

Alfredo Rizza

# From the predicaments of grammatology to the origin of the Lydian (and other) scripts

## 1 Some premises on possible predicaments of grammatology

Before presenting a few problems and ideas concerning the origins of the Lydian alphabet, there are some important terminological points that deserve to be briefly discussed.<sup>1</sup> In common with other disciplines, grammatology may sometimes suffer the insidious problems of any terminological system, especially when this system is built upon a natural language. Words used in a specific technical language may, and this is usually the case, undergo the same processes of language-change that are typical of our everyday language. Restrictions or broadenings of the usages of a term, in particular, are very common, together with metaphorical and metonymical extensions. Such changes do not necessarily need long periods of time to emerge and they co-exist with the ‘original’ (if one may say so) meanings. So terms like ‘grapheme’ or ‘letter’, just to cite a couple, may occasionally be understood in rather divergent ways. But the same can also be said for ‘character’, ‘sign’, ‘shape’ or ‘script’.

‘Grapheme’ will not be used in the next section of this paper because it is of little relevance, at least when conceived as it is conceived here. ‘Grapheme’ may be understood at least in two different general ways: (1) as a predicate, (2) as a ‘thing’. Once we define the grapheme as the «smallest distinctive unit of a writing system»<sup>2</sup> we are considering it a ‘thing’.<sup>3</sup> This usage is in fact widespread and very practical. Nonetheless it may lead to a too concrete understanding of ‘grapheme’. Grapheme, parallel to ‘phoneme’, should more safely be defined as the *class of all equivalent smallest distinctive units* of a writing system, not a concrete unit in itself. Obviously, such a set may contain only one unit, but this should not allow the metonymical process transferring ‘grapheme’ to its instantiation(s). A major concern is, however, the use of ‘grapheme’ as a predicate. Saying that «X is a grapheme» means nothing more than «X has a graphemic relevance».

---

<sup>1</sup> My gratitude to G. B. Holland for all the comments and for helping me with English. Furthermore to M. Bencich, P. Cotticelli, M. Egetmeyer, M. Hartmann, M. Ofitsch, T. Quadrio, P. Solinas, C. Steitler and Ch. Zinko.

<sup>2</sup> RDLL, s.v.

<sup>3</sup> Under a certain understanding of ‘unit’, obviously. ‘Unit’ can be understood either in an abstract or concrete sense.

The problem is: at what level of pertinence? In fact the biggest problem in the definition of grapheme given above, i.e. «the smallest distinctive unit of a writing system», lies in ‘writing system’ more than it lies in any metonymical process involving reification. Once we define ‘grapheme’ as a function of a writing system we need to share a common definition of ‘writing system’, as long as for any difference in such a definition, a difference in the identification of the graphemes will follow. It is not the purpose of this paper to analyze all these problems, but it is necessary at least to state the limits that are traced around ‘writing system’ and related concepts.

‘Writing system’ is here understood as a general reference to any graphic visual system encoding a message in a ‘static’ way, as a norm, and requiring, as a norm, a dedicated space, typically a surface, where contrastive shapes may be systematically laid out.<sup>4</sup> The kind of writing system we will concentrate our attention on, is the ‘glottic’ one. A glottic writing system is here taken as a writing system that recodes speech utterances. Recoding (and recording) speech may require, however, means that could be described as non-glottic, for example all the signs that are used to reduce any given ambiguity in the system. The presence, in a glottic system, of elements or structures that are not directly representing speech, does not alter the teleology of the system itself. A glottic writing system, however, would be better understood as one of the many levels of pertinence of a semiotic system within which the written documents play their role. Very important is also another level of pertinence, interconnected with, but not reducible to the glottic one. This could be called, partially following Harris (1995, pp. 95–109), the *notational* level of pertinence.

In order to understand better the overall picture, please refer to the following scheme (table 1):

		NOTATIONAL SYSTEM (META-RULES)	shapes, potential values
		↓	
LANGUAGE → (RULES)		(glottic) SCRIPT (INTERFACE LEVEL)	shape-value morphology and syntax
		⇒	WRITTEN LANGUAGE

**Table 1:** Connections among levels of pertinence of a glottic writing system (adapted from Rizza 2012)

<sup>4</sup> Cf. Harris 1995 about writing being ‘static’ and requiring a surface.

This is a primitive outline of the interconnections between what one could define as the proper glottic level and a level, the notational, that partially overlaps the glottic one. This happens as soon as a ‘script’ is derived out of a notational system in order to represent a given language. For the purposes of this paper it suffices to describe shortly the table above, within the limits of relevance for the glottic level. A notational system is here understood as a body of rules defining in very general terms the morphology of shapes that will be able to create contrast.<sup>5</sup> This body may also contain general syntactical rules, such as restrictions on the formations of strings or arrays of shapes, script-directions and the like. Let us imagine that a certain notational system allows, in its glottic application, only a linear ordering of shapes, leftwards and top-to-bottom. It follows that we could derive only scripts that have these syntactical layout rules, but for each script the correspondence between shapes and values may vary. A notational system may provide, in principle, also a set of potential values and for this set there may, or may not, be restrictions, such as: any shape must represent a simple syllabic structure.<sup>6</sup> Or: any shape will acquire a value depending on the context, but the only possible values are, again, simple syllabic structures.<sup>7</sup> In general there are no such strict rules at the notational level, as one can see, for example, for the cuneiform scripts, where the shapes may acquire a range of different values, some of them purely functional to reduce ambiguity (or the contrary). Morphological and syntactical rules at the notational level must not be confused with morphological and syntactical rules at the glottic script level. Relevant for the script level are shape-value relations, not just shapes, and orthographical rules must be applied in order to code speech. So morphological and syntactical rules apply to shape-value relations. This is a very important point. ‘Shape-value’ need not be considered a one-to-one relation. It is not strictly realized with shape units, rather, it is realized with strings, or, perhaps even better, arrays of shape units. Historically it is clear that the relation is a many-to-many one. Many shapes for one value, one shape for many values depending on the level of representation of the speech utterance. Digraphs like <ch> representing [k] in the Italian script are graphemic strings, while the character |c| and the character |h| out of the specific script and out of the specific context (i.e. out of morphological and syntactical rules pertinent to a written language) cannot be identified as real graphemes in the glottic sense. At the glottic level it may be useful to define the grapheme as the

---

<sup>5</sup> And enforce emblems. For the concept of ‘emblem’ cf. Harris (1995), pp. 71–79.

<sup>6</sup> This rule will force the script to be purely syllabographic.

<sup>7</sup> This allows polyphony.

*class of all equivalent minimal arrays of notational units.*<sup>8</sup> For example, in a given “glottic script” ⟨tsch⟩ may be a grapheme (a string that is graphemic at the glottic level) if it is the minimal mean to code the intended glottic function (whatever this may be), even if ⟨tsch⟩ is in fact built with four shape-units, which correspond to four characters,<sup>9</sup> that are part of a notation system and a repertoire shared by several written languages.

The term ‘character’ just introduced is here to be considered a «unit of information used for the organization, control, or representation of textual data»,<sup>10</sup> a definition strongly dependent on the wide spreading influence of the information theory and the use of computers.

It should be quite evident by now that ‘sign’, ‘grapheme’, ‘notational unit’, ‘character’ and, most relevant for this paper, ‘letter’ are all terms that can be used to designate the very same thing, but surely do not mean the same.<sup>11</sup>

‘Letter’ in particular will be central in the rest of the paper. Better than ‘character’ or ‘grapheme’ or ‘notational unit’, the term ‘letter’ can more easily account for the entities that will be treated. The choice is practical and has evident traditional and historical grounds. When speaking of an ancient alphabet, we are generally not concerned with the representation of blanks, carriage returns and the like, which are all characters. ‘Grapheme’ is also incorrect, if we reserve the term for the glottic level of pertinence in both paradigmatic and syntagmatic relations. *c* and *h* are both letters of the Italian alphabet, but they should be treated as (glottic) graphemes only when they undergo the proper morphological and syntactic rules of speech representation provided by the orthographic component. The term ‘letter’, however, is also to be considered as a class comprising a number of variants within single scripts. Unlike ‘notational unit’, ‘letter’ is more tied to the glottic level and usually provided with a ‘default value’, especially in *abecedaria*. A letter is actually the basic element of an *abecedarium* and, as we will try to stress in the next sections, *abecedaria* (historically attested or to be reconstructed) are of central relevance in the study of the origin of scripts.

---

**8** The term ‘array’ can be misleading. I am not thinking here of the difference between script and charts as explained in Harris 1995. An array of notational units may be ⟨è⟩, ⟨dž⟩ or Greek ⟨Ϛ⟩, where ` , ~ etc. are all notational units.

**9** The correspondence between notational units and characters is not one-to-one. |dž| is one single character (UNICODE 01C6) clearly composed by three different notational units.

**10** The Unicode Standard Version 6.2 – Core Specification, § 3.4, p. 67.

**11** See also Haugen 2011, pp. 109–120.

## 2 The origin of scripts: Lydian among others

### 2.1 Lydian ‘national’ alphabet

The Lydians had their own ‘national’ alphabet.

A	a	𐌆 𐌇	n
𐌈 𐌉	b	𐌊	τ
𐌋	g	o	o
𐌌	y	𐌍	r
𐌎 𐌏 𐌐	e	𐌑 𐌒	ś
𐌓 𐌔	v w	𐌕	t
𐌖 𐌗 𐌘	s	𐌙	u
𐌚	i	+	q
𐌛 𐌜	k	𐌝	ē
𐌞 𐌟	l	8	f
𐌠	d	↑ 𐌡	c
𐌢	m	𐌣	λ
𐌤	ā	𐌥 𐌦 𐌧 𐌨	v

**Illustration 1:** Lydian alphabet (with some variants) and current transcription (adapted from LW, Gusmani 1978)

### 2.2 Scripts of archaic Greece and the concept of ‘*corpus doctrinae*’ of literacy

The question of the origin of the Lydian alphabet may at first appear to be easy, as long as it can be conveniently compared with eastern Greek, or ‘blue’,<sup>12</sup> alphabets. But to decide if Lydian actually is derived from, e.g., an Ionian Greek model or if both go back to a common sub-archetype is actually difficult. Gusmani 1978 recognizes that Lydian, Greek and Phrygian share some common innovations out of the Semitic original model. He reminds us also that Lydian has substantial affinities with the oriental Greek alphabets, but tries to emphasize what seems to be closer to Phrygian.

In a difficult but very interesting study about *abecedaria*, writing and literacy in Ancient Italy and Etruria, Prosdocimi 1990 showed that, while investigating

<sup>12</sup> Kirchhoff 1887<sup>a</sup>, Swiggers 1996.

the history and the origins of a specific (alphabetic) writing system, looking for an “original” alphabet is always inappropriate. The concept should be replaced by that of a ‘*corpus doctrinae*’,<sup>13</sup> i.e. the body of written and oral teaching and training tools by means of which not only a specific, already formed writing system could be perpetuated, but also from which a new writing system or, perhaps better, a new written language could be created. This means that we should try to reconstruct as many doctrinal/teaching corpora as can be inferred from all the epigraphic corpora that one can observe to be interconnected. Put in these terms, it would in fact be incorrect to derive Lydian from a specific historical alphabet,<sup>14</sup> like Greek or Phrygian; it would be more correct to see if, out of Phrygian, Greek, Lydian, Carian etc. one can envisage a set of shapes, variants, and rules that were available while inventing, deriving, adapting local written languages. If it were possible to reconstruct the ‘perspective of the teachers’<sup>15</sup> and realize, for example, that this must have implied Greek-speaking ‘teachers’, then we could say that a certain written language derives from a certain Greek ‘doctrinal’ system. In our case, however, following this line of research may require far too many undocumented assumptions.

Nevertheless we can try to discuss some major facts. Among the Greek dark-blue alphabets some identical shapes have different values, a fact of interest, if one considers that they are part of the same tradition and share a number of orthographic peculiarities. Some of the shapes may happen to be identical because of independent shape variation of different originals. But the very interesting point is that there is a clear tendency to maintain a visual distinction between different values. So the alphabets of Argos and Mycenae (ill. 2) have shapes of *gamma* that are identical to those of *lambda* in Ionia (ill. 3). But then Ionian alphabets have a shape of *gamma* that differs from both Ionian *lambda* (so the system is safe) and Argive *gamma*. Having produced a particular distinction between *gamma* and *lambda*, the Argive inscriptions show then for the function /b/ a sign that can theoretically be understood as an open variant of a *bet/beta*<sup>16</sup> or as a variant of *gamma* with a ‘diacritical’ added.

---

13 Prosdocimi 1990, pp. 157–195: «corpus dottrinale».

14 Properly a historical model.

15 Cf. Prosdocimi 1990, pp. 164–166.

16 Archaic variant of *bet*: Guarducci 1967.



Illustration 2: Alphabet of Argos and Mycenae. Arranged on the base of Jeffery 1961, Guarducci 1967



Illustration 3: Alphabet of Ionia. Arranged on the base of Jeffery 1961, Guarducci 1967

The various blue alphabets show considerable variation in the selection of the shapes for the value /b/: Argos vs. Corinth (ill. 4), Megara, Lefkada and others vs. Ionia, Sicyon, partially Naxos and the Cyclades (ill. 5), these local choices have local consequences, that may also be interesting for Lydian, e.g. for the letter [β] (cf. tables 3–5).



Illustration 4: Alphabet of Corinth. Arranged on the base of Jeffery 1961, Guarducci 1967



Illustration 5: Alphabet of the Cyclades. Arranged on the base of Jeffery 1961, Guarducci 1967

For the blue alphabets there is not just one single tradition for  $\beta$ ,  $\gamma$ ,  $\delta$ ,  $\varepsilon$ ,  $\lambda$ ,  $\rho$ . And all these signs are quite relevant for Lydian, as we will see. Now  $\beta$ ,  $\gamma$ ,  $\delta$ ,  $\varepsilon$  are all ordered one next to the other in the *abecedaria*. So it seems that there was a repertoire showing a number of shapes in a row that have been locally selected in the process of adaptation of the single written languages. The single choices then had consequences for the shape selections of other letters, outside the range, that can result very similar. So there is a shape of *beta* in Naxos (ill. 5) that is used as *gamma* in Corinth. The shapes of  $\beta$ ,  $\gamma$  and  $\delta$  in Corinth allow a variant of  $\varepsilon$  that is identical to the Ionian *beta* (tables 2, 5).

In the light of what has just been illustrated we can reconstruct, in a ‘*corpus doctrinae*’, a set of shapes for the range  $\beta$ - $\varepsilon$  that outnumbered the range of values itself and were locally selected or locally independently implemented. The choices made within this range are connected with the choices for  $\lambda$  and  $\rho$ , that have shapes available that may end up being identical to those of the range  $\beta$ - $\varepsilon$  (cf. tables 2–3).

### 2.3 Lydian local literacy knowledge

Now to Lydian. Gusmani 1978<sup>17</sup> gives a complete overview of the problems connected with the study of the origin of the Lydian alphabet and its single letters. Gusmani’s study also offers a typology of variations among donor and derived scripts: (1) removal of redundant letters; (2) loss of shape-value distinction, when two originally ‘distinctive’ letters becomes variants of some sort; (3) acquisition of shape-value distinction by originally non-distinctive variants; (4) re-interpretation of the value of a letter. Lydian examples for type (1) could be the removal of  $\{g\}$  due to the loss of voiced-voiceless distinction, for type (3) the use of a variant of  $\mu$  for  $\{ã\}$ , and for type (4) the refunctionalization of  $\psi$ .<sup>18</sup>

Gusmani concludes that the best *comparanda* can be found in Old Phrygian and Eastern Greek *models*. While strongly supporting the close relationship with the Greek (dark-)blue alphabets, not exclusively from Ionia,<sup>19</sup> this article aims at replacing the concept of ‘model alphabet’ with that of ‘teaching corpora’.<sup>20</sup>

<sup>17</sup> Cf. also Gusmani 1975.

<sup>18</sup> More in Gusmani 1978, pp. 841–842.

<sup>19</sup> For a brief illustrated introduction to the historical ties between Lydia, Ionia and Aeolia, cf. now Kerschner 2010.

<sup>20</sup> Prosdocimi 1990.



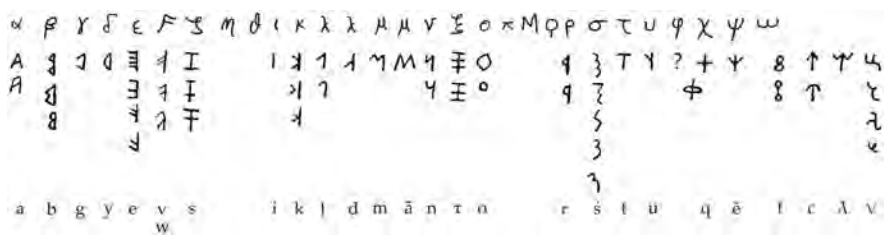


Illustration 6: Lydian alphabet (arranged on the base of Gusmani 1978, p. 847)

In illustration 6 the letters and the standard transcriptions<sup>21</sup> have been rearranged in order to offer a direct comparison with the Greek alphabets.

### The range η h θ and the ‘blue’ features of Lydian

It is interesting to note that Lydian lacks any comparison with Greek in clusters of signs: the range η h θ and π M ρ. The Old Phrygian script and possibly Lycian also lack shape variants in the range η h θ.<sup>22</sup> The shift in value of χ and ξ, however, may speak in favor of a closer relationship with the blue alphabets. The Lydian ξ, transcribed as |τ| in fact corresponds to an affricate [ts], and χ, transcribed |q|, most probably to a labiovelar [k<sup>w</sup>]. The shape-value relation thus may be understood in Lydian as analogous to that of the dark blue alphabets. It is intuitively evident that the *potestates*, the standard values in the *abecedaria* and in general in the teaching practices were, with a degree of probability not yet quantifiable, those of a “blue” teaching corpus, not necessarily Greek. It is important to notice that the remodeling of the shape-value relation took place strictly locally, as is also the case with the shapes of ψ and τ (*sampi*), refunctionalized in different ways in the Anatolian scripts. Lydian τ is what we transcribe as |c|, but its phonetic value is still uncertain, while ψ stands for the nasalized vowel transcribed as |ē|. Corresponding shape variants in Old Phrygian, Lycian, Carian follow different paths. Garbini 1978 made a very interesting observation about the value of ξ/*sāmek* in Lydian. He explains that the values of the Phoenician letters were sometimes different from the ones accepted in our tradition. In particular *sāmek* is to be better interpreted as having a dental fricative element, thus pointing to an affricate very similar to the value of Lydian.<sup>23</sup> This acute observation, however, is isolated, if

<sup>21</sup> Following Gusmani 1978 and Melchert 1994 (cf. now Gérard 2005).

<sup>22</sup> Lycian: Carruba 1978; Old Phrygian: Brixhe–Lejeune 1984.

<sup>23</sup> «[...] il segno trascritto usualmente come s non corrispondeva alla sorda s, ma era qualcosa di più forte, contenendo un elemento dentale fricativo: in tal modo diventa chiaro come mai i

not *ad hoc*; to the contrary, referring to a teaching corpus that certainly transmitted a number of comparable local solutions in the structure of the standard shape-value relation may be a more powerful explanatory tool. Differently than was thought by Garbini,<sup>24</sup> in Lydian and in most of the dark blue alphabets,  $\sigma$  corresponds to ([s]) while only the greek  $\zeta$  adheres to the Semitic value, as Lydian diverges ([ʃ]). This points again, in my opinion, to a teaching tradition that provided tools and techniques able to solve problems specific to individual written languages. This tradition seems to show common features underlying Greek blue scripts and Lydian.

### The range $\beta$ , $\gamma$ , $\delta$ ( $\epsilon$ ) and the $\beta$ - $\gamma$ - $\lambda$ contrast

Tables 2, 3 and 4 sum up the observations already made for the range  $\beta$ ,  $\gamma$ ,  $\delta$  ( $\epsilon$ ) of the Greek blue alphabets and allow some consequences for the position of the Lydian alphabet.

Lydian |g| is a variant either of  $\beta$  or of  $\gamma$ . The same shape is in fact used in Argos as *beta*. As already said, *beta* and *gamma* are adjacent so a shifting of shapes between the two values may have been induced by other choices in the system (cf. Argos). A comparable shift, but involving other shapes, can be observed comparing Cycladic  $\beta$  with Corinthian  $\gamma$  (tables 2–3; ill. 5). Lydian |g| is rarely used<sup>25</sup> and is merely an alternative to |k|, and may originally well have been derived from one of the shapes in the range *beta-gamma*. If we are right in reconstructing a range of interchangeable shapes for *beta-gamma*, then also Carian |b| may be traced back to the same range (table 4).<sup>26</sup> Now the early use of the letter |g| in Lydian texts, and its subsequent removal, may be a clue suggesting that the Lydian script was at the beginning introduced, directed or supervised by non-Lydian, perhaps Greek, teachers, sensitive to a phonemic voice-voiceless alternation alien to Lydian phonology.<sup>27</sup>

Lydian |y| can be compared to a variant of *delta* in Argos or to a variant of *rho* in Ionia (table 4), this second being particularly important for Carian |š|. In the case of Lydian I would prefer a derivation from the variants of *delta*, as long as *delta* and *epsilon* are adjacent, and Lydian |y|, that alternates with |i| should

---

greci non lo abbiano adottato per il loro sigma, mentre lo ritroviamo, con un valore fonetico che poteva essere vicino a quello originario, nella scrittura lidia», Garbini 1978, p. 912.

<sup>24</sup> Garbini 1978, p. 912.

<sup>25</sup> Cf. Gusmani 1978, p. 834.

<sup>26</sup> Carian: Adiego 2007, pp. 205–233; on the origin of the Carian script: pp. 230–233.

<sup>27</sup> Cf. Prosdocimi 1990, pp. 210–212 for a comparison with Etruscan abecedaria. For Lydian phonology: Gérard 2005.

have been a rather undistinguished short vowel, but close enough to the value of  $\epsilon$ . Lydian  $\{l\}$  and  $\{d\}$  are also really interesting if we look for a comparison within the Greek blue alphabets. If we look at tables 3 and 4, we can see that Argos has a perfectly parallel situation. There, the two shapes are respectively used as *gamma* and *lambda*. Lydian  $\{l\}$  = Argivian  $\{y\}$ , Lydian  $\{d\}$  = Argivian  $\{\lambda\}$ . But Lydian  $\{d\}$  is, most probably, not a dental plosive; its historical origin is either Proto Anatolian  $*/d/$  or PA  $*/y/$ , but the Lydian outcome should be described as fricative or approximant, perhaps interdental  $[\theta, \delta]$ , lateral  $[\mathfrak{z}, \mathfrak{z}]$ , or a flap  $[r]$ .<sup>28</sup> The ‘Mediterranean’ oscillation  $\delta/\lambda/\rho$  is well known<sup>29</sup>, so, for Lydian  $\{d\}$ , an origin from shapes of *delta*, or one from shapes of *lambda* are both motivated. Table 3 shows also the different local shape-value relations of letters that are visually very similar. The choice in the association of shapes and values must be thus understood as a systemic process where single choices are interconnected with other choices.

One can also notice, in table 4, that the two variants of *gamma* in Naxos are also two variants in Carian, but of  $\{b\}$ . The same for the two variants of *gamma* in Corinth, paralleled by Carian  $\{d\}$ . So behind these various scripts it really seems that there were common principles, even if flexible enough to allow the growth of single traditions.

It should also be noted that the data collected in table 4 support a closer connection of Lydian and the Greek blue alphabets, going back to the same *corpus doctrinae* that allowed the individual areas to grow their own local ‘literacy’ knowledge, interchanging shapes and values in order to give not only a tool for writing but also a visible aid to cultural/political identities.<sup>30</sup>

### $\{f\}$ , supplementary signs and the ‘extended’ notational repertoire

The sign  $\{f\}$  is well known for having been compared to Etruscan. Gusmani 1978 addresses briefly the problem (p. 840): Etruscan (and Lydian)  $\{f\}$  may be a mod-

<sup>28</sup> Cf. Melchert, cited in Gérard 2005, p. 58.

<sup>29</sup> In connection to Lydian, cf. Kearns 1994b, pp. 52–53. Kearns 1994a.

<sup>30</sup> An interesting approach to the question of the Aegean-Anatolian alphabets would be an ‘areal dialectological’ one, trying to trace and relate isoglosses for shapes, at the one level, and for rules (values) at the other. Let us also imagine for a while, and for fun, that there was a sort of “booklet with instructions for the usage of an alphabet”: it is possible that there was a chapter on “how to personalize your own alphabet” that gave a number of examples and directions on how to modify common-usage characters along with a list of less used (or just value-free) shapes/nnotations, most of which appear only in some written languages but not in others (this ‘instruction booklet’ would not be too far from a common doctrinal source that could explain how identical signs could emerge in distant and sometimes unrelated areas.

ification of  $\beta$ . This is not the appropriate occasion to enter into the discussion about the origin of  $\{f\}$  in the various scripts where it appears, but a few points might here be mentioned. Gusmani 1978, p. 840 considered the Lydian - Etruscan - Italic coincidence not to be fortuitous; the sign is also known from a handful of Old Phrygian inscriptions,<sup>31</sup> while the archaic Greek attestations of a similar letter, but with a different value, are better explained as mistakes.<sup>32</sup> One possible epigraphical piece of evidence for its connection with the shapes of  $\beta$ , coming from an Etruscan *abecedarium*,<sup>33</sup> is most probably false;<sup>34</sup> one should, however, consider a couple of important observations that were made, on this topic, in Prosdocimi 1990, pp. 218-221. Etruscan  $\{f\}$  may derive from  $\beta$  only if the derivation took place in a non-Etruscan environment.<sup>35</sup> Prosdocimi's considerations support in any event the possibility that the letter indeed comes from variants of  $\beta$ , and this could be true for Italic/Etruscan and for Lydian. In this sense it is interesting to note that in Corinth the letter for /e/ has a shape clearly comparable to  $\beta$  (table 5). This in turn may again suggest the existence of a range of shape variants available for a range of values. The choice of which value should be assigned to which shape was thus probably relatively open and locally established. It is, however, important to remember that the ductus and the variants of  $\{f\}$  (in both ancient Anatolia and Italy) show a considerable difference from those of  $\beta$ ,<sup>36</sup> while they are almost identical in the shapes and similar in value to the North Arabic Tha-

31 Brixhe–Lejeune 1984, pp. 52–53 (W-08); pp. 244–245 (P-101); pp. 249–250 (P-106).

32 In one inscription from Phlius (Scranton 1936) the alleged '8' was soon recognized as a mistake by C. D. Buck, apud Scranton 1936, p. 238, n. 1. Despite the effort to interpret it as  $\eta$  (Scranton 1936) or  $\omega$  (Jeffery 1961, p. 147), Buck's opinion was confirmed by A. Raubitschek and published by Scranton (1941). Another highly debated example might come from Asprokampo: cf. Jeffery 1961, p. 147, n. 1.

33 Feruglio 1973, de Simone 1975.

34 Pandolfini 1990, p. 47.

35 «La derivazione [8< $\beta$ ] è probabile a patto che non sia derivazione entro l'etrusco [...] perché se 8 è da  $\beta$ , l'ambiente di nascita deve aver usato b in valore proprio, condizione necessaria e sufficiente per spiegare la modificazione in 8: differenziazione funzionale di un segno in due, B e 8 [...]; questa ipotesi si attaglia benissimo all'italico di cui Poggio Sommavilla è un precoce affioramento» (cf. etiam Prosdocimi 1976). An echo of this is now in Wallace 2008, p. 21: «the letter 8 may have been borrowed from an archaic Italic alphabet, possibly Umbrian». Differently from Wallace, the approach supported in this article aims at changing the perspective. Instead of trying to find the specific “donor model”, it could be useful to try to reconstruct common access to teaching material, practices and knowledge. In question here is the improvement of the “know-how” that emerged in an Italic environment. Differently from Prosdocimi, it is here highlighted that the shape and its association with /f/ could have been available in a wider Mediterranean geographical areal since at least the 7th century b.C.

36 Prosdocimi 1976, p. 32, with an afterthought in footnote (\*\*).

mudic |t|. Not only the origin of |f| remains obscure; those of |c|, |λ| and |v| are also extremely difficult. The idea that |v| stems from variants of *yod* (Gusmani 1978) lacks an intuitive motivation.<sup>37</sup> Possible connections with Aegean writings for |c| (*sampi*) and |λ| may appear *ad hoc*, while a broader comparison with Old Phrygian, Carian, Lycian, Greek and Iberian, apart from the different values, is strongly suggestive of their presence in older repertoires of teaching corpora known to Semitic, Greek and Anatolian teachers.

Not only must the sum of the notations of a *corpus doctrinae* outnumber the total of the letters used to represent phonemes in the individual scripts, it must also include other functional notations, such as symbols for word dividers, numerals, weights and the like. There are a number of interesting shapes with these functions in the archaic Greek inscriptions that could help us to reconstruct a possible ‘extended’ repertoire of shapes that may have been associated with phonetic values in one script and with other functions in another.

### 3 Conclusions

One of the aims of this paper was to combine suggestions coming from different grammatological approaches. The works of R. Harris and A. L. Prosdocimi were selected for their interest in what lies behind a specific writing system or script. In particular it seemed useful to try to apply the notions of “notation(al) system” and “corpus doctrinae” to redefine the terms of the origin of an ancient script, Lydian in particular. The results tell us that the concept of ‘alphabet’ proved itself to be insufficient. An alphabet may be understood as a model that collects notations for the coding of phonemic segments (with or without the possibility to note allophones). A notational system, however, is generally wider than an ‘alphabet’, in the sense that it entails, usually, an ‘extended repertoire’ of notations, e.g. for numerals, weights, punctuation and the like. Thus the notational system resembles the “theoretical alphabet”, i.e., the model that lists dead as well as non-segmental phonemic notations, like in the old Etruscan *abecedaria*.

Now, behind interconnected historical scripts, we could try to locate one or more notational systems in an even broader written and oral collection of teaching practices and materials. A notational system, with its extended repertoire, naturally survives in the teaching process even when the *abecedaria* gave up all notations except segmental phonemic ones. It is also natural to think of this *corpus doctrinae* as a system where one could be able to compare various local

---

<sup>37</sup> Unless the etymological nasal behind |v| changes in Lydian to a semivowel.

solutions in the application of shape-value relations and orthographical rules. This reasoning can be applied to those alphabets that are abstracted from the remnants of dead epigraphical traditions usually restricted to few (if not a single) textual genres. A wider notational system can be reconstructed (at least in part) by comparing epigraphical traditions that evidently share common traits. An important task then is to recognize the epigraphical corpora that were more interconnected one to another. This could hopefully lead to the identification of one or more teaching ('doctrinal') traditions able to explain, or at least to shed more light on, the genesis of local, 'epichoric' scripts.

## Bibliography

- Adiego, I. J., 2007, *The Carian language*, Leiden–Boston.
- Brixhe, C. – Lejeune, M., 1984, *Corpus des inscriptions paléo-phrygiennes*, Paris.
- Carruba, O., 1978, *La scrittura licia*, *Annali della Scuola Normale Superiore di Pisa, classe di lettere e filosofia* 8/3, pp. 849–867.
- de Simone, 1975, *Etruskischer Literaturbericht: neueröffentliche Inschriften 1970–1973*, *Glotta* 53, pp. 125–181.
- Feruglio, A., 1973, *Rivista di epigrafia etrusca*, *Studi Etruschi* 41, pp. 293–302.
- Garbini, G., 1978, *Intervento*, *Annali della Scuola Normale Superiore di Pisa, classe di lettere e filosofia* 8/3, pp. 911–912.
- Gérard, R., 2005, *Phonétique et morphologie de la langue lydienne*, Louvain-la-Neuve.
- Guarducci, M., 1967, *Epigrafia greca I. Caratteri e storia della disciplina. La scrittura greca dalle origini all'età imperiale*, Roma.
- Gusmani, R., 1975, *Lydiaka*, *Oriens Antiquus* 14, pp. 265–274.
- Gusmani, R., 1978, *La scrittura lidia*, *Annali della Scuola Normale Superiore di Pisa, classe di lettere e filosofia* 8/3, pp. 833–848.
- Harris, R., 1995, *Signs of writing*, London.
- Haugen, O. E., 2011, *Do we need all these characters? On the transcription and encoding of medieval primary sources*, in Cotticelli, P. (ed.), *Linguistica e filologia digitale: aspetti e progetti*, Alessandria, pp. 101–120.
- Jeffery, L. H., 1961, *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.*, Oxford. Revised edition with a supplement by A. W. Johnston, Oxford 1990.
- Kearns, J. M., 1994a, *A Greek genitive from Lydia*, *Glotta* 72, pp. 5–14.
- Kearns, J. M., 1994b, *The Lydian consonant system*, *Kadmos* 33, pp. 38–59.
- Kerschner, M., 2010, *The Lydians and their Ionian and Aiolian neighbours*, in Cahill, N. D. (ed.), *Lidyalılar ve Dünyaları / The Lydians and their world*, İstanbul, pp. 247–265.
- Kirchhoff, A., 1887<sup>a</sup>, *Studien zur Geschichte des griechischen Alphabets. Vierte umgearbeitete Auflage*, Gütersloh.
- LW = Gusmani, R., *Lydisches Wörterbuch*, Heidelberg, 1964.
- LWE = Gusmani, R., *Lydisches Wörterbuch. Ergänzungsband. Lieferung 1*, Heidelberg, 1980; *Lieferung 2*, Heidelberg 1982; *Lieferung 3*, Heidelberg, 1986.
- Melchert, H. C., 1994, *Anatolian historical phonology*, Amsterdam.

- Pandolfini, M., 1990, Gli alfabetari etruschi, in Pandolfini, M. – Prodocimi, A. L., *Alfabetari e insegnamento della scrittura in Etruria e nell'Italia antica*, Firenze, pp. 3–94.
- Prodocimi, A. L., 1976, Intervento in *Atti del colloquio sul tema "l'etrusco arcaico"*, Firenze, pp. 31–32.
- Prodocimi, A. L., 1990, Insegnamento e apprendimento della scrittura nell'Italia antica, in Pandolfini, M. – Prodocimi, A. L., *Alfabetari e insegnamento della scrittura in Etruria e nell'Italia antica*, Firenze, pp. 155–298.
- RDLL, *The Routledge Dictionary of Language and Linguistics*, by H. Bussmann, K. Kazzazi, G. Trauth, London 1998.
- Rizza, A., 2012, Grammatology and digital technologies. Different applications of the concept of 'character' in Unicode and other non-technical problems about ancient scripts, in Bolatti-Guzzo, N. – Festuccia, S. – Marazzi, M. (ed.), *Centro Mediterraneo preclassico: Studi e Ricerche III. Studi vari di egeistica, anatolistica e del mondo mediterraneo*, Napoli, pp. 225–251.
- Scranton, R. L., 1936, *Inscriptions from Phlius*, *Hesperia: The Journal of the American School of Classical Studies at Athens* 5, pp. 235–246.
- Scranton, R. L., 1941, Correction of an inscription from Phlius, *Hesperia: The Journal of the American School of Classical Studies at Athens* 10, pp. 371–372.
- Swiggers, P., 1996, Transmission of the Phoenician script to the West, in Daniels, P. T. – Bright, W. (eds.), *The world's writing systems*, Oxford, pp. 261–270.
- Wallace, R. E. 2008, *Zikh rasna. A manual of the Etruscan language and inscriptions*, Ann Arbor.

## Acknowledgements

*This article is a revised version of the paper I presented at the colloquium Percorsi e sviluppi di alfabeti e sillabari nel Mediterraneo antico: problemi di genealogia e di prestito, Università degli studi di Verona, Dipartimento di Filologia, Letteratura e Linguistica, June 29, 2012, organized by Paola Cotticelli (Università di Verona) and Markus Egetmeyer (Sorbonne, Paris).*

---

**Alfredo Rizza:**

E-Mail: [alfredo.rizza@gmail.com](mailto:alfredo.rizza@gmail.com)

arg		⊃				∧	Γ		D	
		β				γ <sub>1</sub>	γ <sub>2</sub>		δ	
ion	B			⊃	Γ					Δ
	β			γ <sub>1</sub>	γ <sub>2</sub>					δ
cor			⊃	⊃		<		Γ		Δ
			β	γ <sub>1</sub>		γ <sub>2</sub>		γ <sub>3</sub>		δ
cyc	B			⊃	Γ	∧				Δ
	β <sub>1</sub>			β <sub>2</sub>	γ <sub>1</sub>	γ <sub>2</sub>				δ
lyd	B	⊃							D	
	b/p	g/k							y	

**Table 2:** The range β-γ in some blue alphabets in comparison with Lydian (notations not chronologically ordered)

	β	γ	λ	
Arg	⊃	Γ	⊃	
Ion	B	Γ	Γ ∧	
Cor	⊃	Γ ⊃ <	Γ ∧	
Cycl	B ⊃	Γ ∧	Γ ∧	
Lyd	B	⊃	Γ	⊃
	b	g	l	d

**Table 3:** The β-γ-λ contrast and |g|·|l|·|d| in Lydian



	Lyd	Arg	Ion	Cor	Nax	Old Phr	Car	Lyc
Β	b		β	ε		b	(β)(p)	b
Γ	g	β						
Δ	y	δ	ρ				š	
Λ	l	γ	λ	λ	λ	l	b	
Τ	d	λ						
Δ			δ	δ	δ	d	l	d
Λ		γ			γ	d	b	l
Γ			γ		γ	g	b	
ϸ			γ	γ	β		d	
ϸ				γ			d	
ϸ				β			m	

Table 4: Notations that show intersystemic interchangeable value-assigning rules

lid	ϸ	ϸ ϸ	ϸ ϸ	ϸ
	β vs.  b [p]/[b]	ε vs. e	f [φ]²/[f]²	f vs.  w [w]/[v]
cor	ϸ	ϸ		ϸ

Table 5: Variants for /b/, /f/ and /w/ in Corinthian Greek and Lydian

