eθinu sφuras enθus* ‘]e?eθinu for [in the name of] the village of Enθu' (2.7.2.2). It must be noted, though, that Etruscan uses the genitive II *spura-l* (Schumacher 2004, 301 [n. 182]).

SZ-4.1 *þal* has a clear cognate in Etr. *zal* 'two' (Rix 1998, 57 f.), attested unambiguously on dices, e.g Vc 0.74. The interpretation is supported by the plural noun *φuter*.

SZ-4.1 *kativates kalitis þal φuter suχ*

The inscription is one of the more unusual votive texts, featuring the only (identifiable) numeral with one of only two plural forms in the corpus, while the usual pertinentives and verb forms are absent. It is appealing to think of *kativate*° and *kaliti*° as the two Φuts, but, though the *r*-plural indicates that *φut-* is an animate noun,[363] it does not agree with the genitives (or ablatives?). No translation can be offered.

For the well-attested Raet. *terisna*, Rix 1998, 48 (n. 2) compares Etr. *zeri*, which is translated as 'all', 'everyone' by Vetter 1924, 149. An adjective derived with the genitival suffix *-na* Etr. **zerisna* 'belonging to everyone' = 'public' would correspond to Raet. *terisna*. This theory is expanded by Eichner with his interpretation of Lemn. *zari*['for everybody'. The word, attested twice fragmentarily on potsherds from the Kabiri sanctuary at Chloi, appears to make a pair with *novaisna* (six attestations), which is interpreted as 'belonging to the Gods' = 'sacred'.[364] Eichner (p.c.) analyses the latter form as *nu-v-aiz-na* 'sacro-sanctum' (with the glide *v* reflected in writing; for *nu-* cf. Etr. *nu-na-r* [with variants] 'taboo' vel sim.), and emends *zari*[to *zarisna* (from *zarizna* by dissimilation) 'belonging to everyone' (cf. Eichner 2012b, 37 with reference to the translation of Steinbauer 1999, 501 Etr. *zeri* 'free'). Such a pairing of 'sanctus' – 'publicus' on the pottery is supported by documents from the younger Greek tradition of the sanctuary.[365] Eichner also compares *zeronai* on the Kaminia stela (2012b, 28 [n. 85]). The sound value of the letter which Eichner has designated "Quasi-zeta" ʅ (t^s vs. *s*) is still under discussion (e.g. Eichner 2012b, 13–17 vs. Agostiniani 2012, 180–183); the variation in the stem vowel also remains to be explained.

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[363] There are a few exceptions to the restriction of the *r*-plural to animate nouns, see Rix 2004, 954; see also Eichner 2012a, 28 (n. 66), who distinguishes between an individuative and a collective plural.

[364] Beschi 2000, 99; Agostiniani 2012, 185; Cristofani 2003, 219. Beside the more or less complete attestations of full words, there is a large number of ceramics with single nu or zeta, thought to be the corresponding short forms. The material is published in Beschi 2000, 73–94.

[365] Though only *ἱερός*/*ἱερά*/*ἱερόν* is written on vessels; *δημοσία* is attested stamped on reused bricks from the late Roman telerion (see Beschi 2000, 100–135).

Rix 2000, 13 further compares problematic *zêrśna* on the Tabula Cortonensis (AC a4). The common reading is *têrśna*, but the first letter is damaged in the lower area, so that zeta cannot be excluded (ibid., n. 6).[366] The meaning of the word in the first section of the text, which seems to be concerned with the number or amount of the commodities negotiated in the contract, is unclear.[367] It is likely to stand in contrast to *raśna* 'public' in the next line, though in Rix' interpretation *zêrśna* is a synonym. Whether this form is indeed a derivation from *zeri* is doubtful. *têrśna* would correspond to Raet. *terisna*: both *ê* (from compensatory lengthening, see Eichner 2006b, 217) and *ś* (*lariś*-rule; 2.7.1.2) point to syncopated *i*. The connection of *terisna* with the *zeri*-group and *zêrśna*? is most tenuous. The equation presupposes the traditional interpretation of the letter ⫯ as a third character for the dental affricate (2.5.4.1) and consequent reading as /z/. The suffix *-na* is not securely attested in Raetic as forming lexical genitival adjectives like in Etruscan. A meaning 'public' would theoretically fit well on the helmets (SL-1, BZ-26), where it might mark the piece of armoury as belonging not to an individual, but to a community, to be dispensed in times of conflict; it makes less sense on votive gifts. An interpretation of *terisna* as a name, as favoured by Marstrander 1927, 18 f. and Morandi 1999, 56; 2000; 2003, 346, is also unlikely, as the word never appears in either of the paradigmatic oblique cases (genitive, pertinentive) or in combination with an individual name.

2.7.3.3. Enclitic elements

The enclitic deictic pronoun (archaic Etruscan [-]*ita*, Neo-Etruscan *-ta*) is attested twice: IT-5 *-θeis* (ablative; 2.7.2.2) and WE-4 *-ta* (Tecchiati et al. 2011, 51; De Simone 2013; Wallace 2008, 61). Both inscriptions are fragmentary, so that the element cannot be put into syntactic context.

A character ᛣ in SZ-2.1 has sometimes[368] been read as chi: *φrima remi-χ visteχanu* 'Φrima and Remi Visteχanu', with *-χ* corresponding to the Etr. enclitic conjunction *-c* 'and'. In fact, the character in question is a (factory?) mark of the kind which are usually found on the Sanzeno bronzes (cf. especially SZ-9.2, SZ-10.2, SZ-20; 2.8.1.1): it is offset to the bottom, not as tall as the letters, its shape does not correspond to that of ᛉ in *visteχanu*, and there are distinct gaps on either side (cf. Vetter 1954, 70 [2] and MLR 144). If a

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[366] Meiser in ET includes both options in the index.

[367] Overviews over the possible interpretations can be found in Wallace 2008, 197–213 and Amann 2005.

[368] Mayr 1950, 333 (no. II); Pellegrini 1951a, 309 (no. 2a); Tibiletti Bruno 1978, 224; Rix 1998, 21; Schumacher 2004, 334 (with n. 208); LIR SA-4a.

factory mark, it would have been applied before the inscription, so that the writer had to arrange his letters around it.

The only well arguable attestation of enclitic -*χ*/-*k* is the one suggested by Rix 1998, 34 for VR-3 *remie-s-hi ratasuv-a-k-hi* 'by Remie and Ratasu' with -*hi* as an enclitic particle with genitive and -*k* 'and' (2.7.2.2; also Schumacher 1998a, 111). I find this analysis convincing; unfortunately, no further evidence can be adduced. The sequence *ka*, which would be equivalent to the archaic Etruscan form of the conjunction -*ka*, does crop up in places where word separation is difficult (e.g. SZ-15.1), but an interpretation as enclitic 'and' cannot be well argued. Schumacher 2004, 333 f. adduces VN-10 *laθur lumene χa* 'Laθur and Lumene', but this necessitates (as duly noted) the assumption that VN-11 *lumene·χa* has a counterpart on another (lost) object. See 2.8.1.1 on the two-character sequences in the Ganglegg inscriptions.

The Etruscan postposition -*θi* 'in', 'by' (being the older form; Late Etruscan has deaspirated -*ti*; Wallace 2008, 103; Steinbauer 1999, 488), which occurs with locative forms, might be attested in BZ-4 *aχvili-ti* 'in/by the X', supporting the interpretation of *aχvili* as a locative.[369]

2.7.4. Raetic and Etruscan

It is not at this point clear how closely Etruscan and Raetic are related to each other. There are some striking similarities. Most prominently, there is at this stage no evidence that the phonemic systems of the two languages are at all different from each other. Almost all phonemes of Etruscan are accounted for in Raetic, with the exception of the second obstruent row (or part of it, if Rix is correct in assuming that the dental affricate stands in the place of the respective velar; 2.5.5.1), which may be obscured by orthographic practice. There are no indications for Raetic phonemes which do not exist in Etruscan. Even internal diachronic developments such as the shift in the vowel system (2.7.1.1) may have happened in a parallel manner, which indicates that the separation of the two branches did not happen too long before their attestation. The forms of the grammatical morphemes which we can compare are, in the majority of cases, identical, having undergone Rix' prehistoric apocope (preterite -*ke*, verbal noun -*ku*, genitive I -*s*, genitive II -*a*, pertinentive I -*si*, per-

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[369] See TIR (http://www.univie.ac.at/raetica/wiki/Category:Word) for more sequences which are likely to represent words, as well as Rix 1998, 42 (n. 53) for typological considerations on the possible semantics of opaque additional elements in votive inscriptions, such as MA-8 *muiu*, MA-10 *ker*, MA-14 *śur*.

tinentive II -[*a*]*le*, ablative -*s*), and so are some of the lexical morphemes and indeed full equations (*þinaχe* ~ *zinace*, *þal* ~ *zal*, *sφura* ~ *spura*).

On the other hand, there are notable differences (Rix 1998, 58). Despite the slender material base of Raetic, we have attestations of words – though a good many of them may be onomastic elements – which find no comparanda in Etruscan (e.g. *tani*[*u*]*n*, *φut*°); phonetically identical or near-identical cognates have different semantics (*þinaχe* 'donated' ~ *zinace* 'gave'). The case functions appear to be different, and the Raetic patronymic suffixes, though they can be formally and functionally compared to those of prehistoric/ archaic Etruscan, are different even from those used in Etruria before the emergence of the Central Italic family name system. However, all these discrepancies are likely to have more to do with differences between formulaic text types than between languages. The Raetic writing culture is only partly, if at all, dependent on that of Etruscan, so that its inscriptions resemble those of Etruscan only at one remove. The formulae which emerged probably did so without immediate reference to Etruscan texts, and the vocabulary which is habitually used in them is an independent selection from the language's inventory.

As pointed out by Rix 1998, 58 f., the most important difference between Raetic and Etruscan lies in the onomastic inventory. Rix knows only one Raetic name – *remi* – which he considers to be Tyrsenian. I have suggested a few more name bases which may represent inherited onomastic material (2.6.1.2), but there is no doubt that the vast majority of Raetic names consists in loans from neighbouring, mainly or exclusively IE, languages. For Rix (ibid., 60), these conditions can only be explained by assuming a separation between Raetic and Etruscan "mehrere Jahrhunderte" prior to their attestation; he dates Proto-Tyrsenian to around the turn from the second to the first millennium BC. (An even earlier date for the split – the last quarter of the second millennium BC – is given in 2004, 944.)

Schumacher 2004, 316 f. further points to discrepancies in the distribution of case allomorphs (Raet. gen. I *sφura-s* vs. Etr. gen. II *spura-l*; 2.7.3.2) and to the lack of any evidence for syncope triggered by protosyllabic stress, which is so characteristic for Etruscan from the 5th c. onwards. In Etruscan, sporadic variation between vowels in non-initial syllables already in the 7th c. shows that the dynamic protosyllabic accent dates at least to archaic Etruscan (Rix 1985a, 217; Steinbauer 1999, 44–46); Schumacher concludes that this accent pattern in Etruscan is prehistoric, and that Raetic, which either had no protosyllabic stress or none strong enough to lead to syncopation, was already distant from Etruscan at that time. It must be noted, though, that the prehistoric apocope posited by Rix to explain variants of case endings implies that rules for optional or even general penultimate stress predate those for protosyllabic stress which in turn caused syncopation (Rix 1985, 117 f.) – cf. Agostiniani 1992, 52, who, upon typological considerations, suggests that prehistoric and even archaic Etruscan had a slightly dynamic penultimate pitch accent, which only changed to a strong dynamic protosyllabic accent at the beginning of the 5th c.

As noted by both Rix and Schumacher, the accounts of the origin of the Raeti given by Pompeius Trogus, Pliny and Livy (2.2.1) cannot be accurate. The notion that the Raeti were Etruscans who had been forced to retreat into the mountains by a Celtic invasion of the Padan plain in the 6th c. is obsolete in any case; the invasion in question happened around 400 BC, with ample Raetic epigraphic material predating this phase (unless, as posited by Gamper, the entire Raetic writing culture is considerably younger than generally assumed; see n. 252). Also, if the Raeti were historically expatriated Etruscans, their alphabet would not be expected to differ from that used by the remaining populace. Raetic and Etruscan must be considered to derive from a common ancestor; the time at which the two languages separated is at this point only to be determined by educated guesses.

Relevant to this question is the evidence of Lemnian, the third Tyrsenian language which is epigraphically documented – not in Italy or adjacent areas, but on the island of Lemnos in the Aegean. Lemnian is attested even more sparsely than Raetic, though it boasts two considerable inscriptions on the Kaminia stela, dated to the second half of the 6th c. BC (Eichner 2012b, 2013). The existence of a related language in Asia Minor raises the question of the Tyrsenian "homeland", which has been debated since the discovery of the stela in the 19th c. Eichner 2012b, 38 f. (and passim), who inclines toward Italic etymologies for many Etruscan/Lemnian names, lexemes and suffixes, argues that the Lemnians emigrated from Italy, possibly representing a low social stratum of Etruscanised Italic inhabitants whose dialect shows affinity to Northern Etruscan. In Eichner's model, the emigration predates the introduction of the alphabet in Etruria (cf. Malzahn 1999), whereas De Simone (e.g. 1995) assumes a later separation, but also with Italy as point of origin, the Lemnians-to-be taking their Italic alphabet with them. The presence of speakers of a Tyrsenian language in the Italian Alps, especially if they separated from the Etruscan branch already in the 2nd millennium BC as assumed by Rix, certainly supports an Italic origin of the Tyrsenian languages by shifting the balance point of evidence, even though the arrival of the Raeti in their historic homesteads itself is not archaeologically manifest (2.4.1). Herodotus I 94, however, identifies the Etruscans as immigrants from Asia Minor. There is currently no consensus on the issue; cf. the compendium Bellelli 2012.

2.8. Epigraphic culture

2.8.1 Inscription and support types

2.8.1.1. Non-script notational systems

Of the almost four-hundred inscriptions on about three-hundred objects currently included in the Raetic corpus,[370] only about two fifths are linguistically usable. About one more fifth may partly encode language, while the rest consists of diverse kinds of marks (e.g. factory or owner's marks, symbols of unknown meaning, possibly numbers, and even ornaments). The vast majority of these must be expected to have a para-linguistic meaning, and should not be completely disregarded.[371]

Fig. 39: Beaker with inscriptions AS-20.1–3 from Bostel di Rotzo. Museo Archeologico dell'Altopiano dei Sette Comuni, inv. no. 42691. Drawing by Gudrun Bajc for TIR.

Two repeatedly occurring sequences of characters are found on ceramic beakers from Bostel di Rotzo: 𐌉𐌗𐌗𐌉 (AS-2, 3, 4, 15) and 𐌀𐌌 (AS-19.1, AS-20–23). They are usually inscribed on the narrow bottom of the vessel, with the tops of the letters pointing towards the foot, sometimes also on the foot or the wall, and usually written repeatedly on the same object. In AS-15, AS-19 and probably AS-2, these marks appear in combination with language-encoding inscriptions. None of the marks was incised before firing, as would be the case with pottery marks, whose primary function is to keep pieces in a shared kiln

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[370] http://www.univie.ac.at/raetica/wiki/Category:Inscription; http://www.univie.ac.at/raetica/wiki/Category:Object.

[371] See http://www.univie.ac.at/raetica/wiki/Non-script_notational_systems for an overview. The introduction of newfound script-like marks into the corpus has been widely avoided by TIR; marks which are similar to, or inscribed on objects which are similar to, inscriptions/objects in the corpus were given sigla with the code "EX" for "excluded".

apart. Workmen's marks may be incised after firing, but it cannot be excluded that the characters have some other significance. The same goes for the numerous other, more or less neat and legible, scratchings on pottery in the corpus. A sequence ◁X or ᗡX is inscribed on the foot of three ceramic bowls from different findplaces (NO-14, RN-3, WE-7). Otherwise on pottery, we find sequences of |, X and V and similar basic shapes (e.g. BZ-20 X|||, IT-10 X|Λ| ; sometimes the same sequence occurs on more than one object, e.g. SZ-52 and SZ-54 ΛX||||| ,[372] SZ-56 and SZ-58|Λ||), seemingly random combinations of characters (e.g. SZ-29 XXꓘX), as well as more extensive illegible scratchings (e.g. NO-12, see fig. 39).

Fig. 40: Inscription NO-12 on the bottom of a Sanzeno bowl from Dercolo. Castello del Buonconsiglio Trento, inv. no. 3446. Drawing by Gudrun Bajc for TIR.

Several documents on pottery in the Raetic corpus establish connections to larger corpora of marks and non-script characters which are very unlikely to have anything to do with Raetic literacy and North Italic writing in the Etruscan tradition. For example, IT-1 |N| belongs with numerous fragments of inscribed pottery from the Himmelreich (collective siglum EX-81). The pieces bear diverse characters, often on handles and bottoms, ranging from obviously non-script, ornament-like scratchings and symbols to such as might be interpreted as letters (e.g. X, ↑). Similar sherds are found throughout the Inntal. SI-1]ʃΦ and SI-2]|X|ʃ have been introduced into the corpus by TIR on account of the presence of characters which are not usually found among the marks and script-like scratchings, but they have to be viewed in the context of a host of inscribed potsherds from the burnt-offerings site on the Rungger Egg.[373]

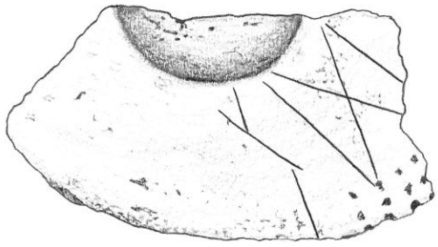

Fig. 41: Potsherd with inscription SI-2 from the Rungger Egg. Amt für Bodendenkmäler Bozen, inv. no. 33-1/53 L.

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[372] Cf. VN-19 on a bone from the Ganglegg.

[373] Cf. also the mark BZ-17 on a bronze axe, which belongs in the context of similar Hallstatt-age marks which predate the alphabet in Northern Italy (2.4.2).

There are two sequences which occur on pottery and also on other types of objects: Λ˩ (vel sim.) and I˥V. Two characters Λ˩ or Λ˥ are found on Sanzeno bowls (4x), iron scythe rings (3x) and maybe iron axe heads (1x), mostly from Sanzeno (7x). On Sanzeno bowls, there is a considerable amount of variation; while it is likely that the marks somehow belong together, it is hard to determine how the characters should be read. Both SZ-57.1 and SZ-60.2 Λ˩ are inscribed upside-down (↾V). In the case of SZ-60.2, the central hasta of the second letter is prolonged, making it look more like Y in any case. SZ-57.1 appears to have been incised before firing, unlike SZ-57.2, in which Λ features an additional small bar at the bottom. WE-6 Λ˥, the only attestation from outside Sanzeno, resembles the scythe ring inscriptions. In the axe head inscriptions (SZ-62 ΥΛ˩, SZ-76.1 Λ˩ or Λ˥, SZ-76.2 IIΛ˥), applied on the side of the blade where it is broadest, the sequence is always accompanied by varying additional strokes. On scythe rings (SZ-44.2, SZ-45.2, SZ-46.2), the characters appear in tolerably uniform shape: Λ˥ (the hasta in writing direction of Λ sometimes shortened). They are always accompanied by the sequence IXIIXV on the other side. IXIIXV is also inscribed on other iron tools, a chisel (SZ-50) and a knife (SZ-51). The characters are sometimes inscribed sinistroverse, sometimes dextroverse. Cf. SZ-47 VIXI and HU-1 IXVIXI.

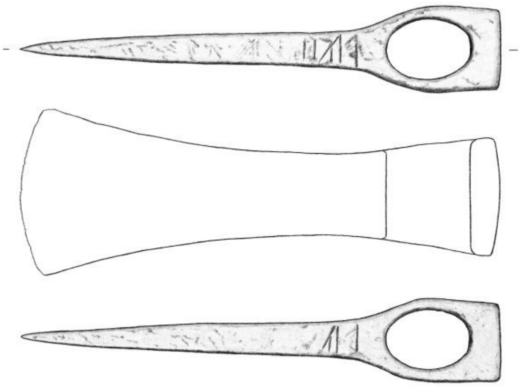

Fig. 42: Axe with inscriptions SZ-76.1 and 2 from Sanzeno. Tiroler Landesmuseum Ferdinandeum, inv. no. 12.481. Drawing by Gudrun Bajc for TIR.

The second, more easily identifiable, sequence I˥V is found only once on pottery (SZ-27, twice on the object). It is more closely associated with iron tools (axes, hoes, chisels: SZ-39, SZ-43, SZ-79, SZ-88, SZ-92, SZ-93, SZ-95). Except in the last case, the sequence is always inscribed twice on an object, in the same place as the above-mentioned Λ˩, on opposite sides. Only SZ-39.1 I˥VӾ features an additional character, the symbol Ӿ (see below). The iron tools may well come from the same smithy, but an interpretation of the short sequence as a factory mark is hindered by its appearance once on a Sanzeno bowl and once on a bronze situla (SZ-95, inside near the rim).

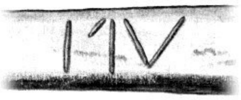

Fig. 43: Inscription SZ-43.2 on a chisel from Sanzeno. Tiroler Landesmuseum Ferdinandeum, inv. no. 13.530. Drawing by Gudrun Bajc for TIR.

A sequence 𐌄𐌌I↑ occurs twice on iron farming implements from Sanzeno, a hoe (SZ-33) and a scythe (SZ-74).

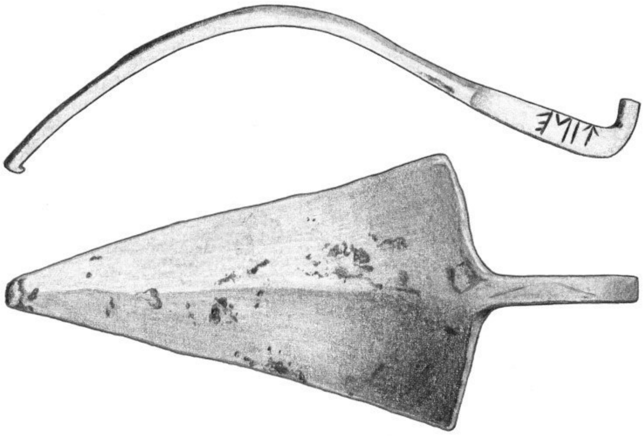

Fig. 44: Hoe with inscription SZ-33 from Sanzeno. Tiroler Landesmuseum Ferdinandeum, inv. no. 12.328. Drawing by Gudrun Bajc for TIR.

Two-letter sequences starting with 𐌀 are found on various object types such as bowls (SZ-28 Kᛕ, SZ-70.1 K𐌋 [incised before firing], SZ-90 Ʌ𐌀), simpula (SZ-65 V𐌀 [twice], SZ-75 V𐌀), a miniature bucket (BZ-25 Ʌ𐌀 [twice]), and a bone point (VN-12 𐌄𐌀). Cf. also VN-18 𐌄?𐌀 and PU-11 KVA. The significance – if any – is unknown (cf. FI-1 kakaka [2.5.7]).

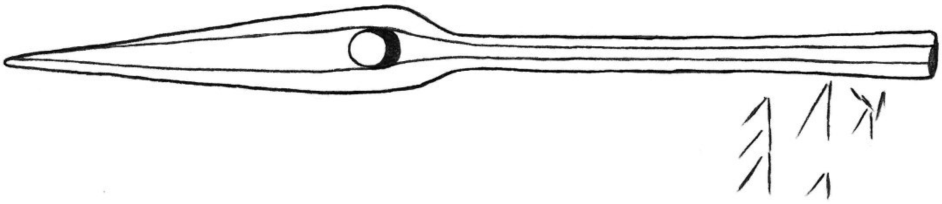

Fig. 45: Bone point with inscription VN-18 from the Ganglegg. Vintschger Museum, inv. no. G 97/207a.

N𐌀 and I𐌀 are also among the sequences of characters of unclear significance which are inscribed after a number of the names attested on the Ganglegg (VN-7.1]N𐌀¦X[, VN-14.1 I𐌀·𐌄Φ·ᛅ[). Both are separated from what comes before by separators. VX appears in VN-17 VX·𐌄𐌀[and VN-8 NX𐌔I𐌊ᛅY – the separator in the former inscription supports the segmentation of the latter in a genitive *χaris* + VX. Three inscriptions have ᛅY.

VN-10 V⅃ | ΛΨ ⱻMⱻMV⅃ | ᗡИXΛ⅃
VN-11 ||||X|Ψ·ΛΨ·ⱻMⱻMV⅃
VN-15 ИΨ[

The meaning and function of these characters is as unclear as that of the objects they are written on – abbreviations? Numbers? They may be compared to the numerous marks on bones and bone points discovered on the Ganglegg hill which bear only (supposedly) non-script characters, only a fraction of which is included in the corpus. Some (e.g. VN-5.1 and VN-6 ⱻ|X||||)[374] are reminiscent of the rows of simple characters found prominently on pottery. If the bones and bone points are connected with some sort of lot-casting practice, the marks may function as acronyms or symbols referring to relevant concepts – in light of the properly inscribed pieces, which bear names, they might represent personal marks of the owners. In any case, it is unlikely that we are dealing with mere decorations. An isolated, similar find comes from Sanzeno (EX-35). Cf. also SZ-18 |XΛMΛ|ϟ|ⱻⱻΨ, arguably a name *χevisiana* + X|.

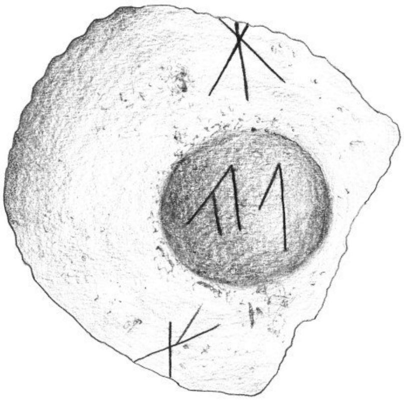

Fig. 46: Potsherd with inscription WE-6 and two symbols from Mellaun. Tiroler Landesmuseum Ferdinandeum, inv. no. 11.556.

Clearly non-script characters which may be workman's marks are sometimes found on the furled rims of metal vessels from Sanzeno-context (e.g. the complex marks BZ-7.1 and 2, BZ-8.1]ˡ | < | < | |, BZ-8.2V|V| , NO-81| , SZ-82|X). Handles of such vessels, on the other hand, bear sequences which may be script, e.g. SZ-35 VXVΛ *auθu*, SZ-37 |ᐊ|ᐊ *riri* (twice). While a sequence like SZ-36 |ᛣX| with its basic characters is reminiscent of the para-script marks described above, SZ-38 and SZ-17 |ϟΨϟ *sχsi* might even be read as a shortened name in the pertinentive, representing a workman's inscription as known from Etruscan (Schumacher 2004, 299 f.). Cf. also BZ-5, SZ-40, SZ-53, SZ-67.

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[374] Cf. this sequence with VN-9 and marks pottery from Sanzeno (above) – evidence for influence from an alphabet in which alpha was straightened?

Two round stones, in form comparable to the Venetic inscribed ciottoloni, are inscribed with sequences of lines of unknown significance. Despite the superficial similarity of the two objects and of the marks they bear, it is doubtful whether the stones and inscriptions can have had the same function. The stone with IT-6 ΛIXIʎ from the Hörtenberg (published in Tischer 2006) is comparatively small (6.5 x 5.5 x 5 cm), obviously worked and perforated lengthwise, while the one with SR-11 VIʎI from Serso is a natural boulder of 38 x 27 x 13 cm. The latter also features a large cross on the opposite side.

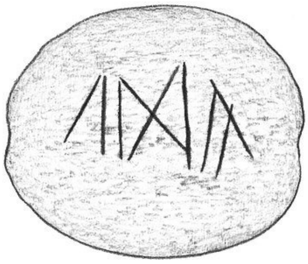

Fig. 47: Stone with inscription IT-6 from the Hörtenberg near Pfaffenhofen. Landeskonservatorat für Tirol, no inv. no.

A number of complex characters ("symbols"; cf. Graf 2011, 110) occur in the Raetic corpus, on their own, in combination with other characters, and together with (or at least in the vicinity of) language-encoding inscriptions; tab. 21 gives a few examples. These symbols are prominently found among the marks which accompany many of the inscriptions on Sanzeno bronzes.

SZ-5.2 X	BZ-15 IXᚦ	SZ-1.2 IIIIIXI IIIIIXᛆᛅXᛃᛗᛃ
with WE-6 Ж	SZ-81 XXIЖ	
	NO-12 \Ж/ ᛘ?(?)(?)?ᛊI	
SZ-25 \W/		SR-4]ᛘ·ᛊIᛞᛃᛏ \W/ |]Aᛊ·///ᛃᛏ·ᛁΛX

Tab. 21: Complex symbols recurring in the Raetic corpus and on finds from Raetic context.

2.8.1.2 Bronze batons and similar objects

The bronze batons are a find group with only a tenuous connection with Raetic epigraphy. These batons, between 19 and 27 cm long, are round bronze rods which are partly flattened in the centre and decorated. Four of these batons make up one set, as evidenced by finds from Sanzeno, Dercolo and Zams-Kronburg near Landeck (the Dercolo set from the same deposit as the bronze with inscription NO-11). Two of each set make a pair – one pair flattened, one pair round. Isolated pieces come from find places in North Tyrol, the Bozen and Trento areas, from the Montesei di Serso, and from the Gailtal (photographs in Zemmer-Plank 2002). Zemmer-Plank 2002, 1161. 1176 points out that, while the decorations on the ends are identical within a set, the ornaments in the central areas vary (spiral bands, chequerboard pattern, radial eye pattern, boat with bird protomes) – she argues that the batons were used as sortes: they were held in hand so that the middle parts were invisible, and one after the other was drawn and its significance interpreted. The context of the Dercolo set (2.4.2) indicates a dating of these sortes to the early La Tène period; Zemmer-Plank (1177) considers this divination practice to be imported from Etruria.

Inscribed bronze batons appear to be the exception. That the sortes could be inscribed with characters is demonstrated by the single piece from the Gailtal and by the three fragments with inscriptions HU-4.1–3, but these characters are merely script-like marks (e.g. HU-4.1 |||| X || X || | | ||). None of the objects which bear language-encoding inscriptions in the Raetic corpus can be grouped with the sortes with certainty. The best candidate, a shortish and hardly decorated round baton from the Campi Neri, bears a votive inscription (NO-15 *esumnesinuþnualeutikutianus*). Two elongated objects from Sanzeno (SZ-87, SZ-96) are cast in open moulds, like bronzes; barring the lack of animal features, they are similar to the bronze with inscription NO-11. The longer one comes from the Campi Neri (inscription SZ-87]*esminupitisθauχkaạna*); its slight taper is reminiscent of the flattened sortes, but the ornamentation on the preserved end is almost identical to that on the shorter piece (inscription SZ-96 *venaθ*), which is only 5.5 cm long and completely straight. The shorter object is also perforated on both ends, and looks more like a fitting. Similar half-plastic bronze objects are also known from San Giorgio di Valpolicella (VR-10, VR-11). The two objects are similar in shape, shortish batons which thicken and curve upwards on the left end; both are broken on the left side. Their function is likely votive (see 2.7.2.2 on the readings), but it is not known what they represented. While the round baton with inscription NO-15 may qualify as a lot stick, the half-plastic objects are probably better grouped with the bronze votives discussed in the following section.

2.8.1.3 Votives I – Bronzes, statuettes, bronze sheet miniatures and plaques

As discussed in section 2.4.2, it is not clear what sort of place Casalini was, but a votive function of the fifteen zoomorphic bronzes, most of which were found together in a sand pit, is beyond question. The bronzes are executed in half-plastic, i.e. cast in an open mould, and have holes drilled into them – apparently they were attached to a wall, pole or similar vertical structure. Within the Raetic corpus, we can compare the iron helmet with inscription SZ-73, also found at Sanzeno (Nothdurfter 1979, 87 [nr. 1275]), which has a nail driven through the neck guard, as well as the perforated antler votives (2.8.1.4). Votives may have been attached to a wall, stela, pole or tree. The burnt-offerings site on the Pillerhöhe featured a wooden pole to which the miniature shields were attached (Gleirscher et al. 2002, 209; Nothdurfter 2002, 1142). The inscribed styli which were offered at the Venetic Baratella sanctuary at Este are also perforated at the broad end; some still have small metal rings attached to them, with which they were presumably hung up. The Este bronze tablets feature handles which appear to have served the same purpose (Marinetti 2002, 48. 50). A stone stela provided the support in Este (Nothdurfter 2002, 1142), while a nature sanctuary in a forest glade (with votive objects attached to trees) is proposed by Fogolari 1975, 185 for the Venetic site of Làgole di Cadore.

The horse bronzes with inscriptions HU-5.1 and 2 and HU-6, old findings which were sold into Switzerland, should be considered together with the pieces found in and around 1947. The animals depicted are mostly horses, more or less stylised, sometimes with riders, as well as fish and a couple of unidentifiable abstractified creatures. It is not a given that all the bronzes which have come down to us are from the same time, but some of them closely resemble each other in shape and the inscriptions they bear are noticeably similar overall. The bulk of the bronzes must be of local manufacture and was bought locally by the dedicants. In fact, it is likely that the inscriptions were made upon request by local scribes rather than by the dedicants themselves, which would account for the uniform ductus.

The texts consist mainly in name formulae in the nominative. Only SZ-1.1 and SZ-14 contain Raetic verbs/verbal nouns of dedication (*þinaχe* and *eluku*, respectively). The other inscriptions just name the dedicants; only SZ-1.2 and 15.2 (*e*[*n*]*teθa*[]), SZ-4.1 (*þal φuter*) and maybe SZ-11 (*erikian*) contain non-onomastic material. Sometimes up to three persons appear to be named on one object; the arrangement of the rows of names into formulae is debatable in some cases – as pointed out by Rix 1998, 21, asyndetic coordination is possible in both Etruscan and Raetic.

SZ-1.1 *lasta φirima þinaχe* | *χika śiχanu*

In SZ-1.1, *lasta* and *φirima* can be certainly indentified as individual names. The sequence in line 2 is more difficult – the gap between iota and kappa is enforced by one of the fins; I prefer to read a name formula *χika śiχanu* (cf. Schumacher 1998, 304), whereas Rix 1998, 19 considers *χika* a misspelling of the patronym *śiχanu*, which he assumes to belong with the two names in line 1. While this does not strike me as ingenious, both lines are inscribed on the front of the bronze and may well be part of the same inscription. It is not clear whether 'Lasta, Φirima and Xika Śiχanu donated', 'Lasta [and] Φirima donated' and 'Xika Śiχanu' was added secondarily, or whether 'Lasta [and] Φirima [Ka]śiχanu donated *χi*[*ka*]'.

SZ-15.1 *lasta θianu esiunne* | *pitie kapaśunu*

Similarly, SZ-15.1 has five names written in two lines on the front of the bronze, whose order is not quite evident. If the layout is intentional, *pitie kapaśunu* is a discrete formula; whether *lasta* and *esiunne* are both *θianu* is anybody's guess. Alternatively, the two lines belong together, starting with line 1, and *pitie* was put in line 2 although he would have fit in line 1 perfectly well – then *lasta θianu* could be one name, while *esiunne* belongs with *pitie*.[375] As a third option, one of the individual names could just not be accompanied by a patronym at all.

SZ-14 *φelituriesi eluku sletile* | *kara taśna*

On the bronze with SZ-14, line 1 is inscribed on the underside of the base, line 2 on the upper side between the horse's legs. See 2.6.1.4 for my suggestion to interpret *sletile* not as an individual name, but as a surname to go with *φelituriesi*; the sequence in line 2 is then best interpreted as a name formula *kara taśna* (pace Schumacher 1998, 109, who analyses *sletile karataśna* as a name formula with only the first element inflected [2.6.1.1])[376].

SZ-2.1–2 *φrima remi visteχanu* | *χariχa remi*

On this bronze, also, both sides are inscribed with names. On the front (SZ-2.1), *φrima* and *remi* may share a surname *visteχanu*. Whether SZ-2.2 *χariχa remi* on the back of the bronze belongs with the structurally complete SZ-2.1 is questionable. The two sequences, separated by a small space, are likely to be individual names. A name *χari* is probably attested on VN-8, but the function of *χa* is unclear.

Considering that the ductus, as said above, is generally very homogenous on all the bronzes and does not give any clues about different hands, it may be the case that some of

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[375] This is one of the cases mentioned in section 2.7.3.3, where a sequence *ka* could theoretically be interpreted as enclitic 'and' in its archaic Etruscan form, viz. *esiunne pitie-ka paśunu* 'Esiunne and Pitie Paśunu'.

[376] The allocation of a single siglum SZ-14 for both lines harks back to Schumacher's reading.

the bronzes were reused, possibly by being resold to new dedicants. This is made likely especially by SZ-14, provided that my analysis is correct, where line 1 is a passive construction, whereas the name in line 2 is in the nominative and does not form a syntactical unit with line 1.

Three bronzes bear only script-like characters. While SZ-6 ııЖııX|ᛘ|X looks like the usual sequence of basic letter-like shapes, SZ-7 and SZ-12 may be considered pseudo-script, i.e. an effort of an illiterate or semi-literate person to create something that looks like an inscription. The characters of SZ-7 are inscribed on the foot of the horse bronze; they are very well discernible, but cannot be read (see fig. 48). Both Mayr 1951, 30–32 (no. VII) and Pellegrini 1951a, 311 f. (no. 7) (very tentatively) read the 𐌌-like character (reminiscent of Camunic mu; see tab. 23) as a letter ‹m› and the other complex character as a ligature, but Vetter 1954, 71 (no. 7) points out the space which separates them. SZ-12 consists in a few similarly over-complex characters. Conceivably, there were those who did not care to pay for an inscription executed by a professional writer, or who were not fully aware of the significance of letters.

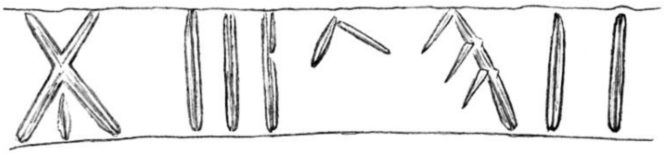

Fig. 48: Inscription SZ-7 on a horse bronze from Sanzeno. Museo Retico Sanzeno, inv. no. 7664.

A special case is SZ-13 on the “dolphin” – emphatically not one of the stylised pisciform bronzes, but a clearly recognisable common dolphin of the Mediterranean. Both object and questionable inscription do not fit in with the others and are likely imports from the south. The potential inscription, a succession of short strokes and angles (max. height 4 mm), runs along the edge on the animal’s belly, over a length about 8.7 cm. After Pellegrini 1951a, 315 (no. 13) stated his conviction that the lines constituted an inscription, though hardly legible, Mayr 1959a, who had not acknowledged the traces at all in 1951 (134 [no. XIII]), was the first to attempt a reading: ЧIMΛIIᗡ∃⅃Φ↑VVᗡV1VI *iupuru uþ φleri iaśin*. Mancini (IR 26), however, observes quite correctly that it is impossible to determine the original shape of the characters and remarks on the fact that only their lower halves appear to be in evidence. The row of longer and shorter lines and bigger and smaller angles offers four arrangements which suggest letters: in two places, there appear to be bars extending from hastae; in two places, very short vertical strokes do not reach the edge of the bronze and appear to be inscribed into larger angles. Inscription and object can be compared to SZ-21 on a vaguely dog-shaped bronze, an old finding from Sanzeno. Here, the very similar short strokes and angles run along the edge on the animal's back, over a length of about 4 cm. Whatmough (PID 202), from Conway's drawing, reads ᛂꟻ⋀ǀ1ǀ11ǀᛘ1 *pnippipiav.i.*. Mancini (LIR SA-16), despite conceding that the inscription is "in realtà inutilizzabile", suggests possible readings *il.nuapiśav.i.* or *la.nuep.mav.i.*. The strokes might here indicate a mane, but this is made unlikely by SZ-13. For both documents, script-character of the marks is improbable.

Marks which do not belong with the respective inscriptions are found on the bronzes with SZ-4 and SZ-5 (X on the flat backs of the bronzes), SZ-2.1, SZ-10 and on the above-mentioned dog-shaped bronze SZ-20 (V on the sculpted fronts, near the edges), and SZ-9 (two non-letter characters, also on the front). Factory marks are the most likely explanation – the letters of SZ-2.1 are arranged around the mark, so it must have been applied before the inscription (2.7.3.3). The repetitions also point to local workshops, though the dog bronze does not fit in style with the other two pieces which have V. The two bronzes with large X embossed on the back, on the other hand, are very similar, looking like stylised fish with heads, and only differ in size. Incidentally, the different size of these two objects speaks against an interpretation of the characters as specifications of weight or price. Cf. also SZ-8.2, HU-5.3 and the complex mark next to HU-6.

Some kind of information unrelated to the votive inscription is also likely to be encoded in the sequences on the backs of the two fish-shaped bronzes: SZ-1.2 ǀǀǀǀǀXǀ ǀǀǀǀǀXꟻᛅXⱻᛚⱻ *eteθay̥*$? and SZ-15.2 ?ᛅXⱻᛚᛘⱻ *enteθa*?. The word in the beginning must be the same, though SZ-1.2 lacks nu; the meaning of the sequences following it (including the doubtful auslaut of *e*[*n*]*teθa*°) is utterly opaque. Numbers are hard to argue with no recognisable system behind the sequences; particularly in SZ-15.2, the criss-cross lines look more like an effort to make the back of the bronze uninscribable.

A single bronze, unlike those of Sanzeno in form, is the horse bronze from Dercolo (NO-11 VᛘMǀᛘ⋀ᛕǀᐊǀ1). The stand-alone protome with a horse's head and forelegs ending in a baton which is perforated at the end was part of a deposit of unclear function – if it was ritual, the name *piri kaniśnu* may refer to the dedicant of the entire situla and its contents. A second, similar, but uninscribed piece was part of the deposit; an almost identical bronze with marks is also known from an unknown location in the Val di Non (Kluge & Salomon

2015, 85 with n. 18). The baton-like hind part of the inscribed bronze with its decorative band at the end is reminscent of inscribed bronze batons, a complete set of which was also part of the deposit (2.8.1.2).

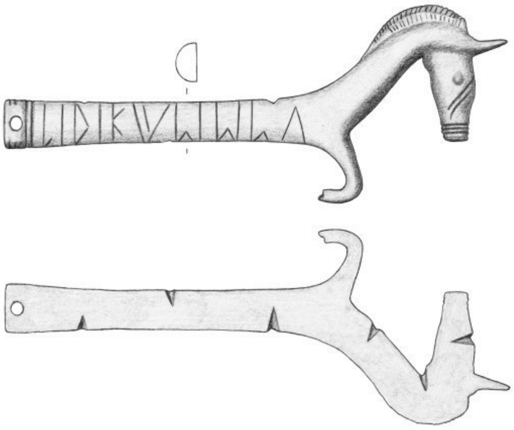

Fig. 49: Horse bronze with inscription NO-11 from Dercolo. Tiroler Landesmuseum Ferdinandeum, inv. no. 1.086. Drawing by Gudrun Bajc for TIR.

There are only three full-plastic bronze statuettes in the corpus, all from the Val di Non, covering the entire scale of epigraphic as well as aesthetic interest. Beside the fabulous Warrior of Sanzeno with the votive inscription SZ-16 running around the pedestal, there is the comparatively crude horse statuette with inscription NO-16 (2.6.2), as well as a smaller, though more detailed, horse statuette with only a mark IXII (SZ-71) inscribed on the flank.

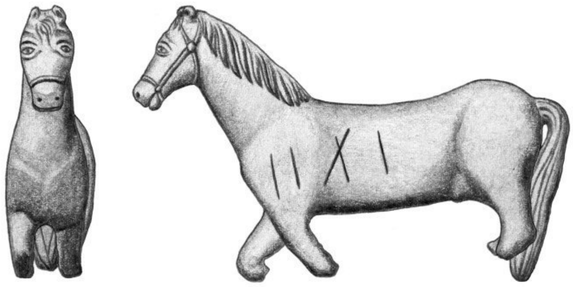

Fig. 50: Horse statuette with inscription SZ-71 from Sanzeno. Tiroler Landesmuseum Ferdinandeum, inv. no. 18.601. Drawing by Gudrun Bajc for TIR.

The only inscribed bronze sheet votives known so far (apart from the miniature situla with BZ-25; 2.8.1.1) are NO-3 on a miniature shield (2.5.4.3; fig. 28) and the recent find NO-19 on the fragment of a figure, both from Meclo. It is hard to determine what sort of figure the latter was part of – the edges are abraded, no hole for an attachment is left. It may have been the arm of a human figure, cf. the examples shown in Marzatico 2001, 538 f. (fig. 62, especially no. 10 and 11 from the Hochbühel near Meran, and fig. 75 from Meclo).

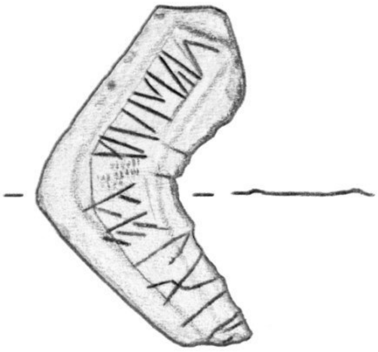

Fig. 51: Fragment of a bronze sheet figure with inscription NO-19 from Meclo. Castello del Buonconsiglio Trento, inv. no. 6012. Drawing by Gudrun Bajc for TIR.

NO-19 ƎIX⅃Ǝꟻ
velθiẹ

Characters are engraved all along the fragment. The part that definitely encodes language is inscribed between the elliptical chased ornament in the bend of the fragment and its narrower end. The first three letters are well legible, the following hasta is probably iota. The last letter is incomplete due to the damage sustained by the rims of the thin sheet. The preserved parts are a hasta and two bars, the upper one very close to the upper edge. The options are ꟻ and Ǝ (with the third bar above the preserved ones). The inscription was clearly inscribed on the votive object,[377] which has quite an appropriate length for a little arm and tapers; the inscription can hardly have been longer. Therefore, *e* is to be preferred as the typical auslaut of Raetic individual names. A name *velθie* is not otherwise attested.[378]

The only votive plaque is the one from the Demlfeld (Ampass) in the Inntal (IT-5; fig. 37). Like the bronzes, it features holes (one in each of the preserved corners) and has clearly been attached to something with iron nails, the rusty traces of whose heads can still be seen. Containing the word *utiku*, the fragmentary inscription is a votive text. It is written in the Sanzeno alphabet, so that both object and inscription are associated with the Central Raetic area, more specifically the Val di Non. Cf. also IT-7 on an unidentifiable piece of bronze sheet, and see section 2.5.1.2 for objects from elsewhere which might be considered to belong with the votive bronze objects.

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[377] Seeing as it is assumed that old metal was reused for the creation of the bronze plaque figures, it cannot a priori be excluded that the inscription was part of the original object. It does not, however, seem likely that an inscribed object would be destroyed in that way, or that a strange inscription would not have been considered objectionable on a votive. Also, the inscription follows the curve neatly.

[378] The other part of the inscription appears to be complete as well, extending between the ornament in the bend and a chased line extending toward it from the breaking edge. The lines easy to distinguish, but cannot be arranged into letters (apart from maybe Ꝟ and V on the left); also, the effect is near-symmetrical – an ornament or a line filler?

2.8.1.4 Votives II – Antler pieces, grips and keys

The kind of inscription most characteristic for the Raetic corpus, not known from any of the surrounding traditions, is the antler votive. Groups of such inscribed votives were found at Magrè near Schio (MA-1–23) and in the Montesei di Serso in the Valsugana (SR-1–10, 12, 13). Context-wise, both the Magrè and the Serso finds can be determined to be cultic. The Magrè antler pieces were found in the bothros of a burnt-offerings site. As for Serso, Marzatico 2001, 505 suggests that the size and two entrances of the Serso building in which the antler pieces were found (house 2) indicate a sanctuary; the presence of an ash layer and a cup-marked stone leads Gleirscher et al. 2002, 245 to think of an indoor space for burnt offerings.

The antler pieces are sawn in half lengthwise; sometimes the tip is sawn off, sometimes the part near the tip/narrower end is left intact. Just like the Sanzeno bronzes, the antler pieces have holes drilled into them, usually on the narrow end, sometimes on the broader one or in the middle. They were attached to a structure (cf. section 2.8.1.3) before being buried (as at Magrè) or deposited in a treasure house (as, possibly, at Sanzeno). The holes appear to have been applied before the inscriptions, as letters are sometimes seen to avoid the holes (e.g. MA-1).

None of the antler pieces – the complete ones at least – from Magrè or Serso could have been attached to a metal instrument – they are generally considered to be abstractified versions of key grips made specifically for offering, without a detour via practical use (Gleirscher 1986a, 183; Marzatico 1996, 52 f.; Nothdurfter 2002, 1131). Key grips can be distinguished from grips of other instruments such as knives by their being curved, which facilitates the insertion into the lock; partial bisection and a hole at the narrow end are reminiscent of various types of key grips (Nothdurfter 2002, 1128. 1131). A complete key with antler grip was found in Bostel di Rotzo (Nothdurfter 2002, 1129 [Abb. 1.6]). The ritual relevance of the key (or, metonymically, its grip) is thought to be derived from its status as an attribute of a female deity or priestess which is known from depictions from Montebelluna in the Venetic area (though inscribed antler pieces are notably absent from the Venetic corpus). The oldest of the round votive plaques depicts a woman usually identified as the πότνια θηρῶν, accompanied by a gryphon and a wolf and holding a key in her hand (Gambacurta 2002a, 103 f.). In the Alpine area, keys appear frequently in women's graves (Nothdurfter 2002, 1141). According to Gleirscher 1986a, 182, the area of distribution of antler votives corresponds to that of the female figures cut from bronze sheet mentioned in the preceding section. Cf. also section 2.4.1 and fig. 19.[379]

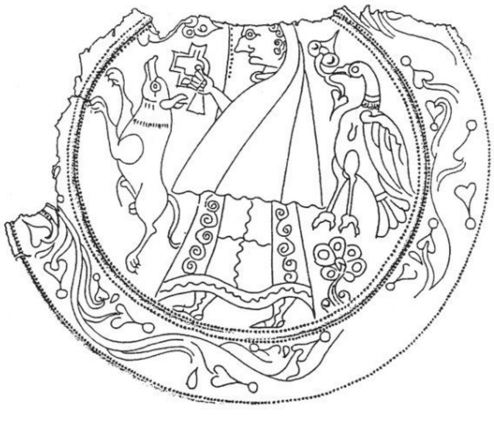

Fig. 52: Bronze disc from Montebelluna with depiction of a female priestess or deity holding a key (from Gambacurta 2002a, 105 [Fig, 22a]).

At both Magrè and Serso, the antler pieces mostly bear names in the nominative, alone (e.g. MA-19 *lasθe φutiχinu* ‘Lasθe Φutiχinu’) or as part of active constructions ‘X dedicated (for Y)’ (e.g. MA-9 *pitale lemais þinake* ‘Pitale donated for Lemai°’) (2.7.2.2). Many inscriptions have short syntactically and semantically opaque elements accompanying the names, e.g. MA-8 *reiθe muiu þinaχe* ‘Reiθe (?) dedicated’. Some of the Serso inscriptions are notable for containing the word *terisna*, while, at Magrè, the ending *-þu* occurs three times (2.6.1.4). It is curious that none of the inscriptions of the most important Raetic subcorpora (Magrè and Serso antler pieces, Sanzeno bronzes) contain the votive formula with pertinentive + verbal noun.

Another similarity between the antler pieces and the Sanzeno bronzes lies in the marks which are scratched into some of the antler pieces, also sometimes on the back, sometimes on the face side of the objects. At Magrè, all but one piece (MA-14) have various combinations of lines scratched, often repeatedly, into the flat back side, sometimes disappearing in the centre where many antler pieces are naturally hollow. Many are extensive, complex

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[379] The similarity of the name of the Venetic deity *reitia* and the ethnonym *Raeti* has of course given cause for speculation (Gleirscher 1986, 189 with literature; see 2.2.2). Prominently, Franz (especially 1957) and Mayr (especially 1957b) held the opinion that certain inscriptions (NO-14, RN-3 read *rt*; BZ-15 ǀXᐅ read by them as *riti* with a ligature X = X+ǀ) were abbreviations of the goddess’ name. A Reitia-cult in the Raetic area was allegedly supported by the attestation of names in *riθ°*, *reiθ°* at Magrè and *reiθuś°* at Sanzeno (Pellegrini 1951, 322; Mayr 1957b). However, all but one of the Magrè attestations are due to the misinterpretation of pi with a closed pocket as rho. In fact, the alleged connection with the Venetic theonym appears to be the main reason for some scholars’ insisting on the identification of the letter as rho (e.g. Markey 2006, 153 f. 158 f. 164). Whether the individual name MA-8 *reiθe* can be connected with the theonym and/or the ethnonym cannot at this point be decided (cf. Schumacher 1999, 345 f.).

and somewhat untidy; simpler, recognisable symbols are found e.g. on MA-11 \X/, MA-16 ⩛ and MA-19 X||. At Serso, marks are scratched on the front of some antler pieces: SR-3, 6 and 9 have two chevrons on the lower edge on the right. From the manner of application, it is not clear that they are not associated with the inscription, also considering that SR-6 and 9 are two of the *terisna*-inscriptions, and that SR-3.1 is connected to SR-6 through the appearance of the name *aruse*. The third *terisna*-inscription SR-4 features three oblique lines and a symbol \V/ in line with the letters. SR-5 has a group ϟ|ϟ, also at the lower right-hand side edge, which is suspicious for being symmetrical, but also looks like it was made by the same tool as used to apply the inscription. In addition, a Magrè-style sequence of lines]>|||<| is scratched on the back.

While large groups of antler pieces are only known from the Alpine foothills (in alphabetic Magrè-context), similar pieces which can be counted among the antler votives were also found in the central Raetic area (in Sanzeno-context). The most prominent is VN-1, on a bisected and perforated antler piece from the Tartscherbichl.

VN-1 𐌖𐌋𐌀𐌄𐌔𐌉𐌅𐌀𐌋𐌄𐌉𐌔𐌉𐌅𐌀𐌋
lavisielavisealu

The letters, running all the way from the thinner to the broader end (about 4.5 cm), become increasingly smaller towards the left, because the writer avoided the small drilled hole by swerving upwards. Although the object is somewhat damaged by erosion on the thinner end, there is no reason to believe that a substantial part of object or inscription is missing. The fact that the upper tip of the first alpha is in evidence suggests that the object had much the same shape as today, with the height of the letters being accomodated to it. The surface is much corroded; while some of the lines are well visible, others are all but gone. They appear to have been tidily scratched, only sporadically are scratches repeated.

The first part of the inscription is comparatively well readable and unambiguous. Sigma has a distinct angle in the upper bend, but is more smoothly curved in the lower half. Starting from the first sigma, the letters become more crowded. The second lambda is followed by a problematic group, probably a scribal error; the writer appears to have erroneously carved two straight hastae, then tried to squeeze an alpha between them. A similar, though shorter scratch disturbs the first epsilon without, however, impeding its legibility. The reading 𐌄𐌀 is based on the observation that the second part of the inscription repeats the first sequence. The rest of the inscription is clear despite the crowding of the letters in the upper left corner.

There is also a group of scratches in the lower corner on the broad end. It is read *tinaχ* by Mayr 1956b, 245 f., but is really too untidy to be arranged into letters, apart from X to the very right, then a vertical scratch I, and possibly 𐌀 – the rest is a profusion of intersecting scratches. The scratchings are probably non-script, though the function is unclear; cf. the non-inscriptions VN-5.1 and VN-6 on bones from the Ganglegg, which also contain the sequence 𐌀IX.

Other antler pieces which were primarily votive objects come from Meclo (NO-7 *φausu*, partly bisected and perforated), Sanzeno (SZ-24]*θ̣nasleθua*, partly bisected), Eppan (BZ-15 IXᚦ, unworked, probably non-script) and San Briccio (VR-1 and 2). The latter two objects are remarkable for being not only less worked, but also considerably larger than the usual specimens, though they both have holes. They are not tips, but pieces from the centre (VR-1) or even from the base (VR-2) of antler pieces. The only comparable piece from the material discussed above is that with inscription SR-2, which is also forked.

WE-3 𐌄𐌋𐌀𐌖𐌍𐌌𐌀𐌗𐌉𐌐 | 𐌖𐌊𐌖𐌋𐌄𐌉𐌔𐌀𐌕𐌔𐌀𐌋
lastasieluku | piθamnuale

Inscribed antler objects which may have been used as key grips or grip plates before being dedicated are known only from the central Raetic area.[380] A grip plate comes from Sanzeno (SZ-97 (?)*ạχsni*?[); round grips come from Tesero (FI-1; 2.5.7), Sanzeno (SZ-32]*þipupi*; SZ-34 *þ*[) and Stufels (WE-3).[381] The latter piece also has para-script marks: in one line, a non-script sequence, much damaged by a broad crack, follows the letters at a certain distance; this group (IIIIXIIII) does not belong with the inscription, being scratched much more deeply, presumably with a different instrument. Similarly, in another line, a very faintly and untidily scratched ◁-shape follows. Both these elements differ in application technique not only from the inscription proper but also from the ornament bands; they seem to have been added at a later time and cannot be interpreted as line fillers.

Four smallish grip plates are straight: from Meclo the illegible NO-4, from Sanzeno SZ-63 with two independent marks, the fragmentary SZ-23]*ilt*[?, as well as SZ-98 and SZ-22. The sequence in line 1 of SZ-98 is reminiscent of SR-1 (2.5.8.2).

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[380] A possible exception is the antler fragment with inscription VR-6, of which it is not clear whether it is a genuine grip plate or a primary votive; its incongruity with the material from Montorio matches well with that of the inscription (2.5.1.2).

[381] Further pieces come from Vintl (Gleirscher 1986a, 183 [Abb. 4.4], possibly bone) and Ardez (MLR 6), both with para- or pseudo-script marks.

SZ-98 ??]𐌉𐌗𐌉𐌐[|]𐌊𐌔𐌉𐌋𐌉𐌅𐌙𐌀[
]*aχviḷịṣḳ*[|]*p̣ịθị*[??

SZ-22.1 IIVII 𐌄𐌊𐌉𐌋 | 𐌄𐌋𐌀𐌉𐌔𐌖𐌊𐌓𐌄𐌐
perkusiale | *like* ?

In SZ-22.1, the two vertical strokes discernible to the left of both lines, which have been read as iotas by Whatmough (PID 203) and Franz 1957, 107 (n. 19), are probably the remains of a decorative band to match the one on the other end of the handle (the only antler votive with such decoration is MA-8). The sequence IIVII (broken off along the second scratch from the left) is probably an ornament filling the line. *like* is unlikely to be a verb in *-ke*, as this would be the only active construction with a pertinentive in Raetic. It cannot be excluded that more text was inscribed on the other, lost grip plate. SZ-22.2 is a decidedly less convincing array of scratches on the plate's back side – despite being vaguely script-like, it is more reminiscent of the scratchings on the back of some Magrè antler pieces. It was read (with the inscribed edge pointing downward) 𐌋𐌙𐌖𐌇⁞𐌀𐌖𐌇𐌀 *ahua·huχl* by Whatmough (PID 203), Schumacher 2004 (alternatively 𐌓𐌙𐌖𐌇⁞𐌀𐌖𐌇𐌀 *ahua·huχr*) and Mancini (LIR SA-26 *ahua·huφa*). However, the fact that many of the scratches are joined to the lower ends of the hastae of the second line of SZ-22.1 suggests that they were executed by putting the tool into the existing indentations on the edge of the handle and scratching inward. The scratches being very long and of differing length and becoming very thin toward the middle of the handle corroborates this. Therefore, the inscription should be looked at the other way round. Its untidy appearance casts doubt on the scratches so far interpreted as the cross-bars of two characters read as heta, they being much more slightly scratched than the others, and much longer than they would need to be. What has been interpreted as some sort of punctuation mark is a vertical row of six very short horizontal scratches separating the inscription into two parts which may be argued to be intended as identical, excepting the chi-shape to the very right. A grouping of the strokes into letters cannot be achieved with any certainty. While the Magrè antler pieces were never attached to an actual tool, it may be asked why any inscription or marks should be applied on the inside of a handle where it could not be seen – in any case, the presence of the scratches indicates that the grip plate was worked on after it had been disjoined from the tool, which indicates a votive function probably also for the inscription on the face side. Since curved handles are typical for keys, the straight specimens may belong to knives or other instruments.

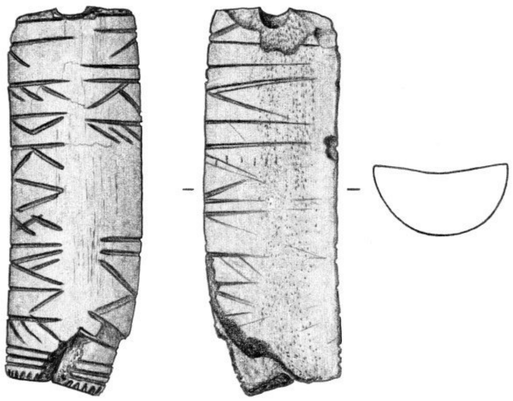

Fig. 53: Antler grip plate with inscriptions SZ-22.1 and 22.2 from Sanzeno. Tiroler Landesmuseum Ferdinandeum, inv. no. 13.454. Drawing by Gudrun Bajc for TIR.

Inscriptions on keys or metal objects associated with keys are SZ-42 *ave* on a socketed bronze grip, BZ-12 *tali śutris* on the distal end of an actual iron key and possibly SZ-18 *χevisiana*? on a bronze instrument whose function is not quite evident.

Fig. 54: Bronze object with inscription SZ-18 from Sanzeno. Tiroler Landesmuseum Ferdinandeum, inv. no. 13.464. Drawing by Gudrun Bajc for TIR.

2.8.1.5 Bones and bone points

Bones and bone points which are frequently found in Raetic context, some inscribed with marks, a few with language-encoding inscriptions, have been interpreted as sortes (e.g. Marinetti 2000, 76; Gambacurta 2002b, 122–124). The most important find from an epigraphical point of view comes from the younger settlement on the Ganglegg in the Vinschgau (Gamper 2006, 107–146). The bones found on that site – uninscribed, with marks or with language-encoding inscriptions – are from the forelegs of goats or sheep. They are completely perforated on the joint head, while the socket is semi-perforated from one side and from the end, forming a tilted tunnel. Similar finds are only known from the Tartscherbichl and from find places in the Lower Engadine and the area of Landeck, though the manner of perforation may vary (Gamper 2006, 143). The function of these objects is as mysterious as that of the somewhat vaguely termed bone points (Knochenspitzen), small bone objects with a flattened blade and usually round handle and a drilled hole at the broadest point. Gamper 2006, 145 suggests that they were either craftsmen's instruments (in the older literature, they are sometimes referred to as needles) or clothing accessories. He points out that among the best comparanda, the bone points from Fai della Paganella north of Trento, there is one piece whose hole looks as if it was worn out by a string (144 [Abb. 77.5]). This type of objects has a wider area of dis-tribution than the perforated bones, being found in the central and southern Raetic areas. On the Ganglegg, bones and bone points were found on the floors, in the layers of ash and debris, of houses which were ritually abandoned, though the majority of the bones are old findings. The low dating for the Ganglegg finds derives from the fact that they were de-posited on the floors of buildings which had been emptied, and which were then burned and filled with debris in the course of a ritual abandonment, thereby representing the youngest layer of finds. Such a use is so far only known from the Ganglegg and from Trissino (Lora & Ruta Serafini 1992, 262).[382]

A number of the inscribed bones and bone points from the Ganglegg bears only marks. Those with transparent language-encoding inscriptions bear names in the nominative (VN-9 *lavise*, VN-10 *laθur lumene*; VN-11 *lumene*; VN-13 *munie*), maybe also in the genitive (VN-8 *χaris*, VN-16 ?*aris*). On para-script elements, see section 2.8.1.1. The function of marks and texts is, like that of the objects, unclear. On bones with a semi-circular cross section, the characters are applied on the curved surface; on bones with a rectangular cross section, they are inscribed laterally. On bone points, the inscriptions are more often applied on the handles, but they also occur on the blades.

Further inscribed bone points in the corpus come from Cles (NO-17 with a votive text *ketanuvale utiku*) and San Giorgio (VR-17 with a fragmentary and opaque sequence]*maima*); a fragmentary piece with marks from Sanzeno (SZ-48 V|X|). Four inscribed pieces were found among the thirty-two unworked pig bones in Trissino, which are interpreted as sortes by Ruta Serafini 2002b, 259. The inscriptions are unclear and partly non-script; TR-3 may be the individual name *piθi* (2.5.1.2). Inscribed bones with inscriptoids also come from the Steger hill near St. Lorenzen (PU-5–7, all currectly untraceable), from Sanzeno (SZ-94 *veþa* vel sim.), from Castelrotto (pig; VR-4 *puz·n*?*χan*), Montorio (pig?; VR-7 *kari*; VR-8 [marks]), and San Giorgio (pig; VR-12 *alp*; VR-13 *larie*; VR-14 *lav*[*i*]*śa*; VR-15 and 16 [marks]). Where at all analysable, the inscriptions appear to encode individ-

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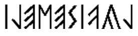
[382] See TIR (http://www.univie.ac.at/raetica/wiki/Non-script_notational_systems) for photographs of Ganglegg bones and bone points which are not included in the corpus (EX-16–27).

ual names. The inscribed material is mostly young (late La Tène period; cf. the specimen with a Latino-Venetic inscription from Venetic Làgole mentioned by Gambacurta 2002b, 123; older specimens are uninscribed and usually larger and more crudely made); whether this dating can be extended to the pieces from the Val di Non is debatable.

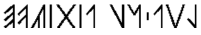
There is only one astragalos with a language-encoding inscription (NO-13 *terisna* from the Monte Ozol; 2.5.4.2; fig. 27), despite the frequency of astragaloi in the Raetic area, many of which are inscribed with marks and various decorations, and used for divination as well as games (Zemmer-Plank 2002, 1178).

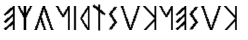
2.8.1.6 Inscriptions on bronze utensils associated with the ritual feast

While there are a considerable number of bronze vessels, mostly situlae and cists or fragments thereof, in the corpus, only seven of these bear certainly language-encoding inscriptions. No comprehensive statement can at this point be made about the function of these texts – differently from inscriptions on votive bronzes, inscriptions on objects of use may theoretically be connected to various phases of the item's lifespan. The situla inscriptions HU-7 and (arguably) CE-1.1–5 contain words which are also found on votives and can be interpreted as texts of dedication; no archaeological context is available for either.

CE-1.1 
laviseśeli

CE-1.2 
velχanu

CE.1.3 
lup·nu piθiave

CE-1.4 
kusenkustrinaχe

CE-1.5 
φelna vinuθalina[

The five sequences are written on the rim of the situla and on the handle (1.1). Being rather evenly distributed, they may have been inscribed at the same occasion and may in some way belong together, but it is not clear that they are part of only one text: CE-1.2 and CE-1.3 resemble each other in ductus (vertical hastae in alpha and upsilon, vertical second bar in nu) and execution (slim tool, slender letters) and may well have been written in one go, but CE-1.3 stands out because of the solitary syllabic punctuation mark.[383] CE-1.1, CE-1.4 and CE-1.5 are applied with a different, broader tool; when the handle is laid down on the rim, so that CE-1.1 can be seen, the sequence is situated right above CE-1.5 and has the same orientation. Although the relation of the five parts is not entirely clear, CE-1.5 seems to contain a finite verb of dedication *trinaχe* (see section 2.7.1.2 on whether it is *þinaχe* with a compromise spelling) and a recipient/beneficiary (2.7.2.2). I am inclined to think of the names in the nominative (see section 2.6.1.4 on *lavise śeli*) as those of a group of donors; cf. the sequences of names on the Sanzeno bronzes (2.8.1.3).

CE-1 ‘Lavise Śeli, Velχanu, Piθiave Lupnu, Φelna Vinuθalina donated to/for Kusenku°’

Two inscribed handles found without the corresponding vessels may be pars-pro-toto votive gifts, but the inscriptions consist in no more than isolated individual names: BZ-9 *piθame* on the handle of a bailer from grave context appears in the casus rectus, while WE-1 *lavises* on the handle of a situla (no context) is a genitive. Two fragments of vessels from the Val di Non bear fragmentary and opaque inscriptions on their rims (NO-1 ?]*ukinua*[,[384] NO-6]*χamuriri:*). All the above texts are inscribed on the handles or furled rims, only SZ-30 on the Sanzeno situla is an exception.

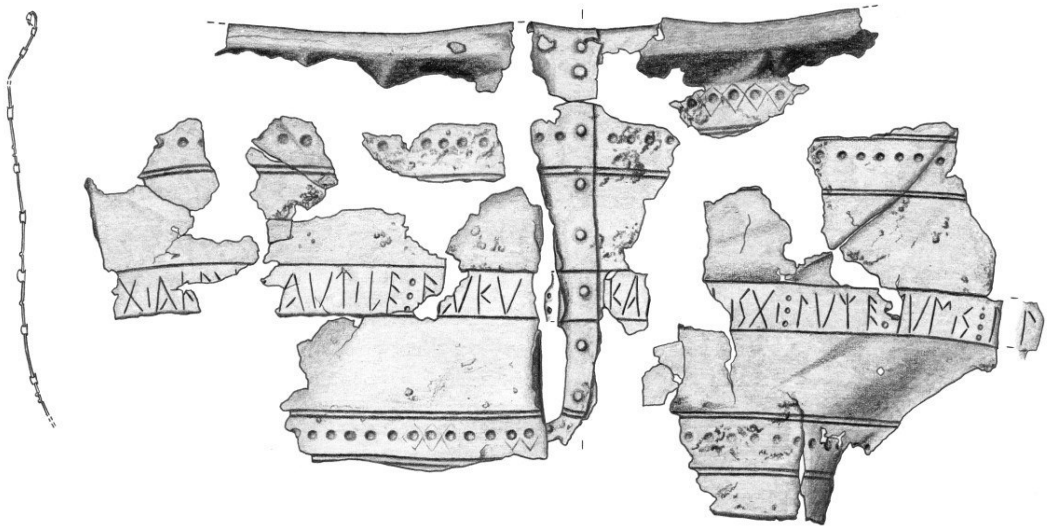


Fig. 55: Inscription SZ-30 on the remains of the Sanzeno situla. Tiroler Landesmuseum Ferdinandeum, no inv. no. Drawing by Gudrun Bajc for TIR.

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[383] Syllabic punctuation is certainly not employed in CE-1.2, as chi ought to be punctuated even under the most loosely applied rules.

[384] The first letter, damaged by the break, was read X by Campi 1888, 145, but this is unlikely from the remaining lines. A reading λ, as suggested by Mayr 1957c, 426, is more probable, but, though the breaking edge is very straight, no traces of a hasta coinciding with it can be verified.

The inscription SZ-30 is inscribed on the wall of the fragmentary situla, running horizontally between two decorative lines at about half the vessel's height. The embossed letters were applied on the inward-facing side of the bronze sheet out of which the situla was constructed (and are usually read like this, viz. dextroverse). This could be taken to indicate that the inscription was applied secondarily: in keeping with the widespread custom of destroying items intended for consecration, the situla was dismantled and inscribed with a votive text (as suggested by the presence of the word *eluku*) on what had been the inward-facing side, using two pre-existing decorative lines as a frame. However, according to Mag. Wolfgang Sölder of the Tiroler Landesmuseum Ferdinandeum, where the remains of the situla are kept, the turned-up edges of fragments E/A (beside the rivetted rim) and B/C (on the very left and right in fig. 55) indicate that, after the removal of the bottom, the situla was not cut open, but flattened as a whole, so that the inward-facing sides of the sheet touched (a practice known from votive miniature vessels). In this case, the inscription cannot have been applied after the situla's dismantling, but must date from its construction.

We then have to ask whether the inscription was meant to be hidden or whether it was in fact visible from the outside. It is not altogether likely that the strokes would have been discernible on the outside of the situla even before copper rust gathered. However, the positive side seems to have been the face side of the bronze plaque with IT-5, i.e. that inscription was applied mirror-inverted from the back. Like IT-5, SZ-30 is dextroverse – the rarer option – only when looked at from behind, and would have appeared in the more common sinistroverse orientation on the face side of the object. Hidden inscriptions are not unusual in general, but we know no other instances from the Raetic corpus. In either case, the function of the inscription is difficult to judge. The evidence of *eluku* for a dedicational text remains, but would a situla have been constructed only to be immediately destroyed for offering? If the vessel was in use for ritual feasts for some time, a text referring to a sacrifice (2.7.3.2) would not be out of place; the inscription may be placed with VR-3 and PA-1 on bronze implements which are associated with ritual practices, though both the latter inscriptions could well be votive. PA-1 on the Paletta di Padova, a ritual spatula, and VR-3 on the Spada di Verona, an elaborately crafted skewer as used in ritual feasts, are comparatively lengthy inscriptions; both contain the word *utiku* (2.7.2.2).

SZ-30 ᛕA[? ?]ıϟXı⁝ᛚVΨ𐌄⁝1VMıϟ⁝ᛚ[ ]XıAᛕ[? ?]AV↑ıᒪ𐌄⁝𐌄ᒪVᛕV⁝
ka[? ?]*isθi:puχe:ṭumis:p*[ ]*θiaḳ*[? ?]*auþile:ẹḷuku:*

Though the archaeological considerations are evident enough, some doubt remains – at least to me – about where the inscription begins. The established transliteration, which starts with *ka*[(thus above), goes back to the original publication (IR 29) and uses the rivetted rim as its starting point. However, the separator to the left of the rim (the one after *eluku*) and the seamless sequence just skipping the rim draw this interpretation into question. Judging from the position of the turned-up edges (which must mark places opposite each other), the inscription is well nigh complete; the situla cannot have been much larger than about 14–18 cm in diameter. With that size, it would have been constructed out of a single sheet of bronze, with only one rivetted rim (W. Sölder p.c.). The writer either performed an impressive feat in spacing the text so perfectly that he had neither to squeeze letters at the end nor to leave a space, or the sheet was only cut after the inscription had been applied. When assuming, on the other hand, that the text was inscribed on a dismantled situla which had been cut open somewhere other than along the rim, in the lacuna between fragments C and D, the text would cross the rim. See n. 354 on issues concerning syntax.

Two language-encoding inscriptions are found on simpula: the lengthy BZ-3 – identified as a votive inscription by the word *utiku* – and SZ-31 *remina*, comparable to the above-mentioned name-only inscriptions on handles of vessels. Though the majority of the Raetic inscribed simpula (including those which bear marks) are complete, it is always the handle which is inscribed; cf. inscribed handles from Venetic Làgole, which were more often sacrificed without the ladle (e.g. Ca 9, Ca 12; Locatelli 2002, 115).

2.8.1.7 Inscriptions on pottery

In spite of the huge amount of potsherds in the Raetic corpus, there are precious few language-encoding inscriptions on pottery. Three certainly relevant texts come from the northern Raetic area: IT-2 *χaisurus* on a Fritzens bowl and IT-8 *piθan*[on the handle of a ceramic vessel represent individual names, while the fragmentary WE-4 on an olla is a votive inscription. Further testimonies which may be language-encoding are IT-3 *tiva*, EN-1 *aχ*?[(both incised before firing), BZ-1]*anu*[, BZ-13]*esil*[, PU-8 *mvak*[, PU-9 *v*?[, PU-10]?*nieχ*, as well as the very fragmentary inscriptions NO-5, SZ-91, and WE-2. VR-9 probably belongs with the Latin inscriptions on pottery from Montorio.

2.8.1.8 Inscriptions on stelae and slabs

While funerary inscriptions on stone are common in the Venetic (Malnati 2002, 130–137) and the Cisalpine Celtic corpora, four inscribed slabs at most represent the Raeti's contribution to the genre; all from the Central Raetic area. Apart from the Roman-era stela BZ-24 (2.8.3), which simply mentions one Ossurie – evidently the deceased – the only (arguably) transparent stone in-scription is BZ-10.1 from Pfatten near Bozen.

Fig. 56: Slab with inscription BZ-10.1 from Stadlhof (Pfatten). Tiroler Landesmuseum Ferdinandeum, inv. no. 8.636. Drawing by Gudrun Bajc for TIR.

BZ-10.1 ᗰ Ǝ↑A⅃ | VᒣAXIꟻ ƎꓘAᛘ
tnake viθamu | *laþe*?

On the reading of the sixth letter, see n. 269; on the character after *laþe*, see section 2.5.8.4. While *laþe* is syntactically and semantically opaque, *tnake* may be interpreted as an individual name, with *viθamu* (or pi*θamu*, see n. 269) as a patronym in -*nu* with progressive assimilation of a nasal cluster.[385] The anlauting consonant cluster in *tnake* is not otherwise attested in Raetic, but occurs in Etruscan (e.g. AV 4.1 *tnucasi*). The similarity with (phonetically or orthographically) syncopated forms of *þinaχe* in the area of Verona (2.5.3.3) must be coincidental, since ↑ occurs in the inscription. Forms in -*ke* are frequent on slabs from the central Raetic area, one from Tavòn in the Val di Non, one from the Piperbühel.

NO-10 ΛϨ⁝ƎꓘƎ⅃ID
rileke : sa

RN-1 ƎΨƎIAᒣ | ƎꓘƎϨA⅃
laseke | *maieχe*

Epigraphically, the only problematic element is the third letter in line 2 of RN-1, which can be read as iota with serifs or as zeta I. The second option was suggested by Mayr 1959b

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[385] See Marchesini 2014b, 212–217 for a different analysis, based on the Celtic interpretation of Markey 2000.

(see already Vetter 1943, 78) and accepted by Kretschmer 1943, 178, but rejected by Battisti 1944, 217. The hasta features distinct additional elements on its top and bottom end. At the bottom, a neat short horizontal scratch is clearly visible. On top, an irregular indentation, vaguely triangular, makes the interpretation difficult. While the indentation is the same breadth as the scratch at the bottom, a slight oblique scratch extends through it to merge with the medial bar of epsilon; this latter may be a slip of the chisel when writing epsilon, or be interpreted as the upper bar of zeta, as suggested by Mancini's drawing (IR-3, LIR BZ-19). The hasta is possibly prolonged slightly beyond the indentation; the spot may be damaged and not reflect the original state. A reading as zeta is unlikely, as this form is rare, possibly non-existent in Northern Italy (cf. section 2.5.4.5). Cf. the Latinoid BZ-24 with iota written with serifs (2.8.3).

All three forms in *-ke*/*-χe* would, if documented separately, be most conveniently interpreted as preterite verb forms, but the co-occurrence of *laseke* and *maieχe* in RN-1 shows that this is not tenable. Here, at least, the similar auslauts must be coincidental. Considering that the preterite ending is more often written with chi in Raetic and the default word order appears to be SV (see n. 354), RN-1 may be interpreted as 'Laseke X-ed' (2.7.2.2), in which case the inscription is hardly funerary. NO-10 *rileke* could be an individual name as well. Indeed, neither of the two somewhat misshapen stones looks particularly like a grave stela, unlike the worked slab which bears BZ-10.1. The latter has the appropriate height and shape, and features an ornamental line below the inscription. The eroded remains of characters on the back (BZ-10.2), where the surface has not been smoothed (Marchesini 2014b, 208), are best interpreted as the letters ᛘᛚ, as seen by Marchesini (208). They might be marks of some description (ibid., 204), but are in my opinion more likely to correspond to the beginning of the inscription proper on the other side of the slab – the writer may have tried his instrument in an inconspicuous spot before starting on the text, which would indicate that some importance was accorded to the inscription and its proper execution. *tnake viθamu* vel sim. may well be the name of the deceased, but without the meaning of *laþe*, it is hard to determine the function of BZ-10.1 securely. An interpretation as a funerary inscription is still likely, provided that the slab was indeed found resting horizontally on two large stones, covering a grave with an urn, as reported and drawn by the excavator Pescosta (see the original drawing in Marchesini 2014b, 205 [Taf. 1]).

A fourth slab, one which can be referred to as a stela, comes from Siebeneich.

BZ-6 𐌄𐌕𐌖𐌀𐌖𐌍 | 𐌉𐌙𐌀𐌍𐌀𐌘
φanaχi | *n?aute*

The letters are inscribed on one broad and one narrow side of the slab, running downwards. The reading of line 1 *φanaχi* is unambiguous. In line 2, a small chevron is inserted under the angle of nu. Mayr's assumption (1962a) that the angle in question is merely that of nu, which had been written incorrectly, then repeated above, can no longer be maintained. Prosdocimi's reading (1971, 40) with lambda *nlaupe* is based on the asymmetry of the letter, which may, however, be due only to the awkward position, and on comparison with his now obsolete reading of the inscriptions ST-1–3. It might be surmised that the belated addition of a letter did not necessarily result in a correct inscription and that neither *nlaute* nor *nuaute* represent the intended outcome.[386] Both *φanaχi* and *nuaute*$^?$ could qualify as individual names; while the object indicates a grave inscription, text and context remain unclear.

The inscriptions TV-1.1 and TV-1.2 on an opisthograph from Castelcies in the province of Treviso are discussed in sections 2.5.8.3 and 2.8.3, respectively. Both are obscure, but unlikely to be funerary.

2.8.1.9 Rock inscriptions

Petrographs from the Raetic area and displaying linguistically Raetic features have been found (so far) only in the very north, viz. in the Northern Limestone Alps. The Schneidjoch in the Rofan mountains (one inscribed wall) and the site of the Achenkirch inscriptions (min. two walls) are located close to each other in the Steinberg/Achensee region (Nordtirol); the Unterammergau inscriptions (min. three walls) are found in southern Bavaria. Not all of the inscriptions are epigraphically or linguistically utilisable – of some, only faint traces can be seen, many are doubtful, a few are most probably not Raetic or even script.

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[386] An emendation to *-nuale* is not tenable. One might assume that the writer accidentally inverted upsilon and alpha (**naule*), then added the upsilon in its proper place, but did not bother to erase the incorrect upsilon. However, the misspelling would be somewhat random, as the Sanzeno-type upsilon in evidence does not resemble alpha (it would be easier to understand in Magrè-context). Also, ↾ would have to be an additional error. Lastly, while *φanaχi* makes for a feasible individual name, the detachment of the suffixes from the name would be unique. (Though they could not both have fitted on the same side – the writer might have preferred to separate at a morpheme border; also, some space must presumably remain for the stela to be buried in the ground.) It is also not clear what function a pertinentive form would have on a grave stela.

The first inscribed wall with Raetic inscriptions, the one at Steinberg,[387] was found in June 1957 by hikers. Seven inscriptions were first published in a Tyrolean daily newspaper; later in the same year Vetter provided a full publication. In 1962, Mayr (1962b) reported an eighth inscription; in 1971, Prosdocimi and Joppich suggested improved readings and interpretations, and published a ninth inscription. The definitive decipherment was only achieved by Zavaroni 2004 and Schumacher 2004, 342–354.

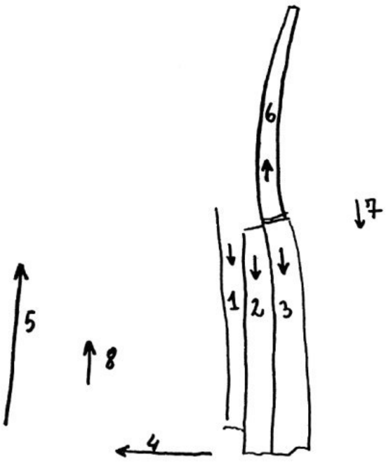

Fig. 57: The arrangement of the inscriptions ST-1–9 on the rock wall (from Prosdocimi 1971, 30).

The inscriptions are written on the right-hand-side wall of a small cave or rather crevice. This crevice is about 2.5 m broad at the entrance, and 3 m deep; it tapers into a cleft at about 4 m from the ground.[388] Thanks to the sheltered situation, the inscriptions are comparatively well legible despite the easily weathering limestone they are scratched in. However, the reading is impeded by numerous graffiti, presumably from prehistory up to the 20th c.[389]

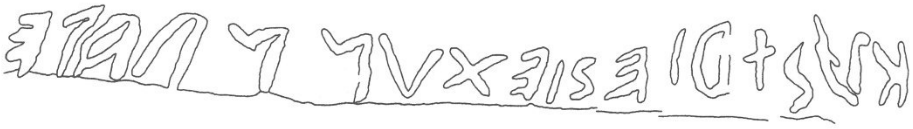

Fig. 58: Inscription ST-1 (turned 90° clockwise), from Schumacher 2004, 366 (Taf. 18).

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[387] From the first, the inscriptions were referred to as those of Steinberg, the village closest to the high-altitude site on the Schneidjoch. In reality, the crevice is situated in the municipal territory of Brandenberg, but a renaming does not seem necessary and would be hard to establish. The same goes for the inscriptions' sigla in the Schumacher/TIR system: inscriptions which are written on the same object – in this case a rock wall – ought to be given the same reference number and distinguished by subordinated numbers (ST-1.1–9). This is executed for the recent finds in Achenkirch and Unterammergau, but for Steinberg, the established sigla (ST-1–9) are retained to avoid confusion.

[388] Details in Sydow 1989 (with photographs and drawings of the crevice) and 2002.

[389] Photographs of the wall can be found in Sydow 1989, 71 (Abb. 6) and Mandl 2011, 124 (Abb. 133). The site has been closed off by a fence to protect the inscriptions from further damage (Sydow 1989, 68 f.).

ST-1 
kastriesieθunnuale

ST-1 is the leftmost – from a reader's point of view, the uppermost – of three associated inscriptions which are written on the right-hand side of the wall, just by the entrance, sharing frame lines. It is about 80 cm long and runs sinistroverse from top to bottom; today, the last letter is about 1.5 m from ground level. The impression that there is a frame line above the letters is created by some long scratches which belong to another graffito. The first alpha and upsilon are inverted. The inscription starts out with rather large letters (up to 9 cm), but after a small protrusion in the rock they get smaller (about 6 cm) to avoid the above-mentioned graffito, which represents a multi-part cross. The letters had to be arranged between the older lines: the lines after either of the two nus, which were the reason for incorrect readings in the older literature, belong to the cross, not the inscription (Schumacher 2004, 344). The existence of tau following the last epsilon, which Vetter 1957, 388 believed to see, cannot be verified today; it may have been wishful thinking making ST-1 more similar to ST-2, whose last preserved letter is tau (Schumacher 2004, 345). The inscription names one *kastrie eθunnu*, in the pertinentive, and is best interpreted as a votive inscription which indicates the dedicant.

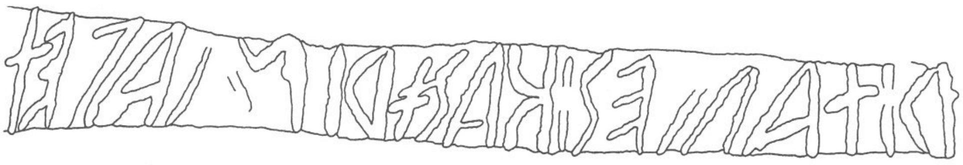
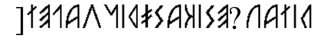


Fig. 59: Inscription ST-2 (turned 90° clockwise), from Schumacher 2004, 366 (Taf. 18).

ST-2 
pitau?esikaszrinụalet[

ST-2 is the middle one of the three inscriptions; it is as long and ends at the same level as ST-1. The last upsilon is almost completely vanished, the hasta of the last lambda is curved in the same way as the immediately preceding hasta of alpha. Like ST-1, ST-2 contains a name formula in the pertinentive: 'by Pitaune [vel sim.] Kaszrinu'. The last recognisable letter must be the beginning of a third word; the possible rest of the text was obliterated by somebody who smoothed the area just beneath it before applying their own inscription. It must be pointed out, though, that, generally, large and tidy petroglyphs did not suffer any major damage by later scratchings – the wilful destruction of part of an inscription as conspicuous as ST-2 is not altogether likely. More usual is the inclusion of element of older scratchings in new ones, as, for example, the frame line between ST-2 and ST-3, which was prolonged toward the ground to form part of another cross.

The first letter of the inscription, a hasta with a large pocket, which does not appear to be closed at the bottom, is usually read as rho (Schumacher 2004, 345). However, two recent finds from the Inntal feature a similar character which is better identified as pi: IT-8]𐌍𐌀𐌗𐌉𐌐 *piθan*[can be compared with *piθamne* (especially MA-2 *piθanme* with metathesis), IT-4 𐌄𐌅𐌀𐌉𐌗𐌉𐌐 *piθiave* occurs also in CE-1.3. The letter form is not attested elsewhere, but appears to be a variant of Magrè-pi typical of the Inntal. Zavaroni 2004, 49 f. read pi in ST-2 even before the new finds. The adduction of parallels for the individual name in ST-2 is precluded by another difficulty in the reading, due to a lacuna in the upper area between letters 5 and 7. Only a hasta remains of the sixth letter; it follows the curve of preceding alpha just like that of lambda in the latter part of the inscription. The hasta of epsilon is straight again, so that a little space remains between letters 6 and 7 in the upper area. The two bars of nu can be detected with some effort – Joppich 1971, 41 reads *ritalnesi* (with incorrect *l* for upsilon). Schumacher 2004, 353 reads *ritauiesi* and points to the PN CIL III 5905 *ridaus* (from Gaimersheim near Ingolstadt). No parallels can be adduced for *pitauie* oder *pitaune*, but see section 2.6.1.2 on the commonness of names in *piθ-*/*pit-*. Rix 1998, 10, taking 𐌖 for lambda as per Joppich's reading suggests *pitalie*, to be compared with MA-9 *piθale*.

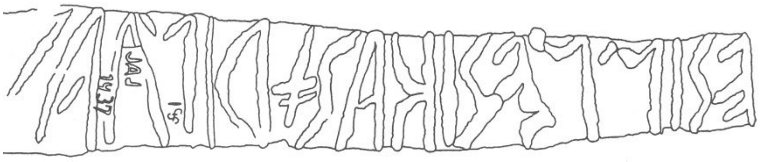


Fig. 60: Inscription ST-3 (turned 90° clockwise), from Schumacher 2004, 366 (Taf. 18).

ST-3 ?]𐌋𐌀𐌖𐌍𐌉𐌓𐌆𐌔𐌀𐌊𐌉𐌔𐌄𐌍𐌌𐌉𐌔𐌄
esimnesikaszrinuaḷ[?

The third inscription of the group is about 77 cm long. The last four recognisable letters are much damaged, but legible; final epsilon can be surmised. Some younger inscriptions use the hastae as frame lines. ST-3 is another name formula in the pertinentive: 'by Esimne Kaszrinu'.

There can be little doubt that the gentlemen referred to in these inscriptions are related: Kastrie Eθunnu and his two sons Pitau?e vel sim. and Esimne. However, it is not clear whether the inscriptions were applied on the same occasion or whether ST-1 is older and

Kastrie's sons added their names to their father's at a later date. The assumption that the inscriptions were applied at different times/by different persons is supported by the variation in the spelling of the father's name (2.5.5.5). Also, ST-1 does not have a frame line above the letters and no additional word or abbreviation like ST-2 and possibly also ST-3. Yet even if ST-1, particularly the initial part, should be older than the other two inscriptions, the fact that it is more heavily eroded than the rest of the group is surprising considering its position as the innermost inscription of the three – this cannot be due to some twenty years maximum which could have passed between their application. Either the letters were less deeply scratched or the surface is more susceptible to weathering in the area above the protrusion. The ductus in ST-1, or at least in the initial two thirds, does differ somewhat from the other inscriptions: the letters are broader, the spaces larger, alpha and upsilon are inverted, the bars of both the latter characters and kappa are not rounded. However, the letters in -*nuale* are quite similar to those in the other two inscriptions. Maybe Kastrie started to write, until it occurred to him that he could leave this laborious task to one of his boys. More likely than a change of hand is that the writer was forced to change his position by the above-mentioned protrusion in the rock face, which could explain the change in ductus and in particular the inverted letters. Despite the inconsistencies in spelling, it is probably preferable to ascribe ST-1–3 to only one writer.

We can only speculate about the context of the inscriptions' application. Seeing as the names appear in the pertinentive, we are probably concerned with votive inscriptions naming donors, but it is not clear what exactly was sacrificed. Following the inscription find, archaeological excavations were conducted in front of and inside the crevice, but they did not yield any finds. The one result the excavations did have was that it allowed a little pent-up spring at the back of the crevice to flow more freely (Sydow 1989, 69 f.). If the site was a sanctuary by a spring (thus Gleirscher et al. 2002, 182), the votive donations must have been purposefully removed – numerous bones and potsherds with marks were found at the spring sanctuary at Telfes in the Stubaital (Sydow 1989, 70). Alternatively, the inscriptions themselves may constitute the sacrifice, as a durable proof of the visit. Still, it must be pointed out that inscriptions on large and/or stationary objects are by no means always connected with cultic practices. Among the modern graffiti, there are a large number of initials and dates, sometimes carved sloppily, sometimes executed very carefully with serifs and cartouches. These carvings are documents of the human desire to leave a mark. Even if the crevice only served as a rain shelter, any Iron Age wanderer awaiting the end of a downpour might have started doodling on the soft limestone surface.

These considerations lead on to the question of who the writers were. We have only vague notions of the societal aspects of Raetic literacy. As said above (2.8.1.3), it is quite possible that the inscriptions on the Sanzeno bronzes were written by local craftsmen or even priests rather than by the dedicants themselves, but this does not necessarily mean that the art of writing was entirely restricted to cult officials or professional scribes. Yet even if the knowledge of script was more common than that, herdsmen from the Achental are among the last people we would expect to have been literate – quite apart from the fact that we are not certain how far the domain of the Raeti extended toward the north as far as actual resident population is concerned (2.4.1). Educated travellers from the south, taking the route through the Achental on their way from the Inntal into the Bavarian plains, would hardly have detoured to the remote Schneidjoch, unless motivated by a sanctuary. The supraregional relevance of sanctuaries and offering sites in Nordtirol is demonstrated by the finds from the Demlfeld near Ampass – not only the Sanzeno-Raetic IT-5 on a bronze plaque, but also a Venetic inscription on a horse bronze (*It 1; Schumacher 2009). In any case, the locations of Iron Age petrographs in the Alps play an important part in the research on pre-Roman routes of transit and trade between Italy and Central Europe.

Fig. 61: Inscription ST-4 with surrounding graffiti (from Schumacher 2004, 367 [Taf. 19]).

ST-4 ⱻ1AΛY·ⱻIXAЖⱻ1I‡A
ạzileθaθiỵ·nuale

Inscription ST-4, about 74 cm long, is written horizontally at (today) about 1.5 m above ground level, starting a little below the last letter of ST-1. Its large letters are deeply engraved, so that it is well legible despite erosion and many younger graffiti. The tip of initial alpha is damaged. The sixth character looks like a symbol Ж – Schumacher 2004, 350 observes that the vertical line is narrower and shallower and suggests that it was added later by someone who used St. Andrew's cross in the inscription as a starting point for a zig-zag line which extends downward, so that a reading as theta X (*θaθivnuale*) is probable. The following alpha is also damaged by younger scratchings or runnels; the character which is read as waw by Schumacher is disturbed by a lacuna in the upper area.

Like ST-1–3, ST-4 contains a name formula in the pertinentive: ‘by Azi° Θaθivnu’. See section 2.7.2.2 on the pertinentive allomorph *-le* in individual names, 2.5.5.5 on zeta, 2.6.1.2 on a possible connection of the individual name with Transpadanian onomastic material and 2.5.8.3 on the apparently suffix-marking punct.

Fig. 62: Inscription ST-5 (turned 90° counter-clockwise), from Schumacher 2004, 368 (Taf. 20).

ST-5 ·|·𐌄𐌔𐌉𐌕𐌖𐌋𐌀𐌍𐌖·𐌀𐌋𐌄𐌊𐌄𐌓·𐌀𐌊𐌅𐌄
hesiṭulanu·aleker·akve

ST-5, about 73 cm long, is inscribed vertically at the back of the crevice; unlike ST-1–3, it runs upward. Due to its awkward position, it is hardly disturbed by younger graffiti. Considering that the writer cannot have stood left of his inscription, where the crevice is already too narrow, it has to be assumed that he applied the letters upside-down. Prosdocimi 1971, 13 suggests that the inscription was copied from a sample by a person who could not read. The first character, disturbed by a younger scratch, consists in a hasta with a dot on either side. Formally, it is identical to the younger Venetic version of heta ·|·. This letter form is unknown in Raetic writing, but regular Magrè-type heta 𐌇 does not occur in the petrographs or indeed anywhere in the Magrè-type inscriptions of the Raetic north; see also section 2.5.5.5 on Este orthography in the petrographs. Prosdocimi (ibid., 36 f.) suggests that his illiterate writer, due to lack of space at the top, added ·|·, which was the last letter in his sample, at the beginning of the inscription, where he also saw epsilon just as at the end. This would mean an original ending ·|·𐌄 *-e.i.* (punctuated iota being homographic with heta ·|·) typical of Venetic (dative ending), but, as Prosdocimi himself observes, the punctuation in the rest of the inscription is not at all in line with the Venetic system (2.5.8.3). Lambda, on the other hand, appears here in a form which is only known from Venetic, more specifically the Cadore, where, however, heta ·|· does not occur.

The fourth character, a shortish vertical scratch after sigma, could be read as iota or as a punct. Iota is more likely, as the line is longer than the unambiguous punct which follows *-nu-*; also, full-length iota does not occur in this inscription. The same problem concerns the eighteenth character, which is a line just as short as the punct.[390] The character ᚢʌ is a ligature of nu and upsilon, as already suggested by Prosdocimi 1971, 37 f., and identified by Zavaroni 2004, 49. 56–58. The reading of ᛚ as lambda is based on the identification of the sequence as the suffix chain *-nu-ale*. Similar forms of lambda are known from Venetic; cf. ST-6 below with a more common non-rounded version. For the suffix-marking punct, see section 2.5.8.3.

Apart from the patronymic suffix and the pertinentive ending, which indicates another name in a votive inscription, ST-5 is obscure. The sequence preceding *-nuale* should contain the patronym's base, ideally also an individual name in the pertinentive. If the above-mentioned shortish scratch is read iota, *-si* may be the pertinentive ending of the individual name, but He° makes for an unusually short name – *hesi tulanuale* 'by He° Tulanu'? See 2.6.1.2 for a possible parallel for a name *tula*, but cf. the similar inscription ST-6, which appears to lack an individual name before the sequence in *-nuale*. For *ker·akve* or *keriakve*, MA-10 *ker* can be compared, but this potential word is opaque.

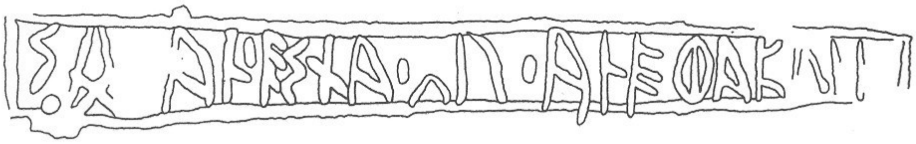


Fig. 63: Inscription ST-6 (turned 90° clockwise), from Schumacher 2004, 369 (Taf. 21).

ST-6 ≷A?ᚨᚿ'ᛖ≷ᚾᚨ'ᛀᚢ'ᚨᚿᛖΦᚨᛕᚨᚿᛖ
sạ?aḷ·esta·nu·aleφakaḷẹ

The position of ST-6 sheds some light on the relative chronology of the Steinberg inscriptions. One of two dextroverse inscriptions on the wall, ST-6 starts at the beginning of ST-3, its first letter back-to-back with that of ST-3 (separated by a frame line), and runs upward with a length of about 68 cm. As with ST-5, its position – here rather high up on the wall – has kept ST-6 almost free from graffiti. Correspondingly, we again have to ask how the inscription was applied: right behind the entrance, there was ample space for the writer, but unless the ground level was at least a metre higher than today he must have stood on a ladder – the last letter is today situated at about 3 m from the ground. In any case, this is

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[390] In the fifth letter, in addition to the pronounced bar which crosses the hasta at about a third of its height, two more bars extend in writing direction above it, forming ᚫ. The perfectly appropriate alignment of the bars conflicts with their being very faint in comparison. Cf. ST-6 below with ᚽ with a bar rather low on the hasta. It might be speculated that the writer made a mistake when sketching the letter, then carved the correct one; the inscription may also have been tampered with at a later date.

probably the reason for the letters' getting smaller toward the top (5 instead of the 8 cm of the inscription's first letters). Seeing that ST-3 is the third inscription in a group of three, the position of ST-6 has to depend on it, rather than the other way round, so that ST-6 must be younger, as already observed by Vetter 1957, 390.

The beginning of the inscription is damaged. The second letter can only be alpha, although it seems that there are two bars which intersect beneath the chevron – Vetter 1957, 390 suggests a mistake of a writer unaccustomed to write dextroverse. After alpha, there is a lacuna. Vetter saw an angle in the upper area and read kappa ᛕ; the traces he referred to are discernible, but too faint to allow a conjecture. The letter ᛚ is a variant of lambda which is known from the Venetic inscriptions of Làgole and Auronzo di Cadore (e.g. Ca 65; cf. ST-5). The following punct, situated in the upper area, may only be a random notch – if it belongs with the inscription, it looks as if it was inserted secondarily. The last two letters in the inscript-ion are heavily eroded and hardly legible.

As in ST-5, we find *-nu-ale* in the middle of the text, and, as in ST-5, the rest is unclear. ST-6 does not feature a potential pertinentive ending for an individual name (which sheds doubt on the tentative interpretation given above for ST-5), but it has a patronym base which may be compared with other Raetic testimonies, viz. *estanuale* ~ *esθu*° etc. attested at Magrè and on the Paletta di Padova (2.6.1.1). If so, the assumed dedicant may be 'Estanu'; *sa?al* and *φakale* are unclear (unless final *-ale* is another pertinentive ending?). On the suffix-marking puncts, see section 2.5.8.3.

Inscriptions ST-5 and ST-6 have some epigraphic characteristics in common, their syntax appears to be similar, and they are both written on parts of the wall which must have presented a challenge to the writers. Apart from the fact that, unlike ST-5, ST-6 has a frame, the similarities indicate that the two inscriptions were applied maybe not by the same person, but by persons who shared a background in the same writing tradition. If a chronological parameter is involved, ST-5 may, like ST-6, be a younger inscription, which could explain the inconvenient positions. This, however, begs the question of why an area in the very centre of the wall was not chosen before the remote corners that ST-5 and 6 are written in.

The undeniable fact that inscriptions 1–6 create a frame around a roughly square area in the centre of the rock wall led Vetter 1957, 387 to think that a bronze plaque could have been attached there, similar to the ones known from the Venetic sanctuary of Làgole – the one which provides parallels for the unusual forms of lambda in ST-5 and 6. Dedicants who wanted to leave an inscription would have had to arrange those around the plaque. This appealing theory had to be abandoned when Mayr (1962b) discovered another inscription, ST-8, in the very place where Vetter had suspected his plaque.

Fig. 64: Inscription ST-8 (turned 90° clockwise), from Schumacher 2004, 368 (Taf. 20).

ST-8 
arisae·ki

With nine characters and a length of about 24 cm, ST-8 is by far the shortest inscription on the wall. It starts a little above ST-4, running upward. Rho is damaged by a younger carving in the form of Latin M (probably an initial), but the other characters are well legible. Content-wise, the inscription is entirely obscure. Cf. maybe VN-14]*a·φe·ki* (see section 2.5.8.3 on the unclear para-script elements in the Ganglegg inscriptions).

Prosdocimi 1971, 46, who had not noticed ST-8 during his visit to the crevice, made an attempt to save Vetter's bronze plaque by suggesting that the inscription (in Joppich's reading [43] *isae.ki*) meant something along the lines of 'here the sacred image'. This interpretation can be dismissed, but the peculiar arrangement of the other inscriptions remains to be explained. Apart from four-stroke sigma, ST-8 does not have any similarities with either variety of the other inscriptions, and may pre- or postdate the putative sanctuary's bronze plaque-adorned heyday. Another possibility is that the centre of the wall does not lend itself to being inscribed from a technical perspective, e.g. because it lacks the easy-to-inscribe weathering crust which distinguishes the North Tyrolean limestone.[391] However, the surface area has since been successfully filled with various graffiti. Vetter's theory also gains new relevance with the finding of the Demlfeld plaque (IT-5), which shows that bronze plaques with votive inscriptions were known in Raetic sanctuaries. This particular plaque with its breadth of about 10 cm is much smaller than the Steinberg plaque would have been, but its two preserved corners feature holes with clear traces of corroded

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[391] See Mandl 2011, 28. 48. 53 on the geological constraints on where to apply a petroglyph.

iron nails around them – the plaque was attached to something for quite a while. To my knowledge, no obvious remains of holes can be made out on the Steinberg wall today.

The two remaining putative inscriptions, ST-7 and ST-9, have no relevance for Raetic epigraphy. ST-7 was discovered by Kurz, who prepared the cast of the inscriptions for Vetter. The inscription, whose remains extend vertically about 25 cm to the right of the beginning of ST-6 between frame lines, may well be Raetic, but it is illegible. Kurz read (sinistroverse) *ḳịṣẹ*; Vetter 1957, 391 saw *kuse*, but Prosdocimi 1971, 38. 46 and Joppich 1971, 43 as well as Schumacher 1998b, 174 judge the remains to be unusable.

ST-9, on the other hand, is well discernible, but not Raetic: the array of scratches is situated a little below and to the left of ST-4, extending horizontally over an area of about 33 x 10 cm. Joppich 1971, 41 attempted a reading (dextroverse ΛIᚾIAᛉᛚI *litiaupi*), but Prosdocimi 1971, 46 and later Schumacher 1998b, 174 f. judged it a pseudo-inscription. The lines are younger than those of the Raetic inscriptions, and cannot be arranged into a convincing sequence of Raetic letters.

Thanks mainly to the work of ANISA – Verein für alpine Forschung[392] under the direction of Franz Mandl, five other rock walls with Raetic inscriptions (beside numerous other walls and boulders with graffiti) were found in recent years (Mandl 2011). Two of these are situated at a site not far from the Steinberg/Brandenberg crevice, in the mountains above the Achental in the municipal area of Achenkirch. Rock AK-1 is a massive overgrown boulder; up to twenty-one Raetic inscriptions are written, amid many other graffiti, on an overhanging wall which affords a little protection from rain. There are no springs in the vicinity, but the entire slope is wet and swampy, so that the slightest rainfall will cause numerous runlets to flow around the rock.

The inscriptions are less well protected from the weather than those of Steinberg and are in accordingly bad condition. Not a single one can be said to be complete; the Raetic character of about half the testimonies which were included in TIR is doubtful. Many can be guessed at only by the frame lines, which – the inscriptions being invariably written vertically – are often difficult to tell from the numerous runnels which are created by water flowing down the wall. AK-1.4 and 5 are in fact unlikely to be Raetic.[393]

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[392] Society for rock art and settlement in the Alps, see http://www.anisa.at.

[393] The four characters of AK-1.4 are fairly well legible, but have an overall un-Raetic look to them, being considerably smaller and squatter than usual for Raetic rock inscriptions. They are possibly part of a

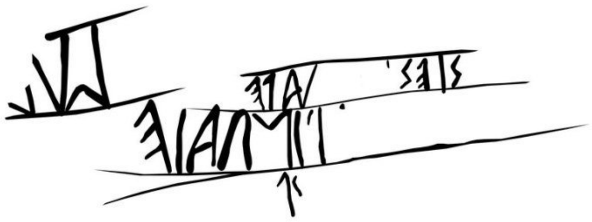

Fig. 65: AK-1 Bildstelle 3 with the remains of inscriptions AK-1.21, AK-1.6, AK-1.7 and AK-1.8 (from top to bottom; turned clockwise). Drawing by Gudrun Bajc for TIR.

Certain are those cases where we can make out (part of) the suffix chain -*nuale*:

AK-1.1 𐌄𐌔𐌋𐌀𐌍𐌄𐌉?𐌉𐌓𐌄𐌋𐌀𐌖𐌍[?
?]*ṇualeri?ienalṣẹ*

AK-1.2 𐌄𐌋𐌀𐌖𐌍[?
?]*nuale*

AK-1.6 𐌄𐌋𐌀𐌖[???]𐌔𐌄𐌉𐌔[
]*ṣịeṣ*[???]*ụale*

AK-1.7 𐌄𐌋𐌀𐌖𐌍[?
?]*ṇụaḷe*

AK-1.11 ?]𐌄?𐌊𐌄𐌓·𐌀 𐌖·𐌀𐌋𐌄𐌊𐌀𐌔?
?]*ẹ?ḳer·*(*a*)*ṇu·aḷekas*?

AK-1.19]???(?)𐌍𐌖𐌀𐌋𐌄
]???(?)*nuale*

AK-1.21]𐌍𐌖𐌀[
]*nuạ*[

The only well legible inscription on rock 1 which does not contain this sequence, AK-1.17, is also the best-preserved one. See 2.5.9 on the possible ligature; the text is entirely obscure.

AK-1.17 𐌄𐌔∿𐌄𐌔𐌙𐌀𐌓𐌕𐌀
es?esχarṭa

Rock 2 of Achenkirch is one of a group of boulders a little way down the swampy slope from rock 1. Between and below the blocks there are cavities which lend themselves to use

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younger inscription. (The remains of) AK-1.5 consist of only three characters, two of which are symmetrical – Mandl 2011, 127 (Abb. 140) assumes them to be the upper part of an erased image. Neither inscription features the usual frame lines.

as shelters; one of the blocks forms a sort of spire in the centre. The inscribed rock wall, apart from the usual graffiti, has maybe three Raetic inscriptions, but the remains are sparse; AK-2.3 is only to be guessed at by its putative frame lines, but otherwise illegible.

Ak-2.1]𐌅𐌀𐌔𐌄?
]*ṿasẹ*?

AK-2.2]???𐌀𐌔·𐌀
]???*ạs·a*

The boulders with Raetic inscriptions found in the Pürschling area in the Ammertal are only three of many inscribed blocks of various sizes which are distributed on the slopes above Unterammergau. The rocks UG-1 and UG-2 are comparatively large, but not useful as shelters; the third boulder UG-3 is much smaller. The only inscriptions in which more than a few isolated letters are legible are two on UG-1 (Schumacher 2016):

UG-1.1 𐌊𐌖𐌔𐌄𐌍
kusen

UG-1.2 𐌉𐌔𐌕𐌀𐌍𐌄[
istane[

Both sequences are opaque; *kusen* might be compared with CE-1.4 *kusenkus*. The letters are framed by a cartouche, the lower and left-hand side lines being considerably deeper than the others – this may be due to channeling by water running down the rock wall. No traces of characters can be detected beyond the right-hand side frame line (which may just be a natural crack). The frame line after nu has been retraced in more recent times and prolonged on the left side into the horizontal bar of a cross (the thin, sharp younger scratch stands out clearly from the broad, eroded older line). There appear to have been letters inscribed after the retraced frame line, traces of which can still be seen, but no secure reading can be offered (possibly 𐌔𐌉𐌕 *sit*[?). An interpretation of the frame line itself as iota is unlikely, as it merges quite clearly with the other frame lines. No other instances of a frame line used for separation purposes text-internally are known from Raetic rock inscriptions; it is therefore preferable to assume that the doubtful letters after the frame line were added at a later date.

Among the utilisable petrograph testimonies, two groups emerge under both epigraphic and linguistical aspects:

1. Sinistroverse inscriptions ending in -*nuale* which contain the well-attested two-part name formulae in the pertinentive case (where decipherable), featuring normal Venetoid lambda 𐌋 and other standard letter forms and being generally inconspicuous: ST-1, ST-2, ST-3, AK-1.1, AK-1.2, AK-1.6, AK-1.7, AK-1.19, AK-1.21.

2. Dextroverse inscriptions of unclear linguistic content which show certain special features (to varying extent): the punctuation of suffixes, ligatures, and peculiar letter forms (four-stroke sigma 𐌔, Cadore-style lambda ᛚ and kappa 𐌊 with bars which do not touch in the middle). Of these inscriptions, ST-5 (the only sinistroverse one) and ST-6 are particularly similar in structure; AK-1.11 (as well as the fragmentary AK-1.10, AK-2.1 and AK-2.2) may be grouped alongside. Dextroverse AK-1.17 lacks the punctuated suffixes, but has 𐌔 and apparently a (different) ligature.

	dir	pun	lig	𐌔	ᛚ	𐌊
ST-1	←	–	–	–	–	–
ST-2	←	–	–	–	–	–
ST-3	←	–	–	–	–	–
ST-4	←	×	–		–	
ST-5	←	×	×	×	×	×
ST-6	→	×	×	×	×	×
ST-8	→	×	–	×		×
AK-1.1	←	–	–	–		
AK-1.2	←	–	–		–	
AK-1.6	←	–	–	–	–	
AK-1.7	←	–	–		–	
AK-1.10	→			×		–
AK-1.11	→	×	(×)	×	×	×
AK-1.17	→	–	(×)	×		
AK-1.19	←	–	–		–	
AK-2.1	→	(×)		×		
AK-2.2	→	×		×		
UG-1.1	→	–	–	×	–	–
UG-1.2	→	–	–	–	–	–

Tab. 22: Different types of rock inscriptions by presence or absence of certain features. A cross marks the presence of a feature, a dash its demonstrable absence; an empty field indicates that the relevant datum is not available for the inscription.

The inscriptions ST-4 and ST-8 do not fit in smoothly with either group, though the use of zeta associated ST-4 with type 1, the presence of ⦚ puts ST-8 closer to type 2. The utilisable testimonies from the Ammertal are hard to compare with the material from the Rofan mountains due to their shortness; both are dextroverse, UG-1.1 features ⦚.

The inscriptions of the first group are written in a Venetoid alphabet, with the typically Raetic orientation of sigma, but “traditional” North Italic alpha with the bar slanting down in writing direction. If my reading is correct, ST-2 shows the use of typically Inntal pi; ST-2 and 3 may show influence of Este orthography in the use of zeta for [d̥] (2.5.5.5). As concerns the second group, the position of ST-6 suggests that this type is younger; the epigraphical peculiarities cannot at this point be classified. A specific affinity with the Venetic sphere is indicated by Cadore-style lambda ᛚ and possibly heta ⫲ in ST-5; four-stroke sigma only occurs elsewhere in Raetic in PU-1, which may also be close to a Venetic tradition, though it shares the use of zeta with the type-1 petrographs. Punctuation of suffixes rather than syllabic punctuation is not known from Venetic; the ligatures stand isolated as well. None of the Raetic petrographs show any particular affinity to the only rock inscriptions in the Venetic corpus, those from Würmlach in the Gailtal (Gt 13–23).

Apart from the somewhat doubtful and epigraphically Camunic AV-1 (2.8.2) and a recently found inscription from the Fern pass (Schumacher forthcoming), the rock inscriptions are the only testimonies of Raetic from beyond the Inntal. Any propositions concerning the ultimate function of these inscriptions and the identity and purpose of the writers must at this point remain speculative.

2.8.1.10 Inscriptions on helmets

Inscribed helmets which are associated with Raetic come from four different contexts: from Vače and the Ženjak helmet hoard in Slovenia, from a hoard from Jenesien near Bozen and from Sanzeno.

The Negau helmet A (variant Vače) is one of two inscribed helmets from the Ženjak hoard, which was found in 1811 by a farmer (details, including a discussion of the hoard’s ultimately unclear function, in Nedoma 1995, 8–15). The hoard contained twenty-six helmets, of which two – A and B – bear language-encoding inscriptions (on helmet B see section 3.4.2). Helmet A, in addition to its four inscriptions, bears two marks: on the chamfer, Λ (height 1.1 cm) embossed with a pointed tool, with the left hasta made up of

18, the right, slightly crooked, of about twenty-one indentations. On the rim on the right side as the helmet is worn, embossed ◁▷ (height 0.6 cm), possibly a workman's mark (Reinecke 1950, 132; Nedoma 1995, 19).[394]

SL-2.1 I|◁V↑:VꓘΛ◁I≷
siraku : þurti

Inscription SL-2.1 (length 5 cm) is engraved on the chamfer. A white inlay was added sometime before 1927, possibly for photos made for Marstrander 1927, but must have been cleaned away since. Remains can still be seen in some of the deeper scratches. The inscription is immediately followed by SL-2.2, separated by a punctuation mark which consists of four small dots, distinctly unlike the (slightly doubtful) separator between *siraku* and *þurti*. The two inscriptions, though not at first glance unlike in appearance, were separated by Marstrander 1927 (no. A 1), who observed that they seem to be written by two different persons: the scratches in SL-2.1 are deeper – "gravée par une main hardie et énergique" (3), the overall execution is neater than that of SL-2.2, which is distinguished by a "manque de sûreté et de contours" (ibid.). The lines in SL-2.1 appear to be scratched from bottom to top. This seems counterintuitive in the absence of an immediate obstacle for the hand like, for example, the rim in case of SL-2.4. It may be argued that the characters were more easily applied when turning the helmet upside-down, because the chamfer can be accessed more comfortably – compare the upside-down SL-2.3. This inscription, however, is clearly written as seen when the helmet is worn, so the writer would have had to engrave his letters upside-down. The hastae of epsilon and iota in SL-2.2, by contrast, are scratched top to bottom. While both inscriptions are indubitably sinistroverse, SL-2.1 has ≷, SL-2.2 has ʅ (but note that the orientation of sigma sometimes varies within the same inscription in Raetic). Another difference is the execution of rho, written with an angle in SL-2.1, with a curve in SL-2.2. Marstrander's splitting of the row has been widely accepted (Kretschmer 1943, 187, Nedoma 1995, 19 f. [Ia]), but see also Prosdocimi 1986, 33. Curiously, writer's mistakes with somewhat similar outcomes may be suspected in both inscriptions.

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[394] Marks of this kind are found on other inscribed helmets and also on numerous uninscribed ones. Ten of the other helmets bear various kinds of marks (Nedoma 1995, 8). The Vače helmet also has two: an oblique stroke ⟍ (height 1.5 cm), embossed with a pointed tool (about thirty indentations) in the back on the chamfer; the same mark is found in the exact same place on another Negau-type helmet (Kunsthistorisches Museum Wien – Antikensammlung, inv. no. VI 1668), but embossed with an oblong tool (Marstrander 1927, 14 f. and 20). Another mark ⟍ ⟋ (height 0.6 cm) is embossed on the edge of the calotte right over the throat and the oblique stroke. Compare also the marks on the fragments from the Jenesien hoard. See Nedoma 1995, 30 (n. 46) and Urban & Nedoma 2002, 55 (tab. 1).

SL-2.1, after starting out fairly tidily in spite of some repeatedly scratched lines, features what looks like a cramped ↾ between the second upsilon and rho. Close inspection shows that the bar ˋ branching off the hasta has been deleted with tiny scratches crossing it (recorded in the early drawings by Giovanelli [1845, tav. II = 1876, Taf. II, no. 1] and Marstrander [4, fig. 1], but neglected by Pichler [1880 in Pauli 1885, Taf. VI, no. 99 B] and Egg [1986, 226, Abb. 183]). The writer seems to have either prematurely added the twig of the following ↾ to the hasta meant for ◁ (Marstrander 1927, 4), or he erroneously started to write ◁ in the wrong direction – all the more comprehensible if he was indeed seeing his work upside-down. Markey 2001b, 110 also points out that the two preceding letters are symmetrical; “this may have left an unskilled engraver in doubt as to the direction of the next asymmetrical letter” (2001b, 110). The writer also seems to have tried to accentuate the hasta with additional scratches. Apart from this lapse, the characters are legible without ambiguity.

It is not absolutely sure, though probable, that the two large dots between *siraku* and *þurti* are intentional, as strictly speaking no indentations can be made out, and the space between V and ↑ is not uncommonly broad. A third dot on top of the left hasta of V may belong to it. Cf. Marstrander 1927, 4, who believes the marks to be accidental; Egg 1986, 227 (Nr. 324) does not include them either. An interpretation of the spots as intentional is supported by the fact that the segmentation into *siraku* and *þurti* is linguistically plausible for both Raetic and Celtic interpretations.

Marstrander 1925, 51 f., expecting a Celtic name, compares CIL XIII 90 *serrancu* and reads a Celtic *n*-stem PN with a base **sīr*- ‘long’, ‘lasting’, ‘constant’. For objections to this interpretation see Markey 2001, 110 f., who reads Celtic **siragu* < **sīr-agō* ‘astral priest’. Altheim & Trautmann 1939, 43 compare a Scythian PN **sirakō*. For a Raetic reading, *siraku* could be segmented into a not otherwise attested verbal noun *sira-k-u* (2.7.2.1) or – more likely – be interpreted as an individual name in °*u* (2.6.1.3). *þurti* is unclear – it could also formally qualify as an individual name, though a verbal noun would be expected to be accompanied by a pertinentive or at least a genitive. When taking *siraku* for an individual name, *þurti* might also be grouped with the surnames in °*i* proposed in section 2.6.1.4: ‘Siraku Þurti’. Cf. maybe the Etruscan PN attested in Adria: Ad 2.19 *zurta*, Ad 2.10 *venuś zurtiuś mi* (see ET index p. 316)? Epigraphically, the inscription with Sanzeno-type tau ↾ and the character for the dental affricate ↑, as well as characteristically Sanzeno-style V and Λ can be ascribed to the Raetic corpus.

Fig. 66: Inscriptions SL-2.1 and SL-2.2 on the Negau helmet A. Kunsthistorisches Museum Wien – Antikensammlung, inv. no. VI 1659. Drawing by Gudrun Bajc for TIR.

SL-2.2 ?ᛅᛋᛁƎ??ᗡ𐌀⁝
: *ar*?(?)*eisy̥*?

The inscription SL-2.2 immediately follows SL-2.1. Marstrander 1927, 4 (no. A 2) argues that the intermediate separator must have been added by the writer of the second inscription. SL-2.2 runs leftwards right up to the last sign of the embossed and upside-down SL-2.3.

The inscription begins with a single repeatedly scratched and somewhat crooked hasta, conveying the impression of being jammed in between the separator and alpha. While the distance between this scratch and the right hasta of 𐌀 is rather big and the sequence may be read *ia*, it is more likely that the two scratches together constitute the hasta – the other hasta of 𐌀 is scratched twice as well. Rho, engraved – with some effort – with a curve, is followed by a problematic group of lines. The most likely segmentation graphically would be ↑ᛚ, yielding a sequence *arlþ*. The fact that the bar of supposed ᛚ is prolonged at an angle suggests that this was done after the right bar of supposed ↑ was seen to merge with it. A reading ᛖ (Marstrander 1927, 5 f.) is therefore unlikely, although his suggestion of ᐢᛚ corrected to ᛖ is interesting, because it could explain the questionable bar to the left of the second hasta. If part of a letter ↑, it may be crooked because the writer's tool was led along the hasta for a few millimetres. Epsilon and iota, though not too neat, are fairly well legible. The following ᛅ is damaged on top by a patch of corrosion; no additional bar (yielding ᛤ) can be made out. The inscription is concluded by two crooked vertical lines, which have been read as iota,[395] inverted upsilon,[396] or been interpreted as a demarcation sign added to separate the inscription from SL-2.3 (Marstrander 1927, 6). The bar branching away from the left scratch, mentioned and dismissed by Marstrander, is clearly non-intentional.

Epigraphically, the inscription is likely to be Raetic, as it has 𐌀 (also found in Venetic inscriptions of the Isonzo area), sinistroverse ᛋ and possibly ↑ as in SL-2.1. Due to the

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[395] Mommsen 1853, 208 [no. 12], Pauli 1885, 36 [no. 99a], Kretschmer 1943, 187, Markey 2001, 112 f.; assumed to be scratched twice like some of the hastae before it.

[396] Egg 1986, 227 [Nr. 324]; unlikely in the context of the other inscriptions on helmet A.

problematic reading, no interpretation can be offered. Markey 2001, 112 f. somewhat fancifully reads *iarśeisvi* = **Iarśe eisvi* ‘Iarsus (who performs the) sacred ceremony/ offering’.

On SL-2.3, see section 2.5.4.5. The most widely accepted interpretation of the sequence *z*$^?$*uφniφanuaφi* is the one given by Marstrander 1925, 45–51. He reads a two-part Celtic name in the genitive *dubni banuabi*[*i*] ‘of Dubnos [son] of Banuabios’ (**dubnos* cf. Gaul. *dumno-rix* etc.; **banu̯o-bi(i̯)os* ‘pig slayer’).[397]

Fig. 67: Inscription SL-2.4 on the Negau helmet A. Kunsthistorisches Museum Wien – Antikensammlung, inv. no. VI 1659. Drawing by Gudrun Bajc for TIR.

SL-2.4 ᛚVᐊ𐌄𐌊
kerut

Inscription SL-2.3 (length about 6.5 cm) is engraved on the brim beneath SL-2.2 with scratches faint but fairly well visible. Kappa is written with a long upper and short lower bar. Those scratches which reach the bottom of the line are scratched from there upwards, probably because the upturned rim presented an impediment for the writer’s tool. The writing direction is ambiguous: either 𐌊 (in a sinistroverse reading) or ᐊ (in a dextroverse reading) is retrograde. The second letter from the right consists of two oblique hastae (the left one slightly straighter) with two bars slanting down from the right hasta. It can be read 𐌄, tipped forward with its bars almost reaching the bottom of the line (known from Etruscan inscriptions, see Wallace 2008, 19; cf. also BZ-26 below), or as Λ erroneously supplied with a superfluous bar. In the first, more likely, case, the letter supports a sinistroverse reading, while Λ, though not as significant statistically, would be dextroverse. The leftmost character, if read sinistroverse, is Sanzeno tau; if read dextroverse, it is Sanzeno or Lugano pi (or indeed Magrè lambda). The dextroverse readings *purak* or *lurak* (Egg 1986, 227 [Nr. 324]) cannot therefore be ruled out. With regard to kappa, Marstrander 1927, 9 observes

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[397] See also Olsen 1903, 26–30; Prosdocimi 1976, 225; Prosdocimi 1986, 32–34; Birkhan 1970, 459 f.; Birkhan 1971, 30; Nedoma 1995, 19 f.; Markey 2001, 115 f.

that “[d]ans l’alphabet proprement étrusque *p* et *k* ont souvent un sens contraire à celui des autres lettres” (a claim I have not verified).[398]

The inscriptions may have been applied at any time between the manufacture of the helmet in the second half of the 5th century and its deposition around 100 BC (Nedoma 1995, 16–18 and 20–22). Clues to their relative or even absolute age come from different directions. If SL-2.1 and SL-2.2 do not belong together, SL-2.2 must be younger according to Marstrander’s interpretation of the last element of SL-2.2 as a separator from SL-2.1. A higher dating for the Veneto-Celtic inscription is also tentatively suggested by the possible connection of the character ⟟ with the Raetic letter ᛐ, which tends to appear in archaic inscriptions. The association of SL-2.1 and SL-2.4 with the Sanzeno alphabet (↑,V, ↾) also indicates a high dating (5th–4th c.; 2.5.2.2). Also relevant is the question of which type(s) of inscriptions we are faced with – owner’s inscriptions must be relatively older than a votive inscription applied just before the helmet was deposited. Eichner (apud Nedoma 1995, 20) suggests a composite theonym with a Celtic dative plural ending *-bi* in SL-2.3 – in this case, the inscription would rather be a votive than an owner’s inscription. This contradicts the arguments brought forth in favour of SL-2.3 being in fact the oldest inscription on the helmet. In any case, they cannot all be votive texts. While it may be observed that SL-2.3 is the only inscription on the helmet which is written upside-down (like the inscription on the Negau helmet B), which could be explained by its being applied specially for the deposit, where the helmets were stacked calotte-down, it is not clear that any of the North Italic helmets bears a votive inscription. Nedoma 1995, 12 argues that the inscriptions’ positions indicate a profane function, citing examples of votive helmet in-scriptions, which are usually applied prominently on the calotte; I fully concur with his opinion that most, if not all of the inscriptions are owner’s inscriptions, applied at different times during the helmet’s period of use (20 f. 34).

The Vače helmet is a stray find purchased by the Kunsthistorisches Museum from a farmer and hobby archaeologist. The good state of preservation of the helmet, without evidence of intentional damage, speaks against a ritual deposit (Nedoma 1995, 33).

SL-1 𐌀𐌍𐌔𐌉𐌓𐌄𐌕
terisna

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[398] The most attractive reading so far was Markey’s, who, after a personal communication from Bernard Mees, suggests *kerup* to be an abbreviation for a Celtic PN *kerubogios* (Markey 2001, 117), as in Lepontic MI·6 *setupk* = *setubogios* – however, this is obsolete with the new reading of ←↾ as tau (2.5.4.4).

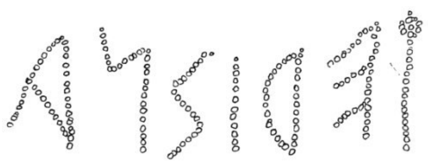

Fig. 68: Inscription SL-1 on the Vače helmet. Kunsthistorisches Museum Wien – Antikensammlung, inv. no. VI 2655.

The main point of interest in the inscription SL-1 (length 3.7 cm), embossed with a pointed tool on the chamfer, is the letter ⫯, discussed in section 2.5.4. The appearance of the letter indicates a high dating for the inscription, which can be grouped with finds from the Val di Non (NO-13) and Serso (SR-6 and SR-9). On a possible Etruscan etymology of *terisna* see section 2.7.3.2. The word is also attested on two of the fragments from the helmet hoard from Jenesien (see Lunz & Morandi 2003, 342–345 for details about the find).[399]

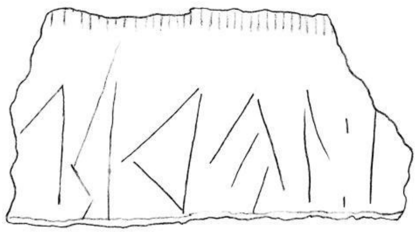

Fig. 69: Inscription BZ-26 on the fragment of a bronze helmets. Amt für Bodendenkmäler Bozen, no inv. no.

BZ-26]𐌍𐌔𐌉𐌓𐌄𐌕⁝𐌉[?
?]*i:terisn*[

BZ-26 (length of the remains 5.5 cm) is by far the most useful document of the lot. The lines are thinly engraved, but well visible; the reading is unambiguous. On the right, the remains of two vertical lines, the left of which can hardly be anything else than 𐌉. The separator consists in three short vertical scratches and does not come up to the height of the letters. The hasta of epsilon is inclined in writing direction; the second bar of nu runs along the breaking edge. We can emend to *terisna*, here written with Sanzeno tau rather than ⫯. Cf. BZ-4, where this word is also preceded by a sequence ending in *i*.

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[399] The hoard contains a large number of small fragments of at least seven different helmets of the Negau type (Lunz & Morandi 2003, 344); eighteen of them bear marks. Of those, four are included in the Raetic corpus. Of the remaining fourteen, one is believed to belong to the same helmet as the one bearing BZ-26; the single scratch visible is more pronounced than the inscription, cf. maybe the diverse marks occurring on helmets with inscriptions (Vače, Negau A and B, EX-84 and 85; see Nedoma 1995, 30 f. [n. 47]). The other thirteen fragments (EX-66) display mostly fragmented scratches, sometimes intersecting or forming angles. Some arrangements are clearly non-linear and/or non-script, some indeterminable. No. 69 may have Ʌ (cf. BZ-27 and BZ-28); no. 65 has an asterisk Ж flanked by vertical scratches.

BZ-27 𐌀𐌍𐌔[ ]*sna* (length of the remains about 3 cm) is less well preserved, but, despite the fact that the fragment is deformed and damaged by heat and corrosion and the scratches have been traced with the inevitable white paint, the reading]*sna* is secure. With reference to BZ-26, we may assume that the inscription also contained or consisted in the word *terisna*. Note, however, that in BZ-27, both sigma and alpha are retrograde in context of the Sanzeno αβ as used on BZ-26. All in all, seventeen of the small fragments of Negau helmets bear characters – some can be excluded to represent script, but some might be the remains of language-encoding inscriptions (especially BZ-28]?*aịṇ*[and BZ-29]*n*?[).[400]

Finally, the heavily damaged iron helmet found at Sanzeno bears at least two inscriptions. Both are fragmentary and hardly legible. SZ-73.1 refers to very faint traces on the neck-guard. 𐌄 is comparatively well legible. It is followed by the upper parts of probably two letters, then what can only be the four tips of X. Mancini (LIR SA-34a) suggests, not implausibly, X𐌄𐌔𐌄 (or X𐌄Ϛ𐌄?) *eseθ*. The inscription may have been longer, but no further traces can be detected. The letters on the other side of the neck-guard (SZ-73.2) are a discrete inscription. While SL-73.1 appears to have been embossed, SZ-73.2 is engraved. The three letters 𐌉𐌔𐌄[ ]*esi* are faint, but unambiguous. Curiously, part of the surface has been mended because of a disruption caused by corrosion; either the inscription is younger than this repair, or the lower parts of the letters were reapplied on the new surface. Vague traces of scratches might be discerned on the surface to the left of the mended crack, but not to the right. If the preserved letters constitute only the end of what was a longer inscription, it may have been a name in the pertinentive. The helmet came down to us with the nail that was struck through the neck guard, indicating that it was put up like the bronzes and antler pieces, and that the inscriptions are of votive character.

2.8.2 The Camunic connection

Considered by early scholars to be associated with the Celtic material from Northern Italy, then sorted by Whatmough (PID) among the Raetic inscriptions, the Camunic/Sondrio corpus is today known to be a separate group. Ties with the Celtic side exist in the form of inscriptions written in the Sondrio alphabet, but in an (arguably) Celtic language (BS·22 from Cividade Camuno, Inscription of Voltino BS·3.2, Castaneda flagon GR·3; see LexLep for literature). In 1998, Ziegaus & Rix published a difficult inscription on a silver

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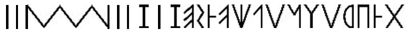
[400] A photo showing the other thirteen fragments, with the scratchings all traced in white paint, can be found in TIR (http://www.univie.ac.at/raetica/wiki/File:EX-66_photo.jpg).

ring from Nußdorf in Bavaria, which they claim to be written in a Sondrio-style alphabet, but linguistically Raetic.

AV-1 

tịp̣ṛuχṇụḷạṿịṣẹẓ§

Engraved, probably with an etcher's needle, all around the outside of the ring, the sinistroverse inscription is complete, but damaged. The appearance of the lines differs considerably: some have quite smooth edges, in others the shape of the instrument is betrayed by a succession of tiny angles. The smallness of the surface (the ring is only 2–2.5 mm broad) can be made responsible for the irregularities in the execution of the characters, if they are indeed such – Rix in the original publication argues that, apart from the sequence of straight strokes and zig-zag-line, the engraving is not regular or symmetrical enough to be merely decorative (298). He suggests that, due to the lack of space vertically, the writer expanded the characters in breadth, which lead to some unusual shapes (300 f.). Rix discerns the following letters (sigla refer to the edition of Camunic inscriptions by Mancini 1980):

- St. Andrew's cross X theta/tau as in a handful of rock inscriptions, mainly from Crap di Luine; the denotation of the form and generally the writing of *t* in Camunic are problematic.
- ⊦ iota "a tratto ortogonale" as in some rock inscriptions: Sc 6 and Na 16, with the bar pointing in writing direction in Na 19, Se 1, Se 2, and apparently on BS·22. The squiggle on the right must then be a writer's mistake. The form does not occur in alphabetaria.
- Greek-style pi Π, which in the Val Camonica inscriptions occurs exclusively as inverted ⊔, but in most alphabetaria opening sideways in writing direction ⊐ or ⊃.
- ᗡ rho, a standard Val Camonica shape, stretched out and carved with a rectangular body to avoid the execution of a curve.
- V upsilon, not unusual in the Val Camonica, though the orientation of the inscriptions is often indeterminable.
- Y chi as occurring in Sc 6 and BS·22 in contrast to more common Ψ. Various trident-shapes appear inconsistently in the alphabetaria in the places of zeta, ksi and possibly chi; their denotation in inscriptions is uncertain.
- A contorted nu-shape; Rix suspects that the small upper bar is a correction of the lower one. The standard shape in the Val Camonica is И, but an inversion of the bars is not unusual.
- V upsilon as above.

- 𐌋 lambda as in Sc 1, at Piancogno and in most alphabetaria. Although the bar extends very far beyond the hasta, Rix excludes ᛚ because of the presence of X.
- 𐌀 alpha with the bar not touching the angle, inclined to the left. While inverted forms are frequent in the Val Camonica (usually congruent with the orientation of upsilon), the short bar, pace Rix, is usually attached to one of the hastae.
- 𐌅 waw, which does not appear in the Camunic inscriptions, where the glide is written with the character for the vowel. A form ⋬ appears in the place of waw in some alphabetaria.
- ⊦ iota as above.
- 𐌔 sigma with pointed angles, probably due to lack of space vertically. The letter, pace Rix, does occur in the Sondrio alphabet, but its use seems to be limited to Piancogno and the non-rock inscriptions: 𐌔 with the upper angle opened in writing direction occurs on the stela from Montagna (PID 252), against writing direction on BS·22; ⌇ occurs on the stela from Tresivio (PID 253) and on the Castaneda flagon (GR·3), both times opened in writing direction. *s* seems to have been normally written Ұ (see below).
- 𐌄 epsilon written without a hasta – no parallels in any of the Transpadanian inscriptions.
- I sigma with straight bars as opposed to common Camunic Ұ (orientation usually congruent with that of alpha and upsilon). Ұ, long assumed to be a variant of zeta used for writing *s* appears in the place of sigma in all the alphabetaria, while the place of zeta is occupied by a trident-shape, usually Y or ⅄. The situation is further complicated by the fact that, where 𐌔 does occur, it frequently does so in inscriptions which also contain Ұ.
- The group of vertical and oblique scratches left of I is interpreted as a line filler by Rix.

The traces can be seen quite easily despite their smallness (max. 2.5 mm), though the unevenness caused by the bending of the ring does at times impede the reading. It is the segmentation which is problematic. Conveniently enough, the inscription starts to the left of the widest space (about 1 mm). While the St. Andrew's cross is tidily scratched with smooth lines, the following cluster of scratches – apart form the squiggle mentioned above, some slighter scratches above and below the dominating horizontal one – is highly doubtful. It cannot be securely determined which of the traces are intentional; the alleged hasta is merely a wedge in the lower area. The next three characters are at least well segmentable: alleged pi, scratched much less smoothly than the lines before and featuring curious small bars extending towards the left from the lower end of each hasta, seems to stand alone, as does the following rectangle read rho, very slightly converging towards the left, with the lines intersecting at the corners, and the Y-shape, scratched fairly smoothly again. The sequence of vertical and oblique scratches read 𐌋V𐌍 by Rix is not positively separable: the zig-zag-line assumed to represent nu is in fact more of a 𐌌, with an additional chevron attached to the bottom of the leftmost bar. Rix' V would have a strangely crooked left hasta. The long bar of alleged 𐌋, not touching the very short hasta, is connected to the left hasta of this V. The space between 𐌋 and the following angle read 𐌖 is comparatively broad (again 1 mm), but features a small but fairly deep scratch in the upper area. Alleged 𐌖 and 𐌀 are pretty clear, ⊦ indeed particularly neat. ≀ is really just two discrete angles, followed by a small horizontal stroke of questionable relevance. The three bars of alleged 𐌄 do indeed seem to lack a hasta, though the two lower ones almost converge, suggesting the trace of a hasta. The group of scratches between 𐌄 and the zig-zag-line appears very homogeneous: the verticals, all of the same height and spaced out evenly, are made up of tiny angles, the first three are encased by thinner vertical bars top and bottom. While it is true that the latter are made up of two scratches each, intersecting the first and third vertical, an isolation of the first group as I from the rest cannot be justified epigraphically – it is due to the inter-pretation (see below). The zig-zag-line is much tidier than alleged 𐌍 in the inscription. It is followed by three more verticals which are more spaced out than the ones before.

All in all, Rix' reading is indeed "nicht unplausibel" (302), but conveys the distinct impression that an idea of what might be read preceded the identification of all the characters. Rix acknowledges that many problems remain, but points out that no compelling interpretation can be expected for isolated documents, which is true especially for Camunic: all of the inscriptions found beyond the Val Camonica show idiosyncrasies compared to the alphabet(s) of the rock inscriptions. The viability of his reading is not qualified by the fact that he seems to have worked solely with Mancini's corpus, and not to have taken into consideration the consequences of the finding of Camunic alphabetaria, as the main reasons cited by him for assigning the inscription to the Sondrio group – the shapes of iota with a bar, Y, inverted alpha and a zeta-like shape for *s* – still hold true. His conclusion concerning the development of the Camunic script, however, is: referring to the tentative dating of the object to the 5th c., inferred from context (297), Rix concludes that the inscription is written in a Sondrio "Uralphabet" based on the Venetic αβ, which still shows some archaic letters/letter forms (𐌀, I, 𐌍) that are more similar to those of Venetic/ Etruscan script than the later standard Sondrio shapes. The alphabetaria, however, demonstrate the Camunic script to be borrowed from an archaic Etruscan, if not directly from a Greek source (2.1.5).

If Rix’ reading is correct, the individual name *lavise* stands out quite clearly. If the first I-shape does belong to the inscription, as Rix assumed, the name appears in the genitive case, the suffix *-s* and inlauting *s* in the name being written with different characters. The sequence *tipruχnu* seems to end in the patronymic suffix *-nu*. Rix observes that patronymics usually follow the individual name, and that concord with the case of the individual name should be expected, and therefore prefers to interpret *tipruχnu* as a noun denoting the object: ‘X of Lavise’, but see 2.7.2.2. A reading including the first ǀ after I *tipruχnu lavisesi* in the pertinentive with only the individual name being marked (2.6.1.1) is unlikely because *i* is written ⊦ twice in the inscription (compare, however, BS·22 with both forms). A two-part name in the nominative *tipruχnu lavise*, with the first I-shape considered part of the line filler, should not be excluded despite the unusual order.

Seeing that the stray testimonies of the Sondrio αβ are notable not only for the alphabetic variants they display, but also for the fact that they tend to be isolated finds very sparsely distributed over a comparatively wide area outside the Val Camonica,[401] the appearance of a Sondrio-αβ inscription in the Alpine foreland of Bavaria is not per se too fanciful, though it would be the farthest outlier by far. If Rix’ interpretation of the inscription is correct, AV-1 represents the only document of the Raetic language written entirely in a foreign alphabet known to this date.

2.8.3 Latin and Latinisation

Only a handful of testimonies in the Raetic corpus document the use or influence of the Latin alphabet in the area. All three are from Sanzeno-context. The only inscription displaying a Latinised variant of a Raetic alphabet, and thereby documenting a process of Latinisation in the late stages of Raetic writing culture, is BZ-24 on a Roman-era stela from Maderneid (Eppan, Überetsch). The sandstone slab also represents one of the few securely identifiable funerary stela, and can be dated not only epigraphically, but also based on the the decoration style (2.4.2). While there are other finds from Eppan, the stela is the only one from Maderneid; in view of the fact that the Sanzeno writing tradition appears to be restricted to the 5th–4th c., the epigraphic context of BZ-24 is unclear.

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[401] Cf. especially GR·3 on the Castaneda flagon from the Canton Graubünden. Only BS·22 on a stela is from the Val Camonica itself. Three more stelae come from Sondrio in the Valtellina (Montagna PID 252, Tresivio PID 253) and Voltino by the Lago di Garda (BS·3.2), all of which lie within the boundaries of the archaeological Breno-Dos dell’Arca group (De Marinis 1992, 161 [fig. 8]).

Fig. 70: Inscription BZ-24 on a stela from Eppan. Stadtmuseum Bozen, no inv. no.

BZ-24 ƎIЯVSSO
osṣuṛie

The sinistroverse inscription (length 24 cm) is engraved on the upper part of the stela, inside a house-shaped frame together with a wave-like pattern. The letters are not all equally well legible, some having suffered more by erosion than others. The circle of omikron is clear despite a disturbance in the upper right area, next to which a piece of the stone has broken off. The next letter, a rounded sigma distinctly longer than omikron, is equally unambiguous. To the left of this, an oblique line running parallel to the middle part of sigma is clearly visible, suggesting another sigma. No other reading seems feasible, although the area under the central line is disturbed, and no trace of a line can be made out in the area above it. (The upper part of the preceding sigma is less deeply scratched than the lower curve; if the same was the case with the second sigma, the upper part might indeed be completely gone.) The angle of upsilon, the same height as omikron again, is clear. The letter after upsilon is problematic: the hasta of a shape like a Raetic rho ᑫ, the same height as upsilon, is prolonged at the bottom (though heavily eroded in that part) to the height of sigma, prompting Mayr 1956a to read Latin pi ꟼ. The area where the downstroke of a Latin rho Я would be is disturbed; what is visible there looks more like a dot which may or may not be intentional. An interpretation of ꟼ as Etruscoid rho is unlikely due to the presence of omikron. The inscription concludes with unambiguous iota and epsilon, both as tall as sigma.

Most letters display decidedly Latin features: apart from the presence of omikron, sigma is rounded and written twice and epsilon features straight bars. Iota appears to be written with serifs (cf. RN-1; 2.8.1.8). The inscription's epigraphically Raetic features are the sinistroverse writing and sigma with the upper angle/curve opening against writing direction.

Linguistically, the inscription can be interpreted as a Raetic individual name with the typical auslaut °*ie*. Schumacher 2004 prefers a reading *ossurie* based on the observation that two other names end in °*urie* (really only one: NO-3/SZ-14 *φel*[*i*]*turie*; 2.6.1.2), but none ending in °*upie*, are documented in the Raetic corpus. The interpretation of the sequence as a name is of course supported by the fact that the stela is best identified as a tombstone. It appears to document the transition from Raetic to Roman culture in the Bozen area, with a man bearing a Raetic name having a tombstone of southern type erected in his honour. Why the individual name stands alone, without a Raetic patronym or Roman nomen, remains unclear.

Two other testimonies must be mentioned in this context. The first is a heavily damaged inscription from Sanzeno, for which an epigraphically and linguistically Latin reading has been suggested.

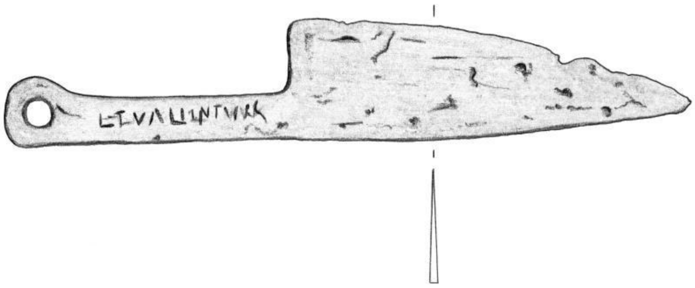

Fig. 71: Iron knife from Sanzeno with inscription SZ-68. Tiroler Landesmuseum Ferdinandeum, inv. no. 7228. Drawing by Gudrun Bajc for TIR.

SZ-68 LT VΛLIINTINI
LṬ UALENTINỊ

The inscription (length about 7.3 cm) is embossed with a punctiform punch, and heavily corroded. The plausible dextroverse Latin reading with alpha and epsilon in Roman cursive form was proposed by Franz 1953, 176 f. Mancini (LIR SA-82) limits himself to tentatively reading the middle section *valen*. The very end of the inscription is hard to read: two curious wiggles, darker in colour than the strokes before, may or may not be relevant. Franz took the entire group into account by reading *ualentinus* in the nominative with a ligature of upsilon and sigma (illustrated in his drawing Abb. 2). The small indentations of which the lines are made up can still be seen in some of the letters; they are visible in a stroke just to the right of nu, but not in the darker area. If Franz' reading is basically correct, a reading *ualentini* with the name in the genitive should be preferred: 'of Lucius T. Ualentinus'. Both readings are possible epigraphically and pragmatically, assuming that the name is that of the knife's owner. Faint traces of probably intentional strokes can be discerned on the other side of the hilt as well, the only recognisable character being N. They were suspected by Franz to be a repetition of the inscription.

The second document is a possibly not language-encoding inscription on a piece of pottery, also from Sanzeno.

SZ-69 ?AИA
ana?

Incised on the bottom of the vessel, the characters (length 6.6 cm) are easy to distinguish. While the letters above seem clear, the leftmost group of scratches is problematic. It can simply be read as another И. However, there is a scratch slanting away from the top of the rightmost hasta, while a horizontal scratch turns the first angle into another A. Mancini (IR 68, LIR SA-42) suggests A⅂AИA *apana*. The Latinoid appearance of the characters, И with a full-length angle and alpha with a bar hardly inclined, is enhanced by the fact that the object is not typical in Raetic context: the sherd is likely a fragment of a piece of black-coated pottery (Campana pottery), an import or a local imitation. The type is dated to the Roman Republican period; an imitation would mean a dating to the 1st c. BC (Demetz 1992, 638).[402]

The documentation of Latinisation processes in Raetic is notably sparse, compared to the numerous documents from Celtic context[403] and especially the great number of Latino-Venetic inscriptions from Venetic Este (Es I–LXIV). It is unclear why the Raeti should have abandoned their alphabet so suddenly; we should expect to see the effects of Romanisation particularly in the southern Raetic area, where a Raetic epigraphic culture was still alive in the late Iron Age, and which was gradually assimilated during the last two centuries BC. It is all the more surprising that the only really relevant testimony, BZ-24, comes not from a site which also yields younger Raetic inscriptions, but from Überetsch, where the local writing culture appears to have deteriorated or even disappeared after about 300 BC (2.5.2.2). The other documents mentioned above do not establish a connection between Raetic and Latin and belong more in the context of the Roman-age Latin inscriptions.

The somewhat dubious Latin inscription TV-1.2 should also be mentioned here. The inscription on the opposite side of the slab which bears TV-1.1 (2.5.8.3) was only detect-ed in 1962, after the latter had been taken out of the church wall, where it had been placed with the allegedly Raetic inscription facing outward. Pellegrini 1964, 78, who was the first

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[402] A fibula type Almgren 65 from Meclo, a 1st-c. BC import or copy from the south (Demetz 1992, 635–637), which has lines engraved on the bow (NO-9). However, the strokes can also be arranged into a reasonably symmetrical zig-zag pattern and are probably ornamental.

[403] See http://www.univie.ac.at/lexlep/wiki/Latin_Script.

to mention the finding in 1964, addressed the possibility of a bilingua and expressed his hope for the Latin text shedding light on the Raetic. He announced a soon-to-be-published edition of the text by Franco Sartori of Padova University, but although the slab was immediately examined and restored at Padova, no edition appeared. The text is noted and reproduced in Pellegrini & Prosdocimi 1967, 400 with the comment “di dubbia trascrizione”; similarly, Mancini (LIR, 278) refers to “un’iscrizione di età romana di difficile lettura”.

TV-1.2 ??(?)R·CIE·RVDI·[| ARCI·DIE·CRS·SA[| ? ·VITARI·SA?[? | ?????
??(?)R·CIE·RUDI·[| ARCI·DIE·CRS·SA[| ?·UITARI·SA?[? | ?????

The inscription is in a worse state of preservation than the Raetic one, possibly because the surface was not as well prepared. On the left, the lines must be assumed to be complete, as two letters belonging to the Raetic inscription are inscribed on the lateral surface, demonstrating it to be undamaged. On the right, the lines are incomplete, just as on the Raetic side. The Latin inscription may have been written on the yet unfragmented slab. Line 1 only starts in the centre of the remaining surface (on the level of line 2/line 3 of the Raetic inscription); apart from abrasion damage in the beginning, it is fairly well legible, as is line 2. Below line 2, the left area is taken up by an arrangement of scratches which cannot be considered part of the text, the most conspicuous shape being reminiscent of an oversized Λ, incomplete on the left (note that this side of the object is undamaged) and accompanied by some three or more shorter vertical scratches. The area between this group and lines 3 and 4 of the text is either empty or abraded; Morandi 1999, 101 f. very tentatively suggests a sequence VIS *vis* before the well legible (remains of) line 3. Line 4, despite the scratches being well discernible, could not so far be made sense of. At the top of the slab, the remains of a horizontal line can be seen – part of a frame? The area between that line and line 1 appears to be empty. If not a trick of the eye due to the closeness of the lines of text, faint pre-drawn lines can be discerned between them.

The first to attempt a reading was Alessandro Morandi (1999, 99–104). Morandi assumes that the Latin inscription is not con-nected with the Raetic one, but was inscribed at a later date, as already suspected by Pellegrini 1985, 115 f. He suggests the reading given above (confirmed by autopsy) and the following interpretation:

]*r* – a vocative, possibly *uir* (difficult) or *puer*?
]*cie* – imp. of *ciere* ‘invoke’ (attested in a Christian carmen epigraphicum, see Morandi’s n. 74)

]*rudi* – uncertain

arci – of *arx* ‘summit’, ‘citadel’ or *arcere* ‘ward off’ (imp. *arce* with late Latin -*i* for -*e*)

die crs – ‘in the day of Christ’ (CRS being unattested as an abbreviation for *christ*°; Morandi suggests contamination with *die crastino* ‘tomorrow’)

sa[– *sacra*, *sacramenta*?

uitari – *uitare* (again with late Latin -*i* for -*e*) ‘avoid’

sac[– *sacrilegium*?

Morandi consequently interprets the text as a Christian carmen epigraphicum. Based on the shapes of alpha (with a dot instead of a bar) and rho, which he compares with identical shapes in CIL V 2096 from Asolo, dated to the Imperial Age (AD 104–108), he dates it to the 3rd–4th c. AD.[404]

Seeing as Morandi’s reading hinges on the interpretation of CRS as *christi*, both it and the dating must be considered doubtful. Moreover, a dot under the alleged rho in the sequence makes a reading *cas* possible (cf. the second-to-last character in line 4). The scratches in the lower left area and the illegible fourth line require explanation. The alphabet is clearly Latin, but, while the characters corresponding to those in CIL V 2096 are certainly suggestive, it cannot be excluded that the inscription is considerably younger or older than the Imperial Age.

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[404] An alternative was suggested to Morandi (n. 74) by Mazzoleni, who addressed the possibility of the puncts in the inscription being syllabic puncts. In this case the first sequence in line 1 might be read as a female name [*mu*]*r.cie* (for *murciae*).

3. Raetic and runes

In the following, I will compare the major aspects – letter forms and grapheme–phoneme relationships, orthography and writing conventions, script use – of the Raetic and the archaic Runic writing cultures to see whether any of the characteristics of the Runic script find a model or an explanation in Raetic writing practice. I will also address the question of possible points of contact between Raeti and Germani which could have provided a context for script transfer.

3.1. Contact

3.1.1 Archaeological finds

The notion that the Alpine tribes were isolated from any dealings with the various cultures of the plains and therefore not in a position to act as donors of a civilisational technique like writing was judged to be amiss in section 1.3.2. As far as the Raeti and Germani specifically are concerned, however, points of contact are few and far between. The respective amounts of non-local finds show that trade between the Etruscan and Italic world and Central Europe was primarily conducted via the Celtic Golasecca culture in the west (2.4.1). The Celtic invasion of Northern Italy must have had an impact on trade, but it does not seem that those Alpine passes which are implicated by Raetic inscription finds, viz. the Brenner and the Reschen, ever played a major role as thoroughfares, until first the Reschen (15 BC–AD 47), then the Brenner (2nd c. AD) were made more accessible by Roman roads (the Via Claudia Augusta and the Via Raetia, respectively).

As far as contact of the Raetic Central/Eastern Alps with the Germanic world is concerned, the foothills and plains between the mountains and the Donau were settled by Celtic tribes (Vindelici). Finds associated with Germanic peoples were made in a La Tène D cremation grave in Kundl in the Inntal (Lang 1993), e.g. a fibula type Beltz J, a cambered fibula, fragments of a round-shield boss and of Drehscheibenkeramik. However, Lang (295–298) expressly states that the finds not only in the Inntal, but also in south-eastern Bavaria, are far too scarce to speak of a Germanic presence in the area in the 1st c. AD. The major Celtic oppidum of Manching appears to have played a part as intermediary in any contacts between the Alpine populations and those of the north, with ample evidence for commercial and in the first instance also ethnic relations to the Germanic sphere and to the Fritzens-Sanzeno culture (Gleirscher 1986b, 87; Lang 1993, 295 f.). Gebhard & Wagner

1992, 285 suggest that 2nd–1st-c. finds from the Alpine area in Manching, such as fibulae and ceramics, may represent evidence for the presence of (Raetic?) traders in the oppidum.

The only archaeologically Germanic find from the Raetic core area is a Lochgürtelhaken found at Sanzeno-Casalini. This type of belt hook, typically found in rich women's graves, became current in Central Germany in the first half of the 1st c. BC (ibid., 86). Few pieces are known even from Southern Germany; the Sanzeno find is an outlier. It is not clear whether it came to the Val di Non through trade or as the property of a Germanic woman. In any case, it is not clear inhowfar Sanzeno in the 1st c. BC was still a centre of script culture (2.5.2.2).

3.1.2 Germanic names in North Italic inscriptions

A more thoroughly discussed link between the Germanic and the North Italic world is epigraphic in nature: the inscription on the Negau helmet B, which was found in the same hoard as helmet A (discussed in section 2.8.1.10). It was in fact this inscription, not the Maria Saaler Berg one, which inspired Marstrander's original version of the North Italic theory (hints are already dropped in 1925, 64). Marstrander had devoted two papers to the helmet inscriptions of Negau and Vače (1925; 1927); while he interpreted the inscriptions on Negau A as Celtic names, he suggested a Germanic etymology for the name on Negau B.

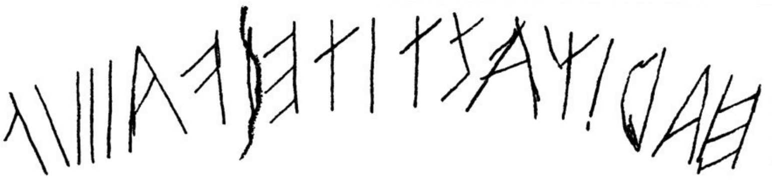
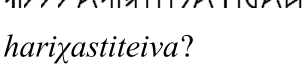


Fig. 72: The inscription on the Negau helmet B (from Nedoma 1995, 23 [fig. 4]).

Negau B 
hariχastiteiva?

Marstrander 1925, 59–64 compares OHG *herigast* < **har̯iagastiz*, with a Celtic genitive ending -*i*, accompanied by a corresponding patronym *teiva*[*i*] < **tīu̯a*, and speculates about contacts between Bastarni and Taurisci. Two years later, having examined the inscriptions himself, he elaborates on his readings. Concerning Negau B (ibid., 16 f.), he judges the characters after *teiva* to be para-script elements (more specifically, a workman's mark), and suggests that the sequence *teiva* is better segmented *tei*[*i*] [*filii*] *fa*[*ber*] (or *fa*[*brica*]):

‘workshop? of Harigast son of Tei’. See Nedoma 1995, 26 f. 46–56 for further readings and interpretations based on Marstrander’s. Nedoma himself (ibid., 57–72), following Marstander’s original interpretation, interprets the inscription as that of an owner, and analyses it as a two-part name in the nominative **harigastiz teiu̯ǣ*. Despite the fact that some details, such as simple *-i-* as composition vowel and the exact function of auslauting *-i*, are still unclear, the identification of the Germanic name **harigastiz* is today widely accepted.

Prosdocimi 1976, 220–223 argues that the inscription is written in a Venetic alphabet similar to the one used in inscriptions from the Isonzo area, specifically Idrija type A (in Is 1 and 2 and the more recently found *Is 4 [Eichner & Nedoma 2009, 66–71]).

Is 1

la.i..v.na.i. v.rota.i.

Is 2

la.i..vna.i.vrot.a..i.

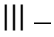
*Is 4

lokenonekrim?.?.*a.i.*

Heta 𐌇 occurs in Is 1/2 and *Is 4, but it does not write /h/. Venetic 𐌇 was changed to ·|· / ||| (with varying length of the lateral hastae) around the end of the 4th c., possibly in the context of the Este writing tablets, where the hastae of 𐌇 could coincide with the grid lines, so that three parallel lines (though horizontal) remained as the significant elements of the letter (cf. 2.1.2). Around the same time, /h/ disappeared in Venetic, so that heta became free to write other sounds, prominently /f/ in the Cadore (simplified from the digraph ‹fh›). By mechanisms which are not quite cleared up (to my knowledge), younger heta came to be identified with the graphically similar punctuated iota ·|·. Lejeune explains 𐌇 for *.i.* in the Isonzo inscriptions as hypercorrect/archaising spelling, while Prosdocimi (1976, 212–216 with literature) prefers to think that both variants of heta could regularly be used in both functions (which allows him to posit a co-occurrence of the forms in Negau B to read the sequence after *teiva* as ⊣| ||| *hil*[*m*] ‘helmet’ [222 f.]). I find Lejeune’s explanation more convincing, despite the fact that, with *Is 4, the hypercorrect spelling is now attested in two unassociated instances. In any case, Prosdocimi argues that the substitution of 𐌇 for ||| to write punctuated iota presupposes an awareness that both letters could stand for /h/, so that 𐌇 /h/ in Negau B can be part of the same tradition. Prosdocimi (217) also involves the petrograph Gt 14 from the Würmlacher Wiesen in the Gailtal.

Gt 14 

ha.r.to

The eleven inscriptions on the rock wall are notoriously difficult to read and mostly obscure, but the sequence in Gt 14 has been read as a Germanic hypocoristic *n*-stem personal name *hardō* or *hartō* from a two-part name with first element **hardu-* (see Nedoma 1995, 44 f. with literature). Here, anlauting Germanic /h/ is reflected by younger Venetic heta  – unless the letter stands for /f/, as heta came to do in the Cadore, in which case the name could as well be Venetic (Nedoma 1995, 45).[405]

Is 3 

luk.s..m.elink.s. I *χa.i.jo.s.kaφ*[

Another issue concerns tau, which features with a straight bar  in Is 1/2, where it appears to write /t/ just as in Negau B (Prosdocimi ibid., 211). Despite the fact that this grapheme allocation is surprising in the context of Venetic and probably also Raetic writing (2.1.2), Prosdocimi decides to go with tau = /t/ rather than /d/, also discounting the possibility of tau being used to represent both dental stops, not least on account of his identification of SL-2.3  as zeta for /d/ (2.5.4.5). As said above, this is not quite certain; depending on the interpretation of  as a Venetic or Raetic letter, SL-2.3 could be alphabetically Raetic as well as Venetic. The situation is complicated by the appearance of St. Andrew's cross in an inscription from Posočje, not yet available to Prosdocimi (*Is 5; Eichner & Nedoma 2009, 71–73), where the letter represents etymological /d/, cf. Es 20  *tomatorio.i.* /domatorioi/. Eichner & Nedoma judge this inscription, together with its support, to be an import from the Veneto – indeed, final punctuated iota does not appear in the typical Isonzo form with long lateral bars, though three-bar mu is unusual in the Venetic core area (maybe Vicenza αβ?).

*Is 5 

tomo.i.?

As remarked by Nedoma 1995, 25, the alphabet used in the Negau B inscription could, just like SL-2.3, also be considered to be Magrè-Raetic (thus also Molinari 1974, 47–49). The similarities between the Venetic Idrija-type and Raetic variants show again how close alphabet variants in Transpadania can be even when they transcend language borders; an interdependence between the present variants may be considered.

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[405] See Nedoma 1995, 6 on more Germanic personal names in Italic and Slovenian inscriptions proposed in the older literature, all of which can be discounted.

The inscription has been repeatedly cited as a nexus between the North Italic and the Germanic world and thereby between the North Italic alphabets and the runes (e.g. Reichardt 1936, 50 f.; Arntz 1938, 13; Rosenfeld 1956, 261–263; Scardigli 1993, 219; Rix 1992, 433 f.). As Düwel 1983, 180 points out, it does not constitute a “missing link” from an alphabetical point of view: heta, alpha, rho, tau and epsilon appear in forms which are no similar to the (putative) corresponding runes than other North Italic or Latin variants. However, Birkhan 2010, 55, also using an evolutionistic metaphor, calls the inscription the “Archaeopteryx der Runologie” – not an immediate precursor of the Runic script, but a related specimen which testifies to a transition between North Italic and Runic writing.

Whether this assessment is accurate must remain undecided until more related “fossils” are found (which Birkhan, incidentally, deems unlikely). In my opinion, the relevance of Negau B in the context of the origin of the runes is limited to providing evidence for contact between members of North Italic and Germanic cultures, and specifically for the fact that a Germanus could have knowledge of North Italic writing. Whether Harigast himself could write or whether he had the inscription made for him by a literate comrade, is of course uncertain. Nedoma 1995, 71 f. (also 61 f.) tentatively suggests that the auslaut of *harigasti* is due to the interference of a Venetic-speaking person who applied the inscription for the illiterate owner of the helmet – either substituting a Venetic genitive ending *-i* or (more likely, cf. section 2.6.1.3) using the vocative *harigasti* with which he was used to address his comrade. That Harigast served in a multi-ethnic/-lingual troop is not merely suggested by the comparison with Negau A with its mix of alphabetically and/or linguistically Venetic, Raetic and Celtic elements.[406] Nedoma 1995, 21 f. points out that, as far as we can tell from Roman accounts and the archaeological evidence, Germani did not usually wear helmets – not even looted ones. It is therefore likely that the now-historical figure of Harigast belongs in the context of Germanic mercenary service in Southern Europe, as referred to by Pompeius Trogus, Livy and Caesar among others – serving on the

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[406] The Negau-A inscription SL-2.4 (2.8.1.10) was also at one point used to establish a connection between the North Italic and the Germanic world. Egger 1959, 88 f. (who, in the same paper [88], suggested an interpretation of the para-script signs in the Negau-B inscription as Roman military sigla) explained dextroverse kappa, set apart from the rest of the inscription by a slightly broader gap, as the North Italic version of the abbreviation *C* for *centuria*. The remaining sequence, read *erul* with retrograde Venetoid lambda, he interpreted as the name of a Germanic centurion Erul(us): *k*[*enturia*] *eruli*. His reading formed the basis for Höfler’s “Erulertheorie”, which ascribes the creation of the runes from a North Italic alphabet to the Eruli – according to Höfler not a tribe, but a mobile warrior band (Höfler 1971; cf. also Klingenberg 1973, 140; Schrodt 1975, 176). Apart from the obsolete reading, Egger’s interpretation, based on Reinecke’s low dating of the helmets (1950, 133), is made chronologically impossible by Egg’s higher dating (Nedoma 1995, 18–20).

side of raiding Alpine tribes or on that of a Venetic societas (Nedoma 1995, 60 f.). Of course, all this only holds under the assumption that Harigast was in fact a member of a Germanic tribe, however defined, and speaker of a Germanic language, rather than just the bearer of a Germanic name (cf. Nedoma 1995, 58). Indeed, the irregular auslaut -*i* might be taken to point to a non-Germanic (Celtic or Italic) inflection pattern and therefore to a loan name.

In any case, it is unfortunate that these helmets can only be dated within such a wide margin; their long serviceable life (see Nedoma 1995, 14) is reflected on Negau A, whose inscriptions demonstrate that it changed hands. The Isonzo alphabet was judged to be a marginal variant which retained archaic features (such as 𐌇) even in the 2nd/1st c., according to Szombathy's original low dating of the finds, by Prosdocimi 1978, 228. The objects have since been redated to the 4th c. (Eichner & Nedoma 2009, 69 f.), but the alphabet's life span may still have been longer.

3.1.3 Germani in the Alps

Germanic mercenaries, also invoked for Rix's theory of Runic derivation, are not the only group which has been located in the vicinity of the Alps and their writing traditions. The most obvious opportunity for contact and cultural exchange between Germani and pre-Latin literate Alpine peoples – specifically the Raeti – is one that has been repeatedly referred to by proponents of the North Italic theory: the final march of the Cimbri.[407] While the ancient sources do not provide detailed information on the exact route the Cimbri took to reach the Padan plain in the last years of the 2nd c. BC, Plutarch (Marius 15) reports that they went via Noricum, while the Teutones and Ambrones passed through the Western Alps (Grünewald 2000, 499). It is generally considered that this does not mean Noricum proper, but its very western border the Brenner pass and Wipp-/Eisacktal, a reference to an encounter at the *saltus tridentinus* (Frontinus, Strat. IV 1, 13) indicating a passage which led by Trento. Lewis 1974, 92 f. attempts a detailed reconstruction of events leading up to the battle of Vercellae, with the Cimbri advancing from Innsbruck via the Brenner, possibly supplemented by the Celtic (Helvetic) Tigurini who traversed the Reschen, and encountering Catulus twice, at the mouth of the Avisio and at Chiusa di Ceraino. If this is correct, the Cimbri marched right through Raetic lands. Differently, however, Loose 1972, who

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[407] See Grünewald 2000, 496 with literature on doubts about the Germanicness of the Cimbri's name and ethnos.

doubts that the Brenner route was traversable for so large a train and prefers to bring the Cimbri to the Padan plain via a route bypassing the high-altitude mountains, through Noricum and Venetic lands (the Val Canale, Canal del Ferro and Tagliamento valley).

Gamper 2006, 348 f. argues that, while there are no material remains of the Cimbri's presence in Northern Italy, a shift from large settlements in the valley plains and in lower elevations in the middle La Tène period to smaller, fortified settlements in higher altitudes in LT D can be observed in the Inntal, the Eisacktal and the upper Adige valley. ^{14}C-datings from the Ganglegg, one of the younger elevated sites, indicate a dating to the last decade of the 2nd c. BC, which leads Gamper to connect the settlement shift with the Cimbric invasion. In any case, whether this putative march through the Alpine valleys would have afforded the Cimbri an opportunity for intensive cultural exchange with the local tribes is doubtful. They travelled with women and children in search for land, so their invasion can hardly be called a campaign; the ancient sources reporting blood and thunder, plunder and pillage are propagandistic to a certain extent. Yet, as pointed out by Gamper, it must be assumed that so large a train had to rely on provisions being supplied by the inhabitants of the valleys it passed through; indeed, the Raeti abandoning their old homesteads to barricade themselves on the mountains does not suggest cordial relationships between them and the passing Germani.

The Cimbri were identified as those Germani who became acquainted with North Italic writing by, e.g., Baesecke 1934 and Altheim & Trautmann 1939; they were also sometimes connected directly with the Negau B inscription (see Nedoma 1995, 21). The latter document was interpreted as a testimony for Germanic inhabitants of the Alps long before the Cimbri came along by Mentz 1955. Mentz argues that the Taurisci were originally (i.e. around the middle of the 1st millennium BC) a Germanic tribe, and that they are responsible for the Slovenian helmet inscriptions, all of which Mentz reads as linguistically Germanic. He does not, however, explicitly refer to any possible connection with the Runic script, though he declared himself for the North Italic theory in 1937. Mentz' Eastern Alpine Germani, even if they had existed, would have been only tenuously associated with the Raeti; even less relevant are the "Alpengermanen" of the upper Rhône valley as originally proposed by Zeuss in 1837.[408]

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[408] Cf. also Kretschmer 1929, 7 f. A Germanic population in the Western Alpine area is a chimera based on Germanic etymologies for the names of certain Celtic tribes located in the Western Alps. Much (1925, 1932) booked the Celtic Tulingi and Daliterni, referred to by Avienus, as well as the Seduni and Varagri

3.2 Epigraphic culture

It is not a given that the context in which writing is used in a young literate culture is the same as that of the model tradition – the looser the connection between the two systems, or indeed the two cultures, the higher the chance that the script will be put to a different use. That being said, the comparison between the Raetic and the Runic epigraphic culture shows that there is little or only superficial similarity: in both cultures (regarding only the archaic phase on the Runic side), script is used to inscribe shortish texts on portable objects. These texts are predominantly names, inscribed with varying degrees of workmanship; some contain non- and para-script elements. Regarding the latter, Graf 2011, who attempts a typology of what he calls non-lexical inscriptions in the South Germanic Runic corpus, distinguishes the following strategies:

– symbolic (para-script signs, i.e. non-script signs which occur in the context of language-encoding inscriptions, and recurring symbols with a standardised non-lexical meaning),
– decorative-ornamental (letters which are used as ornaments, ornaments which resemble letters),
– imitative (script imitation),
– abbreviatory/condensing (futhark-inscriptions, i.e. in the wider sense alphabetaria, and rune crosses).

Para-script elements in Raetic are, as far as I can see, either orthographic (2.5.8) or recurring, i.e. symbols (2.8.1.1). It may be assumed that the Raetic symbols “einen Sinngehalt transportieren”, as Graf 2011, 110 claims for symbols in the Runic corpus, but there appear to be no formal comparanda, at least not among the most frequent ones – Graf names the swastika, the triskelion and the fulmen, while variants of multiple chevrons and asterisks dominate in Raetic inscriptions and inscriptoids. Examples for a decorative-ornamental use of letters are hard to identify – Graf’s Runic examples prominently include sequences of (putative) bindrunes, mainly of ᛞ. I cannot see any cases which might qualify in the Raetic corpus among the numerous inscriptoids which do not appear to encode language. In combination with language-encoding inscriptions we find line fillers, e.g. the inscription SZ-22.1, accompanied by a sequence ||V||, where the formal sameness of the signs with letters presents no impediment to their being used for a line-filling or line-ending ornament. Graf does not mention palindromes, which might be counted among ornamental uses of letters, unless one would argue a deeper symbolic significance; the only Raetic example is the

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(mentioned on the Tropaeum Alpium [2.2.2] and classified as “semi-Germanic” by Livy) and the Gaesati as Germanic (overview in Düwel 1973; for details see Schmeja 1968).

unclear sequence ᛊᛁᛋ on the antler piece with inscription SR-5, which features two opposing sigmas at the ends – cf. ᛋᚢᛖᚢᛊ on the Kylver stone. Ornaments which are formally identical with graphically simple letters are surely a universal, cf. for Raetic the symmetrical sequence of ᚷ- and ᛁ-shapes on the back of a knife (EX-1).

Pseudo-script testimonies are inscriptions which were applied by a person who is aware of script and its power to increase the value of an object or a ritual act, but who has no competence in writing. They are related to the ornamental use of script insofar as performative aspects take precedence over the primary function of script, viz. to encode and transfer meaning. Graf 2011, 113 f. distinguishes between sequences which cannot be segmented (because the writer had no concept of discrete characters, perceiving inscriptions as clusters of lines), sequences of separate characters which bear no resemblance to letters in the respective script, and sequences of randomly reproduced characters which look like letters, but do not encode language. The latter type, as Graf notes, is the most difficult to argue for any one document – the structure and meaning of opaque inscriptions may always just elude the modern scholar. I would count the Raetic inscriptions SZ-7 (2.8.1.3; fig. 48) and NO-18 (2.8.1.1; fig. 40) among pseudo-inscriptions of Graf's type 2; type 1 could be considered for dubious sequences like NO-9 (see n. 402), SZ-22.2 (2.8.1.4; fig. 53) and the zig-zag-like group of scratches beside NO-19 (2.8.1.3; fig. 51).

Letter rows are cited as a Runic characteristic which finds a better inspiration in North Italic than in classical Latin writing by Eichner 2006, 106. Among the North Italic alphabets, alphabetaria are known from all corpora except the Raetic one: the enigmatic Camunic alphabetaria (see tab. 23) are the most complete (indeed somewhat overcrowded) specimens; the mostly consonant-only rows on the Venetic bronze tablets (2.1.2) belong in the context of tuition. The Cisalpine Celtic corpus lacks complete alphabetaria, but see 2.1.4 on the sequence *aev*, which is generally taken for a pars-pro-toto alphabetarium – cf. the numerous incomplete futhark-inscriptions collected in Düwel & Heizmann 2006, 4–14. The Raetic corpus is the one among the North Italic inscription corpora which, so far, does not include a single, even partial, letter row.

Many of the apparent similarities between the archaic Runic and the Raetic corpus are due more to the limitations of modern epigraphy – the obscurity of longer inscriptions and non-script sequences, the overall same problems of reading and interpretation, the uncertainties concerning the context of the few documents which have come down to us – than to a possible interdependence of the two scripts. Those similarities which are real are too general to argue for a connection; name inscriptions on small objects are not exactly specific to these two writing cultures. When going even the least bit into detail, clear differences become apparent.

The Raetic writing culture was based on cult. Some or all of the single names in the genitive may be owner's inscriptions (2.7.2.2), one of the longer inscriptions (PU-1) may be a secular text, and a goodly portion of the testimonies cannot be interpreted with certainty, but there can be no doubt that Raetic writing in its origin and function is tied to ritual traditions. As far as we can see, workmen's inscriptions are not a Raetic text type, the only possible language-encoding example being *sχsi* at Sanzeno (2.8.1.1), whereas this is the one type which can be conclusively argued for the earliest Runic inscriptions (the *wagnijo*-group; 1.1.5). Explicitly votive texts, the most important Raetic text type by far, is notably absent from not only the archaic, but the entire Runic tradition.[409] Correspondingly, the objects which are inscribed are different. In the archaic Runic corpus, weapons stand out as supports, beside objects of everyday use; in Raetic, the largest group of supports is the votives, followed by objects with a ritual function. The only pieces of armament in the Raetic corpus are defensive, viz. the helmets, and these, found in Slovenia and inscribed in various alphabets and languages, are situated at the margins of Raetic epigraphy. Even funerary inscriptions, which appear to have become so important only secondarily in Runic, are thin on the ground in Raetic. In short, a connection between Raetic and Runic writing could only be assumed in the context of a theory like that proposed by Rix 1992, which works with Runic scribes who had very limited access to the model script's context and culture. For scholars who prefer a North Italic model for those alphabets' restricted use in comparison with the Latin αβ's large literary scope, the Raetic corpus does not serve.

3.3 Orthography and writing conventions

Of the orthographic features and writing conventions of the archaic Runic script which have been connected with archaic writing traditions, some to the exclusion of classical Latin writing (1.3.4), only some are relevant in Raetic orthographic practice. As said in section 1.3.4.2, it is not at all clear by what logic the repeated changes in writing direction came about throughout the history of the alphabet, and consequently whether a new writing

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[409] See Mees 2013 for an interpretation of verbs forms in Runic context as dedicatory in a "magico-religious" context.

culture must really copy its model in this respect. Should one insist all Runic layout options to be attested in the model alphabet's corpus, the Raetic one is not a perfect fit. Non-fixed writing direction with a prevalence of dextroverse inscriptions, as in the oldest Runic inscriptions, can be observed in certain Raetic subcorpora (Magrè proper [2.5.1.1] and type-2 petrographs [2.8.1.9]), but the Raetic corpus so far lacks real boustrophedon inscriptions, while the archaic Runic testimonies include both real (e.g. on the Tune stone [KJ 72])[410] and false boustrophedon (e.g. on the Vimose buckle [KJ 24]).[411]

Inconsistent word separation and interpunction are characteristic of Raetic writing, as they are of North Italic writing in general. The separators which begin to appear on rune stones and bracteates in the 4th c. take the form of one to four vertically arranged dots, much as in Raetic (2.5.8.1) and Cisalpine Celtic.[412] However, the only separator in an archaic inscription appears to occur on the Vimose plane (KJ 25), whose inscription, though certainly language-encoding, is not transparent. Word separation strategies by layout, such as writing different words in separate lines, in separate places or even on either side of an object, which are employed on, e.g., the Illerup shield-handle mounting II and the Skovgårde fibula (n. 410), are quite natural and accordingly widely attested. Direct comparisons are difficult in any case, as the motivation for the choices made by the scribe are not always obvious (in Raetic e.g. NO-3 [fig. 28] with two words separated by a row of dots and a third one offset).

The only Runic feature for which, among the North Italic alphabets, the Raetic script is notable are ligatures (2.5.9), but the similarity here is restricted to this general observation. A near-complete inventory and systematic analysis of bind-runes is provided by MacLeod 2002. Just as in Raetic, ligatures in early Runic are "employed in a random and arbitrary fashion" (MacLeod 2002, 35, and 33–36. 61–65 on reasons for bind-runes) insofar as it is usually not evident why an inscription uses ligatures or why two specific runes are ligated, while others are not (e.g., on the Thorsberg chape, ᚢ and ᛗ, but not ᚢ and ᚹ). While bind-runes which include inverted runes occur repeatedly in the older Scandinavian corpus, lig-

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[410] Two of the earliest Runic inscriptions consist in two lines, one sinistro- and one dextroverse, but the creative layout choices make a classification of the testimonies as boustrophedon inscriptions questionable. The Skovgårde fibula features two words in one line, both running from either end of the spring toward the middle, with a separator in between (Stoklund 1995, 322 f.). Two lines, one dextro-, one sinistroverse, are inscribed on side A of chape I from Vimose (KJ 22), head-to-head and separated by a double line. The single word on side B is dextroverse.

[411] LexLep registers two real boustrophedon inscriptions in the Cisalpine Celtic corpus (NO·19, VS·1).

[412] See http://www.univie.ac.at/lexlep/wiki/separator.

atures of the type MacLeod calls “part-reversed”, i.e. ones in which one rune is retrograde, as in both Raetic examples, only occur in unintelligible inscriptions (tab. 6 and p. 59) and once in a Continental inscription (tab. 9). A ligature  *n͡u* does not exist in Runic, and neither, of course, does  *l͡t*, which contains a specifically Raetic letter – though to ask for identical ligatures would of course be immoderate even for scholars who expect the concept of the ligature to have an example in the model alphabet. Ligatures of any kind are, I believe, absent from both the Venetic and the Cisalpine Celtic inscriptions, but they do also occur in Camunic, e.g. in the alphabet row PC 10 from Piancogno: the positions of gamma and delta being interchanged, delta  is written in ligature with beta  (sharing its last hasta).

It is difficult to tell whether geminates are reflected in Raetic writing as a rule, but we have two certain cases of spelled-out geminates in ST-1 *eθunnu*° = *eθun-nu*° with double *n* at the morpheme boundary and SZ-15.1 *esiunne*, possibly with double *n* through assimilation of *mn* (2.6.1.2). MA-13 *essθua* also appears spelled with just one sigma (2.6.1.2); however, double sigma can hardly reflect geminated /s/ before a dental stop. The geminate spelling in BZ-24 *ossurie* should probably be counted among that inscription’s epigraphically Latinoid features (2.8.3), but it does serve to show that the Raetic language had geminates which surfaced in Latin spelling. Whether there are more, veiled in the Raetic inscriptions by an orthographic convention, cannot at this point be determined. There are no forms in the corpus where we should definitely expect a geminate, e.g. in names which have parallels in other corpora or can be etymologised, or in suffixed forms like *eθunnu*°, but none is spelled out. Cf. maybe cases in which possible geminates attested in Latin-script documents are reflected by san in Raetic (2.5.6): SZ-15.1 *kapaśu*° with a suffix -*ass*-, BZ-3 *laśa*(*nu*) ~ CIL III 10723 *lassonia* (2.6.1.2), but neither comparison is certain.

A nasal before a homorganic stop is spelled out in SR-2 *enθus*; there is no conclusive evidence that nasals in that position are not written in Raetic. The only possible instance is SZ-1.2 *eteθa*° vs. SZ.15.2 *enteθa*° – the sequences are obscure, but probably language-encoding; non-spelling of /n/ before the dental stop ([d]?) is the best explanation for the variation.[413]

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[413] As a rule, neither geminates nor nasals before homorganic stops are spelled in the Lugano αβ (Motta 2000, 184).

3.4 Characters

The main reason for bringing the North Italic αβs into the question of Runic derivation in the first place was that they provide a large variety of graphical letter variants, which, not merely because of their overall “archaic” look and angularity, are reminiscent of runes (e.g. Rix 1992, 414. 416) and can be used to supplement character derivations where Wimmer’s are forced and questionable. The following section is concerned with a comparison of the grapheme inventory of the Raetic αβs with that of the archaic futhark. Other North Italic αβs are referred to if they provide notable parallels.[414]

The only two runes for which specifically Raetic models have been suggested are ᛏ and ᚦ (Whatmough 1933, 509 f.; Rix 1992, 419 f.; 1998, 46; Markey 2006, 147 [n. 2]), they being graphically identical to or reminiscent of the Sanzeno and Magrè characters for the dental affricate, respectively (2.5.3).

ᛏ – Sanzeno-αβ ↑. The letters are graphically identical; there are no graphical variants in Raetic and only one maginal one ᛐ (Kowel and Valsfjord, see Odenstedt 1990, 127) in early Runic. Both denote dentals, but while ᛏ represents a stop, ↑ stands for an affricate. ᛐ as on the Kowel lancehead appears sporadically in Northern Italy, e.g. in archaic Venetic *Es 120, in the Isonzo inscriptions (3.1.2) and in the Camunic alphabetaria from the Foppe di Nadro (in the place of tau; see tab. 23 below), and, of course, in the Latin αβ – the rune belongs with those which can be derived from a Latin letter without much difficulty.

ᚦ – Magrè-αβ ᛔ. As is the case with ᛏ and ↑, both the rune and the Raetic character write dentals, and again the values do not quite fit (here spirant vs. affricate). Unlike ᛏ, ᚦ cannot be derived from a Latin letter without assuming graphical changes which cannot be convincingly motivated even with reference to supposed rules of rune formation. An association with ᛔ, whose graphical derivation is equally obscure, is therefore appealing, but seeing that the letters are not even identical, the comparison is not quite convincing. While it is true that the Raetic character, whose pockets are never rounded, appears with only two pockets ᛒ once (MA-5), this form is unlikely to be a character variant, but is most likely due to sloppiness on the part of the writer: the comparatively complex Magrè character usually ends up being considerably taller than the other letters in the

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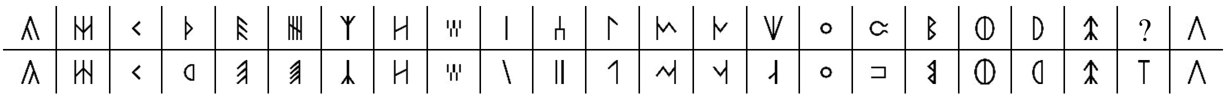
[414] All North Italic characters are given in dextroverse orientation in this chapter to facilitate comparison with the respective runes.

respective inscriptions, so that the omission of the lowest angle does not strike me as an unreasonable move. ᚦ is ultimately no more similar to Raetic ᛔ graphically than it is to Latin D or Greek Δ, or to tau gallicum Ð vel sim. as suggested by Marstrander 1928, 107 f. Phonetically, the Raetic letter and tau gallicum denote affricates, the Latin and Greek letters plosives, so that both could be considered only sufficient approximations for the Germanic spirant. A letter graphically identical to Runic ᚦ appears in the place of delta in the Camunic alphabetarium PC 10 from Piancogno (see tab. 23 below; cf. Schumacher 2007, 336).

The fact that both of the specifically Raetic letters have potentially corresponding Runic forms, and – all being dental characters – with vaguely appropriate values at that, may seem immediately suggestive, but a connection is not evident. However, the appearance of both forms (or variants thereof) in the Camunic alphabetaria, which – as will be seen below – are notable for providing a number of graphical parallels with runes, may yet be significant, and remains to be investigated.



Tab. 23: Camunic alphabetaria from Piancogno and the Foppe di Nadro.[415]

Among those runes as can be identified with Mediterranean archigraphemes with reasonable certainty, some bear resemblance to variants which are attested in Raetic inscriptions:

ᛁ – iota ᛁ. Being the graphically simplest and hence probably the most stable of the alphabetic letter forms, iota in the shape of a full-length vertical is present in Raetic as it is in all of the relevant alphabets, including Latin. The letter is of no diagnostic value.

ᛊ – sigma ᛊ. As with iota, the standard Italic form with three strokes is present in Raetic as well as in the other North Italic αβs. While the letter is usually turned against writing direction in Raetic inscriptions, no such convention is evident in Runic, but the orient-

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[415] The first line gives the alphabet row PC 10 from Piancogno (Tibiletti Bruno 1990, 67–76), with letters slightly standardised where their shape deviates from Camunic standard (nu, qoppa). The positions of mu and nu as well as of gamma and delta are interchanged in the original; delta is written in ligature with beta (3.2). The ligature and possibly the inversion of the nasals also occur in the very similar row PC 27. The other alphabetaria or fragments of such from Piancogno are PC 6, PC 12, and probably PC 28. The second line gives an ideal alphabetarium from rock 24 of the Foppe di Nadro (Tibiletti Bruno 1990, 123–143), based on FN 3, FN 4, FN 5 and FN 6, where only FN 3 and FN 6 are complete. Here also the letters for the nasals are interchanged. The two other alphabet fragments FN 1 and FN 2, also on rock 24, both end with waw (?) and display a variant form of gamma ᛚ.

ation of Runic ᛊ tends to be variable and can even change within the same inscription, which is true also for the Raetic (2.5.1.1) and the Cisalpine Celtic corpus. The arguably archaic Runic variant 𐌔 (Odenstedt 1990, 87–92; Imer 2011, 178 f.; Seebold 2011, 92) is very rare in Raetic inscriptions, occurring only in the palaeographically problematic inscription PU-1 on a belt plaque from Lothen in the Pustertal and in type-2 petrographs. The Lothen inscription, datable to the 5th c. through its support, is written in a Venetoid αβ (with inverted lambda and upsilon) – see sections 2.5.2.1 and 2.5.5.5 on whether it actually follows Venetic (specifically Este) orthography. The inscription also features a variant of san 𐌑, which does not otherwise occur in Raetic (which has 𐌌), but is typical for the Lugano αβ (Stifter 2010, 367–374), and upsilon ᚢ. The second, more peculiar of the alphabet variants used in Raetic petrographs, which contains four-stroke sigma, may be argued to be close to Venetic writing (2.8.1.9). Despite the fact that 𐌔 in Raetic seems to appear in Venetoid contexts, the form is not at all common in Venetic inscriptions (e.g. Pa 10); it is, however, quite frequent in the Lugano αβ.[416] To execute sigma as a zig-zag line with a variable number of five to eight strokes, as attested in a handful of archaic Runic inscriptions, seems not to have been an option in Raetic. Sigma with five (e.g. CO·6) and seven (NO·1) strokes appears in the Lugano αβ.

ᛚ – lambda ᛚ. Provided that lambda was not inverted in Runic to ease the scratching in wood, as suggested by Wimmer 1887, 105, the inverted variant can be directly derived from a number of North Italic αβs: it is typical for the Venetic αβs, for the Raetic Magrè αβ (2.5.1.1), and it appears in Camunic alphabetaria (see tab. 23) and sporadically in inscriptions (e.g. Sc 1). It occurs only twice in the Lugano αβ, once in combination with inverted upsilon (TI·36.3) and once in an inscription which provides evidence for san ᛞ writing /d/ (MI·10.1; see below).

ᚢ – upsilon ᚢ. Like inverted lambda, inverted upsilon is associated with the Camunic, Venetic and Raetic Magrè αβs, though it is not as rare in the Lugano αβ as inverted lambda.[417] Symmetrical Λ (argued to be the original form of the rune by Odenstedt 1990, 30) is the standard form in the North Italic αβs; asymmetrical variants with one straight and one oblique hasta ᚢ are more frequent in Raetic than in Venetic. Specifically the somewhat unusual ᚢ with a curved second hasta, so well established in Runic despite the oft-claimed avoidance of curves in that script, occurs about ten times in

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[416] See http://www.univie.ac.at/lexlep/wiki/S.

[417] See http://www.univie.ac.at/lexlep/wiki/U.

Raetic: in three inscriptions from Trissino (TR-1, 2 and 4; 2.5.1.2), in PU-1 from the Pustertal (which also has four-stroke sigma), and in a number of petrographs (2.8.1.9).

There are two Runic forms which, though available from other North Italic αβs, speak against specifically a Raetic model:

ᚨ – alpha ᚨ. The Runic form with an upright hasta and two bars is one of those as have most frequently been compared with North Italic models (e.g. Weinhold 1856, 412; Marstrander 1928, 88 f.; Mees 2000, 65 f.). “Closed” alpha 𐌀 and its variant 𐌀 (also rounded) are the original Etruscan forms and appear like that in the archaic Venetic and Golaseccan αβ. In the latter, they develop into ᚨ around 400 BC and appear in this form in the younger Lugano αβ. In the Venetic αβs, ᚨ is, I believe, absent, though flag-shaped ᚹ is typical for the southern alphabets of Este, Padova and Vicenza. Raetic alpha notably does not undergo this change. This is conceivably due to the fact that the Raetic αβs display a predilection (also visible in some Venetic varieties, e.g. the Isonzo αβ; 3.4.2) for alpha with its bar turned against writing direction (𐌀→; 2.5.1.1) – only 𐌀 with the bar attached to the first hasta can develop into upright ᚨ by straightening that hasta and reducing the second one to a second bar. Raetic does not provide a model for Runic ᚨ.

ᛟ – omikron ⋄. It has sometimes been remarked by runologists that the North Italic theory does not work out because the alphabets concerned do not feature omikron (Odenstedt 1990, 152; Morris 1988, 6. 151; Miller 1994, 63). This is of course due to the confusion of the Etruscan and “North Etruscan” αβs (see n. 60) – speakers of IE languages who learned to write from the Etruscans did revitalise or reintroduce omikron to write IE /o/ (2.1). However, while both the Lugano and the Venetic αβs contain omikron (a recently publ-ished Celtic inscription from the canton Wallis [VS·2] even has ᛟ), the letter is absent from Raetic inscriptions, as the Raetic language, like the Etruscan one, had a four-part vowel system without /o/ (2.7.1.1).

Then there is the oft-referred-to group of runes which cannot be derived from any alphabet but the Latin one, at least not without difficulty:

ᛒ – Latin B. Unlike omikron, the letters for the Greek voiced stops never made their way to Northern Italy prior to the phase of Latinisation. Therefore ᛒ must be taken from the Latin αβ. The Camunic alphabetaria feature a variant ᛗ vel sim. in the place of beta (see tab. 23), whose graphical derivation/development is obscure; to my knowledge, the letter has not so far been found used in inscriptions.

ᚠ – Latin F. The rune's obvious model, both graphically and sound-value-wise, goes back to waw, which uniformly appears as ᚨ in the North Italic αβs. Rix' suggestion (1992, 420) that ᚠ could have been simplified from the Venetic digraph ‹vh› /f/ in a development which parallels that which led to Latin F /f/ is not impossible, but strained. The Venetic αβ used in the Cadore does the exact opposite and simplifies the digraph to heta after the loss of /h/ (3.4.2). Rix proposes that ᚠ is borrowed from a Venetic variant of waw with upturned bars ᚠ (e.g. Pa 7) or ᚡ (e.g. Ca 20) (also Mees 2000, 65). Quite apart from the fact that these forms are not so much variants with upturned bars as inverted letters, they are clearly marginal (cf. also Raetic PU-5 and SR-3.2). If anything, ᚠ could be from ᚨ to avoid homography with ᛆ (the letters are indeed near-homographic in the younger Lugano αβ, where waw is a lettre morte, as evidenced by attestations of the sequence *aev* ᛆᚫᚨ). However, such an assumption is entirely unnecessary with regard to the other compellent Latin derivations.

ᚱ – Latin R. While it is true that a short descending stroke of rho appears already in Western Greek αβs, it was adopted in few Italic αβs. The standard form in all the North Italic αβs, including Camunic, is ᚦ or D, rarely ᚹ. Rho R with the long additional bar is typical for the Latin αβ, where the bar established itself to maintain the letter's distinctiveness from pi, which developed a closed pocket P. Whether one chooses, like Morris 1988, 116 f. as a representative of the Mediterranean theory, to derive ᚱ directly from a Greek variant with a descending stroke, or whether one would prefer to look for a model letter which can explain the Runic variants with different combinations of curved and angled lines and the bars being often attached to the hasta only at the top – the North Italic αβs do not contain useful forms.

ᛗ – Latin M. The Etruscan form of mu 𐌌 with four bars is also the standard form in the Venetic and Lugano αβs. Both Raetic αβs have a variant 𐌌 with three bars, which also occurs frequently in the Lugano αβ, and features in the Venetic αβ of Vicenza. Variants with two hastae (M, M) are only known from late Venetic and Celtic inscriptions which show influence from Latin writing – forms with crossed bars ᛗ in the Lugano αβ are not variants of mu, as hopefully suggested by Rix 1992, 419 f., but of san (see Stifter in LexLep).[418] Though the rune's crossing bars are an unexpected feature, Latin M is the obvious model.

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[418] http://www.univie.ac.at/lexlep/wiki/Ś.

ᚲ – Latin C. Archaic Etruscan orthography employs gamma according to the *kacriqu*-rule, i.e. using kappa, gamma and qoppa to write contextual allophones of /k/ (n. 117). The rule was soon dropped and one of the letters was generalised for /k/ – kappa in Northern Etruscan, gamma in Central/Southern Etruscan. The more prestigious southern orthography established itself eventually, but kappa remained the standard letter for the velar stop in the North Italic αβs. Unless one chooses to explain the seemingly unmotivated smallness of Runic ᚲ by deriving it from kappa 𐌊 with short bars (which is frequent in the Lugano and the Raetic αβs) in ligature (e.g. Marstrander 1928, 87; Rix 1992, 429), the Latin variant of gamma C /k/ is the obvious model. Note, however, ᚲ in the place of gamma in the Camunic alphabetaria from both Piancogno and the Foppe di Nadro (not in inscriptions; see tab. 23).

ᛖ – cursive Latin ǁ. Also in regard to its archaic variant ⊓ (Imer 2011, 178; Seebold 2011, 91 f.), the rune is in my opinion best derived from the Latin cursive form ǁ (also Haas 1965, 228). The letter is amply attested in the Latino-Venetic inscriptions, as well as in SZ-68 (2.8.3), but originally all North Italic αβs feature 𐌄.

ᚺ – Latin H. I count ᚺ among the runes which are best derived from the Latin variant of heta, because, to my knowledge, the letter does not usually occur in this form in the North Italic corpora. The Venetic αβs have two- and three-barred forms as well as the younger ⫲; /h/ disappears in Venetic around the end of the 4th c. (3.4.2).[419] The Raetic αβs know ᚻ in Magrè-context and ᚻ in Sanzeno-context; the letter is absent in the Lugano αβ. The Camunic script, yet again, is the only one in Transpadania to provide a model for single-barred heta: alphabetaria from both Piancogno and the Foppe di Nadro have ᚺ. The letter only sporadically and mostly dubiously occurs in inscriptions (e.g. PN 24m; Tibiletti Bruno 1990, 92). The pedigree of the Runic variant ᚻ in continental inscriptions remains to be clarified.

A North Italic model is particularly difficult to argue when working with the Raetic script with regard to those runes which can be smoothly derived only from the Latin αβ. The whole point of introducing the North Italic αβs into the discussion was to avoid strained derivations which only work with the help of a number of ad-hoc assumptions about rune formation, writing habits and phonetics. Accordingly, most systematic formulations of the North Italic theory since Marstrander 1928 involve late North Italic αβs

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[419] The form ᚻ is a variant of zeta in the northern Venetic area (Cadore, Agordino).

from the 1st c. BC which show influence from Latin writing (an exception is Rix 1992). Unlike the Cisalpine Celtic[420] and particularly the Venetic corpora, the latter containing a host of 1st-c. BC inscriptions, most prominently from Este (Es I–LXIV), which document the gradual Latinisation of the local writing culture, the Raetic corpus is notably poor in such testimonies (2.8.3). It is unclear why the Raeti should have abandoned their alphabet so suddenly; we should expect to see the effects of Romanisation particularly in the southern Raetic area, where a Raetic epigraphic culture was still alive in the late Iron Age, and which was gradually assimilated during the last two centuries BC (2.2.2). It is all the more surprising that the only relevant testimony, BZ-24, comes not from a site which also yields younger Raetic inscriptions, but from Überetsch, whence we have no datable language-encoding inscriptions after about 300 BC (2.5.2.2). In any case, the runes listed above cannot well be derived from an entirely hypothetical Latinised Raetic αβ.

Apart from (unlikely) ᚦ mentioned above, none of the more problematic Runic forms is explained by any form particular to Raetic.

ᚾ Though a connection of the rune with the archigrapheme nu is likely, none of the North Italic αβs provide a direct model for ᚾ. The closest form may be Camunic 𐌍 with the bars extending from about the middle of the hasta (in both alphabetaria [see tab. 23] and in inscriptions, e.g. Na 12; cf. Schumacher 2007, 336).

ᛞ Butterfly san ᛞ, graphically identical to Runic ᛞ, is particular to the Lugano αβ. Both Raetic αβs have standard san 𐌑 (once ᛗ) and no other form which corresponds graphically. As pointed out by Stifter 2010, 374, the Lugano αβ's Butterfly san may qualify as a model for the rune – not merely graphically, as the letter can be argued to write /d/ in late Latinoid inscriptions (e.g. MI·10.1 MᚨᛞI◇ᛚᚨN◇ *mediolano* from ca. 200 BC). Rix 1992, 421 suggests a derivation from Venetic theta ⊠ as it appears within grid lines on the Venetic alphabet tablets (also Mees 2000, 59), but see section 2.1.2.

ᛉ The rune is graphically identical to one of the variants of North Italic chi ᛉ, well attested in Raetic, but also in the Lugano and the Venetic αβs – if the correspondence in form is not coincidental, all of the North Italic candidates qualify. Yet again the Camunic alphabetaria provide an alternative parallel, as they feature a letter ᛉ (Piancogno) or ᛦ (Foppe di Nadro) in the place of zeta (see tab. 23; cf. Mees 2000, 61; Schumacher 2007, 336).

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[420] See http://www.univie.ac.at/lexlep/wiki/ Latin_Script.

ᚷ Certainly coincidental is the graphical correspondence of Runic ᚷ and the North Italic St. Andrew's cross X, be it theta or tau; none of the North Italic αβs – not even the Camunic ones – have a letter of this or a similar shape for a velar (pace Mees 2000, 61 f.). Rix 1992, 421 attempts a connection via the rune name, suggesting that **gebō* is interpretatio germanica of Ven. *donom* 'gift', which would be singular even within his theory.

ᚹ The rune is graphically identical with pi with a closed pocket ᚹ as it appears in the Magrè αβ, but if one were prepared to derive a letter for /u̯/ from one for /p/, Latin P could serve just as well. The Raetic αβs do not feature any variants of qoppa which might qualify as models. Raetic does have a bilabial glide, but it is written with waw 𐌅; formally, a derivation 𐌅 > ᚹ is no more appealing than 𐌅 > ᚠ referred to above. Haas 1965, 229, who argues for a Venetic source of the futhark, and Rix 1992, 421 derive ᚹ from phi 𐌘 [b] as it appears in the Venetic (and Raetic) αβs.

ᛃ Haas 1965, 227 f., Rix 1992, 420 and Mees 2000, 63 f. also find a model for ᛃ in the Venetic letter combination ⟩⟩ *ij*. Apart from the fact that the forms are, again, not identical, but only similar, ⟩⟩ is attested only once (Is 3 *gaijos* [3.4.2]); the standard form is ⟩I (one straight and one broken iota; e.g. Ca 5).

ᛇ While Rix 1992, 420 books the yew-rune, together with the ing-rune, as the two runes which he cannot account for, Haas 1965, 228 derives it from Venetic punctuated iota ·I·, which may occur in Raetic ST-5, but must be considered a Venetic feature (3.2.4).

◇ Mees 2000, 62 f. derives the rune (in the variant with stave ⟠) from qoppa, which does not occur in any of the Raetic αβs.

ᛈ The rune with its symmetrical bars is hard to compare with any variant of pi in Italy other than the Camunic one.[421] Camunic has ⊔ in inscriptions (e.g. FN 14) and the decidedly similar ⊂ and ⊏, pointed out by Schumacher 2007, 336, in the alphabetaria (see tab. 23).[422]

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[421] Mees 2000, 60 derives the rune from san, via a variant which is argued to be unattested by Stifter in LexLep (http://www.univie.ac.at/lexlep/wiki/Ś).

[422] The first, badly discernible character ↑ on the Frøyhov statuette (1.1.5; fig. 3) can hardly be compared with the Raetic letter ↑ in the absence of an archaeological connection.

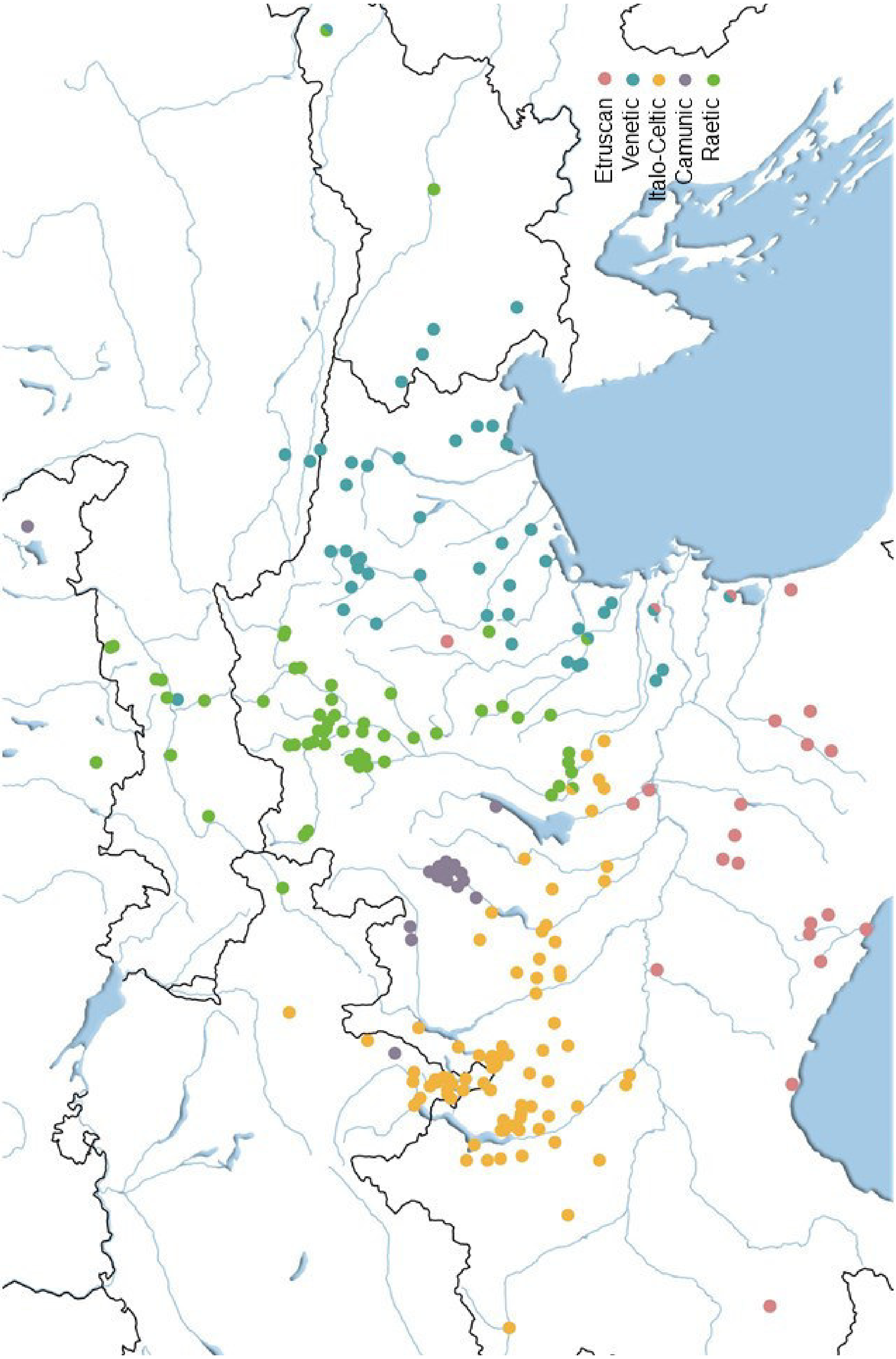
To sum up, no convincing connection can be claimed between specifically Raetic letters and runes with regard to either purely graphical forms or grapheme–phoneme relationships. It is clear that no attested Raetic alphabet or alphabet variant could have served as a model for the futhark. If one were prepared to assume an unattested phase of Latinisation, in which Latin letters could provide models for the obviously Latin-derived runes, certain runes would still remain unaccounted for, as the North Italic letters which lend themselves to comparison belong to other alphabets. Even within the Raetic corpus, the two most prominent candidates for rune-models, Magrè-style ᛒ and Sanzeno-style ↑, belong with distinct alphabets. Thus, when including Raetic forms, source eclecticism is unavoidable. As said in section 1.3.3, this must be reckoned with, but within the bounds of arguability. Theories like those proposed by Rix, Mees and Markey, involving blanket explanations for the generous mixing of characters which does not require further, individual justification, are not necessarily implausible, but hard to maintain against methodologically conditioned criticism or simple disbelief. As things stand now, a conclusive argument for why certain runes are modelled on letters which are only attested in the Lugano alphabet (e.g. ᛞ), while others find comparanda in letters which are exclusively associated with Camunic alphabetaria (e.g. ⊂) or marginal Venetic variants (⟫), seems remote.

3.5 Conclusion

I, for my part, do not abandon hope for the possibility to come closer to a North Italic model for the runes. The above list of comparanda does reveal concentrations of similarities such as the type-2 petrographs and the Camunic corpus – in the context of Raetic, these point beyond the local traditions, but then the Raetic corpus was never the focus of the North Italic theory. I do concur with Markey in that I am inclined to think that the interrelations between the North Italic alphabets amount to more than one variant being derived from the next. There is evidence, though not yet systematically processed and fully understood, for contact between the various writing traditions (e.g. at the Demlfeld sanctuary; 2.5.1.2) and for mutual influence and interference in regard to letter forms (e.g. Cadore-style lambda at Steinberg; 2.8.1.9) and orthography (e.g. dentals used as in Padova in the Prestino inscription; 2.1.4). Thus, there appears to be a connection between certain Raetic traditions and the Venetic alphabet variant of the Isonzo area (3.1.2) which may involve the Gailtal petrographs. On the Western front, I suspect a correlation between the Celtic use of san to write the tau gallicum phoneme, i.e. a dental affricate, the Magrè character for the corresponding Raetic phoneme, and a similar character appearing in the place of san in Camunic alphabetaria, though the issue is not clear to me. In any case, I cannot but reiterate the vague, but pertinent observation by Schumacher 2007, 336 that the number of odd rune forms which find comparanda in Camunic alphabetaria and inscriptions is highly suggestive, and that a relationship is “durchaus im Bereich des Möglichen”. The Camunic corpus still awaits full publication; efforts in that direction are currently being made at the conducted at the Soprintendenza Archeologia, Belle Arti e Paesaggio per le Province di Brescia. Once comprehensively published, we may be able to extract evidence which brings the question of the origin of the runes one step closer to being answered.

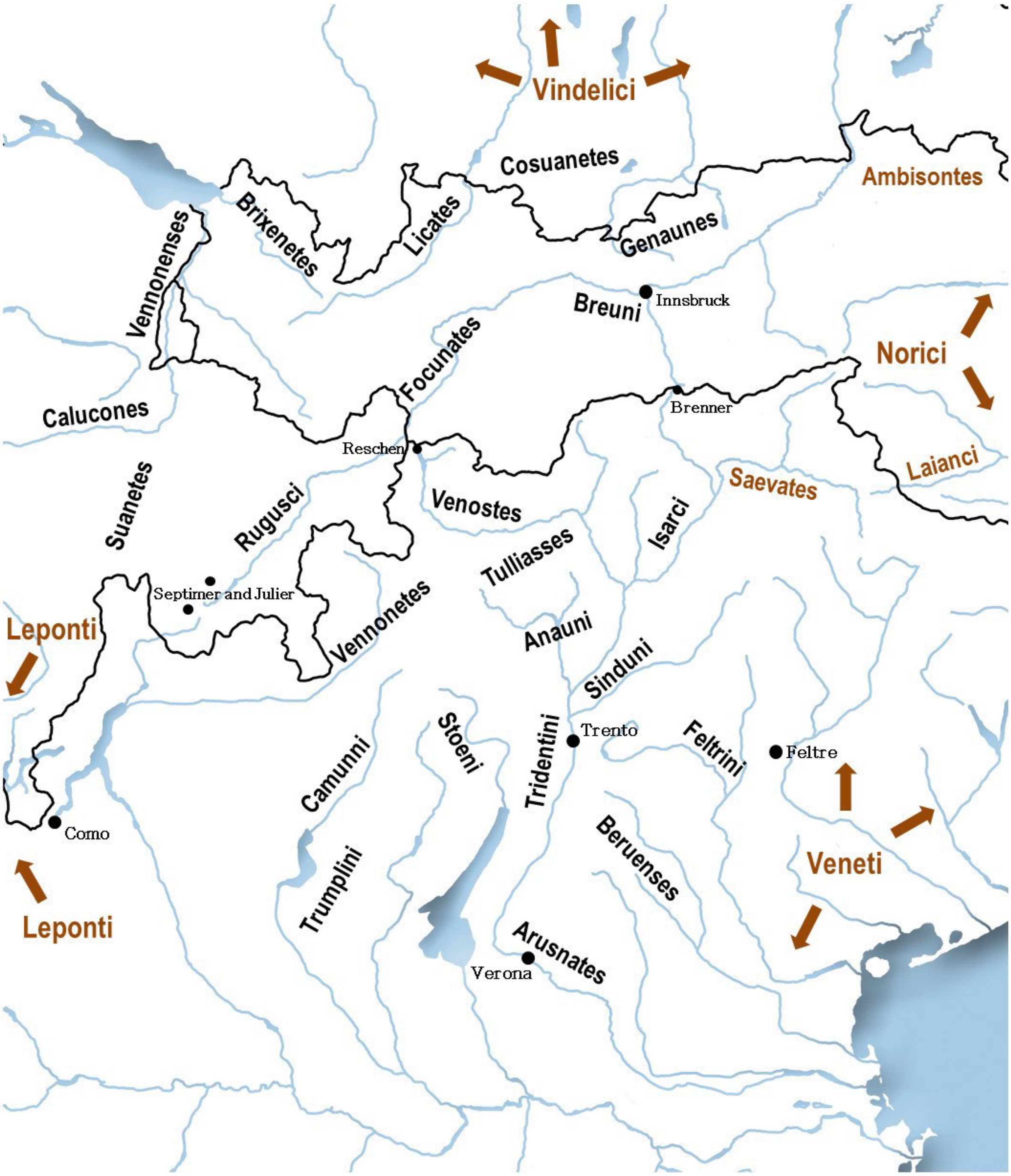
4. Appendices

4.1 Appendix I: Map 4: Find places of North Italic Inscriptions (created by Gudrun Bajc for TIR)



4.2 Appendix II: Map 5: Tribes associated with the Raeti and their possible areas of settlement

The map locates a selection of tribes associated with the Raeti in their possible areas of settlement (neighbouring Celtic and [quasi-]Italic tribes in brown), widely following Abb. 1 in Gleirscher 1991, 7; see also Heuberger 1932, 10–50, as well as Anreiter 1997, 9 f. 173 for Nordtirol. It means to give a general idea of how to think of a "tribe" in geographical terms – as said in ch. 2.2, the reconstruction of actual areas of settlement is highly dubious in many cases.



4.3 Appendix III: List of Raetic inscriptions

The following table provides a list of all inscriptions which are included in the online edition TIR as of April 2018 with standard transliterations (non-script characters being transliterated as if they were letters), supports and find places, for quick reference. For more information on the testimonies, including displays of the original characters, variant readings, detailed descriptions, images and literature, please refer to the TIR site (http://www.univie.ac.at/raetica/wiki/Category:Inscription). The list is arranged by find places, roughly from south to north. See section 0.3 for sigla codes and transliteration conventions.

Siglum	**Transliteration**	**Object/material**	**Find place**
SL-1	*terisna*	bronze helmet	Vače
SL-2.1	*sirakụ:þurti*	bronze helmet	Ženjak
SL-2.2	*:ar*?(?)*eisṿ*?		
SL-2.3	*zuφniφanuaφi*		
SL-2.4	*kerut*		
TV-1.1	]*iaṇ·aθare* |]*armataṇ·* |]??*eṣ·śaruṣ́·*?̣· |]*ḷ·s·salusruśn*?(?) |]?*ạṛṃạ*[	slab	Castelcies
TV-1.2	??(?)R · CIE · RUDI ·[| ARCI · DIE · CRS · SA[| ? · UITARI · SA?[? | ?????		
PA-1	*eθsualeuθikukaial·* | *nakinaθarisakvil·*	bronze spatula	Padova
VR-1	*tinesuna*	antler piece	San Briccio
VR-2	*malav·zn*	antler piece	San Briccio
VR-3	*taniniutikuremieshiratasuvakhikvelisanes*	bronze spit	Ca’ dei Cavri$^?$
VR-4[i]	*puz·n*?*χan*	antler piece	Castelrotto
VR-6	]*ạṭ·laþu*?[	antler piece	Montorio Veronese
VR-7	*kaṛi*	bone	Montorio Veronese
VR-8	*i*?*θ*	bone	Montorio Veronese
VR-9	]????[	potsherd	Montorio Veronese
VR-10	*ieśulat·naχe*	bronze fitting	San Giorgio di Valpolicella
VR-11	]*śt·luχ·zn·χe*	bronze fitting	San Giorgio di Valpolicella
VR-12	*ạlp*	bone	San Giorgio di Valpolicella
VR-13	*laṛịẹ*	bone	San Giorgio di Valpolicella
VR-14	*ḷaṿ·ṣ́a*	bone	San Giorgio di Valpolicella
VR-15	*ạ*	bone	San Giorgio di Valpolicella
VR-16	*inn*	bone	San Giorgio di Valpolicella
VR-17	]*mai·ma*	bone point	San Giorgio di Valpolicella
TR-1.1	*esiau*	bone	Trissino
TR-1.2	?		
TR-2	*uθeθ·e*	bone	Trissino
TR-3	*pịθ̣ị*	bone	Trissino
TR-4	*θu·θ*	bone	Trissino
MA-1	*piθamne helanu*	antler piece	Magrè
MA-2[ii]	*piθanmelka*[*θ̣ụṛịẹþụ*	antler piece	Magrè
MA-4	]*eiluke*[(?)?]*śu*	antler piece	Magrè
MA-5	*piθieikuṣiþu*	antler piece	Magrè
MA-6	*piθiemetinu* | *θriahiṣ·*	antler piece	Magrè

MA-7	*]ẹmaniṣ[*	antler piece	Magrè
MA-8	*reiθemuiuþinaχe*	antler piece	Magrè
MA-9	*pitalelemaisþinake*	antler piece	Magrè
MA-10	*piþiekerpinake*	antler piece	Magrè
MA-11	*]ẹṣθuvaθinaχe*	antler piece	Magrè
MA-12	*estualeaφiṛ·[*	antler piece	Magrè
MA-13	*es·sθuaθel·pa?inua*	antler piece	Magrè
MA-14[iii]	*esium·ninuśur·*	antler piece	Magrè
MA-16	*val·θe?nu*	antler piece	Magrè
MA-17	*klevieval·θikinuasua*	antler piece	Magrè
MA-18	*knusesusinu*	antler piece	Magrè
MA-19	*lasθeφutiχinu*	antler piece	Magrè
MA-20	*]θ̣ịχ̣ịṇụa??(?)iχa*	antler piece	Magrè
MA-21	*pịθ̣[*	antler piece	Magrè
MA-22	*]ạθa*	antler piece	Magrè
MA-23	*usθiþu* | *zezeve*	antler piece	Magrè
MA-24	*]ś*	leaden ingot	Magrè
AS-1	?	potsherd	Bostel di Rotzo
AS-2	? *iθθi*	potsherd	Bostel di Rotzo
AS-3	? *iθθi*	potsherd	Bostel di Rotzo
AS-4	?	potsherd	Bostel di Rotzo
AS-5	?	potsherd	Bostel di Rotzo
AS-6	?	potsherd	Bostel di Rotzo
AS-7	?	potsherd	Bostel di Rotzo
AS-8	?	potsherd	Bostel di Rotzo
AS-9	?	potsherd	Bostel di Rotzo
AS-10	?	potsherd	Bostel di Rotzo
AS-11	?	potsherd	Bostel di Rotzo
AS-12	?	bone point	Bostel di Rotzo
AS-13	?	bone point	Bostel di Rotzo
AS-14	*φeχe*	potsherd	Bostel di Rotzo
AS-15.1	*iθθipiseapasia*	beaker	Bostel di Rotzo
AS-15.2	*i$θi*		
AS-16	*ka kavinχ*	beaker	Bostel di Rotzo
AS-17.1	*esipa?ịaṛeθuluva*	potsherd	Bostel di Rotzo
AS-17.2	*eṣịpạ?ḳẹθanava*		
AS-18	*piθạmn[?*	potsherd	Bostel di Rotzo
AS-19.1	*pịθ̣ạṃṇ[*	beaker	Bostel di Rotzo
AS-19.2	*śv*		
AS-20.1	*śṿ*	potsherd	Bostel di Rotzo
AS-20.2	*śv*		
AS-20.3	*śv*		
AS-21.1	*śv*	beaker	Bostel di Rotzo
AS-21.2	*śv*		
AS-22.1	*śṿ*	beaker	Bostel di Rotzo
AS-22.2	*]ṿ*		
AS-22.3	*ṣ́ṿ*		

AS-23.1	*śv*	beaker	Bostel di Rotzo
AS-23.2	*ṣ́ṿ*		
SR-1	?]*nsu·mnaviθahuṛ·* |]*ịṣkesaχviliṣke*	antler piece	Montesei di Serso
SR-2	*sφurạ·senθus* |]*ẹ*?*eθinụ*	antler piece	Montesei di Serso
SR-3.1	*aruśnas*	antler piece	Montesei di Serso
SR-3.2	?]*ṿilna*		
SR-4	*θul·te*?*·s*[? | $ *teris·ṇ*[	antler piece	Montesei di Serso
SR-5	*φrimapiθamnụ*	antler piece	Montesei di Serso
SR-6	*aṛụseθaṛ·nateriṣ·nạ*	antler piece	Montesei di Serso
SR-7	]*naviθahur·*	antler piece	Montesei di Serso
SR-8	*vs·eraus·*	antler piece	Montesei di Serso
SR-9	?]?(?)*ieṛịṣna*	antler piece	Montesei di Serso
SR-10	???????]*ịal·*	antler piece	Montesei di Serso
SR-11	*iaiu*	stone	Montesei di Serso
SR-12	?]*χlị*[	antler piece	Montesei di Serso
SR-13	]*ṇas*	antler piece	Montesei di Serso
SR-14	?	potsherd	Montesei di Serso
SR-15	?	bowl	Montesei di Serso
CE-1.1	*laviseśeli*	situla	Cembra
CE-1.2	*velχanu*		
CE-1.3	*lup·nu piθiave*		
CE-1.4	*kusenkustrinaχe*		
CE-1.5	*φelna vinuθalina*$		
FI-1	*ṣ a*[| *kakaka*[(?) | *θarani*[? | *saφạṇa* | *θ̣arani*[?	antler grip	Tesero
NO-1	?]*ukinua*[	bronze fragment	Cles (Campi Neri)
NO-2	*tianusataṇ*	strainer	Cles
NO-3	*φelturiesi:φelvinuale utiku*	miniature shield	Meclo (Valemporga)
NO-4	*a*?(?)*l*?*a*[(?)	antler piece	Meclo (Valemporga)
NO-5	(?)]?*a*[	potsherd	Meclo (Valemporga)
NO-6	]*χamuriri:*	bronze fragment	Meclo (Castellaccio)
NO-7	*φausu*$	antler piece	Meclo
NO-8	?] *ip*	bronze fragment	Meclo
NO-9	*aupiaịạ*	fibula	Meclo (Valemporga)
NO-10	*rileke:sa*	slab	Tavòn
NO-11	*pirikaniśnu*	bronze	Dercolo
NO-12	*is*?(?)(?)?*n*$	bowl	Dercolo
NO-13	*ṭerisna*	astragalos	Revò (Monte Ozol)
NO-14	*θṛ*[	potsherd	?
NO-15	*esumnesinuþnualeutikutianus*	bronze baton	Cles (Campi Neri)
NO-16	*tianusa* | *taniun*	bronze	Cles (Campi Neri)
NO-17	*ketanuvaleutiku*	bone point	Cles (Campi Neri)
NO-18	? | ?	bowl	Dercolo
NO-19	?§*velθiẹ*	bronze plaque	Meclo
SZ-1.1	*lasta φirimaþinaχe* | *χikaśiχanu*	bronze	Sanzeno
SZ-1.2	*eteθaṿ*$*iiiii iθiiiii*		
SZ-2.1	*φrima* | *remi visteχanu*	bronze	Sanzeno

SZ-2.2	*χariχa remi*		
SZ-3	*visteχamaiu*?	bronze	Sanzeno
SZ-4.1	*kativates* | *kalitis þal φuter suχ*	bronze	Sanzeno
SZ-4.2	$		
SZ-5.1	*vaþanu* | *reiθuśnu*	bronze	Sanzeno
SZ-5.2	$		
SZ-6	*θiχiθ*?$?	bronze	Sanzeno
SZ-7	? ? $	bronze	Sanzeno
SZ-8.1	*kaθiave*	bronze	Sanzeno
SZ-8.2	?		
SZ-9.1	*kuninasi* | *θauχrilina*	bronze	Sanzeno
SZ-9.2	?		
SZ-10.1	*χelivaiθina*	bronze	Sanzeno
SZ-10.2	?		
SZ-11	*erikian vetelie*	bronze	Sanzeno
SZ-12	?	bronze	Sanzeno
SZ-13	?	bronze	Sanzeno
SZ-14	*φelituriesielukusletile* | *ḳạṛataśna*	bronze	Sanzeno
SZ-15.1	*lastaθianuesiunne* | *pitiekapaśunu*	bronze	Sanzeno
SZ-15.2	*enteθa*?§		
SZ-16	*laθurusitianusatanin*	statuette	Sanzeno
SZ-17	*sχsi*	bronze handle	Sanzeno
SZ-18	*χevisianaθi*	bronze key	Sanzeno
SZ-19	*ḳạþạ*[?]̣:[?]*ạ*?[?]$	bronze handle	Sanzeno
SZ-20	*χ*	bronze	Sanzeno
SZ-21[iv]	?		
SZ-22.1	*perkusiale* | *like iiuịị*	antler grip plate	Sanzeno
SZ-22.2	?		
SZ-23	]*ilt*[?	antler grip plate	Sanzeno
SZ-24	]*θ̣nasleθua*	antler grip plate	Sanzeno
SZ-25	$	iron gouge	Sanzeno
SZ-26	?	iron gouge	Sanzeno
SZ-27.1	*upi*	potsherd	Sanzeno
SZ-27.2	*upi*		
SZ-28	*ke*	bowl	Sanzeno
SZ-29	*θkθθ*	bowl	Sanzeno
SZ-30	*ka*[? ?]*isθi:puχẹ:ṭumis:p*[ ]*θiaḳ*[? ?]*auþile:ẹḷukụ:*	situla	Sanzeno
SZ-31	*remina*	simpulum	Sanzeno
SZ-32	]*þipupi*	antler piece	Sanzeno
SZ-33	*þine*	iron hoe	Sanzeno
SZ-34	*þ*[?	antler piece	Sanzeno
SZ-35	*auθu*	bronze handle	Sanzeno
SZ-36	*iχθi*	situla	Sanzeno
SZ-37.1	*riri*	bronze handle	Sanzeno
SZ-37.2	*riri*		
SZ-38	*ṣχsi*	iron knife	Sanzeno

SZ-39.1	$*upi*	iron axe	Sanzeno
SZ-39.2	*upi*		
SZ-40	]*alu*·[	bronze handle	Sanzeno
SZ-41	]?*χ*[	potsherd	Sanzeno
SZ-42	*ave* ?	bronze handle	Sanzeno
SZ-43.1	*upi*	iron chisel	Sanzeno
SZ-43.2	*upi*		
SZ-44.1	*uθiiθi*	iron scythe ring	Sanzeno
SZ-44.2	*la*		
SZ-45.1	*uθiiθi*	iron scythe ring	Sanzeno
SZ-45.2	*la*		
SZ-46.1	*uθiiθi*	iron scythe ring	Sanzeno
SZ-46.2	*la*		
SZ-47	*iθiu*	iron scythe ring	Sanzeno
SZ-48	*iθiu*	bone point$^?$	Sanzeno
SZ-49	*iiθii*	tusk	Sanzeno
SZ-50	*uθiiθi*	iron chisel	Sanzeno
SZ-51	*uθiiθ*[	iron knife	Sanzeno
SZ-52	*iiiiiiθa*	bowl	Sanzeno
SZ-53	§	bronze handle	Sanzeno
SZ-54	*iiiiịθ̣a*	bowl	Sanzeno
SZ-55	*ṃ·e*	potsherd	Sanzeno
SZ-56	*iai*	bowl	Sanzeno
SZ-57.1	*la*	bowl	Sanzeno
SZ-57.2	*la*		
SZ-58	*iai*	bowl	Sanzeno
SZ-59	?	bowl	Sanzeno
SZ-60.1	*ịạ*	bowl	Sanzeno
SZ-60.2	*la*		
SZ-60.3	*ụị*		
SZ-61	?(?)?	bowl	Sanzeno
SZ-62	*la*?	iron axe	Sanzeno
SZ-63.1	*iiṿ*	antler piece	Sanzeno
SZ-63.2^v	*a*		
SZ-65.1	*ku*	simpulum	Sanzeno
SZ-65.2	*ku*		
SZ-66	?	iron axe	Sanzeno
SZ-67	?	bronze handle	Sanzeno
SZ-68	LṬ UALENTINỊ	iron knife	Sanzeno
SZ-69	?*ana*	potsherd	Sanzeno
SZ-70.1	*kl*	bowl	Sanzeno
SZ-70.2	*aiθiii*		
SZ-71	*iθii*	statuette	Sanzeno
SZ-72	]*ri*[	iron scythe ring	Sanzeno
SZ-73.1	*e*??*θ̣*	iron helmet	Sanzeno
SZ-73.2	]*esi*		
SZ-74	*þine*	iron scythe	Sanzeno

SZ-75	*ḳụ*	bronze handle	Sanzeno
SZ-76.1	*la*	iron axe	Sanzeno
SZ-76.2	*laii*		
SZ-77	$*aθ̣*	iron axe	Sanzeno
SZ-78	*u*	iron ladle	Sanzeno
SZ-79.1	*upi*	iron chisel	Sanzeno
SZ-79.2	*upi*		
SZ-80	*ii θ ii ii*	iron knife	Sanzeno
SZ-81	$*iθθ*	iron axe	Sanzeno
SZ-82	*θi*	cist	Sanzeno
SZ-83	?	bowl	Sanzeno
SZ-84	*ạ*	potsherd	Sanzeno
SZ-85	*iu*	bowl	Sanzeno
SZ-86	*ịpịẹ*	potsherd	Sanzeno
SZ-87	]*esminupitisθauχkaạna*	bronze baton	Sanzeno
SZ-88.1	*upị*	iron hoe	Sanzeno
SZ-88.2	*ụpị*		
SZ-89	?	potsherd	Sanzeno
SZ-90	*ka*	potsherd	Sanzeno
SZ-91.1	?]*e*[	potsherd	Sanzeno
SZ-91.2	]*ạ*[		
SZ-92.1	*upi*	iron axe	Sanzeno
SZ-92.2	*upi*		
SZ-93.1	*upi*	iron axe	Sanzeno
SZ-93.2	*upi*		
SZ-94	*veþa*	bone	Sanzeno
SZ-95	*upi*	situla	Sanzeno
SZ-96	*venaθ*	bronze baton	Sanzeno
SZ-97	(?)*ạχsni*?[	antler piece	Sanzeno
SZ-98	]*aχviḷiṣḳ*[|]*pịθ̣ị*[??	antler piece	Sanzeno
BZ-1	]*anu*[	potsherd	Meran (Hochbühel)
BZ-2	*enikes*	bronze axe	Tisens (St. Christoph)
BZ-3	*taniun:laśanuale* | *utiku:terunies:sχaistala*	simpulum	Terlan (Siebeneich)
BZ-4	*tevaśniχesiutikuθiuθisaχvilitititerisnaθi*	bronze fragment	Bozen (Moritzing)
BZ-5	*$ lah*	bronze handle	Terlan (Siebeneich)
BZ-6	*φanaχi* | *nụaute*	slab	Terlan (Siebeneich)
BZ-7.1	]?	cist	Bozen (Moritzing)
BZ-7.2	]?		
BZ-8.1	]???????	situla	Bozen (Moritzing)
BZ-8.2	*iuiu*		
BZ-9	*piθame*	bronze handle	Bozen (Moritzing)
BZ-10.1	*tnake piθamu* | *laþe*?	slab	Pfatten (Stadlhof)
BZ-10.2	*ṭṇ*		
BZ-11	*ṭịte*	cist	Pfatten (Stadlhof)
BZ-12	*tali ṣ́uṭriṣ*	bronze key	Pfatten (Leuchtenburg)
BZ-13	]*ẹṣil*[	potsherd	Pfatten
BZ-14	*ruśie*	bronze plaque	Eppan (Putzer Gschleier)

BZ-15	*i*$*r*	antler piece	Eppan (Putzer Gschleier)
BZ-16	*avvi*	iron chisel	Eppan (St. Pauls)
BZ-17[vi]	?	bronze axe	Kaltern
BZ-19	$*iị*	iron sickle	Tisens (St. Hippolyt)
BZ-20	*iiiθ*	potsherd	Tisens (St. Hippolyt)
BZ-21	*ịị*?(?)*ị*[	potsherd	Tisens (St. Hippolyt)
BZ-22	?]*θ*[	potsherd	Tisens (St. Hippolyt)
BZ-23	?(?)*u*	potsherd	Meran (Hochbühel)
BZ-24	*ossụṛie*	slab	Eppan (Maderneid)
BZ-25.1	*ka*[	miniature cist	Pfatten
BZ-25.2	*ka*		
BZ-26	?]*i:terisṇ*[	helmet (fragment)	Jenesien (Kosman-Gut)
BZ-27	]*sna*	helmet (fragment)	Jenesien (Kosman-Gut)
BZ-28	]?*aịṇ*[	helmet (fragment)	Jenesien (Kosman-Gut)
BZ-29	]*n*???[	helmet (fragment)	Jenesien (Kosman-Gut)
VN-1	*lavisielavisealu*	antler piece	Mals (Tartscher Bühel)
VN-2	]*ụmep*[	bone	Schluderns (Ganglegg)
VN-3	]*umep*[	bone	Schluderns (Ganglegg)
VN-4	*iuiui*	bone	Schluderns (Ganglegg)
VN-5.1	*iiiiθiv*	bone	Schluderns (Ganglegg)
VN-5.2	?		
VN-6	*iiiiθiv*	bone	Schluderns (Ganglegg)
VN-7.1	]*eθ·ku*[	bone	Schluderns (Ganglegg)
VN-7.2	]*ii θ* [?		
VN-8	*χarisθu*	bone	Schluderns (Ganglegg)
VN-9	*lavise*	bone point	Schluderns (Ganglegg)
VN-10	*laθur* | *lumene χa* | *lu*	bone	Schluderns (Ganglegg)
VN-11	*lumene·χa·χiθiiii*	bone point	Schluderns (Ganglegg)
VN-12	*ke*	bone point	Schluderns (Ganglegg)
VN-13	*muṇịe*	bone	Schluderns (Ganglegg)
VN-14.1	]*a·φe·ki*	bone	Schluderns (Ganglegg)
VN-14.2	??		
VN-15	? |]*χạ*	bone	Schluderns (Ganglegg)
VN-16	?*aris*	bone point	Schluderns (Ganglegg)
VN-17	]*ḳe·θu*	bone	Schluderns (Ganglegg)
VN-18	*ḳ*?*e*	bone point	Schluderns (Ganglegg)
VN-19	*iiiii θ̣ạ*[	bone	Schluderns (Ganglegg)
RN-1	*laseke* | *maieχe*	slab	Klobenstein (Piperbühel)
RN-2	*kuhilina:un:a:a:sṇa:er*?(?)*:* | *aχu*?(?)*le:* *:ii:iiii:i:i:* | *siara:*??[ ]*:alv:vịṣị:isθ̣iu:ṣ*?*aịχ:*	wooden staff	Klobenstein (Piperbühel)
RN-3	*θṛ*	potsherd	Klobenstein (Piperbühel)
SI-1	*φs*[	potsherd	Seis/Schlern (Rungger Egg)
SI-2	*siθi*[	potsherd	Seis/Schlern (Rungger Egg)
WE-1	*lavises*	bronze handle	Matrei am Brenner
WE-2	]*e*[???	potsherd	Sterzing (Kronbühel)
WE-3	*lastasieluku* | *piθamnuale*	antler piece	Brixen (Stufels)
WE-4	?]*niχesitaeluku*(?)*θ̣e*[	potsherd	Brixen (Stufels)

WE-5.1	*ị̇θu*	potsherd	Mellaun (Reiferfelder)
WE-5.2	*ui*		
WE-6	*la*	potsherd	Mellaun
WE-7	*θr*	potsherd	Mellaun (Reiferfelder)
WE-8.1	?	potsherd	Mellaun
WE-8.2	*ii*		
PU-1	*χa?φelzurieskalahepruśiahil*(?) | *klu?θurus*	bronze belt plaque	Lothen (Burgkofel)
PU-2	*iθi* | *iθiθi*	loom weight	St. Lorenzen
PU-3	?	stone loom weight	St. Lorenzen
PU-4	*χarse*	stone plaque	St. Lorenzen
PU-5	*ṿakụ*	bone	St. Lorenzen
PU-6	]*ạụṃ*(?)*e*	bone	St. Lorenzen
PU-7	?	bone	St. Lorenzen
PU-8	*ṃṿạḳ*[	potsherd	St. Lorenzen
PU-9	*v*?[	potsherd	St. Lorenzen
PU-10	]?*ṇị̇ẹχ*	potsherd	St. Lorenzen
PU-11	*kụa*	stone object	St. Lorenzen
IT-1	???	potsherd	Volders (Himmelreich)
IT-2	*χaisurus*	potsherd	Volders (Himmelreich)
IT-3	*tiva*	potsherd	Volders (Himmelreich)
IT-4	*piθiạṿẹṣị̇χụrṿị̇le*	body of a lyre$^{?}$	Fritzens (Pirchboden)
IT-5	?: |]*θ̣*[ ]*θ̣?kaị̇a*[? | *utiku:θaukị̇ṣ* | *kleimunθeis* | *avaśuerasi:ihi*	bronze plaque	Ampass (Demlfeld)
IT-6	*aiθiu*	stone	Pfaffenhofen (Hörtenberg)
IT-7	]*leθ*?(?)*θ̣ị̇*	bronze plaque	Pfaffenhofen (Hörtenberg)
IT-8	*piθan*[	potsherd	Fliess (Pillerhöhe)
IT-9	*uiu*	bowl	Fliess (Pillerhöhe)
IT-10	*iaiθ*	potsherd	Fliess (Pillerhöhe)
EN-1	*aχ*?[	potsherd	Ardez (Suotchaste)
AK-1.1	?]*ṇualeri?ienalṣẹ*	rock	Achenkirch
AK-1.2	?]*nuale*		
AK-1.3	?		
AK-1.4	]*reis*		
AK-1.5	]*ḳẹụ*		
AK-1.6	]*ṣị̇eṣ*[???]*ụale*		
AK-1.7	??]*ṇụaḷe*		
AK-1.8	?		
AK-1.9	*ạ*?		
AK-1.10	*ḳẹṣạ?????ẹ*		
AK-1.11	????]*ẹ?ḳer·*(*a*)*ṇu·aḷekas*?		
AK-1.12	?		
AK-1.13	]?*ẹ*?[ ]*ṇ*[		
AK-1.14	?		
AK-1.15	?		
AK-1.16	?		
AK-1.17	*es?esχarṭa*		
AK-1.18	?		

AK-1.19	]???(?)*nuale*		
AK-1.20	?		
AK-1.21	]*nuạ*[		
AK-2.1	]*ṿasẹ*?	rock	Achenkirch
AK-2.2	]???*ạs·a*		
AK-2.3	?		
ST-1	*kastriesieθunnuale*	rock	Steinberg am Rofan
ST-2	*pitauṇesikaszrinụalet*[		
ST-3	*esimnesikaszrinuaḷ*[?		
ST-4	*ạzileθaθiṿ·nuale*		
ST-5	*hes·ṭulanu·aleker·akve*		
ST-6	*sạ?aḷ·esta·nu·aleφakaḷẹ*		
ST-7	?		
ST-8	*arisae·ki*		
ST-9	?		
UG-1.1	*kusen*	rock	Unterammergau
UG-1.2	*istane*[??		
UG-1.3	?*a*?[		
UG-1.4	?*a*?[		
UG-2.1	?*u*??(?)*e*(?)	rock	Unterammergau
UG-2.2	?		
UG-3.1	?	rock	Unterammergau
UG-3.2	?]*ẹ*		
AV-1	*tịpṛuχṇụḷạṿịṣẹẓ*§	silver ring	Nußdorf
HU-1[vii]	*iθụiθi*	bronze axe	Trentino
HU-4.1	§	bronze baton	
HU-4.2	$		
HU-4.3	?		
HU-5.1	*laustẹ*	bronze	Sanzeno?[viii]
HU-5.2	?*ịφiliẹ*		
HU-5.3	$??		
HU-6	*taevvtarie*	bronze	Sanzeno?
HU-7	?*ẹḳiesiuṭikutanin* | *metḷainile*	situla	Bologna?[ix]

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[i] First published in Poggi 1879, 312–314 (no. 52), the inscription VR-5 on a potsherd, part of the collection of Amilcare Ancona (Ancona 1880, 32 f. [no. 109] and pl. XI, no. 7 [non vidi]), was implied to be lost by Whatmough (PID 248), but found and autopsied anew by Morandi 2004, 691 f. (no. 269), who also provided a new drawing (Fig. 30.269). Pauli 1885, 19 (no. 39) claimed to have the drawing which is reproduced in *Altitalische Forschungen* (Taf. 2.39) from Poggi, but Poggi only gave an idealised rendering of the characters (312). (Pauli's citing p. 90 from Poggi is a mere slip.) It is therefore unclear where that drawing is from (possibly Ancona 1880?). The drawing in Pauli features omikron not quite closed at the bottom (expressly mentioned by Poggi 1879, 313) and followed by a short oblique scratch in the lower area. In the middle, lambda and the three hastae following it are crossed by a long oblique line, which was judged to be an unintentional scratch by Poggi himself, Danielsson 1912, 23 and Rhŷs 1914, 69–71, who consequently read ‹liu›. The dot between putative upsilon and epsilon was included as a punct by Danielsson, but dismissed by Poggi and Rhŷs. While Poggi did not discriminate between the various North Italic groups, Pauli (56) and Rhŷs classified the inscription as Celtic. It was Whatmough who sorted it among the Raetic testimonies, based on the observations that Verona lies rather far east of the Cisalpine Celtic area and that the form of omikron was typical for Venetic. Disregarding Poggi's reading,

he preferred to include both scratch and punct and suggested *kolzi·eθu* with a Venetic form of zeta, despite observing that the Venetic features do not agree with the forms of lambda and upsilon. Morandi's drawing shows closed omikron, the small scratch to its left and the punct, but not the longer scratch which crosses the letters in the middle. In consequence of Whatmough's reassignment of the inscription, it was included in Schumacher 1992 and allotted the Raetic siglum VR-5.

Epigraphically, the inscription is written in the Lugano alphabet, with Etruscoid (non-inverted) lambda and upsilon, and omikron (Rix 1998, 10). Raetic inscriptions from the area of Verona have Venetoid inverted upsilon. The punct, if it is part of the inscription, does not hinder its ascription to the Cisalpine Celtic corpus (cf., from the area of Verona, VR·22). If the longer scratch discounted by Poggi and Morandi cannot be used to turn the sequence *iu* into consonant + *i*, it cannot be syllabic in any case.

The linguistic interpretation of the text depends on the chosen reading. Morandi read *koliu:etu*, including the punct, suggesting parallels for both sequences in the Cisalpine Celtic corpus (arguable *koliu* instead of CO·66 *kopiu*, VA·23 *etu*). Poggi and Rhŷs read a single word *koliuetu*, comparable with other Celtic names in *-etu* (VB·23 *kiketu*, CO·48 *plialeθu*, NM·6 *seχeθu*, VB·2 *oletu*; cf. n. 318). The alternative reading *kaliti.etu* proposed by Markey 2006, 157, obviously using Pauli's drawing, must be disregarded, since it includes the longer scratch discounted by Morandi. Note, however, his suggestion to consider the smaller scratch next to omikron (which, again following Pauli, he assumes to be open at the bottom) to be part of the letter, reading alpha.

It is unfortunate that the find place is only known to be in the environs of Verona, since it can be observed that (with the single possible exception of the Spada di Verona, said to be from Ca' dei Cavri [2.4.2]) find places of Raetic inscriptions lie on the left bank of the river Adige, while all the known Celtic epigraphic material is from the west. Still, the connections with the Cisalpine Celtic corpus are sufficient to ascribe the inscription to it both epigraphically and linguistically, as done by Morandi and in the literature prior to Whatmough. Seeing that the inscription under its Raetic siglum VR-5 had already been included in *Lexicon Leponticum* for its Celtic content, it was evicted from the TIR corpus.

[ii] MA-3 = MA-2: the two fragments were kept separate by Schumacher 1992/2004, but are clearly part of the same object.

[iii] MA-15 = MA-4, as in n. ii.

[iv] The inscription SZ-21 is inscribed on the object SZ-20 bronze. Whatmough in the PID listed two inscriptions on similar objects (no. 201 and 202). No. 201, a chi-shape on the chest of "[t]he half of a dog (?) in bronze" he had seen himself in the Ferdinandeum in December 1923. At the same opportunity, he had also inquired for a "similar piece" mentioned in the notes of his teacher Conway, who had seen the latter in March 1908, bearing a lengthy sequence "along ridge of his back" [sic]. This second piece could not be found during Whatmough's visit, which is not surprising, as the two objects are the same: the vaguely bulldog-shaped bronze with the inv. no. 13.674 has both the mark on its chest and the strokes along its back. Whatmough misinterpreted Conway's notes and failed to recognise the row of short strokes applied on the animal's neck as the inscription referred to by Conway's drawing. This duplication not of inscription, but of object and consequently siglum found its way into all later corpora (Schumacher 1992/2004 SZ-20 and SZ-21, LIR SA-17 and SA-16, MLR 193 and 239), conceivably due to the fact that neither of the inscriptions invites repeated examination. In TIR, the two inscriptions retain their original sigla as determined by Schumacher in an effort to minimise confusion, despite the fact that according to TIR rules, inscriptions on the same object should bear the same siglum, followed by a dot and subordinated reference number. The corresponding object is listed as SZ-20 bronze; the siglum SZ-21 [object type] remains unallocated.

[v] SZ-64 = SZ-23: a duplication effected by Whatmough, Mancini and Schumacher together, and perpetuated in LIR (SA-38, SA-41) and MLR (215, 240, despite autopsy). Whatmough (PID), following Conway's notes, published sub no. 204 a calcined "broken fragment" with a sinistroverse inscription reading *ilpsii*, the last three letters damaged. Mancini, during his autopsy sessions in the Ferdinandeum, found four calcined fragments which he could not fit together, giving separate drawings, but under one reference number (IR 63 I, II, III) – probably because the pieces come together in a little box. Schumacher 1992, who did not effect an autopsy of either of these minor testimonies, included both Whatmough's no. 204 (as SZ-23) and Mancini's IR 63 (as SZ-64). The fragments in the tiny cardboard box with inv. no. 13.453, as given by Mancini, were fit together during our autopsy, making possible a reading]*ilt*[, tau being followed by three scratches of which only the middle parts are left on the smallest fragment. The inscription could then be identified as the one already published by Whatmough. It is possible that Conway just omitted to mention the further fragmentation of his fragment (or that Whatmough misunderstood the

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notes), but it is more likely that it was still in one piece in 1908, as examination of the breaking edges shows that the fragments have come apart only recently. Also, Whatmough writes that the last three letters are only “incomplete at the top”, which suggests that more was left of the lower part of the three scratches on the left when Conway saw them. In TIR, the inscription is included as SZ-23 (the entry ultimately representing PID 204); the siglum SZ-64 remains unallocated.

[vi] BZ-18 = NO-18: the inscription is listed as BZ-18 (indicating a find place in the area of Bozen) in Schumacher 1992 due to a wrong find place (Entiklar, part of Kurtatsch in the Adige valley) given by Mancini in the original publication (IR 82; see also LIR BZ-12, MLR 42 sub Cortaccia/Kurtatsch). The index card kindly provided by Stefan Demetz of the Stadtmuseum Bozen, where the bowl is kept, indicates Dercolo as find place. The siglum has therefore been changed to NO-18 reflecting the find place in the Val di Non. The identical reference number is coincidental. The siglum BZ-18 remains unallocated.

[vii] HU-2 = BZ-23: the museum find was published by Mancini as IR 69 (“inedita”) sub “provenienza incerta”. However, the object had already been mentioned in an archaeological publication of the finds from the Hochbühel near Meran (Torggler-Wöß 1953, 442 with a drawing of the characters). Schumacher 1992/2004 followed Mancini, using the sigla code “HU” for “Herkunft unbekannt” (see also LIR INC-1, MLR 301 sub “provenienza incerta”); in TIR, it was added to the inscriptions from the area of Bozen (BZ-23). The siglum HU-2 remains unallocated.

HU-3 = SZ-89: just like BZ-23/HU-2, this inscription was published by Mancini sub “provenienza incerta” (IR 70; see also LIR INC-2) and consequently listed as HU-3 by Schumacher 1992/2004. Marchesini includes the inscription among those of Sanzeno (MLR 219). The siglum HU-3 remains unallocated.

[viii] The bronzes HU-5 and HU-6 are old findings similar to the Sanzeno bronzes and therefore likely to belong with that group. They belonged to René Wehrli, director of the Kunsthaus Zürich from 1950 to 1976, who probably acquired them from the art market and lent them to the Kunsthaus. Schumacher could examine them in 1992; their current whereabouts are unknown.

[ix] See section 2.4.2.

4.4 Appendix IV: Archaeological contexts of Raetic inscription finds

The table gives a list of find places of objects which bear Raetic inscriptions (as listed in appendix III), arranged roughly south to north. The toponyms associated with find places are frequently subject to variation. Modern readjustments of municipal (or even national) borders and better localising equipment in remote areas affect traditional designations, which raises the question of whether one should stick with the established names or adapt them to remain correct in the geographical/political sense. Generally, field names, i.e. the names of specific locations of finds in reference to the terrain rather than to the modern political entities, may be somewhat obscure local names for fields and meadows (e.g. Flur Moosholz), they may be derived from properties the land belongs or belonged to (and which may by now have changed hands and names, e.g. Kosman-Gut), or simply be descriptive specifications (e.g. colle di castello). There is usually a hierarchy of toponyms associated with a single find place, ranging from local names for parts of minor hills to those of the administrative units. Custom does establish itself in many cases, but any scholar is entitled to choose how specific to be, according to personal preference and knowledge of the literature or locality. This is to say that I, too, have made choices for the present list, and certain find places may be recorded under different names in the literature – this is why some entries list up to three names. Specifications concerning the find spot, if known, are given in brackets. Column 3 gives only a short indication of the type of site (sanctuary, settlement, etc.); literature can be found in the endnotes. For details and dating see there and section 2.4. Maps can be found in TIR (http://www.univie.ac.at/raetica/wiki/Category:Site).

Archaeological site (locality)	**Inscribed objects**	**Context**
Ženjak/Obrat (Benedikt, Negau)	SL-2 bronze helmet	hoard[i]
Vače (Litija)	SL-1 bronze helmet [stray find]	no context[ii]
Chiesa di San Martino (Castelcies)	TV-1 slab [stray find]	no context[iii]
Basilica di Sant'Antonio (Padova)	PA-1 bronze spatula [stray find]	no context[iv]
San Briccio di Lavagno	VR-1 antler, VR-2 antler	context destroyed and disputed[v]
Colle del Castello (Montorio Veronese)	VR-6 antler, VR-7 bone, VR-8 bone, VR-9 potsherd	settlement[vi]
Ca' dei Cavri (Bussolengo)	VR-3 bronze spit [stray find]	no context[vii]
Castelrotto (San Pietro in Cariano)	VR-4 antler	settlement, possibly with burial ground and/or burnt-offerings site[viii]
Casaletti (San Giorgio di Valpolicella)	VR-10–11 bronze fittings, VR-12–16 bones, VR-17 bone point	cult building[ix]
Colle di Castello (Trissino)	TR-1–4 bones [cult building]	settlement with cult building[x]
Magrè Vicentino (Schio)	MA-1–23 antler pieces, MA-24 leaden ingot	burnt-offerings site[xi]
Piovene Rocchette	AS-14 potsherd	settlement?[xii]
Rotzo (Bostel)	AS-1–11, 15–23 ceramics, AS-12–13 bone points	settlement[xiii]
Montesei di Serso (Serso, Pergine)	SR-1–10, 12, 13 antlers, SR-11 stone, SR-14 potsherd, SR-15 bowl [house 2]	settlement with burnt-offerings site and cult building? [xiv]
Dos Caslir (Cembra)	CE-1 situla	burnt-offerings site[xv]
Tesero	FI-1 antler	settlement[xvi]

Dercolo	NO-11 bronze, NO-12 bowl, NO-18 bowl	hoard[xvii]
Valemporga (Meclo, Cles)	NO-3 miniature shield, NO-4 antler, NO-5 potsherd, NO-9 fibula[xviii]	sanctuary[xix]
Campi Neri (Meclo, Cles)	NO-1 bronze fragment, NO-15 bronze rod, NO-16 bronze, NO-17 bone point[xx]	burnt-offerings site[xxi]
Casalini[xxii] (Sanzeno)	SZ-1–15 bronzes, SZ-16–96 various	sanctuary (and settlement/ emporion/treasuries?)[xxiii]
Tavòn	NO-10 slab [stray find]	no context
Monte Ozol (Revò)	NO-13 bone	burnt-offerings site[xxiv]
Laimburg (Pfatten)	BZ-13 potsherd	settlement[xxv]
Leuchtenburg (Pfatten)	BZ-12 bronze key	burnt-offerings site[xxvi]
Stadlhof (Pfatten)	BZ-10 slab, BZ-11 cist	burial ground, possibly with burnt-offerings site[xxvii]
Kaltern[xxviii]	BZ-17 bronze axe	hoard[xxix]
Putzer Gschleier (St. Pauls, Eppan)	BZ-14 bronze plaque, BZ-15 antler, BZ-16 iron chisel	sanctuary (in a settlement?)[xxx]
Maderneid (Eppan)	BZ-24 slab [stray find]	possibly burial ground[xxxi]
Moritzing (Bozen)	BZ-4 bronze fragment, BZ-9 bronze handle [1960 find], BZ-7 cist, BZ-8 situla [1968 find]	burial ground[xxxii]
Kosmangut (Jenesien)	BZ-26–29 fragments of bronze helmets	possibly burnt-offerings site[xxxiii]
Greifensteiner Hang (Jenesien)	BZ-5 bronze handle [1985 find]	various fragmentary contexts, including settlements and burnt-offerings site[xxxiv]
Pataunerhof (Siebeneich, Terlan)	BZ-6 slab [stray find]	no context[xxxv]
Großkarnellhof (Siebeneich, Terlan)	BZ-3 simpulum [old finding]	settlement with burnt-offerings site; possibly burial ground; context destroyed[xxxvi]
St. Christoph (Tisens)	BZ-2 bronze axe	sanctuary (probably burnt-offerings site)[xxxvii]
St. Hippolyt (Tisens)	BZ-19 iron sickle, BZ-20–22 potsherds	settlement with burnt offerings site or cremation grave[xxxviii]
Hochbichl (Tirol, Meran)	BZ-1 potsherd, BZ-23 potsherd	probably burnt-offerings site[xxxix]
Ganglegg (Schluderns)	VN-2–19 bones and bone points	settlement[xl]
Tartscher Bichl (Mals)	VN-1 antler	settlement and burnt-offerings site[xli]
Suotchastè (Ardez, Schuol)	EN-1 potsherd [Feld 3]	settlement[xlii]
Piperbühel (Klobenstein, Ritten)	RN-1 slab, RN-2 wooden rod, RN-3 potsherd	settlement, possibly with burial ground and sanctuary[xliii]
Rungger Egg (Seis am Schlern)	SI-1 potsherd, SI-2 potherd	burnt-offerings site[xliv]
Reiferfelder (Mellaun)	WE-5 potsherd, WE-7 potsherd[xlv]	burial ground, probably with burnt-offerings site[xlvi]

Stufels (Brixen)	WE-3 antler, WE-4 potsherd	settlement[xlvii]
Steger (St. Lorenzen)	PU-5–7 bones, PU-8–10 potsherds, PU-11 stone [enclosure]	settlement, probably with burial ground and/or sanctuary[xlviii]
Sonnenburger Weinleite (St. Lorenzen)	PU-2 loom weight, PU-4 stone plaque	settlement[xlix]
Puenland (St. Lorenzen)	PU-3 loom weight	settlement[l]
Burgkofel (Lothen)	PU-1 belt plaque [Blockhalde]	numerous finds; context destroyed – burial ground, burnt-offerings site and/or sanctuary by a spring[li]
Kronbichl (Sterzing)	WE-2 potsherd	settlement, possibly burnt-offerings site[lii]
Matrei am Brenner	WE-1 bronze handle	no context
Pillerhöhe (Fliess)	IT-8 potsherd, IT-9 bowl, IT-10 potsherd [Festwiese]	burnt offerings site[liii]
Hörtenberg (Pfaffenhofen)	IT-6 stone, IT-7 bronze plaque	settlement[liv]
Demlfeld (Ampass)	IT-5 bronze plaque	burnt-offerings site[lv]
Himmelreich (Volders)	IT-1 potsherd, IT-2 potsherd, IT-3 potsherd	settlement, possibly with burnt-offerings site[lvi]
Pirchboden (Fritzens)	IT-4 body of a lyre$^{?}$ [house 2]	settlement[lvii]
Achenkirch	AK-1–3 rock	rock inscription site; no archaeological finds
Steinberg am Rofan	ST-1–9 rock	rock inscription site; no archaeological finds – possibly a sanctuary by a spring[lviii]
Unterammergau	UG-1–3 rock	rock inscription site; no archaeological finds
Flur Moosholz (Nußdorf)	AV-1 silver ring	a number of stray finds; context unknown[lix]

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[i] Reinecke 1950; Nedoma 1995, 8–15.

[ii] Egg 1986, 228 (no. 330).

[iii] Morandi 1999, 15–17, 31–34.

[iv] Ghirardini 1901, 314 f.

[v] Gleirscher et al. 2002, 242 f. (no. 110).

[vi] Marinetti 2004a, 409 f.

[vii] Rossi 1672, 404; Marinetti 1987, 131.

[viii] Salzani 1978; Gleirscher et al. 2002, 251 (no. 154).

[ix] Salzani 2003; Marinetti 2003.

[x] Ruta Serafini 2002b.

[xi] Pellegrini 1918; Gleirscher et al. 2002, 252 f. (no. 157); Ruta Serafini 2002a.

[xii] Alfonsi 1911.

[xiii] De Guio 2011.

[xiv] Lunz 1974, 243–245; Perini 1978; Gleirscher et al. 2002, 245 f. (no. 126).

[xv] Lunz 1974, 243; Marzatico 1994; Gleirscher et al. 2002, 236 (no. 80).

[xvi] Gamper 2006, 329.

[xvii] Lunz 1974, 235 f.; Schindler 1998, 221–232; Gleirscher et al. 2002, 235 (no. 77); Kluge & Salomon 2015.

[xviii] Probably from the same context NO-6 bronze fragment, NO-7 antler, NO-8 bronze fragment and NO-19 bronze plaque (all from Meclo).

[xix] Campi 1884; Lunz 1974, 232–234; Gleirscher et al. 2002, 236 f. (no. 82); Marzatico 2002.

[xx] Probably from the same context NO-2 strainer (old finding from Cles).

[xxi] Campi 1887; Lunz 1974, 232; Gleirscher et al. 2002, 236 (no. 81).

[xxii] The area of modern Sanzeno emcompasses seven find spots (Marzatico 1999, 473 f. [fig. 4 and 5]). Of the almost a hundred inscribed finds from Sanzeno, all those which can be localised more precisely come from Casalini – these are the bronzes (SZ-1–13 and 14), the statuette (SZ-16), as well as fifteen or at most twenty-two objects of various type from excavations. The remainder are old findings, whose association with Casalini is likely under the circumstances, but cannot be proved.

[xxiii] Lunz 1974, 230 f.; Marzatico 2001, 494–501; Gleirscher et al. 2002, 251 (no. 155).

[xxiv] Perini 1971 and 2002; Lunz 1974, 229; Gleirscher et al. 2002, 247 (no. 133).

[xxv] Gamper 2006, 326.

[xxvi] Gleirscher et al. 2002, 261 (no. 198).

[xxvii] Lunz 1974, 209–211; Gleirscher et al. 2002, 246 (no. 130).

[xxviii] The find is usually registered under the name of Kaltern, the municipality bordering on Pfatten in the west, but, as indicated by Lunz, the find spot appears to lie close to the Pfatten sites on the east side of the ridge.

[xxix] Orsi 1882; von Merhart 1969; Lunz 1974, 211–213.

[xxx] Lunz 1974, 206–208; Gleirscher et al. 2002, 238 (no. 88).

[xxxi] Mayr 1956a, 175.

[xxxii] Steiner 2002, 241–254 (1868 find), 254–258 (1860 find).

[xxxiii] Lunz & Morandi 2003, 341–345; Gleirscher et al. 2002, 139 f. (no. 97).

[xxxiv] Lunz 1985.

[xxxv] Mayr 1962a, 285.

[xxxvi] Lunz 1974, 199 f.; Gleirscher et al. 2002, 254 (no. 168).

[xxxvii] Lunz 1974, 196; Gleirscher et al. 2002, 255 (no. 171).

[xxxviii] Lunz 1974, 195 f.; Gleirscher et al. 2002, 254 (no. 169).

[xxxix] Lunz 1974, 191–193; Gleirscher et al. 2002, 237 (no. 84).

[xl] Lunz 1974, 188; Gamper 2006, 87–255.

[xli] Lunz 1974, 186–188; Steiner 1999, 306–321; Gleirscher et al. 2002, 243 (no. 115).

[xlii] Caduff 2007.

[xliii] Lunz 1974, 179–181.

[xliv] Gleirscher et al. 2002.

[xlv] WE-6 potsherd and WE-8 potsherd, both old findings, may also come from the Reiferfelder or from the nearby settlement on the Albanbühel.

[xlvi] Lunz 1974, 173 f.; Gleirscher et al. 2002, 234 (no. 72).

[xlvii] Lunz 1974, 169–171.

[xlviii] Constantini 2002, 40–43.

[xlix] Lunz 1974, 157 f.; Constantini 2002, 47 f.

[l] Constantini 2002, 22–24.

[li] Lunz 1974, 158–160; Constantini 2002, 27–29.

[lii] Lunz 1974, 166 f.; Gleirscher et al. 2002, 253 (no. 163).

[liii] Tschurtschenthaler & Wein 2002; Gleirscher et al. 2002, 259 f. (no. 190).

[liv] Tischer 2006.

[lv] Tomedi 2013.

[lvi] Gamper 2006, 265 f.; Gleirscher et al. 2002, 231 (no. 58).

[lvii] Tomedi & Appler 2000.

[lviii] Sydow 1989.

[lix] Ziegaus & Rix 1998.

4.5 Appendix V: Raetic inscriptions containing the letter ᛚ

Below are listed all inscriptions which feature the letter ᛚ, in the standardised original script and with a transliteration representing ᛚ as tau (*t*) according to the argument in section 2.5.4. The words affected by the new reading are cited and commented separately. The readings are to some extent simplified; para-script and other problematic elements are disregarded.

SZ-1.1

lasta φirimaþinaχe | *χikaśiχanu*
lasta (individual name; 2.6.1.2)

SZ-1.2
(…)
eteθaṿ
eteθav$^{?}$ (opaque)

SZ-2.1

φrima | *remi visteχanu*
visteχanu (patronym; no comparanda)

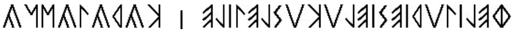
SZ-3
(…)
visteχamaiu(…)
visteχa (individual name; no comparanda)

SZ-4.1

kativates | *kalitis þal φuter suχ*
kativates (opaque; no comparanda), *kalitis* (opaque; no comparanda), *φuter* (noun; 2.7.3.2)

SZ-11

erikian vetelie
vetelie (individual name; no comparanda)

SZ-14

φelituriesielukusletile | *karataśna*
φelituriesi (individual name [pert.]; 2.6.1.2), *sletile* (name [pert.]; 2.6.1.4), *taśna* (patronym; 2.8.1.3)

SZ-15.1

lastaθianuesiunne | *pitiekapaśunu*
lasta (individual name; 2.6.1.2), *pitie* (individual name; 2.6.1.2)

SZ-15.2
(…)?
enteθa?
enteθa? (opaque)

SZ-16

laθurusitianusatanin
tianus(*a*) (theonym [gen.]; 2.6.2), *tanin* (opaque; 2.7.3.2)

SZ-23

]*ilt*[

SZ-30

ka[ ]*isθi:puχe:tumis:p*[ ]*θiak*[ ]*auþile:eluku:*
tumis (maybe name [gen.]; no comparanda)

SZ-87

esminupitisθauχkaana
pitis (individual name [gen.]; 2.6.1.2)

HU-5.1

lauste
lauste (individual name; no comparanda, if not with *lasta*; 2.6.1.2)

HU-6

taevvtarie
tarie (probably individual name; 2.6.1.2)

NO-2

tianusatan
tianus(*a*) (theonym [gen.]; 2.6.2), *tanin* (opaque; 2.7.3.2)

NO-15

esumnesi : nuþnualeutikutianus
tianus (theonym [gen.]; 2.6.2), *utiku* (deverbal noun; 2.7.3.1)

NO-16

tianus | *taniun*
tianus(*a*) (theonym [gen.]; 2.6.2), *taniun* (opaque; 2.7.3.2)

NO-17

ketanuvaleutiku
ketanuale (patronym; no comparanda), *utiku* (deverbal noun; 2.7.3.1)

BZ-3

taniun:laśanuale | *utiku:terunies:sχaistala*
taniun (opaque; 2.7.3.2), *utiku* (deverbal noun; 2.7.3.1), *terunies* (prob. individual name [gen.]; no comparanda), *sχaistala* (opaque; no comparanda)

BZ-4

tevaśniχesiutikuθiuθisaχvilititerisnaθi
tevaśniχesi (maybe individual name [pert.]), *utiku* (deverbal noun; 2.7.3.1), *ti* (maybe postposition; 2.7.3.3), *terisna* (opaque; 2.7.3.2)

BZ-6

φanaχi | *nuaute*
n(*u*)*aute* (opaque; no comparanda; 2.8.1.8)

BZ-10.1

tnake viθamu | *laþe*
tnake (individual name; no comparanda; 2.8.1.8)

BZ-11

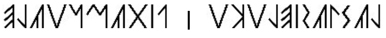
tite
tite (maybe individual name; 2.6.1.2)

BZ-12

tali śutris
tali (opaque; no comparanda), *śutris* (maybe individual name [gen.]; no comparanda)

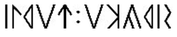
BZ-26

?]*i:terisn*[
terisna (opaque; 2.7.3.2)

WE-3

lastasieluku | *piθamnuale*
lastasi (individual name [pert.]; 2.6.1.2)

IT-5

]*θ*[ ]*θ:kaia*[| *utiku:θaukis* | *kleimunθeis* | *avaśuerasi:ihi*
utiku (deverbal noun; 2.7.3.1)

SL-2.1

siraku:þurti
þurti (maybe individual name; 2.8.1.10)

SL-2.4

kerut
kerut (opaque; no comparanda)

4.6 Appendix VI: The Etruscan characters for obstruents in Raetic

The following table gives a survey of Raetic forms containing characters for obstruents which are attested more than once in the Raetic corpus, have parallels in other corpora or can be etymologised. All possible comparanda (or representative examples in the case of well-attested name bases) are listed; a considerable number of them may not be equivalent. The third column includes forms in inscriptions which may display yet more strategies for the spelling of obstruents, viz. inscriptions which contain the letter ꞁ, PA-1 and PU-1, and the Steinberg inscriptions. The table is intended only to give an overview; see section 2.5.5 for a discussion and sections 2.6.1.2 and 2.7.3 for commentaries and references.

	Sanzeno αβ	**Magrè αβ**	**Archaic and Steinberg**	**Attestations in other corpora and etymologies**
labial	***p**erkusiale* (SZ-22.1)			***p**erkena* (Vt 3.5)
	p**iθamnuale* (WE-3) ***p**iθame* (BZ-9) [p**iθamu* (BZ-10.1)]	***p**iθamne* (MA-1) ***p**iθanme* (MA-2) ***p**iθamn*[(SR-5) ***p**iθamn*[(AS-18) ***p**iθamn*[(AS-19.1) ***p**iθan*[(IT-8)		***p**ittammnikos* (Ca 14) ***p**itamn*[(Sp 2.102)E
	***p**iθiave* (CE-1.3) ***p**iθi*[(SZ-98)	***p**iθiavesi* (IT-4)		
	***p**itie* (SZ-15.1) ***p**itis* (SZ-87)	***p**iθie*(*i*) (MA-5) ***p**iθie* (MA-6) ***p**iþie* (MA-10) ***p**iθie* (IT-4) ***p**iθi* (TR-3)		***p**iθes* (Vs 1.42, Vs 1.102) ***p**itienus* (CIL III 3112) ***p**itius* (CIL III 128, 4518, 4602) ***p**itta* (Untermann 1959, 138) ***p**ittiena* (CIL V 5100)
		***p**itale* (MA-9)[i]		***b**ittalius* (CIL V 4397)
	*lu**p**nu* (CE-1.3)			*lu**b**ia* (CIL V 5033) *lu**b**icius* (CIL V 4757) or *lu**p**ius* (CIL V 5551)
	***p**iri* (NO-11)			***p**irakos* [**b**irakos] (NM·4)
	***φ**ausu* (NO-7)			***b**auso* (CIL V 5537, III 4888)
		***φ**utiχinu* (MA-19)		***b**utijakos* (Ca 17) ***b**utto* (CIL III 3801, 3819)
	***φ**elna* (CE-1.5)			***b**elatulla* (CIL V 5273)
	***φ**elituriesi* (SZ-14) ***φ**elt*^{i}*uriesi* (NO-3)		***φ**elzuries* (PU-1)	– " –
	***φ**elvinuale* (NO-3)			– " –
	***φ**irima* (SZ-1.1) ***φ**rima* (SZ-2.1)	***φ**rima* (SR-5)		***f**rema* (Es 32, 94) or IE ****b̥**rima*
		*s**φ**uras* (SR-29)		Etr. *s**p**ura*
dental	***t**anin* (SZ-16) ***t**an*[(NO-2) ***t**aniun* (NO-16) ***t**aniun* (BZ-3)		***t***^{i}*anin* (HU-7) ***t***^{i}*anini* (VR-3)	
	*u**t**iku* (NO-17) *u**t**iku* (BZ-3)		*u**t***^{i}*iku* (HU-7) *u**t***^{i}*iku* (VR-3)	Etr. *u**t**ince* (LL II D9)

*u**t**iku* (BZ-4) *u**t**iku* (IT-5) *u**t**^{i}iku* (NO-3)		*u**θ**iku* (PA-1)	
***t**erisna* (BZ-4) ***t**erisn*[(BZ-26)		***t**^{i}erisna* (NO-13) ***t**^{i}erisn*[(SR-4) ***t**^{i}erisna* (SL-1)	Etr. ******z**erisna* or Etr. ***t**erśna*$^{?}$
*-**t**i* (BZ-4)			Etr. *-**θ**i*
*-**θ**eis* (IT-5)	*-**t**a* (WE-4)		Etr. *-**t**a*, abl. *-**t**is*
***t**i**t**e* (BZ-11)			Etr. ***t**i**t**e*
*rei**θ**uśnu* (SZ-5.1)	*rei**θ**e* (MA-8)		*rei**t**ii* (Es 52) *rei**t**a* (CIL V 3743)
*pi**θ**amnuale* (WE-3) *pi**θ**ame* (BZ-9) [*pi**θ**amu* (BZ-10.1)]	*pi**θ**amne* (MA-1) *pi**θ**anme* (MA-2) *pi**θ**amn*[(SR-5) *pi**θ**amn*[(AS-18) *pi**θ**amn*[(AS-19.1) *pi**θ**an*[(IT-8)		*pi**tt**ammnikos* (Ca 14) *pi**t**amn*[(Sp 2.102)
*pi**θ**iave* (CE-1.3) *pi**θ**i*[(SZ-98)[ii]	*pi**θ**iavesi* (IT-4)		
*pi**t**ie* (SZ-15.1) *pi**t**is* (SZ-87)	*pi**θ**ie*(*i*) (MA-5) *pi**θ**ie* (MA-6) *pi**þ**ie* (MA-10) *pi**θ**ie* (IT-4) *pi**θ**i* (TR-3)		*pi**θ**es* (Vs 1.42, Vs 1.102) *pi**t**ienus* (CIL III 3112) *pi**t**ius* (CIL III 128, 4518, 4602) *pit**t**a* (Untermann 1959, 138) *pi**tt**iena* (CIL V 5100)
	*pi**t**ale* (MA-9)[i]		*bi**tt**alius* (CIL V 4397)
	*me**t**inu* (MA-1)		*me**t**śo* (Ca 49) *me**tt**asius* (CIL V 4729) *me**t**elui* (NO·18)
	***φ**utiχinu* (MA-19)		*bu**t**ijakos* (Ca 17) *bu**tt**o* (CIL III 3801, 3819)
*las**t**a* (SZ-1.1) *las**t**a* (SZ-15.1) [*laus**t**e* (HU-5.1)]	*las**θ**e* (MA-19)		*las**t**ulus* (CIL Suppl. I 609) IE **-**t**o-*[iii]
***t**arie* (HU-6)	***θ**arna* (SR-6)	***θ**aris* (PA-1)	***t**arna* (Vc 1.44)
	*val**θ**eφnu* (MA-16) *val**θ**ikinu* (MA-17)		*vol**t**io* (Es 27, 33, 44) *vol**t**iomnos* (Es div.)
	***θ**urieþu* (MA-2)		***t**uris* (CIL V 5033) ***t**urijonei* (Ca 24)
	*us**θ**iþu* (MA-23)		*os**t**s* (Vi 2)
	***θ**arani*[(FI-1)		Celt. *****t**aranus*
*ka**θ**iave* (SZ-8.1)			*ca**tt**avus* CIL V 4762 *ca**t**io* (CIL V 3528) *ka**t**akna* (Es 52) Celt. **ka**t**i̯au̯os*
*vinu**θ**alina* (CE-1.5)			Celt. **u̯inno**t**alos*
*la**θ**ur* (SZ-16, VN-10)			*la**t**umarui* (VB·3.1) *la**t**ur* (Sp 2.53)

		*es**θ**uva* (MA-11) *es**t**uale* (MA-12) *ess**θ**ua* (MA-13)	*e**θ**suale* (PA-1) *es**t**anuale* (ST-6)	
			***t**ulanuale* (ST-5)	***t**ula* (CIL V 5070)
			*klu**θ**urus* (PU-1)	*klu**t**iaris* (Pa 16)
			*kas**t**riesi* (ST-1)	*kas**t**ikos* (Gt 9) *cas**t**icus* (CIL V 4705)
			*kas**ẓ**rinuale* (ST-2) *kas**ẓ**rinuale* (ST-3)	– " –
			*a**ẓ**ile* (ST-4)	*a**t**ilius* (CIL V 5774) *a**tt**o* (Gt 1)
dorsal/velar	*elu**k**u* (SZ-14) *elu**k**u* (SZ-30) *elu**k**u* (WE-3)	*elu**k**u* (WE-4)		Etr. -***k**u*
	*uti**k**u* (NO-17) *uti**k**u* (BZ-3) *uti**k**u* (BZ-4) *uti**k**u* (IT-5) *ut*^{i}***iku*** (NO-3)		*ut*^{i}***iku*** (HU-7) *ut*^{i}***iku*** (VR-3) *uθ**iku*** (PA-1)	– " –
	*þina**χ**e* (SZ-1.1) *trina**χ**e* (CE-1.4) [*maie**χ**e* (RN-1)]	*þina**χ**e* (MA-8) *þina**k**e* (MA-9) *pina**k**e* (MA-10) *θina**χ**e* (MA-11) [*z·n?**χ**an* (VR-4)] [*t·na**χ**e* (VR-10)] [*zn·**χ**e* (VR-11)]		Etr. -***k**e*
	*a**χ**vil*° (SZ-98) *a**χ**vil*° (BZ-4)	*a**χ**vil*° (SR-1)	*a**k**vil* (PA-1)	Etr. **a**k**vil*/*a**χ**vil*
	*per**k**usiale* (SZ-22.1)			*per**k**ena* (Vt 3.5)
			***k**luθurus* (PU-1)	***k**lutiaris* (Pa 16)
			***k**astriesi* (ST-1)	***k**astikos* (Gt 9) ***c**asticos* (CIL V 4705)
		***k**uśiþu* (MA-5)		***c**ussa* (CIL V 4891) ***c**useda* (CIL V 5071)
		***k**levie* (MA-17)		***c**leuius* (CIL V 4717)
	***k**aθiave* (SZ-8.1)			***c**attauus* CIL V 4762 ***c**atio* (CIL V 3528) ***k**atakna* (Es 52) Gaul. ****k**ati̯au̯os*
	***k**aniśnu* (NO-11)			***c**anus* (Es XXX) ***c**anius* (Tr V) ***c**analius* (CIL V 322)
	*eni**k**es* (BZ-2)			***k***-suffix *tena**g**ino* (CIL Suppl. I 715)
	*lase**k**e* (RN-1)			– " –
		*valθi**k**inu* (MA-17)		– " –
		]*θi**χ**inu* (MA-20)		– " –
		*φuti**χ**inu* (MA-19)		– " –

°*ni***χ***esi* (BZ-4)	]*ni***χ***esi* (WE-4)		– " –
χ*ari* (SZ-2.2, VN-8)	***k****ari* (VR-7)		***c****ariassis* (CIL V 4266) ***k****aranmns* (Es 24) Celtic ****k****ar*-
k*ara* (SZ-14)			– " –
	χ*arse* (PU-4)		– " –
	χ*aisurus* (IT-2)		Celt. ****g****aiso*-

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[i] See also ***piθ***[(MA-21) and maybe ***pit****au*?*esi* (ST-2). All names in *pit-*/*piθ-* may or may not be formed from the same base (2.6.1.2).

[ii] A problematic group of attestations – only CE-1.3 is certain. The remains of the damaged part of SZ-98 allow for an amendation to at least *piθiav*[; on the reading of IT-3 see section 2.5.1.2.

[iii] Maybe also SZ-10.1 *vai***θ***ina* and NO-19 *vel***θ***ie* (2.6.1.2)?

4.7 Appendix VII: Onomastic material in Raetic inscriptions – index a fronte

The following table lists all sequences in the Raetic corpus which can be argued to be individual names, attested as such or as bases of patronyms. Many of these names are doubtful to varying degrees. Segmentation is sometimes uncertain, concerning entire words (e.g. SZ-14 *karataś-na* – one name or a two-part formula *kara taś-na*?) or potential endings (e.g. *esθ/tua* vs. [gen.] *esθ/tu-a*). In some cases it is not clear whether auslauting *-nu* is the patronymic suffix, productive or fossilised, or a coincidental auslaut (e.g. BZ-3 *laśanu*; 2.6.1.3). Some sequences are listed in variants to indicate such uncertainties. All names are given without case endings (e.g. BZ-2 *enike*° attested [gen.] *enikes*) and without the patronymic suffix (e.g. SZ-15.1 *reiθuś*° attested *reiθuśnu*); names which are only attested in suffixed form (i.e. in oblique cases or as bases of patronyms) feature the symbol ° to indicate that the underlying auslaut is uncertain. Probable spelling variants (e.g. *piθie* ~ *pitie*) are kept separate. The list of sigla gives all possible attestations, including the more doubtful ones; for details on readings please refer to TIR. See section 2.6.1 for discussions and appendix VIII for a reverse list.

Name	**Attestations**	**Comments**
aruse	SR-3.1, SR-6	
aruśna°	SR-3.1	patronym of *aruse*?
azi°	ST-4	
eθun°	ST-1	
enike°	BZ-2	
esθu(*a*)	MA-11, MA-13	
eθsuale	PA-1	possibly pertinentive of *esθu*(*a*)
estuale	MA-12	possibly pertinentive of *esθu*(*a*)
esta° / *estanu*°	ST-6	
esimne°	ST-3	
esmi° / *esminu*	SZ-87	
esumne°	NO-15	
vaiθi°	SZ-10.1	
valθe?° / *valθe?nu*	MA-16	
valθiki°	MA-17	
vaþanu	SZ-5.1	
velθie	NO-19	
velχa° / *velχanu*	CE-1.2	
vena	SZ-96	identification as name uncertain
vetelie	SZ-11	
ve?a	SZ-94	*veþa* or *vepa*; identification as name uncertain
vinuθali°	CE-1.5	
visteχa°	SZ-2.1, SZ-3	
θaθiv°	ST-4	
θar°	SR-6	
θari°	PA-1	segmentation and identification as name uncertain
θauki°	IT-5	identification as name uncertain;
θauχka°	SZ-87	identification as name uncertain;
θauχrili°	SZ-9.1	segmentation uncertain;
θelpa?i°	MA-13	or *pa?i*°; segmentation uncertain
θia°	SZ-15.1	probably PN, but cf. *tianu*

θiuθi°	BZ-4	possibly theonym
θurie°	MA-2	reading uncertain
he°	ST-5	reading and identification as name uncertain
hela°	MA-1	
kaθiave	SZ-8.1	
kaniś°	NO-11	
kapaśu°	SZ-15.1	
kara	SZ-14	segmentation and identification as name uncertain
kari	VR-7	
kastrie°	ST-1, ST-2, ST-3	
velisane°	VR-3	
keta° / ketanu	NO-17	
kluʔθuru°	PU-1	
knuse	MA-18	
kunina°	SZ-9.1	
kuśi°	MA-5	reading uncertain
lavise	WE-1, CE-1.1, VN-1, VN-9, AV-1	
lavisie	VN-1	
lavśa	VR-14	
laθur	SZ-16, VN-10	
laśa° / laśanu	BZ-3	
larie	VR-13	reading uncertain
laseke	RN-1	
lasθe	MA-19	
lasta	SZ-1.1, SZ-15.1, WE-3	
lauste	HU-5.1	
lumene	VN-10, VN-11	
lup° / lupnu	CE-1.3	
meti°	MA-6	
metlaini°	HU-7	
munie	VN-13	
naki°	PA-1	identification as name uncertain
nuþ°	NO-15	
ossurie	BZ-24	
paʔi°	MA-13	or *θelpaʔi°*; segmentation uncertain
perkusi°	SZ-22.1	
piθame	BZ-9	maybe a variant of *piθamne*
piθamne	MA-1, MA-2, AS-18, AS-19.1, IT-8, BZ-10.1$^{?}$	with variations in the nasal cluster; three testimonies fragmentary in the end
piθiave	CE-1.3, IT-4, SZ-98	
piθi	TR-3	reading uncertain
piθie	MA-5, MA-6	
piri	NO-11	
pitale	MA-9	
piti	SZ-87	
pitie	SZ-15.1	

piþie	MA-10	most probably a spelling mistake for *piθie* or *pitie*
śiχa	SZ-1.1	segmentation and identification as name uncertain
ratasu°	VR-3	segmentation and identification as name uncertain
reiθe	MA-8	
reiθuś°	SZ-15.1	
remi	SZ-2.1, SZ-2.2	
remie°	VR-3	
remina	SZ-31	patronym of *remi*?
rileke	NO-10	
ruśie	BZ-14	
sleθu°	SZ-24	segmentation and identification as name uncertain
sleti°	SZ-14	
susi°	MA-18	
taś°	SZ-14	segmentation uncertain
tarie	HU-6	segmentation and identification as name uncertain
terunie°	BZ-3	
tinesu° / *tinesuna*	VR-1	identification as name uncertain
tipruχ° / *tipruχnu*	AV-1	reading uncertain
tite	BZ-11	reading uncertain
tnake	BZ-10.1	
tula°	ST-5	segmentation uncertain
tumi°	SZ-30	identification as name uncertain
usti°	MA-23	
φanaχi	BZ-6	identification as name uncertain
φausu	NO-7	
φel(*i*)*turie*°	SZ-14, NO-3	
φelzurie°	PU-1	
φelna	CE-1.5	
φelvi°	NO-3	
φeχe	AS-14	identification as name uncertain
φ(*i*)*rima*	SZ-1.1, SZ-2.1, SR-5	
φutiχi°	MA-19	
χaisuru°	IT-2	
χari	SZ-2.2, VN-8	
χarse	PU-4	
χeli	SZ-10.1	
χevisia° / *χevisiana*	SZ-18	
χika	SZ-1.1	segmentation and identification as name uncertain
χurvi°	IT-4	reading uncertain
]*auþi*°	SZ-30	
]*uki*° /]*ukinu*°	NO-1	identification as name uncertain
?*ekie*	HU-7	

4.8 Appendix VIII: Onomastic material in Raetic inscriptions – index a tergo

The following table gives a list of the sequences in appendix VII in reverse order. Names which are attested only in suffixed forms are marked with °; in numerous cases, the element before the suffix is unlikely to represent the auslaut of the underlying form (2.6.1.3). For names in °*nu*/°*na* of which it is unsure whether *nu*/*na* is a suffix or part of the individual name (2.6.1.3), both options are listed.

Name	**Attestations**	**Comments**
veʔa	SZ-94	*veþa* or *vepa*; identification as name uncertain
θia°	SZ-15.1	probably PN, but cf. *tianu*
χevisia°	SZ-18	or *χevisiana*
χika	SZ-1.1	segmentation and identification as name uncertain
θauχka°	SZ-87	identification as name uncertain
hela°	MA-1	
tula°	ST-5	segmentation uncertain
φ(i)rima	SZ-1.1, SZ-2.1, SR-5	
χevisiana	SZ-18	or *χevisia*
vena	SZ-96	identification as name uncertain
nakina	PA-1	or *naki*°; identification as name uncertain
remina	SZ-31	patronym of *remi*?
kunina°	SZ-9.1	
φelna	CE-1.5	
aruśna°	SR-3.1	patronym of *aruse*?
tinesuna	VN-1	or *tinesu*°
laśa°	BZ-3	or *laśanu*
lavśa	VR-14	
kara	SZ-14	segmentation uncertain
keta°	NO-17	or *ketanu*
lasta	SZ-1.1, SZ-15.1, WE-3	
esta°	ST-6	or *estanu*°;
esθua	MA-11, MA-13	or *esθu*°
visteχa°	SZ-2.1, SZ-3	
śiχa	SZ-1.1	segmentation and identification as name uncertain
velχa°	CE-1.2	possibly *velχanu*
kaθiave	SZ-8.1	
piθiave	CE-1.3, IT-4, SZ-98	
he°	ST-5	reading and identification as name uncertain
reiθe	MA-8	
lasθe	MA-19	
piθie	MA-5, MA-6	
velθie	NO-19	
ʔ*ekie*	HU-7	
vetelie	SZ-11	
remie°	VR-3	
munie	VN-13	

terunie°	BZ-3	
ruśie	BZ-14	
larie	VR-13	reading uncertain
tarie	HU-6	segmentation and identification as name uncertain
kastrie°	ST-1, ST-2, ST-3	
φelzurie°	PU-1	
θurie°	MA-2	reading uncertain
ossurie	BZ-24	
φel(*i*)*turie*°	SZ-14, NO-3	
lavisie	VN-1	
pitie	SZ-15.1	
piþie	MA-10	most probably a spelling mistake for *piθie* or *pitie*
tnake	BZ-10.1	
rileke	NO-10	
laseke	RN-1	
enike°	BZ-2	
pitale	MA-9	
eθsuale	PA-1	possibly pertinentive of *esθu*(*a*)
estuale	MA-12	possibly pertinentive of *esθu*(*a*)
piθame	BZ-9	maybe a variant of *piθamne*
velisane°	VR-3	
lumene	VN-10, VN-11	
piθamne	MA-1, MA-2, AS-18, AS-19.1, IT-8, BZ-10.1$^{?}$	with variations in the nasal cluster; three testimonies fragmentary in the end
esimne°	ST-3	
esumne°	NO-15	
lavise	WE-1, CE-1.1, VN-1, VN-9, AV-1	
χarse	PU-4	
knuse	MA-18	
aruse	SR-3.1, SR-6	
tite	BZ-11	reading uncertain
lauste	HU-5.1	
φeχe	AS-14	identification as name uncertain
θaθiv°	ST-4	
(*θel*)*paʔi*°	MA-13	
φelvi°	NO-3	
χurvi°	IT-4	reading uncertain
azi°	ST-4	
vaiθi°	SZ-10.1	
piθi	TR-3	reading uncertain
θiuθi°	BZ-4	possibly theonym
naki°	PA-1	or *nakina*; identification as name uncertain
valθiki°	MA-17	
]*uki*°	NO-1	or]*ukinu*
θauki°	IT-5	identification as name uncertain
vinuθali°	CE-1.5	
χeli	SZ-10.1	

θauχrili°	SZ-9.1	segmentation uncertain
remi	SZ-2.1, SZ-2.2	
esmi°	SZ-87	or *esminu*
tumi°	SZ-30	identification as name uncertain
metlaini°	HU-7	
kuśi°	MA-5	reading uncertain
θari°	PA-1	identification as name uncertain
kari	VR-7	
χari	SZ-2.2, VN-8	
piri	NO-11	
perkusi°	SZ-22.1	
susi°	MA-18	
sleti°	SZ-14	
meti°	MA-6	
piti	SZ-87	
usti°	MA-23	
]*auþi°*	SZ-30	
φanaχi	BZ-6	identification as name uncertain
φutiχi°	MA-19	
eθun°	ST-1	
lup°	CE-1.3	or *lupnu*
taś°	SZ-14	segmentation uncertain
kaniś°	NO-11	
reiθuś°	SZ-15.1	
θar°	SR-6	
laθur	SZ-16, VN-10	
nuþ°	NO-15	
sleθu°	SZ-24	segmentation and identification as name uncertain
esθu°	MA-11, MA-13	or *esθua*
valθeʔnu	MA-16	or *valθeʔ°*
laśanu	BZ-3	or *laśa°*
ketanu	NO-17	or *keta°*
vaþanu	SZ-5.1	
estanu°	ST-5	or *esta°*
velχanu	CE-1.2	or *velχa°*
]*ukinu°*	NO-1	or]*uki°*
esminu	SZ-87	or *esmi°*
lupnu	CE-1.3	or *lup°*
tipruχnu	AV-1	or *tipruχ°*; reading uncertain
kapaśu°	SZ-15.1	
kluʔθuru°	PU-1	
χaisuru°	IT-2	
ratasu°	VR-3	segmentation and identification as name uncertain
tinesu°	VR-1	or *tinesu°*; identification as name uncertain
φausu	NO-7	
tipruχ°	AV-1	or *tipruχnu*; reading uncertain
valθeʔ°	MA-16	or *valθeʔnu*

5. Bibliography

Adams 2003 = James N. Adams, Bilingualism and the Latin Language (Cambridge 2007).

Adiego 1998 = Ignacio J. Adiego, Die neue Bilingue von Kaunos und das Problem des karischen Alphabets. In: Colloquium Caricum. Akten der internationalen Tagung über die karisch-griechische Bilingue von Kaunos 31.10–1.11.1997 in Feusisberg bei Zürich, ed. Wolfgang Blümel et al. = Kadmos 37 (1998), 57–79.

Adiego 2007 = —, The Carian Language. Leiden/Boston 2007.

Agostiniani 1992 = Luciano Agostiniani, Contribution à l'étude de l'épigraphie et de la linguistique étrusques. In: Lalies 11 (1992), 37–64.

Agostiniani 1993 = —, La considerazione tipologica nello studio dell'etrusco. In: Incontri Linguistici 16 (1993), 23–44.

Agostiniani 2011 = —, Pertinentivo. In: Alessandria 5 (2011), 17–44.

Agostiniani 2012 = —, Sulla grafia e la lingua delle iscrizioni anelleniche di Lemnos. In: Bellelli 2012, 169–194.

Agrell 1927 = Sigurd Agrell, Der Ursprung der Runenschrift und die Magie. In: ANF 43 [NF 39] (1927), 97–109.

Agrell 1938 = —, Die Herkunft der Runenschrift. In: Kungliga Humanistiska Vetenskapssamfundet i Lund, Årsberättelse 1937–1938 (1938), 65–117.

Aigner-Foresti 1992 = Luciana Aigner-Foresti (ed.), Etrusker nördlich von Etrurien. Etruskische Präsenz in Norditalien und nördlich der Alpen sowie ihre Einflüsse auf die einheimischen Kulturen. Akten des Symposions von Wien – Schloß Neuwaldegg, 2.–5. Oktober 1989 (= Sitzungsberichte der ÖAW, Phil.-Hist. Kl. 589; Wien 1992).

AKEO = AKEO. I tempi della scrittura, ed. Museo di Storia Naturale e Archeologia di Montebelluna (Cornuda 2002).

Albright 1969 = William Foxwell Albright, The Proto-Sinaitic Inscriptions and their Decipherment (Cambridge, Mass./London ^{2}1969).

Alexander 1975 = Gerhard Alexander, Die Herkunft der Ing-Rune. In: ZfdA 104 (1975), 1–11.

Alfonsi 1911 = Alfonso Alfonsi, Piovene. Scoperta di una stazione preistorica. In: NotScav (1911), 273–279.

Allen 1987 = W. Sidney Allen, Vox Graeca. A guide to the pronunciation of Classical Greek (Cambridge ^{3}1987).

Alpago Novello 1963 = Alberto Alpago Novello, Ritrovamenti archeologici in Feltre. In: Archivio Storico di Belluno, Feltre e Cadore 34 (1963), 113–123.

Alpago Novello 1964 = —, Ritrovamenti archeologici in Feltre. In: Archivio Storico di Belluno, Feltre e Cadore 35 (1964), 16–22.

Altheim & Trautmann 1939 = Franz Altheim & Erika Trautmann, Vom Ursprung der Runen (Frankfurt a. M. 1939).

Amann 2005 = Petra Amann, Die Tabula Cortonensis. Ein epigraphischer Neufund aus Etrurien und seine unterschiedlichen Interpretationen. In: „Eine ganz normale Inschrift" (FS Weber), ed. Franziska Beutler & Wolfgang Hameter (Wien 2005), 179–196.

Anreiter 1997 = Peter Anreiter, Breonen, Genaunen und Fokunaten. Vorrömisches Namengut in den Tiroler Alpen (= Archaeolingua Series Minor 9; Budapest 1997).

Antonsen 1970 = Elmer H. Antonsen, Toward a New Runic Grammar. In: The Nordic Languages and Modern Linguistics. Proceedings of the International Conference of Nordic and General Linguistics, University of Iceland, Reykjavík, July 6–11, 1969, ed. Hreinn Benediktsson (Reykjavík 1970).

Antonsen 1975 = —, A Concise Grammar of the Older Runic Inscriptions (Tübingen 1975).

Antonsen 1982 = —, Zum Ursprung und Alter des germanischen Fuþarks. In: FS Schneider, ed. Ernst S. Dick & Kurt R. Jankowsky (Amsterdam/Philadelphia 1982), 3–15.

Antonsen 1986 = —, Die ältesten Runeninschriften in heutiger Sicht. In: Germanenprobleme in heutiger Sicht, ed. Heinrich Beck (= RGA Ergänzungsband 1; Berlin/New York 1986), 321–343.

Antonsen 1996 = —, Runes and Romans on the Rhine. In: Looijenga & Quak 1996, 5–13.

Antonsen 2002 = —, Runes and Germanic Linguistics (= Trends in Linguistics 140; Berlin/New York 2002).

Arntz 1935a = Helmut Arntz, Handbuch der Runenkunde (= Sammlung kurzer Grammatiken germanischer Dialekte B, Ergänzungsreihe Nr 3; Halle a. d. Saale 1935; 2nd rev. ed. 1944).

Arntz 1935b = —, Das Ogom. In: PBB 69 (1935), 319–413.

Arntz 1938 = —, Die Runenschrift. Ihre Geschichte und ihre Denkmäler (Halle a. d. Saale 1938).

Arntz 1944 see Arntz 1935a.

Askeberg 1944 = Fritz Askeberg, Norden och kontinenten in gammal tid. Studier I forngermansk kulturhistoria (Uppsala 1944).

Askedal et al. 2010 = John Ole Askedal, Harald Bjornvand, James E. Knirk & Otto Erlend Nordgreen (eds), Zentrale Probleme bei der Erforschung der älteren Runen. Akten einer internationalen Tagung an der Norwegischen Akademie der Wissenschaften (= Osloer Beiträge zur Germanistik 41; Frankfurt a. M. 2010).

Bae 2001 = Chul-Hyun Bae, Comparative Studies of King Darius's Bisitun Inscription (Diss. Harvard 2001).

Bæksted 1952 = Anders Bæksted, Målruner og Troldruner (= Nationalmuseets Skrifter, Arkæologisk-Historisk Række IV; Kopenhagen 1952).

Baesecke 1934 = Georg Baesecke, Die Herkunft der Runen. In: Germanisch-römische Monatsschrift 22,11–12 (1934), 413–417.

Baesecke 1940 = —, Vorgeschichte des deutschen Schrifttums (Halle a. d. Saale 1940).

Bagley 2004 = Robert W. Bagley, Anyang writing and the origin of the Chinese writing system. In: Houston 2004a, 190–249.

Baines 2004 = John Baines, The earliest Egyptian writing: development, context, purpose. In: Houston 2004a, 150–189.

Bammesberger 1991 = Alfred Bammesberger (ed.), Old English Runes and their Continental Background (Heidelberg 1991).

Bammesberger et al. 2006 = Alfred Bammesberger, Gaby Waxenberger & René Derolez (eds), Das *futhark* und seine einzelsprachlichen Weiterentwicklungen. Akten der Tagung in Eichstätt vom 20. bis 24. Juli 2003 (= RGA Ergänzungsband 51; Berlin/New York 2006).

Barkhudaryan 2011 = Vladimir Barkhudaryan, The Creation of the Armenian Alphabet and the Armenian Identity. In: Seibt & Preiser-Kapeller 2011, 17–20.

Barnes 1987 = Michael P. Barnes, The Origins of the Younger fuþark – a reappraisal. In: Runor och runinskrifter. Föredrag vid Riksantikvarieämbetets och Vitterhetsakademiens symposium 8–11 september 1985 (= Kungl. Vitterhets Historie och Antikvitets Akademien, Konferenser 15; Stockholm 1987), 29–45.

Barnes 1994 = —, On Types of Argumentation in Runic Studies. In: Knirk 1994, 11–29.

Barnes 1997 = —, Native and foreign in the runes and runic writing of Scandinavia. In: Nyström 1997, 9–21.

Barnes 2010 = —, Phonological and Graphological Aspects of the Transitional Inscriptions. In: Askedal et al. 2010, 191–207.

Barnes 2012 = —, Runes. A Handbook (Woodbridge 2012).

Barnes 2013 = —, What Is Runology, and Where Does It Stand Today? In: Futhark 4 (2013), 7–30.

Battisti 1944 = Carlo Battisti, Osservazioni sulla lingua delle iscrizioni nell'alfabeto etrusco settentrionale di Bolzano. In: SE 18 (1944), 199–236.

Battisti 1947 = —, Osservazioni sulla lingua delle iscrizioni nell'alfabeto etrusco settentrionale di Bolzano, SE 19 (1946–47), 249–276.

Beck 1972 = Heinrich Beck, Sprachliche Argumente zum Problem des Runenaufkommens. In: ZfdA 101 (1972), 1–13.

Beck 2001 = —, Runen und Schriftlichkeit. In: Von Thorsberg nach Schleswig. Sprache und Schriftlichkeit eines Grenzgebietes im Wandel eines Jahrtausends. Internationales Kolloquium im Wikinger Museum

Haithabu vom 29. September – 4. Oktober 1994, ed. Klaus Düwel et al. (= RGA Ergänzungsband 25; Berlin/New York 2001), 1–23.

Beck 2003 = —, Zum Problem der 13. Rune (ᛇ). In: Runica – Germanica – Mediaevalia, ed. Wilhelm Heizmann (= RGA Ergänzungsband 37; Berlin/New York 2001), 77–83.

Beck 2006 = —, Das fuþark und Probleme der Verschriftung/Verschriftlichung. In: Bammesberger et al. 2006, 61–79.

Bellelli 2012 = Vicenzo Bellelli (ed.), Le origini degli Etruschi. Storia Archeologia Antropologia (Rom 2012).

Benelli 2011 = Enrico Benelli, ‘Vornamengentilizia’. Anatomia di una chimera. In: Corollari. Scritti di antichità etrusche e italiche in omaggio all’opera di Giovanni Colonna, ed. Daniele F. Maras (Pisa/Roma 2011), 193–198.

Beschi 2000 = Luigi Beschi, Cabirio di Lemno: Testimonianze letterarie ed epigrafiche. In: Scuola archeologica di Atene e delle missioni italiane in oriente 74–75 [NS 58–59] (1996–97 [2000]), 7–145.

Birkhan 1970 = Helmut Birkhan, Germanen und Kelten bis zum Ausgang der Römerzeit. Der Aussagewert von Wörtern und Sachen für die frühesten keltisch-germanischen Kulturbeziehungen (= Sitzungsberichte der ÖAW, Phil.-hist. Kl. 272; Wien 1970).

Birkhan 1971 = —, Die “keltischen” Personennamen des boiischen Großsilbers. In: Die Sprache 17 (1971), 23–33.

Birkhan 2006 = —, Keltisches in germanischen Runennamen? In: Bammesberger et al. 2006, 80–100.

Birkhan 2010 = —, Runen und Ogam aus keltologischer Sicht. In: Askedal et al. 2010, 33–62.

Boltz 2003 = William G. Boltz, The Origin and the Development of the Chinese Writing System (= American Oriental Series 78; New Haven, Conn. 2003).

Bonfante 1935 = Giuliano Bonfante, Quelques aspects du problème de la langue rétique. In: Bulletin de la Société de Linguistique de Paris 36 (1935), 141–154.

Bonfante 1981 = —, The spread of the alphabet in Europe: Arezzo, *Erz*, and runes. In: Out of Etruria. Etruscan influence North and South, ed. Larissa Bonfante (Oxford 1981), 124–134.

Boone 2004 = Elizabeth Hill Boone, Beyond writing. In: Houston 2004a, 313–348.

Borger & Hinz 1959 = R[ykle] Borger & W[alther] Hinz, Eine Dareios-Inschrift aus Pasargadae. In: Zeitschrift der Deutschen Morgenländischen Gesellschaft 109 (1959), 117–127.

Bork 1924 = Friedrich Bork, Zur Entstehungsgeschichte des Futharc. In: Mannus 16 (1924), 127–137.

Bottéro 2004 = Françoise Bottéro, Writing on shell and bone in Shang China. In: Houston 2004a, 250–261.

Bradley 1890 = Henry Bradley, The Order of Runes in the Futharc. In: The Academy 38 (Dec. 13, 1890), 566–567.

Braunmüller 1998 = Kurt Braunmüller, Methodische Probleme in der Runologie – einige Überlegungen aus linguistischer Sicht. In: Düwel 1998, 3–23.

Braunmüller 2004 = —, Zum Einfluss des Lateinischen auf die ältesten Runeninschriften. In: Verschränkung der Kulturen. Der Sprach- und Literaturaustausch zwischen Skandinavien und den deutschsprachigen Ländern (FS Naumann), ed. Oskar Bundle et al. (= Beiträge zur nordischen Philologie 37; Tübingen/Basel 2004), 23–50.

Bravi 1979 = Ferruccio Bravi, La Lingua dei Reti. II. Testi, Lessico, Repertori (= Clessidra 19; Bozen 1979).

Bredel et al. 2011 = Ursula Bredel, Nanna Fuhrhop & Christina Noack, Wie Kinder lesen und schreiben lernen (Tübingen 2011).

Bredsdorff 1822 = Jacob Hornemann Bredsdorff, Om Runeskriftens Oprindelse (Kjøbenhavn 1822).

Bright & Daniels 1996 = William Bright & Peter T. Daniels (eds), The World’s Writing Systems (Oxford/New York 1996).

Brixhe 1976 = Claude Brixhe, Le Dialecte Grec de Pamphylie. Documents et Grammaire (= Bibliothèque de l’Institut Français d’Études Anatoliennes d’Istanbul XXVI; Paris 1976).

Brixhe 2004 = —, Nouvelle chronologie anatolienne et date d’élaboration des alphabets grec et phrygien. In: Comptes-rendus des séances de l’Académie des Inscriptions et Belles-Lettres 148,1 (2004), 271–289.

Brixhe 2007 = —, History of the alphabet: Some guidelines for oversimplification. In: Christidis 2007, 277–287.

Bronkhost 2002 = Johannes Bronkhorst, Literacy and rationality in Ancient India. In: Asiatische Studien 56 (2002), 797–831.

Brough 1977 = John Brough, The Arapacana Syllabary in the Old Lalitavistara. In: Bulletin of the School of Oriental and African Studies 40 (1977), 85–95.

Brunner & Toth 1987 = Linus Brunner & Alfred Toth, Die rätische Sprache – enträtselt. Sprache und Sprachgeschichte der Räter (Gossau 1987).

Buck 1904 = Carl Darling Buck, A Grammar of Oscan and Umbrian, with a Collection of Inscriptions and a Glossary (Boston 1904).

Buck 1919 = —, An ABC Inscribed in Old English Runes. In: Modern Philology 17,4 (Aug. 1919), 43–48.

Bugge 1871 = Sophus Bugge, Bemærkninger om runeindskrifter på guldbrakteater. In: Aarbøger for Nordisk Oldkyndighed og Historie 1871, 171–226.

Bugge 1874 = —, Om runeskriftens oprindelse. In: Forhandlinger i Videnskabs-Selskabet i Christiania 1873 (1874), 485–487.

Bugge 1913 = —, Runeskriftens Oprindelse og ældste Historie. In: Norges Indskrifter med de ældre Runer (Heft 1, Inledning), ed. Sophus Bugge (Christiania 1905–1913).

Buonamici 1927 = Giulio Buonamici, Rivista di epigrafia etrusca. In: SE (1927), 505–522.

Caduff 2007 = Bruno Caduff, Ardez-Suotchastè. Eine urgeschichtliche Fundstelle im Unterengadin (GR). In: Jahrbuch der Historischen Gesellschaft von Graubünden (137. Jahresbericht der Historischen Gesellschaft, 2007), 5–98.

Calzavara Capuis & Pellegrini 1970 = Loredana Calzavara Capuis & Giovan Battista Pellegrini, Tavoletta Iscritta da S. Lorenzo di Sebato. In: Venetia. Studi miscellanei di archeologia delle Venezie, vol. 2, ed. Istituto di Archeologia dell'Università di Padova (Pubblicazioni dell'Istituto di Archeologia dell'Università di Padova 6; Padova 1970), 235–253.

Campi 1884 = Luigi Campi, Il sepolcreto di Meclo nella Naunia. In: Archivio Trentino 3 (1884), 191–208.

Campi 1888 = —, I Campi Neri presso Cles nell'Anaunia. In: Annuario della Società degli Alpinisti Tridentini 13 (1886–87 [1888]), 133–158.

Carpenter 1933 = Rhys Carpenter, The antiquity of the Greek alphabet. In: American Journal of Archaeology 37 (1933), 8–29.

Carpenter 1945 = —, The Alphabet in Italy. In: American Journal of Archaeology 49 (1945), 452–464.

Christidis 2007 = A[nastasios] F. Christidis (ed.), A History of Ancient Greek from the Beginnings to Late Antiquity (Cambridge 2007).

CII see Fabretti 1967.

CIL = Corpus Inscriptionum Latinarum, ed. Theodor Mommsen et al. (Berlin 1853–).

CIL Suppl. I = Corpus Inscriptionum Latinarum. Supplementa Italica I: Additamenta ad Vol. V Galliae Cisalpinae, ed. Hector Pais (Roma 1884).

Cipolla 1884 = Carlo Cipolla, III. Lavagno. In: NotScav (1884), 4–13.

Ciurletti & Marzatico 1999 = Gianni Ciurletti & Franco Marzatico (eds), I Reti/Die Räter. Atti del simposio 23–25 settembre 1993, Castello di Stenico, Trento (= Archeologia delle Alpi 5; Trento 1999).

Cohen 1958 = Marcel Cohen, La Grande Invention de l'Écriture et son Evolution (Paris 1958).

Collingwood & Wright 1965 = Robin G. Collingwood & Richard P. Wright, The Roman Inscriptions of Britain, vol. I: Inscriptions on Stone (Oxford 1965).

Colonna 1972 = Giovanni Colonna, Clusium et Orvieto. In: SE 40 (1972), 470–471.

Colonna 1997 = —, Divinités peu connues du panthéon étrusque. In: Les Étrusques. Les plus religieux des hommes. État de la recherche sur la religion étrusque. Actes du colloque international, Galeries nationales du Grand Palais, 17–18–19 novembre 1992, ed. Françoise Gaultier & Dominique Briquel (Paris 1997), 167–184.

Conestabile 1863 = Giancarlo Conestabile, Second spicilegium de quelques monuments écrits ou épigraphes des Étrusques. Musées de Londres, de Berlin, de Manheim, de La Haye, de Paris, de Pérouse (Italie) (Paris 1863).

Connolly 1979 = Leo A. Connolly, The rune ᛇ ᛇ and the Germanic vowel system. In: Amsterdamer Beiträge zur älteren Germanistik 14 (1979), 3–32.

Constantini 2002 = Raffaela Constantini, Sebatum (= Città romane 4; Roma 2002).

Conway et al. 1933 = R[obert] S. Conway, J[oshua] Whatmough & S[arah] E. Johnson, The Prae-Italic Dialects of Italy (Cambridge, Mass. 1933).

Cook & Woodhead 1959 = R[obert] M. Cook & A[rthur] G. Woodhead, The Diffusion of the Greek Alphabet. In: American Journal of Archaeology 63,2 (1959), 175–178.

Cooper 1989 = Jerrold S. Cooper, Writing. In: International Encyclopedia of Communications, vol. 4 (1989), 321–331.

Cooper 2004 = —, Babylonian beginnings: the origin of the cuneiform writing systems in comparative perspective. In: Houston 2004a, 71–99.

Cordenons 1911 = Federico Cordenons, Silloge delle Iscrizioni Venetiche. Con note sugli antichi alfabeti e sistemi di scrittura usata dagli Italici e dagli Etruschi (Feltre 1911).

Corssen 1874 = Wilhelm Paul Corssen, Ueber die Sprache der Etrusker, vol. 1 (Leipzig 1874).

Cortsen 1935 = Søren Peter Cortsen, Literaturbericht 1928–1934: Etruskisch. In: Glotta 25 (1935), 145–147.

Coulmas 1989 = Florian Coulmas, The Writing Systems of the World (Oxford/New York 1989).

Cristofani 1972 = Mauro Cristofani, Sull'origine e la diffusione dell'alfabeto etrusco. In: Aufstieg und Niedergang der römischen Welt. Geschichte und Kultur Roms im Spiegel der neueren Forschung, ed. Hildegard Temporini & Wolfgang Haase (Berlin/New York 1972), 466–489.

Cristofani 2003 = —, Nuove iscrizioni "tirreniche" da Lemno. In: Archeologia del Mediterraneo. Studi in honore di Ernesto de Miro, ed. Graziella Fiorentini et al. (Roma 2003), 219–222.

Cross 1989 = Frank Moore Cross, The Invention and Development of the Alphabet. In: Senner 1989, 77–90.

Cubberley 1982 = Paul Cubberley, Glagolitic's Armenian Connection. In: Wiener Slawistischer Almanach 9 (1982), 291–304.

Cubberley 1996 = —, The Slavic Alphabets. In: Bright & Daniels 1996, 346–355.

Cushman 2010 = Ellen Cushman, The Cherokee Syllabary from Script to Print. In: Ethnohistory 57 (2010), 625–629.

Dal Rì 1987 = Lorenzo Dal Rì, Influssi etrusco-italici nella regione retico-alpina. In: Gli Etruschi a nord del Po, ed. Raffaele De Marinis (Mantova 1987), 160–179.

Dal Zotto 1940 = Attilio dal Zotto, Il Colle delle Capre di Feltre preromana. In: Archivio Storico di Belluno, Feltre e Cadore 12 (1940), 1209–1212.

Daniels 1990 = Peter T. Daniels, Fundamentals of Grammatology. In: Journal of the American Oriental Society 110,4 (Oct.–Dec., 1990), 727–731.

Daniels 1992 = —, The syllabic origin of writing and the segmental origin of the alphabet. In: The Linguistics of Literacy, ed. Pamela Downing et al. (= Typological Studies in Language 21; Amsterdam/Philadelphia 1992), 83–110.

Daniels 1996a = —, The Study of Writing Systems. In: Bright & Daniels 1996, 3–17.

Daniels 1996b = —, The First Civilizations. In: Bright & Daniels 1996, 21–32.

Daniels 1996c = —, Methods of Decipherment. In: Bright & Daniels 1996, 141–159.

Daniels 1996d = —, Scripts Invented in Modern Times – Introduction. In: Bright & Daniels 1996, 577–578.

Daniels 1996e = —, The Invention of Writing. In: Bright & Daniels 1996, 579–586.

Daniels 1996f = —, Use and Adaptation of Scripts. In: Bright & Daniels 1996, 625.

Danielsson 1912 = Olof August Danielsson, Zu den venetischen und lepontischen Inschriften. In: Skrifter utgivna av Kungliga Humanistiska Vetenskaps-Samfundet i Uppsala 13 (1910–1912), 3–33.

Davis 1930 = John B. Davis, The Life and Work of Sequoyah. In: Chronicles of Oklahoma 8,2 (June, 1930), 149–180. URL: http://digital.library.okstate.edu/chronicles/v008/v008p149.html (last accessed: 1. 5. 2018).

DeFrancis 1989 = John DeFrancis, Visible Speech. The Diverse Oneness of Writing Systems (Honolulu 1989).

De Guio 2011 = Armando De Guio (ed.), Bostel di Rotzo (VI) – stato di avanzamento delle ricerche. In: Quaderni di Archeologia del Veneto 27 (2011), 168–183.

De Hoz 1983 = Javier de Hoz, Origine ed evoluzione delle scritture ispaniche. In: AIΩN 5 (1983), 27–61.

Delamarre 2003 = Xavier Delamarre, Dictionnaire de la langue gauloise. Une approche linguistique du vieux-celtique continental, 2nd rev. augm. ed. (Paris 2003).

De Marinis 1988 = Raffaele C. De Marinis, Le popolazioni alpine di stirpe retica. In: Italia omnium terrarum alumna. La civiltà dei Veneti, Reti, Liguri, Celti, Piceni, Umbri, Latini, Campani e Iapigi, ed. Giovanni Pugliese Carratelli (Milano 1988), 99–155.

De Marinis 1992 = —, Il territorio prealpino e alpino tra i Laghi di Como e di Garda dal Bronzo recente alla fine dell'età del Ferro. In: Metzger & Gleirscher 1992, 145–174.

De Marinis 1999 = —, Rapporti culturali tra Reti, Etruria padana e Celti golasecchiani. In: Ciurletti & Marzatico 1999, 603–649.

De Marinis & Biaggio Simona 2000 = Raffaele C. De Marinis & Simonetta Biaggio Simona (eds), I Leponti tra mito e realtà. Raccolta di saggi in occasione della mostra (Locarno 2000).

Demetz 1992 = Stefan Demetz, Rom und die Räter. Ein Resümee aus archäologischer Sicht: In: Metzger & Gleirscher 1992, 631–653.

Derolez 1952 = René Derolez, Richtingen in de Runenkunde. Met enkele beschouwingen over het problem: Ogam-runen. In: Belgisch Tijdschrift voor Philologie en Geschiedenis 30 (1952), 5–49.

Derolez 1981 = René Derolez, The Runic System and its Cultural Context. In: Michigan Germanic Studies 7,1 (2001), 19–26.

Derolez 1998 = —, On the "Otherness" of the Anglo-Saxon Runes and the "Perfect Fit" of the Fuþark. In: Düwel 1998, 103–116.

De Simone 1970 = Carlo de Simone, Die griechischen Entlehnungen im Etruskischen, Bd 2: Untersuchung (Wiesbaden 1970).

De Simone 1980 = —, Gallisch **Nemetii̯os* — etruskisch *Nemetie*. In: Zeitschrift für vergleichende Sprachforschung 94 (1980), 198–202.

De Simone 1995 = —, I Tirreni a Lemnos: L'alfabeto. In: SE 60 (1995), 145–163.

De Simone 2013 = —, Analisi linguistica. In: De Simone & Marchesini 2013, 55–71.

De Simone & Marchesini 2013 = Carlo de Simone & Simona Marchesini (eds), La lamina di Demlfeld (= Mediterranea. Quaderni annuali dell'Istituto di Studi sulle Civiltà italiche e del Mediterraneo antico del Consiglio Nazionale delle Ricerche. Supplemento 8; Pisa/Roma 2013).

De Voogt 1993 = Alexander Johan de Voogt, The Caroline Islands script (MA thesis Hawaii 1993).

De Voogt 2012 = —, Invention and borrowing in the development and dispersal of writing systems. In: De Voogt & Quak 2012, 1–10.

De Voogt & Döhla 2012 = Alex de Voogt & Hans-Jörg Döhla, Nubian graffiti messages and the history of writing in the Sudanese Nile Basin. In: De Voogt & Quak 2012, 53–67.

De Voogt & Quak 2012 = Alex de Voogt & Joachim Friedrich Quack (eds), The Idea of Writing. Writing Across Borders (Leiden/Boston 2012).

Devoto 1968 = Giacomo Devoto, Geschichte der Sprache Roms, transl. from Italian by Ilona Opelt (Heidelberg 1968).

Diakonoff 1970 = I[gor] M. Diakonoff, The origin of the 'Old Persian' writing system and the ancient Oriental epigraphic and annalistic traditions. In: W.B. Henning Memorial Volume, ed. Mary Boyce & Ilya Gershevitch (London 1970), 98–124.

Dietz et al. 1996 = Martina Dietz, Edith Marold & Hauke Jöns, Eine frühkaiserzeitliche Scherbe mit Schriftzeichen aus Osterrönfeld, Kr. Rendsburg-Eckernförde. In: Archäologisches Korrespondenzblatt 26 (1996), 179–188.

Dillmann 2003 = François-Xavier Dillmann, Runenmeister. In: RGA 25 (2003), 537–546.

Diringer 1968 = David Diringer, The Alphabet: A Key to the History of Mankind (New York ^{3}1968).

Driver 1948 = Godfrey R. Driver, Semitic Writing from Pictograph to Alphabet (London 1948).

Drost-Abgarjan 2011 = Armenuhi Drost-Abgarjan, Das armenische Alphabet im Kontext der autochthonen Schriftsysteme des Christlichen Orients. In: Seibt & Preiser-Kapeller 2011, 21–28.

Düwel 1973 = Klaus Düwel, Alpengermanen. In: RGA 1 (1973), 190–191.

Düwel 1981 = —, The Meldorf fibula and the origin of runic writing. In: Michigan Germanic Studies 7,1 (1981), 8–14.

Düwel 1988 = —, Buchstabenmagie und Alphabetzauber. Zu den Inschriften der Goldbrakteaten und ihrer Funktion als Amulette. In: Frühmittelalterliche Studien 22 (1988), 70–110.

Düwel 1994 = Klaus Düwel (ed.), Runische Schriftkultur in kontinental-skandinavischer und -angelsächsischer Wechselbeziehung. Internationales Symposium in der Werner-Reimers-Stiftung vom 24.–27. Juni 1992 in Bad Homburg (Berlin/New York 1994).

Düwel 1997 = —, Magische Runenzeichen und magische Runeninschriften. In: Nyström 1997, 23–41.

Düwel 1998 = — (ed.), Runeninschriften als Quellen interdisziplinärer Forschung. Abhandlungen des Vierten Internationalen Symposiums über Runen und Runeninschriften in Göttingen vom 4.–9. August 1995 (= RGA Ergänzungsband 15; Berlin/New York 1998).

Düwel 2003 = —, Runenschrift. In: RGA 25 (2003), 571–585.

Düwel 2008 = —, Runenkunde. 4. rev. ed. (= Sammlung Metzler 72; Stuttgart/Weimar 2008).

Düwel & Gebühr 1981 = Klaus Düwel & Michael Gebühr, Die Fibel von Meldorf und die Anfänge der Runenschrift. In: ZfdA 110 (1981), 159–175.

Düwel & Heizmann 2006 = Klaus Düwel & Wilhelm Heizmann, Das ältere Fuþark – Überlieferung und Wirkungsmöglichkeiten der Runenreihe. In: Bammesberger 2006, 3–60.

Ebbinghaus 1979 = Ernest A. Ebbinghaus, The Origin of Wulfila's Alphabet. In: General Linguistics 19,1 (1979), 15–29.

Ebbinghaus 1990 = —, The Question of Visigothic Runic Inscriptions Re-examined. In: General Linguistics 30,4 (1990), 207–214.

Ebbinghaus 1996 = —, The Gothic Alphabet. In: Bright & Daniels 1996, 290–296.

Ebel 1963 = Else Ebel, Die Terminologie der Runentechnik (Diss. Göttingen 1963).

EDH = Epigraphische Datenbank Heidelberg, ed. Christian Witschel et al. URL: www.epigraphische-datenbank-heidelberg.de (last accessed: 1.5.2018).

Egg 1976 = Markus Egg, Einige Bemerkungen zum Helmdepot von Negau (Südsteiermark). In: Archäologisches Korrespondenzblatt 6,4 (1976), 299–303.

Egg 1986 = —, Italische Helme. Studien zu den ältereisenzeitlichen Helmen Italiens und der Alpen (Mainz 1986).

Egg 1992 = —, Spätbronze- und eisenzeitliche Bewaffnung im mittleren Alpenraum. In: Metzger & Gleirscher 1992, 401–438.

Egger 1959 = Rudolf Egger, Die Inschrift des Harigasthelmes (Wien 1959 [Sonderabdruck aus dem Anzeiger der ÖAW, phil.-hist. Kl. Jg. 1959, Nr. 5]).

Eichler et al. 1995 = Ernst Eichler et al. (eds), Namenforschung, vol. 1 (= HSK 11.1; Berlin/New York 1995).

Eichner 1994 = Heiner Eichner, Zur Entzifferung des Karischen. In: La Decifrazione del Cario. Atti del 1° Simposio Internazionale, Roma, 3–4 maggio 1993, ed. Maria E. Giannotta et al. (Roma 1994), 167–169.

Eichner 2006a = —, Zu den Quellen und Übertragungswegen der germanischen Runenschrift. Ein Diskussionsbeitrag. In: Bammesberger et al. 2006, 101–108.

Eichner 2006b = —, Das Ǝ von Cortona und das etruskische Phonemsystem. In: Italo – Tusco – Romana, ed. Petra Amann et al. (Vienna 2006), 209–220.

Eichner 2011 = —, Anmerkungen zum Etruskischen *in memoriam* Helmut Rix. In: Alessandria 5 (2011), 67–92.

Eichner 2012a = —, Sakralterminologie und Pantheon der Etrusker aus sprachwissenschaftlicher Sicht. In: Kulte – Riten – religiöse Vorstellungen bei den Etruskern und ihr Verhältnis zu Politik und Gesellschaft. Akten der 1. Internationalen Tagung der Sektion Wien/Österreich des Istituto Nazionale di Studi Etruschi ed Italici (Wien, 4.–6. 12., 2008), ed. Petra Amann (=Denkschriften der ÖAW, Phil.-hist. Kl. 440; Wien 2012), 17–46.

Eichner 2012b = —, Neues zur Sprache der Stele von Lemnos (Erster Teil). In: Journal of Language Relationship/Voprosy jazykovogo rodstva 7 (2012), 9–32.

Eichner 2013 = —, Neues zur Sprache der Stele von Lemnos (Zweiter Teil). In: Journal of Language Relationship/Voprosy jazykovogo rodstva 10 (2013), 1–42.

Eichner & al. 1994 = Heiner Eichner, Janka Istenič & Milan Lovenjak, Ein römerzeitliches Keramikgefäß aus Ptuj (Pettau, Poetovio) in Slowenien mit Inschrift in unbekanntem Alphabet und epichorischer (vermutlich keltischer) Sprache. In: Arheološki vestnik 45 (1994), 131–142.

Eichner & Nedoma 2009 = Heiner Eichner & Robert Nedoma, Neue vorrömische Inschriften aus Westslowenien: epigraphische und linguistische Evidenz. In: Keltske študije 2: Studies on Celtic Archaeology. Papers in honour of Mitja Guštin, ed. Georg Tiefengraber et al. (= Protohistoire Européenne 11; Montagnac 2009), 65–75.

Elliott 1959 = Ralph W. V. Elliott, Runes. An Introduction (Manchester 1959; 2nd ed. 1989).

Elliott 1989 see Elliott 1959.

Englund 2004 = Robert K. Englund, The state of decipherment of proto-Elamic. In: Houston 2004a, 100–149.

Eska 2017 = Josepf F. Eska, Phonological contrasts and character reduction in the alphabet of Lugano. In: ZcP 64,1 (2017), 59–80.

Eska & Wallace 1999 = Joseph F. Eska, & Rex T. Wallace, The linguistic milieu of *Oderzo 7. In: Historische Sprachforschung 112 (1999), 122–136.

ET see Meiser 2014.

Evans 1986 = David A. H. Evans, Hávamál (= Viking Society for Northern Research text series 7; London 1986).

EWAhd = Etymologisches Wörterbuch des Althochdeutschen (Göttingen 1988–).

EWDS = Etymologisches Wörterbuch der deutschen Sprache, ed. Elmar Seebold (Berlin/New York 252011).

Fabretti 1867 = Ariodante Fabretti, Corpus inscriptionum italicarum (Torino 1867).

Fairfax 2014 = Edmund Fairfax, The twisting path of runes from the Greek alphabet. In: NOWELE 67,2 (2014), 173–230.

Falk 1993 = Harry Falk, Schrift im alten Indien. Ein Forschungsbericht mit Anmerkungen (= ScriptOralia 56; Tübingen 1993).

Faulmann 1880 = Das Buch der Schrift. Enthaltend die Schriftzeichen und Alphabete aller Zeiten und aller Völker des Erdkreises, 2nd rev. ed. (Wien 1880).

Feist 1910 = Sigmund Feist, Eine neue Theorie über die Herkunft der deutschen Runendenkmäler. In: Zeitschrift für den deutschen Unterricht 24 (1910), 246–249.

Feist 1930 = —, Zum Ursprung der germanischen Runenschrift. In: Acta philologica scandinavica 4 (1929–1930), 1–25.

Fell 1991 = Christine E. Fell, Runes and Semantics. In: Bammesberger 1991, 195–229.

Février 1948 = James G. Février, Histoire de l'écriture (Paris 1948).

Fischer 2004 = Henry George Fischer, The Origin of Egyptian Hieroglyphs. In: Senner 1989, 59–76.

Flowers 1986 = Stephen E. Flowers, Runes and Magic. Magical Formulaic Elements in the Older Runic Tradition (= American University Studies, Series 1: Germanic Languages and Literature 53; New York et al. 1986).

Flowers 2006 = —, How to Do Things with Runes: A Semiotic Approach to Operative Communication. In: Stoklund 2006, 65–81.

Fogolari 1975 = Giulia Fogolari, La Protostoria delle Venezie. In: Popoli e civiltà dell'Italia antica, vol. 4, ed. Ferrante Rittatore Vonwiller & Giulia Fogolari (Roma 1975), 61–222.

Förster 2011 = Hans Förster, Koptisches Alphabet und koptische Identität. In: Seibt & Preiser-Kapeller 2011, 29–37.

Franz 1951 = Leonhard Franz, Der älteste Fundbericht über das vorgeschichtliche Gräberfeld von Pfatten. In: Veröffentlichungen des Museums Ferdinandeum 31 (1951), 125–132.

Franz 1953 = —, Epigraphische Kleinigkeiten. In: Der Schlern 27 (1953), 176–178.

Franz 1957 = —, Südtiroler Reitia-Inschriften. In: Der Schlern 31 (1957), 105–109.

Franz 1958 = —, Eine Inschrift aus Cles. In: Der Schlern 32 (1958), 39–40.

Franz 1959 = —, Rätische Inschriften im Innsbrucker Landesmuseum. In: Der Schlern 33 (1959), 228–229.

Freeborn 2006 = Dennis Freeborn, From Old English to Standard English. A Couse Book in Language Variation across Time (Basingstoke/New York ^{3}2006).

Frei 1959 = Benedikt Frei, Die Ausgrabungen auf der Mottata bei Ramosch im Unterengadin 1956-1958. In: Jahrbuch der Schweizerischen Gesellschaft für Urgeschichte 47 (1958–1959), 36–42.

Frei 1970 = — (ed.), Der heutige Stand der Räterforschung. Vorträge anlässlich der Jahresversammlung in Chur 1968 (= Jahrbuch der Schweizerischen Gesellschaft für Ur- und Frühgeschichte 55; Basel 1970).

Frei et al. 1984 = Benedikt Frei et al. (eds), Das Räterproblem in geschichtlicher, sprachlicher und archäologischer Sicht (= Schriftenreihe des Rätischen Museums Chur 28; Chur 1984).

Frei-Stolba 1992 = Regula Frei-Stolba, Die Räter in den antiken Quellen. In: Metzger & Gleirscher 1992, 657–671.

Frey 1962 = Otto-Herman Frey (ed.), Die Situla in Providence (Rhode Island). Ein Beitrag zur Situlenkunst des Osthallstattkreises (= Römisch-Germanische Forschungen 26; Berlin 1962).

Fridell 2015 = Staffan Fridell, Tendenser i skrifttecknens utveckling: Alfabet och runor. In: Futhark 6 (2015), 7–19.

Friedrich 1966 = Johannes Friedrich, Geschichte der Schrift (Heidelberg 1966).

Gambacurta 2002a = Giovanna Gambacurta, Le lamine. In: AKEO, 101–110.

Gambacurta 2002b = —, Manufatti iscritti in osso o corno. In: AKEO, 121–126.

Gambacurta et al. 2002 = Giovanna Gambacurta et al. (eds), Catalogo. Veneti antichi. Alfabeti e documenti. In: AKEO, 157–275.

Gambari & Colonna 1988 = Filippo Maria Gambari & Giovanni Colonna, Il Bicchiere con Iscrizione Arcaica da Castelletto Ticino. In: Studi Etruschi 54 (1986 [1988]), 119–164.

Gamkrelidze 1994 = Thomas V. Gamkrelidze, Alphabetic Writing and the Old Georgian Script. A Typology and Provenience of Alphabetic Writing Systems (New York 1994).

Gamper 2006 = Peter Gamper, Die latènezeitliche Besiedlung am Ganglegg in Südtirol. Neue Forschungen zur Fritzens-Sanzeno-Kultur (= Internationale Archäologie 91; Rahden, Westfalen 2006).

Gardiner 1916 = Alan H. Gardiner, The Egyptian Origin of the Semitic Alphabet. In: Journal of Egyptian Archaeology 3 (1916), 1–16.

Gebhard & Wagner 1992 = Rupert Gebhard & Ursel Wagner, Spuren der Räter nördlich der Alpen? Alpine Funde aus Manching und Südbayern. In: Metzger & Gleirscher 1992, 275–286.

Gehring 1976 = Brigitte Gehring, Die Fibeln von Mechel (Meclo) im Nonsberg. In: Archaeologia Austriaca 59–60 (1976), 143–173.

Gelb 1963 = I[gnaz] J. Gelb, A Study of Writing, 2nd rev. ed. (Chicago/London 1963).

Gempeler 1976 = Robert D. Gempeler, Werke der Antike im Kunsthaus Zürich (= Sammlungsheft 5; Zürich 1976).

Gering 1903 = Hugo Gering, Die germanische Runenschrift. In: Mitteilungen des Anthropologischen Vereins in Schleswig-Holstein 16 (1903), 9–22.

Ghirardini 1901 = Gherardo Ghirardini, Padova – Di un singolare bronzo paleoveneto scoperto presso la Basilica di S. Antonio. In: Notizie degli Scavi di Antichità (1901), 314–321.

Ghislanzoni 1939 = Ettore Ghislanzoni, Il sepolcreto di Vadena (Bolzano). In: Monumenti antichi Lincei 38 (1939), 319–534.

Giacomelli 1963 = Gabriella Giacomelli, La lingua falisca (Firenze 1963).

Giertz 1993 = Martin Giertz, Replik til Gad Rausings debattinlägg i Fornvännen 87 “On the Origin of the runes”. In: Fornvännen 88 (1993), 27–28.

Giovanelli 1825 = Benedetto Giovanelli, Trento. Città de’ Rezj e colonia romana (Trento 1825).

Giovanelli 1844 = —, Dei Rezj. Dell’origini de’ popoli d’Italia e d’una iscrizione rezio-etrusca. Pensieri di Benedetto Conte Giovanelli Podestà di Trento (Trento 1844).

Giovanelli 1845 = —, Le antichità rezio-etrusche scoperte presso Matrai nel Maggio 1845 (Trento 1845).

Giovanelli 1976 = —, Die Rhätisch-Etruskischen Alterthümer entdeckt bei Matrei im Mai 1845. In: Zeitschrift des Ferdinandeums für Tirol und Vorarlberg 3,20 (1876), 45–99.

Gippert 2011 = Jost Gippert, The script of the Caucasian Albanians in the light of the Sinai palimpsests. In: Seibt & Preiser-Kapeller 2011, 39–50.

Gleirscher 1985 = Paul Gleirscher, Zur Entwicklung der Fritzens-Sanzeno-Kultur. In: Mitteilungen der Österreichischen Gesellschaft für Ur- und Frühgeschichte 35 (1985), 57–63.

Gleirscher 1986a = —, Stilisierte Frauenfigürchen aus Südtirol und dem Trentino. “Reitia”, Göttin der “Räter”? In: Der Schlern 60 (1986), 178–190.

Gleirscher 1986b = —, Ein früher germanischer Gürtelhaken aus Sanzeno im Nonsberg. In: Archäologisches Korrespondenzblatt 16 (1986), 85–91.

Gleirscher 1991 = —, Die Räter (Chur 1991).

Gleirscher 1992 = —, Die Laugen-Melaun-Gruppe. In: Metzger & Gleirscher 1992, 117–134.

Gleirscher 1993 = —, Zum etruskischen Fundgut zwischen Adda, Etsch und Inn. In: Helvetia Archaeologica 24 (1993), 69–105.

Gleirscher 1999 = —, Zur archäologischen Gruppengliederung im Rätergebiet. In: Ciurletti & Marzatico 1999, 257–268.

Gleirscher et al. 2002 = Paul Gleirscher, Hans Nothdurfter & Eckehart Schubert, Das Rungger Egg. Untersuchungen an einem eisenzeitlichen Brandopferplatz bei Seis am Schlern in Südtirol (Mainz a. R. 2002).

Godley 1920 = A[lfred] D. Godley, Herodotus (Cambridge 1920).

Goldwasser 2010 = Orly Goldwasser, How the Alphabet Was Born from Hieroglyphs. In: Biblical Archaeology Review 36,2 (Mar/Apr 2010), 38–50. 74.

Göransson 1747 = Johan Göransson, Is atlinga, der är: De forna Göters, här uti Svea rike, bokstäfver ok salighets lära, tvåtusend tvåhundrad år före Christum, utspridde i all land (Stockholm 1747).

Graf 2011 = Martin Hannes Graf, Schrift, Sprache und was dazwischen liegt. Zur Materialität epigraphischer Schriftlichkeit der ältesten Runeninschriften. In: NOWELE 62/63 (2011), 213–247.

Granberg 2010 = Antoaneta Granberg, Wulfila’s alphabet in the light of neighbouring scripts. In: NOWELE 58/59 (2010), 169–193.

Griffiths 1999 = Alan Griffiths, The fuþark (an ogam): order as a key to origin. In: IF 109 (1999), 164–210.

Grønvik 2001 = —, Über die Bildung des älteren und des jüngeren Runenalphabets (= Osloer Beiträge zu Germanistik 29; Frankfurt a. M. 2001).

Grønvik 2010 = —, Nordische Merkmale in der Sprache der älteren Runeninschriften. In: Askedal et al. 2010, 115–135.

Grünewald 2000 = Thomas Grünewald, Kimbern § 2. Historisches. In: RGA 16 (2000), 495–500.

Grünzweig 2004 = Friedrich E. Grünzweig, Runeninschriften auf Waffen. Inschriften vom 2. Jahrhundert n. Chr. bis ins Hochmittelalter (= Wiener Studien zur Skandinavistik 11; Wien 2004).

Haarmann 1990 = Harald Haarmann, Universalgeschichte der Schrift (Frankfurt/New York 1990).

Haarmann 1995 = —, Early Civilization and Literacy in Europe. An Inquiry into Cultural Continuity in the Mediterranean World (= Approaches to Semiotics 124; Berlin/New York 1995).

Haarmann 2009 = —, The Danube Script and other Ancient Writing Systems: A Typology of Distinctive Features. In: Signs of Civilization. Neolithic Symbol System of Southeast Europe. Proceedings from the

International Symposium Signs of Civilization ~ Novi Sad, Serbia May 25–29, 2004, ed. Joan Marler & Miriam Robbins Dexter (Sebastopol 2009), 17–47.

Haas 1965 = Otto Haas, Die Herkunft der Runenschrift. In: Orbis 14,1 (1965), 216–236.

Hagland & Lorentzen 1997 = Jan Ragnar Hagland & Rutt Trøite Lorentzen, Skrift med runer i lys av forsking på tidleg skriving hos barn. In: Nyström 1997, 43–78.

Haile 1996 = Getatchew Haile, Ethiopic Writing. In: Bright & Daniels 1996, 569–576.

Hallock 1970 = Richard T. Hallock, On the Old Persian Signs. In: Journal of Near Eastern Studies 29,1 (1970), 52–55.

Hammarström 1920 = Magnus Hammarström, Beiträge zur Geschichte des etruskischen, lateinischen und griechischen Alphabets (= Acta Societatis Scientiarum Fennicae 49,2; Helsingfors 1920).

Hammarström 1930 = —, Om runeskriftens härkomst. In: Studier i nordisk filologi 20 (1929 [1930]), 1–65.

Hartmann 2005 = Markus Hartmann, Die frühlateinischen Inschriften und ihre Datierung. Eine linguistisch-archäologisch-paläographische Untersuchung (= Münchner Forschungen zur historischen Sprachwissenschaft 3; Bremen 2005).

Haug 1914 = Ferdinand Haug, Raeti. In: Paulys Realencyclopädie der Classischen Altertumswissenschaft, rev. ed. Georg Wissowa et al., 2. Reihe, Vol. I A,1 (Stuttgart 1914), 42–46.

Haugen 1976 = Einar Haugen, The Scandinavian Languages. An Introduction to their History (London 1976).

Hawkins 2012 = Shane Hawkins, A Linguistic Analysis of the Vase Inscriptions of Sophilos. In: Glotta 88 (2012), 122–165.

Heizmann 2010 = —, Zur Entstehung der Runenschrift. In: Askedal et al. 2010, 9–32.

Hellquist 1939 = Elof Hellquist, Svenskt etymologiskt ordbok (Lund 1939).

Hempel 1935 = Heinrich Hempel, Der Ursprung der Runenschrift. In: Germanisch-romanische Monatsschrift 23 (1935), 401–426.

Hempl 1896 = George Hempl, Wimmers Runenlehre. In: Philologische Studien (FS Sievers), ed. Karl Bohnenberger (Halle a. d. Saale 1896), 12–20.

Hempl 1899 = —, The Origin of the Runes. The Journal of Germanic Philology 2 (1899). 370–374.

Hempl 1903 = —, The Runes and the Germanic Shift. In: The Journal of Germanic Philology 4 (1902–1903), 70–75.

Hempl 1908 = —, Linguistic and Ethnografic Status of the Burgundians. In: Transactions and Proceedings of the American Philological Association 39 (1908), 105–119.

Henning 1889 = Rudolf Henning, Die deutschen Runendenkmäler (Strassburg 1889).

Heubeck 1979 = Alfred Heubeck, Schrift (= Archaeologia Homerica 3; Göttingen 1979).

Heubeck 1986 = —, Die Würzburger Alphabettafel. In: Würzburger Jahrbücher für die Altertumswissenschaft NF 12 (1986), 7–20.

Heuberger 1932 = Richard Heuberger, Rätien im Altertum und Frühmittelalter. Forschungen und Darstellungen (= Schlern-Schriften 20; Innsbruck 1932).

Hill 1967 = Archibald A. Hill, The typology of writing systems. In: Papers in Linguistics in Honor of Léon Dostert, ed. William M. Austin (The Hague 1967), 92–99.

Hinz 1942 = W[alther] Hinz, Zur Behistun-Inschrift des Dareios. In: Zeitschrift der Deutschen Morgenländischen Gesellschaft 96 (NF 21) (1942), 326–349.

Hinz 1952 = —, Zur Behistun-Inschrift des Dareios. In: Zeitschrift der Deutschen Morgenländischen Gesellschaft 102 (NF 27) (1952), 28–38.

Hoffmann 1976 = Karl Hoffmann, Zur altpersischen Schrift. In: Aufsätze zur Indoiranistik 2 (1976), 620–645.

Höfler 1971 = Otto Höfler, Herkunft und Ausbreitung der Runen. In: Die Sprache 17 (1971), 134–156.

Holder 1904 = Alfred Holder, Alt-Celtischer Sprachschatz, vol. II (Leipzig 1904).

Hooker 1990 = J[ames] T. Hooker (ed.), Reading the Past. Ancient Writing from Cuneiform to the Alphabet (London 1990).

Høst 1976 = Gerd Høst, Runer. Våre eldste norske runeinnskrifter (Oslo 1976).

Houston 2004a = Stephen D. Houston (ed.), The First Writing. Script invention as history and process (Cambridge 2004).

Houston 2004b = —, Overture to *The First Writing*. In: Houston 2004a, 3–15.

Houston 2004c = —, Writing in early Mesoamerica. In: Houston 2004a, 274–309.

Huyse 1999 = Philip Huyse, Some further thoughts on the Bisitun Monument and the genesis of the Old Persian cuneiform script. In: Bulletin of the Asia Institute 13 (1999), 45–65.

Ilkjær 1984 = Jørgen Ilkjær, The weaponfind from Illerup and its implications for the explanation of similar finds from Northern Europe. In: Frühmittelalterliche Studien 18 (1984), 83–90.

Ilkjær 1996 = —, Runeindskrifter fra mosefund i Danmark – Kontekst og oprindelse. In: Looijenga & Quak 1996, 409–410.

Ilkjær 2003 = —, Danish war booty sacrifices. In: Jørgensen et al. 2003, 44–65.

Ilkjær 2006 = —, Vimose. § 5. Deutung. In: RGA 32 (2006), 409–410.

Ilkjær & Lønstrup 1982 = Jørgen Ilkjær & Jørn Lønstrup, Interpretation of Great Votive Deposits of Iron Age Weapons. In: Journal of Danish Archaeology 1 (1982), 95–103.

Ilkjær & Lønstrup 1983 = —, Der Moorfund im Tal der Illerup-Å bei Skanderborg in Ostjütland (Dänemark). In: Germania 61 (1983), 95–116.

Imer 2010 = Lisbeth Imer, Runes and Romans in the North. In: Futhark 1 (2010), 41–64.

Imer 2011 = —, The Oldest Runic Monuments on the North – Dating and Distribution. In: NOWELE 62/63 (2011), 169–212.

Imnaishvili 2011 = Vakhtang Imnaishvili, Die Folgen der Entstehung des georgischen Alphabets in den ersten Jahrhunderten. In: Seibt & Preiser-Kapeller 2011, 51–55.

IR see Mancini 1975.

Jeffery 1990 = L[ilian] H. Jeffery, The Local Scripts of Archaic Greece. A study of the Origin of the Greek Alphabet and its Development from the Eighth to the Fifth Centuries B.C. Rev. ed. with a suppl. by A. W. Johnston (Oxford 1990).

Jensen 1958 = Hans Jensen, Die Schrift in Vergangenheit und Gegenwart. 2nd rev. and suppl. ed. (Berlin 1958).

Jensen 1969 = Jens Juhl Jensen, The problem of the runes in the light of some other alphabets. In: NTS 23 (1969), 128–146.

Johnston 1997 = Alan Johnston, All Runes to me. In: Nyström 1997, 93–112.

Jónsson 1889 = Finnur Jónsson, Die runenschrift von Ludv. F. A. Wimmer. Zeitschrift für deutsche Philologie 21 (1889), 492–498.

Joppich 1971 = Julius Joppich, Anhang. Tonabdruck und Korrektur zur Lesung der Felsinschriften nach Emil Vetter. In: Prosdocimi 1971, 41–44.

Jørgensen et al. 2003 = Lars Jørgensen, Birger Storgaard & Lone G. Thomsen, The Spoils of Victory. The North in the shadow of the Roman Empire (exhibition catalogue, National Museum Copenhagen 2003).

Jungandreas 1974 = Wolfgang Jungandreas, Die Namen der Runen. Futhark und Kosmologie. In: Onoma 18 (1974), 365–390.

Justeson & Stephens 1993 = J[ohn] S. Justeson & L[aurence] D. Stephens, The evolution of syllabaries from alphabets: transmission, language contrast, and script typology. In: Die Sprache 35,1 (1991–1993), 2–46.

Kabell 1967 = Aage Kabell, Periculum Runicum. In: NTS 21 (1967), 94–126.

Kananchev 2011 = Zurab Kananchev, Die Albanische Schrift – zum Problem “Mesrop Maštocʿ ”. In: Seibt & Preiser-Kapeller 2011, 57–64.

Kasseroler 1957 = Alfons Kasseroler, Die vorgeschichtliche Niederlassung auf dem “Himmelreich” bei Wattens (= Schlern-Schriften 166; Innsbruck 1957).

Keightley 1989 = David N. Keightley, The Origins of Writing in China: Scripts and Cultural Contexts. In: Senner 1989, 171–202.

King 1996 = Ross King, Korean Writing. In: Bright & Daniels 1996, 218–227.

Kirchhoff 1854 = Adolf Kirchhoff, Das gothische Runenalphabet. 2nd suppl. ed. (Berlin 1854).

KJ see Krause 1966.

Klingenberg 1973 = Heinz Klingenberg, Runenschrift – Schriftdenken – Runeninschriften (Heidelberg 1973).

Kluge 1919 = Friedrich Kluge, Runenschrift und Christentum. In: Germania 3 (1919), 43–48.

Kluge & Salomon 2015 = Sindy Kluge & Corinna Salomon, Ausgewählte Funde aus Dercolo im Kontext der rätischen Inschriften. In: Wissenschaftliches Jahrbuch der Tiroler Landesmuseen 8 (2015), 80–95.

Knirk 1993 = James E. Knirk, Runes and Runic Inscriptions. In: Medieval Scandinavia. An Encyclopedia, ed. Philipp Pulsiano (New York/London 1993), 545–555.

Knirk 1994 = — (ed.), Proceedings of the Third International Symposium on Runes and Runic Inscriptions. Grindaheim, Norway, 8–12 August 1990 (= Runrön 9; Uppsala 1994).

Krause 1937a = Wolfgang Krause, Wesen und Werden der Runen. In: Zeitschrift für Deutschkunde 51 (1937), 281–293. 345–356.

Krause 1937b = —, Runeninschriften im älteren Futhark (= Schriften der Königsberger Gelehrten Gesellschaft, Geisteswiss. Kl. 13,4; Halle a. d. Saale 1937).

Krause 1938 = —, Die Runen als Begriffszeichen. In: Schlottig 1938, 35–53.

Krause 1940 = —, Zum Stand der Runenforschung. In: Göttingische gelehrte Anzeigen 202,5 (1940), 181–205.

Krause 1966 = —, Die Runeninschriften im älteren Futhark, mit Beiträgen von Herbert Jankuhn (= Abhandlungen der Akademie der Wissenschaften in Göttingen, Philolog.-hist. Kl. 3. Folge 65; Göttingen 1966).

Krause 1968 = —, Handbuch des Gotischen. 3rd rev. ed. (München 1968).

Krause 1970 = —, Runen (= Sammlung Göschen 1244; Berlin 1970).

Krause 1971 = —, Die Sprache der urnordischen Runeninschriften (Heidelberg 1971).

Kretschmer 1929 = Paul Kretschmer, Das älteste germanische Sprachdenkmal. In: ZfdA 66 [NF 54] (1929), 1–14.

Kretschmer 1932 = —, Die Etruskerfrage und die Inschriften von Magrè. In: Symbolae philologicae O.A. Danielsson Octogenario dicatae, ed. Axel Nelson (Uppsala 1932), 134–142.

Kretschmer 1943 = —, Die vorgriechischen Sprach- und Volksschichten (Fortsetzung). In: Glotta 30 (1943), 84–218.

Kretschmer 1949 = —, Wem waren die raetischen Täfelchen von Magrè geweiht? In: Die Sprache 1 (1949), 30–36.

Krikorian 2011 = Mesrob K. Krikorian, Wo, wann und zu welchem Zweck wurde das georgische Alphabet geschaffen? In: Seibt & Preiser-Kapeller 2011, 83–90.

Kuhn 1938 = Friedrich Kuhn, Das Zeugnis der Sprache über Alter und Ursprung der Runenschrift. In: Schlottig 1938, 54–73.

Küttel 2006 = Hartmut Küttel, Entwicklung der grammatischen Rechtschreibkenntnisse. In: Didaktik der deutschen Sprache. Ein Handbuch, vol 1, ed. Ursula Bredel et al. (Basel 22006), 380–391.

Lambert 1994 = Pierre-Yves Lambert, La langue gauloise. Description linguistique, commentaire d'inscriptions choisies (Paris 1994).

Lang 1992 = Amei Lang, Von der Hallstattzeit zur Frühlatènezeit in Nordtirol. Bemerkungen zum Beginn der Fritzens-Sanzeno Keramik. In: Metzger & Gleirscher 1992, 91–115.

Lang 1993 = —, Germanen im Unterinntal? Historischer Versuch und archäologische Realität. In: Kulturen zwischen Ost und West. Das Ost-West-Verhältnis in vor- und frühgeschichtlicher Zeit und sein Einfluß auf Werden und Wandel des Kulturraums Mitteleuropa, ed. Amei Lang et al. (Berlin 1993), 293–307.

Lattes 1901 = Elia Lattes, Iscrizioni inedite venete ed etrusche dell'Italia settentrionale. In: Rendiconti del Reale Istituto Lombardo di Scienze e Lettere 34, Ser. II (1901), 1131–1142.

Lehmann 2012 = Reinhard G. Lehmann, 27–30–22–26 – How many letters needs an alphabet? The case of Semitic. In: De Voogt & Quack 2012, 11–52.

Lejeune 1951 = Michel Lejeune, L'Inscription Rétique de Castelcies. In: SE 21 (1951), 209–214.

Lejeune 1953 = —, Voltiomnos, Volsomnos, Volsounos. In: Bulletin de la Société Linguistique de Paris 49 (1953), 41–51.

Lejeune 1971 = —, Lepontica (Paris 1971).

Lenormant 1872 = François Lenormant, Essai sur la propagation de l'alphabet phénicien dans l'ancien monde, vol. 1 (Paris 1872).

Leonardi 1992 = Giovanni Leonardi, Le prealpi venete tra Adige e Brenta tra XIII e VI secolo a.C. In: Metzger & Gleirscher 1992, 135–144.

Lewis 1974 = R. G[eoffrey] Lewis, Catulus and the Cimbri, 102 B. C. In: Hermes 102,1 (1974), 90–109.

LexLep = Lexicon Leponticum, ed. David Stifter, Martin Braun & Michela Vignoli. URL: http://www.univie.ac.at/lexlep/ (last accessed: 1.5.2018).

Lichtenberg 1912 = R[einhold] Freiherr von Lichtenberg, Das Alter der arischen Buchstabenschrift, ihre Entwicklung und ihre ferneren Einflüsse. In: Mannus 4 (1912), 295–305.

Liliencron 1852 = Rochus von Liliencron, Zur Runenlehre. 1. Abhandlung. In: Rochus von Liliencron & Karl Müllenhoff, Zur Runenlehre (Halle 1852), 1–25.

LIR see Mancini 2009–10.

Locatelli 2002 = Daniela Locatelli, Bronzi votivi e pubblici. In: AKEO 2002, 111–119.

Looijenga & Quak 1996 = Tineke Looijenga & Arendt Quak (eds), Frisian Runes and Neighbouring Traditions (= Amsterdamer Beiträge zur älteren Germanistik 45; Amsterdam 1996).

Loose 1972 = Rainer Loose, Kimbern am Brenner? Ein Beitrag zur Diskussion des Alpenüberganges der Kimbern 102/101 v. Chr. In: Chiron 2 (1974), 232–252.

Lora & Ruta Serafini 1992 = Silvana Lora & Angela Ruta Serafini, Il gruppo Magrè. In: Metzger & Gleirscher 1992, 247–272.

Luciani 2016 = Franco Luciani, Berua, Raeticum oppidum dei Beruenses. In: Geographia antiqua 25 (2016), 99–127.

Luft 1898 = Wilhelm Luft, Studien zu den ältesten germanischen Alphabeten (Gütersloh 1898).

Lühr 2000 = Rosemarie Lühr, Die Gedichte des Skalden Egill (= Jenaer Indogermanistische Textbearbeitung 1; Dettelbach 2000).

Lund Hansen 1987 = Ulla Lund Hansen, Römischer Import im Norden. Warenaustausch zwischen dem römischen Reich und dem freien Germanien während der Kaiserzeit unter besonderer Berücksichtigung Nordeuropas (Kopenhagen 1987).

Lund Hansen 1998 = —, Zur Ausstattung und sozialen Stellung runenführender Gräber der Kaiserzeit in Südskandinavien. In: Düwel 1998, 160–179.

Lund Hansen 2003a = —, Die ersten Runen. In: Runica – Germanica – Mediaevalia, ed. Wilhelm Heizmann (= RGA Ergänzungsband 37; New York 2003), 394–398.

Lund Hansen 2003b = —, 150 years of weapon-offering finds – research and interpretations. In: Jørgensen et al. 2003, 84–89.

Lunz 1973 = Reimo Lunz, Ur- und Frühgeschichte Südtirols. Rätsel und Deutung (Bozen 1973).

Lunz 1974 = —, Studien zur End-Bronzezeit und älteren Eisenzeit im Südalpenraum (Firenze 1974).

Lunz 1981a = —, Archäologie Südtirols. Von den Jägern des Mesolithikums (um 7000 v. Chr.) bis zum Ende des Weströmischen Reiches (476 n. Chr.) (= Archäologische Forschungen in Tirol 7; Calliano 1981).

Lunz 1981b = —, Venosten und Räter. Ein historisch-archäologisches Problem (Calliano 1981).

Lunz 1985 = —, Eine neue "rätische" Inschrift aus Siebeneich. In: Scavi nella conca di Bolzano e nella Bassa Atesina 1976–1985. Ausgrabungen im Raum Bozen und Unterland 1976–1985 (Bolzano 1985), 143–147.

Lunz & Morandi 2003 = Reimo Lunz & Alessandro Morandi, Un frammento di elmo di bronzo con iscrizione retica da Settequerce – Siebeneich. In: Archeologia Classica 54 (2003), 341–349.

Lüthi 2006 = Katrin Lüthi, South Germanic runic inscriptions as testimonies of early literacy. In: Stoklund 2006, 169–182.

MacLeod 2002 = Mindy MacLeod, Bind-Runes. An Investigation of Ligatures in Runic Epigraphy (Uppsala 2002).

Macri 1996a = Martha J. Macri, Maya and Other Mesoamerican Scripts. In: Bright & Daniels 1996, 172–182.

Macri 1996b = —, Rongorongo of Easter Island. In: Bright & Daniels 1996, 183–188.

Maggiani 2002 = Adriano Maggiani, L'alfabeto etrusco nel Veneto. In: AKEO, 55–63.

Makaev 1965 = È[nver] A. Makaev, Jazyk drevnejšix runičeskix nadpisej. Lingvističeskij i istoriko-filologičeskij analiz (Moskva 1965).

Makaev 1996 = Ènver A. Makaev, The Language of the Oldest Runic Inscriptions. A Linguistic and Historical-Philological Analysis, transl. [of Makaev 1965] by John Meredig (= Kungliga Vitterhets Historie och Antikvitets Akademiens Handlingar, filol.-filos. ser. 21; Stockholm 1996).

Malnati 2002 = Luigi Malnati, Monumenti e stele in pietra preromani in Veneto. In: AKEO, 127–138.

Malzahn 1999 = Melanie Malzahn, Das lemnische Alphabet: Eine eigenständige Entwicklung. In: SE 63 (1997 [1999]), 259–279.

Mancini 1973 = Alberto Mancini, Rivista di epigrafia italica: Retico. In: SE 41 (1973), 364–371.

Mancini 1975 = —, Iscrizioni retiche. In: SE 43 (1975), 249–306.

Mancini 1980 = —, Le iscrizioni della Valcamonica. In: Studi Urbinati di storia, filosofia e letteratura, Suppl. ling. 2 (1980), 75–167.

Mancini 1992 = —, Iscrizioni retiche e iscrizioni camune. Due ambiti a confronto. In: Quaderni del Dipartimento di Linguistica – Università di Firenze 2 (1991 [1992]), 77–113.

Mancini 1995 = —, Nuove Iscrizioni Retiche. In: Quaderni del Dipartimento di Linguistica – Università di Firenze 6 (1995), 137–153.

Mancini 1999 = —, Iscrizioni retiche: aspetti epigrafici. In: Ciurletti & Marzatico 1999, 297–333.

Mancini 2009–10 = —, Le Iscrizioni Retiche (= Quaderni del dipartimento di linguistica – Università di Firenze, Studi 8–9; Padova 2009–10).

Mancini & Prosdocimi 1976 = Alberto Mancini & Aldo L. Prosdocimi, Nota sui corni iscritti di S.Briccio di Lavagno e sul «Retico». In: 3000 anni fa a Verona, ed. Alessandra Aspes (Verona 1976), 111–122.

Mandl 2011 = Franz Mandl, Felsbilder. Österreich – Bayern: Nördliche Kalkalpen (= Anisa – Verein für alpine Forschung 4; Haus im Ennstal 2011).

Maras 2007 = Daniele F. Maras, Divinità etrusche e iconografia greca: La connotazione sessuale delle divinità solari ed astrali. In: Polifemo 7 (2007), 101–116.

Maras 2014 = —, Breve storia della scrittura celtica d'Italia. L'area Golasecchiana. In: ziχu. Studi sulla cultura celtica di Golasecca 1 (2014), 73–93.

Marchand 1959 = James Marchand, Les Gots ont-ils vraiment connu l'ecriture runique? In: Mélanges de Linguistique et de Philologie. Ferdinand Mossé in memoriam (Paris 1959), 277–291.

Marchese 1981 = Maria Pia Marchese, Sulle più antiche attestazioni del germanico. In: Quaderni Patavini di Linguistica 2 (1980/1981), 1–49.

Marchesini 2012 = Simona Marchesini, La ricezione di elementi cultuali allogeni in ambito retico: *Taranis* in Val di Fiemme (TN). In: Mode e modelli. Fortuna e insuccesso nella circolazione di cose e idee, ed. Carlo Regoli (= Officina Etruscologia 7), 177–190.

Marchesini 2013 = —, Descrizione epigrafica della lamina. In: De Simone & Marchesini 2013, 45–53.

Marchesini 2014a = —, Nuove iscrizioni retiche da Cles e Sanzeno (Trento). In: Antichi popoli delle Alpi. Sviluppi culturali durante l'età del Ferro nei territori alpini centro-orientali. Atti della giornata internazionale di studi 1 maggio 2010 Sanzeno, Trento, ed. Rosa Roncador & Franco Nicolis (Trento 2014), 127–144.

Marchesini 2014b = —, Über die rätische Inschrift aus Pfatten/Vadena im Tiroler Landesmuseum Ferdinandeum, Innsbruck. In: Wissenschaftliches Jahrbuch der Tiroler Landesmuseen 7 (2014), 202–217.

Marchesini 2015 = —, Monumenta Linguae Raeticae, with Rosa Roncador (Roma 2015).

Marek 1993 = Christian Marek, Euboia und die Entstehung der Alphabetschrift bei den Griechen. In: Klio 75 (1993), 27–44.

Marinetti 1985 = Anna Marinetti, Le iscrizioni sudpicene I: Testi (= Lingue e iscrizioni dell'Italia antica 5; Firenze 1985).

Marinetti 1987 = —, L'iscrizione retica (PID 247) da Ca' dei Cavri (Verona). In: Prima della Storia. Inediti di 10 anni di ricerche a Verona, ed. Alessandra Aspes (Verona 1987), 131–140.

Marinetti 1991 = —, Una Iscrizione Retica su un Piccolo Osso di Animale dal Maton di Castelrotto. In: Annuario Storico della Valpolicella 1990–1991 (1991), 39–42.

Marinetti 1992 = —, Documenti epigrafici da St. Lorenzen (Val Pusteria, Bolzano). In: Metzger & Gleirscher 1992, 691–700.

Marinetti 2000 = —, Le iscrizioni sui materiali da Montorio (Verona). In: Quaderni di Archeologia del Veneto 16 (2000), 74–77.

Marinetti 2002 = —, Caratteri e diffusione dell'alfabeto venetico. In: AKEO, 39–54.

Marinetti 2003 = —, Iscrizioni retiche di San Giorgio Valpolicella (VR). In: Quaderni di Archeologia del Veneto 19 (2003), 111–117.

Marinetti 2004a = —, Nuove iscrizioni retiche dall'area veronese. In: SE 70 (2004), 408–420.

Marinetti 2004b = —, Rivista di Epigraphia Italica: Venetico: Rassegna di nuove iscrizioni (Este, Altino, Auronzo, S. Vito, Asolo). In: SE 70 (2004), 389–408.

Markey 2000 = Tom Markey, Rheto-Celtic PNAKE-VITAMULATE = *BEN(N)ACOS WINDAMOLATOS. In: General Linguistics 37 (2000 [1997]), 37–40.

Markey 2001 = —, A Tale of Two Helmets: The Negau A and B Inscriptions. In: JIES 29 (2001), 69–172.

Markey 2006 = —, Early Celticity in Slovenia and at Rhaetic Magrè (Schio). In: Linguistica 46 (2006), 145–171.

Markey & Mees 2003 = Thomas L. Markey & Bernard Mees, Prestino, patronmony and the Plinys. In: ZcP 53 (2003), 116–167.

Marstrander 1925 = Carl Johan Sverdrup Marstrander, Les inscriptions des casques de Negau, Styrie. In: Symbolae Osloenses 3 (1925), 37–64.

Marstrander 1927 = —, Remarques sur les inscriptions des casques en bronze de Negau et de Watsch. In: Avhandlinger utgitt av Det Norske Videnskaps-Akademi i Oslo, hist.-filos. kl. 1926, 2 (1927), 1–26.

Marstrander 1928 = —, Om Runene og Runenavnenes Oprindelse. In: NTS 1 (1928), 85–188.

Marzatico 1992 = Franco Marzatico, Il gruppo Fritzens-Sanzeno. In: Metzger & Gleirscher 1992, 213–246.

Marzatico 1994 = —, I Reti nell'area atesina. In: Popolazioni retiche ed euganee nell'area culturale centro-alpina, ed. Franco Marzatico & Raffaele De Marinis (Milano 1994), 26–47.

Marzatico 1996 = —, Le chiavi nelle Alpi orientali fra il V–I secolo avanti Cristo: la chiave di Sanzeno o retica. In: Oltre la porta. Serrature, chiavi e forzieri dalla preistoria all'età moderna nelle Alpi orientali. Catalogo della mostra tenuta a Trento, Castello del Buonconsiglio, dal 13 luglio al 31 ottobre 1996, ed. Umberto Raffaelli (Trento 1996), 39–66.

Marzatico 1997 = —, I materiali preromani della Valle dell'Adige nel Castello del Buonconsiglio (= Patrimonio storico artistico del Trentino 21; Trento 1997).

Marzatico 1999 = —, I Reti in Trentino: il Gruppo Fritzens-Sanzeno. In: Ciurletti & Marzatico 1999, 467–504.

Marzatico 2001 = —, La seconda età del Ferro. In: Storia del Trentino, vol. 1: La preistoria e la protostoria, ed. Michele Lanzinger et al. (Bologna 2001), 479–573.

Marzatico 2012 = —, Testimonianze figurative nel bacino dell'Adige fra l'età del Bronzo e l'età del Ferro. In: Preistoria Alpina 46 (2012), 309–332.

Marzoli & Wiel Marin 2013 = Catrin Marzoli & Federica Wiel Marin, Der ausgedehnte jünger-eisenzeitliche Kultplatz von Siebeneich. Ein Vorbericht. In: Der Schlern 87 (2013), 6–39.

Mayr 1947 = Karl M. Mayr, Vorrömische Inschrift vom Putzer-Gschleier in Eppan. In: Der Schlern 21 (1947), 267.

Mayr 1950 = —, Die Inschriften der Votive von Sanzeno (1). In: Der Schlern 24 (1950), 332–336. 407–409.

Mayr 1951 = —, Die Inschriften der Votive von Sanzeno (2). In: Der Schlern 25 (1951), 30–32. 78–79. 133–135. 179–181.

Mayr 1953 = —, Rätische Votivinschrift vom Tartscherbühel bei Mals. In: Der Schlern 27 (1953), 365–367.

Mayr 1954 = —, Webstuhlgewicht mit rätischen Schriftzeichen. In: Der Schlern 28 (1954), 552–553.

Mayr 1956a = —, Räto-römischer Grabstein mit Inschrift aus Maderneid in Eppan. In: Der Schlern 30 (1956), 175–176.

Mayr 1956b = —, Hirschhornvotive aus den rätischen Bergen. In: Der Schlern 30 (1956), 245–246.

Mayr 1957a = —, Hirschhornvotive mit rätischen Inschriften aus Meclo (Mechel) am Nonsberg. In: Der Schlern 31 (1957), 230–231.

Mayr 1957b = —, Reitia-Inschrift vom Piperbühel bei Klobenstein am Ritten. In: Der Schlern 31 (1957), 275.

Mayr 1957c = —, Hirschhornvotiv mit rätischer Inschrift aus Sanzeno am Nonsberg. In: Der Schlern 31 (1957), 426–427.

Mayr 1959a = —, Die Inschrift auf dem Delphin von Sanzeno. Ein Erstversuch zu ihrer Entzifferung. In: Der Schlern 33 (1959), 397.

Mayr 1959b = —, Der Grabstein des Laseke vom Piperbühel bei Klobenstein am Ritten. In: Der Schlern 33 (1959), 469–470.

Mayr 1960a = —, Die rätischen APAN-Inschriften. In: Der Schlern 34 (1960), 389–390.

Mayr 1960b = —, Die Gürtelinschrift von Lothen in neuer Deutung. In: Der Schlern 34 (1960), 495–498.

Mayr 1961 = —, Die Göttersteine von Feltre und ihre Inschriften. In: Der Schlern 35 (1961), 359.

Mayr 1962a = —, Keltischer Grabstein von Siebeneich bei Bozen. In: Der Schlern 36 (1962), 285–286.

Mayr 1962b = —, Eine neue Steinberg-Inschrift. In: Der Schlern 36 (1962), 287.

Mayrhofer 1978 = Manfred Mayrhofer, Nachlese altpersischer Inschriften. Zu übersehenen und neugefundenen beschrifteten Objekten und zur Schriftproblematik im persischen Weltreich (= IBS Vorträge 19; Innsbruck 1978).

Mayrhofer 1979 = —, Überlegungen zur Entstehung der altpersischen Keilschrift. In: Bulletin of the School of Oriental and African Studies 42,2 (1979), 290–296.

Mayrhofer 1989 = —, Über die Verschriftung des Altpersischen. In: Historische Sprachforschung 102 (1989), 174–186.

McManus 1986 = Damian McManus, Archaizing, Orthography and the Authenticity of the Manuscript Key to the Alphabet. In: Ériu 37 (1986), 9–31.

McManus 1989 = —, Runic and Ogam Letter-names: A Parallelism. In: Sages, saints and storytellers. Celtic studies in honour of Professor James Carney, ed. Donnchadh Ó Corráin (Maynooth 1989), 144–148.

McManus 1991 = —, A Guide to Ogam (= Maynooth Monographs 4; Maynooth 1991).

Mees 1997 = Bernard Mees, A new interpretation of the Meldorf fibula inscription. In: ZfdA 126 (1997), 131–139.

Mees 1999 = —, The Celts and the Origin of the Runic Script. In: Studia Neophilologica 71 (1999), 143–155.

Mees 2000 = —, The North Etruscan Thesis of the Origin of the Runes. In: ANF 115 (2000), 33–82.

Mees 2004 = —, Runo-Gothica. The Runes and the Origin of Wulfila's Script. In: Die Sprache 43,1 (2002/2003), 55–79.

Mees 2006 = —, Runes in the First Century. In: Stoklund 2006, 201–231.

Mees 2013 = —, 'Giving' and 'making' in early runic epigraphy. In: Transactions of the Philological Society 111,3 (2013), 326–353.

Meid et al. 1971 = Wolfgang Meid, Hermann M. Ölberg & Hans Schmeja (eds), Studien zur Namenkunde und Sprachgeographie (FS Finsterwalder = IBK 16; Innsbruck 1971).

Meiser 1998 = Gerhard Meiser, Historische Laut- und Formenlehre der lateinischen Sprache (Darmstadt 1998).

Meiser 2014 = Gerhard Meiser (ed.), Etruskische Texte. Editio minor, rev. ed. with Valentina Belfiore & Sindy Kluge (= Studien zur historisch-vergleichenden Sprachwissenschaft 4; Hamburg 2014).

Méndez Dosuna 2007 = Julián Méndez Dosuna, Ex praesente lux. In: Die altgriechischen Dialekte. Wesen und Werden. Akten des Kolloquiums Frei Universität Berlin 19.–22. September 2001, ed. Ivo Hajnal (= IBS 126; Innsbruck 2007), 355–384.

Menghin 1970 = Osmund Menghin, Die Räter in Tirol. In: Frei 1970, 141–147.

Menghin 1911 = Oswald Menghin, Zur Urgeschichte des Venostenlandes. In: Mitteilungen der Anthropologischen Gesellschaft 41 (1911), 297–322.

Menghin 1914 = —, Ein umwallter La Tène-Pfahlbau am Ritten. In: Wiener Prähistorische Zeitschrift 1 (1914), 53–77.

Mentz 1937 = Arthur Mentz, Die Notae der Germanen bei Tacitus. In: Rheinisches Museum für Philologie NF 86,1 (1937), 193–205.

Mentz 1955 = —, Schrift und Sprache der Alpengermanen. In: Zeitschrift für deutsches Altertum 85 (1954/1955), 247–262.

Metzger & Gleirscher 1992 = Ingrid R. Metzger & Paul Gleirscher (eds), Die Räter/I Reti (Bozen 1992).

Meyer 1896 = Richard M. Meyer, Runenstudien I. Die urgermanischen runen. In: PBB 21 (1896), 162–184.

Michalovski 1996 = Piotr Michalovski, Mesopotamian Cuneiform – Origin. In: Bright & Daniels 1996, 33–36.

Michigan Germanic Studies 7,1 (1981) = Proceedings of the First International Symposium on Runes and Runic Inscriptions, ed. Claiborne W. Thompson (Michigan 1981).

Miller 1994 = D. Gary Miller, Ancient Scripts and Phonological Knowledge (Amsterdam/Philadelphia 1994).

Millet 1996 = N[icholas] B. Millet, The Meroitic Script. In: Bright & Daniels 1996, 84–87.

MLR see Marchesini 2015.

Molinari 1974 = Maria Vittoria Molinari, Nota sull'iscrizione dell'elmo B di Negau. In: Archivio Glottologico Italiano 59 (1974), 44–55.

Moltke 1951 = Erik Moltke, Er runeskriften opstået i Danmark? In: Fra Nationalmuseets Arbejdsmark 1951, 47–56.

Moltke 1976 = —, Runerne i Danmark og deres oprindelse (Kopenhagen 1976).

Moltke 1981 = —, The Origins of the Runes. In: Michigan Germanic Studies 7,1 (1981), 3–7.

Moltke 1985 = —, Runes and their Origin. Denmark and Elsewhere (Copenhagen 1985).

Mommsen 1853 = Theodor Mommsen, Die nordetruskischen Alphabete auf Inschriften und Münzen. In: Mittheilungen der antiquarischen Gesellschaft in Zürich 7/8 (1853), 197–260.

Mommsen 1854–85 = —, Römische Geschichte (Leipzig 1854–85).

Morandi 1982 = Alessandro Morandi, Epigraphia Italica (Roma 1982).

Morandi 1998 = —, Epigrafia camuna. Osservazioni su alcuni aspetti della documentazione. In: Revue Belge de Philologie et d'Histoire 76 (1998), 99–124.

Morandi 1999 = —, Il cippo di Castelciès nell'epigrafia retica (Roma 1999).

Morandi 2000 = —, Una breve nota a proposito di retico t'erisna/perisna. In: Preistoria Alpina 36 (2000), 69–71.

Morandi 2004 = —, Celti d'Italia, tomo II: Epigrafia e lingua dei Celti d'Italia (= Popoli e civiltà dell'Italia antica 12.2; Roma 2004).

Morris 1985 = Richard L. Morris, Northwest-Germanic *rūn-* ›rune‹. A case of homonymy with Go. *rūna* ›mystery‹. In: PBB 107 (1985), 344–358.

Morris 1988 = —, Runic and Mediterranean Epigraphy (= NOWELE Suppl. 4; Odense 1988).

Motta 2000 = Filippo Motta, La documentazione epigraphica e linguistica. In: De Marinis & Biaggio Simona 2000, 181–222.

Μπέσιος et al. 2012 = Ματθαίος Μπέσιος, Γιάννης Ζ. Τζιφόπουλος & Αντώνης Κοτσώνας (eds), Μεθωνη Πιεριας I: Επιγραφές, χαράγματα και εμπορικά σύμβολα στη γεωμετρική και αρχαϊκή κεραμική από το 'Υπόγειο' της Μεθώνης Πιερίας στη Μακεδονία (Thessaloniki 2012).

Much 1925 = Rudolf Much, Der Eintritt der Germanen in die Weltgeschichte. Kaspar Zeuss zum Gedächtnis (Sonderabdruck aus Germanistische Forschungen; Wien 1925).

Much 1932 = —, Die Gaesaten. In: Zeitschrift für deutsches Altertum 69 (1932), 17–46.

Much 1967 = — (ed.), Die Germania des Tacitus. 3rd suppl. ed. Wolfgang Lange & Herbert Jankuhn (Heidelberg 1967).

Musset 1965 = Lucien Musset, Introduction a la Runologie. En partie après les notes de Ferdinand Mossé (Paris 1965; 2nd ed. 1967).

Neckel 1929 = Gustav Neckel, Magnus Hammarström, Om runskriftens härkomst [review]. In: Deutsche Literaturzeitung 50 [NF 6],26 (1929), 1237–1239.

Neckel 1933 = —, Die Herkunft der Runen. In: Forschungen und Fortschritte 9 (1933), 293–294.

Neckel 1936 = — (ed.), Edda. Die Lieder des Codex Regius nebst verwandten Denkmälern (= Germanische Bibliothek 9; Heidelberg 1936).

Neckel 1938 = —, Die Runen. In: Acta Philologica Scandinavica 12, 102–115 (repr. in: Vom Germanentum. Ausgewählte Aufsätze und Vorträge [Leipzig 1944], 423–435).

Nedoma 1995 = Robert Nedoma, Die Inschrift auf dem Helm B von Negau. Möglichkeiten und Grenzen der Deutung norditalischer epigraphischer Denkmäler (Wien 1995).

Nedoma 1998 = —, Zur Problematik der Deutung älterer Runeninschriften – kultisch, magisch oder profan? In: Düwel 1998, 24–54.

Nedoma 2003a = —, Pietroassa – Runologisches – Sprache, Deutung, “Sitz im Leben”. In: RGA 23, 155–158.

Nedoma 2003b = —, Runennamen. In: RGA 25, 556–562.

Nedoma 2006 = —, Schrift und Sprache in den südgermanischen Runeninschriften. In: Bammesberger et al. 2006, 109–156.

Nedoma 2010 = —, Schrift und Sprache in den ostgermanischen Runeninschriften. In: NOWELE 58/59 (2010), 1–70.

Nedoma 2011 = —, Personennamen in älteren Runeninschriften auf Fibeln. In: NOWELE 62/63 (2011), 31–89.

Nichols 1996 = John D. Nichols, The Cree Syllabary. In: Bright & Daniels 1996, 599–611.

Niebuhr 1811–32 = Barthold Georg Niebuhr, Römische Geschichte (Berlin 1811–32).

Nielsen 1998 = Hans Frede Nielsen, The Linguistic Status of the Early Runic Inscriptions of Scandinavia. In: Düwel 1998, 539–555.

Nielsen 2006 = —, The Early Runic Inscriptions and Germanic Linguistics. In: Stoklund 2006, 95–114.

Nielsen 2010 = —, The Early Runic Language of Scandinavia: Proto-Norse or North-West Germanic? In: Askedal et al. 2010, 95–114.

Nielsen 1985 = Karl Martin Nielsen, Runen und Magie. Ein forschungsgeschichtlicher Überblick. In: Frühmittelalterliche Studien 19 (1985), 75–97.

Nordén 1939 = Arthur Nordén, Die Frage nach dem Ursprung der Runen im Lichte der Val Camonica-Funde. In: Berichte zur Runenforschung 1 (1939), 25–34.

Norman 1988 = K[enneth] R. Norman, The origin of Pāli and its position among the Indo-European languages. In: Journal of Pali and Buddhist Studies 1 (1988), 1–27.

Norman 1993 = —, [Review of von Hinüber 1990]. In: Journal of the Royal Asiatic Society 3,2, ser. 3 (1993), 277–281.

Nothdurfter 1979 = Johann Nothdurfter, Die Eisenfunde von Sanzeno im Nonsberg (= Römisch-germanische Forschungen 38; Mainz a. R. 1979).

Nothdurfter 1992 = —, Die Fritzens-Sanzeno-Kultur und ihre Beziehungen zur etruskischen Kultur. In: Aigner-Foresti 1992, 45–62.

Nothdurfter 2002 = —, Schlüssel – Schlüsselgriffe – Geweihvotive. In: Zemmer-Plank & Sölder 2002, 1127–1154.

Nylander 1967 = Carl Nylander, Who Wrote the Inscriptions at Pasargadae? Achaemenian Problems. III. In: Orientalia Suecana 16 (1967), 135–180.

Nyström 1997 = Staffan Nyström (ed.), Runor och ABC. Elva föreläsningar från ett symposium i Stockholm våren 1995 (= Runica et Mediævalia, Opuscula 4; Stockholm 1997).

Oberosler 2004 = Roberta Oberosler, Catalogo. Sezione V. Nel segno dei principi guerrieri, del banchetto e delle aristocrazie. 6.4; 7.3. In: Guerrieri, Principi ed Eroi fra il Danubio e il Po dalla Preistoria all'Alto Medievo, ed. Franco Marzatico & Paul Gleirscher (Trento 2004), 645–646. 657–658.

Oberziner 1883 = Giovanni Amennone Oberziner, I Reti in relazione cogli antichi abitatori d'Italia. Studi storici e archeologici (Roma 1883).

O'Connor 1996 = M[ichael] O'Connor, Epigraphic Semitic Scripts. In: Bright & Daniels 1996, 88–107.

Odenstedt 1983 = Bengt Odenstedt, The Inscription on the Meldorf Fibula. In: ZfdA 112 (1983), 153–161.

Odenstedt 1989 = —, Further Reflections on the Meldorf Inscription. In: ZfdA 118 (1989), 77–85.

Odenstedt 1990 = —, On the Origin and Early History of the Runic Script. Typology and Graphic Variation in the Older Futhark (= Acta Academiae Regiae Gustavi Adolphi 59; Uppsala 1990).

Odenstedt 1991 = —, A New Theory of the Origin of the Runic Script: Richard L. Morris's Book *Runic and Mediterranean Epigraphy*. In: Bammesberger 1991, 359–387.

Olofsson 2008 = Åke Olofsson, Early writing among ancient Vikings and today's pre-schoolers: A cognitive developmental perspective on reading acquisition.... In: Paedagogica Historica 44,1–2 (2008), 167–178.

Olsen 1903 = Magnus Olsen, Über eine in Steiermark gefundene gallische Inschrift in nord-etruskischem Alphabet. In: ZcP 4 (1903), 23–30.

Olsen 1917 = —, Om troldruner (= Fordomtima 2; Uppsala 1917).

Orgler 1866 = Flavian Orgler, Archäologische Notizen aus Süd-Tirol (= Programm des k. k. Gymnasiums zu Bozen veröffentlicht am Schlusse des Schuljahres 16 (1865/66); Bozen 1866).

Orsi 1882 = Paolo Orsi, Un ripostiglio di bronzi dell'età del Ferro trovato presso Caldano. Estratto dall'VIII. Annuario della Società degli Alpinisti Tridentini 1881–82 (Rovereto 1882).

Page 1978 = R[aymond] I. Page, Runes (London 1987).

Page 1999 = —, An Introduction to English Runes (Woodbridge ^{2}1999).

Page 2006 = —, Rune Rows: Epigraphical and Manuscript. In: Bammesberger et al. 2006, 216–232.

Pallottino 1954 = Massimo Pallottino, Testimonia Linguae Etruscae (Firenze 1954).

Pandolfini 1990 = Maristella Pandolfini, Gli alfabetari etruschi. In: Pandolfini & Prosdocimi 1990, 3–94.

Pandolfini & Prosdocimi 1990 = Maristella Pandolfini & Aldo Luigi Prosdocimi (eds), Alfabetari e insegnamento della scrittura in Etruria e nell'Italia antica (= Biblioteca di Studi Etruschi 20; Firenze 1990).

Paper 1956 = Herbert H. Paper, The Old Persian /L/ Phoneme. In: Journal of the American Oriental Society 76,1 (1956), 24–26.

Pardeller 1960 = Josef Pardeller, Ist die Birkenrute vom Piperbühel ein urzeitliches Heilgerät? In: Der Schlern 34 (1960), 404.

Parkes 1992 = M[alcolm] B. Parkes, Pause and Effect. An Introduction to the History of Punctuation in the West (Berkeley/Los Angeles 1992).

Pauli 1885 = Carl Pauli, Altitalische Forschungen, Bd 1: Die Inschriften nordetruskischen Alphabets (Leipzig 1885).

Pauli 1888 = —, Le iscrizioni di Meclo. In: Archivio Trentino 7,1 (1888), 139–150.

Pauli 1891 = —, Altitalische Forschungen, Bd 3: Die Veneter und ihre Schriftdenkmäler (Leipzig 1891).

Pauli 1894 = —, Altitalische Forschungen, Bd 2: Eine vorgriechische Inschrift von Lemnos, Abteilung 2 (Leipzig 1894).

Pedersen 1923 = Holger Pedersen, Runernes Oprindelse. In: Aarbøger for Nordisk Oldkyndighed og Historie 3,13,2 (1923), 37–82.

Pellegrini 1951a = Giovan Battista Pellegrini, Osservazioni sulle nuove iscrizioni nordetrusche di Sanzeno. In: AAA 45 (1951), 303–329.

Pellegrini 1951b = —, L'iscrizione del cinturone di Lothen. In: Cultura Atesina 5 (1951), 11–15.

Pellegrini 1954a = —, [Review of Pallottino 1954]. In: SE 23 (1954), 461–464.

Pellegrini 1954b = —, Noterelle epigrafico-linguistiche. In: AAA 48 (1954), 419–431.

Pellegrini 1959 = —, Origine e diffusione degli alfabeti preromani nell'Italia superiore. In: Spina e l'Etruria padana. Atti del primo convegno di studi etruschi (= SE suppl. to vol. 25; Firenze 1959), 181–196.

Pellegrini 1964 = —, Tra prelatino e latino nell'Italia superiore. In: Arte e civiltà romana nell'Italia settentrionale dalla republica alla tetrarchia. Catalogo (Bologna 1964), 71–79.

Pellegrini 1969 = —, Popoli Preromani nelle Alpi Orientali. In: Alpes Orientales V. Acta quinti conventus de ethnographia Alpium Orientalium tractantis, ed. Niko Kuret & Milko Matičetov (Ljubljana 1969), 37–54.

Pellegrini 1985 = —, Reti e Retico. In: L'Etrusco e le Lingue dell'Italia Antica. Atti del Convegno della Società Italiana di Glottologia, Pisa, 8 e 9 dicembre 1984, ed. Adriana Quattordio Moreschini (Pisa 1985), 95–128.

Pellegrini & Prosdocimi 1967 = Giovan Battista Pellegrini & Aldo Luigi Prosdocimi, La lingua venetica (Padova 1967).

Pellegrini & Sebesta 1965 = Giovanni Battista Pellegrini & Carlo Sebesta, Nuove Iscrizioni Preromane da Serso (Pèrgine). In: Studi Trentini di Scienze Storiche 44 (1965), 3–33.

Pellegrini 1918 = Giuseppe Pellegrini, Magrè (Vicenza). – Tracce di un abitato e di un santuario, corna di cervo iscritte ed altre reliquie di una stipe votiva preromana, scoperte sul colle del Castello. In: NotScav (1918), 169–207.

Perini 1965 = Renato Perini, Risultati dello scavo di una capanna dell'orizzonte retico nei Montesei di Serso (Pergine Valsugana – Trentino). In: Studi Trentini di Scienze Naturali, Sez. B, 42,2 (1965), 148–183.

Perini 1971 = —, Ciaslir del Monte Ozol (Valle di Non). Scavo 1968. In: Studi Trentini di Scienze Naturali, Sez. B, 47,2 (1970–1971), 150–234.

Perini 1978 = —, 2000 anni di vita sui Montesei di Serso. Mostra archeologica, Pergine – 1978 – Trento (Trento 1978).

Perini 2002 = —, Il Ciaslir del monte Ozol, Revò-Romallo (Valle di Non, Trentino). In: Zemmer-Plank & Sölder 2002, 763–769.

Petrie 1906 = W. M. Flinders Petrie, Researches in Sinai (London 1906).

Pfiffig 1963 = A[mbros] J. Pfiffig, War die erste Schrift der Etrusker eine Silbenschrift? In: Kadmos 2,2 (1963), 142–149.

Pichler 1880 = Fritz Pichler, Etruskische Reste in Steiermark und Kärnten. In: Mittheilungen der k.-k. Central-Commission zur Erforschung und Erhaltung der Kunst- und historischen Denkmale NF 6 (1880), 33–60.

PID see Conway et al. 1933; unless otherwise stated, the acronym refers to vol. II.

Pisani 1935 = Vittore Pisani, La lingua degli antichi Reti. In: AAA 30 (1935), 91–108.

Pisani 1966 = —, Italische Alphabete und germanische Runen. In: Zeitschrift für vergleichende Sprachforschung NF 80 (1966), 199–211.

Pittioni 1937 = Richard Pittioni, Zur Frage der Echtheit des Knochenpfriemens vom Maria-Saaler-Berg (with an addendum by Josef Gangl). In: NTS 8 (1937), 460–469.

Pittioni 1942 = —, Zur Frage nach der Herkunft der Runen und ihrer Verankerung in der Kultur der europäischen Bronzezeit. In: PBB 65 (1942), 373–384.

Poggi 1879 = Vittorio Poggi, Contribuzioni allo studio dell'epigrafia etrusca. In: Giornale Ligustico di Archeologia, Storia e Belle Arti 6 (1879), 71–92. 245–318.

Polomé 1991 = E[dgar] Polomé, The Names of the Runes. In: Bammesberger 1991, 421–438.

Powell 1991 = Barry B. Powell, Homer and the Origin of the Greek Alphabet (Cambridge 1991).

Powell 2009 = —, Writing. Theory and History of the Technology of Civilization (Malden, Mass. 2009).

Priese 1973 = Karl-Heinz Priese, Zur Entstehung der meroitischen Schrift. In: Sudan im Altertum. 1. Internationale Tagung für meroitische Forschungen in Berlin 1971, ed. Fritz Hinze (= Meroitica 1; Berlin 1973), 273–299.

Prosdocimi 1971 = Aldo Luigi Prosdocimi, Note di epigrafia retica. In: Meid et al. 1971, 15–46.

Prosdocimi 1978 = —, [Appendice] L'alfabeto (venetico) delle iscrizioni di Idria (Is 1, 2, 3) e gli alfabeti delle iscrizioni di Negau (A-B) e Vače. In: Aldo Luigi Prosdocimi & Piergiuseppe Scardigli, Negau. In:

Italia linguistica nuova ed antica. Studi linguistici in memoria di Oronzo Parlangèli, ed. Vittore Pisani & Ciro Santoro (Galatina 1976), 179–229 [203–229].

Prosdocimi 1983 = —, Puntazione sillabica e insegnamento della scrittura nel venetico e nelle fonti etrusche. In: AIΩN 5 (1983), 75–126.

Prosdocimi 1985 = —, L'origine delle rune come questione di trasmissione di alfabeti. In: Studi linguistici e filologici per Carlo Alberto Mastrelli, ed. Luciano Agostiniani et al. (Pisa 1985), 387–399.

Prosdocimi 1986 = —, Contatti di lingue nella Decima Regio, parte nordorientale. In: Aquileia nella "Venetia et Histria" (= Antichità Altoadriatiche 28; Udine 1986), 15–42.

Prosdocimi 1988 = —, La lingua. In: I Veneti Antichi. Lingua e cultura, ed. Giulia Fogolari & Aldo Luigi Prosdocimi (Padova 1988), 221–440.

Prosdocimi 1990 = —, Insegnamento e apprendimento della scrittura nell'Italia antica. In: Pandolfini & Prosdocimi 1990, 155–301.

Prosdocimi 2002 = —, Trasmissioni alfabetiche e insegnamento della scrittura. In: AKEO 2002, 25–38.

Prosdocimi 2003 = —, Sulla formazione dell'alfabeto runico. Promessa di novità documentali forse decisive. In: Corona Alpium II. Miscellanea di studi in onore di Carlo Alberto Mastrelli (Firenze 2003), 427–440.

Pulgram 1958 = Ernst Pulgram, The tongues of Italy. Prehistory and history (Cambridge, Mass. 1958).

Quak 1996 = Arend Quak, Noch einmal die Latein-These. In: Looijenga & Quak 1996, 171–179.

Rageth 1992 = Jürgen Rageth, Zur Eisenzeit im Alpenrheintal. In: Metzger & Gleirscher 1992, 175–211.

Ratliff 1996 = Martha Ratliff, The Pahawh Hmong Script. In: Bright & Daniels 1996, 619–624.

Rausing 1992 = Gad Rausing, On the Origin of the Runes. In: Fornvännen 87, 200–205.

Reichardt 1936 = Konstantin Reichardt, Runenkunde (Jena 1936).

Reinecke 1950 = Paul Reinecke, Der Negauer Helmfund. In: Berichte der römisch-germanischen Kommission 32 (1942 [1950]), 117–198.

Rhŷs 1914 = Sir John Rhŷs, The Celtic Inscriptions of Cisalpine Gaul (= Proceedings of the British Academy 6 [2013–2014]; London).

RIB see Collingwood & Wright 1965.

Ribezzo 1934a = Francesco Ribezzo, Sostrato mediterraneo e Lautverschiebung germanica. In: Rivista indo-greco-italica 18 (1934), 61–101.

Ribezzo 1934b = —, Note e aggiunte ai tre volumi di Conway, Whatmough, Johnson *Prae-Italic Dialects of Italy*. In: Rivista indo-greco-italica 18 (1934), 103–114.

Ribezzo 1953 = —, Giovan Battista Pellegrini, L'iscrizione del cinturone di Lothen [review]. In: Studi Etruschi 22 (1952–1953), 468–470.

Riesenberg & Kaneshiro 1960 = Saul H. Riesenberg & Shigeru Kaneshiro, A Caroline Island script. In: Smithsonian Institution Bureau of American Ethology Bulletin 173 (1960), 273–334.

RIG = Recueil des Inscriptions Gauloises, vol. I: Textes Gallo-Grecs, ed. Michel Lejeune (Paris 1985).

Risch 1970 = Ernst Risch, Die Räter als sprachliches Problem. In: Frei 1970, 127–134.

Risch 1984 = —, Die Räter als sprachliches Problem. In: Frei et al. 1984, 22–36.

Risch 1989 = —, Iscrizioni preromane («nordetrusche») nel Museo Retico a Coira. In: Atti del Secondo Congresso Internazionale Etrusco, ed. Guglielmo Maetzke (Roma 1989), 1579–1586.

Ritner 1996a = Robert K. Ritner, Egyptian Writing. In: Bright & Daniels 1996, 73–84.

Ritner 1996b = —, The Coptic Alphabet. In: Bright & Daniels 1996, 287–290.

Rix 1963 = Helmut Rix, Das etruskische Cognomen. Untersuchungen zu System, Morphologie und Verwendung der Personennamen auf den jüngeren Inschriften Nordetruriens (Wiesbaden 1963).

Rix 1968 = —, Zum Ursprung der etruskischen Silbenpunktierung. In: Münchener Studien zur Sprachwissenschaft 23 (1968), 85–104.

Rix 1983 = —, Norme e variazioni nell'ortografia etrusca. In: AIΩN 5 (1983), 127–140.

Rix 1985a = —, Schrift und Sprache. In: Die Etrusker, ed. Mauro Cristofani (Stuttgart/Zürich 1984), 210–238.

Rix 1985b = —, Das letzte Wort der Duenos-Inschrift. In: MSS 46 (1985 = FS Hoffmann III), 193–220.

Rix 1992 = —, Thesen zum Ursprung der Runenschrift. In: Aigner-Foresti 1992, 411–441.

Rix 1995a = —, Etruskische Personennamen. In: Eichler et al. 1995, 719–724.

Rix 1995b = —, Römische Personennamen. In: Eichler et al. 1995, 724–732.

Rix 1997 = —, Germanische Runen und venetische Phonetik. In: Vergleichende Germanische Philologie und Skandinavistik (FS Werner), ed. Thomas Birkmann et al. (Tübingen 1997), 231–248.

Rix 1998 = —, Rätisch und Etruskisch (= IBS Vorträge 68; Innsbruck 1998).

Rix 2000 = —, Osservazioni preliminari ad un'interpretazione dell'Aes Cortonense. In: Incontri Linguistici 23 (2000), 11–31.

Rix 2002 = —, Sabellische Texte. Die Texte des Oskischen, Umbrischen und Südpikenischen (Heidelberg 2002).

Rix 2004 = —, Etruscan. In: The Cambridge Encyclopaedia of the World's Ancient Languages, ed. Roger D. Woodard (Cambridge 2004), 943–966.

Roberti 1950 = Giacomo Roberti, Deposito di bronzetti zoomorfi con iscrizioni nordetrusche rinvenuto a Sanzeno. In: Studi Trentini di Scienze Storiche 29,3 (1950), 171–186.

Robertson 2004 = John S. Robertson, The possibility and actuality of writing. In: Houston 2004a, 16–38.

Robertson 2012 = —, How the Germanic Futhark Came from the Roman Alphabet. In: Futhark 2 (2011/2012), 7–25.

Rosenfeld 1956 = Hellmut Rosenfeld, Die Inschrift des Helms von Negau. In: ZfdA 86 (1955/1956), 241–265.

Rossi forthc. = Adriano V. Rossi, Once again on DB/AE L and DB/OP IV 89–92. In: Achaimenidika 1.

Rossi 1672 = Andrea Rossi, Note overo memorie del museo del Conte Lodovico Moscardo, 2nd ext. ed. (Verona 1672).

Rubio 2006 = Gonzalo Rubio, Writing in Another Tongue: Alloglottography in the Ancient Near East. In: Margins of Writing, Origins of Cultures, ed. Seth L. Sanders (= University of Chicago Oriental Institute Seminars 2; Chicago 2006).

Rüger 1998 = Christoph Bernhard Rüger, Lateinische Schriftlichkeit im römischen Grenzgebiet gegen die Germanen. In: Düwel 1998, 357–375.

Runenprojekt Kiel = Sprachwissenschaftliche Datenbank der Runeninschriften im älteren Futhark, ed. Edith Marold et al. URL: http://www.runenprojekt.uni-kiel.de/ (last accessed: 1.5.2018).

Ruta Serafini 2002a = Angela Ruta Serafini, Magrè. In: Zemmer-Plank & Sölder 2002, 257–258.

Ruta Serafini 2002b = —, Trissino. In: Zemmer-Plank & Sölder 2002, 259–260.

Saenger 1997 = Paul Saenger, Space Between Words. The Origins of Silent Reading (Stanford 1997).

Salin 1904 = Bernhard Salin, Die altgermanische Thierornamentik. Typologische Studie über germanische Metallgegenstände aus dem IV. bis IX. Jahrhundert, nebst einer Studie über irische Ornamentik (repr. Leipzig 1981).

Salomon 2006 = Corinna Salomon, Das Problem des Pfluges. 100 Jahre Wort- und Sachgeschichte (MA thesis Wien 2006).

Salomon 2017 = —, Zu Varianten von Pi und Tau in rätischen Inschriften. In: Die Sprache 51,2 (2014/2015 [2017]), 237–263.

Salomon forthc. = —, Thesaurus Inscriptionum Raeticarum – New inscriptions and readings. In: Die Sprache 52,1.

Salomon 1996a = Richard G. Salomon, South Asian Writing Systems. In: Bright & Daniels 1996, 371–372.

Salomon 1996b = —, Brahmi and Karoshthi. In: Bright & Daniels 1996, 373–383.

Salomon 1998 = Indian Epigraphy. A Guide to the Study of Inscriptions in Sanskrit, Prakrit, and the Other Indo-Aryan Languages (New York/Oxford 1998).

Salzani 1978 = Luciano Salzani, Un ritrovamento dell'età del ferro presso Castelrotto. In: Bolletino del Museo Civico di Storia Naturale di Verona 5 (1978), 515–522.

Salzani 1984 = —, Il territorio veronese durante il I millennio a.C. In: Il Veneto nell'antichità. Preistoria e protostoria II, ed. Alessandra Aspes (Verona 1984), 778–808.

Salzani 2003 = —, S. Ambrogio di Valpolicella. Nota preliminare sui rinvenimenti protostorici in località Casaletti di S. Giorgio. In: Quaderni di Archeologia del Veneto 19 (2003), 95–101.

Sampson 1985 = Geoffrey Sampson, Writing Systems. A linguistic introduction (London 1985).

Sanders 2004 = Seth L. Sanders, What was the Alphabet for? The Rise of Written Vernaculars and the Making of Israelite National Literature. In: Maarav 11,1 (2004), 25–56.

Sanjian 1996 = Avedis K. Sanjian, The Armenian Alphabet. In: Bright & Daniels 1996, 356–363.

Sanness Johnsen 1974 = Ingrid Sanness Johnson, Den runologiske plassering av innskriften fra Caistor-by-Norwich. In: ANF 89 (1974), 30–43.

Satzinger 2002 = Helmut Satzinger, Syllabic and Alphabetic Script, or the Egyptian Origin of the Alphabet. In: Aegyptus 82,1–2 (2002), 15–26.

Scancarelli 1996 = Janine Scancarelli, Cherokee Writing. In: Bright & Daniels 1996, 587–592.

Scancarelli 2005 = —, Cherokee. In: Native languages of the Southeastern United States, ed. Heather K. Hardy & Jeannine Scancarelli (Lincoln/London 2005).

Scardigli 1993 = Piergiuseppe Scardigli, Zur Herkunft der Runenschrift aus der nordetruskischen Schrift. In: Die Etrusker und Europa. Ausstellungskatalog Altes Museum Berlin 28.2.–31.5.1993 (München 1993).

Scardigli 1994 = —, Der Weg zur deutschen Sprache. Von der indogermanischen bis zur Merowingerzeit (Bern 1994).

Scardigli 1998 = —, Gotische Schrift. In: RGA 12 (1998), 455–458.

Schäferdiek 2007 = K[nut] Schäferdiek, Wulfila. In: RGA 34 (2007), 318–321.

Scheungraber 2014 = Corinna Scheungraber, Zur Keltizität des Personennamen Essimnus. In: In Fontibus Veritas (FS Anreiter), ed. Gerhard Rampl et al. (Innsbruck 2014), 555–573.

Schindler 1998 = Martin Peter Schindler, Der Depotfund von Albedo TI und die Bronzedepotfunde des Alpenraums vom 6. bis zum Beginn des 4. Jh. v.Chr. [= Antiqua 30; Basel 1998).

Schirmeisen 1911 = Karl Schirmeisen, Buchstabenschrift, Lautwandel, Göttersage und Zeitrechnung. In: Mannus 3 (1911), 97–120. 255–278.

Schlottig 1938 = Kurt Helmut Schlottig (ed.), Beiträge zur Runenkunde und nordischen Sprachwissenschaft. Gustav Neckel zum 60. Geburtstag (Leipzig 1938).

Schmandt-Besserat 1981 = Denise Schmandt-Besserat, From Tokens to Tablets: A Re-evaluation of the So-called "Numerical Tablets". In: Visible Language 15,4 (1981), 321–344.

Schmeja 1968 = Hans Schmeja, Der Mythos von den Alpengermanen (= Arbeiten aus dem Institut für vergleichende Sprachwissenschaft 8; Wien 1968).

Schmeja 1996 = —, Vordeutsche Schriftdenkmäler in Tirol: die 'rätischen' Inschriften. In: Literatur und Sprache in Tirol. Von den Anfängen bis zum 16. Jahrhundert. Akten des 3. Symposiums der Sterzinger Osterspiele (10.–12. April 1995), ed. Michael Gebhardt & Max Siller (Innsbruck 1996), 13–24.

Schmid-Sikimić 2000 = Biljana Schmid-Sikimić, An den Wegen über die Alpen. Minusio und Mesocco: Referenzorte der älteren Eisenzeit in der Südschweiz. In: De Marinis & Biaggio Simona 2000, 215–243.

Schmidt et al. 2011 = Christoph G. Schmidt, Robert Nedoma & Klaus Düwel, Die Runeninschrift auf dem Kamm von Frienstedt, Stadt Erfurt. In: Die Sprache 49,2 (2010/2011), 123–186.

Schmitt 1963 = Alfred Schmitt, Die Bamum-Schrift (Wiesbaden 1963).

Schmitt 1981 = Rüdiger Schmitt, I. Forschungsbericht. Altpersisch-Forschung in den Siebzigerjahren. In: Kratylos 25 (1980 [1981]), 1–66.

Schmitt 1990a = —, Epigraphisch-exegetische Noten zu Dareios' Bīsutūn-Inschriften (=Sitzungsberichte der ÖAW, Phil.-hist. Kl. 561; Wien 1990).

Schmitt 1990b = —, Bisotun iii. Darius's Inscriptions. In: Encyclopædia Iranica IV (1990), 299–305.

Schmitt 1991 = —, The Bisitun Inscription of Darius the Great. Old Persian Text (= Corpus Inscriptionum Iranicarum I: The Old Persian Inscriptions I; London 1991).

Schmitt 1998 = —, Neue Lesungen des Bīsutūn-Textes. In: Studia iranica et alanica (FS Abaev; Rome 1998), 447–464.

Schmitt 2009 = —, Die altpersischen Inschriften der Achaimeniden (Wiesbaden 2009).

Schneider 1956 = Karl Schneider, Die germanischen Runennamen. Versuch einer Gesamtdeutung (Meisenheim am Glan 1956).

Schönberger 1950 = Matthias Schönberger, Sinnzeichen und Runen in den Ostalpen. In: Jahrbuch des österreichischen Alpenvereins 75 (1950), 113–121.

Schrodt 1975 = Richard Schrodt, Die Eibenrune und idg. *ei* im Germanischen. In: ZfdA 104 (1975), 171–179.

Schulte 2006 = Michael Schulte, Älteres und jüngeres Fuþark – Phonologische Aspekte der Reduktion des Runenalphabets. In: Bammesberger et al. 2006, 414–433.

Schulte 2015 = —, Runology and historical sociolinguistics: On runic writing and its social history in the first millennium. In: Journal of Historical Sociolinguistics 1,1 (2015), 87–110.

Schumacher 1992 = Stefan Schumacher, Die rätischen Inschriften. Geschichte und heutiger Stand der Forschung (= IBS Sonderheft 79; Innsbruck 1992).

Schumacher 1993 = —, Das Etruskische und die ‘rätischen’ Inschriften aus der Sicht der Sprachwissenschaft und Epigraphik. In: Helvetia Archaeologica 24 (1993), 33–50.

Schumacher 1994a = —, Neufunde ‘rätischer’ Inschriften. In: SE 59 (1994), 307–320.

Schumacher 1994b = —, Neue ‘rätische’ Inschriften aus dem Vinschgau. In: Der Schlern 68 (1994), 295–298.

Schumacher 1998a = —, Sprachliche Gemeinsamkeiten zwischen Rätisch und Etruskisch. In: Der Schlern 72,2 (1998), 90–114.

Schumacher 1998b = —, Zur Lesung der Inschrift Steinberg 8 (ST-8). In: Wort – Text – Sprache und Kultur (FS Schmeja), ed. Peter Anreiter & Hermann M. Ölberg (= IBK Sonderheft 103; Innsbruck 1998), 167–177.

Schumacher 2004 = —, Die rätischen Inschriften. Geschichte und heutiger Stand der Forschung, 2nd ext. ed. (= IBK Sonderheft 121; Innsbruck 2004).

Schumacher 2007 = —, Val Camonica, Inschriften. In: RGA 35 (2007), 334–337.

Schumacher 2009 = —, Eine neue venetische Inschrift aus Ampass bei Hall in Tirol. In: *h2nr (FS Eichner), ed. Robert Nedoma & David Stifter (= Die Sprache 48; Wien 2009), 201–208.

Schumacher 2016 = —, Rätische Inschriften im Pürschlinggebiet bei Unterammergau. In: Der spätlatène- und frühkaiserzeitliche Opferplatz auf dem Döttenbichl südlich von Oberammergau, vol. 3, ed. Werner Zanier (= Münchner Beiträge zur Vor- und Frühgeschichte 62,3; München 2016), 821–827.

Schürr 2001 = Diether Schürr, Zur Schrift und Sprache der Inschrift auf Helm B von Negau: ‘Germanizität’ und inneralpine Bezüge. In: Sprachwissenschaft 26 (2001), 205–231.

Schürr 2003a = —, Die rätische Inschrift der Situla in Providence: Neulesung und Deutung. In: SE 69 (2003), 243–255.

Schürr 2003b = —, Esimne: Ein alpiner Name und seine Verbreitung. In: BzN NF 38,4 (2003), 379–399.

Schwink 2000 = Frederick W. Schwink, The Velar Nasal in the Adaptation of the Runic Alphabet. In: American Journal of Linguistics and Literatures 12 (2000), 235–249.

Scragg 1974 = D[onald] G. Scragg, A History of English Spelling (New York 1974).

Sebesta 1981 = Carlo Sebesta, Iscrizione retica su osso dalla Valle di Fiemme. In: Studi Trentini di Scienze Storiche 60,2 (1981), 193–204.

Seebold 1981 = Elmar Seebold, Etymologie. Eine Einführung am Beispiel der deutschen Sprache (München 1981).

Seebold 1986 = —, Was haben die Germanen mit den Runen gemacht? Und wieviel haben sie davon von ihren antiken Vorbildern gelernt? In: Germanic Dialects. Linguistic and Philological Investigations, ed. Bela Brogyanyi & Thomas Krömmelbein (Amsterdam/Philadelphia 1986), 525–583.

Seebold 1991 = —, Die Herkunft der Runenschrift. In: FS Grønvik, ed. John Ole Askedal (Oslo 1991), 16–32.

Seebold 1994 = —, Die sprachliche Deutung und Einordnung der archaischen Runeninschriften. In: Düwel 1994, 56–94.

Seebold 2011= —, Typologische Chronologie der älteren nordischen Runen. In: NOWELE 62/63 (2011), 91–168.

Segert 1963 = Stanislav Segert, Altaramäische Schrift und Anfänge des griechischen Alphabets. In: Klio 41 (1963), 38–57.

Seibt 2011 = Werner Seibt, Wo, wann und zu welchem Zweck wurde das georgische Alphabet geschaffen? In: Seibt & Preiser-Kapeller 2011, 83–90.

Seibt & Preiser-Kapeller 2011 = Die Entstehung der kaukasischen Alphabete als kulturhistorisches Phänomen. Referate des Internationalen Symposions (Wien, 1.–4. Dezember 2005), ed. Werner Seibt & Johannes Preiser-Kapeller (= Denkschriften der ÖAW, Phil.-hist. Kl. 430 = Veröffentlichungen zur Byzanzforschung 28; Wien 2011).

Senner 1989 = Wayne M. Senner (ed.), The Origins of Writing (Lincoln/London 1989).

Sethe 1939 = Kurt Sethe, Vom Bilde zum Buchstaben. Die Entstehungsgeschichte der Schrift (Leipzig 1939).

Ševčenko 1971 = Ihor Ševčenko, On the Social Background of Cyril and Methodius. In: Studia Paleoslovenica 1971, 341–351.

Sievers 1891 = Eduard Sievers, Runen und Runeninschriften. In: Grundriss der germanischen Philologie, ed. Hermann Paul, vol. 1 (Strassburg 1891), 238–250.

Singler 1996 = John Victor Singler, Scripts of West Africa. In: Bright & Daniels 1996, 593–598.

Skeat 1890 = Walter W. Skeat, The Order of the Letters in the Runic “Futhork”. In: The Academy 38 (Nov. 22, 1890), 477.

Sölder 1992 = Wolfgang Sölder, Überlegungen zur ‘Zweigschossigkeit’ rätischer Häuser. In: Metzger & Gleirscher 1992, 383–399.

Sperber 1992 = Lothar Sperber, Zur Spätbronzezeit im alpinen Inn- und Rheintal. In: Metzger & Gleirscher 1992, 53–90.

Spurkland 2005 = Terje Spurkland, Norwegian Runes and Runic Inscriptions (Woodbridge 2005).

Spurkland 2010 = —, The Older Fuþark and Roman Script Literacy. In: Futhark 1 (2010), 65–84.

Stadler 1992 = Harald Stadler, Die eisenzeitlichen Gräber im Virgental und die Frage der Ostausdehnung der Fritzens-Sanzeno-Gruppe. In: Metzger & Gleirscher 1992, 551–565.

Steblin-Kamenskij 1962 = Michail Ivanovič Steblin-Kamenskij, Noen fonologiske betraktninger over de eldre runer. In: ANF 77 (1962), 1–6.

Steinbauer 1999 = Dieter H. Steinbauer, Neues Handbuch des Etruskischen (St. Katharinen 1999).

Steiner 1999 = Hubert Steiner, Ein eisenzeitlicher Neufund vom Tartscher Bichl im oberen Vinschgau. In: Der Schlern 73 (1999), 306–325.

Steiner 2002 = —, Das jüngereisenzeitliche Gräberfeld von Moritzing, Gemeinde Bozen (Südtirol). In: Tecchiati 2002, 155–358.

Stephens 1884 = George Stephens, Handbook of the Old-Northern Runic Monuments of Scandinavia and England (Edinburgh/Copenhagen 1884).

Stifter 2009 = David Stifter, Vernacular Celtic Writing Traditions in the East-Alpine Region in the Iron-Age Period? In: Interpretierte Eisenzeiten. Fallstudien, Methoden, Theorie. Tagungsbeiträge der 3. Linzer Gespräche zur interpretativen Eisenzeitarchäologie, ed. Raimund Karl & Jutta Leskovar (= Studien zur Kulturgeschichte von Oberösterreich 22; Linz 2009), 361–372.

Stifter 2010 = —, Lepontische Studien: *Lexicon Leponticum* und die Funktion von *san* im Lepontischen. In: Akten des 5. Deutschsprachigen Keltologensymposiums Zürich, 7.–10. September 2009, ed. Karin Stüber et al. (= Keltische Forschungen. Allgemeine Reihe 1; Wien 2010), 361–376.

Stifter 2013a = —, Two continental Celtic studies: The vocative of Gaulish, and Essimnus. In: Continental Celtic Word Formation. The Onomastic Data, ed. Juan Luis García Alonso (Salamanca 2013), 99–122.

Stifter 2013b = —, Vocative for nominative. In: Vocative! Addressing between System and Performance, ed. Barbara Sonnenhauser & Patrizia Noel Aziz Hanna (=Trends in Linguistics. Studies and Monographs 26; Berlin 2013), 43–85.

Stifter 2015 = —, Keltische Schriftsysteme – Die lepontische Schrift: Entwicklung in Interaktion. In: Historical Linguistics 128,1 (2015), 236–259.

Stifter forthc. = —, Ancient Celtic Epigraphy and its Interface with Classical Epigraphy. In: Proceedings of the XVth International Congress of Greek and Latin Epigraphy Vienna.

Stoklund 1985 = Marie Stoklund, De nye runefund fra Illerup ådal og en nyfundet runeindskrift fra Vimose. In: Danske Studier 80 (1985), 5–24.

Stoklund 1987 = —, New inscriptions from Illerup and Vimose. In: Runor och runinskrifter. Föredrag vid Riksantikvarieämbetets och Vitterhetsakademiens symposium 8–11 september 1985 (= Kungl. Vitterhets Historie och Antikvitets Akademien, Konferenser 15; Stockholm 1987), 281–300.

Stoklund 1994 = —, Von Thorsberg nach Haithabu. Ein Überblick über die dänischen Inschriften unter besonderer Berücksichtigung der möglichen Spuren von kulturellen und sprachlichen Kontakten nach außen. In: Düwel 1994, 95–116.

Stoklund 1995 = —, Die Runen der römischen Kaiserzeit. In: Himlingøje – Seeland – Europa. Ein Gräberfeld der jüngeren römischen Kaiserzeit auf Seeland, seine Bedeutung und internationalen Beziehungen, ed. Ulla Lund Hansen & Birger Storgaard (København 1995), 317–346.

Stoklund 2003 = —, The first runes – the literary language of the Germani. In: Jørgensen et al. 2003, 172–179.

Stoklund et al. 2006 = Marie Stoklund, Michael Lerche Nielsen, Bente Holmberg & Gillian Fellowes-Jensen (eds), Runes and their Secrets. Studies in Runology (Copenhagen 2006).

Stolz 1892 = Friedrich Stolz, Die Urbevölkerung Tirols. Ein Beitrag zur Palaeo-Ethnologie von Tirol, 2nd rev. ed. (Innsbruck 1892).

Stroud 1989 = Ronald S. Stroud, The Art of Writing in Ancient Greece. In: Senner 1989, 103–119.

Stüber et al. 2009 = Karin Stüber, Thomas Zehndner & Ulla Remmer, Indogermanische Frauennamen (Heidelberg 2009).

Sulzer 1855 = Giuseppe Giorgio Sulzer, Dell'origine e della natura dei dialetti comunemente chiamati romanici. Messi a confronto coi dialetti consimili esistenti nel Tirolo (Diss. Trento 1855).

Swiggers 1996a = Pierre Swiggers, The Iberian Scripts. In: Bright & Daniels 1996, 108–112.

Swiggers 1996b = —, Transmission of the Phoenician Script to the West. In: Bright & Daniels 1996, 261–270.

Swiggers & Jenniges 1996 = Pierre Swiggers & Wolfgang Jenniges, The Anatolian Alphabets. In: Bright & Daniels 1996, 281–287.

Sydow 1989 = Wilhelm Sydow, Die Halbhöhle am Schneidjoch, Gem. Brandenberg, Tirol – ein Quellheiligtum? In: Archaeologia Austriaca 73 (1989), 67–74.

Sznycer 1975 = Maurice Sznycer, Les inscriptions protosinaïtiques. In: Le Déchiffrement des Écritures et des Langues. Colloque du XXIX^{e} congrès des orientalistes – Paris, Juillet 1973, ed. Jean Leclant (Paris 1975), 85–93.

Taylor 1879 = Isaac Taylor, Greeks and Goths: A Study on the Runes (London 1879).

Taylor 1883 = —, The Alphabet: An Account of the Origin and Development of Letters (London 1883).

Taylor & Taylor 1995 = Insup Taylor & M. Martin Taylor, Writing and Literacy in Chinese, Korean and Japanese (= Studies in Written Language and Literacy 3; Amsterdam/Philadelphia 1995).

Tecchiati 2002 = Umberto Tecchiati (ed.), Der Heilige Winkel/Il Sacro Angolo. Der Bozner Talkessel zwischen der Späten Bronzezeit und der Romanisierung (13.–1. Jh. v. Chr.)/La conca di Bolzano tra la tarda età del bronzo e la romanizzazione (XIII–I sec. a. C.) (Bozen/Wien 2002).

Testen 1996 = David D. Testen, Old Persian Cuneiform. In: Bright & Daniels 1996, 134–137.

Thrane 1998 = Henrik Thrane, An Archaeologist's View of Runes. In: Düwel 1998, 219–227.

Thurneysen 1933 = Rudolf Thurneysen, Italisches. I. Die etruskischen Raeter. In: Glotta 21 (1933), 1–7.

Tibiletti Bruno 1978 = Maria Grazia Tibiletti Bruno, Camuno e dialetti retico e pararetico. In: Lingue e Dialetti dell'Italia Antica, ed. Aldo Luigi Prosdocimi (= Popoli e Civiltà dell'Italia Antica 6; Roma 1978), 209–255.

Tibiletti Bruno 1979 = —, Tradizioni linguistiche e culturali a contatto. Reti e Romani. In: Congresso romanità del Trentino e di zone limitrofe, vol. 2, ed. Adriano Rigotti (= Atti della Accademia Roveretana degli Agiati, Classe di scienze umane, di lettere ed arti 229,6,19; Rovereto 1979), 115–134.

Tibiletti Bruno 1990 = —, Nuove iscrizioni camune. In: Quaderni Camuni 49/50 (1990), 33–171.

Tibiletti Bruno 1992 = —, Gli alfabetari. In: Quaderni Camuni 60 (1992), 309–380.

TIR = Thesaurus Inscriptionum Raeticarum, ed. Stefan Schumacher, Corinna Salomon & Sindy Kluge. URL: http://www.univie.ac.at/raetica/wiki/ Main_Page (last accessed: 1.5.2018).

Tischer 2006 = Thomas Tischer, Eine eisenzeitliche Siedlung auf dem Burghügel zu Hörtenberg, Pfaffenhofen. In: ArchaeoTirol. Kleine Schriften 5 (2006), 213–216.

Tollini 2012 = Aldo Tollini, Symmetry and asymmetry. Chinese writing in Japan: The case of Kojiki (712). In: De Voogt & Quak 2012, 169–179.

Tomedi 2001 = Gerhard Tomedi, Zur vorgeschichtlichen Musik in Alttirol und im Südalpenraum. In: Musikgeschichte Tirols, Bd 1: Von den Anfängen bis zur frühen Neuzeit. ed. Kurt Drexler & Monika Fink (= Schlern-Schriften 315; Innsbruck 2001), 11–35.

Tomedi 2013 = —, Il luogo di culto di Demlfeld presso Ampass. In: De Simone & Marchesini 2013, 11–16.

Tomedi & Appler 2001 = Gerhard Tomedi & Hans Appler, Eine befestigte Höhensiedlung der Eisenzeit am Pirchboden ober Fritzens. In: ArchaeoTirol. Kleine Schriften 2 (2000), 124–125.

Tomlin 1988 = Roger S. O. Tomlin, The Curse Tablets. In: The Temple of Sulis Minerva at Bath, vol. II: The Finds from the Sacred Spring, ed. Barry Cunliffe (Oxford 1988), 59–269.

Torggler-Wöß 1953 = Emmy Torggler-Wöß, Die Funde vom Hochbühel bei Meran. In: Der Schlern 27 (1953), 412–415. 442–445. 507–510.

Trigger 2004 = Bruce G. Trigger, Writing systems: a case study in cultural evolution. In: Houston 2004a, 39–68.

Troeng 2003 = John Troeng, A Semitic Origin of some runes. An influential foreign presence in Denmark c. AD 200. In: Fornvännen 98 (2003), 289–305.

Tschurtschenthaler & Wein 1998 = Michael Tschurtschenthaler & Ulrike Wein, Das Heiligtum auf der Pillerhöhe und seine Beziehungen zur Via Claudia Augusta. In: Via Claudia. Neue Forschungen, ed. Elisabeth Walde (Innsbruck 1998), 227–259.

Tschurtschenthaler & Wein 2002 = —, Das Heiligtum auf der Pillerhöhe. In: Zemmer-Plank & Sölder 2002, 635–673.

Tuplin 2005 = Christopher Tuplin, Darius' Accession in (the) Media. In: Writing and Ancient Near Eastern societies (FS Millard; New York/London 2005), 217–244.

Uhlich 1999 = Jürgen Uhlich, Zur sprachlichen Einordnung des Lepontischen. In: Akten des zweiten deutschen Keltologensymposiums (Bonn, 2.–4. April 1997), ed. Stefan Zimmer et al. (= Buchreihe der ZcP 17; Tübingen 1999), 277–304.

Uhlich 2007 = —, More on the linguistic classification of Lepontic. In: Gaulois et celtique continental, ed. Pierre-Yves Lambert & George-Jean Pinault (= École pratique des hautes études. Sciences historiques et philologiques. III. Hautes études du monde gréco-romain 39; Genève 2007), 373–411.

Unseth 2016 = Peter Unseth, The international impact of Sequoyah's Cherokee syllabary. In: Written Language & Literacy 19,1 (2016), 75–93.

Untermann 1959 = Jürgen Untermann, Namenlandschaften im alten Oberitalien. In: BzN 10 (1959), 74–108. 121–159.

Untermann 1960 = —, Namenlandschaften im alten Oberitalien. In: BzN 11 (1960), 273–318.

Untermann 1961a = —, Namenlandschaften im alten Oberitalien. In: BzN 12 (1961), 1–30.

Untermann 1961b = —, Die venetischen Personennamen, vol. I: Text, vol. II: Karten (Wiesbaden 1961).

Untermann 1962 = —, Das silbenschriftliche Element in der iberischen Schrift. In: Emerita 30,2 (1962), 281–294.

Untermann 1995 = —, Die vorrömischen Personennamen der Randzonen des alten Italien. In: Eichler et al. 1995, 732–738.

Vallat 2011 = François Vallat, Darius, l'héritier légitime, et les premières Achéménides. In: Elam and Persia, ed. Javier Álvarez-Mon & Mark B. Garrison (Winona Lake, Indiana 2011), 263–284.

van der Kuijp 1996 = Leonard W. J. van der Kuijp, The Tibetan Script and Derivatives. In: Bright & Daniels 1996, 431–441.

van Dongen 2013 = Erik van Dongen, The Overland Route: Intra-Anatolia Interaction *ca*. 1000–540 BC and the Transmission of the Alphabet. In: Ancient West and East 12 (2013), 47–70.

van Langenhove 1938 = George van Langenhove, Allgemeines zur Runenlehre. In: Schlottig 1938, 7–24.

Vennemann 2006 = Theo Vennemann, Germanische Runen und phönizisches Alphabet. In: Sprachwissenschaft 34 (2006), 367–429.

Verger 1998 = Stéphane Verger, Un graffite archaïque dans l'habitat hallstattien de Montmorot (Jura, France). In: SE 64 (1998 [2001]), 265–316.

Vetter 1924 = Emil Vetter, Etruskische Wortdeutungen. In: Glotta 13 (1924), 138–149.

Vetter 1935 = —, Literaturbericht 1930–1933. Italische Sprachen. In: Glotta 23 (1935), 187–207.

Vetter 1936 = —, Die Herkunft des venetischen Punkiersystems. In: Glotta 24 (1936), 114–133.

Vetter 1939 = —, Etruskisches. Zur altetruskischen Silbeninterpunktion. In: Glotta 27 (1939), 157–162.

Vetter 1943 = —, Literaturbericht 1934–1938. Italische Sprachen. In: Glotta 30 (1943), 15–84.

Vetter 1954 = —, Literaturbericht. Italische Sprachen I. Teil. In: Glotta 33 (1954), 65–87.

Vetter 1957 = —, Die vorrömischen Felsinschriften von Steinberg in Nordtirol. In: Anzeiger der phil.-hist. Klasse der ÖAW 1957, Nr 24 (1957), 384–398.

von Friesen 1904 = Otto von Friesen, Om runskriftens härkomst (Uppsala 1904).

von Friesen 1919 = —, Runenschrift. – I. Das erste Auftreten und die Herkunft der Runenschrift. In: RGA 4 (1918/1919), 5–13.

von Friesen 1929 = —, Runes. In: Encyclopedia Britannica (14th ed.) 17 (1929), 659–664.

von Friesen 1931 = —, De senast framställda meningarna i frågan om runornas härkomst. In: ANF 47 (1931), 80–133.

von Hinüber 1990 = Oskar von Hinüber, Der Beginn der Schrift und frühe Schriftlichkeit in Indien (= Akademie der Wissenschaften und der Literatur Mainz, Abh. d. geistes- u. sozialwiss. Kl. 11; Mainz 1990).

von Merhart 1969 = Gero von Merhart, Der Depotfund von Kaltern. In: Hallstatt und Italien. Gesammelte Aufsätze zur Frühen Eisenzeit in Italien und Mitteleuropa, ed. Georg Kossack (Mainz 1969), 227–267.

von Wieser 1889 = Franz von Wieser, Neue prähistorische Funde aus Tirol. In: Mittheilungen der anthropologischen Gesellschaft in Wien 19 [NF 9] (1889), 172–173.

von Wieser 1891 = —, Die Bronze-Gefässe von Moritzing. In: Zeitschrift des Ferdinandeums für Tirol und Vorarlberg 3,35 (1891), 305–329.

Voutiras 2007 = Emmanuel Voutiras, The introduction of the alphabet. In: Christidis 2007, 266–276.

Wachter 1986 = Rudolf Wachter, Die etruskische und venetische Silbenpunktierung. In: Museum Helveticum 43,2 (1986), 111–126.

Wachter 1987 = —, Altlateinische Inschriften. Sprachliche und epigraphische Untersuchungen zu den Dokumenten bis etwa 150 v. Chr. (= European University Studies, series 15, vol. 38; Bern 1987).

Wachter 1989 = —, Zur Vorgeschichte des griechischen Alphabets. In: Kadmos 28,1 (1989), 19–78.

Wachter 1998 = —, Italien. Alphabetschriften. In: Der neue Pauly 5 (1998), 1162–1167.

Wachter 2001 = —, Non-Attic Greek Vase Inscriptions (Oxford 2001).

Walde-Psenner 1983 = Elisabeth Walde Psenner, I bronzetti figurati antichi del Trentino (= Patrimonio storico e artistico del Trentino 7; Trento 1983).

Walker & Sarbaugh 1993 = Willard Walker & James Sarbaugh, The Early History of the Cherokee Syllabary. In: Ethnohistory 40 (1993), 70–94.

Wallace 1989 = Rex Wallace, The Origins and Development of the Latin Alphabet. In: Senner 1989, 121–135.

Wallace 2008 = —, Zikh Rasna. A Manual of the Etruscan Language and Inscriptions (Ann Arbor/New York 2008).

Wallace 2013 = —, Etruscan Genitives in *-a* and *-al*. In: Multi Nominis Grammaticus (FS Nussbaum), ed. Adam I. Cooper et al. (Ann Arbor/New York 2013), 329–339.

Watt 1987 = W[illiam] C. Watt, The Byblos Matrix. In: Journal of Near Eastern Studies 46,1 (Jan. 1987), 1–14.

Weinhold 1856 = Karl Weinhold, Altnordisches Leben (Berlin 1856).

Weißbach 1911 = F[ranz] H. Weißbach, Die Keilschriften der Achämeniden (Leipzig 1911).

Werba 1983 = Chlodwig Werba, [Review of Mayrhofer 1978]. In: Wiener Zeitschrift für die Kunde Südasiens 27 (1983), 203–207.

Werba 2006 = —, mavāred-rā na-bāyad ziyād kard be joz-e ehtiyāj. (Indo-)Iranische Rekonstrukte als textkritisches Korrektiv in der Altiranistik. In: Iranistik in Europa – gestern, heute, morgen, ed. Heiner Eichner et al. (Wien 2006), 261–306.

Whatmough 1923 = Joshua Whatmough, Inscriptions of Magrè and the Raetic Dialect. In: The Classical Quarterly 17 (1923), 61–72.

Whatmough 1934 = —, The Raeti and their Language. In: Glotta 22 (1934), 27–31.

Whatmough 1944 = —, Κελτικά: Being Prolegomena to a Study of *The Dialects of Ancient Gaul*. In: Harvard Studies in Classical Philology 55 (1944), 1–85 (repr. as The Dialects of Ancient Gaul. Prolegomena and Records of the Dialects [Cambridge, Mass. 1970]).

Williams 1992 = Henrik Williams, Which came first, ᛖ or Π? In: ANF 107 (1992), 192–205.

Williams 1994 = —, The Non-Representation of Nasals before Obstruents. Spelling Convention or Phonetic Analysis? In: Knirk 1994, 217–222.

Williams 1996 = —, The Origin of the Runes. In: Looijenga & Quak 1996, 211–218.

Williams 1997 = —, The Romans and the Runes – Uses of Writing in Germania. In: Nyström 1997, 177–192.

Williams 2004 = —, Reasons for Runes. In: Houston 2004a, 262–273.

Wilser 1912 = Ludwig Wilser, Ursprung und Entwicklung der Buchstabenschrift. Eine Erwiderung auf SCHIRMEISENs Abhandlung im III. Bande des Mannus. In: Mannus 4 (1912), 123–129.

Wimmer 1874 = Ludvig F. A. Wimmer, Runeskriftens Oprindelse od Udvikling i Norden. In: Aarbøger for Nordisk Oldkyndighed og Historie 1874, 1–270.

Wimmer 1887 = —, Die Runenschrift, rev. and suppl. ed., transl. by Friedrich Holthausen (Berlin 1887).

Wingo 1972 = E[lvis] Otha Wingo, Latin Punctuation in the Classical Age (The Hague 1972).

Wirth 1936 = Herman Wirth, Die Heilige Urschrift der Menschheit: Symbolgeschichtliche Untersuchungen diesseits und jenseits des Nordatlantik (Leipzig 1931–1936).

Woodard 1997 = Roger D. Woodard, Greek Writing from Knossos to Homer: An Interpretation of the Origin of the Greek Alphabet and the Continuity of Ancient Greek Literacy (New York/Oxford 1997).

Woodard 2014 = —, The Textualization of the Greek Alphabet (New York 2014).

Zavaroni 2001 = Adolfo Zavaroni, L'alfabeto camuno. In: Studi Trentini di Scienze Storiche 80,4 (2001), 713–743.

Zavaroni 2004 = —, Nuove letture delle iscrizioni di Steinberg nel loro contesto religioso. In: Römisches Österreich 26 (2004), 47–69.

Zavaroni 2005 = —, Corpus Inscriptionum Camunnarum. Piancogno – Roccia delle Spade (4). URL: http://www.simbolisullaroccia.it/archivio/2005/2005-iscrizioni-zavaroni/archivio_ iscrizioni.htm# (last accessed: 1.5.2018).

Zebisch 1888 = Herbert Zebisch, Raetisch – eine iberische Sprache (Schärding 1988).

Zemmer-Plank & Sölder 2002 = Liselotte Zemmer-Plank & Wolfgang Sölder (eds), Kult der Vorzeit in der Alpen. Opfergaben – Opferplätze – Opferbrauchtum (Bozen 2002).

Ziegaus & Rix 1998 = Bernward Ziegaus & Helmut Rix, Ungewöhnliche Funde der späten Hallstattzeit aus dem Alpenvorland. In: Germania 76 (1998), 291–303.

Zusammenfassung

Die Herkunft der germanischen Runenschrift ist nach bald 150 Jahren der Forschung weiterhin ungeklärt. Während die Anfang des 20. Jahrhunderts populäre Griechisch-These heute in den Hintergrund getreten ist, halten sich die Präponenten der Latein- und der Norditalischthese die Waage: Die Latein-These ist communis opinio unter v.a. skandinavischen Runologen; die Norditalisch-These wird in erster Linie von Forschern vertreten, die mit den betreffenden norditalischen Alphabeten beschäftigt sind. Die vorliegende Arbeit setzt sich in einem theoretischen Teil mit einigen allgemein schriftgeschichtlichen Fragen in runologischem Kontext auseinander, um zu zeigen, dass die Norditalisch-These nicht a priori ausgeschlossen werden darf. Weiters wird eine umfassende Analyse des rätischen Inschriftenkorpus vorgelegt, auf deren Basis die Frage nach einer möglichen Abhängigkeit der Runenschrift von einem rätischen Alphabet diskutiert wird. Die Arbeit kommt zu dem Ergebnis, dass kein Aspekt spezifisch rätischer Schriftlichkeit zur Erklärung der Charakteristika der Runenschrift geeignet ist.

Summary

After almost 150 years of scholarship, the question of the origin of the Runic script is still not settled. While the Greek theory, popular at the beginning of the 20th century, has lost in importance, the Latin theory and the North Italic theory are championed by runologists and North Italic epigraphists, respectively. The present work is concerned, in a theoretical part, with certain questions of script history and transfer in a runological context, in order to show that the North Italic theory must not be rejected a priori. Part two consists in a comprehensive analysis of the Raetic inscription corpus, which serves as a basis for a discussion of whether the Runic script may be dependent on the Raetic one. The thesis reaches the conclusion that no aspect of specifically Raetic writing compellingly serves as a model for any aspect of Runic writing.