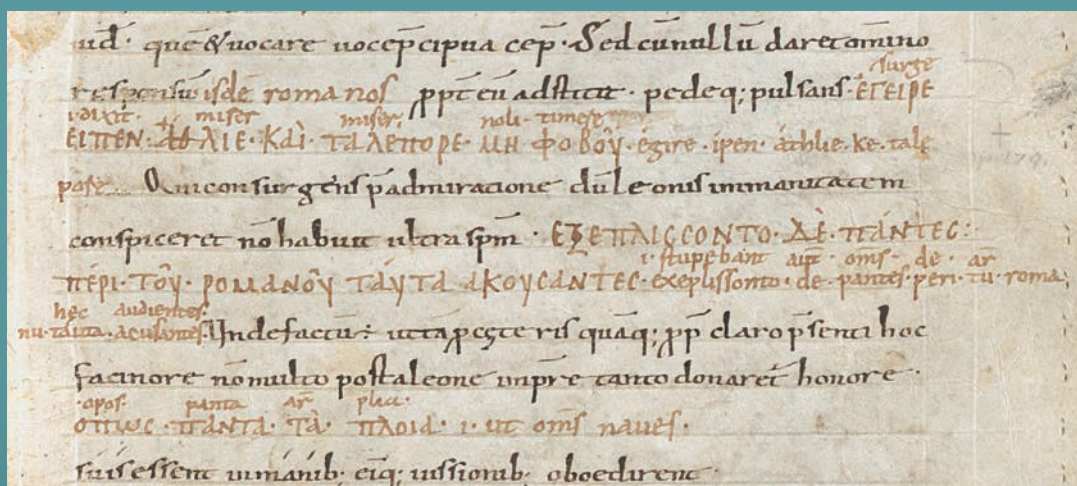


Linguistic and Cultural Aspects of Script Systems

Alessia Bauer & Daniel Petit (eds)





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Table of contents

Preface	vii
Abbreviations	ix
The Role of Graphemics and its Metalanguage: The Case of <i>Ductus</i> Paola COTTICELLI-KURRAS	1
The Greek Alphabet on the Periphery: Writing in Thracian in the Northern Aegean (6 th –4 th century BCE) Andrea SANTAMARIA & Eleonora SELVI	19
Once Again on Homeric Greek νῆδυμος: Orality and <i>scriptio continua</i> Daniel PETIT	49
Echoes of Greek in Early Medieval Europe: From Alphabetic Symbolism to Liutprand of Cremona’s <i>Antapodosis</i> Francesco ROVAI	61
Mind the dot: How Romans Learned to Mark Meaning Francesca COTUGNO	73
Irish Ogham and ‘Foreign’ Roman Script in Early Medieval Irish Epigraphy Nora WHITE	87
Miswriting or Deliberate Orthographic Strategy? The Spindle Whorl from Saltfleeby Alessia BAUER	101
Runic Orthography in Contact: Geminate Spellings and Bind-runes in Bergen’s Medieval Rune-stick Inscriptions Julia-Sophie HEIER	109
Remarks on the Origin and Development of the Khotanese Orthography Alessandro DEL TOMBA	127
Biscripts in Mesoamerica: Problems and Prospects Christoph HELMKE	145

An Ethnographic Approach to Cultural and Linguistic Contacts in Nahua Pictorial Texts of Colonial Period (and an Application of WRITING Model to a Latin Epigraphic Case Study)	
Antonio PERRI	179
Indexes	
Index of notions	201
Index of texts and inscriptions	205

The Greek Alphabet on the Periphery: Writing in Thracian in the Northern Aegean (6th–4th century BCE)¹

Andrea Santamaria & Eleonora Selvi

Abstract: Over the past two decades, the epigraphic record of western Thrace has been enriched by the publication of numerous inscriptions in Greek and in a non-Greek language generally identified as ‘Thracian.’ This article evaluates the contribution of this new evidence to our understanding of the dynamics of alphabet transmission in late Archaic and Classical northern Aegean and of the script’s adaptation to the writing of the Thracian language. Drawing on the perspectives of the *corpus doctrinae* and communities of practice, we contend that the proposed derivation of the Thracian alphabet of Zone and Samothrace from a Paro-Thasian template is unconvincing for several graphematic, paleographic, and epigraphic reasons. Instead, we argue for a multilinear transmission centered around regional sanctuaries during the late Archaic period. These different inputs were reworked by Thracian speakers into one or more locally developed adaptation(s) that incorporate(s) features so far unattested in the Paro-Thasian nor, in some cases, in the Greek alphabetic repertoire, such as the graphematic distinction between /i/ and /j/.

Keywords: Thracian language; Epichoric alphabets; Ancient Greek graphematics; late Archaic Balkans; Ancient Greek colonization

1. Introduction²

This paper examines the processes of transmission and adaptation of the alphabet used to record what is traditionally identified as the ‘Thracian’ language in the northern Aegean during the late Archaic and Classical periods (6th–4th century BCE), with particular attention to the documents from the island of Samothrace and from Zone on the mainland. In recent decades, scholarly debate on the transmission of the Greek alphabets and on the Thracian language and epigraphy has been marked by two significant developments: one theoretical and methodological, the other documentary.

On the methodological side, we will apply to the Thracian documentation a model centered on writing as a cultural practice, adopting the theoretical frameworks of the *corpus*

¹ This work pertains to the Subcluster “ROOTS of Inequalities: Social, Economic, and Environmental developments” within the ROOTS Cluster of Excellence (funded by the *Deutsche Forschungsgemeinschaft* under Germany’s Excellence Strategy EXC 2150-390870439) at Kiel University. Andrea Santamaria (corresponding author) is responsible for §3, and Eleonora Selvi for §2; both authors share responsibility for §§1 and 4–5. We would like to thank the organizers and participants of the 6th LSS Conference for their valuable suggestions and the stimulating discussion, in particular Prof. Dr. Alessia Bauer, Prof. Dr. Daniel Petit, and Prof. Dr. Paola Cotticelli.

² Since this study represents the first systematic reassessment of the graffiti from Zone after the *editio princeps* (Brixhe 2015), we found it appropriate to establish a concise and unequivocal citation system. To this end, we employ the abbreviation “IAZ”, with reference to the volume *Αρχαία Ζώνη* I by Tsatsopoulou-Kaloudi *et al.* (2015). The numbering follows that of Brixhe (2015) in the same volume. Alternative citation systems known to us include the abbreviation “T. Zo.” in *OT*, which, however, refers only to the reduced catalogue provided by the author (p. xlvii), and the formula “Αρχαία Ζώνη I, no.” in Guijarro Ruano (2024), which has been set aside here for the sake of simplicity and because no inscriptions appear in the other volumes of the *Αρχαία Ζώνη* series.

doctrinae and the ‘community of practice.’ The *corpus doctrinae* theory, originally developed by Prosdocimi in 1990 for the Etruscan alphabets, has proved successful in a variety of cases, including Anatolian (Rizza 2014), Italic (Benelli 2020), and peripheric Greek alphabets (Selvi & Santamaria 2023). Here, we combined it with the ‘community of practice’ model, adapted in archaeology to interpret cultural history as the history of social worlds rather than of archaeological cultures (Bombardieri 2014, Furholt 2020). When applied to writing systems, these theories, which will be discussed in detail in Section §2, reject the idea of a linear filiation between scripts in favor of a model centered on teaching and learning practices situated within a specific social and cultural setting, an approach that can prove especially effective in contact areas.

Alongside this, the past two decades have marked a turning point in Thracian epigraphy, largely thanks to the publication of new documents from the Sanctuary of Apollo at Zone (Brixhe 2015) and a small number of additional finds from Samothrace (Matsas 2004). Together, these documents form the most substantial corpus of inscriptions that can, albeit with the usual caution, be assigned to the Thracian language (Dana 2015: 245, Guijarro Ruano 2019: 70–71, Sowa 2020: 801). In our study, we will take into account these inscriptions. About a decade before the appearance of the Zone inscriptions, the corpus of Greek inscriptions from the northern Aegean (*IThrAeg*) had also been published. Although the inscriptions from Zone align well, both linguistically and epigraphically, with those from Samothrace (Brixhe 2006), they have not altered the status of Thracian as a *Trümmersprache*, and the linguistic evidence they yield remains limited (Brixhe 2006, 2015, Guijarro Ruano 2019, 2023, 2024). Even so, the publications of the last twenty years have, for the first time, made it possible to carry out a comprehensive and detailed comparison of the epigraphic cultures of the northern Aegean, particularly in the Archaic and Classical periods, and thus to analyze the patterns of coexistence, sometimes within a single site or narrow geographic area, and differentiation between documents written in Greek and Thracian.

Accordingly, this study has two primary aims. First, by extending and refining the data partially assembled by Brixhe (2006, 2015), it brings together in a single overview the paleographic and graphematic features of Thracian documents from Zone and Samothrace, including their paleographic variants and punctuation practices. Second, it seeks to situate this material within the wider landscape of neighboring alphabetic traditions and to examine the possible mechanisms through which Thracian communities of this region came to adopt the alphabet.

The paper is structured as follows. Section §2 briefly reviews and discusses the main theoretical approaches to the transmission and reception of alphabets. Section §3 presents the Thracian documentation, beginning with an overview of the proposed classifications of the Thracian alphabets (§3.1), followed by a discussion of the general features and the historical and archaeological contexts of the inscriptions from Samothrace and Zone (§3.2), and finally an analysis of the characteristics of the alphabet, or alphabets, attested at these locations (§3.3). Section §4 discusses how these features might be positioned within the contiguous or related alphabetic traditions, and offers the concluding remarks.

2. Alphabet transmission in peripheric areas: towards an anthropological approach

The transmission of the alphabet across the Iron Age Mediterranean has often been interpreted through a structuralist and utilitarian lens, which frames writing as a secondary

system subordinate to language, a perspective particularly influential in alphabetic studies due to the seemingly direct correspondence between signs and phonemes (Marazzi 2014). However, even alphabetic writing functions as an autonomous, complex system embedded in sociocultural dynamics, something ignored by the rigidly genealogical models that dominated 20th-century scholarship, epitomized by Wachter's (1989) framework, dismissed by Benelli (2020: 106) as an artificial "genealogical monster." In more recent times, examples of these approaches are those of Waal (2018) and Astoreca (2021), which treat linguistic and functional parameters as the sole and inflexible drivers of transmission.

In so-called peripheric areas such as Thrace, such an approach was yielded together with the belief that local, non-Greek populations had very little, if any, agency in the process of receiving the alphabet imported by the Greeks, and certainly not in 'creating' one.

According to Janouchová (2017: 7), during the 19th and 20th centuries, scholarship commonly cast Thrace as a region fundamentally shaped by Greek cultural influence. This perspective drew on the dominant acculturation models of the time, which assumed that exposure to Greek culture would, almost by default, set local populations on an unavoidable path toward Hellenization. Within this framework, cultural developments arising from interactions between Thracian communities and the Greek world were routinely interpreted through a broadly Greek-centered model: non-Greek groups were thought to progressively relinquish their own practices and identities in favor of Greek material culture and ideological forms (Dietler 2005, Vranič 2014, Selvi 2024: 4–12). Epigraphic habits were similarly assessed, "often overlooking the specificities of the epigraphic material and assessing the informational value of inscriptions purely in quantitative terms" (Janouchová 2017: 7).³ As a result, both the appearance of the Greek alphabet and the production of texts in Greek were taken as straightforward indicators of a Hellenized Thracian populace (e.g., Sharankov 2011: 135 and Vranič 2014: 39, with references therein).

Adopting an approach that considers the dynamics of teaching and learning the alphabet within actual human societies and communities, without identifying an ethnic (as problematic as this definition is) group as the sole 'giver' and another one as the 'receiver,' sheds light not only on the formation of alphabets but also on the processes that gave rise to such a wide variety of forms, rules of usage, and represented languages. Our perspective, which already served to establish the origin and formation of the Pamphylian alphabet and its two digammas (Selvi & Santamaria 2023), therefore, builds on the assumptions developed in the *corpus doctrinae* theory (Prosdocimi 1990) and in the framework of communities of practice (Bombardieri 2014, Furchholt 2029).

Prosdocimi's theory, whose implications are rich enough to fill a book of their own, can be boiled down, at least for our purposes, to this:

(a) Writing systems possess two essential characteristics: "totality" and "conventionality", and their use is made possible by specific "rules of usage" conventionally established within a community.

(b) The transmission of writing does not strictly adhere to the principle of economy, nor does it aim solely to represent the smallest possible linguistic units. The sociocultural function of writing plays a role not only in its use but also in its creation. This type of learning is therefore best described as "learning-enculturation": those who transmit writing, the teachers, necessarily imprint their own linguistic and cultural perspective onto its

³ Translated from Czech by the authors.

transmission, reflecting the priorities of the source language sometimes alongside, but often at the expense of, the target language.

(c) Teaching is based on a *corpus doctrinae*. This *corpus doctrinae* consists of “body of written and oral teaching and training tools by means of which [...] a new written language could be created” (Rizza 2014: 172). It preserves signs, variants, or rules that do not appear in documented materials but are remnants of obsolete elements or equivalent uses from neighboring traditions. It is also difficult to define the *corpus doctrinae* as exclusively pertaining to a single writing tradition; teaching could incorporate or mention different strands and traditions to foster more flexible literacy. The corpus can be expanded, reduced, or modified, always according to a homeostatic principle of intrinsic completeness. Example of this multiple literacy are, for example, the famous ‘double’ abecedarium inscribed under the foot of a lekythos from Kyme (ca. 700 BC), dismissed by Astoreca (2021) as an “exercise in digraphy,” featuring both the local script of Kyme and the Corinthian script of the vase’s origin (Boffa 2016, Vallarino 2023: 24). From Corinth itself comes another iconic example: the so-called abecedarium of Troilos (Lejeune 1983), which presents a complete sequence from <A> to <Ψ>, concluding with the sign , a Corinthian variant of <E> for /e:/, which otherwise appears in its standard form in the fifth position (Vallarino 2023: 27). These cases align with the concept of a *corpus doctrinae*, reflecting a sophisticated awareness of multiple alphabetic traditions within Greek poleis. As Luraghi (2021) observes, such evidence, though sparse, suggests a remarkably high level of cross-alphabetic knowledge in at least some regions. Further support for this comes from vessels displaying bigraphism, such as one combining Corinthian and Euboean alphabets (Luraghi 2021, with references).

Prosdocimi’s perspective can be linked to key aspects of the “communities of practice” learning theory, which interprets the learning process not only as the acquisition of technical skills but also as a social practice of transmitting social and symbolic capital and integrating individuals into a community that shares both technical ability and cultural heritage. The concept of “situated learning,” introduced by Lave & Wenger (1990) posits that learning occurs through social interactions and that communities themselves form the core of learning processes. Bombardieri (2014: 44–45) identifies two levels of knowledge transmission within these communities: the first is technical transmission, the transfer of practical skills (tools, vocabularies, routines, and gestures) through which “technical capital” is acquired and refined. The second is cultural transmission: the sharing, through the learning practice, of collective memories, stories, rituals, and symbols, that shapes “social and symbolic capital.” Furholt (2020) has added another pole to this framework with the “polythetic culture model”, which is particularly fruitful in contact areas like Thracia, accounting for the intersection of different “communities of practice” in and across societies. According to Furholt, different material productions, in which we include written objects, can identify “distinct social worlds, in which several differentiated communities of practice exist. Each individual is usually part of different communities of practice connected to different social worlds, and these are not necessarily congruent” (2020: 7). Bringing these perspectives together, we propose that distinct writing traditions could arise, develop, and be reabsorbed within the same areal *corpus doctrinae*, through learning communities centered around specific practices, such as the worship of a specific god in a specific sanctuary, or places. These communities could overlap with neighboring ones, even those speaking different languages.

3. The ‘Thracian’ alphabet(s) from the Northern Aegean coast

Drawing on the theoretical-methodological framework detailed in the previous section, this section discusses the typology of the alphabet(s) used to scratch the Thracian documents from the northern Aegean. Given the chronology of the documentation, the discussion mainly focuses on the late-Archaic graffiti coming from the sanctuaries of Apollo at Zone, and those dedicated to the Great Gods and Bendis on the island of Samothrace.

3.1 Attestations and proposed taxonomy of the ‘Thracian’ alphabets

What are usually referred to as ‘Thracian alphabets’ are writing templates used to register a language likely identifiable with Thracian over a relatively broad area from the lower Danube to the northern Aegean and a timespan of more than two centuries (6th-4th century BCE).⁴ The only attempt to systematize this wide spectrum of alphabetic variants was made, in the brief introduction to the *Onomasticum Thracicum* (Dana 2014: xlv-lxviii; henceforth *OT*), by Dan Dana.⁵ Here, the alphabets used in possible Thracian inscriptions are divided into four distinct graphic traditions:

(a) The alphabet of a possible 6th/5th-century funerary stela found at Kjolmen (Preslav distr., NE Bulgaria) (Dana 2014: xlv). While the text on this inscription appears to be written in an alphabet belonging to the Greek tradition “with patent archaic letters” (Dana 2015: 244, see also Sowa 2020: 803), none of the proposed interpretations of the sound values of its letters has so far proved demonstrable, and the precise identification of the graphemes therefore still awaits a definitive consensus (Sowa 2020: 799–800, esp. fn. 12, with bibliography).

(b) The alphabet attested by the ‘Thracian’ graffiti from Zone and those from Samothrace (§1), four stone inscriptions from Zone (i.e., Brixhe & Zournatzi 2015, nos. I–III, and *IThrAeg* 427, 4th century BCE)⁶, and three inscriptions from Maroneia (*IThrAeg* 376, 377, 378), “2 of them with a slightly different alphabet” (Dana 2015: 244, Dana 2014: xlv-lxviii). Dana (2014: xlvii, esp. fn. 199; 2015: 3, fn. 1) tends to follow Brixhe’s (2006: 126, see also Brixhe 2015: 283) view that these documents largely rely on a Paro-Thasian template, although significant differences and distinctive features of the Samothrace-Zone alphabet(s) are also mentioned.

(c) The alphabet attested by one inscription from Samothrace (Fraser 1960, no. 64), tentatively dated to the first half of the 4th century BCE (Dana 2014: xlviii, 5th/4th century per Lehmann 1955: 100). The alphabet on this inscription is described as “slightly different from the Zone alphabet” (Dana 2015: 244), owing to the presence of two letters allegedly unknown to (b), namely <H> and <Ψ>, together with the use of the dotted *omicron*, though it is only vaguely characterized as “grec” (Dana 2014: xlviii).

⁴ The precise identification of the language, or linguistic variety, of Thracian inscriptions other than those from Zone and Samothrace lies, as one might expect, beyond the scope of this study. Owing to the scarce legibility of many of these inscriptions, robust linguistic conclusions have so far remained elusive. For these issues, see Dana (2015), Matzinger (2016), Guijarro Ruano (2019) and Sowa (2020), with the relevant bibliographies.

⁵ See also Dana (2015: 244). Cf. Sowa (2020: 802–803) for a slightly different proposal, based on two “paleographic zones”: a “Bulgarian” one, apparently comprising Dana’s groups (a) and (d) and characterized by “archaic shape of letters”, and a “northern Aegean” one comprising (b) and (c) and simply described as using the “Greek script.” It should be noted, however, that the author does not appear to have been aware of the publication of the graffiti from Zone in Brixhe (2015) (see especially Sowa 2020: 814).

⁶ Dana (2014: xlvii) knew only three of the stone inscriptions from Zone, presumably excluding the inscription Brixhe and Zournatzi (2015, no. III), discovered in 2012, while the other unpublished material presented by Brixhe & Zournatzi (2015) comes from the first excavations of the temple of Apollo at the end of the 1980s (Brixhe & Zournatzi 2015: 251–255).

(d) The alphabet attested on six luxury gold and silver objects from two sites near Duvanlij (Bašova Mogila and Arabadžiskata Mogila, 5th–4th century BCE) and from Ezerovo (perhaps first half of the 5th century), in central Bulgaria. This alphabet has been described as “identical to the Greek alphabet, but without *omega*” (Dana 2015: 244), while Sowa (2020: 800, fn. 14) regarded the alphabet on a gold ring from Duvanlij as “apparently Ionic.”

Focusing on the documents from Samothrace and Zone, this contribution concerns groups (b) and (c). These two groups not only account for more than 90% of the inscriptions thought to be written in the ‘Thracian’ language, but also come from three archaeological contexts closely connected with one another, as will be discussed in the next section, through their chronology, their affiliation with the Samothracian sphere of influence, and their religious character.

3.2 The ‘Thracian’ documents from the northern Aegean coast: typology, context and language

Contact with the Greek world is generally regarded as the main factor behind the adoption of (Greek-type) alphabets among Thracian speakers (Tiverios 2008: 79; see also §2). The Thracian documents from the northern Aegean come from a narrow coastal strip between Maroneia and Zone, on either side of Mount Ismaros, and from the nearby island of Samothrace (Table 1). The appearance of documents written in a non-Greek language likely identifiable as Thracian in the northern Aegean spans the 6th to the 4th century BCE and falls within three colonies or outposts established by Greek polities. A total of almost 130 Greek colonies has been counted along the northern Aegean coast (Tiverios 2008: 3), often located near or directly on earlier Thracian sites. The relationship between the Greek *apoikoi* and the local population, whose presence is well attested in contemporary sources (for instance, Greek-Thracian relations are the central focus of Arch. fr. 93a W. and Pind. *Pae.* 2), varied considerably over time, shifting between cooperation and open hostility.⁷ Between the Archaic and Classical periods, the central and eastern part of the northern Aegean coast fell within the Thasian Peraia, largely extending from the Struma to the Nestos rivers (though possibly with some extensions in both directions) and the Samothracian Peraia, stretching from Ismaros to the Hebros river. In between, from the Nestos to Ismaros, lay a series of significant colonies founded by various Greek cities, such as Abdera and Maroneia. The Thracian communities situated between Maroneia (to the west) and Samothrace (to the east) thus occupied an area marked by three kinds of interactions: between Greek-speaking groups and Thracian speakers; between the spheres of influence of Thasos, Samothrace, and colonies belonging to other *poleis*; and among different Thracian *ethnoi* attested in the region, such as the Kikones and the Saians. From 513/512 BCE until the Battle of Plataea, the additional presence of Persian power further complicated this landscape (Stronk 1998–1999).

⁷ The issue of Greek-Thracian relations and their reflection in Greek sources has generated a vast literature. For the area relevant to this study, see among many others Graham (1978: 218–220, with bibliography), Pouilloux (1989), Koukouli-Chrysanthaki (1992), Tsantsanoglou (2003: 247–248, 2024: 5–7), Tiverios (2008: 74–74) on Thasos and its *Peraia*; Isaac (1986: 80–81) and Graham (1992: 276–279) on Clazomenae and Abdera; and Graham (2002), Parissaki (2018), and Matsas *et al.* (2023) on Samothrace and its Peraia.

Category	Samothrace	Zone	Maroneia
Number	79 (69 are doubtful)	258	2
Type	Graffiti on potsherds (78) and one stone inscription	Graffiti on potsherds (253) and five stone inscriptions	Stone inscriptions
Provenance	Sanctuary of the Great Gods (76), Sanctuary of Bendis (3)	Sanctuary of Apollo, Sanctuary of Demeter (outer area)	Reuses in the areas of the western parodos of the theater and the Roman portico
Date	6 th –4 th century BCE	6 th –5 th century BCE (graffiti), late 5 th –4 th century BCE (stone inscriptions)	4 th century BCE
References	Fraser 1960, no. 64; Lehmann 1960; Matsas 2004, nos. 1–3	<i>LAZ</i> ; Brixhe & Zournatzi 2015, nos. I–IV; <i>IThrAeg</i> 427	<i>IThrAeg</i> 376–377

Table 1. Potential Thracian inscriptions from the northern Aegean

Turning to the epigraphic evidence, little can be said about the exact context of the two documents from Maroneia. Those are two fragments of slabs found in different circumstances as reused material in a Roman building and dated paleographically to the mid-4th century BCE, although the shape of some of their letters might point to an earlier date, around the beginning of the century (*IThrAeg* 476). The inscription *IThrAeg* 377 is accompanied, on the opposite face of the stele, by another extremely fragmentary text (*IThrAeg* 378) which, however, seems to preserve sequences compatible with Greek and could therefore, albeit with considerable uncertainty, be included among the Greek-Thracian bilinguals.

On Samothrace, the American excavation campaigns found (and in some cases re-found) between 1938 and 1957 a series of potential non-Greek graffiti on pottery and a stone inscription within the Sanctuary of the Great Gods. Three graffiti from the so-called ‘Sanctuary of Bendis’ have recently been added to this corpus (Brixhe 2006). The Sanctuary of the Great Gods was the center of major mystery cults known far beyond the island, although the precise nature of these rites, as well as the identity of the gods worshipped in the sanctuary, remains a matter of debate (see e.g. McCredie 1974, Cole 1984: 1–4, Graham 2002: 249–250, Mari 2002). Lehmann (1960: 11) assigned some stratigraphic contexts to the 6th century BCE and dated the whole group of inscriptions between 550 and the 4th century BCE; later investigations, however, significantly lowered the chronology of the pottery from the sanctuary (McCredie 1979: 32) and do not posit any building earlier than the second half of the 5th century (Matsas 2004: 37), although traces of earlier cultic practices may well have existed from the 7th century BCE onward (Maniatis *et al.* 2012: 263). The ‘Thracian’ graffiti from the Sanctuary of the Great Gods amounts, according to the Lehmann’s count, to 75 inscriptions (see also Ilieva 2017). Almost all of these graffiti, however, consist of only one or two letters. To distinguish Thracian from Greek graffiti, Lehmann relied on the assumption that all sequences <Θ(E)> represent abbreviations of θεῶν ‘belonging to the gods,’ indicating the object’s dedication to the sanctuary and thus to be taken as “Greek,” whereas other sigla, such as <Α>, <Κ>, and <Δ>, would refer to Thracian deities. For

instance, the group of graffiti consisting solely of the letter <A> is considered non-Greek, “given the non-Greek divine names beginning with *Αχιω-* in Samothrace” (Lehmann 1960: 58). Yet it goes without saying that such an assumption, albeit reasonable, cannot be further demonstrated.⁸ Excluding doubtful cases, only ten inscriptions remain (Fraser 1960: no. 64, Lehmann 1960: nos. 1–2, 65?, 68–70, Matsas 2004: nos. 1–3) whose texts are sufficiently long, or sufficiently comparable to those from Zone, to be reasonably regarded as written in a non-Greek language, normally identified as ‘Thracian.’ The remaining inscriptions may well be non-Greek, especially the longer sequences, such as <ΔΕΝΤΟΛΕ>, but this assumption should await definitive confirmation through future study or, more likely, new discoveries.

Zone is a coastal settlement located approximately 40 km west of the Hebros Delta and less than 20 km east of Maroneia. Possibly built on or near a pre-existing Thracian site (Tsatsopoulou-Kaloudi 2015: 74), Zone was one of the principal settlements of the Samothracian Peraia. In both Samothrace and Zone, some archaeological remains could point to the presence of an Aeolic community (Ilieva 2007: 213–215). At Zone, a group of 291 inscribed sherds (253 in the local ‘Thracian’ variety) was found within the cella of a sanctuary which, because most of these graffiti contain dedications to Apollo, is generally considered to have been dedicated to this deity.⁹ The inscribed sherds belong to an assemblage of roughly 21,000 ostraka (one third of all fragments from the sanctuary) recovered beneath the cella floor. Architectural remains and the presence of 4th-century pottery within the assemblage indicate that their deposition is not contemporary with the construction of the temple, but instead took place during its reconstruction in the first half of the 4th century BCE, at the zenith of Zone’s economic growth (Tsatsopoulou-Kaloudi 2015: 204). Since the earliest Thracian sherds can be dated securely to the mid-6th century BCE, the deposit contains dedications produced up to two centuries earlier. According to Tsatsopoulou-Kaloudi (2015: 204), this large ceramic assemblage is unlikely to be an underlay of the floor of the temple, but may rather be understood as a kind of ‘posthumous’ foundation deposit, intended as an ideological statement emphasizing continuity between the new temple and the earlier generations of (Thracian-speaking) worshippers. One cannot exclude that the predominance of Archaic dedications reflects a deliberate and ideologically motivated selection of the most ancient material. In any case, the deposition of these sherds is roughly contemporary with the production of the Thracian stone inscriptions (Brixhe & Zournatzi 2015, nos. I–IV), including a Greco-Thracian bilingual (Brixhe & Zournatzi 2015, no. IV) found near the temple of Apollo and dated paleographically between the late 5th and early 4th century BCE. As Zournatzi (2015: 267) noted, the monument should primarily be

⁸ Lehmann develops this line of interpretation by drawing on graffiti with sequences such as <ΔΕΝΤΟΛΕ>, which he takes to contain a root meaning ‘divinity,’ on the grounds that “in an Indo-European language a form like *dim* or *den* equaling *θεῖον*, *deorum*, etc. seems most natural” (Lehmann 1960: 15). From this perspective, sequences like <ΔΚ> (no. 23) are likewise understood as allusions to the Kabeiroi, although it is far from clear that the Samothracian gods were ever called by this name, the only theophoric attested on the island being *Θεοὶ Μεγάλοι* (Hemberg 1950: 73–81, cf. Clinton 2021: 19). These readings admittedly sit uneasily with the Greek evidence (though see the limited exceptions noted in Lehmann 1960: 15 n. 35). At the same time, the extreme brevity of the inscriptions and our very limited understanding of the language they may reflect make any firm conclusions precarious. Even the rightward ductus, now securely attested in Thracian contexts by the Zone corpus (see below), also appears on graffiti in which Lehmann reconstructs the Greek sequence *θεῖον* (e.g., nos. 79 and 268). More broadly, when an inscription consists of only a single letter, interpreted as a theonym on Lehmann’s model, we must also ask how justifiable it is to assign that theonym to ‘Thracian’ rather than to Greek, since there is no reason to assume that Greek worshippers could not have honored deities with a non-Greek name.

⁹ For Zone in the Archaic and Classical periods and the cult of Apollo in the area, see Tsatsopoulou-Kaloudi (2015), Janouchová (2016) and Avramidou *et al.* (2022), and the bibliography therein.

regarded as an official acknowledgment of the social position occupied by Thracian communities at Zone alongside the Greek-speaking one. The rough contemporaneity between this monument and the deposition of the sherds in temple may reflect a broader program of enhancing the visibility of the Thracian social component. Within a few decades, this process might extend to the nearby center of Maroneia as well, as pointed out by the attestation of a possible bilingual stele (*IThrAeg* 377–378).

The texts on the graffiti from Samothrace and Zone allow us to be reasonably confident that they record the same language. Evidence for this lies in the presence, on both sides of the strait, of a relatively complex dedicatory formula that contains no elements recognizable as Greek (1–3):

- (1) αβολο υνεσο πιλαγε καιε (*LAZ* 5; Zone)
- (2) βενζι υνεσο γ[(*Matsas* 2004, no. 3; Samothrace)
- (3) εποτεΨβνεσαντο καιε (*Lehmann* 1960, no. 1; Samothrace)

This dedicatory formula is among the best-known and most interpretable sequences in the corpus of documents generally attributed to the Thracian language. From left to right, the first element is readily recognizable as a theonym. At Zone, it is Apollo, which clearly refers to the deity to whom the sanctuary from which the graffiti derive was dedicated. At Samothrace, βενζι is recognizable as the most prominent Thracian goddess known to the Greek world, namely Bendis (Brixhe 2006), who was also worshipped by the Thracian community in Athens, as mentioned in *Pl. Rep.* 327a, 328a (Janouchová 2013). The second element, υνεσο, is more difficult to interpret. It has been cautiously taken as a divine epithet (Brixhe 2015: 291–292), and in any event must be connected to the deity, as it appears almost exclusively after the theonym.¹⁰ The third element, sometimes partially preserved at Samothrace as well (e.g. *Matsas* 2004, no. 1]●ει υνεσο πορι]), is, given its variability and the recognizability of forms such as νεοιλε κυτονιδεσ (*LAZ* 32) and απολοδορε (*LAZ* 281), likely the name of the dedicator. Less certain is the interpretation of the closing word καιε, often written as καε (e.g. *LAZ* 26), which is probably to be understood either as a reference to the dedicated object or as a verb expressing the act of dedicating (Brixhe 2015: 293–294).

3.3 The Paro-Thasian model and the northern Aegean ‘Thracian’ alphabets

Scholars generally agree that the Thracian graffiti from Samothrace and Zone adopted the Parian alphabetic template (Brixhe 2006: 126, 2015: 283, Dana 2014: xlvii, 2015: 3, more cautiously, Sowa 2020: 812), which is thought to have reached the area through the mediating role of Thasian expansion. As already acknowledged in the past, however, not all features of this template, whether paleographic or graphematic, align with those attested on Thracian graffiti.

In what follows, we examine the arguments for and against this hypothesis and suggest that a straightforward derivation from a Paro-Thasian template is neither demonstrable nor, on the basis of the available material, the most plausible scenario.

¹⁰ The sole exception is *LAZ* 30, where the two elements are separated by the form βιαιε, which Brixhe (2015: 215) cautiously interprets, on the basis of comparisons with later dedicatory formulas, as a possible ethnonym, though he acknowledges that it finds no parallels in the region’s toponymy.

3.3.1 The Paro-Thasian feature(s) and their limitations

The reason why the ‘Thracian’ alphabet used at Samothrace and Zone has been regarded as modelled on that of Paros-Thasos is essentially one, though, as we shall see, it carries considerable evidential weight: the presence of the so-called ‘moon-shaped’ (or ‘semicircular’) *beta* <C>. As a premise, the reading of this grapheme is certain thanks to its occurrence in the Thracian form Αβολο for the theonym Apollo. This form corresponds to Ἀπόλλωνι (LAZ 59) and Απώλλωνος (LAZ 109, 129, 226, 263, 286) in the Greek graffiti and reflects a tendency toward voicing of intervocalic stops that can, cautiously, be reconstructed for other Thracian varieties as well.¹¹ The ‘moon-shaped’ *beta* is also found on Samothrace, in the corresponding dedicatory formula, for the rendering of the theonym Bendis. This variant is not new to the Thracian world: it appears, in the mid-5th century, on the coinage of the Bisaltae (Dana 2014: lxvii fn. 199, with bibliography), a Thracian tribe established within the area of Thasian penetration in the Strymon valley. Its presence in this context is unsurprising in light of the influence exerted by the Thasian monetary system in the region during the Late Archaic and Classical periods, evident both in the metrological and iconographical features of the local coins (Picard 1999: 342–344, Psoma 2003: 235). Thasian coin types continued to be imitated in the Thracian area for centuries, including in issues struck by the Odrysian dynasty (Wartenberg 2021: 58).

Within the Greek-speaking world, the ‘moon-shaped’ *beta* is a feature exclusive to the Cycladic alphabets and of Thasos, including its Peraia (e.g., Bonias 2000). It is highly probable that this feature was transmitted from the Parian motherland as early as the 7th century BCE and that it reached the northern Aegean coast through the expanding influence of Thasos. As Brixhe (2015: 283) has already pointed out, this becomes even more plausible in light of the fact that the Greek graffiti from Zone appear to adopt the characteristic Paro-Thasian vocalic system, i.e. <Ω> = /o/, /o:/ and <Ο> = /ɔ:/, as suggested by the spelling <ΑΠΩΛΛΟΝΙ> for Ἀπόλλωνι, together with <ΧΩΙΠΙΝΩΣ> (LAZ 198) for Χοιρίνος.¹² The Thracian inscriptions cannot provide evidence on this point, since <Ω> never appears in them. The absence of <Ω> is typically explained by the possible absence of quantity contrasts among the vowels. It is worth noting, however, that a ‘Thracian’ use of <Ο> seems attested in at least one Greek inscription from nearby Abdera (*IThrAeg* 30, mid-6th century BCE). The editors interpret the use of <Ο> for /ɔ:/ in this inscription as a Paro-Thasian trait, but examination of the photograph shows that <Ο> appears also for /o/, for instance in the masculine singular psilotic article ὁ (cf. <ΗΩ> for the non-psilotic variant ὁ in *LSAG* 305.F.S466), and that *omega* is entirely absent. Moreover, not all the Greek graffiti from Zone employ the Paro-Thasian vocalic system, as shown by the spellings of Apollo’s name, or its initial, in LAZ 100 <[ΑΠΙΟ]ΛΛΩΝΟΣ> and 252 <ΑΠΙΟ>.¹³ Alongside these, two instances exhibit mixed usage. First is <ΩΛΩ> in LAZ 58, interpretable as [Ἀπ]ώλω[νος] (or [Ἀβ]ώλω[νος]?). Given the degemination of the liquid, one cannot rule out that this graffito was produced by a Thracian speaker who mistakenly generalized the use of <Ω> due to the absence of this grapheme, and of quantity contrast, in the template most familiar to them. This may represent a form of hypercorrection in an attempt to imitate features

¹¹ On this phenomenon in the Thracian inscriptions and on the degemination of the liquid in the local form of Apollo see Brixhe (2015: 301–302).

¹² See del Barrio Vega (2018: 477) and Gomis García (2019: 75–76).

¹³ A different case is represented by the form <ΕΠΟΙΕΣ[ΕΝ]> (= ἐποίησεν ‘(s)he made’) in LAZ 190, an inscription executed prior to firing and thus presumably written in Attica, from where the vase originates, using the pre-Euclidean Attic alphabet (Brixhe 2015: 236).

characteristic of some Greek-speaking members of the community. A different situation arises in *LAZ* 203 δέομεν Ἀπώλλο[νος], where, if the distribution of <Ω> and <Ο> is indeed that proposed in the *editio princeps*, one word (δέομεν) follows non-Parian conventions while another (Ἀπώλλο[νος]) follows Parian ones. In total, then, there are seven cases where the use of <Ω> and <Ο> is unquestionably Paro-Thasian, while in four cases the system is either not employed or only partially so, two of which are entirely non-Paro-Thasian and two ‘mixed.’ The overall picture argues for a situation in which Paro-Thasian criteria were not applied exclusively and in which some dedicants used <Ω> and <Ο> according to Ionic phonetic values, or used them inconsistently. The unusual generalization of <Ω> in *LAZ* 58 and, above all, the use of the Paro-Thasian alphabet only in the name of Apollo in *LAZ* 203 may, however cautiously, raise the possibility that some individuals were far less familiar with the system than generally assumed, and that in at least some contexts it was primarily associated with the recording of dedications to the deity.¹⁴

The ‘moon-shaped’ *beta* is not the only paleographic variant of this letter used in the Thracian inscriptions from Samothrace and Zone. At Zone, a significant number of inscriptions render the theonym Ἀβολου with the more common ‘double-looped’ *beta* <Β>.¹⁵ The form <Β> for *beta* instead of <C> appears on Thasos for the first time in *IG* XII Suppl. 349, dated ca. 430 BCE (Pouilloux 1954: 440), at least half a century later than the latest graffiti in our corpus, and in Paros the first attestation likewise dates to the second half of the 5th century BCE (Papadopoulos 2013: 4), with clear use of <C> still in the second quarter of the century (e.g., *IG* XII,5 107.1, ca. 475–450 BCE). By contrast, <Β> is present on the northern Aegean coast not only at Zone, where it further occurs in mid-5th-century stone inscriptions (*IThrAeg* 404.2, 405.2, 406.2), but also at Abdera from at least the first quarter of the 5th century (*IThrAeg* 1.15).

Along with this, Samothrace yielded a rather rare example of the Theran *beta*. It appears in two inscriptions from the Sanctuary of the Great Gods (Lehmann 1960, nos. 1 and 65; see Figure 1). One (no. 1) is a relatively complex text incised on the outer lip of a glazed kylix from the “Black Pit” beneath the Altar Court (Lehmann 1960: 45).¹⁶ Much of the sequence has no known parallels, but the closing <KAE>, identical to that of the dedicatory inscriptions for Apollo and Bendis (§3.2), indicates that this too is a votive inscription closely comparable to those discussed above. The second instance, displaying a more rounded variant of the Theran *beta*, comes from an edge-on fragment of a tile from the area of the Arsinoeion, which preserves on its first line a sequence readable as <ΘΙΟΒΗ•>, the last sign being a vertical stroke compatible with several letters, including <Ι>, <Γ>, and <Ν>. Although highly fragmentary, it is tempting to see here the Doric form for ‘god,’ θιός, a form we would expect to find on Thera as well, suggesting, however tentatively, that the Theran *beta* may have been used by both the Thracian and Greek-speaking communities.

¹⁴ Comparable dedicatory practices appear to have existed on Thasos itself, where a sherd of Attic manufacture, like most of those from Zone, found near the possible temple of Apollo Pythios and datable to the late 6th century BCE bears the inscription <ΑΠΩΛΛΑΝ> (Grandjean and Salviat 1995: 661, 664, Fig. 6).

¹⁵ On the essentially pan-Hellenic distribution of this <Β>, see *LSAG*² (23).

¹⁶ On this area of the sanctuary, especially for the periods later than our inscriptions, see Cole (1984: 20, with references).



Fig. 1: *a*: Photograph of the inscription Lehmann no.1 (1960, Pl. 1, Fig. 1)
b: Drawing of the inscription Lehmann no. 65 (from Lehmann 1955: 99, Fig. 1)

Some alleged instances of the ‘moon-shaped’ *beta* display paleographic features unattested in the Paro-Thasian tradition, though this may simply reflect accidents of preservation or the idiosyncrasies of individual engravers. For example, an idiosyncrasy is likely the case of the angular variant of the ‘moon-shaped’ *beta* attested in the divine names both on Samothrace (Matsas 2004, no. 3) and at Zone (e.g., *LAZ* 68), for which we found no parallels in Paro-Thasian materials, nor is such a variant recorded in *LSAG*² (289). Sometimes the *beta* is not ‘moon-shaped’ but quadratic, a form primarily associated with the Argive *beta* and thus belonging to a rather distant alphabetic milieu. In *LAZ* 11 it shows divergent strokes unattested at Paros and Thasos but present within the Cycladic tradition since an early date, as demonstrated by a short inscription from Naxos dated to the 7th century BCE (Matthaiou 2010–2013: 1). On *LAZ* 11, moreover, the engraver employs a ‘five-stroked’ *sigma* characteristic of the Peloponnese. Returning to *beta*, a quadratic figure whose reading is uncertain appears in the fragmentary *LAZ* 223.¹⁷ Here the strokes are parallel and correspond more closely to the typical *digamma* <C> attested in Thessaly (Doulgeri-Intzesiloglou 2000: 299), as well as in Boeotia, Euboea, Corinth (in the Penteskouphia alphabetarium; see Boegehold 1992), Corcyra, an Attic alphabetarium (Langdon 2005), and in one case in the Cyclades, in the well-known alphabetarium from Amorgos (*IG* XII,7 413, mid-5th century BCE). The same variant also appears in Italy, in Messapia (De Simone and Marchesini 2002: 13). A similar shape comes from the sequence αβολο in *LAZ* 191 and from *LAZ* 289, whose text is difficult to interpret, both also exhibiting at least one feature unattested in the Paro-Thasian corpus (see below and §3.3.2). Confusion between *beta* and *digamma* is well documented in Pamphylia (Selvi and Santamaria 2023), and it cannot be excluded that the engraver here was influenced by the form of that letter.

The shape of several other letters is compatible with what we find in the Paro-Thasian corpus, but they do not constitute distinctive features of this alphabetic variety. One is the *rho*: its ‘normal’ shape <P> is not attested on Thracian graffiti, where we have only variants of *rho* <D> without a vertical stroke (e.g., *LAZ* 106), and of the ‘Euboic’ form with an oblique stroke <P> (also on a Greek graffito, *LAZ* 193). Both shapes are well attested at Paros and Thasos, where they are more common than the variant <P>, but they are also well-known elsewhere (*LSAG*² 34). For example, the variant <D> is attested on an Attic retrograde inscription dated to the 7th century BCE (Guarducci 2005: 42–43), while <P> occurs on a Thera grave stone (*IG* XII,3 811) which also renders /ks/ with <Ψ>, a point to which we will return. The ‘three-stroked’ *sigma*, although particularly common in the Cycladic tradition (Trippé 2014: 270), is also well documented elsewhere (*LSAG*² 34), and

¹⁷ Brixhe (2015: 241) reads this letter as <E>, but the area of the sign is not abraded, and there is no reason to posit such a graphic error.

is not the only variant of the sibilant occurring either in the Cyclades or on Samothrace and at Zone. The same holds for the ‘rho-shaped’ alpha <P>, which Brixhe (2006: 126) suggested might constitute an “identity marker” of Thracian writers, even though there are Thracian graffiti that use the <A> variant (e.g., *LAZ* 64, 236; Lehmann 1960, no. 1) and Greek graffiti displaying the ‘rho-shaped’ one (e.g., *LAZ* 133, 216). The ‘rho-shaped’ alpha overwhelmingly outnumbers <A> in the Archaic documents from Paros and Thasos, yet it is equally found in alphabets considered distant from the Cycladic ones, including in Phocis (*LSAG*² 117), Argos (e.g., *LSAG*² 170), and Thessaly (e.g., *LSAG*² 114). It also appears elsewhere in the northern Aegean, for instance in a mid-6th-century inscription from Abdera (*IThrAeg* 30.2), where it occurs alongside <A> (l.3), and continued to be in use in the Teian colony into the mid-5th century (*IThrAeg* 27.1). Both <P> and <A> also occur together in the Thracian texts from Samothrace (e.g., Lehmann 1960, nos. 2 and 59).

Likewise, the variant <Γ> (often with the horizontal stroke slightly sloping downward) is by far the most common form of *lambda* in the graffiti from Zone (e.g., *LAZ* 1, 3, and 5, including the Greek ones such as *LAZ* 59), although the variant <Λ> is also attested from an early date (e.g., *LAZ* 9, 191), and on *LAZ* 191 it co-occurs with other paleographic features unknown in the Paro-Thasian corpus. This variant of *lambda* is a hallmark of the Cycladic alphabets, where this form tends to shift the shape of gamma toward <Λ> (Trippé 2014: 270). It is worth noting that the attestation of *lambda* with a straight horizontal stroke <Γ> at Zone (*LAZ* 18, late 6th cent. BCE) predates the occurrence of this feature in the Paro-Thasian template, where the earliest attestation known to us, at Thasos, dates to the early 5th century BCE (*IG* XII,8 398; see Pouilloux 1954: 440). A *lambda* written <Γ> is, moreover, entirely familiar outside the Cyclades: it is standard in Archaic Attica (*LSAG*² 66–67) and appears widely in Doric and Aeolic areas, such as at Corinth (*LSAG*² 114–115) and in Thessaly (*LSAG*² 96). What distinguishes these alphabets from one another is the way the form of *gamma* diverged from that of *lambda*. In Thessaly, for example, *gamma* keeps the shape <Γ> with a straight horizontal stroke, which sets it apart from the sloping upper stroke of *lambda* (*LSAG*² 96), whereas in the Cyclades, especially on Paros (e.g., *IG* XII,5 105.3; *SEG* 51, 1071.8), it tends to shift toward a <Λ>-shaped form (*LSAG*² 289). The graffiti from Samothrace and Zone preserve a single possible case, namely the long inscription *LAZ* 291 on an oinochoe of the late 6th to early 5th century BCE, of the simultaneous presence of *lambda* and *gamma*. Notably, it exhibits precisely the opposite behavior from what one would expect at Paros and Thasos in this period, with a *lambda* showing an oblique upper stroke and a *gamma* written with a straight horizontal one. It is also worth noting that one of the few Archaic attestations of the <Γ> variant for *gamma* from the area of the Ionian islands comes precisely from Samothrace (*IG* XII,8 226).

3.3.2 Elements incompatible with a Paro-Thasian template (1): <J> and <Ψ>

In the previous section, we argued that the presence of the ‘moon-shaped’ *beta* in some inscriptions from Samothrace and Zone is not sufficient to establish that the Paro-Thasian alphabet spread straightforwardly to the Thracian-speaking communities of Zone, Samothrace and Maroneia. In this and the next section, we discuss features that are fundamentally incompatible with such an origin and constitute counterevidence to this scenario.

As Brixhe (2015: 285) already noted, certain letters appear in the Zone-Samothrace material that are entirely absent from the Paro-Thasian corpus.¹⁸ First is the *yod* <J>, attested 17 or 18 times at Zone and once on Samothrace, and almost certainly representing /j/.¹⁹ This reading is supported by the distribution of the sign, which occurs exclusively before vowels and as the second element of diphthongs (Brixhe 2015: 285). While Greek alphabets normally do not have a separate grapheme for the prevocalic allophone /j/ of /i/ or for /i/ as second element of a diphthong, the use of <J> alongside <I> with this function is consistently attested in the Phrygian inscriptions (Obrador-Cursach 2020: 32–33). In the few Greek inscriptions where a distinction between /i/ and /j/ (or /ij/) seems to be represented, it is achieved instead through reduplicated <II> (e.g., *IG I³ 174,13* Ἀχαΐα; *IG IV 506.6–7* ἐξπρίασθο, δαμιο[ρ]γοί, etc.).²⁰ Therefore, the graphematic contrast between <I> and <J> indicates a structural divergence between the alphabet used at Samothrace and Zone and its putative Greek model. A graphematic distinction between <I> and <J> in the Phrygian alphabet is likely a local innovation dating to the 6th century BCE, and it is not always applied consistently in later documentation, which sometimes still employs <I> where <J> would be expected (e.g., <ESTATOI>, G-144, 5th century BCE). According to Adiego (2018: 148–149), the distinction between <I> and <J> should be understood as the refunctionalization of two allographs ultimately deriving from the Semitic *yod* <Z>. The coexistence of two allographs of *iota* is not new in the broader alphabetic milieu from which the Greek alphabets emerged, and from which some appear, independently of the Phrygian refunctionalization, to have selected the so-called ‘crooked’ variant of *iota* <S> and, with a shape closer to <J>, the S-shaped variant standard in the Doric islands.²¹ This broader picture is supported by the appearance of <S> in the Cyrene alphabetarium and on a Laconian cup from Cyrene, both of the 6th century BCE, despite its absence from the later Thera epigraphy (Gasperini 1973/4: 298, 301).²² The *yod* is not new to the broader Thracian sphere either: it also occurs in the Kjolmen inscription and thus provides a point of contact (beyond the scope of the present discussion) between the ‘Thracian’ alphabets (a) and (b) described in §3.1. More recently, an ‘angular’ variant <J> of the S-shaped *iota* has been identified in a graffito from Azoria (Crete), where it seems to denote /i/ in the sequence <TIMAS> (West 2015: 153–154), representing, to our knowledge, the only attested instance of a ‘crooked’ *iota* without divergent strokes.²³ A

¹⁸ A rather unusual form is the ‘hook’ in *LAZ* 244. Brixhe (2015: 241) reads the sign as <P>, which would imply an uncommon variant with an open loop, as the ‘looped’ *rbo* is normally accompanied by the oblique stroke (as, for example, in *IG XII,3* 811 above). The shape of this letter in fact closely matches the ‘curved’ *pi* widespread in the Archaic Greek world, especially in the central Aegean (*LSAG*² 33), including Paros (*IG XII,5* 252). Where used, the ‘curved’ *pi* generally does not alternate with the ‘straight’ form, but, in this inscription, it still provides the most economical explanation.

¹⁹ It must be noted, however, that the form <KAIE> is never written with *yod*.

²⁰ A unique occurrence in the Samothracian graffiti, the sequence <ΔΙΑ> (Lehmann 1960, no. 22), is difficult to interpret and, as the editor suggests, could even reflect an abbreviation <Δ(I)> followed by a numeral <(I)IA>. Similar problems arise with the fragmentary sequence *LAZ* 130]IIIIO[from Zone; see Brixhe (2015: 285, fn. 4).

²¹ Given the clear graphematic and paleographic differences (the ‘crooked’ *iota* bears no relation to an approximant or glide and almost always appears with divergent strokes, identical to the three-stroked sigma), we agree with Adiego (2018: 149) that “the alleged connection between the Phrygian *yod* and broken *iota* is a mirage.” For a different view, see Brixhe (1994: 88).

²² In the Greek-speaking world, the form <J> is also used once to render the aspirated velar /k^h/ in the transparent *κεχαρισμένον* ‘acceptable, welcome’ (*LSAG*² 309). Given its uniqueness and its distance from all other known values of <J>, it remains difficult to evaluate this occurrence in the broader context.

²³ We find less convincing, given the frequency of personal names in Τίμα- (despite their absence on Crete), the reading <TXMAS>, based on the possible presence of <J> with the value /k^h/ on Crete (see the preceding footnote),

different possible *yod* appears in an Eteocretan inscription (*Dreiros* 1.1), though this occurrence is difficult to compare with the other potential evidence of the sign from the Greek world: it is misaligned with the corresponding retrograde sequence and differs from <J> in having divergent strokes and a central horizontal stroke reminiscent of the Semitic *yod* <𐤅>. It is interesting to notice that in a 4th Greek inscription coming from Zone (Brixhe & Zournatzi 2015, IV) the word αἰδίων, ‘everlasting’, it is unusually spelled with <ι>.

Speaking of approximants, the digamma attested in Thracian inscriptions, at least in those from Samothrace (e.g., Lehmann 1960: 70–71) it is instead residual in the entire Cycladic and Ionic area already in the Archaic age, with only one, uncertain, attestation from 7th cent. Thasos (*LSAG*² 305.25).

Another sign absent from the Paro-Thasian material is <Ψ>. In the Greek world, <Ψ> is known with two phonetic values, /ps/ and /k^h/, which underpinned the blue/red classification of alphabets. As in other “light blue” alphabets (e.g., Attic, see *LSAG*² 84–85), the Ionic Cyclades generally avoided separate symbols for consonantal clusters. On Paros, for instance, <XΣΕΝΩΔΩΚΩ> (*LSAG*² 466.F, 550–525 BC) renders Ξεινώδοκος, and comparable uses of <XΣ> are attested on Thasos (*IG* XII Suppl. 412, Pouilloux 1954: 445). Evidence for /ps/ is limited, though <ΦΣ> is once attested on Thasos (*IG* XII,8 398, early 5th century) and once on Paros (*LSAG*² 305.25), while <ΠΣ> occurs twice in the Cyclades at Amorgos (*IG* XII,7 141, tentatively dated around the 550 BCE) and Siros (*IG* XII,5 711, Archaic). The aspirated stop /k^h/ is instead normally written with <X> or <+>.²⁴ A reading /k^h/ is particularly implausible for the Thracian graffiti, since the language appears not to have possessed aspirated stops, despite occasional adoption of Greek aspirate signs (Brixhe 2006: 137, Yanakieva 2016: 516, Mihaylova & Mircheva 2017: 216, Sowa 2020: 794–795). The Zone-Samothrace material likewise provides no counterevidence to this assumption. In fact, the Greek inscriptions from Zone employ <X> for /k^h/, as seen in the aforementioned <XΩΙΠΙΝΩΣ> (*Laz* 198). This would make it difficult to explain why Thracian speakers would not have employed, for spelling a phoneme otherwise absent in their own language, the only variant for /k^h/ that was actually in use in the region.²⁵ Brixhe (2015: 286) already recognized that neither of the standard Greek values fits well here and tentatively suggested a value /ks/, following Lejeune’s (1978) reconstruction for the Phrygian homograph, which would also find a parallel in the sporadic occurrence of <Ψ> for /ks/ at Thera (*IG* XII,3 449) and Melos (*IG* XII,3 1139). Yet Brixhe himself admits that none of the Thracian sequences containing <Ψ> yields a satisfactory reading if the sign stood for /ks/.²⁶ Notably, the traditional identification of Phrygian <Ψ> (*CIPPb* no. 20) has recently been challenged: together with another ‘trident-shaped’ sign (*CIPPb* no. 23), it is more convincingly understood as a palaeographic variant of <K> representing a voiceless velar stop (Obrador-

which would resolve the problem of the rare palaeographic variant of the ‘crooked’ *iota* but would yield a sequence with no sense in Greek and would require analyzing the graffiti as written in Eteocretan.

²⁴ A single possible case of ‘red’ *chi* exists in the Cyclades, namely *IG* XII,5 649 from Keos, now lost. The sequence on it is generally reconstructed as ἐχδ : ὄρε[ιγ], referring to the mountain nymph (but cf. Hoffmann 1891: 22), for which reading <Ψ> as /k^h/ appears the best interpretation, even though the uniqueness of this variant is usually attributed to Euboean influence rather than to its availability among the local alphabetic repertoire (*LSAG*² 298).

²⁵ The letter <X> also appears on Samothrace, in a graffiti containing the sequence <IXY>, which can hardly be assigned to either language.

²⁶ The only partial exception is the personal name <ΨΕΡΟ> (*Laz* 13), which Brixhe (2015: 213) suggests might reflect a Greek loan of the type <ΑΠΟΛΟΔΡΕ>, <ΝΕΟΚΛΕ>, or <Π(Ι)ΛΑΥΕ>, derived from the root ξηρός ‘dry.’ This interpretation, however, is weakened both by the absence of any attested personal names built on ξηρός and by the fact that a borrowed Greek name would be expected to show the ending <-Ε>, which likely goes back to the vocative case and is the rule in Greek borrowings in the Thracian graffiti from Zone (Guijarro Ruano 2024: 52, 2025).

Cursach 2020: 38–50). A similar development occurs in Lycian, where Adiego (2018: 152–153) argues that <Ψ> spells /k/ in opposition to <K> which stands for /c/. Although tentatively, we argue that a value /k/ better accounts for the material from Zone. A central piece of evidence is <ΨΟΖΙ>, a fully legible sequence in LAZ 272, which, given its context, likely represents the dedicator's name. Within Thracian onomastics, <ΨΟΖΙ> has an excellent parallel in the widespread name Κοζι/Cozi (variants Κοζετ-, Κοστ-, Κοσετ-), also found in compounds such as Κοζιλας, Κοζιθης, and Κοζιστας (OT 96–97). Of the 23 attestations of this name and its derivatives in OT and OT Supplement, only one lies outside the Aegean; among the remaining instances, only one does not come from the northern Aegean, with the majority concentrated in eastern Macedonia, particularly the Chalkidiki Peninsula and the lower Strymon valley.²⁷ It is therefore plausible that the name was current in the Zone region as well. No alternative Thracian name provides a convincing match with the other potential phonetic values of <Ψ>, and it is worth noting that the cluster /ps/ is exceedingly rare in Thracian, if present at all. The isolated forms Μοψηστις (1×) and Ψειλοξειου (1×) stand alone, while Ψιφραου (an epithet of Hermes) and ΨΑψιθηος (1×) remain uncertain.

Another personal name is <ΔΑΛΙΕΨΑ> (LAZ 20+176+273), which OT (108) associates with a possible element δαλ-/dal- known from names such as Δαλιλας and Dales.²⁸ The personal name Δαλιλας may point to the existence of an element δαλι-, likely derived from the *i*-stem name Δαλις/*Dalis*, combined here with the well-known suffix -λας (e.g., Αϊου-λας, Βασιε-λας, etc.; see OT 200). The second element -εΨα is, therefore, likely a suffix or an extension of δαλι- but is difficult to analyze on the basis of Thracian onomastic evidence, regardless of how <Ψ> is interpreted. If <Ψ> is read as /k/, a form -εκ- would find a partial parallel in the thematic *k*-suffixes attested across various Indo-European languages of the Mediterranean basin (e.g., Latin -ex, gen. -icis, and -ix, gen. -icis; Greek -αξ, gen. -ακος). Owing to their uncertain etymology, these suffixes are often connected to the substrate (Wigman 2024). As is well known, thematic *k*-suffixes are fairly productive in personal names, and although the comparison remains highly tentative, they represent the closest morphological *comparandum* to -εΨα currently available in the documentation.

3.3.3 Elements incompatible with a Paro-Thasian template (2): paleogeographic variants and ‘ductus’

Alongside the structural differences noted above, the Zone-Samothrace corpus displays some paleographic features that depart markedly from those attested in the Paro-Thasian, and, more generally, Cycladic epigraphic record (see Table 2). Three such cases, already discussed in a previous section, are the unusually high number of *beta* variants, the possible use of the straight *gamma*, and one instance of the ‘five-stroked’ *sigma* (§3.3.1), to which we may add the shapes of other signs.

A first divergence concerns the variability in the rendering of <O>, which, as noted, is the only sign used for the mid back vowel. In the graffiti from Zone and Samothrace, along with the more canonical, nearly perfectly rounded <O>, at least three additional shapes occur: a rhomboidal shape <◊> (e.g., LAZ 239, 257, Lehmann 1960, no. 5), a squared/rectangular shape <◻> (LAZ 234, 289), and a dotted variety <◌◌◌>, also attested at

²⁷ To these we must probably add the two forms Κοζιβίθους (whose second element is well attested in Thracian onomastics in Egypt; see OT 58) and Κοζιστος on two graffiti from Abydos (nos. 372 and 418 respectively).

²⁸ On this name see Parissaki (2007: 161) and Guijarro Ruano (2024: 50).

Zone in Greek graffiti (*LAZ* 32), with a small central dot inside the circle (*LAZ* 87, 228; Fraser 1960, no. 65). Although all of these variants are well known in the Greek world, none is attested in the Parian or Thasian corpora. For instance, the rhomboidal variant appears across the mainland in the Archaic period and continues to be used in Macedonia into the Hellenistic period (Nigdelis and Lioutas 2009: 105).²⁹ The dotted variant occurs consistently in the stone inscription from Samothrace which would constitute the only example of alphabetic group (c).³⁰ At Zone, it is attested, among other cases, in the Thracian rendering of the anthroponym Νεοκλής on *LAZ* 87, within the sequence preserved in the join *LAZ* 32+65+87+101 [αβολο ὕνεσο] νεοκλε κυτονιδες καλυπ[–], where all other instances of <O> are written without a dot. This contrast may point to a deliberate emphasis, perhaps of an identitarian nature, on the connection between the paleographic variant <O> and the name of the dedicator. It is, by contrast, not plausible that the dotted *omicron* carried any distinct phonetic value in this context. Dotted *omicrons* are well known from the graffiti of Methone (Panayotou-Triantaphyllopoulou 2017: 237), in the Peloponnese (e.g., *LSAG*² 225–226) and the Doric islands (*LSAG*² 244–245). In nearly all cases, they are paleographic variants of the common <O>, sometimes even appearing alongside it (e.g., *LSAG*² 324.26), and no phonetic distinction can be demonstrated. The only exception is Thera, where the dotted variant was refunctionalized to spell /ɔ:/ in opposition to /o/ rendered by <O> (Astoreca 2021: 78). Finally, the ‘squared’ *omicron* is another relatively common variant, particularly favoured on metal (Johnston 2020), and attested also on a side of the Lemnos stele and, at times, in Phrygia (Janko 2015).

The Zone graffiti also display a degree of originality in their use of punctuation compared to the material from Paros and Thasos. At Paros, punctuation is unattested before the 4th century BCE. At Thasos it appears sporadically from the late 6th century (becoming more usual only from the late 5th century), but as a rule it is employed to divide sections of text.³¹ In general, punctuation is rare in the Cycladic alphabets. The earliest Cycladic examples date to the Archaic period and come from Naxos, in a boustrophedon votive inscription that served as the base for a statuette dedicated by Euthycartides (*IG* XII 5, XXIV, 1425a, 620–600 BCE). This inscription, however, uses an interpunct not found in the Zone graffiti, namely three dots arranged vertically <:|. The two dots <:|, the only other interpunct employed in the Cyclades, appears, again on Naxos, for the first time on an inscribed column datable, with some uncertainty, to 500/490 BCE (*IG* XII,5 40), and further in the inscription from Keos with the ‘red’ *chi* (see fn. 24 above). At Paros, the two dots appear only twice, both later than the disappearance of the local alphabet (*IG* XII,5 123 and 211). At Thasos, the interpunct <:| appears in a document dated on paleographic grounds to between 440 and 420 BCE (Pouilloux 1954: 116) and, later, in several economic documents where it functions as a paragraph divider (Pouilloux 1954: 123–125). In the graffiti from Zone, at least three types of interpuncts appear, and they are clearly used as word dividers, as supported both by the average number of letters in the sequences they delimit and by cases

²⁹ The figure reappears later as well, also in Thrace (e.g., *IGBulg.* 5901, 2 CE), between the 2nd and 3rd centuries CE (Catenacci *et al.* 2022: 25).

³⁰ As indicated by Lehmann’s normalized transcription (1955: 100). Fraser (1960: 120) does not mark the dot in the second <O> on line 3, though the photograph shows it clearly present, despite slight abrasion.

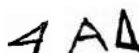
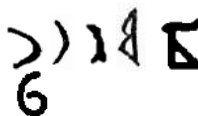
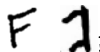
³¹ The earliest instance of punctuation on Paros is the sign <:|, which divides words in *IG* XII,5 211 (early 4th century BCE). On Thasos, the earliest punctuation consists of three vertically arranged dots, used as section dividers on *IG* XII,8 356 (ca. 500 BCE) and as word dividers on a funerary hydria (500–450 BCE; see Bernard and Salviat 1967: 593–598, no. 42), while punctuation becomes more common from ca. 430 BCE onward, on inscriptions that begin to give up epicoric features, showing, for example, the use of and <Ξ> (Pouilloux 1954: 440).

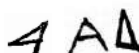
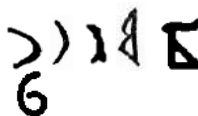
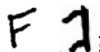
embedded within recognizable strings, such as *LAZ* 72 αβολο :: υ{ι}νεσ[ο ...]. These interpuncts are the single dot <·> (e.g., *LAZ* 270), the two dots <:> (e.g., *LAZ* 30), and the four dots <::> (e.g., *LAZ* 227). Of these, the two dots <:> is the only sign widely attested across the Greek alphabetic varieties, although its use, like Greek punctuation more generally, remains unsystematic (Guarducci 2005: 27). The single dot (or ‘monopunct’), although typologically widespread in writing systems (e.g., Crellin 2022) and part of the Semitic tradition starting from the 10th century BCE (Naveh 1973: 206–207), is far rarer in Greek alphabets than one might expect (Guarducci 2005: 28). In the Archaic period, the single dot tends to appear chiefly in the Greek western area (e.g., *IG* IX,1 334 from Galaxidi, *LSAG*² 283.1 from Taras, *IG* XIV 636 from Petelia, and *LSAG*² 261.29 from Rhegion), but it also sporadically occurs elsewhere, including some Anatolian alphabetic inscriptions (Obrador-Cursach 2020: 51). Still rarer are the four dots <::>, never listed in *LSAG*² and, to our knowledge, absent from the Greek alphabetic tradition. Notably, interpuncts created by reduplicating the two dots <:> do not appear to exist, whereas reduplication was productive with the three vertical dots, yielding dividers of six (*LSAG*² 170–171) or nine dots (*LSAG*² 344–345). Consequently, it seems that the very graphic principle required to generate a sign such as <::> was unknown in the Greek world.³² Given the clarity of *LAZ* 72, it is difficult to interpret <::> in this inscription as anything other than a word divider, and we must allow that it may represent a unique feature within the Aegean epigraphic record.

To these considerations regarding the shape of the letters, one must add a broader point: the direction of writing. The Thracian graffiti from Zone and Samothrace are the only inscriptions in the region showing retrograde writing. This ductus is used in more than half the cases. Since Thracian graffiti typically consist of a single line, however, it is not possible to determine whether they are written sinistroverso or boustrophedon.³³ Although the poor legibility of some graffiti leaves room for uncertainty, the lack of a fixed ductus is suggested not only by the fluctuating direction of the writing, but also by instances of letters rotated 180 degrees in comparison to their standard orientation. For instance, the ‘moon-shaped’ beta is sometimes oriented backward in comparison to its usual drawing in dextroverso inscriptions and vice versa (e.g., *LAZ* 145 and 187). Similar behavior is observed for other signs, as exemplified by the dextroverso variant of <Σ> in the sinistroverso graffiti *LAZ* 183. This evidence supports the assumption that the writing direction was not codified for the Thracian-speaking community represented in the Sanctuary of Apollo at Zone, while retrograde inscriptions or retrograde variants of letters do not occur in the Greek graffiti, nor on other types of inscriptions, from Samothrace and Zone. Nevertheless, one should stress that both sinistroverso and boustrophedon writing remain common in the Greek world at least until the early 5th century (Guarducci 2005: 29), with occurrences also in the Cyclades (*LSAG*² 290) and at Thasos (Pouilloux 1954: 37–38, esp. 38 fn. 1). Here, boustrophedon writing appears to have been a short-lived phenomenon and is absent from the earliest attestations of writing on the island. In particular, retrograde or boustrophedon script on Thasos seems to be almost exclusively associated with graffiti found on the *Rempart*, while only a single stone inscription written with a non-dextroverso ductus is

³² The only partial exception may be, tentatively, the interpunct consisting of five dots, which seems to represent a unique innovation in the sacrificial calendar from Miletos (*LSAG*² 343.33, perhaps 525–500 BCE). Here, the five dots appear alongside another interpunct, namely three vertically arranged dots, and may well constitute an idiosyncrasy of that document.

³³ Note that boustrophedon ductus is attested both with the first line running left-to-right and with it running right-to-left (Guarducci 2005: 28).

Samothrace and Zone	Possible phonetic value	Relevant comparisons
	/a/	<i>Not diagnostic</i>
	/b/	 Paros and Thasos
		 Other Greek alphabets and Phrygia
		 Thera
		 Argos
	/g/	 Paros and Thasos
		 Other Greek alphabets with hook-shaped <i>lambda</i> (e.g., Phlius and Thessaly)
	/d/	<i>Not diagnostic</i>
	/e/	<i>Not diagnostic</i>
	/w/	<i>Disappeared or residual in Ionic areas</i>
	/ts/ or /z/	<i>Not diagnostic</i>

Samothrace and Zone	Possible phonetic value	Relevant comparisons
	/a/	<i>Not diagnostic</i>
	/b/	 Paros and Thasos
		 Other Greek alphabets and Phrygia
		 Thera
		 Argos
	/g/	 Paros and Thasos
		 Other Greek alphabets with hook-shaped <i>lambda</i> (e.g., Phlius and Thessaly)
	/d/	<i>Not diagnostic</i>
	/e/	<i>Not diagnostic</i>
	/w/	<i>Disappeared or residual in Ionic areas</i>
	/ts/ or /z/	<i>Not diagnostic</i>

	/ɛ:/	<i>Not diagnostic</i>
	/i(:)/	<i>Not diagnostic</i>
	/k/	<i>Not diagnostic</i>
	/l/	 Paros and Thasos
		 Other Greek alphabets (e.g., Corinth and Phokis)
		 Phrygia
	/m/	<i>Not diagnostic</i>
	/n/	<i>Not diagnostic</i>
	/o(:) or ɔ(:)/	 = /ɔ:/ Paros and Thasos
		 Several Greek alphabets (e.g., Argos, Attica, Phokis)
		 Other Greek alphabets (e.g., Sikyon)
		 Other Greek alphabets (e.g., Elis)
	/p/	<i>Not diagnostic</i>
	/r/	 Paros and Thasos

		 Samos and other Greek alphabets
		The <P> shape attested almost always in Greek alphabets it is absent in Thracian graffiti.
	/i/ (after vowel) and /j/	 Phrygia
		 = /i/ Doric islands
	/s/	 Paros and Thasos
		 Other Greek alphabets (e.g., Asiatic Ionia, Lakonia, and Syracuse)
		 Phrygia
	/t/	<i>Not diagnostic</i>
	/u/	<i>Not diagnostic</i>
	/k/?	 Phrygia
		 = /k ^h / Other Greek alphabets (e.g., Achaea, Arkadia, Boiotia)
		 = /ps/ Other Greek alphabets (e.g., Argos, Corinth, Asian Ionia)
	/o/, /o:/, /ɔ:/?	 = /o/, /o:/

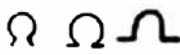
		 = /o:/ and /ɔ:/ Asian Ionia and Doric Hexapolis
		Some Greek alphabets (e.g., Lakonia and Achaian colonies)
		Several Greek alphabets (e.g., Thasos, Ionic Dodekapolis, and Doric Hexapolis)
		Unknown

Table 2: Paleographic table of the Thracian graffiti from Zone and Samothrace and relevant comparisons

4. Discussion and conclusions:

The ‘Thracian’ alphabet(s) from Samothrace and Zone in context

We have shown that the alphabetic varieties attested in the late Archaic and Classical Thracian documents from the northern Aegean cannot be aligned with any tradition that might be ‘linearly’ inherited from a known corpus. It is therefore time, we suggest, to move beyond earlier classifications that treat the Thracian alphabet(s) of Zone and Samothrace as direct borrowings from a Paro-Thasian template, as well as beyond the notion of a passive ‘Hellenization’ and ‘alphabetization’ of Thracian-speaking communities during the period of Greek colonization. The distinctiveness of these alphabetic systems is readily apparent in their adoption of letters and conventions drawn from outside the Greek sphere, possibly from Phrygian or Semitic, or, alternatively, in their revival of archaisms such as the graphematic distinction between /i/ and /j/, long abandoned in the Greek alphabet but perhaps preserved within the *corpus doctrinae* developed by the sanctuary’s community of practice. Whether recovered or adopted, such features presuppose a meaningful degree of linguistic awareness and agency.

We noted that certain features of these alphabet(s) find scarcely any parallels in the surrounding Greek traditions: the possible use of <Ψ> as a variant for /k/, for example, appears far removed from the practices attested in the alphabets most similar to the Cycladic ones. At least theoretically, this could point to an independent development of a ‘red’ *chi*, given the absence of the aspirated stops in Thracian (in the same way that, according to Adiego (2018: 153), Lycian <Ψ> would originally have represented /k^h/ < PIE *b₂) or, alternatively, to an independent evolution of the letter from Phoenician *kaḏ*, as has been proposed for Phrygian (§3.3.2). A similar situation holds for the distinction between <J> and <I>, another striking feature of the northern Aegean Thracian writers that finds no parallels in other Greek templates and is therefore best understood as the

refunctionalization of two inherited allographs preserved within the local *corpus doctrinae* or borrowed from a neighboring region such as Phrygia. As noted above (§2), a *corpus doctrinae* may preserve features long obsolete or unexpected from a phonetic point of view. The presence and unusual shape of the *digamma* in the 5th-century abecedarium from Amorgos (IG XII,7 413), where the sound /w/ had been lost early, shows that elements long abandoned in everyday use could persist in didactic contexts. Similarly, in the Pamphylian alphabet, two competing *digamma* variants, the epichoric <И> and the pan-Greek <F>, remained in use into the 1st century BCE, even though they functioned primarily as phonetic allographs (Selvi 2023). The same may well apply to the /i/–/j/ distinction in the northern Aegean Thracian alphabet(s).

We also observed that a range of paleographic variants, such as the ‘double-looped’ and ‘Theran’ *beta*, the ‘straight’ gamma, the rhomboidal, squared, and dotted *omicron*, and the ‘five-stroked’ *sigma*, all weaken the hypothesis that the Thracian-speaking communities attested at late Archaic and Classical Zone and Samothrace derived their alphabet solely from Thasian teachers. Equally noteworthy is the variety of punctuation marks attested in the Thracian graffiti, especially the use of <::>, which, to our knowledge, is otherwise unattested in the Greek world. The distribution of such original or rare interpuncts is uneven across Greek alphabetic traditions: in the Archaic and early Classical periods, some regions employ numerous punctuation signs, while others, such as Paros and Thasos, favor *scriptio continua* or restrict themselves to only one or few interpuncts. Even neighboring areas may differ sharply: in the northern Peloponnese, for instance, Megara uses only <:>, Sicyon only <|>, whereas nearby Corinth employs between six and nine dots and Phlius three. Although the ‘productivity’ of punctuation marks cannot by itself determine the closeness of alphabetic traditions, the evidence from Zone appears far removed from what one might expect to have been transmitted by teachers coming from the Paro-Thasian tradition (§3.3.3).

The presence of the interpunct <::>, unattested elsewhere, may also reflect a degree of originality in the selection and reworking of scribal variants, which could also underlie the absence of the common variant of *rho* <P>, essentially universal across Greek alphabets, and the presence of an original quadratic *beta* with divergent strokes.

Within this framework, it would be reductive to assume that Thracian speakers merely adopted a Paro-Thasian template. Alongside this, it is unnecessary to posit the existence of a distinct Thracian alphabetic variant (c), different from (b) (§3.1), represented only by Fraser’s inscription (1960, no. 64). From the previous discussion (§3.3) follows that every feature of that inscription is attested elsewhere in the graffiti and in the ‘Thracian’ inscriptions from Samothrace and Zone. In particular, both <Ψ> and the dotted *omicron* already appear in graffiti beginning in the 6th century BCE, while <H> occurs in Thracian texts dating around the 4th century BCE, such as *IThrAeg* 377.3 and Brixhe & Zournatzi 2015, no. IV. The other allegedly distinctive paleographic features, including the ‘four-stroked’ *sigma* and the ‘double-looped’ *beta*, are in fact widespread within the repertoire associated with group (b).

As noted in §3.2, central to our discussion is the role of temples both as aggregators of the documents that survive today and as places where individuals of diverse backgrounds and origins came together while participating in shared rituals and practices. From the Late Geometric period onward, major sanctuaries also became centers that exerted economic control over trade and networks (Sherratt & Sherratt 1993). Temples could likewise function as spaces of learning and enculturation. An early example of the association between

Apollo's sanctuaries and the formation of a writing tradition is the deposition of graffiti at Eretria, dated between the 8th and 7th centuries (Theurillat 2007: 336). Theurillat notes that the dense concentration of graffiti in the pits of the sanctuary of Apollo Daphnephoros can hardly be accidental, particularly given their absence in the neighboring sanctuary of Artemis. Prosdocimi (1990) similarly identifies sanctuaries in Iron Age Italy, such as Portonaccio at Veii, as spaces in which what we would now call 'communities of practice' cultivated and transmitted the forms of writing associated with dedicatory inscriptions and the comprehension of religious texts.

Comparable dynamics appear in the sanctuary of Kommos in Crete, where Phoenicians and Greeks shared sacred space; the resulting mixture of writing traditions and letter shapes, even on the same object, led Csapo & Geagan (2012: 107) to challenge a genealogical model in favor of "horizontal links." Polymorphic corpora such as the 8th to 7th-century material from Methone (Kotsonas 2012, Johnston 2017) show that such coexistence and experimentation were pivotal in the earliest phases of the emergence of a writing tradition. This phenomenon did not end with the Geometric period but reappears in later contexts where alphabetic writing was being adopted by local communities. A telling example is the composite graffiti from the Illyrian settlement of Ošanića in Bosnia, dated to the mid-Hellenistic period and again tied to the acropolis sanctuary; these display a process of selective adaptation and refunctionalization drawn from an emphatically polymorphic set of possibilities (Marić 2006). In all these cases, 'communities of practice' composed of individuals from different regions, and often different languages, formed around centers associated with writing practices, creating environments in which writing traditions could be exchanged and reworked through shared worship and sanctuary-based networks.

What, then, does this imply for the Thracian alphabet(s) of Samothrace and Zone? The presence of the aforementioned 'mixed' alphabetic features and the fact that such a situation is common in templar contexts require future investigation into the extent to which the sociocultural landscape of the sanctuary of the Great Gods at Samothrace and the sanctuaries of Apollo and Demeter at Zone may have influenced the material that has come down to us. For example, certain features that are decidedly non-Paro-Thasian, or even distinctive regional variants far removed from Paro-Thasian practice, tend to co-occur within our corpus. To cite two instances, one may note the co-occurrence of 'squared' *beta*, 'five-stroked' *sigma*, and 'ps' in LAZ 11 and the frequent pairing of the pan-Greek *lambda* <Λ> with the equally widespread 'two-looped' *beta* (e.g., LAZ 213, 236, 240). The 'moon-shaped' *beta* <C> likewise appears largely, though not exclusively, in the writing of divine names in these locations, just as the Paro-Thasian use of *omega* might be associated to the name of Apollo in the Greek graffiti of Zone (§3.3.1). When these elements are considered alongside the presence of distinctly 'exotic' and rare features, such as the Thera *beta* and the graphematic contrast between <Δ> and <Ι>, we may legitimately ask whether, and to what extent, these alphabetic varieties reflect the encounter into these religious centers of individuals from different groups, the development of scribal traditions drawing from slightly divergent sources and capable at times of generating original features, or some combination of the two.

We must also recall that the graffiti preserved at Zone resulted from a selection made when the sanctuary was rebuilt two centuries after the ostraca were inscribed, at a time when they were already 'antiques' (§3.2). This selection may have privileged certain features and, in some respects, may reflect more how 4th-century communities wished earlier alphabetic varieties to appear than the situation that had actually prevailed nearly two centuries earlier.

This invites the question of whether the paleographic variants attested in the graffiti should be understood as components of a single northern Aegean ‘Thracian’ alphabetic repertoire or as belonging to distinct alphabetic traditions emerged in response to stimuli from different epichoric varieties.

To sum up and conclude, this study has provided a comprehensive comparison of the alphabet(s) as emerging from the published ‘Thracian’ inscriptions of Zone and Samothrace. It must be stressed, however, that Lehmann’s edition of the Samothracian graffiti does not provide photographs or drawings for all the inscriptions, and a full re-examination of this material, which we plan to undertake in the near future, may yield minor refinements to our discussion. The framework of the *corpus doctrinae* and the model of the ‘communities of practice’ have proven useful for the discussion of the distinctive features of the Thracian inscriptions, showing that the previously proposed Paro-Thasian model cannot account for the formation of the Thracian alphabet(s) attested at Zone and Samothrace. Instead, we argue for a multilinear transmission enabled by the particular conditions of the sanctuary, which functioned as a point of aggregation for diverse traditions, Greek and possibly even non-Greek, then reworked in original manners by the Thracian speakers during the late Archaic period. Thus, we contend that not only the genealogical model of alphabetic transmission but also the dynamics of ‘Hellenization’ in peripheral areas must be reconsidered with due attention to local agency.

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