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Indice

Articoli

- On the cipher script of the London-Leiden Demotic magical papyrus 9
PAOLO MILIZIA
- Armeno *aṛagast* ‘tenda, vela’, ‘pressoio del vino’. 43
Con un’appendice su ebraico biblico *migdal*
GIANCARLO SCHIRRU
- Between digit and symbol: The figure ‘6’ in Christian epigraphy 67
FRANCESCO ROVAI
- The origin of the Persian =*e* copula and related questions. 109
Reflections on the development of copulas in New Persian and Gavruni
CHAMS BENOÎT BERNARD
- On the presence of metaphony in feminine plural nouns: 167
New insights from the dialects of Campania
GIOVANNI ABETE, CESARINA VECCHIA

Léxeis

- Some etymological thoughts on latin *aequus* ‘even, level, equal’, 205
with notes on the words for ‘one’ in Indo-European
DOUGLAS Q. ADAMS
- Greek μέλω ‘dance and sing’ and Slavic **mlǫčati* ‘be silent’ 219
DANIEL KÖLLIGAN

Recensioni

- Lucia Tamponi 235
Variation and Change in Sardinian Latin. The Epigraphic Evidence
(ALESSANDRO DE ANGELIS)
- Federico Dragoni 257
Watañi lāntaṃ. Khotanese and Tumshuqese Loanwords in Tocharian
(FRANCESCA MICHETTI)

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Articoli



On the cipher script of the London-Leiden Demotic magical papyrus*

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ABSTRACT

The present paper aims to show that the cipher script of the London-Leiden Demotic magical papyrus is a complex cultural artefact whose creation is inextricably connected with that of the magical handbook which contains it. In particular, it is argued that some of its signs can be interpreted as Greek letters in Demotic disguise. This fact can be seen as a confirmation that the graphic shapes employed in writing systems are easily burdened with cultural identity values. Altogether, this contribution also provides additional counterarguments to the view that the script at issue is basically a Greek ciphered alphabet enlarged with Demotic letters.

KEYWORDS: history of writing, Old Coptic, Demotic, cryptography

1. *Introduction*

The Demotic Magical Papyrus of London and Leiden (henceforth, also pMagLL) belongs to a group of magical handbooks which were produced in Graeco-Roman Egypt and collect spells written in Egyptian language and Demotic writing. While the amount of discovered magical papyri written in Greek is remarkable¹ and the Coptic magical

* A previous version of the present research was presented at the conference *Terzo incontro di studi del progetto di ricerca di rilevante interesse nazionale Lingue antiche e sistemi scrittori in contatto: pietra di paragone del mutamento linguistico*, Siena, 23rd-24th January 2023. The author thanks Marina Benedetti and the other organizers of that conference as well as all the people who participated in the discussion. The author also expresses his gratitude to two anonymous reviewers of this journal, whose valuable comments resulted in important improvements of the paper. He is, of course, solely responsible for any remaining flaws. The present research has been partially funded by the project 'Metalinguistic texts as a privileged data source for the knowledge of ancient languages' (PRIN 2020F37EXS).

¹ Some figures are given by DIELEMAN (2019: 288f.); edited collections are PGM, SMag and the Greek texts in GEMF; for a general introduction see BRASHEAR (1995).

texts are several tens² in number, the extant magical books written in Demotic are not comparably numerous and comprise four major papyri and some minor texts or fragments³.

Three of the major papyri, pMagLL (formed by pBM EA 10070 plus pLeiden I 383), pLeiden I 384 and pLouvre E3229, belong to a group of 11 magical manuscripts – also comprising several Greek Papyri and the Greek/Old Coptic magical papyrus P.Bibl.Nat.Suppl.gr. no 574 (PGM IV) – which have been found in the Thebes region in Upper Egypt and are thought to have been part of a same archive, which modern scholars call the “Theban Magical Library”⁴. All of these papyri were acquired in Egypt by the merchant Giovanni Anastasi (1780-1860). Between 1828 and 1829, Anastasi sold one of the two papyrus portions forming pMagLL (i.e., pLeiden I383) – together with the two papyrus portions forming pLeiden I384 – to the Dutch Museum of Antiquities in Leiden. The other portion of pMagLL (i.e., pBM EA 10070) remained in Anastasi’s possession until his death in 1860, after which it was acquired at an auction by the British Museum. The discovery that pLeiden I383 is the continuation of pBM EA 10070 was first published in Hess’s edition of the latter (1892).

The three Demotic papyri included in the Theban Magical Library are dated to the late second or the early third century CE⁵. A fourth non-minor Demotic magical text, pBM EA 10588, perhaps slightly more recent, also dates no later than mid third century CE⁶. All of these four papyri are, in fact, bilingual, since they contain sections in Greek; moreover, all of them exhibit passages written in hieratic script (details in Quack 2010: 321ff.; cf. also Quack 2023). This latter fact

² See the texts edited by A. Kropp in AkZ and LOVE (2016); see also PERNIGOTTI (1995), with translations of a selection of texts.

³ See RITNER (1995: 3343ff.), BRESCIANI (1987: 313, 324 n. 5); see also QUACK (2004: 408) on the fragment pBM EA 10808 (ed. Osing 1976), and QUACK (2023) on the magical fragments in hieratic script contained in P. Leiden Pap. Inst. Inv. 1000 recto, which are to be considered as linguistically Demotic.

⁴ See DOSOO (2016), DIELEMAN (2019: 292f.).

⁵ Cf. QUACK (2017: 49ff.), DIELEMAN (2019: 292).

⁶ QUACK (2017: 54).

suggests that they were produced in Egyptian temple scriptoria⁷, as has been convincingly argued by J. Dieleman (2005: 22, 48ff., 285ff.; 2019: 293; cf. also Ritner 1995: 3335, quoted below)⁸.

In pMagLL, 113 word-occurrences, representing 93 forms⁹, are written in a special alphabet generally interpreted as a means of concealing the text from unwanted readers. A further occurrence of the use of this script is found in a word in Papyrus Leiden I 384, another manuscript of magical content written by the same scribe who wrote pMagLL. The main aim of this paper is to show that the cipher script at issue is a non-trivial cultural artefact involving cases of graphic camouflage whose ratio can only be understood in the light of the peculiar relationship existing in this context between Greek and Enchorial components, seen both as elements of a technology of writing and as symbols of a cultural identity. This will lead us to discard the schematic hypothesis put forth by F. Ll. Griffith and H. Thompson (the first editors of pMagLL) regarding the invention of this script (and recently accepted by Dieleman 2005 and by Faraone and Torallas Tovar in GEMF, p. 137) and to adhere, with additional arguments, to the view expressed by R. Ritner (1995). As we shall see, though concerning a use of writing which is obviously very *sui generis* and is bound to a single historical episode, the invention of the cipher script of pMagLL offers a noteworthy confirmation of the well-known anthropological tendency according to which the graphic shapes employed in writing systems are easily burdened with cultural identity values.

⁷ DIELEMAN (2005: 48ff., 285ff.; 2019: 293). As for the dialectological position of pMagLL, see SATZINGER (1984: 141 and footnote 22), who classifies the language of the Old Coptic glosses as an archaic form of Achmimic (differently JOHNSON 1976).

⁸ Editions: pMagLL (pBM EA 10070+pLeiden I 383): DMagP (with a hand-written copy by H. Thompson), GEMF 16; pLeiden I384: JOHNSON (1975 – Demotic sections only), GEMF 15; pLouvre E3229: JOHNSON (1977), GEMF 17; pBM EA 10588: BELL-NOCK-THOMPSON (1933), GEMF 18. Photographs: pBM EA 10070 and pBM EA 10588: https://www.britishmuseum.org/collection/object/Y_EA10070-1, °EA10070-2, °EA10070-3, °EA10588-1, °EA10070-2; pLeiden I 383 and 384: <https://www.rmo.nl/collectie/collectie-zoeker/collectiestuk/?object=172306,°=172312>; pLeiden I 384 JOHNSON (1975); pLouvre E3229: JOHNSON (1977). Translations without text edition: GMPT. Note that the Greek portions of pMagLL correspond to PGM XIV (i.e., to the fourteenth text in Preisendanz's collection).

⁹ Cf. the list in DMagP (vol. 3: 109-112).

The relative paucity of the Demotic magical papyri and their being presumably bound to priest milieux of the traditional Egyptian religion lend this textual corpus a particular status within the greater corpus of the magical books coming from the Graeco-Roman Egypt. Thus, if it is true that, in the contemporary Greek magical papyri taken as a whole, a syncretistic religion is represented which assimilated Egyptian, Greek but also Babylonian and Jewish elements (see Betz in GMTP, p. xlvi), the Demotic manuscripts testify a community of practices in which the assimilation of exogenous cultural components, in primis the Greek one, coexists with an allegiance to the indigenous scriptorial traditions, which is culturally relevant in itself. Such allegiance is evident not only, and obviously, in the use of Demotic language and writing, but also in the fact that these papyri not seldom resort to hieratic script for specific passages or even single words or word groups (cf. below)¹⁰. These cultural coordinates are of fundamental import for the analysis of the cipher script.

2. *The graphic and linguistic repertoire of pMagLL*

The graphic and linguistic repertoire of pMagLL has been described in depth by J. Dieleman (2005, 2006). Since, as we will see, practically all of its elements are involved in the creation of the cipher script, it is necessary here to spend a few words on it. The papyrus contains 93 spells and is mainly written in the Egyptian language in Demotic script (indeed, it notoriously represents a major source for the study of late “Demotic Egyptian”). In addition to normal Demotic,

¹⁰ An anonymous reviewer of this journal questions the interpretation of the choice of Demotic in cultural identity terms and wonders whether it is simply that the scribe felt more at home with the Egyptian language. However, what is important here is the *written* form of language. Thus, if it is obvious that a native speaker of Egyptian would have felt more at ease in communicating orally in Egyptian, the use of Demotic as a written language in Roman Egypt is by far less obvious; indeed, for this period, it seems reasonable to think that the number of people literate in Demotic outside the priestly milieux might have been very low (if not zero; cf. TAIT 1992: 307). On the other hand, that the priestly class represented a stronghold of the indigenous cultural identity is a truism. On the creation of pMagLL as a cultural operation, see also GORDON (2019: 103f.).

the following writing systems are used: Greek; an alphabet of the Old Coptic kind¹¹; hieratic; a special use of Demotic letters.

Three spells contain parts written in Greek script: spell n. 2¹² contains a long invocation in Greek, spell n. 18 a Greek formula accompanied by a quasi-equivalent passage in Demotic, spell n. 35 a long invocation of Typhon Seth in Greek. These uses of Greek do not necessarily indicate a raw incorporation of non-adapted material into the Demotic book. In spell n. 2, the Greek invocation is preceded by a Demotic passage which states that the invocation had to be recited in Greek (*mtw=k š p³y.y š n mt.t wynn r-r=f* 'And you should recite this formula in Greek to it', col. IV, l. 7¹³). Thus, it was the magical practice itself which was bilingual¹⁴.

In other passages, the use of the Greek language is of a different kind. Spell 73 is followed by a short indication in Greek and several spells (nn. 48, 51, 55, 59, 63, 64) comprise some Greek names of plants¹⁵, animals, minerals and illnesses. In these cases, the Greek words are often flanked by their Demotic equivalents, to make full use of both Greek and Egyptian nomenclatures. Other spells contain magical words or names in Greek letters: spell n. 65 reports a graphic formula in Greek letters to be copied on a metal strip; in spell n. 75 a short list of magical names is written with the Greek alphabet.

Frequently, the Demotic text is provided with supralinear glosses written in a particular kind of Old Coptic alphabet (on which see

¹¹ Old Coptic texts are texts in the Egyptian language and Old Coptic script not belonging to the cultural milieu (Christian, Gnostic, Manichaean) to which the term Coptic is normally applied and dating between the 1st and the 4th century CE (on a different definition of the distinction between Coptic and Old Coptic, see QUACK 2017: 56; on the issue, see also QUAEGBEUR 1982). Old Coptic alphabets consist, like the Coptic ones, in the Greek alphabet supplemented by some additional letters of Demotic origin. On the origin of the Coptic alphabets from the Old Coptic ones, see QUACK (2017) – on Old Coptic texts and alphabets, see also SATZINGER (1991), KASSER (1991), CREVATIN (2018).

¹² Spells are numbered according to RITNER (1995: 3339-3342).

¹³ Text and translation according to GEMF (pp. 150f.; cf. DMagP, vol. 1, pp. 40f.).

¹⁴ Note also the passage in pMagLL col. 15, ll. 24-30 (GEMF pp. 194f.; DMagP, vol. 1, pp. 108f.), where two parallel invocations are given, the one in Greek and the other in Egyptian. As concerns, in particular, the bi-ethnic character of the cult of Imhotep/Imouthes (Asclepius), cf. BRESCIANI (1987: 319).

¹⁵ On these glosses and on the kind of reference manuals that the scribe was probably consulting, see BETRÒ (1988 and 2016).

Quack 2017: 49ff.). These are often used to clarify the pronunciation of the voces magicae¹⁶.

Some short passages in Egyptian language are written in hieratic script instead of Demotic. In the Demotic magical papyri hieratic pericopes are found, in particular, in invocation and incantation formulas. As has been shown by J. Quack, while in some cases the sentences written in hieratic are also archaic from a linguistic point of view – which suggests that the compiler of the book took an older hieratic text as a source for the passage at issue – there are also cases in which this possibility can be ruled out with certainty (cf. Quack 2010: 322-324): thus, the fact that in pMag LL 23, 21-31, the hieratic script is used to write the vox magica *Abrasax* is revealing, given that voces magicae are typical of Greek papyri and do not appear before the 1st century CE (cf. Brashear 1995: 3430). This indicates that the compiler of the text, who probably coincides with the author of the manuscript, had an active competence in hieratic writing.

Moreover, as in the other Demotic magical papyri, Demotic writing itself can also be used according to special conventions aiming at indicating vowel sounds, albeit in an inaccurate way as to quality distinctions. This “special alphabetic Demotic” has been thoroughly studied by Quack (2004).

3. *General features of the cipher script*

Though it has been sometimes described simply as a script in which the signs express one sound each and which includes vowel signs (e.g., Quack 2017: 50), the cipher script is probably better defined as a (ciphered) Old Coptic alphabet. The feature which most blatantly points to such a classification is the fact that it uses a digraph sign for render-

¹⁶ The term “voces magicae” refers to words generally conceived as special names of divine entities provided with magical invocatory power. Though several voces magicae originated as linguistic expressions – often in Hebrew or Aramaic – they must have been meaningless sound sequences for the magical practitioners. On voces magicae and their use in Graeco-Egyptian magical papyri, see BRASHEAR (1995: 3429ff.; 3576ff.) and the papers collected in TARDIEU, VAN DEN KERCHOVE & ZAGO (2013).

ing /u/, /w/: thus, the word $\mu\alpha\omicron\gamma$ (*maou* /maw/) is written as $\mu\tau\text{z}\lambda$, where the z -shaped sign corresponds to an omicron and the λ -shaped sign corresponds to an upsilon; similarly, the word $\mu\omicron\gamma$ (*mou* /mu/) is written as $\mu\text{z}\lambda$. Analogously, as happens in Coptic, a sequence $\epsilon\iota$ can be used to write a simple /j/ or /i/ sound (cf. the ciphered word $\pi\alpha\epsilon\iota\omega\epsilon$ at col. 13 l. 24).

A further noteworthy peculiarity of the cipher script is that ciphered words are written from left to right even if they are normally placed in lines in Demotic script that are otherwise written from right to left. This fact might be interpreted as a means of enhancing secrecy, but is also a form of allegiance to the Greek/Coptic direction of writing. In the same way, in the Medinet Madi bilingual ostraka, Greek words written in Greek alphabet, though included in Demotic lines, also retain their usual left-to-right direction¹⁷.

According to the list in DMagP (vol. 3: 105-107), the cipher script comprises 36 signs. This high number, which clearly exceeds that of a normal Old Coptic alphabet, is due to the fact that several sounds can be represented by two (and in some cases three) graphemes. This non-uniqueness of encoding can be viewed as a means of enhancing the difficulty of breaking the code, but it is also connected, as we will see, to the multiplicity of sources from which the signs are taken: it is not infrequent that one of two equipollent signs is of Demotic and the other of Greek origin. At the same time, two graphemes can represent more than one sound: sign. n. 13 corresponds to γ , but also to z (*h*); sign. n. 29 corresponds to x \acute{c} , as expected on the basis of its shape, but also to τ .

It is very likely that the two shapes that Griffith and Thompson consider as two variant forms of sign n. 15 (= B), i.e., $\langle \text{z} \rangle$ and $\langle \text{y} \rangle$, are in fact two distinct graphemes having the same value (cf. below). Moreover, a certain doubt might be raised as to whether sign n. 2 $\langle \text{F} \rangle$ – to which Griffith and Thompson assign the value λ – might be a third graphic variant of the very similar sign n. 1 $\langle \text{f} \rangle$ or $\langle \text{f} \rangle$, which represents an ϵ . This hypothesis is perhaps strengthened by the fact that sign n. 30, which indicates τ (*t*), seems to be identical to sign n. 2.

¹⁷ On the use of Greek script for writing Greek loanwords in the Demotic ostraka of Narmouthis, see also LOVE (2020: 323).

Since graphemes representing two sounds seem not to be the exception rather than the norm, it seems not impossible that sign n. 2 is simply a sign. 1 traced in such a way that it is not distinguishable from sign 30.

A further sign must be added to Griffith and Thompson's list, i.e., < ϑ >. It appears in the only ciphered word contained in pLeiden I 384. According to Johnson's suggestion (1975: 47), it may correspond to the Demotic *h*, one of whose shapes is < ϑ > (from hieroglyphic $\text{—}_{f18} + \text{—}_{y1}$)¹⁸, with the dot (coming from —) being omissible. However, this identification is not certain, since the word in which it appears is obscure and in the second ciphered alphabet reported in the decryption table of pMagLL (see below) there is a similar sign which has the value of omicron.

The cipher script is usually employed for two kinds of words: terms indicating ingredients necessary to fulfil the practices prescribed for the spell and terms indicating the effect of a spell.

4. Griffith and Thompson's hypothesis on the creation of the cipher script


Griffith and Thompson, the first editors of pMag LL, hypothesized a two-step creation process for the cipher script. In their words (vol. 3 p. 108): «The cipher was probably greek in origin, that is, was invented by a Greek, because (1) a certain number of the signs are demotic and represent those sounds in the egyptian language which are wanting in the Greek language. Thus they would afford some concealment in greek writing, but none in demotic; (2) there are some signs ... [i.e., nn. 28, 18, 31] which occur only in greek words and which therefore may have conveyed to greek ears a different sound from any letters in egyptian; (3) there is no special sign for the aspirate, vowel signs being used instead; (4) there is no differentiation between the sounds τ and ρ, which an Egyptian could scarcely have failed to distinguish».


These four arguments have been accepted in more recent years by J. Dieleman in his treatment of the cipher script (2005: 87-96, espe-

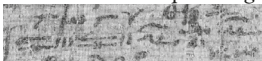
¹⁸ In the present paper, hieroglyphic signs are always written with their right-to-left shape, which is the only one relevant to the discussion, and numbered according to GARDINER (1957).

cially p. 88). However, as I shall try to show, none of them stands up to critical examination.

As to the second argument, one of the three letters mentioned (sign. n. 31) corresponds to a *z* and it is therefore expected on phonological grounds that it is found only in Greek words. Indeed, in Coptic words of Egyptian origin, *z* is extremely rare and can only occur as an optional graphic variant of *c* (*s*) restricted to the postnasal position (where /*s*/ was realized by a voiced allophone [z]). A not too dissimilar case is that of sign. 18 <Ⲭ> which, in my opinion, is very likely a compendium of the graphic nexus *nq* <ⲛⲓ>¹⁹, where *n* is the arch placed above and *q* is the sign placed below. The sign is used in correspondence of both Greek κ [k] and Greek γ [g], but it can be observed that a partly analogous digraph – i.e. *ng* – consisting of *n* plus the sign of a dorsal plosive (in this case *g*) is one of the strategies adopted to render a Greek γ in Demotic script²⁰. This fact suggests that the primary value of sign. 18 was also γ [g]. If so, its presence in Greek words only is expected, since Egyptian has no [g] sound (except for the postnasal allophone of /k/). When it corresponds to κ [k] in a Greek word, it can be easily interpreted as a graphic hypercorrection, which is easily possible if the writer is an Egyptian (not

¹⁹ In pMagLL, this nexus can be observed in col. 31. 34 (in the word sequence *nqwqwt*, GEMF p. 148 cf. DMagP vol. 1, p. 38f.); where it appears as follows (manuscript photograph): . One of the reviewers for this journal writes that, in her/his opinion, this interpretation of sign 18 <Ⲭ> is “palaeographically” unlikely. Since unfortunately s/he does not elaborate this claim further, the best that can be done here is to let the reader judge for herself on the basis of the images (the drawing of sign 18 given above is taken from Thompson’s drawings in DMagP). A point, however, must be stressed: by no means is the thesis defended here that sign n. 18 originated as a palaeographical evolution of the nexus ⲛⲓ. Rather, I am suggesting that the sign at issue was invented with the shape of that nexus in mind. The two perspectives are obviously profoundly different. Analogous considerations hold for the similar comments that the same reviewer wrote about the interpretation of sign n. 17 (to be considered in my opinion as an invented sign which was created taking hieratic *q* as a model rather as a palaeographical evolution of hieratic *q*) and of sign n. 20, on which see below.

²⁰ This can be seen in the relationship between the supralinear glosses in Greek alphabet and the Demotic words to which they refer. For instance, in pMagLL col. v26, l. 6 (GEMF, p. 274, cf. DMagPP, vol. 1, pp. 198), the alphabetic Greek ΓΩΓΥΘΙΞ corresponds to the Demotic sequence *ng³ngetsyks* with *ng* ( where *n* is the bow above) for Γ:



On the correspondences between Greek letters and the special alphabetic Demotic of the magical papyri, see QUACK (2004: 433).

a Greek) speaker. In other words, the Egyptian speaker who categorizes both [k] and [g] as /k/ but knows that some of the sounds that he categorizes as /k/ should be written, according to the Greek norm, with ρ, may easily overapply this grapheme. Thus, a sole grapheme remains for which its restriction to Greek words is not expected, i.e., sign n. 28, which renders c [s]. Indeed, in Egyptian words, another sign is attested for this sound, i.e., n. 27. However, one should bear in mind that there are several sounds which can be written with two different graphemes. Therefore, it may be simply due to chance that for one of these pairs one of the two signs is only attested in Greek words. Moreover, since sign n. 28 <ϱ> is probably a reversed Greek lunate sigma provided with a tail, its graphic origin may have conditioned its distribution.

The third argument is void, as well. As already noted by Griffith and Thompson themselves (vol. DMagP vol. 3: 107; see also Quack 2017: 54; cf. also Kasser 1991: 43sg.), the use of a same grapheme to write both /h/ and /u/ is also found in the convention of the special alphabetic Demotic. Thus, in pMagLL the voces magicae which in Greek writing, as is shown by the Old Coptic supralinear glosses, begin with γ followed by a vowel, are rendered in Demotic with *h* (or *h̄*) in the place of γ. Therefore, the graphic association between /h/ and /u/ is not only not proof of a Greek origin of the cipher script, but, on the contrary, is consistent with a graphic peculiarity specific to the Demotic papyri²¹.

²¹ One of the reviewers of this journal, after observing that this is «due to the fact that Greek words beginning with *y* practically always have a *spiritus asper*», concludes that such a peculiarity «is rather an indication that this notation came about in a Greek milieu or at least under strong influence from the Greek language». As the reader already understood, there can be no doubt that this graphic use is due to the special circumstance according to which Greek words beginning with <υ> at the graphic level regularly exhibit an initial /hy/ phonologically. Therefore, the role of the Greek language is out of the question. However, the issue here is whether the graphic refunctionalization of the letter <υ> is more likely to have been introduced by native speakers of Greek primarily literate in Greek or by native speakers of Egyptian primarily literate in Demotic. Now, from the point of view of a Greek, it is perfectly normal that an initial /h/ sound is not written at all (lack of breathings is normal in non-literary papyri) and that a vowel is written; from the point of view of a person primarily literate in Demotic, on the contrary, the norm is that an initial /h/ sound is written, while a vowel is not. Of course, in order to devise it, the inventor of this refunctionalization must have had some experience of Greek words written in Greek alphabet, but this is no proof that he belonged to a Greek milieu: he may well have been a native speaker of Egyptian with some degree of biliteracy.

As for the fourth argument, it is true that a failure to categorize the sounds [tʃ] and [t] as different units is expected from a speaker of Greek and not from a speaker of Egyptian. However, Griffith and Thompson's solution is not unproblematic. Indeed, the grapheme which is used for rendering both /tʃ/ and /t/ is of Demotic origin and belongs, therefore, to the subset of graphemes which, according to the hypothesis of the two scholars, were added at the moment in which the script was adapted in order to write Egyptian words. Now, it is rather unlikely that such an operation could have been accomplished by a native speaker of Greek. On the other hand, it is not impossible that the user of the cipher script treated <𐓇> as a perfect equivalent of Greek <τ> because he was influenced by the way in which Egyptian words were rendered in Greek texts (in the case of anthroponyms, such adaptations into Greek must have been relatively common in everyday writing). Indeed, in Greek texts the [tʃ] which in Demotic writing is written with <𐓇> was most frequently rendered by <τ> (less frequently by <θ>, <χ> or <ϙ>), as happened with the anthroponyms beginning with *Dd-hr* 'said the face', whose Greek renderings begin, in most cases, with *Τεω*²². This fact, in turn, was effectively due to a case of under-differentiation of phonemes ascribable to Greek speakers who identified [tʃ] as a realization of /t/. Admittedly, such borrowing of a graphic neutralization typical of written renderings of Egyptian words made by Greeks is not banal in an Old Coptic text²³. All in all, Griffith and Thompson's fourth argument points to a real problem but is by no means conclusive as concerns the origin of the cipher script.

The first argument is apparently the strongest one and is the pivot of the two-step hypothesis. The idea goes as follows: at first a certain

²² Cf. BLASCO TORRES (2017: 442); see also BRUNSCH (1978: 66).

²³ It can also be observed that in the hieroglyphic/hieratic writing system historical or pseudo-historical spellings are found by which dental sounds are written with signs normally indicating palatals: to mention an instance, in the hieroglyphic text of the trilingual inscription of Gallus (1st century BCE), we find *wdnw* 'offerings' (l. 6) written with 𐓇 *d* instead of 𐓇 *d*, as if it were *wdnw* (on this instance, see HOFFMANN *et al.* 2009: 57; on the general phenomenon, see GARDINER 1957: 28, § 19 and obs. 2; on the sound change prompting it, see VERGOTE 1973: 20-22). One might wonder whether this kind of non-one-to-one correspondences between signs and sounds may have influenced the users of the cipher script.

Greek ciphered alphabet was created in a Greek milieu, then some Egyptian speaker decided to also apply it to Egyptian, and added, therefore, some Demotic letters to write the sounds that could not be written with the Greek alphabet. In doing so, he did not care to devise new ciphered signs and integrated plain Demotic letters into the script. Interestingly enough, according to this schema, the invention of the cipher script would have had a history parallel to that of the invention of the Coptic script (but independent of it!): the Coptic alphabet is a Greek alphabet supplemented by letters of Demotic origin necessary to write sounds which are absent in Greek.

However, this line of reasoning would only make sense if the non-encrypted Demotic letters comprised in the cipher script were those and only those which render sounds absent in Greek. But, as we shall soon see, it is not so. Moreover, there are some other signs, which also render sounds which *can* be represented by Greek letters, which are clearly taken from the hieratic script (cf. below). Thus, the very prerequisite for Griffith and Thompson's first argument is void.

In fact, Ritner (1995: 3335) already came to what seems to me the only possible conclusion: «Earlier suggestions of a Greek origin for this code cannot be maintained [...] Derived from the Demotic and highly arcane Hieratic scripts, the cipher could only have been composed by an author familiar with Egyptian priestly tradition».

Albeit untenable in its formulation, Griffith and Thompson's idea of a relationship between specifically Greek cipher alphabets and the cipher script of pMagLL contains some elements of truth. Not only is there no doubt that in the milieu in which pMagLL was produced and used, Greek ciphered alphabets were known – an encoding table for two alphabets of this kind is found in an intercolumnar space of pMagLL itself (cf. below) – but it may also be observed, as we shall see, that *some* of the symbols used in cipher script are also present in such alphabets, so that it is likely that they were taken from those sources²⁴.

²⁴ Moreover, it should be mentioned that, as concerns the contents of the papyrus, Griffith and Thompson's hypothesis according to which pMagLL represents «an egyptian version of a greek original [...] indebted for most of its material on egyptian sources» remains viable (see also the arguments adduced by QUACK 2004).



5. *The Demotic and hieratic components of the cipher script*



As mentioned above, the cipher script contains a series of non-altered letters of Demotic origin. The following ones correspond to sounds which have no equivalent in the Greek alphabet:


n. 32 <𐓖> = *š* ($\frac{ms}{M8}$); n. 33 <𐓗> = *ḥ* ($\frac{AA1}{AA1}$); n. 34 <𐓘> = *f* ($\frac{19}{19}$); n. 35 <𐓙> = *ḥ*? ($\frac{12}{M12}$); n. 36 <𐓚> *k*^j (from $\frac{w}{W11}$). To these, the sign <𐓛> found in pLeiden I 384 should perhaps be added (cf. above).

There are at least two, but possibly three signs which are Demotic or have been invented with a Demotic sign in mind and render sounds also present in Greek. An undoubtable case is that of sign n. 11, <𐓜>, which is the only letter used for indicating ω (\bar{o} /*o*/): this is a hieroglyphic/hieratic sign (being a variant shape of $\frac{37}{E37}$) used to indicate \bar{o} in the Demotic special convention which Quack calls “late syllabic writing” (see Quack 2017: 40f., 54). Griffith and Thompson themselves mention that this symbol is also found for ω in a Demotic rendering of the Greek name *Ισιδωρα* in a mummy ticket of the Roman period (cf. Spiegelberg 1901: *16). Indeed, the $\frac{1}{1}$ / $\frac{1}{1}$ sign is the logogram for *i³.t* ‘back’, whose late phonological shape was [o:ʔ], as testified by the Coptic preposition in the prepronominal status $\varrho\omega\omega$ = ‘from’, which contains it etymologically. A second undoubtable Demotic sign is n. 15b <𐓝>, whose value is *β* and which is clearly sign n. 34 (i.e., the Demotic sign for *f*) provided with a diacritical²⁵ oblique stroke (note that Coptic *β* was a labial voiced fricative or approximant). A third sign of probable Demotic origin is n. 18 <𐓞>, which has been dealt with above. A less certain further case might also be mentioned here. It concerns sign n. 25 <𐓟>. The value of this symbol is *π* (*p*) and its shape is extraordinarily similar to that of one of the Demotic signs for <*b*> (from $\varrho\perp$ = Z7 + D58). The next two photograph crops, an occurrence of this form of <*b*> and an occurrence of sign 25 respectively, can show

²⁵ This fact, is indeed, interesting per se. On the one hand it implicates a sort of sub-phonemic analysis, on the other it testifies a procedure of letter creation through diacritization which, albeit realized in ways different from that observed here, is not unknown to Coptic alphabets (cf. the Akhmimic letter ϱ , which is a diacriticized ϱ , and the letter ϱ of the Lycopolitan of the *Ascensio Isaiæ*, which is a diacriticized ω).

the similarity:  (*b* in the word *ʾlbt* in col. 2, l. 20; GEMF, p. 144, cf. DMagP, vol. 1, p. 28);  (*p* in the encrypted word *κϕκϕπϕτ* in 10.31)²⁶. The reason why a Demotic <*b*> letter would have been used for rendering a /*p*/ sound is not entirely clear²⁷. However, the graphical similarity between the two symbols and the phonetic affinity between /*p*/ and the sound normally corresponding to <*b*> (i.e. /β/) leads us not to discard the possibility that sign n. 25 was invented with the <*b*> letter in mind.

As for the presence of signs invented with a hieratic model in mind, a straightforward case is that of sign n. 17 < >, which renders [k]. Its shape is significantly similar to the hieratic form of the hieroglyphic letter *q* (Δ_{N29}) – i.e.,  ²⁸ – with the only substantial difference being that the vertical lines of sign 17 descend below the horizontal line²⁹.

The use of a sign related to Egyptian *q*³⁰ (Δ_{N29}) as an equivalent of Greek κ is something expected: the Demotic *q*-letter  is used in the same way in some Old Coptic alphabets and in the Coptic alphabet of papyrus Bodmer VI (cf. Quack 2017: 74, 76)³¹. It is therefore very unlikely that the similarity of sign. 17 to hieratic *q* is due to chance.

²⁶ Note that the seeming additional vertical stroke in the second image is, in fact, a small fracture in the papyrus.


²⁷ Since in the phonological development of Ancient Egyptian some final *b* consonants yielded *p* (on the conditions of this change see the different treatments by VERGOTE 1973: 16 and PEUST 1999: 135f.), one might wonder whether scribes acquainted with hieratic may have had experience of traditional spellings with (hieratic) <*b*> for contemporary phonological /*p*/ (cf., e.g., Ancient Egyptian *db* ‘horn’, Akhmimic Coptic τϕπ). However, it must be stressed that, in non-logographic Demotic words, spellings are regularly adjusted to the new phonology as concerns this change (cf. Demotic *tp* ‘horn’, DG 625) – I am grateful to a reviewer of this journal for pointing this fact out to me.


²⁸ A selection of drawings reproducing the shape of *q* in late hieratic papyri can be found in HP, vol. 3, p. 30, n. 319.

²⁹ I agree with an anonymous reviewer of this journal about the fact that this sign cannot be considered as a palaeographical evolution of hieratic *q*. Though, as with other analogous cases, given the significant similarity of the shapes and the functional comparability, it seems reasonable to consider it as an invented sign which was created taking the hieratic *q* as a model.

³⁰ This letter indicates a (possibly ejective) uvular consonant which, by the latest states of the Egyptian language, had evolved into a (certainly non-aspirated and possibly still ejective) velar stop (cf. VERGOTE 1973: 23; LOPRIENO 1995: 32-34).

³¹ There is moreover a supralinear Old Coptic gloss (n. 415 in the list in DMP vol. 3) in which the sign 17 of the cipher script is used as an Old Coptic letter of the Egyptian stock corresponding to in Demotic .

Interestingly enough, the downward prolongation of the vertical strokes renders this sign similar to the logogram used for *dm* ‘papyrus roll’, a word also used to cite other magic formularies in expressions such as “another papyrus (says)” (the following image is a photograph crop of an occurrence in col. v27, l. 5: ). Given the centrality of this word in the semantic sphere of magic, one may suspect that this similarity is an intentional allusion.

Another case that seems to me straightforward is that of sign n. 4 <Ⓜ> which corresponds to *e* (*e*). This sign can be interpreted as modelled on the hieratic shape of the sequence $\vartheta^{\beta} iw$ – with $\vartheta_{27}^{\beta}(w) + \beta_{M17}^{\beta}(i)$: indeed, the Demotic continuation of this very sequence, i.e., <Ⓜ>, functions as a single letter which can be used as a vocalic sign for *e* (cf. Spiegelberg 1925: 4f.). The right part of the sign, i.e., Ⓜ, can be interpreted as a simplified version (drawn with a precisely vertical orientation and deprived of its base stroke) of the hieratic form of β (an occurrence of this letter in the papyrus is in the following photograph crop: , col. 6, l. 19, in the word *ip.t* ‘Opet’, written with hieratic letters – GEMF, p. 158f.; cf. DMagP, vol. 1, p. 54f.)³². As concerns the left part of the cipher sign, the evolution of ϑ into a vertical stroke is also well documented and is also observable in the Demotic letter *b* mentioned above³³. Sign n. 4 seems, therefore, to be an artificial back-transition into hieratic forms of Demotic <Ⓜ>, which testifies that the inventor of the cipher was aware of the graphic etymology of that Demotic letter.

A further possible instance of a sign of hieratic origin is n. 20 <Ⓝ>, which renders λ (*l*). This may be a vertically straightened (and simplified through the deletion of the short stroke corresponding to the lion’s tail) version of the hieratic sign <Ⓝ>, which continues hieroglyphic

 ³⁴.
E23

³² A shape worth mentioning here – very similar to the sign Ⓜ at issue – is the Ⓜ (with a dwarfed base stroke) reported in HP, vol. 3, p. 26, n. 282 for an occurrence of *i* in papyrus Berlin 3135 (second-third century CE).

³³ Cf. HP, vol. 3, p. 18, n. 200b.

³⁴ In the Demotic text of pMagLL this sign appears as a logogram for *rw* ‘lion’ in the usual oblique form <Ⓝ> (cf. col 10, l. 27).

6. *The Greek components of the cipher script*

As we have seen, the Demotic and hieratic components of the cipher script are, in fact, as a rule, not ciphered. The contrary is true for the Greek components.

In the Greek and Coptic texts of the Roman and Byzantine Egypt, cryptography – which was used in magical texts but also in other contexts (cf. Menci 2008, 2010; Menchetti 2005) – was usually based either on the technique of grapheme substitution or on fantasy alphabets³⁵. In the former procedure each letter of the normal alphabet is systematically substituted with a different letter of the same alphabet. In a widespread system belonging to this kind, the enlarged Greek alphabet used for the notation of numbers – i.e. the alphabet that includes the letters stigma (ζ), koppa (φ) and sampi (λ) – is divided into three columns and each of these is encoded in a way analogous to that of the Hebrew Atbash system, i.e. with the last letter being exchanged for the first, the second last for the second and so on³⁶:

PLAIN	CIPHERED	PLAIN	CIPHERED	PLAIN	CIPHERED
A	Θ	I	φ	P	λ
B	H	K	Π	Σ	Ω
Γ	Z	Λ	O	T	Ψ
Δ	ζ	M	Ξ	Υ	X
E	E	N	N	Φ	Φ
ζ	Δ	Ξ	M	X	Υ
Z	Γ	O	Λ	Ψ	T
H	B	Π	K	Ω	Σ
Θ	A	φ	I	λ	P

The second technique is based on invented signs, which are typically obtained by altering the encoded letter in some way. An instance

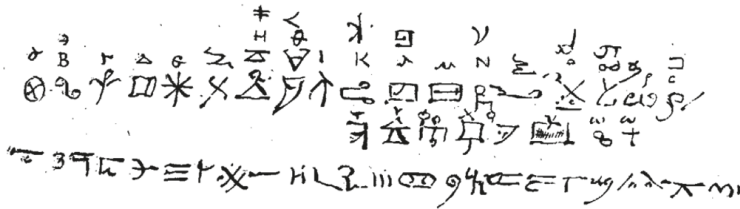
³⁵ On Coptic cryptography, see DORESSE (1952 and 1991), WISSE (1979), CHASSINAT (1921: 17-21), DIELEMAN (2010).

³⁶ Cf. GARDTHAUSEN (1913: 311); see also MENCI (2008), MENCHETTI (2005: 237).

of this kind of ciphering is offered by pMichigan inv. 534³⁷ (+pOslo 75), a magical Greek text dated to the 2nd century CE which is entirely in cipher. Hunt (1929) gives the following decryption table, about which it is important to note that, in fact, the symbol <h> has the value *eta* and not *zeta* as indicated there³⁸:


ϱ	α	ⲓ	θ	Ϛ	ν	h	υ
Ⲡ	β	ⲑ	ι	ϛ	ξ	ⲛ	φ
Ⲟ	γ	Ⲓ	κ	ⲟ	ο	ⲝ	χ
Ⲛ	δ	ⲓ	λ	ⲣ	π	ⲧ	ψ
ⲛ	ε	Ⲕ	μ	ⲑ	ρ	Ⲙ	ω
*? h?	ζ	ⲕ		ⲓ	σ		
Ϛ	η	Ⲗ		Ⲕ	τ		








Interestingly, as mentioned above, in pMagLL two alphabets of this kind are reported in a sort of decryption table placed vertically between columns 1 and 2 of the verso side³⁹:



³⁷ Editions: Hunt (1929), PGM 57, GEMF n. 8. Photograph: "P.Mich.inv. 534; Recto", <https://quod.lib.umich.edu/a/apis/x-2437/534r.tif> University of Michigan Library Digital Collections (retr. 8 jan. 2023). Another portion of the same papyrus is pOslo 75 (PGM n. 72). As for the cipher, cf. DORESSE (1952).

³⁸ Cf. HUNT (1929: 10, note 19); see the writing of the vox magica $\gamma\mu\omicron\eta\rho$ in line 19 (GEMF n. 8, l. 58, pp. 40f. – see the photograph cited in the preceding footnote, to be rotated 180°).


³⁹ Image from DIELEMAN (2005: 39) whose source is C. Leemans, *Papyrus égyptien à transcriptions grecques du Musée d'Antiquités des Pays-Bas à Leide (Description raisonnée I 383)*, 2 vols., Leiden, 1839. A new drawing has been published in GEMF, p. 246. However, there are some details in which this seems to be less reliable than Leemans' one. In particular, as regards the first letter of the alphabet placed at the bottom of the table, GEMF has Ⲛ instead of ⲛ . An inspection of the photo published by the Rijksmuseum at the url <https://www.rmo.nl/imageproxy/jpg/247550> confirms, as far as I can see, the shape drawn by Leemans. Here is the detail (converted in grayscale via color-filtering): . This is relevant to our issue, since the shape of sign n. 1 coincides with that of Leemans' drawing.

These are fantasy alphabets suitable for encrypting Greek. In fact, pMagLL does not use these cipher alphabets in their entirety, but some of the signs of the cipher script coincide with some symbols included in this table. As already noted by Griffith and Thompson, signs nn. 1 <  > α, 31 <  > ζ, 23 <  > η, and 10 <  > ω are found in the alphabet placed at the bottom of the table (the values of the signs are inferable from their position according to the alphabetic order). It may be added here that sign n. 30 <  > τ is probably a variant – with doubling of the horizontal stroke – of the τ contained in the same alphabet (τ̄), and sign n. 30 <  > Δ is rather similar (except for the fact that its right vertical stroke is not doubled) to the Δ of the upper alphabet (Δ̄). Moreover, sign n. 6 <  > Η (ē) – which in fact is a minimally modified version of Η – is substantially identical to an Η sign of pMichigan inv. 534 (see above)⁴⁰.

Among the kinds of deformation recurrently exhibited by the glyphs of fantasy alphabets, three are of major importance to our topic⁴¹:

- 1) rotation or (vertical or horizontal) mirroring;
- 2) geometricization;
- 3) deletion or partial deletion of an element.

Examples of rotation and mirroring are shown in the following table (see also the signs nn. 13 and 19 of the cipher script in the appendix below and the signs for mu, sigma and tau of the script of pMichigan inv. 534 in the table above):

⁴⁰ In fact, this sign, obtained through the deletion of the upper part of the right vertical stroke of the eta, is very similar to the etas of some papyri from the Hellenistic period onward and of some cursive scripts (cf. GARDTHAUSEN 1913, tables 1 and 4a). An example is the eta of p. Hamburg II 153 (late 3rd century BC) – e.g.,  in line 272 (fr. 6) – which is interpreted by Cavallo and Maehler as influenced by contemporary cursive (2008: 68). There can be little doubt, however, that in the manuscripts here at issue this sign was conceived as a slightly altered version of the majuscule sign.

⁴¹ On the modifying methods employed in the cipher of pMichigan inv. 534 see also BAJNOK-PATÁRICZA (2003). Another kind of recurrent alteration is the doubling of some stroke.

SOURCE	GREEK IN pMAG. LL	CIPHER SCRIPT IN pMAG. LL	2ND ALPHABET IN pMAG. LL TABLE	pMICH. INV. 534
epsilon	ϵ	⤴	ϵ	⤵
iota	ι	/	ι	ι
omega	ω	ϑ(=0), Ϟ(=0)	ω	—
alpha	α	(see below)	(see below)	α

Geometricization is the term I use here for a kind of transformation which simplifies the shape of the letter to an extreme degree to obtain a figure consisting of geometrically basic elements (segments and dots) arranged in a geometrically basic disposition (e.g., parallel or intersecting so as to divide the round angle into equal parts). Obvious examples are the following signs for ν and z (but see also the signs for κ and ψ of the script of pMichigan inv. 534 above):


	GREEK IN pMAG. LL	CIPHER SCRIPT IN pMAG. LL	2ND ALPHABET IN pMAG. LL TABLE
nu	ν	, ✕	
zeta	ζ	≡	≡

Clear examples of deletion, in which the altered form is, in fact, very similar to its original shape, are the following:



	GREEK IN pMAG. LL	CIPHER SCRIPT IN pMAG. LL	2ND ALPHABET IN pMAG. LL TABLE	pMICH INV. 534
tau	τ	—	τ	—
eta	η	η	—	η

A further likely example is sign n. 15a of the cipher script (cf. the table in the appendix), which can be interpreted as an altered β .

The examples mentioned so far show that a strict analogy exists between the Greek elements of the cipher script and a Greek

ciphered alphabet of the fantasy type such as that of pMichigan inv. 534. Nonetheless, even the Greek part of the cipher script must have been devised by a person literate in Demotic. A fact suggesting this conclusion is that the rotated omega signs are normally used for encrypting the letter omicron⁴². Indeed, this was made possible by the fact that the inventor of the script chose to rely on the sign  to indicate the long vowel of *o*-quality⁴³ corresponding to Coptic ω . It remains difficult to say why an altered ω – and not an altered o – was used for *o*. It may be noted, however, that in the script of pMichigan inv. 534 o is the only letter which is used with its plain shape.

But there is another fact which, in my opinion, demonstrates even more clearly that the inventor of the encrypted Greek letter belonging to the cipher script of pMagLL was literate in Demotic: that is the fact that in some instances the operation which is carried out is not only to alter the Greek letters so that the reader does not recognize them as such, but also to alter the Greek letters in order to make it appear that they belong to the Demotic script. The inventor of the cipher script noticed that some opportunities of camouflage were at hand and seized them. Three cases seem to me hardly ascribable to chance.

The most accomplished camouflage is perhaps that concerning the letter mu. In the Greek parts of pMagLL, mu has a shape similar to that which is typical of the Alexandrine majuscule, i.e., . Sign n. 21, which encodes mu, is clearly obtained by depriving  of its leftmost curvilinear stroke.

GREEK LETTER		CIPHER
	deletion →	

⁴² A possible occurrence of sign n. 9 with the value ω is in the word $\epsilon\omega$ at col. 3, l. 27 and col. 30v., l. 11.

⁴³ From the point of view of those scholars who assume that the graphic distinction between Coptic o and ω renders an opposition of quality (mid-high vs. mid-low) rather than of quantity (short vs. long), this was a (short) mid-high vowel.

It is important to note that three Demotic signs that serve as a model in the examples just mentioned – i.e., <⠄>, <⠆> and <⠇> – are elements of very high frequency⁴⁴. Given that the Demotic signs are several hundred, the fact that the result of the transformation of a Greek letter ends up as similar to one of the numerous Demotic signs might be accidental. But this is by far less probable if we limit ourselves to considering the high-frequency signs. Indeed, it is obvious that the more frequent the models of the camouflage are, the more effective the camouflage itself is.

A fourth possible case is that concerning sign n. 12 which appears sometimes as a monogrammic equivalent of the digraph οϣ. It seems highly probable that this sign is substantially a vertically mirrored compendium οϣ in which the ϣ is placed above the ο and fused with it. Thus, the source shape might have been analogous to the <⠆> which appears several times – used, in particular, at the end of a line as a means of saving space – in the Coptic manuscript pBodmer VI, written one or two centuries later than pMagLL⁴⁵. This shape, as is known, will become a widespread ligature in the majuscule book scripts of the subsequent centuries (cf. Gardthausen 1913, tables 2 and 3). Interestingly the shape of sign 12 has the additional property of being slightly asymmetrical, with its left portion being straightened:

GREEK LETTER		CIPHER
⠆	vertical mirroring → ⠆ straightening of the left part →	⠆

This particular transformation might have been chosen by virtue of the fact that the resulting shape is equivalent to a vertically mirrored

⁴⁴ In the corpus on which the DPDP (Demotic Palaeographical Database Project, <http://129.206.5.162>, ed. by J. F. Quack, Heidelberg University) is based, the *p*³-logogram is the 4th most frequent sign, the *s*-letter the 22nd. As for the “stroke plus dot” sign of the genitival particle, it is particularly frequent in pMagLL because in this text it is often used, instead of the simple horizontal stroke, not only for the genitival *z*, but also to write the *z*-prepositions (cf. DMagP, vol. 3: 42f.).

⁴⁵ Two instances can be seen in the photograph at https://iif.unige.ch/iif/2/1072205347_017/full/full/0/default.jpg (cf. the edition in KASSER 1960: 32).

high-frequency Demotic sign representing *w*, with the only difference that the eyelet of the latter is open to the left <Ϝ>. Taken alone, this last case appears as a mere possibility, but at the light of the three cases previously observed it is at least worth of mention.

That this kind of camouflage is identifiable only in three or perhaps four signs does not weaken the approach proposed here. Indeed, all in all, it is expected that it was not always possible to create a shape allowing – so to say – a double interpretation. Of course, this kind of camouflage could only be devised by a person who was literate in both Greek and Demotic.

7. *Aims and connotations of the cipher script*

As mentioned above, the words typically written in cipher are ingredients and effects. These are of course pieces of information of maximal importance, since, without knowing them, the unwanted reader can neither perform the spell nor select the spell apt to his aims. Moreover, some of the “effects” are quite objectionable – for instance, there are spells aimed at making people die. These facts seem to be consistent with the idea that the main goal of the use of the cipher script was secrecy⁴⁶.

At the same time, as happens in other cases with the cryptographies of the Graeco-Roman Egypt, there are reasons to doubt that the want of secrecy was so authentic, and it seems possible to speak of an aspiration to – when not a pretence of – secrecy (cf. in particular Menci 2008: 262). Not only does the script contain several letters of Demotic origin which are not encrypted, but there are some parallel passages in which the same word is written here in cipher and there in plain writing – indeed, W. N. Groff, who deciphered the script (in Groff 1900), took advantage precisely of these passages to break the code. This may in part be due to the probably collectaneous nature of

⁴⁶ Interestingly, the much later (9th or 10th century CE) Coptic Medical papyrus published by CHASSINAT (1921) uses the Atbash-like encoding mentioned above in a similar way, since it mostly ciphers materials necessary to the practices.

the manuscript. Nevertheless, an authentic want of secrecy would have required a more careful control⁴⁷.

Anyway, the aspiration to secrecy is at most capable of explaining half of the problem, i.e., to answer the question as to why, in order to write the words at issue, cryptographic writing was chosen. But there is another half of the question: i.e., why those particular words were written in ciphered Old Coptic rather than in a possible ciphered Demotic writing. As to this issue, it is not out of place to guess, in Griffith and Thompson's vein, that this choice might have been favoured by the fact that a tradition of Greek cipher alphabets existed; as we have seen, even if it cannot be said that the inventor of the cipher script adopted an already existing Greek cipher script as a whole, he probably took some of the signs from such encrypted writings. At the same time, the choice of an Old Coptic script, with its tendentially phonological organization and its ability to render vowel sounds, had the advantage of minimizing the amount of graphic ambiguity, which could be particularly precious precisely for the words that are found written in cipher, given their textual importance. The writers of the Demotic magical papyri were well aware of the superiority of the Greek/Old Coptic writing from this point of view: this is indeed the reason why they supplied the voces magicae written in Demotic script with supralinear Old Coptic glosses. It should be mentioned, however, that the spellings of the ciphered words, in addition to using <ϣ—> for both /t/ and /tʃ/, show some possible inaccuracies with respect to the vowel quality distinction /a/ : /e/⁴⁸.

If phonological accuracy might have been one of the reasons favouring the choice of Old Coptic as the system underlying the cipher

⁴⁷ It is also to be noted that “enigmatic” kind of writings which do not aim, in fact, at secrecy are also not unknown to the Egyptian tradition. Thus, inscriptions in enigmatic writing found in the tombs of Ramses VI and Ramses IX exhibit special “deconventionalized” spellings whose main aim, as shown by STAUDER (2020), seems to be to provide a dazzled experience of reading and which, moreover, are placed in inaccessible locations (which excludes secrecy as a goal).

⁴⁸ QUACK (2006: 208ff.) has shown that some occurrences of sign n. 3a/3b (elsewhere readable as ε) seem to correspond to *a*-vowels (however, as concerns the occurrences of the word corresponding to Sahidic ΗΝ Bohairic ΕΝ ‘ape’ – nn. 8 and 14 in the list of words in cipher in DMagP – it should be said that the vocalism of this form is problematic per se). Moreover, one might suspect that sign. n. 2, whose occurrences seem to represent an *a*, is, in fact, a third variant of sign n. 3a/3b.

writing, then the way in which the ciphering was carried out had a very relevant advantage: it allowed the writer of the papyri to use a writing system of the Greek type, while reasserting, at the same time, the Enchorial cultural identity through the use of graphic shapes reminiscent of the indigenous scripts⁴⁹.

Even if the papyrus at issue contains passages in the Greek alphabet and language, it is not out of place to attribute to our scribes a consideration of this kind. As we have seen, the overall evidence concerning shapes and functions of the cipher signs shows that the attitudes of the inventor (or inventors) of the script towards the two sources (the Egyptian scripts and the Greek alphabet) are different: while Greek letters are systematically disguised, signs of Egyptian origin or inspirations can be used without their nature having to be concealed, and this independently of whether they render sounds that can be represented by the Greek alphabet or not (as signs 11 and 15b clearly prove). Thus, though not rejecting the Greek component of late Egyptian magic, the Demotic papyri are the product of a milieu which must have conceived itself as a preserver of indigenous traditions. This is perfectly consistent with the hypothesis that the creators (and the intended audience) of the Demotic magical handbooks were likely native Egyptian priests (see Section 1 above)⁵⁰.

In the framework of the interpretation proposed here, it is easy to understand why the cipher script includes signs of hieratic and Demotic origin which are not encrypted, at risk of diminishing the efficiency of the system in guaranteeing secrecy. It is not because an idle encryptor, in adapting a Greek ciphered alphabet to the Egyptian language, did not take the trouble to invent additional ciphered signs, but because, by limiting himself to encoding non-indigenous letters, the inventor of the script could enhance – so to say – the Demotic-hieratic

⁴⁹ That writing systems can be seen as symbols of cultural identities cannot surprise (on this issue from a general ethno-anthropological point of view, see CARDONA 1981 § 3.6, MANCINI 2014, with further references). Obviously, there is no reason to believe that this should not hold for a cipher script. In fact, since it selects a strictly closed group of potential recipients, the possibility that a cipher writing assumes an identitarian connotation is even more easily understandable.

⁵⁰ On the relationships between priesthood, literacy in Egyptian writing and magical practices in Graeco-Roman Egypt see also FRANKFURTER (1996: 210-214).

flavour of the code⁵¹. This is in line with E. Love's observation according to which the fact that plain Old Coptic writing was often used as a *supplement rather than substitute* indicates that «it was seen as a low form of writing, compared to the high forms comprising endographic Egyptian scripts» (Love 2020: 336).

8. *Concluding remarks*
















To conclude, the cipher script of the Demotic magical papyrus of London and Leiden is a complex cultural artefact which combines non-masked Egyptian elements with Greek elements masked as Egyptian ones. The way in which our cipher was devised confirms that letter shapes are often seen as culturally non-neutral and that writing, whether plain or encrypted, is a privileged locus for the affirmation of the identity of social groups.

















The creation of this script turns out to be connected with that of the magical books which contain it: the heterogeneity of its sources – hieratic, Demotic and Greek – faithfully mirrors that of the graphic repertoire exhibited by the texts that those manuscript collects. At the same time, this triple literacy, which involved the mastering of hieratic, Demotic and Greek and which was shared by authors and readers of the Demotic magical papyri points to a temple milieu. Ostraka from Narmouthis (Fayum) dating to the late 2nd century CE clearly show that, in this period, young Egyptian priest-scribes not only studied hieratic (cf. Gallo 1997) but were also taught to compose texts in Greek (cf. Bresciani *et al.* 1983: 3; Prada 2012: 632; Clarysse 2019: 308).














The cultural identity of such an environment clearly shows through the shapes of the cipher signs.

⁵¹ Partially encrypted writing systems are by no means exceptional. For instance, in the cryptographic hieroglyphic-Egyptian texts of the New Kingdom, signs are occasionally used according to their normal value (see WERNING 2020: 202); in the Atbash-like encoding (cf. above) the letters ε, η, φ, when not disguised according to a different technique, are left unencoded; in the fantasy alphabet of pMichigan inv. 534 the omicron is not encoded; in the “Greek-Arabic numerical code” (WISSE 1979: 115; cf. DORESSE 1991: 67) used in a 14th century Bohairic manuscript, the letters α from to θ in the alphabetic order are not encoded.

Appendix: annotated table of the cipher script

	SIGN	VALUE	NOTES ON GRAPHIC ETYMOLOGIES AND CAMOUFLAGES
1		λ	A geometricized λ rotated 45° counterclockwise. <u>Camouflage</u> : it is identical to a vertically mirrored genival particle.
2		λ	? Perhaps a variant of 3b.
3a		ε	Maybe an altered ε.
3b		ε	Perhaps a variant of the preceding sign in which the two horizontal strokes are merged.
4		ε	A transposition of Dem. < ʿw > i'w (from hierogl. ʿw) into hieratic shapes.
5a		ε	An epsilon rotated 90° clockwise.
5b		?π	? [Value not certain; only two dubious occurrences, cf. DMagP, vol. 3: 105.]
6		η	A slightly altered Greek eta.
7		ι	An iota rotated 45°.
8		?ι	? [Value not quite certain according to Griffith and Thompson; indeed, in two occurrences (nn. 10 and 11 in Griffith and Thompson's list of words in cipher) it seems to represent η.]
9		ω	An omega rotated 90° counterclockwise.
10		ω	A vertically mirrored omega.
11		ω	It is the variant shape ^{***} of hieroglyphic/hieratic ω.
12		οϵ	Probably a vertically mirrored ligature omicron + epsilon. <u>Camouflage</u> ?: it might perhaps be interpreted as a vertically mirrored version of the Demotic sign < ʿw > (w), but with a closed eyelet.
13		ϵ, 2	A vertically mirrored epsilon.

14		Υ,Ϛ	? One might speculate whether it is a rotated epsilon provided with a tail (some confusions between <ε> and <Υ> is found: sign n. 13 is used for <ε> in two occurrences, cf. DMagP, vol. 3: 106).
15a		Β	Probably a Greek beta deprived of its vertical stroke and provided with a diacritic (perhaps by analogy with the equifunctional 15b).
15b		ϥ	It is the Demotic sign for <i>f</i> provided with a diacritic in order to distinguish it from n. 34.
16		Δ,Τ	Probably an altered Greek delta. It is similar to the delta of the first ciphered alphabet contained in the decryption table of pMagLL. Camouflage?: it is similar to the determinative of <i>iny</i> 'stone'.
17		κ	It is a hieratic form of hieroglyphic Δ <i>q</i> (it is also similar to the determinative of <i>d'm</i> 'book').
18		Γ,Κ	Very likely a ligature for Demotic <i>nq</i>  .
19		λ	A vertically mirrored Greek lambda.
20		λ	It may be a vertically straightened and simplified form of the hieratic sign for hieroglyphic  <i>l</i> .
21		μ	A Greek mu deprived of its right stroke. Camouflage: it is identically to a horizontally mirrored Demotic sign of the masculine singular definite article.
22		μ	?
23		Ν	A geometricized Greek nu.
24		Ν	A variant of the preceding sign in which the three strokes are arranged so as to form an asterisk.
25		Π	It is probably modelled on one of the most common Demotic signs for <i>b</i> .
26a		Ρ	A Greek rho horizontally mirrored and deprived of the upper part of its eyelet. Camouflage: it is identical to a Demotic sign for <i>s</i> .

26b		p	It is the preceding sign provided with a diacritic probably in order to distinguish it from the Demotic sign for <i>s</i> .
27		c	? [It is similar to the “spitting mouth” determinative which is used in the same papyrus in the hieratic form for water <𐤁𐤍>. One might wonder whether it is a geometricized form <<> of the Greek lunate sigma <C> provided with a detached tail in order to make it look like that determinative.]
28		c	Probably a horizontally mirrored Greek sigma (similar to the one adopted in pMich inv. 534) provided with a tail.
29		z, τ	It is the Old Coptic <i>čanča</i> , i.e., the simplified variant of the Demotic letter <i>d</i> (whose shape derives in turn from hieroglyphic ).
30		τ	Probably a Greek tau altered by deleting the left portion of its horizontal stroke and doubling the right one. It is very similar to an encrypted tau included in the first ciphered alphabet of the decryption table of pMagLL.
31		z	A geometricized Greek zeta. Camouflage?: it is identical to a hieratic form for <i>mw</i> ‘water’ used in the same papyrus, but this could also be a matter of chance.
32		ω	It is one of the shapes of Demotic <i>š</i> .
33		z/h	Demotic <i>h</i> .
34		q	Demotic <i>f</i> .
35		?z/h	Value uncertain (a single occurrence is found). Apparently a Demotic <i>h</i> .
36		σ, κ	Demotic <i>g</i> .
37		?	This sign appears once in pLeiden I 384. It is perhaps a Demotic <i>h</i> .

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Armeno *aṙagast* ‘tenda, vela’, ‘pressoio del vino’. Con un’appendice su ebraico biblico *migdal**

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ABSTRACT

The Armenian noun *aṙagast* is described in modern lexicography as having not only the meaning of ‘veil, tent, sail’, but also the one of ‘wine press’. The article investigates this last semantic value, and argues that it could be ancient, even if it is not attested in Classical Armenian: the argument developed considers the traditional technology of vinification based on a hole, dug in the soil, presumably topped by a wood structure covered by a tent. The same referent can be proposed for the Biblical Hebrew *migdal* in Is. 5, 2.

KEYWORDS: Armenian, Biblical Hebrew, lexical meaning, etymology, semantic change, wine making

1. *Il significato di aṙagast nell’armeno orientale moderno*

Il sostantivo armeno orientale moderno *aṙagast*¹ è censito nella lessicografia non solo col significato di ‘tenda’, ‘velo’ o ‘vela’, ma anche in quello di ‘pressoio del vino’, chiaramente eccentrico rispetto

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¹ Per la traslitterazione dell’armeno, sia nella sua varietà antica sia in quelle moderne, sono assunte le convenzioni esposte in BELARDI (2003: 127-128), con un’unica eccezione motivata dalla maggiore facilità tipografica (cfr. anche SCHMITT 1972; 2007: 25-26): le ostruenti sorde aspirate sono indicate con uno spirito aspro posposto alla lettera alfabetica (come è ampiamente in uso) e non con un puntino sottoscritto.

al resto del suo spettro semantico. In questo articolo si cercherà di esplorare per quale via i due significati, quello di ‘tendaggio, velo’ e quello di ‘vasca per la premitura dell’uva’, siano storicamente in rapporto tra loro.

Per dichiarare più accuratamente la semantica della forma prendiamo le mosse da un esame della lessicografia corrente. Nel ‘Dizionario esplicativo della lingua armena contemporanea’ diretto da Ararat Sahaki Ľaribyan e pubblicato dall’Accademia delle scienze della Repubblica Sovietica di Armenia tra il 1969 e il 1980, volto dichiaratamente a una descrizione sincronica della varietà orientale moderna, lingua nazionale della Repubblica di Armenia, il sostantivo è censito con i seguenti significati (ŽHLBB: 169)²: 1. ‘vela’; 2. ‘tenda’; 3. ‘stanza per lo sposo e la sposa separata da una tenda’, ‘talamo nuziale’; 4. (traslato) ‘patto coniugale’; 5. (dialettale) ‘la parte in pietra o in cemento del pressoio, in cui si pigia l’uva’ («*hnjani k’arakrov kam ċementov patrastvac masə, ɔwr ċmlowm en xatotə*»). A proposito di quest’ultimo si offre un esempio tratto dallo scrittore ottocentesco Perċ P’rošyan: «*Mtan aṛagasti mejn ɔw xatotə trorec’in*» ‘Entrarono nel pressoio e pigiarono l’uva’.

Le stesse accezioni sono riportate, assieme ad altre, nel successivo ‘Dizionario esplicativo dell’armeno moderno’ di Êdoward Bagrati AĽayan, del 1976, volto, a differenza del precedente, a una documentazione semantica arricchita anche da usi antichi (AHBB: 100) in cui inoltre il termine *hnjan* ‘fosse in cui si porta l’uva e la si pesta’ è glossato con il nostro *aṛagast* (AHBB: 881). Gli stessi dati figurano già nel più antico ‘Dizionario esplicativo armeno’ pubblicato durante la Seconda guerra mondiale da Step’an Malxaseanc’, sempre per l’Accademia delle scienze della Repubblica Sovietica d’Armenia, alla voce *aṛagast* (HBB: 213) e alla voce *hnjan* (HBB: 118) glossata con *aṛagast*.

Ancora, nel dizionario etimologico di Hrac’ya Aċaṛyan, originariamente pubblicato tra il 1926 e il 1935 (HAB: 248-49), alla fine della voce è citata, relativamente al dialetto di Erevan, la forma *aṛak’ast*

² Le glosse lessicografiche armene sono qui e oltre da noi rese in italiano senza altra indicazione; la traslitterazione del testo originale è offerta solo nei passi più rilevanti.

col significato di ‘parte del pressoio o della casa, in cui è pigiata l’uva per estrarne il vino’ («*hnjani kam tan mēġ ayn masn, owr xatōtn en koxowm, gini hanelow hamar*»).

Il recente ‘Dizionario dialettale della lingua armena’ (HLBB: I, 97), che per lo più è basato su materiale estratto proprio dal dizionario di Ačařyan, per questa voce si limita a citare il dialetto dell’Ararat con la definizione ‘la parte (la fossa) del pressoio costruita in pietra o in cemento in cui è pigiata l’uva’ («*hnjani k’arowrov kam čementov patrastvac masō (gowbā) owr čmelowm en xatōtā*») e fornisce due citazioni, tratte ancora dallo scrittore Perč Pṙořyan.

In definitiva, il significato di ‘pressoio del vino’, ‘vasca in cui si preme l’uva’ è censito con sicurezza dalla lessicografia relativa all’armeno moderno, dove esso viene indicato per lo più come dialettale o arcaico. In questa accezione *aṙagast* è inteso come sinonimo del sostantivo *hnjan*, ovvero indica una parte dell’impianto pressoio più ampiamente nominato come *hnjan*, parte costituita specificamente dalla vasca di spremitura dell’uva.

2. *Varietà antica*

A differenza di quanto avviene per la lessicografia relativa alle varietà moderne di armeno, il significato di ‘pressoio del vino’, per il sostantivo *aṙagast*, non è segnalato dagli strumenti lessicografici dedicati all’esame della lingua antica. Il *Dizionario armeno-italiano* di Emanuele Ciakciak, pubblicato dalla Tipografia Mechitarista di Venezia nel 1837, a tutt’oggi il miglior dizionario bilingue in cui l’armeno classico sia glossato con una lingua occidentale moderna, segnala le seguenti accezioni che riportiamo nell’italiano ottocentesco dell’opera: (DAI: 184-185) 1. ‘zanzariére, zenzariére, cortina, cortinággio; tálamo, letto nuziále, letto; cámera degli sposi, tálamo’; 2. *mankownk’ kam ordik’ aṙagasti* ‘i compagni, i familiari, confidenti dello sposo; appartamento delle donne, ginecéo’; 3. *erkayin kam verin aṙagast* ‘il Paradiso del ciélo, il Ciélo; la S. Chiesa; la S.S. Vergine; Palestra dei Martiri; la S. Croce’; 4. ‘il fondo del cuóre, pericárdi’; 5. ‘tenda, padiglióne, trabacca; cortina;

coperta, velo, velame; pretesto, máscara, spézie, inganno, colore, título, ombra, sotterfúgio, scusa, figura, nome, apparenza, orpello'; 6. *aṙagast* or *yašš-n* 'túniche, membrane degli occhi'; 7. 'diafragma'; 8. *aṙagast nawoč* 'vela di nave'. L'organizzazione delle accezioni segue da vicino quella del coevo 'Nuovo dizionario della lingua armena', allestito dalla congregazione Mechitarista di Venezia sul modello della lessicografia europea, e in particolare del dizionario italiano della Crusca, in cui il significato dei singoli lemmi della lingua di età aurea è accompagnato da esempi tratti dai testi classici di riferimento: le glosse esplicative del significato, offerte in armeno classico, sono spesso precedute da glosse in greco antico e latino tratte dalle corrispondenze tra le rispettive versioni del testo biblico. Per *aṙagast* sono indicati i seguenti significati (NBHL: I 281-282): 1. Ἰστίον, ἐπίσπαστρον, κάλυμμα, καταπέτασμα; *velum, velamen, tegumentum, operimentum, aulaeum*; 'tela o tappeto steso e allungato come tenda o divisorio'; 2. παστός, νύμφων; *thalamus*; 'camera interna della sposa e dello sposo, appartamento esclusivamente degli sposi'; 3. Ἰστίον, ἀρτέμων; *velum, artemo*; 'vela delle navi stesa al corso del vento per spingere avanti'; 4. 'membrana degli occhi'; 5. διάφραγμα; *insepimentum, diaphragma, praecordia, membrum*; 'tessuto sottile che separa il cuore e i polmoni, dal fegato e dalla milza'.

Per capire meglio quale sia il nucleo semantico attestato nell'epoca più antica è bene svolgere un breve esame dei dati testuali di età aurea e in particolare nella traduzione del testo biblico, sia nell'Antico sia nel Nuovo Testamento.

Il primo passo da esaminare è il capitolo 27 del libro dell'Esodo, in cui sono riportate le istruzioni divine impartite a Mosè per la costruzione dell'altare: nel testo è descritto in realtà un vero tempio nomade, il nucleo da cui prende origine il futuro Tempio di Gerusalemme. Si prevede infatti che attorno all'altare sia posto un grande recinto rettangolare, con i due lati lunghi di circa cinquanta metri, e quelli corti di circa la metà, ciascuno scandito da colonne di bronzo tra le quali deve essere agganciato e steso un tendaggio che corre lungo tutto il recinto, fatta salva l'apertura anteriore provvista di una cortina riccamente decorata. Nella descrizione dei diversi lati del recinto, con una formula che poi viene ripetuta per quattro volte (ci limitiamo a citare

la prima di queste al versetto 9, nelle versioni ebraica (1a), in quella greca della Settanta (1b), nella Bibbia armena (1c) e in una traduzione italiana del testo armeno (1d))³ si dice:

(1) Antico Testamento, Esodo, 27 9:

- (a) וְשִׁיתָ אֶת הַצֵּר הַמְשֻׁכָּן לְפָנֶיךָ וְנִבְּתִימְנָה קְלָעִים לְחֹצֵר שֵׁשׁ מִשְׁרָר מִצָּה בְּאַמָּה
אֲרָר לְפָנֶיךָ תִּתְּנֶנּוּ:
- (b) Καὶ ποιήσεις αὐλὴν τῆ σκηνῆ· εἰς τὸ κλίτος τὸ πρὸς λιβα **ιστία** τῆς αὐλῆς ἐκ βύσσου κεκλωσμένης, μῆκος ἑκατὸν πηγῶν τῶ ἐνὶ κλίτει·
- (c) *Ew arasc'es srah i xorani-n, i kotm harawoy: ew z-aṙagast srahi-n i bebezoy maneloy; hariiwr kangown y-erkaynowt' iwn mioy kotman-n.*
- (d) ‘Farai poi il recinto del padiglione, sul lato meridionale; e il **tendaggio** del recinto, (farai) di bisso ritorto; per la lunghezza di cento braccia sullo stesso lato’

Come si vede l’ebraico *qéla* ‘tenda, benda di stoffa’, usato al plurale *qpla’im*, connesso con la base *qála* ‘lanciare (con la fionda)’ (ma nei corradicali arabi, aramaici ecc. anche ‘veleggiare’, ‘tenda’, ‘benda, fionda’ ecc.; BDB: 887), è tradotto nel greco della Settanta con *ιστία* ‘veli’, anch’esso al plurale, mentre in armeno si ricorre al termine *aṙagast*, che in questo versetto è al singolare, ma nel resto del passo è usato anche al plurale. Del recinto dell’altare, col suo tendaggio, si parla sempre nell’Esodo poco più avanti, nei capitoli 37 e 38, quando si narra dell’effettiva costruzione dell’altare ricorrendo di nuovo agli stessi termini. Il recinto dell’altare e il suo tendaggio sono inoltre citati nel libro dei Numeri, al capitolo 3, sempre con una corrispondenza testuale tra l’ebraico *qéla*, qui al singolare, il greco τὰ *ιστία*, al plurale, l’armeno *aṙagastk*, al plurale.

Un secondo significato presente nella Bibbia è quello di ‘velo’ per coprire una parte del corpo, in cui il termine è usato in corrispondenza del greco *κάλυμμα*: ciò avviene in modo metaforico in un passo della seconda lettera ai Corinzi:

³ Qui, e negli altri passi riportati più in basso, il testo ebraico è citato da ELLIGER & RUDOLPH (1984); quello greco della Settanta da RAHLFS & HANHART (2006); il Nuovo Testamento greco da NESTLE & ALAND *et al.* (2012); il testo armeno è quello della Bibbia di ZÓHRABEAN (1805), con l’eccezione del Vangelo che è citato da KÜNZLE (1984).

(2) Nuovo Testamento, 2 Corinzi, 3 15-16

- (a) ἀλλ' ἕως σήμερον ἡνίκα ἂν ἀναγινώσκηται Μωϋσῆς, **κάλυμμα** ἐπὶ τὴν καρδίαν αὐτῶν κείται· ἡνίκα δὲ ἐὰν ἐπιστρέψῃ πρὸς κύριον, περιαιρεῖται τὸ **κάλυμμα**.
- (b) *Ayl minc'ew çaysôr yoržam ont' eřnown z-Mousês, noyn ařagast kay i veray srtic' noća. Ayl yoržam darjç' in ař Tër, apa verasc' i ařagast-n.*
- (c) 'Ma fino a oggi, quando leggono Mosè, uno stesso **velo** si trova sul loro cuore. Ma quando si convertiranno al Signore, allora il **velo** sarà tolto'

Paolo cita qui un passo dell'Esodo, il capitolo 34, in cui si dice che Mosè, per la pelle raggianti, si era velato il volto che si scopriva solo parlando col Signore: per indicare il 'velo', nella Bibbia greca è sistematicamente impiegato il sostantivo τὸ κάλυμμα, sia nel passo dell'Esodo sia nelle occorrenze della seconda lettera ai Corinzi, dal momento che Paolo cita direttamente dalla Settanta. Nella traduzione armena i rimandi interni del testo sono spezzati: nel passo veterotestamentario è usato il termine *patrowak* (Es. 34, 33 35), mentre nella lettera di Paolo si impiega prima il termine *k'ot* (2 Cor 3, 13 14), quindi, nel passo riportato qui sopra, *ařagast*.

Il significato metaforico di 'velo' si ritrova anche nel Libro della Sapienza di Salomone (17 3), che ci è noto dal testo greco, dove traduce il sostantivo *παρακάλυμμα*.

Il terzo significato attestato nella Bibbia è quello di 'camera, talamo nuziale', impiegato nel terzo libro dei Maccabei, noto solo nel testo greco: qui la traduzione armena non segue letteralmente il testo della Settanta, almeno per come noi lo leggiamo. Tuttavia nel passo sono confrontabili almeno questi due lacerti tratti dal testo greco (3a) e dalla sua traduzione (3b), su cui è basata la glossa in italiano (3c):

(3) Antico Testamento, 3 Maccabei, 4:

- (a) [6] αἱ δὲ ἄρτι πρὸς βίου κοινωνίαν γαμικὸν ὑπελήλυθυῖαι **παστὸν** νεάνιδες ἀντὶ τέρψεως μεταλαβοῦσαι γόους
- (b) [5] *Isk or ard ewš norog amowsnowt' iwnk' i mimeans haseal t'eralic' owraxowt' eamb norasêr ařagastic'-n*
- (c) 'E quelli che proprio allora erano coniugi recenti, raggiuntisi reciprocamente nel piacere incompleto di amanti novizi **nei talami nuziali**'

Come si può notare, l’armeno *aṙagast* corrisponde al greco *παστός* nel significato di ‘talamo nuziale’, ‘cortina ricamata del letto nuziale’.

Infine si ha il significato di ‘nozze’, ‘festa nuziale’, in traduzione del greco *νυμφῶν*, in un passo che ricorre parallelo nei Vangeli sinottici, in cui Gesù risponde all’accusa dei Farisei di non far rispettare il digiuno ai suoi discepoli con la frase, qui ripresa dal Vangelo di Matteo (anche qui la traduzione italiana (4c) segue il testo armeno):

(4) Nuovo Testamento, Matteo, 9 15:

- (a) *καὶ εἶπεν αὐτοῖς ὁ Ἰησοῦς· μὴ δύνανται οἱ υἱοὶ τοῦ νυμφῶνος πενθεῖν ἐφ’ ὅσον μετ’ αὐτῶν ἐστὶν ὁ νυμφίος· ἐλεύσονται δὲ ἡμέραι ὅταν ἀπαρθῇ ἀπ’ αὐτῶν ὁ νυμφίος, καὶ τότε νηστεύσουσιν.*
- (b) *Asê čnosa Yisows· mi et’e mart’ inc’ ic’ê mankanč aṙagasti sowg aṙnowl· minč’ p’esayn and nosa ic’ê· ayl ekeč’en awowrk’n· y-oržam barjč’i i noč’anê p’esayn· ew apa parhesc’en:*
- (c) ‘Disse a loro Gesù: «Come è possibile per gli invitati **alle nozze** essere in lutto finché lo sposo è con loro? Ma verranno giorni, quando lo sposo sarà loro tolto, e allora digiuneranno»’

Oltre a questi passi biblici è opportuno considerare qui alcune occorrenze del termine nella *Storia degli Armeni* di Movsês Xorenac’i, malgrado la datazione assai disputata di questo testo⁴. Il sostantivo compare qui quattro volte; in tre di queste testimonia significati già visti: ‘talamo nuziale’ (III 68 5, p. 359 8)⁵; ‘nozze’ (III 68 17, p. 361 6); e il valore metaforico di ‘velo’ (si parla di *ketcaworowt’ean-n aṙagastiw* ‘con il velo dell’ipocrisia’, III 43 3; p. 312 20). In un caso ha invece un valore che non è presente nella Bibbia, e indica la tenda regale in un accampamento militare, quindi un padiglione mobile. Il passo segue immediatamente la descrizione della battaglia in cui il re armeno usurpatore Ervand (Oronte) viene sconfitto dal giovane Artasêš (Artasse), da cui verrà poi ucciso nei giorni immediatamente seguenti al combat-

⁴ Per l’ampio dibattito sulla datazione della ‘Storia degli Armeni’ di Movsês Xorenac’i, oscillante nell’opinione degli interpreti moderni tra il V e l’VIII sec., basti qui il riferimento a GARSOÏAN (2012) e alla bibliografia ivi indicata.

⁵ I riferimenti all’opera di Movsês Xorenac’i contengono l’indicazione al libro, al capitolo e al capoverso dell’edizione MOWARDEAN & IWZBAŠEAN (2003), seguita dal rimando alla pagina e alla riga della tradizionale edizione di riferimento ABELEAN & YAROWT’IWNEAN (1913).

timento⁶. Si dice in particolare che dopo la battaglia, mentre il comandante dell'esercito vincitore Sembat, al comando di un drappello, si era lanciato all'inseguimento di Ervand che era precipitosamente fuggito al galoppo, Artasês era rimasto sul campo con il grosso delle truppe e, raggiunto a cavallo l'accampamento abbandonato da Ervand, aveva deciso di passare la notte proprio nel padiglione del re armeno:

(5) Movsês Xorenac'i, II 46 18, p. 172 13⁷:

- (a) *Isk Artasîsi baseal i y-Erowanday šrĵapateal aṛagast-n, i kašey ew i ktaweay parsĵin, êĵ, ew i xorani nora bnakečaw z-ayn gišer.*
 (b) 'e Artasês, giunto alla **tenda** di Ervand, circondata tutt'attorno da pareti di pelle e di tela, scese, e nel padiglione di lui passò quella notte'

Sulla base di questa recensione si può ricostruire la seguente organizzazione semantica: il nucleo più interno di significato sembra essere quello di 'tenda, cortina, copertura; velame', o di 'velo' che copre una parte del corpo; da qui si sviluppa il significato di 'stanza nuziale', intesa come camera divisa dal resto della casa da una tenda, o di 'talamo nuziale', un letto circondato da tende; quindi per sineddoche si ha il significato di 'nozze'.

3. Etimologia

Il nucleo semantico indicato è solidale con l'etimologia che, almeno nei suoi tratti generali, è sufficientemente chiara. Il nome infatti, come è riconosciuto già nel dizionario veneziano del 1836-37 (NBHL: 281) ripreso in ciò da tutta la letteratura successiva⁸, è da connettersi col verbo *aganim*, che significa 'coprirsi, indossare' vestiti, ma anche scarpe, protezioni militari o ornamenti (NBHL: I 2; DAI: 2).

⁶ L'episodio, generalmente considerato poco affidabile, è collocabile storicamente nel passaggio dalla dinastia armena degli Orontidi a quella degli Artassidi, in età Seleucide; per una descrizione di tale contesto cfr. CHAUMONT (2002: 78).

⁷ Cfr. anche traduzione e commento in THOMSON (1978: 186); MAHÉ & MAHÉ (1993: 200).

⁸ Vd. HÜBSCHMANN (1897: 411); MEILLET (1936: 77); HAB: 248; OLSEN (1999: 331); EDAIL: 101-102.

Il verbo ha un tema *ag-*, che si può vedere dall’ aoristo *ag-ay*: è quindi ampliato al presente col suffisso in nasale *-an-* molto comune nella coniugazione armena (parallelo a quello che si ha in greco nelle forme *τυγχ-άν-ω*, *λανθ-άν-ω* ecc.). In *ar̄-ag-ast*, la base di derivazione *ag-* è preceduta dalla preposizione *ar̄-*, qui usata come primo elemento di un composto secondo un modulo chiaramente produttivo in armeno⁹, e seguita da un suffisso deverbale *-ast* su cui torneremo più in basso. Il verbo *aganim* compare già in antico con un allotropo *haganim* (NBHL: II 2; DAI: 103) in cui si può vedere lo sviluppo secondario di una fricativa glottidale iniziale, un fenomeno non raro nella fonologia storica dell’armeno¹⁰, oppure la conservazione di una laringale (vd. più in basso). La fricativa iniziale tende a generalizzarsi già in medio armeno, dove il verbo si presenta nella forma *hagnem* (MHB: 394) a cui si legano i lessemi moderni *hagnem* ‘vestire’, *hagnvel* ‘vestirsi’, *hagowst* ‘vestito’.

La base verbale *ag-* è etimologicamente collegata alle forme latine *ind-uō* ‘vestire’ ed *ex-uō* ‘spogliare’, a quelle paleoslave *ob-uti* ‘calzare (le scarpe)’ (ind. presente *obujō*, preterito 2 e 3 pers.sg. *obu*) e *iz-uti* ‘scalzare (le scarpe)’, al lituano *aūti* ‘calzare (le scarpe)’ (ind. presente *aunū*, preterito *aviaū*) con numerosi corradicali presenti in gran parte delle lingue baltiche e slave¹¹. L’etimo è tradizionalmente ricostruito come **ew-* (IEW: 346), e le forme attestate nelle lingue storiche possono essere fatte risalire al grado *e*, per il latino (Leumann 1977: 543), o al grado *o*, per lo slavo e il baltico. L’esito armeno non fa difficoltà per il trattamento **-w-* > *-g-*, dal momento che anche in posizione interna, come avviene in posizione iniziale, questo è il riflesso maggioritario¹². Tradizionalmente si parte dal grado *o* (Hübschmann 1897: 411), presupponendo quindi un’evoluzione **ow-* > **ag-*, con passaggio di ie.

⁹ Tutte le preposizioni armene, tranne *c’*, sono impiegabili come primo elemento nella composizione verbale; cfr. JENSEN (1959: 34).

¹⁰ Vd. MEILLET (1936: 38); BELARDI (2006: 318).

¹¹ HÜBSCHMANN (1897: 411); MEILLET (1936: 109); LAEW: 434-35; DELL: 207; STANG (1942: 47-48); REW: I 476; II 246; LiEW: 27; EDLIL: 642-643; VAILLANT (1966: 289); EDSIL: 363; BELARDI (2009: 11); EDAIL: 3-4.

¹² Cfr. ad esempio *kogi* ‘burro’ (< **g^wow-yo-*), derivato da *kov* ‘mucca’ (< **g^wow-*); vd. MEILLET (1936: 49-50); GODEL (1975: 82-83); SCHMITT (1982: 69-70); BELARDI (2006: 274-277).

**o* > arm. *a* che non può essere considerato normale: si può pensare però all'influsso assimilativo della successiva vocale *a*, presente stabilmente nella coniugazione, sia nel presente *aganim*, sia nell'aoristo *agay*.

Più recentemente è stato proposto un etimo con laringali funzionali soprattutto a dar conto delle forme armene: **h₂ewH-* (Klingenschmitt 1982: 173-77; LIV: 275). In questa proposta, la laringale iniziale si sarebbe conservata come fricativa glottidale nell'allotropo armeno *haganim* e spiegherebbe la vocale *a* iniziale armena; il verbo latino *-uō* andrebbe considerato come un riflesso del grado zero, mentre per quelli balto-slavi si può considerare una trafila che abbia come grado intermedio un dittongo **aw-* (da cui si avrebbe *u* in slavo e *au* in baltico) proveniente da ie. **h₂ew-*¹³.

È bene tener distinto questo verbo *aganim*, che ha il significato di 'coprirsi', da un altro *aganim*, omonimo del precedente, che vuol dire 'passare la notte' (aoristo *agay*; NBHL: I 2; DAI: 2). Non perché la semantica dei due verbi armeni non abbia elementi sovrapponibili, ed è anzi probabile che le due forme si siano presto confuse nella coscienza dei parlanti. Ma perché la seconda (*aganim* 'passare la notte') si lascia dichiarare secondo una diversa trafila che prevede come verbi corradicali il greco *ιάω* 'dormire, passare la notte', l'aoristo *ἄεσα*, su cui è secondariamente formato il presente *ἄεσκω* 'passare la notte' (Chantraine 1948: 313; Schwyzler 1990: 648, 708, 755), *αὐλή* 'corte, luogo chiuso di un palazzo', *αὐλῖς* 'luogo in cui si passa la notte all'aperto', 'bivacco'. Le forme greche, a loro volta, sono connesse dall'etimologia corrente con il sanscrito *vas-* 'abitare, passare la notte'; l'avestico *vanh-* 'abitare'; il gotico *wisan* 'essere, abitare' (una base con ampio sviluppo nel sistema verbale germanico); il tocario B *wäs-* (presente *wasšäm*) 'abitare'; l'ittito: *hūiš-^{zi}*, *hūš-* 'essere in vita, sopravvivere'¹⁴.

¹³ Sulla possibilità di collegare allo stesso etimo il verbo ittito *unu-^{zi}* 'decorare, adornare', cfr. la discussione e la bibliografia offerta in EDHIL: 918-920.

¹⁴ HÜBSCHMANN (1897: 411-412) («Unsicher»); HAB: I 76; DELG: 23, 133-134, 437; GEW: 25, 186, 706; KLINGENSCHMITT (1982: 203) (in cui la comparazione è limitata ad arm. *aganim* e alle forme gr. *ιάω*, *αὐλή*, *αὐλῖς*); GED: 405-406; CLACKSON (1994: 104-107) (che considera la possibilità di comparare le forme greche e armene con le altre indicate); EWA: II 531; BELARDI (2006: 276); EDIV: 202-203; EDHIL: 353-355; EDG: 25, 169, 574-575; EDAIL: 4 (in cui è discussa la trafila fonologica); DTB: 649-650. L'etimo di queste forme è indicato come **h₂wes-* in LIV: 293 (cfr. gli etimi **aw-* in IEW: 72, **wes-* in

Tornando ad *āragast*, si deve ancora notare che il suffisso derivativo *-ast* (la forma si flette per lo più nella declinazione in *-i-*: str. sg. *āragastiw*, str. pl. *āragastiwk*¹⁵, gen.-dat.-abl. pl. *āragastic*¹⁵; ma si ha anche lo str. sg. *āragastaw*, che presuppone un suffisso *-asta-*, nella declinazione in *-a-*) è piuttosto isolato per la sua vocale *-a-*; il suffisso è infatti per lo più attestato in armeno antico nelle forme *-owst*, *-ist*, *-est*: ad es. *p’axowst* ‘fuga’, da *p’axc’em* ‘fuggire’; *owtest* ‘cibo’ da *owtem* ‘mangiare’; *hangist* ‘quiete’ da *hangč’im* ‘riposare’¹⁵. Gli esempi con *-a-* testimoniati in armeno biblico sono *zgast* ‘attento’, proveniente da *zgam* ‘sentire’; *imast* ‘significato’, da *imanam* ‘essere compreso’; e appunto *āragast* da *aganim*. In queste forme, la vocale *-a-* del suffisso derivativo trova corrispondenza nella base verbale, nella vocale della coniugazione (*zgam*) o nel suffisso nasale *-an-* che marca il presente (*im-an-am*, *ag-an-im*)¹⁶.

4. Evoluzione semantica

Tra i significati descritti in precedenza per le attestazioni antiche di *āragast*, quello maggiormente solidale con l’etimologia appena illustrata, e che può essere assunto quindi come il suo nucleo semantico originario, è il valore di ‘velo’ che copre parte del corpo, per esempio il volto. Questo è infatti il contenuto che ci si può attendere da un nome derivato dal verbo *aganim* ‘vestire, indossare’. Da qui si sono evoluti gli altri: in primo luogo quello di ‘tenda, cortina, copertura; velame’, cioè un diaframma steso verticalmente; da questo ha preso forma il significato di ‘stanza nuziale’, cioè un ambiente separato dal resto della casa mediante una tenda o un velo; quest’uso è stato traslato nell’indicare le ‘nozze’. Per altra via, dal significato di ‘tenda, cortina’, si è passati a quello di ‘padiglione’ da campo.

IEW 1170-1171); sulla derivazione da quest’etimo del verbo difettivo arm. *goy* ‘stare’, vd. KLINGENSCHMITT (1982: 260-261); EDAIL: 4, 221. Alla stessa base vanno comunque ricondotte le forme armene *awt* ‘il pernottare’, *awt’oc* ‘alloggio, camera per dormire’, che si lasciano confrontare facilmente al gr. *αὐλῆς*.

¹⁵ Vd. JENSEN (1959: 44); OLSEN (1999: 416-417, 480-482, 617-519); BELARDI (2009: 234).

¹⁶ Vd. OLSEN (1999: 331); cfr. KLINGENSCHMITT (1982: 125), in cui si avanza anche l’ipotesi di un riflesso della laringale da lui proposta nell’etimo (vd. sopra).

Gli altri significati del sostantivo testimoniati dalla letteratura armena di età post-classica non fanno alcuna difficoltà, dal momento che non è difficile collegare la semantica illustrata con i valori di ‘vela’ della nave, ‘palpebra’ degli occhi, ‘diaframma’ del cuore o del tronco, ‘membrana’ di un frutto o di un fiore.

Ciò che resta difficile da spiegare è il problema da cui eravamo partiti: in che modo si sia potuto sviluppare il significato di ‘pressoio del vino’. Quest’ultimo, stando almeno alla lessicografia, è testimoniato solo nelle varietà moderne dell’armeno, in particolare nei dialetti della piana dell’Ararat; il fatto che questo valore semantico sia emerso alla scrittura solo molto tardi, almeno stando alle fonti censite dalla lessicografia, non ci dice nulla sull’età della sua formazione, che potrebbe essere molto più antica rispetto a quella della sua documentazione.

Sulla questione è già venuto Hrach Martirosyan nel suo dizionario etimologico armeno con una proposta che riteniamo fondamentale corretta, e rispetto alla quale ci limiteremo a fornire solo alcune precisazioni che crediamo rilevanti; egli osserva infatti a proposito di *aṙagast*:

- (6) The semantic development taken place in this word is remarkable. It seems to comprise two basic parts: A) ‘cover, curtain, sail, (nuptial) canopy’ > ‘bridal chamber’ [broadening]; B) ‘room’ > ‘wine-pressing room’ > ‘wine-pressing basin’ [specialization, narrowing]. The neutral meaning ‘room’ is hardly attested, but it must be posited in order to make a start for part B. One notes that in *hnjan* [...], a similar development has taken place, albeit in the opposite direction: ‘basin, font; a kind of bathing-vessel’ > ‘a wine-press basin’ [specialization] > ‘a room for wine-pressing’ [narrowing]; the basin of a fountain; garden-basin’.

(EDAIL: 102)

La trafila indicata ipotizza quindi che il significato di ‘camera nuziale’ abbia dato luogo al valore generico di ‘camera’ (che per la verità non è attestato), poi specializzatosi ulteriormente in ‘camera del pressoio vinario’; vorremmo proporre in alternativa una via in cui questo stadio intermedio, il più gravoso dal punto di vista argomentativo, non è necessario. La riflessione di Martirosyan contiene un’indicazione che intendiamo qui approfondire, nel proporre che l’evoluzione semanti-

ca di *āragast* vada esaminata congiuntamente a quella del sostantivo *hnjan*: come abbiamo mostrato in apertura, infatti, i due termini sono indicati come sinonimi dalla lessicografia per quanto riguarda il loro particolare uso nella viticoltura. La questione può essere affrontata mediante un riferimento alla cultura materiale in cui questi termini hanno acquisito il loro significato specifico, e in particolare alla tecnica di spremitura dell’uva tradizionale.

Per parte nostra, siamo intervenuti sulla storia della parola *hnjan* in un precedente articolo di cui riassumiamo qui gli assunti principali¹⁷. In origine, in particolare nelle traduzioni bibliche, il termine aveva il significato specifico di ‘fossa in cui si preme l’uva’. Per indicare questa vasca si ha una corrispondenza piuttosto regolare tra l’ebraico *yeqeb*, il greco *ληνός* e l’armeno *hnjan*. Dal contesto si capisce che con questa serie di termini ci si riferisce chiaramente a una fossa scavata nel terreno, quindi non un manufatto in legno o in metallo che fosse trasportabile, e va riconnessa con ciò che sappiamo delle tecniche di vinificazione usate nel Levante pre-ellenistico, in cui non erano in uso per la premitura dell’uva i torchi vinari meccanici, a leva o a vite, diffusisi solo successivamente, ma un sistema di vasche tagliate in una superficie rocciosa, là dove possibile accanto alla vigna: una vasca (o più di una) poco profonda e più ampia, per lo più di forma quadrangolare, era usata per la pestatura dell’uva ed era collegata con un canale di scolo a una molto più profonda usata per la raccolta e la fermentazione del mosto: da qui avveniva la svinatura, compiuta dall’alto in modo da lasciare sul fondo tutti i residui della fermentazione. Questo tipo di impianto è ben documentato dall’archeologia e dall’etnografia relativamente all’area siro-palestinese¹⁸. In Armenia la tecnica descritta si è conservata ben oltre l’età antica, e arriva a lambire l’età della meccanizzazione moderna, almeno nelle aree rurali più conservative: per esempio, resti archeologici di un sistema di vasche di questo tipo, di dimensioni e fattura sontuosi, risalenti al VII secolo si possono vedere nei pressi della cattedrale di Zvart’noc¹⁹, e altre evidenze

¹⁷ Ci siamo soffermati sulla storia e l’etimologia di arm. *hnjan* in SCHIRRU (2021).

¹⁸ Vd. i dati raccolti dalla palestinologia classica in DALMAN (1935: 356-357); GAL-LING (1937: 538-539); REICKE & ROST (1962-1966: 939).

¹⁹ Una descrizione delle rovine di questo impianto è offerta in TIRACJAN (1983: 57-58).

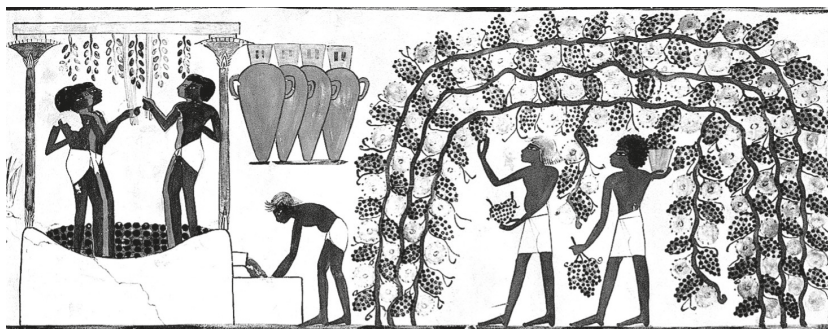
si stendono in epoche anche molto più recenti, pur presupponendo tecniche più umili e rudimentali.

Questo tipo di impianto doveva avere una parte aerea, costituita da una copertura, nella forma più essenziale probabilmente una semplice impalcatura di legno con un tendaggio, che potesse proteggere dal sole i lavoranti impegnati nella premitura, e potesse offrire loro dei sostegni per non scivolare. L'evidenza archeologica dell'esistenza di questa impalcatura è costituita dalla presenza di piccole fosse circolari, funzionali all'alloggiamento dei pali, presenti ai quattro vertici delle vasche scavate nella roccia: il fatto è messo in relazione con numerose immagini provenienti dall'Egitto antico in cui è rappresentato il processo di vinificazione: la vasca di spremitura dell'uva è normalmente sormontata da una struttura di pali in legno che sostengono una trave aerea, che sostiene una copertura e da cui pendono corde a cui i lavoranti possono sostenersi per non scivolare²⁰.

(7) Egitto antico, Tebe, particolare dalle pitture parietali di una tomba risalente alla XVIII dinastia (1580-1350 a.C.): a destra è rappresentata la vendemmia, a sinistra la vinificazione; sulla vasca di spremitura dell'uva si trova una struttura in pali e travi di legno, con copertura, da cui pendono alcune corde di sostegno per i lavoranti²¹:

²⁰ Vd. in particolare quanto si dice in AHLSTRÖM (1978: 30-34) e la bibliografia ivi indicata; per una bibliografia recente sui siti noti rispondenti alla tipologia descritta vd. ORSINGER *et al.* (2020: 1222). Da segnalare che il più occidentale di essi è stato scoperto in Sardegna ed è da riconnettersi con la colonizzazione fenicia, vd. VAN DOMMELEN *et al.* (2010).

²¹ L'immagine è elaborata sulla base dei disegni a colori curati da Norman de Garis Davies in cui sono riprodotte le pitture parietali della tomba di Nakht a Tebe, disegni conservati al Metropolitan Museum of Arts di New York e disponibili in formato digitale sul sito del museo (all'indirizzo: www.metmuseum.org): il particolare è tratto dai dipinti della parete Ovest del lato Nord della tomba, che sono stati originariamente riprodotti a stampa con varie soluzioni in Davies 1917: tavole XXII, XXIII e XXVI (cfr. anche il testo alle pp. 69-70); bisogna sottolineare che, come ricordato dall'autore, si tratta di figurazioni facenti parte di un repertorio convenzionale e formalizzato, ampiamente utilizzato nella pittura tombale egizia, in cui la vasca di spremitura dell'uva è di norma sormontata da una struttura in legno. Il disegno è stato successivamente riedito in GRESSMANN (1927), tavola LXXIX, n. 183; cfr. anche l'immagine n. 179 nella tavola LXXVIII, tratta dai dipinti presenti in una tomba situata a Giseh, nella regione del Delta, e risalente alla V dinastia (2750-2625 a.C.). Cfr. ancora de HULSTER (2011: 6) e la descrizione dell'impalcatura, basata su immagini provenienti dall'Egitto antico, offerta in LUTZ (1922: 52).



L'esistenza di edifici leggeri situati al di sopra delle vasche è testimoniata chiaramente dalla *Storia degli Armeni* di Agatangelo, dove proprio uno di questi, situato nelle vicinanze di Valaršapat, l'attuale Èjmiacin, capitale dell'allora regno di Armenia, svolge un ruolo cruciale in tutta la vicenda narrata. È qui che, nel racconto di Agatangelo, si nascondono le trentasette monache cristiane, tra cui Hřip'simê, e Gayanê, sfuggite alle persecuzioni di Diocleziano, qui vengono scoperte dal re Tiridate che ne ordina il martirio, qui si ritira in eremitaggio Gregorio l'Illuminatore e qui infine avviene la conversione dell'intera corte reale, dopo essere rimasta per molti giorni in penitenza nei campi circostanti la piccola costruzione. Quest'ultima è definita nel testo sempre come *hnjan*: che non si tratti di una semplice buca scavata, ma di una piccola costruzione rurale, è chiaro dal contesto. Tra l'altro, in un caso, l'edificio è chiamato *hnjanayark* (Ag 150 2)²², cioè letteralmente ‘copertura dello *hnjan*’, un composto nominale in cui si ricorre al termine *yark* ‘copertura, riparo, capanna’, semanticamente non lontano al nostro *aṙagast*. Che si tratti di una piccola costruzione è chiaro anche dal fatto che più volte Agatangelo menzioni le sue ‘porte’ (Ag 166, 1; 722, 3; 760, 3; 761, 3; 762, 1).

È proprio con riferimento a questa copertura aerea delle vasche di vinificazione che deve essere entrato in uso, in un'epoca che non è a

Nell'immagine riprodotta, dalle travi pendono, oltre alle corde, anche elementi vegetali, alcuni rami con foglie: forse, più che a una decorazione delle travi (come supposto in DAVIES 1917: 69), si può pensare che si tratti di un riferimento a una copertura in frasche o a un pergolato.

²² Il testo di Agatangelo è citato da THOMSON (1976).

noi nota, il termine *aṛagast*, che quindi può aver affrontato la seguente evoluzione di significato:

- (8) ‘tendaggio, copertura’ → ‘tenda, riparo leggero, capanna, padiglione’ → ‘copertura aerea del pressoio’ → ‘pressoio’

Si può ancora notare che, stando a quanto viene riportato circa la situazione dialettale moderna descritta in apertura, i termini *hnjan* e *aṛagast* nel loro significato di ‘pressoio vinario’ sono sinonimi, ma le loro accezioni specifiche tendono ad avere un valore invertito rispetto alla loro origine: *hnjan* infatti è attestato anche col valore di semplice ‘capanna, casupola’, mentre *aṛagast*, a quanto si è visto, è inteso semmai con riferimento specifico alla ‘vasca di spremitura’.

5. *Appendice: ebraico migdal*

Vorremmo soffermarci in appendice sul significato del termine ebraico *migdal* nella specifica occorrenza presente nel Canto della Vigna, nel libro di Isaia, di cui riportiamo il testo ebraico (9a), quello della Settanta (9b) e la traduzione armena (9c); la traduzione italiana (9d) segue il testo ebraico; si parla di una vigna:

- (9) Antico Testamento, Isaia, 5 2:
- (a) וַיִּעֲקֹהוּ וַיִּסְקֶלְהוּ וַיִּטְעֵהוּ שִׁרְקַ וַיְבֹן מִגְדָּל כְּתוֹכּוֹ וַיִּגְמַר יִקְבַּ הַצֶּבֶב בּוֹ
- (b) καὶ φραγμὸν περιέθηκα καὶ ἐχαράκωσα καὶ ἐφύτευσα ἄμπελον σωρηχ καὶ ἠκοδόμησα πύργον ἐν μέσῳ αὐτοῦ καὶ προλήιον ὄρυζα ἐν αὐτῷ.
- (c) *C’angov p’akec’i, jotabarj zardarec’i, ew tnkec’i ort’ sorek; aštarak šinec’i i mifi nora, ew gowb hncaj p’orec’i i nma.*
- (d) ‘e rivoltò la terra, e asportò le pietre, e piantò un vitigno di qualità, ed innalzò una **torre** (?) in mezzo a essa, e insieme un fosso pressoio scavò in essa’

Le diverse versioni non sono esattamente coincidenti: il testo ebraico presenta tutti i verbi alla terza persona singolare maschile (*wa-yāzazqēhū, wa-yšaqqālēhū, wa-yyittā’ēhū, wa-yyiben, ḥāsēb*), una scelta che sarà ripresa dalla Vulgata latina; nel testo greco invece

le forme verbali sono sistematicamente alla prima persona singolare (φραγμὸν περιέθηκα, ἐχαράκωσα, ἐφύτευσα, ᾠκοδόμησα, ὠρυξά), e lo stesso avviene nella versione armena (*č'angov p'akeč'i, jolabarj zardareč'i, tnkeč'i, šineč'i, p'oreč'i*) che segue di norma il testo greco.

Nel passo, il termine ebraico *migdal* viene tradotto nella Settanta col greco πύργος ‘torre’, il quale è reso a sua volta in armeno con *aštarak*, anch'esso dal significato di ‘torre’. Gli interpreti vedono qui generalmente un riferimento a una ‘torre di guardia’, o comunque a una costruzione in pietra realizzata all'interno della vigna²³.

Walter Belardi, a proposito di questo versetto, si era reso conto della possibilità che i traduttori greci abbiano frainteso il testo ebraico in particolare nel rendere in questo passo il termine *migdal*; ricapitolando le difficoltà del passo già evidenziate dagli editori moderni, afferma:

- (10) (a) Il contesto, dunque, resta poco chiaro, e ci sfuggono le ragioni del succedere di *yeqeb* e *migdal* (Belardi 1990[1984]: 256-57)
- (b) Se *migdal* (*púrgos*) avesse significato anche qui una “torre” (cf. arabo *majdal* “castello”, sir. *magdāl* “torre”), per quanto piccola [...] non si capisce perché nell'ira della distruzione il contadino, deluso nelle sue aspettative, non torni a nominarla, mentre va indicando – ricorrendo alla figura retorica del «parallelismo poetico» – quello che demolirà di costruito solidamente, che è soltanto il muretto di recinzione e di protezione (Belardi 1990[1984]: 258-259)

Il passo è effettivamente oscuro per il riferimento a una torre. Vengono infatti nominati le azioni e gli elementi cruciali per rendere produttiva una vigna: essa viene vangata, dissodata, si sceglie il vitigno da piantare e si costruisce l'impianto di spremitura. Cosa c'entra una torre? E perché essa è nominata in relazione al pressoio (*yeqeb*)?²⁴

²³ Vd. ad esempio DALMANN (1935: 333) e la descrizione della torre alle pp. 317-318.

²⁴ Per la verità, i traduttori armeni potevano avere una ragione per non trovare fuori luogo il riferimento alla costruzione in una vigna di un πύργος, da loro reso col termine *aštarak*: al tempo in cui essi hanno operato (il V secolo) si era infatti ampiamente diffusa nell'area siro-palestinese la presenza di fattorie fortificate in pietra funzionali alla protezione dei raccolti, costruite a forma di torre, che si datano tra il IV e il VII secolo, generalmente indicate con il termine πύργος; sulla questione vd. DECKER (2006). Sulla parallela diffusione nell'Africa romana coeva di edifici analoghi, per cui si usa invece il termine latino *centenarium*, vd. MUNZI *et al.* (2014). Ma quest'uso non può essere datato all'età più antica.

Lo stesso Belardi offre un'interpretazione alternativa. Ricorda infatti come l'ebraico *migdal* sia usato molte volte nella Bibbia per indicare una torre in muratura, primo tra tutti il proverbiale episodio della "Torre di Babele" della Genesi (11 4-5)²⁵. Segnala però che in un passo del libro di Nehemia con questo termine si indica chiaramente una struttura provvisoria, una tribuna di legno realizzata per l'occasione, per permettere a Esdra di mostrare alla folla radunata il libro della legge di Mosè (in 11d la traduzione italiana segue il testo ebraico):

(11) Antico Testamento, Nehemia, 8 4:

- (a) וַיַּעֲמֵד עֲזָרָא הַסֹּפֵר עַל-מִגְדָּל-לֵעֵץ אֲשֶׁר עָשׂוּ לְדַבֵּר
 (b) καὶ ἔστη Εσδρας ὁ γραμματεὺς ἐπὶ βήματος ξυλίνου
 (c) *Ew kayr Ezra k'ahanay ew grič' i veray bemi p'aytelini*
 (d) 'e lo scriba Esdra stava sopra **una tribuna** di legno che avevano costruito per l'occorrenza'

Nel testo ebraico, non ripreso in questi particolari da quello greco e armeno, si specifica che la tribuna era di legno (*al migdal-ēs*) ed era stata 'costruita per l'occasione' (*ašer ašó la-ddavar*), quindi provvisoria. Il testo greco, pertanto, non può tradurre *migdal* con πύργος, né quindi può essere impiegato in armeno il termine *aštarak*, come avviene negli altri usi di *migdal*; in greco si ricorre al sostantivo βήμα, qui usato col significato di 'tribuna, pulpito', e l'armeno traduce crudamente il greco con l'imprestito *bem*. Il nome *migdal* è trasparente dal punto di vista della sua morfologia derivativa: si tratta di una formazione prefissata, di tipo *miqtal*, derivata dal verbo forte *gādal* 'essere (diventare) grande' e pertanto è associabile a un significato generico di 'costruzione elevata' (Bauer & Laender 1922: 490; Joüon & Muraoka 2011: 237).

Belardi pensa quindi che anche nel Canto della vigna del libro di Isaia (riportato in 9) con il termine *migdal* si faccia riferimento a una struttura leggera in legno, un catafalco, similmente a quanto avviene nel libro di Nehemia. Ritiene in particolare che questa struttura di legno fosse funzionale all'impianto di spremitura dell'uva, nominato subito dopo: in particolare avanza l'ipotesi che esso servisse alla collocazione in posizione sopraelevata del tino di spremitura delle uve, da cui il mosto

²⁵ Vd. BDB: 153-154; HAL: 543-444.

potesse poi scendere nella fossa di fermentazione sottostante, lo *yeqeb* nominato nel testo, secondo un uso vivo nella viticoltura tradizionale dell’Italia meridionale (Belardi 1990[1984]: 259).

Sulla base di quanto abbiamo cercato di ricostruire circa la struttura dell’impianto di spremitura dell’uva in uso nell’Oriente antico, si potrebbe però pensare che il termine *migdāl* indichi, nel passo di Isaia, l’impalcatura in legno, con una copertura, posta sopra il pressoio, quella per cui l’armeno ha impiegato il termine *aṙagast* di cui si è lungamente trattato.

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Between digit and symbol: The figure ‘6’ in Christian epigraphy*

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ABSTRACT

In late Latin inscriptions, particularly in Christian epitaphs, a <Ϟ>-shaped sign is sometimes employed alongside the conventional notation <VI> in order to express the digit ‘6’. Traditional explanations about the origin of this sign are discussed and rejected in favour of an alternative hypothesis which focuses on its symbolic significance. Over and above its numerical value, the Greek digit <Ϟ> ‘6’ (the so-called *episemon*) can in fact be regarded as a Christological symbol, and it is by virtue of such an ideological connotation that it was adopted in the graphic/writing repertoire of Latin Christian epigraphy.

KEYWORDS: Christian epigraphy, writing contact, alphabetic mysticism, sacred onomastics

To see the writing without the image
is like hearing a voice without seeing the form;
to see the image without the writing
is like seeing a person but not hearing his words.
(Zheng Qiao, *Tongzhi. Tupu lüe*, XII cent.
in *Siku quanshu*, Vol. 374, *juan* 72.1b)

1. *Introduction*

Besides the usual notation <VI>, late Latin epigraphy and Christian epigraphy in particular attest with some frequency a sign <Ϟ> with the logographic value of the digit ‘6’, both in isolation (e.g. *CIL*

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XI 4043: *que vicsit annos* Ç ‘6 years’, AD 395, Capena) and with-in more complex numerical sequences (e.g. *CIL* V 1702: *vixit annos* XÇII *mesis* ÇII ‘18 years and 8 months’, 4th century AD, Aquileia). This figure is employed both in the calculation of years and months of life in tomb inscriptions (cf. above) and in dating (e.g. *AE* 1971, 137: *sub d(ie)* ÇII *Kal Decembres*; *CIL* IX 1392: *die* ÇI *kal Maiias*); any subsequent <I> figures are sometimes indicated in subscript (e.g. *AE* 1979, 312: <Ç_{II}> ‘8’ and <Ç_{III}> ‘9’). Depending on the radius of the curved stroke, and the inclination, length and curvature of the descending stroke, the design exhibits a certain degree of variability. This can cause the basic shape (Figure 1a) to resemble either a capital <C> (Figure 1b, where the descending stroke is barely noticeable) or a capital <S> (Figure 1c).

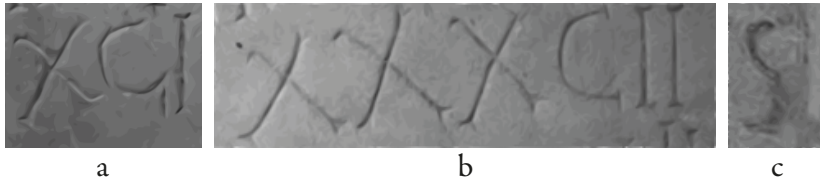


Figure 1. a - *AE* 1990, 454 (detail); b - *AE* 1990, 454 (detail);
c - *CIL* XI 2583 (detail).

This sign is not exclusive to stone inscriptions; it also appears in imperial papyri, in the Ravenna papyri of the 5th-8th centuries, and in Merovingian diplomas (Mallon 1952: 125-126)¹. And again, in a seventh- to eighth-century addition to a late fifth-century manuscript (*Urb.lat.* 1154; Pellegrin 1982: 658, with bibliography), pagination is indicated in figures and words as follows (Figure 2):

¹ See, e.g., MABILLON (1709: 379 tab. XIX 1 = *ChLA* 13 564): *Marcus, dies dieci, annum* XÇ [= 16] *regni(i) dom(n)i nostri Chlothachariae, glor(iosissimi) regis* (France, Lamorlaye, 10 March 673); MABILLON (1709: 379 tab. XIX 2 = *MGH* Dipl. I no. 57 = LAUER-SAMARAN 1908: no. 17): *sub d(ie) tertio Kal(endas) Novembris, annum* XÇ [= 16] *regni nostri* (France, Compiègne, 30 October 688). Further *fac-similia* are available in LAUER-SAMARAN (1908: nos. 6, 16, 17, 29, 31, 32, 37). It should be noted that, in both of the examples cited here, the palaeographic datum, though visible in the *fac-similia*, is not recorded in the edited text, where the numbering is normalized respectively as *ann(o) XVI* and *Annum XVI*. The same problem also arises for epigraphic documents (cf. below, footnote 11).

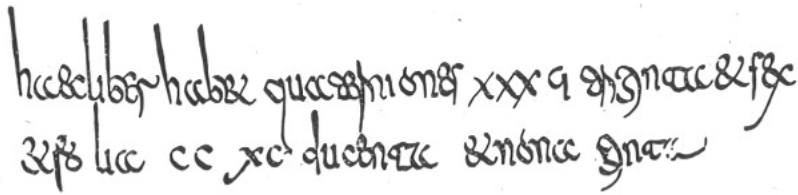


Figure 2. MS Urb.lat. 1154 f. 289r.

Text: *haec liber habet quaterniones XXXVI triginta et sex / et folia CCXC ducenta et nonaginta.*

There is an obvious homography with the <Ϟ> / <Ϛ> forms of *digamma*, used in Greek numeration with the value of ‘6’ and with the arithmonym of *episemon*². Although it has no phonological reference³, *digamma* is preserved as the sixth element of the sequence in the Greek alphabetic numbering system due to the fixity acquired by the alphabetic series at the moment it also begins to serve as a notation of numer-

² The arithmonym ἐπίσημον (lit. ‘sign, mark’; cf. the corresponding adjective ἐπίσημος ‘remarkable, illustrious’) was used until the Middle Ages only with reference to the digit ‘6’, as in the treatise attributed to Bede *De loquela per gestum digitorum* (*Patr. Lat.* XC 697): *Prima est Ϛ quae dicitur Episimon et est nota numeri VI.; secunda est Ϟ (sic) quae vocatur kophe et valet in numero XC.; tertia est Ϛ (sic) quae dicitur enneacosia quia valet DCCCC*. It was only later, in the 16th century, that the term came to refer indifferently to each of the three additional *notae* (at least since Joseph Justus Scaliger, *Animaduvers.* 116: *tria episema trium numerorum VI, XC, DCCCC*), then further distinguished as ἐπίσημον βαῦ ‘6’, ἐπίσημον κόππα ‘90’ and ἐπίσημον σανπί ‘900’ (so also in MONTAFAUCON’s *Palaeographia graeca*, 1708: 122, 128, 132: ἐπίσημον βαῦ, ἐπίσημον κοφῆ, ἐπίσημον σαμπι). The statement of the recent GARIPZANOV (2018: 33: «Sampi, which was known as an Episemon, a distinguishing sign in Greek») is thus inaccurate: the definition of *sampi* as *episemon* does not come from Greek, but from the Renaissance. The collective name of the three characters in antiquity was rather παράσημα, as stated in the *scholia* of Dionysius Thrax (UHLIG 1883: I.318.29-37, 319.21-31).

³ Apart from the well-known dialectal survivals, the residual uses of *digamma*, mostly in archaic epigraphs, are phonetic scripts of a transitional glide that can occur in intervocalic context or between diphthong and vowel (SCHWYZER 1939: 87, 223; BUCK 1955: 49; ALLEN 1987: 82 n. 57; LEJEUNE 1987: 163-164; WOODARD 2014: 62-63; cf. instead BRIXHE 1976: 52-53 for the dialect of Pamphylia). See, for instance: *SEG* 4.64: δῦφο τάλαν[τα] (Sicily, 6th century BC); *IG* I³ 1251: ἀφντάρ (Attica, 550-540 BC); WACHTER (2001: CHA 2): Γᾶρυρόνῆς (Vulci, 550-510 BC) as opposed to Γῆρυρόνῆς (cf. McDONALD-CLACKSON 2020: 95); and, more recently, *SEG* 37, 340: ἐδραλωσαι (Mantinea, ca. 350 BC) against other Arcadian forms such as δεᾶτοι and δεα[ση]τοι (cf. GARCÍA RAMÓN 2018: 40).

ical sequentiality (Prosdocimi 1990: 223-224)⁴. In particular, it is the form <C> (and not <F>) of *digamma* that specialises in the digit function (Threatte 1980: 113; Ranocchia 2018: 208; 2020: 199-200, both with further bibliography), with its square pattern gradually cursivising into the <Q> / <S> forms attested both in epigraphy (reff. in Tod 1950: 135 n. 22) and in imperial papyri (reff. in Ranocchia 2020: 199 n. 8). Here, too, the design allows for variations (cf. Gardthausen 1913 [1879]: 367; Tod 1950: 135) which can make it coincide, on the one hand, with that of the lunate *sigma* <C>, on the other hand, with that of an <S> of the Latin alphabet and, later, with the so-called *stigma* <S>, the original ligature of the nexus <σ> + <τ> (Ranocchia 2020: 199 and reff. in n. 7)⁵.

The following sections illustrate the shortcomings of the traditional explanations provided for the introduction of <Q> in the graphic/writing repertoire of Latin Christian epigraphy. In particular, Section 2 discusses the hypothesis of its Greek origin, understood as the simple borrowing of the Greek digit for ‘6’ in the Latin numbering sys-

⁴ The same applies, of course, to the other two ‘dead letters’ as well, *qoppa* (18th position, ‘90’) and *sampi* (27th position, ‘900’). Cf. JANNARIS (1907), TOD (1911-1912; 1950: 135-136), THREATTE (1980: 113-114) and CHRISOMALIS (2010: 134-147).

⁵ On Greek numbering systems, their chronology and local and regional variants, the contributions of TOD (1911-1912; 1913; 1926-1927; 1936-1937; 1950) and, confined to Attica, THREATTE (1980: 110-119) remain fundamental. For intent of inventory: in the alphabetical numbering system (also called “Ionian” or “Milesian”) the 27 letters assume a progressive numeral value ordered by units (α-θ ‘1-9’), tens (ι-ϙ ‘10-90’) and hundreds (ρ-ϛ ‘100- 900’) (TOD 1950; THREATTE 1980: 113-117; CHRISOMALIS 2010: 134-147). From the 1st century AD onwards, this system definitively supplanted the acrophonic system of the Attic type, in which each digit (with the exception of ι ‘1’) is instead represented by the initial letter of the corresponding numeral, e.g. π(έντε) ‘5’, δ(έκα) ‘10’, η(εκατόν) ‘100’, χ(ίλιοι) ‘1,000’ (TOD 1926-1927; 1936-1937; THREATTE 1980: 110-113; CHRISOMALIS 2010: 98-105). There is, however, no clear-cut chronological divide that marks the passage from one system to the other, since the two coexist for centuries: in Attica the first attestations of both are substantially coeval (5th century BC), even if the alphabetic system spreads mainly from the Augustan age (cf. TOD 1911-1912: 128, who does not exclude a higher chronology for the acrophonic system, to the 7th century BC; TOD 1950: 137-138; THREATTE 1980: 112, 117). Rather, their distribution is better characterised in terms of more or less broad functional domains: while the alphabetic system is applied in all contexts where numerical notation is required (TOD 1950: 129-134), the acrophonic system is instead excluded from the notation of ordinal numerals, fractions (except those indicating monetary values) and dating (TOD 1911-1912: 128; THREATTE 1980: 112; CHRISOMALIS 2010: 104). On the other hand, even after the generalisation of the alphabetic system, it will continue to be employed in the stichometry of literary works (TOD 1911-1912: 129-130).

tem; Sections 3 and 4, on the other hand, illustrate and refute the current interpretation of Mallon, which attributes the origin of this sign to a ligature of the Old Roman cursive script. Sections 5 and 6, finally, propose an alternative hypothesis that does recognise a Greek origin of <Ϛ> but gives priority to its symbolic and specifically Christological values for explaining its adoption in Latin Christian inscriptions.

2. *The shortcomings of the Greek hypothesis*

The phylogenetic review of hypotheses concerning the origin of <Ϛ> in the Latin script begins from the self-evident formal identity with the Greek digit. Within the field of diplomatics, Mabillon (1709: 215-216) observed that <Ϛ> was scatteredly employed to denote the number six («*passim ad numerum sextum designandum*»), both in chapter numbering and in dating formulas of Merovingian diplomas. He concluded that «*haec nota sine dubio est ipsum ἐπίσημον Ϛ graecum, quo sex significantur*». Similarly, in the field of epigraphy, since at least the work of Maffei (1749: 180), the symbol has been identified as «*numeralem notam [...] ex Graeca Ϛ derivatam, ac senarium numerum significantem*». The hypothesis of a Greek origin and the label of ἐπίσημον βαῦ persisted throughout the eighteenth and nineteenth century⁶. Even in the mid-twentieth century, this interpretation remained influential, as reflected in the sylloge of *Inscriptiones cristianas de la España romana y visigoda* where Vives (1942: 190) stated: «[e]l episemon deriva de una letra griega Ϛ, arcaica, con valor de: VI (seis)».



A few years later, this explanation was finally superseded by the accounts presented by Mallon (1948; 1952), which continue to exert a significant influence in this field (§ 3). After all, in the absence of corroborating evidence, it is not possible to claim that the addition of a Greek digit to Roman numerals was due to interference between the two systems. To reach this conclusion, it is sufficient to apply to num-

⁶ Cf. SCHWARZ (1724), TASSIN-TOUSTAIN (1797 III: 513), DE WAILLY (1838 I: 705), LE BLANT (1856 I: 73, 151; 1865 II: 124), and CALMETTES (1867, with references also to Merovingian coinage).

bering systems the more general considerations made by Prosdocimi (1990) regarding writing systems. Each numbering system is, by definition, as a ‘system’, comprehensive and self-contained in terms of notation, and it is characterised by a distinct set of symbols (e.g., *I* ‘1’, *V* ‘5’, *X* ‘10’, etc. vs. α ‘1’, β ‘2’, γ ‘3’, etc.) and its own “syntactic” rules, which lead to different analyses of the same arithmetic reference (e.g., *XXII* ‘10+10+1+1 = 22’ vs. $\kappa\beta$ ‘20+2 = 22’). Thus, the substitution of <Q> for <VI> would import an entirely incongruous element into the Latin system. Not (only) because its form is Greek, but, most significantly, because its structural properties continue to be Greek. This is evident from the following considerations: (i) it involves completely different semiotic principles of notation (<Q> = symbolic/opaque vs. <VI> = diagrammatic/articulated); (ii) it is the only logogram with a value greater than ‘1’ that does not conform to a base of 5 (*V*, *L*, *D*) or 10 (*X*, *C*, and, later, *M*); and (iii) unlike all other numerals, it functions solely as an additive element (<QI> ‘6 + 1 = 7’) and never as a subtractive one (*<IQ> ‘6 - 1 = 5’), due to the fact that there is already a dedicated symbol for ‘5’.

In sum, the mere coexistence of the two numbering systems, albeit centuries-long and occasionally resulting in a physical contiguity on the same material support (see § 6), cannot, in itself, trigger any interference, particularly in the absence of further motivations that cannot be structural in nature. The improbability of such a state of affairs is akin to writing, today, *20IVI* instead of *2016*.

3. *Mallon and the ligature <vi>*

Building on an intuition by Fumagalli (1802: 175), who sees in <Q> of the Late Latin documents ‘the Roman VI, somewhat deformed and reduced to a cursive character’ [transl. F.R.], Mallon (1948; 1952: 125-135) reported the genesis of the sign in the groove of Latin palaeography: <Q> would be a cursive ligature of the digraph <vi>, already typical of the Old Roman cursive script (1st-3rd century). In the numerous papyri, tablets, and ostraka that document this variety, <v> is realised as a single curved stroke in the upper half of the line (<  > / <  >; cf. also Cherubini-Pratesi 2010: 53) and created ligatures

with the following letters, as in the cases of <va> (Figure 3a), <vm> (Figure 3b; cf. other *fac-similia* in Mallon 1952: 126-127) and, indeed, <vi>, both in its alphabetic/phonological reading /wi/ (Figure 3c) and in its logographic/numerical reading ‘6’ (Figure 3d):

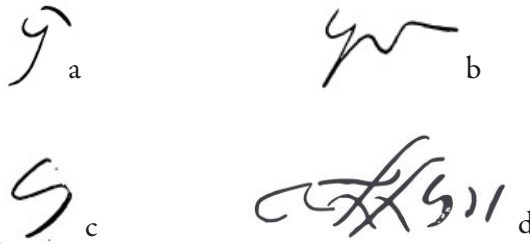


Figure 3. a - Ligature <va> (Mallon 1952: 126); b - Ligature <vm> (Mallon 1952: 126); c - Ligature <vi> in *quid* (202-207 AD; Mallon *et al.* 1939: n. 28 l. 7); d - Ligature <vi> in *CCXXVI* (II cent. AD; *CIL* XV 4407).

This ligature – but only in the numerical value ‘6’ – survived in the following centuries in similar domains of use (e.g. Ravenna papyri, Merovingian diplomas), even though the New Roman cursive (4th-6th century) had by then replaced the earlier variety, while retaining some of its signs as numerals (cf. in addition to <VI> ‘6’, the cases of <L> ‘50’ and <D> ‘500’ discussed in Mallon 1948: 16-25; 1952: 128-130)⁷. However, if the fate of a *cursive* ligature is likely to have been one of continuity in the *cursive* tradition of documentary writing, the reasons for its introduction into epigraphic *capital* script from the 4th century onwards are less straightforward.

According to Mallon, however, even this fact can be explained within the framework of the transition from Old to New Roman cursive between the 3rd and 4th centuries and, in particular, in the

⁷ An examination of the discontinuities marking the evolution from Old Roman (majuscule) to New Roman (minuscule) cursive is beyond the scope of this paper. For a comprehensive overview of the various positions and related bibliographical references, please refer to CHERUBINI-PRATESI (2010: 75-85) and COTUGNO (2015: 57-58). After all, aside from the survival of the former (the *litterae caelestes* of the imperial chancery) and the early emergence of the latter (the appearance of “preminuscular” forms of <d> and fully minuscule forms of <h> and <q> as early as the 1st century AD), there is a significant consensus regarding the completion of the transition from one to the other between the 3rd and 4th centuries.

light of its consequences for the process of *ordinatio* of inscriptions. In his contributions on *ordinatio*, Mallon (1955; 1957) isolates three moments in the composition of an epigraphic text: (i) the drafting of a minute in cursive writing; (ii) the transposition of the text on stone, drawn in square capitals by an *ordinator*; and (iii) its engraving by a stonemason along the lines drawn by the *ordinator*. Some errors, which cannot be explained in any other way, especially in the presence of complex and/or ambiguous ligatures, would be evidence of the *ordinatores* mechanically transliterating letter by letter from cursive to capital, without being able to understand what was being transcribed.

As long as, in the Old Roman cursive (1st-3rd century), the *ordinatores* were able to recognise in <C> not only the logogram/digit '6' but also the alphabetic digraph <vi>, they would always have been able to decipher and reconvert the ligature read on the cursive minute into the sequence <vi> of the epigraphic capital – hence the absence of <C> in the inscriptions of this period. When, with the New Roman cursive (4th-6th century), numerical and alphabetical notation became increasingly distant, they would have read <C> only as a figure and limited themselves to reproducing it on stone, thus introducing into the epigraphic capital a sign that had never been part of it before:

[Q]uand l'écriture courante eût changé, la syllabe *ui* s'est trouvée faite d'une manière différente du prétendu episemon, et le sigle ne représenta plus une syllabe déterminée, mais ce fut seulement une chiffre et un chiffre qui ne ressemblait à aucune lettre [... S]i un chiffre de notre système se trouve gravé sur pierre, c'est précisément parce qu'il n'est plus qu'un chiffre, parce qu'il ne correspond plus à une lettre de l'écriture courante. (Mallon 1948: 31, 33)

Such an explanation is, to date, currently accepted both in diplomatic-codicological (Marichal 1953: 189; Bischoff 1990 [1986]: 176; Munzi 2007: 109, with references in n. 13) and epigraphic studies (Gordon 1983: 46; Lassère 2005: 57; Panciera 2006 [1974]: 714 n. 36; Piras 2017: 155)⁸.

⁸ Also CHRISOMALIS (2010: 111) refers to it, but rather loosely. Of the presence of <C> in inscriptions after the 4th century, however, CAGNAT (1898: 30) and COOLEY (2012: 358), among others, merely take note without advancing any interpretation.

Despite the radical difference in his interpretation, Mallon shares with the earlier 18th- and 19th-century proposals a “monogenetic” approach insofar as he traces the origin of the <Q> sign in both diplomatics and epigraphy to a common cause – in this case, the transition between the two cursive varieties. There are, however, major dissimilarities between the two writing domains that must be taken into account: purposes and intended recipients of the documents, their private or public dimension, techniques, materials and contexts of production, and so forth. Thus, the hypothesis presented here eschews a *reductio ad unum* and instead suggests two separate patterns of development. Obviously, the following sections (§§ 4.1-4.2) do not intend to refute Mallon’s reconstruction of the origins of <Q> as a cursive ligature and its survival as a numerical figure into the cursive realm of documentary, administrative, and book writing. Rather, the objections concern the second part of his proposal, namely the assumptions and the supposed process that would explain the adoption of this cursive ligature among the capital forms of inscriptions as a consequence of the script change from Old Roman Cursive to New Roman Cursive.

4. *The origin of <Q> in epigraphy: The shortcomings of the palaeographic hypothesis*

4.1. *The role of the ordinator*

A preliminary objection arises from the need to assume a process of *ordinatio* that required the use of a cursive-written minute. It is important to recall Panciera’s (2006 [1967]) observation that the three steps postulated by Mallon represent a coherent sequence and, in numerous instances, were undoubtedly implemented. However, it is also evident that a multitude of alternative procedures were concurrently in use. For example, it is conceivable that the minutes were already inscribed in epigraphic characters; the drawing of the text on the stone and the subsequent engraving might have been the

work of the same individual; the irregular spacing, alignment and dimension of the letterforms in the less accurate epigraphic monuments indicates that the text was not previously laid out on the stone with a preparatory drawing but was engraved freehand on the spot; in other instances, the text could have been scribbled on the stone in the form of a note, rather than as a calligraphic model to be traced with a chisel; '[t]o conclude, the potential scenarios are manifold and limiting them to a single hypothesis is both inappropriate and dangerous' (Panciera 2006 [1967]: 1811 transl. F.R.; cf. also Adams 2003: 84-93).

A significant number of the inscriptions attesting <Q> provide evidence that their arrangement is anything but *ordinatum*. In some instances, this is due to the fact that they are graffiti (*ICUR V 14815a,b*, *CIL XI 4046*, *ICI IV 40*), which, by their very nature, rule out a preparatory composition of the text. Additionally, a number of gravestones engraved with a chisel exhibit a somewhat haphazard redaction, characterised by inconsistencies in letter size, spacing, and misalignment of lines. Examples such as *CIL X 100* (Figure 4a, which features, among other things, the alternation of <s> with <z> in reverse and varying sizes and alignments of the <o>s), *CIL X 7766* (Figure 4b, where the progressive “squeezing” of letter-spacing from left to right and the line breaks <minu | s> and <pac | e> clearly indicate miscalculated spacing), and the «meschino quadretto» (De Rossi 1874: 112) of *CIL XI 3516* demonstrate the absence of any preliminary layout of the text on the stone.



Figure 4. a - *CIL X 100*; b - *CIL X 7766*.

Nevertheless, even if one were willing to accept the premise of *ordinatio*, several additional considerations arise regarding the skills and practices that would need to be assumed for the *ordinatores*. Mallon (1955; 1957) demonstrated that even when they did not accurately understand the cursive lettering of the minute, they still transcribed it into a sequence of capital letters – perhaps even linguistically incongruous⁹ – but they never “drew” brand new forms outside the repertoire of that variety. Above all, it seems very *ad hoc* to assume the creation of a numeric sign that remains completely isolated and inconsistent in relation to the rules of the established numbering system: even in the hypothesis of a Latin origin, the same structural inconsistencies outlined in § 2 still persist. Furthermore, if the *ordinatores* identified in <Q> «un chiffre qui ne ressemblait à aucune lettre», it is unclear why, once they recognised its numerical value as a figure, they would not have been able to reproduce it in the numbering system of the capital script that they otherwise continued to employ and dominate fully. Nor is it clear why, within one and the same inscription – which, in Mallon’s framework, it is reasonable to assume was derived from a single minute – <Q> can coexist with the sequence <VI> in its numerical use, as evidenced by *CIL* X 100 (<VI> and <QII>), *CIL* X 7836 (<VIII> and <QII>), *ILCV* 3061 (<VII> and <XQI>), *ICI* VIII 57 (<XVIII> and <Q>), and *CIL* XIV 3418 (<XVIII> and <XQ>). The solution clearly cannot lie in multiplying the number of *ordinatores*, claiming that more than one worked on the same (brief) text in a single workshop but with such heterogeneous criteria and skills.

⁹ The case discussed by MALLON (1957: 185-190) is an illustrative example. In this instance, the form *aralibus* (which is non-existent in Latin) of *CIL* VIII 19929 is derived from the misreading of a cursive *ara libe(n)s* in *scriptio continua*. Among the texts collected in the *Appendix*, the epitaph *CIL* X 7499 appears to be written «*litteris fere cursiuis*» ‘in almost cursive letters’ (cf. *ILCV* 2734). However, these letterforms are not copied from a minute but rather the result of the technique whereby the text was created. This was not done by engraving with a chisel, but rather by ‘writing with minium on the plastered lime of the stone that sealed the opening of a tomb’ (cf. *CIL* X 7499, transl. F.R.). The implausible <ω>s in place of <a>s, as seen in the forms [*p*]ωce and Kωl(endis) of the *CIL* edition, should therefore be understood as two <a>s in the New Roman cursive.

4.2. *The type of inscriptions*

Ultimately, a comprehensive survey of the distribution of <Ç> in epigraphic materials unequivocally demonstrates its univocal association with Christian epigraphy¹⁰. The fact that ‘6’ in the form of <Ç> is associated with these types of inscriptions has long been recognised, albeit in a cursory manner (at least from Hübner 1885: lxx: «Ç, sex numeri nota in titulis christianis non rara» to Solin 2019: 110). However, it is necessary to emphasise the categorical nature of the quantitative scrutiny: <Ç> is not simply characteristic of Christian epigraphy, it is exclusive to it.

The survey was conducted using the online EDR database, which collates 105,917 inscriptions dating before the 7th century AD from Rome and the rest of peninsular and insular Italy, with the exception of Christian epigraphy from the city of Rome (see below for details)¹¹. Out of the 5,299 Latin or bilingual inscriptions from the 4th to the 7th century, the period during which <Ç> is attested, 2,084 are Christian. The remaining 3,215 are classified as pagan (392), Jewish (20), uncertain (86), or, for the most part, they are unclassified in terms of the “religion” variable (2,717). Within this sample, all instances of the two different notations for the digit ‘6’ (<Ç> and <VI>) were counted, both in isolation and within more complex sequences (e.g., <XVIII> and <XÇII>), up to a maximum numerical value of ‘106’. The results are presented in Table 1¹².

¹⁰ Labels such as “Christian epigraphy” and “Christian inscriptions” are not understood here in a strictly chronological sense *à la* ADAMIK (2023: 322 fn. 5: «[t]he term ‘Christian era’ refers to the period between the 4th and 7th centuries»), but rather in the sense of inscriptions composed/commissioned by Christians. It goes without saying that, in fact, most of these documents tend to cluster in the indicated period.

¹¹ For further information, please refer to the Epigraphic Database Rome (<http://www.edr-edr.it/default/index.php>; consulted on 15.05.2023). The decision to utilise this resource was based on its status as the sole computerised corpus to annotate the palaeographic feature of the use of <Ç> (searchable via the string “%6” and, in certain instances, “6%”). This sign is, instead, consistently “normalised” to ‘VI’ in texts edited, for instance, in the Clauss-Slaby database (<http://www.manfredclauss.de/>). It seems pertinent to recall that data, whether linguistic or otherwise, are inherently vulnerable to deterioration and that any editing, standardisation or normalisation process inevitably results in a certain degree of impoverishment. For further details on this topic, see SIMONE (2022).

¹² The results extracted from EDR excluded the inscription published in VAGLIERI (1908: 249), which is too fragmentary, and *CIL* VI 3404 (= *ICUR* I n.s. 1446b), where the string edited in the *facsimilia* of *CIL* VI and *ICUR* I as ÇII is read by HÜBNER (1885: lxx)

	<Q>	<VI>
Christian inscriptions	56	488
Others	0	387

Table 1. Cyphering of the digit '6'.

The constraint is clearly evident, and it should be added that the Christian nature of the inscriptions attesting <Q> can always be established on the basis of other contextual elements (cf. *Appendix*): formulas (e.g., [*requiescere*] *in pace*), symbols (e.g., crosses, Christogram, the apocalyptic letters *alpha* and *omega*), pictorial representations (e.g., the dove, the fish), and archaeological context (e.g., catacombs, cemeteries). These are, in all cases, funerary inscriptions (gravestones or graffiti in catacombs). However, it must also be noted that (i) the vast majority (1,700) of the 2,084 Latin or bilingual Christian inscriptions from the 4th to 7th centuries collected in EDR are funerary; (ii) while these typically record the age of the deceased and the date of death, inscriptions commemorating public works, donations, and benefactors rarely contain numerical values. Consequently, only 7 non-funerary Christian inscriptions include the numeral '6', which is noted with <VI> in all cases¹³.

The provenance of the texts, which span the entire peninsula from Aquileia to Vibo Valentia (cf. *Appendix*), does not exhibit any notable areal constraints. It is noteworthy that some of the inscriptions are of Roman origin (*CIL* VI 38364, 35802, 32953, 32941, 32949, 32948, *ICUR* V 14815a,b, Slavich 2019: no. 78), despite the fact that the Christian epigraphy of the city of Rome was not included in EDR's original scope. In any case, further confirmation of the spread of <Q> also in the Christian epigraphy of Rome can be found in the *ILCVs*. A manual perusal of the first volume returns over 20 occurrences, all

as *XII*. The text is inscribed on the hidden side of an opisthograph tombstone embedded in a wall, on the other face of which the later inscription *ICUR* I n.s. 1446a (= *ILCV* 2926) is now visible.

¹³ The occurrences are the following: *AE* 1987, 437, *AE* 1992, 702 [*bis*]: three inscriptions on mosaic floors indicating the measurement (in feet) of the surface offered; *CIL* XI 4966: epigraphic *carmen*; *CIL* X 4724: statue base; *InscrIt* X,1 552: dedication of a *basilica*; *CIL* X 478: *tabula patronatus*.

in epitaphs (*ILCVI* 134, 287, 301, 471, 485, 490, 496, 502, 591, 592, 619, 696, 698, 808b, 841, 1137, 1271, 1327a, 1479a, 1561, 1637c, 2007, 2124, 2268)¹⁴.

The chronology deserves further consideration, as the appearance of <Q> in epigraphy only from the 4th century onward has been used as an argument to support the theory that its origin is linked to the transition from the Old Roman cursive to the New Roman cursive (§ 3). However, once the association with Christian epigraphy is recognised, the chronological edge becomes an epiphenomenon rather than a substantive difference. Further examination of the EDR database reveals that: (i) the number of Christian inscriptions dating before the 4th century is significantly lower than those of the following period (469 pre-4th century vs. 2,084 from the 4th to the 7th century); (ii) the frequency of the number ‘6’ in these inscriptions is even lower (73 occurrences pre-4th century vs. 544 occurrences from the 4th to 7th centuries); (iii) some inscriptions containing <Q> have broad dating ranges, with the earliest possible dates potentially falling before the 4th century (*CIL* VI 35802; Corda CAR114; Fiocchi Nicolai 1988: 192; *ICUR* V 14815a,b); and (iv) apart from these four, the majority of the remaining inscriptions attesting to <Q> (39 out of 52) are clustered not so much after the 4th century as after the 5th. Thus, it is difficult to pinpoint a clear-cut boundary at the transition between the 3rd and 4th centuries, which seems rather to be projected from the interpretative hypothesis.

In addition to the previous objections (§ 4.1), the distribution highlighted here reveals a further, perhaps the most fundamental, limitation of the hypothesis that <Q> was introduced into epigraphic documents through a process “from minute to carving”. Indeed, this

¹⁴ It is worth mentioning once again the absence of <Q> in the sections *Tituli operum locorumque publicorum*, *Tituli aedificiorum priuatorum* (*ILCVI* 773-807), and *Tituli aedificiorum et operum sacrorum* (*ILCVI* 1752-1979). Partial surveys outside of Italy confirm this distribution: 8 of the 9 African inscriptions cited by MALLON (1948: 38 n. 1) as examples of lapidary attestations of <Q> are Christian epitaphs (*CIL* VIII 9111, 9862, 9885, 20301, 20302, 21479, 21602a, 21772), and the same symbol is well-documented in Christian funerary inscriptions from Visigothic Spain according to VIVES (1942: nos. 60, 78, 127, 130, 156, 185, 269, 306).

explanation overlooks an important piece of evidence that it cannot account for: why the proposed process should apply only to those *ordinatores* – or, in cases where they did not intervene, stonecutters – who were commissioned to produce Christian funerary inscriptions? The presence of <Q> in Christian epitaphs does not seem to be the result of a misunderstanding, but rather the result of a deliberate choice, the reasons for which should be sought through the use of the symbolic values conveyed by the written sign as a heuristic key.

5. *Episemon as a Christological sign*

Starting from the obvious premise that the introduction of <Q> in Latin inscriptions is not a matter of language but of writing, it follows that one must give relevance not only to its grammatological and referential functions (in this case, numerical notation), or to the technical and material facets of the processes that shape its palaeographic aspect. Writing is, indeed, also ‘an ideological space’ within which it is necessary to distinguish ‘a structural, denotative aspect and an aura of connotations, not functional but ideologically charged’ (Cardona 2009 [1981]: 88 transl. F.R.; see also Durand 2014).

Each writing system is a ‘culturally specific and autonomous symbolic apparatus’ (Mancini 2014: 36 transl. F.R.) due to the radical historicity that determines the social and ideological connotations of writing practices. In structuring such a system, ideological values are (at least) as important as the functional needs of a mere representation of a phonological form. The product of such a system, that is, each individual writing event, can therefore only be interpreted within the historical-cultural framework that dictates its ‘conditions of meaningfulness’ (Prosdocimi 2004: 533 transl. F.R.). This is especially true in the case of multi-layered documents such as inscriptions, where the written form of the linguistic-propositional content is just one of the media conveying the overall message, alongside script variety, layout, writing material, location, and so forth (Susini 1982: 16-18; Petrucci 1986; Prosdocimi 2004: 532-539; Mancini 2012).

From this perspective, the hypothesis of a Greek origin for the introduction of <Ϟ> in Latin epigraphy may resurface. Not only because, in general, since Early Christianity, the Greek language represented a symbol of religious identity for Christians (Felle 2018; cf. also below, § 6), but especially because, in Late Antique Christianity, the number ‘6’ – and, even more so, the Greek figure that represents it – is the object of considerable treatment, intertwining “the mysticism of numbers” and “the mysticism of letters”. On the one hand, there are the numerological speculations of the Gnostic Christianity that draws from the Pythagorean and (Neo-)Platonic traditions (Kalvesmaki 2013; «the Greek Qabalah», in the terms of Barry 1999); on the other hand, there is the Judeo-Christian tradition of the *onomastica sacra*, whose complex ramifications among the Church Fathers, as well as their origins in rabbinic hermeneutics, have been thoroughly reconstructed in Mancini’s (2022) recent work¹⁵. It is within this ideological system of interpreting signs that, in the Greek context, the *episemon* ‘6’ – also as the counterpart of the Semitic *wāw* – came to represent the *Episemon*, “the Sign” of Jesus Christ.

5.1. *The Marcosian doctrine*

As with a large part of Christian numerological apparatus, this theory can be traced back to Gnostic circles, and in particular to the Valentinian Marcus (*floruit* 160-180 AD) – which implies that it is known to a

¹⁵ These reflections would contribute to a broader corpus of treatises on the myths of the *inuentio litterarum*, the numerological values of letters, the iconic meanings of their hatching, and other such concepts. This would result in the proliferation of treatises *De litteris* ‘On letters’ during the Carolingian era. Such a surge of interest in graphemics reflects an approach that explores alphabetic forms from a semiotic perspective that is independent of their phonetic reference, thus transcending their traditional definitions in terms of *nomen*, *figura*, and *potestas* as outlined in artigraphic and orthographic studies (MUNZI 2007; MANCINI 2018). On occasion, these explorations yield highly original results that diverge from mainstream traditions, intertwining numerological values and symbolic interpretations of palaeographic design in innovative ways. An example of this is the *De littera of Leidensis* 135 (MUNZI 2007: 95-117), in which the meaning of the letters is derived from the number of strokes required to draw them (1: the unity of Father, Son and Holy Spirit; 2: the two Laws, Old and New Testament; 3: the Trinity) and from the iconic interpretation of their design. To illustrate, the two strokes of the lowercase represent the Old and New Testament, but because they are of different lengths, they also symbolise the brevity of human suffering compared to the reward of eternal life (MUNZI 2007: 101, 107).

large extent from the accounts and refutations made by orthodox here-siology, with Irenaeus of Lyons *circa* (130-202 AD) being a key source of information. A section of his *Adversus haereses* (I 14-16) offers an overview of the Marcosian doctrine through a compendium of the *Revelation* received by Marcus (Kalvesmaki 2013: 183-223; cf. also Drucker 1995: 82-83; Barry 1999: 107-112). In the course of the *Revelation*, the Truth utters a *logos*, ‘and the *logos* became a name, and the name was the one we know and pronounce, Christ Jesus’ – then it falls silent. The Tetrad, therefore, addresses Marcus, who expects the Truth to speak further:

Ὡς εὐκαταφρόνητον ἠγγήσω τὸν λόγον, ὃν ἀπὸ στομάτων τῆς Ἀληθείας ἤκουσας· Οὐ τοῦθ’ ὅπερ οἶδας καὶ δοκεῖς ἔχειν παλαιὸν ἔστιν ὄνομα· φωνὴν γὰρ μόνον ἔχεις αὐτοῦ, τὴν δὲ δύναμιν ἀγνοεῖς. Ἰησοῦς μὲν γὰρ ἔστιν ἐπίσημον ὄνομα, ἕξ ἔχον γράμματα, ὑπὸ πάντων τῶν τῆς κλήσεως γινωσκόμενον.

‘You have deemed of little worth the *logos* you have heard from the mouth of Truth. That which you think you know and believe you possess is not the ancient name: for you hold only its sound, yet remain ignorant of its power. Indeed, Ἰησοῦς is an *episemon* name, bearing six letters, known to all those who have received the calling’.

(Iren. *Adu.haer.* [*Revelation to Marcus*] I 14,4)

The superficial objection raised by Irenaeus (*Adu.haer.* II 24,2) – namely, that Ἰησοῦς has six letters in Greek but not in Hebrew – is not of concern here, especially because it is not based on the number of letters that the ἐπίσημον ‘6’ is associated with Christ. Rather, the entire passage revolves around two key points. On the one hand, there is the ambiguity of the form ἐπίσημον: as an adjective referring to ὄνομα (‘distinguished, notable name’; as it appears in the Latin version of the passage: *Iesus autem est insigne nomen*), or as its apposition (‘name-sign’ and, in particular, ‘sign 6’ = ‘figure 6’). On the other hand, it is centred on the distinction between the name of Jesus as a sound (φωνή), which is accessible to all, and the name as a written sign (ἐπίσημον), which is known only to the elect.

The passage continues illustrating the manifestations of the three Powers (Δυνάμεις) within the letters of the Greek alphabet (Iren. *Adu.haer.* I 14,5-6). The associations and numerological operations presupposed in this section are far from clear (Kalvesmaki 2013: 123-125;

see also the summary in Mastrocinque 2003: 96). What is important, however, is the observation that the 24 letters of the alphabet alone would not have been sufficient, and only the descent of the one who is with the Father restored order to their sequence (Iren. *Adu.haer.* I 14,5: Ἐπὶ δὲ τοῦ ὑστερήσαντος λόγου ὁ ἀφεδρασθεὶς ἐν τῷ Πατρὶ κατῆλθεν).

Τὸν γὰρ τέλειον Νοῦν, ἐπιστάμενον τὸν τῶν ἕξ ἀριθμὸν δύναμιν ποιήσεως καὶ ἀναγεννήσεως ἔχοντα, φανερώσαι τοῖς υἱοῖς τοῦ φωτὸς τὴν διὰ τοῦ φανέντος ἐπίσημοις αὐτὸν ἀριθμοῦ γενομένην ἀναγέννησιν. [...] ὁ γὰρ ἐπίσημος ἀριθμὸς συγκεκρασθεὶς τοῖς εἰκοσιτέσσαρσι στοιχείοις τὸ τριακονταγράμματον ὄνομα ἀπετέλεσεν.

‘Indeed, the Perfect Mind, knowing that the number 6 holds within itself the power of creation and regeneration, revealed to the children of light the regeneration that was brought about through Him who appeared as the ἐπίσημος (?) / ἐπίσημον (?) number in relation to it. [...] For the ἐπίσημος number, in merging with the 24 στοιχεῖα, completed the name formed by the thirty letters’.

(Iren. *Adu.haer.* [*Revelation to Marcus*] I 14,6)

The ἐπίσημον ‘6’ is thus the “number ἐπίσημος”, an allegory of the Christ-ἐπίσημον, who must descend to earth and become part of the numerical-alphabetic series of the elements (στοιχεῖα) in order to bring it to completion – a theme that is further explored in the writings of Clement of Alexandria (§ 5.2) and will be further elaborated in the treatise *On the Mystery of the Letters* (§ 5.3)¹⁶.

5.2. *Clement of Alexandria*

Clement of Alexandria’s contribution (*circa* 150-215 AD) is notable for his attempt at aligning the doctrine of the ἐπίσημον with orthodox teachings (Kalvesmaki 2013: 224). This passage revolves around the numerical values associated with the episode of the Transfiguration, which is also central to the Marcosian theories (Kalvesmaki 2013: 125):

ὁ δὲ, διὰ γενέσεως, ἦν ἐδήλωσεν ἡ ἕξάς, ἐπίσημος, ὀγδοὰς ὑπάρχων φανῆ, θεὸς ἐν σαρκίῳ τὴν δύναμιν ἐνδεικνύμενος, ἀριθμούμενος μὲν ὡς ἄνθρωπος,

¹⁶ Irenaeus’ text and arguments were subsequently adopted, almost verbatim, by Epiphanius (*Panar.* XXXIV) and Hippolytus of Rome (*Ref.* VI.40-56).

κρυπτόμενος δὲ ὁς ἦν· τῇ μὲν γὰρ τάξει τῶν ἀριθμῶν συγκαταλέγεται καὶ ὁ ἕξ, ἡ δὲ τῶν στοιχείων ἀκολουθία ἐπίσημον γνωρίζει τὸ μὴ γραφόμενον. Ἐνταῦθα κατὰ μὲν τοὺς ἀριθμοὺς αὐτοὺς σώζεται τῇ τάξει ἐκάστη μονὰς εἰς ἑβδομάδα τε καὶ ὀγδοάδα, κατὰ δὲ τὸν τῶν στοιχείων ἀριθμὸν ἕκτον γίνεται τὸ ζήτα, καὶ ἑβδομον τὸ <η>. Εἰσκληπέντος δ' οὐκ οἶδ' ὅπως τοῦ ἐπισήμου εἰς τὴν γραφὴν, ἐὰν οὕτως ἐπώμεθα, ἕκτη μὲν γίνεται ἡ ἑβδομάς, ἑβδόμη δὲ ἡ ὀγδοάς· διὸ καὶ ἐν τῇ ἕκτῃ ὁ ἄνθρωπος λέγεται πεποιῆσθαι ὁ τῷ ἐπισήμῳ πιστὸς γενόμενος ὡς εὐθέως κυριακῆς κληρονομίας ἀνάπαυσιν ἀπολαβεῖν.

‘And He [Christ], illustrious (ἐπίσημος) by virtue of the creation revealed by the Hexad, appeared in truth as the Ogdoad, a God manifesting His power in a body of flesh, counted as a man, yet hidden in His true nature. Indeed, within the orderly series of numbers, the six is included, yet the sequence of letters reveals that the ἐπίσημον remains unwritten. Therefore, according to the numbers themselves, each unit is preserved in its rightful order up to the Hebdomad and the Ogdoad; but according to the reckoning of the letters, ζ is counted as the sixth and η as the seventh. However, with the ἐπίσημον introduced into the script – I do not know how –, if we proceed thus, the Hebdomad becomes the sixth and the Ogdoad the seventh. Hence, it is said that man, too, was created on the sixth day, he who, having become faithful to the ἐπίσημον, was deemed worthy to receive directly the solace of the Lord’s inheritance’.

(Clem. *Strom.* VI 16)

Referring to Drucker (1995: 83), Bandt (2007: 39-40), and Kalvesmaki (2013: 244-261 and the references therein, including the reading of εἰσκληπέντος) for doctrinal interpretations and certain specifics of Clement’s exposition, which also associates the numbers ‘7’ and ‘8’ with Christ, the passage synthesises what is found in his contemporary Irenaeus: (i) the dual usage, both adjectival and nominal, of ἐπίσημος/-ον, which is employed in both cases to refer to Christ; (ii) the discrepancy between sounds and writing: the ἐπίσημον ‘6’ is not written (τὸ μὴ γραφόμενον) among the στοιχεῖα, but instead enters into the writing (εἰς τὴν γραφὴν) as part of the numerical series; (iii) the consequent incongruity between the alphabetic and numeric series, which is only ordered following the entry of the ἐπίσημον. This is interpreted as an allegory of the incarnation of Christ, ‘counted as a man’ (ἀριθμούμενος μὲν ὡς ἄνθρωπος) among the elements of the world (στοιχεῖα; on the ambiguity of which, cf. below, § 5.3).

5.3. *On the Mystery of the Letters*

Also belonging to a Gnostic *milieu* but, at least in part, independent from the Marcasian theories, the later anonymous treatise *On the Mystery of the Letters*, composed in Palestine in the mid-6th century (Bandt 2007: 4-8), devotes a core central section of its content – 9 of the 42 total chapters (Chaps. 26-34) – to the *wāw/ἐπίσημον* as a sign of Christ (Bandt 2007: 36-44)¹⁷. However, compared to what was discussed above, this text arrives at this identification through a different route. In fact, it aligns with the hermeneutic approach of rabbinic derivation of *onomastica sacra* ‘sacred onomastics’, whose task is to ‘reinterpret the grammatonyms transmitted by the biblical text (in acrostic psalms) as words imbued with spiritual significance. The grammatonyms, therefore, undergo a transformation from *signa propria* into *signa translata* [...]. This operation is particularly favoured in the case of Hebrew grammatonyms, because [...] ancient exegetes were cognizant of their double *potestas*, referring both to phonological values and specific meanings of the lexicon’ (Mancini 2018: 440 transl. F.R.). Moreover, the *interpretamenta* derived in this way, if sequenced according to the alphabetical series, would result in *conexiones* of coherent microtexts (Mancini 2018: 438-447; Mancini 2022)¹⁸.

As the detailed table in Mancini (2022: 145-147) exhaustively illustrates, with the exception of a few instances where the etymological transparency of the Hebrew grammatonyms leads to converging interpretations from different hermeneutical traditions, these latter diverge significantly from each other (Mancini 2018: 442). The treatise *On the Mystery of the Letters*, which explicitly quotes patristic sources

¹⁷ There exists also a Coptic redaction of the text, whose edition by HEBBELYNCK (1900-1901) remained for a long time the reference version for this treatise, to which DORNSEIFF (1925), DUPONT-SOMMER (1946), and BAUSANI (2023 [1974]: 119), among others, have referred.

¹⁸ To elucidate further, see the interpretation of St. Jerome (*Epist.* XXX 6). Once the meanings of the first four letters of the alphabet are derived (*Aleph* = *doctrina*, *Beth* = *domus*, *Gemel* = *plenitudo*, *Deleth* = *tabularum*), the first *conexio* (*doctrina domus plenitudo tabularum* ‘doctrine of the home fullness of the tablets’) can be deciphered as ‘the teaching of the Church, which is the house of God, is found in the fullness of divine books’ («*quod videlicet doctrina Ecclesiae, quae domus Dei est, in librorum reperitur plenitudine divinatorum*»).

(*ML* 158 14-20) and for which the alphabet represents a sort of psalm hiding a Christological message, unravels the first *conexio*, made up of the first six letters, at the beginning of Chapter 26 as follows:

Ἄλφ· Βήθ· Γάμελ· Δάλεθ· Εἰ· Οὐαῦ· τὰ μεθερμηγευόμενα· θεμελίωσις οἴκου πλήρης ἀνώτερον γένεσις ἐν αὐτῇ σημείον.

Aleph, Beth, Gamel, Daleth, Ei, Wāw: which, when translated, signifies thus: *the foundational stone* (Ἄλφ = θεμελίωσις) *of the house* (Βήθ = οἴκου), *creation* (Δάλεθ = γένεσις) *fulfilled in a loftier manner* (Γάμελ = πλήρης ἀνώτερον), *and within it* (Εἰ = ἐν αὐτῇ) *a sign* (Οὐαῦ = σημείον). (*ML* 164.23-25)

The following nine chapters seek to demonstrate that the σημείον ‘sign’ in question is Christ and that it is represented by the *episemon* (*ML* 174.9 and 174.19: τὸ Ἐπίσημον τύπος τοῦ Χριστοῦ ‘the *Episemon*, character of Christ’; *ML* 174.16 and 176.6-7: τὸ Ἐπίσημον τὸ δηλοῦν τὸν Χριστόν ‘the *Episemon* that reveals Christ’) as the Greek counterpart of the Semitic *wāw*. This central idea is proclaimed from the very outset of the treatise (Chapter 2):

Πρὸς τοῦτο δὲ διδάσκει ἡμᾶς ὁ παρῶν θησαυρὸς τῶν γραμμάτων, ὅτι διπλοῦς ὁ Χριστός, τουτέστι θεὸς καὶ ἄνθρωπος ὁ αὐτός· καὶ ὅτι σημείον Ἐπίσημον ὑπάρχει.

‘And furthermore, this treasury of letters imparts to us the truth that Christ is dual in nature, being both God and man; and that He is represented by the sign *episemon*’. (*ML* 108.6-8)

The Gnostic doctrine of the letter *wāw* is also known from an amulet chiselled on a silver plaque from the 2nd century AD, containing a hymn in Aramaic to *wāw*, invoked with Christological epithets (Dupont-Sommer 1946; cf. also Daniélou 1961: 150)¹⁹. What

¹⁹ BANDT (2007: 36-37), however, avoids establishing a direct connection between the amulet, in which *wāw* essentially functions as a magical-theurgic name, and the much later treatise, highlighting several differences: in the 19 lines of the hymn, despite the epithets ‘Son of God-*Theos*’ and ‘Holy One of God’, the name of Christ is absent, nor is there any reference to the numerical value of the letter. The lack of correspondence is not surprising, given that, as already noted, the *Mystery of the Letters* encompasses the outcomes of diverse traditions and significant elements of originality.

is important to note is that in the Greek interpretation (*ML* 170.25-172.23), once the equivalence $w\bar{a}w \sim \textit{episemon}$ is recognised, the grammatical peculiarities of the latter are remarkably emphasised: in particular, its being a sign without phonetic reference that cannot be removed from the alphabet series nor placed in another position without completely invalidating its fundamental numeric function. Here again, as in Irenaeus (*adu.haer.* I 14,6) and Clement (*Strom.* VI 16), the argument of the incompleteness of the numeric-alphabetic series in the absence of the *episemon* is revisited, but in a much more elaborate version: briefly, the Greeks do not pronounce it (cf., below, εἶπεν) because they are pagans – which, for the author, further proves its identification with Christ – but they cannot do without it so as to order the sequence of the στοιχεῖα as an allegory of the order of creation (*Bandt* 2007: 40-41).

Οὐαῦ· τοῦτο τὸ γράμμα ὁ Ἕλληγ οὐκ εἶπεν ὄλωσ, ὡς μὴ πιστεύων τῷ Χριστῷ τῷ δηλουμένῳ δι' αὐτοῦ.

'*Wāw*: this letter the Greek utters not at all, for he believes not in Christ who through it do reveal Himself'. (*ML* 170.29-30)

Ὅρα γὰρ μὴ κεκτημένου αὐτὸ τοῦ Ἑλλενος μήτε καταριθμοῦντος αὐτὸ ἐν τῷ ἰδίῳ βαθμῷ, ψευδῆ πάντα τὰ στοιχεῖα καὶ αἱ γραφαὶ αἱ κεχωρισμέναι αὐτοῦ τυγχάνουσι. [...] Διδάσκοντος γὰρ τὸν κόσμον τοῦ Θεοῦ διὰ τοῦ τοιοῦτου ὑποδείγματος, ὅτι πᾶσα γραφὴ καὶ πᾶσα ἀνθρώπου πίστις καὶ πᾶσα πνοὴ καὶ κτίσις μὴ καταδεχομένη καὶ ὑπογράφουσα τὸ σημεῖον τὸ Ἐπίσημον τοῦ Χριστοῦ ψευδῆς ἐστὶ καὶ πεπλανημένη καὶ ἀργὴ ὑπάρχει.

'Behold, indeed, that if the Greek did not possess it nor enumerate it in its rightful place, all letters would prove fallacious, as would the texts that were composed without it. [...] For God, through this exemplar, instructs creation that every scripture, every belief of man, and every breath and creation, if it doth not embrace nor bear within itself the *Episemon* sign of Christ, is false and found in error and of no avail'. (*ML* 172.24-174.3)

The entire allegory hinges on the ambiguity of the term στοιχεῖα between grammar and (meta-)physics: on the one hand, στοιχεῖα refers to the *elementa* as the minimal units of λέξις, that is, of articulated sound (φωνή) that can be transcribed in writing (cf. the notorious defi-

nition in Diog. Laert. VII 55; \approx *sch. in* Dion.Thrax GG III 482); on the other, it also denotes the minimal constitutive elements of matter and creation (cf. among others, Pl. *Tht.* 201e, *Ti.* 48b, Arist. *Metaph.* 1014a26). This interpretative key is made explicit in the opening of the treatise itself (*ML* 106.1-4: στοιχεῖα λέγονται ταῦτα τὰ γράμματα οὐχ ὅτι στοιχόν τινα καὶ τάξιν ἀποτελοῦσιν [...] ἀλλ' ὅτι τῶν στοιχείων τῶν κτισμάτων τοῦ κόσμου τοὺς τύπους καὶ τὰ σχήματα ἐν ἑαυτοῖς ἔχουσι καὶ ὑπογράφουσι 'These letters are termed *στοιχεῖα* not because they constitute some sequence [*στοιχόν τινα*] or order [...] but because they themselves hold and bear inscribed the characters and the forms of the elements [*τῶν στοιχείων*] of that which has been fashioned in the world') and it is within this framework that the following passage clearly elucidates the grammatological specificity of the *episemon*-Christ as a written σημεῖον to which no element of λέξις corresponds (Bandt 2007: 39).

Οὐκοῦν βουλόμενος ὁ θεὸς δεῖξαι, ὅτι οὐ συντάσσεται τοῖς κτίσμασι καὶ τοῖς στοιχείοις τοῖς ἐκτυπουμένοις ἐν τούτοις τοῖς γράμμασι Χριστὸς ὁ κτίστης τῶν ἀπάντων, τούτου χάριν ἐν τοῖς συγγράμμασι μᾶλλον τὸ ἑαυτοῦ σημεῖον τέθηκεν, ἐν οἷς οὐκ ἔστι τύπος κτίσματος.

'Thus God has intended to demonstrate that Christ, as the creator of all things, does not reside upon the same tier (οὐ συντάσσεται) as the created things and the *στοιχεῖα* which are depicted in these letters, and therefore has placed His sign amongst the *συγγράμματα*, amidst which no created things are represented'. (*ML* 170.20-24)

The same argument is reiterated shortly thereafter (*ML* 174.3-8) for the other two numeric *notae*, *qoppa* (τὸ Κὼφ ρ '90') and *sampi* (τὸ Ἐννεακόσια λ '900'), which are symbols of the other two persons of the Trinity (*ML* 174.14-18), like Christ, not created and therefore not included among the *στοιχεῖα* that represent the elements of creation. In the same passage the reasons for associating Christ not only with the sign <Ϛ> but also with its numeric value '6' are also explained: he is at once dual (man and God) and triune (*ML* 174.12-14: 'for in him dwells all the fullness of the deity according to the unity of the *logos* with the Father and the Holy Spirit'). The other two numbers of the

Trinity ('90' and '900') – the passage continues – are only triple, as the Father and the Holy Spirit, unlike Christ, do not partake of the dual nature, both divine and human²⁰.

5.4. *Further ramifications*

In conclusion, despite the specificities of its various interpretations, a coherent doctrine of the Christ-*episemon-wāw*, centred on the special grammatological status of the sign <Ϛ>, has traversed the centuries along a boundary often tenuously positioned between heresy and orthodoxy, particularly where Christianity has adopted and reworked other traditions. The available evidence does not allow for a fine-grained reconstruction, but the distinction often seems to have hinged on matters of detail. And perhaps the differentiation is more etic than emic, especially when considering the reception of this doctrine within forms of popular religiosity. Consequently, as is often the case with practices involving the use of written symbols, the manifestations of this branching tradition surface at various points along 'the considerable distance between the most subtle treatises and everyday practice' (Cardona 2009 [1981]: 130 transl. F.R.).

On the one hand, the *episemon* has been identified among the magical characters of Gnostic amulets engraved on gems (Mastrocinque 2003: 92 n. 297, 96); on the other hand, the Greek-Latin numerical list in *Cod. Sangallensis* 1395 p. 435a (9th century; cf. Hawk 2012)²¹ seems to provide evidence of the awareness of its symbolic value even in more orthodox contexts. This is not the only Greek-Latin numerical list in the manuscripts of St. Gall. Kaczynski's Appendix (1988: 117-120) documents others, and from a review of the excellent *fac-similia* available online²², in at least four cases <Ϛ> is not only associated with its Latin counterpart <VI> but is also identified as *episemon* (*Cod.*

²⁰ All of this, incidentally, highlights the trivialisation of the Marcosian doctrine carried out by Irenaeus, where he characterises Ἰησοῦς as an ἐπίσημον ὄνομα ('distinguished name') because it consists of six letters (Iren. *Adu. haer.* I 14,4; cf. above, § 4.1.1).

²¹ The list is incomplete and stops at the Greek <Υ> and its Latin counterpart <CCCC>.

²² Cf. *e-codices - Virtual Manuscript Library of Switzerland* (<https://e-codices.ch/en>).

Sang. 459 p. 111 and p. 154, 9th century; *Cod. Sang.* 671 p. 207, 9th century) or *epissema* (*Cod. Sang.* 1026 p. 7, 13th century). Such numerical-alphabetical series, often accompanied by their respective arithmonyms and grammatonyms, are also well-attested elsewhere (Mancini 2018: 475-477, with further references).

In this instance, however, between the *notae* <Q VI> and the arithmonym <epifimon>, the incipit of a widely known liturgical hymn is inserted, celebrating the cross as an *admirabile signum* (Figure 5)²³.

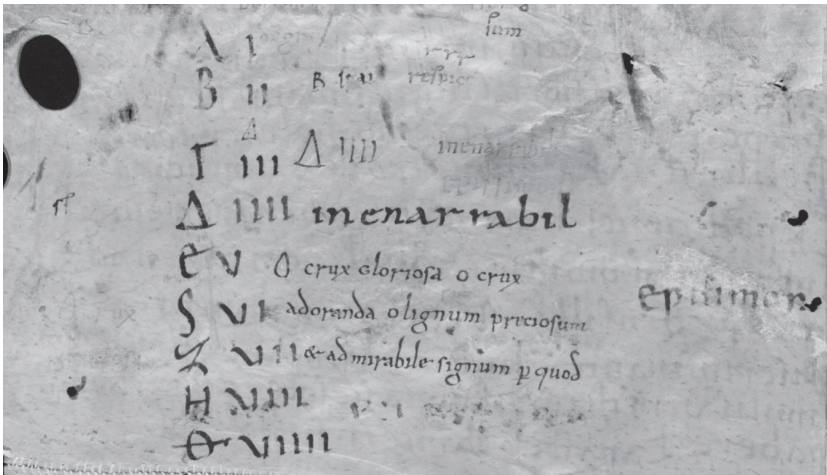


Figure 5. *Cod. Sangallensis* 1395 p. 454a ll. 1-9.

That the short text is to be referred to <Q VI> is confirmed not only by its exact centering with it, but also by the invocation «*o crux*» that flanks it, though barely legible, even on the left side (Figure 6)²⁴.

²³ The text (*O crux gloriosa o crux | adoranda o lignum preciosum | & admirabile signum p[er] quod*) continues with «*et diabolus est victus | et mundus Christi sanguine redemptus*». It is also known with minimal variations and is very common in medieval antiphonaries. A search for the *incipit* «*o crux gloriosa*» through the portal <https://cantusdatabase.org/> returns 175 attestations.

²⁴ Note the two different scripts: the one used for the numerical list, *inenarrabil*, and *episimon*, «largest in size and in the darkest ink on the page, is the same Caroline minuscule as that of the glossary on the preceding pages» (HAWK 2012: 33). The script for the three verses, on the other hand, is «a more rounded minuscule with thinner strokes and a slight cursive aspect» (HAWK 2012: 34). The first scribe, instead of vertically aligning *episimon* with *inenarrabil*, seems to have intentionally left space for *O crux* etc. to be added.



Figure 6. Cod. Sangallensis 1395 p. 435a l. 6 (detail).

Here, the *episemon* thus seems to associate not directly with Christ, but with his most prominent attribute. Moreover, also the line <Δ IIII inenarrabil> suggests that the compiler of the list was aware of interpretations attributed to certain Greek symbols that went beyond mere phonological and/or numerical references. In the broader practice of using Greek letters in the abbreviations of *nomina sacra* (cf. § 6), <Δ> can indeed represent, as a sort of heterogram (Mancini 2014: 33), the word *Deus*. This is also the case in the Book of Durrow's Gospel, in a particularly significant place: the *incipit* of the Gospel of John: *In principio erat Verbum, et Verbum erat apud <ΔM>, et <ΔS> erat Verbum* (IE TCD MS 57 f. 193r; cf. Berschin 1988: 86; Tilghman 2011: 101). The pairing of the adjective *inenarrabilis* with <Δ> is therefore understood in light of the theme of divine ineffability. God is described as *inenarrabilis* already in Irenaeus (*adv. haer.* IV 20), and the phrase *Deus inenarrabilis auctor mundi* and within the prayer *Deus iustitiae*, both of which were widely known at the time when the numerical list was compiled (Hawk 2012: 38-39).

6. *Episemon between Greek and Latin script*

Far beyond Gnostic thought, in late antique Christianity the symbol <Q> accumulates considerable symbolic values and sacred connotations. It is due to these that the hypothesis seems plausible that the sign <Q> found in Latin Christian funerary inscriptions is not merely a cursive ligature transposed into a capital epigraphic script, but rather the Greek *episemon* imported into the repertoire (whether graphic or scriptorial, cf. § 7) of Latin epigraphy. The motivations for this intro-

duction are, of course, entirely different from an implausible interference between numerical systems (§ 2): indeed, <Ϛ> is not adopted *for its referential value as the digit '6'* but *for its ideological value as a symbol* associated with Christ, thereby becoming part of the symbolic apparatus of Christian funerary inscriptions, akin to other Greek letters.

The accurate survey by Felle (2018) on the use of Greek in early Christian inscriptions from Rome and Italy has clearly demonstrated that the deliberate use of the Greek language and/or the Greek script (in the form of Latin-to-Greek codeswitching, monograms, abbreviations, acrostics, and symbols, etc.) represented a symbol of cultural and religious identity for Christians already in the 3rd and 4th centuries. As explicitly noted by Bede (*art.metr.* I 2), 'after receiving the faith of the Lord', Latin scribes adopted individual Greek letters (η, χ, ρ, α, ω), predominantly used in abbreviations of the *nomina sacra*: «*littera H, intromittentes, propter auctoritatem nominis Ihesu [= <IHS>]; χ et ρ, propter nomen Christi [= <Xρ>]; α, et ω, propter auctoritatem dominici sermonis, 'Ego sum α et ω'*» (cf. Mancini 2018: 444; Mancini 2022: 135)²⁵. In Christian epigraphy, sometimes combined in the form of a monogram, these letters are not confined to isolated decorative elements but can be syntactically integrated into the Latin text of the inscription. A simple survey of *ILCVI* shows that the abbreviation <Xρ> is effectively treated as a heterographic logogram corresponding to the lexical morpheme *Christ-*, to which Latin inflectional (cf. the frequent forms: <Xρ>*us*, <Xρ>*i*, <Xρ>*o*, etc.), derivational (cf. *ILCVI* 1557: <Xρ>*iane*), and compositional processes (cf. *ILCVI* 211: <Xρ>*icolae*) are applied.

The symbolic prominence of such an element is evident, given that the heterographic strategy makes it “stand out” from its context not only due to forms alien to the Latin alphabet but also because of usage rules unfamiliar to Latin orthography, which typically does not in-

²⁵ It is reasonable to ask why Bede does not mention <Ϛ>. There are at least three motivations: (i) the ones he is discussing (η, χ, ρ, α, ω) are only letters with alphabetical value, whereas <Ϛ> serves only as a numerical function; (ii) these are letters used in the manuscripts of sacred texts (*art.metr.* I 2: «*Graecas litteras, etsi non in alphabeti ordinem recipiunt, divinis tamen paginis inditas continent*»), while <Ϛ> appears in inscriptions; (iii) Bede's list includes the most frequent and representative elements but is not exhaustive, as it, for instance, omits <Δ>, which can also occur in manuscripts as a *nomen sacrum* (see § 5.4).

clude logograms. The same effect is produced by <ϸ>, which is also an emblem of the *nomen sacrum* of Christ, within numerical sequences: it is integrated therein but, at the same time, is readily distinguishable from the rest in both form and structural properties (§ 2)²⁶.

Since this use also requires knowledge of its numerical value, it is obviously necessary to assume that both the authors and recipients of these texts were familiar with the Greek alphabetic numeral system. The evidence that Latin scribes were acquainted with Greek numerals is broad across epochs and contexts. It is no surprise that Priscian, when discussing *de figuris numerorum* (Passalacqua 1987), demonstrates knowledge of both Greek numbering systems, acrophonic and alphabetic. For centuries thereafter, the Greek alphabet and the numerical value of its letters were addressed in largely diffused treatises among medieval scholars, such as Isidore of Seville's *Etymologiae* (*Etym.* I 3), Bede's *De temporum ratione* (*De temp.* 1), and Hrabanus Maurus' *De computo* (*De comp.* I 8). The most evident signs of these are the scattered but numerous instances of Greek alphabets and numerical lists (like the one illustrated above; cf. § 5.4), found in libraries and *scriptoria* across the West²⁷, sometimes scribbled among the *marginalia*, sometimes structured into actual tables of alphabetical and computational correspondences, sometimes expanded into short works like the *Κατάλογος γραμμάτων Ἑλλήνων* or the *ABCDIS Grece cum numero* (cf. Mancini 2018: 466-467, 475-476).

It cannot be ruled out that, in the case of <ϸ>, the recognition of its numerical value was further facilitated by the existence of a homographic and homosemic Latin ligature in documentary writing (§ 3). However, this remains a pure accident without causal value and leaves no room for a hypothesis halfway between that of Mallon and the one presented

²⁶ All this cannot be subsumed under Adams' (2003: 71) concept of "character switching", where the transposition of individual letters of the Greek alphabet into Latin inscriptions (or *vice versa*) takes place in the writing practice of individual writers without further dissemination. The evidence is abundant: in addition to Adams' illustrative survey (2003: 71-76), one might also consider, for example, the Republican-era graffiti on the *ollae* of San Cesareo (Rovai, in press).

²⁷ For a representative overview of the evidence of Greek writing in Western Europe during the Early Middle Ages, see BISCHOFF (1951: 32-39), BERSCHIN (1980: 41-42; 1988: 88-89), KACZYNSKI (1988: 33-45), MANCINI (2018) and HAWK (2012).

here, namely that <Q> is the original cursive Latin ligature introduced into Christian inscriptions as a consequence of its reinterpretation as the Greek *episemon*. In fact, an interpretation of this kind would only reconfirm that the sign <Q> can enter the repertoire of epigraphic writing solely as an *episemon*. Furthermore, the possibility that the two writing systems in their “usual” forms (in the sense of Cencetti 2014 [1966]: 23-24, as well as below, “normal”) developed homographic signs and ligatures (although not necessarily homophonic; cf. the useful table in Bianconi *et al.* 2021: 53-55) is well demonstrated by the existence of a Greco-Roman scriptorial *koiné* in the civil and military administration of the East from the 4th century onwards (Cavallo 2005 [1970]). In more than one case, due to the affinities between the two alphabets in their “normal” forms, homography is the result of parallel developments rather than mutual influences (Cavallo 2005 [1970]: 47-48).

The two numbering systems could also coexist on the same medium, as in the case of bilingual milestones (e.g., *CIL* III 14154,1; *AE* 2001, 1922). More importantly – and from ancient times – the ability to “do arithmetic” in both systems seems to have been part of elementary education, even for individuals from modest social backgrounds. Each of the fifteen circular bone tokens found in the funerary urn of a child in Rudiae (3rd-1st century BC; cf. Susini 1962: n. 176) bears on the same side a number from ‘1’ to ‘15’ in both Latin and Greek (including: <VI · Q>), forming ‘a true Greco-Latin abacus, which must have served as a teaching tool for the child’ (Susini 1962: 179 transl. F.R.). Rudiae was famously a bilingual territory but, more generally, the importance of Greek computation in daily commercial transactions, even in Rome itself, is easy to imagine.

7. Conclusions

In light of the limitations of traditional hypotheses regarding the origin of <Q> in epigraphic documents (§ 4), the heuristic potential of a semiotic approach becomes evident. This approach highlights the ethnographic and anthropological values of the written sign, seen as a manifestation of awareness and an intent upon making a deliber-

ate effort to represent a specific cultural identity through writing, in this case, a religious one. The sign <Ϟ> in Latin Christian epigraphy is neither the Greek digit simply introduced into the Roman numeral system (§ 2), nor the mechanical transposition of a ligature arising from the cursive stream of Latin writing (§ 3). Rather, it is the Greek *episemon* adopted as a Christological symbol (§§ 5.1-5.3).

The Greek origin raises broader issues because, within the larger framework of “contacts between cultures”, it allows for the isolation of an aspect of “contacts between scripts” that is independent from “contacts between languages”. While the study of interlinguistic contact in the ancient world can now rely on a widely accepted theoretical and methodological framework, explicit reflection on the phenomena of contact between writing systems has only recently begun (Mancini-Turchetta 2014, eds; Baglioni-Tribulato 2015, eds; Consani-Perta 2019, eds). From this perspective, the *diamesic* factor is not merely a parameter of sociolinguistic variation but enriches the exegesis of documents with additional levels of analysis. Since writing includes written language but cannot be reduced to it (Cardona 2009 [1981]; Perri 2014), the focus of the investigation is no longer solely the propositional-linguistic content visually encoded, but also the ensemble of ideological connotations that the written medium independently conveys, separate from orality (§ 5). In a case such as this, it is precisely within these connotations that the genesis of <Ϟ> in Latin epigraphy appears to lie.

Finally, the ways in which the sign is employed within inscriptions (§ 6) also bring into question the debated distinction between ‘graphic’ and ‘scriptorial’ (Perri 2014). ‘The distinction between (systems of) *figures* (i.e., images, more or less abstract graphic forms) and *writing* is, in fact, a clear-cut and indisputable dichotomy only when viewed from classificatory perspectives that privilege an ‘objective’ or *etic* study’ (Perri 2014: 166 transl. F.R.). This typology results from a glotto- and, even more so, alphabet-centric perspective, which isolates graphic notations with univocal linguistic reference from all others. Once the ideological framework is clarified (§ 5), it becomes evident that <Ϟ> functions simultaneously as both a numeral and a symbol. As a logogram-digit, it has a unique linguistic reference, though only regarding the semantic aspects (= ‘6’) and not the phonological or morphological ones (since

<Q> = /'seks/, but <QII> = /'okto/). At the same time, the use of such a graphic notation does not adhere solely to the glottic principle of representing meaning: it is only by virtue of its Greek form as an *episemon* that it can be associated with the sacred name of Christ and replace the Latin script <VI>, which is semantically but not symbolically equivalent. The same considerations apply to the heterographic sequence <Xρ>, symbolically more significant, beginning with the cross-shaped design of <X>, compared to its Latin counterpart <Christ(us)> (§ 6).

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Appendix

- AE 1971, 137 (Cagliari, 400-600; gravestone): *Hic iacet b(onae) m(emoriae) Muscula q | ui vixit annis pl(us) minus XXIII | requievit in pace sub d(ie) | ÇII Kal(endas) Decembres in | dictione duod(ecima).*
- AE 1979, 312 (Cuglieri - OR, 500-600; gravestone): *+ Hic iacet b(o)n(ae) mem(oriae) ABUS | Iscribonissa qui bixit | ann(os) pl(us) min(us) XXÇII requi(escit) | in p(a)ce s(u)b d(ie) XÇIII mensis | Octobrii ind(ictione) XIII +.*

- AE 1987, 428 [= Brusin 1993: n. 3109] (Aquileia, 400-500; gravestone): [...] *Largi* | [*us ...*]s *fdelis* | [*in pac*]e *recessit* | *qui vixit annos XXÇIII men | sis sex, dies sex, III Idus{i} Oct(obres)* | *qui recessit in pace. Parentis contra votum posu | erunt | α + ω* | ((dove)) ((orant figure)) ((lamb)).
- AE 1988, 639 (Cagliari, 400-500; gravestone): *Hic iacet bo(nae) m(emoriae) An{i} ziocia* | ☩ | *qui vixit plus min(u)s aññi(s) | LV requiebit in pace de | posita est sub die XÇI | kalendas Februarias* ((palm branch)).
- AE 1990, 454 [= AE 1999, 812; Solin 1989: 216] (Porto Torres, 400-500; gravestone): [*H*]ic *iacet bone m(emoriae)* | [...]a *qui vixit aññ(is) plus | minus XXXÇII* | *requievit Ioilus | in pace sub die | XÇI kal(endas) Iulias*.
- AE 1997, 417b (Tropea – VV, 573-575; gravestone): + *In oc tumulo requiebit in p | ace s(an)c(t)e recordationis Fanti | nus presbiter ed abbas mon | astirii qui bissit annos pl(us) | m(inus) XXV defuntus est V id(us) Iu | nias, ind(ictione) ÇII i(n) nom(i)n(e) ☩ poscon | solato codam Basili añ(n)o XXXIII | Iustini [Aug(usti) ?] an(no) [VII]I in(d)i(ctione) e[ad(em)]*.
- AE 2000, 572 (Civitavecchia, 500-550; gravestone): + *Hic reqi[escit in pace]* | *Quarage[sima ? quae ? vix]* | *sit plus m[inus annos]* | *XXÇII deposit[a ? est ...]* | *kalenda[s ...]*.
- AE 2005, 424 (Mirabella Eclano – AV, 400-600; gravestone): ☩ *Hic requies | cet in sum | no paces Luce | rna que vixit | añ(n)os XXÇ depos | [it ...]*.
- AE 2007, 600 (Aquileia, 300-400; gravestone): *D(is) M(anibus)* | *Benemereti Iulianeti q | ui vixit annus XÇII fecet | cun virginio suo | p(lus) m(inus) annu unu m(enses) II d(ies) [...]* | *Dolies maritus con | tra votum poset. Recess[it] | in pace fedeles II id(us) M(aias)* | ☩ ☩ | ((dove on a branch)) ((orant figure)) ((dove on a branch)).
- CIL V 1702 (Aquileia, 300-400; gravestone): *Quirace | vixit annus | XÇII mesis ÇII* | ☩.
- CIL V 6237 [= ILCV 2738a] (Milano, 485; gravestone): *B(oniae) M(emoriae)* | *hic requiescit in pac[e] | Iustinus qui vixit in s[e] | culo an(nis) pl(us) m(inus) | L deposi | tus sub d(ie) Ç idus Decem[b(res)] | Fymmacum v(irum) c(larissimum) c(on) s(ulem) | B(oniae) M(emoriae)* | *hic requiescet in pac[e] | Martina qui vixit in s[e] | culo an(nis) pl(us) min(us) | LV depo[sit] | ta sub d(ie) III kal(endas) April(es)*.
- CIL VI 38364 [= ICVR VI, 15808] (Roma, 300-350; gravestone): *D(is) M(anibus)* | *Fl(avius) Aris | tomen | es q(ui) b(ixit) an(nis) | XLIII mes(ibus) | sex d(iebus) ÇI*.
- CIL VI 35802 [= ICVR VII (n.s.), 19080] (Roma, 271-400; gravestone): *L(ucius) Marcus | Rufinus | vixit ann(is) | XLÇ qui nun | quan in Rome fuit*.
- CIL VI 32953 [= ILCV 490] (Roma, 490; gravestone): + *Hic positus est Antiochos candidatus premececi(us) | [...]CALLE[...]* | [...] *domino [...]* | *Placidiae qui visit anus p(lus) m(inus) LÇ in pace, ÇI Kal(endas) Mart(ias) | consul(atu) domini nostri Valentiniani Aug(usti) ÇI et Abinio cons(ule)*.

- CIL VI 32941 [= AE 1997, 166] (Roma, 350-400; gravestone): *D(e)p(ositio) Fl(avii) Valentis protector(is) pr(idie) Idus [[Se]ptembres]] | Aug(ustas) vixit annos XLÇII civis Conco[r]diensis | Fl(avius) Constantius filius patri fecit ben[e]merenti].*
- CIL VI 32949 [= ICVR II (n.s.) 5194] (Roma, 300-450; gravestone): *Hic pax quiescet ꝥ[...]. Eucari duk(enari) scut(ari) | scol(a) secund(a) qui m[ilit]avet an(nis) p(lus) m(inus) XÇIII biarcus | vixit an(nis) p̄(lus) m(inus) XXXV [depos]it[us] diae pridiae Idus | Lu[nia]s Z[...].*
- CIL VI 32948 [= ICVR II (n.s.) 5198] (Roma, 300-450; gravestone): *[Hic iacet ...] tinus scutar(ius) e | [schola] prima senat(or) | [vix(it) ann(is) ...]IIII d(iebus) XX d(e)p(ositus) | [in pace ?] ÇIII Kal(endas) Iul(ias) | [...].*
- CIL IX 1392 [= ILCV 1151] (Mirabella Eclano – AV, 400-500; gravestone): *[Hic re]quiescit in [somno pacis] | Claudia Salunina q[uae] v(ixit) an(nis)] | pl(us) m(inus) XV menses sex [... depos]ita] | die ÇI kal(endas) Maiias L(ucius) Faust[us] | praesbiter patr[onae] | b(ene) [m(erenti) f(ecit)].*
- CIL IX 1393 [= ILCV 1309] (Mirabella Eclano – AV, 400-500; gravestone): *ꝥ Hic requi | escit in so | mno pacis Iuliana pr(ae)p(osit)a(e) qu | ae vixsit an | nos LIIII d̄(e)p̄(ositio) eius | ÇII kal(endas) Ian | uar(ias).*
- CIL IX 1381 [= ILCV 1260] (Mirabella Eclano – AV, 511; gravestone): *+ + + Hic requiescit in | somno pacis Caelius | Iuhannis exhorcista | qui vixit ann(is) pl(us) m(inus) ((20 ?)) | depositio eius ÇII Id̄(u)̄ | Decembres Fl(avio) Felice v(iro) c(larissimo) | consule.*
- CIL X 100 [= ILCV 3119] (Vibo Valentia, 500-600; gravestone): *ꝥ Paulus infas hic recui | escit per inditione(m) VI | cui bissit annos III | m(enses) ÇII et depositus | K(a)l(endis) Octobris f(e)l(ici)t(er).*
- CIL X 1218* [= AE 1988, 629] (Cagliari, 400-500; gravestone): *+ Hic iacet b̄(onae) m̄(emoriae) Furiosus qu | i vixit annis p̄l(us) m(inus) LX | quievit in pace de | positus est XÇII Kal(endas) | Februarias +.*
- CIL X 7499 [= ILCV 2734] (Malta, uncertain dating; painting on plaster): *In [hoc] l[oco] iacet | bon(a)e memori(a)e | Bo[nifati]us q[ui] bicsit | in [h]oc sec[un]do an | nis L ueq[ui]ebit | in [p]oce s[ub] [d]ie Ç K̄al(endis) Sep | tembre indictio | ne [duod]ecima.*
- CIL X 7836 [= ILCV 4376] (Cagliari, 400-500; gravestone): *[...] | dies XX dep(ositus) in pace sub d(ie) non(arum) Aug(ustarum) | B(onae) m(emoriae) Iohannes qui vixit a[nn(is) ...] | quievit in pace VIII kal(endas) Nov[embr(es)] | B(onae) m(emoriae) Cresconius qui vixit annis pl(us) m(i)nus L qui[evit] | s(ub) d(ie) ÇII kal(endas) Mai(as) et depos(itus) s(ub) d(ie) VIII kal(endas) Septe(mbres).*
- CIL X 7770 [= ILCV 3103] (Cagliari, 400-600; gravestone): *B(onae) m(emoriae) Renobata qui | vixit ann(os) pl(us) m(inus) | XXV quiebit | in pace s(ub) d(ie) | Ç non(as) Mai(as).*

- CIL X 7766] (Cagliari, 400-600; gravestone): *H(ic) iacet b(ona)e m(emoriae) Pascasius | qui bix(i)t ann(is) plus minu | s XIII requiebit in pac | e sub di(e) ¶II k(alendas) Iulias ind(i)c(tione) XI.*
- CIL X 7775 [= ILCV 3062] (Cagliari, 400-600; gravestone): + *Ibc iacet bene memoria | e Sergis bixit annos plus | minus LXX requiebit in pa | ce sub die ¶(i)d(us) Ianuarias.*
- CIL X 7762 [= ILCV 3062 A] (Cagliari, 400-500; gravestone): ((blossoming tree)) *b(i)c iacet bene memoria | Ma'r'ia qui bissit annis | plus minus XXXXXX requi | evit in pace sub d̄(ie) ¶I kalēnd̄(as) Ma | ias ((fish)).*
- CIL X 7763 [= ILCV 3062 B] (Cagliari, 400-500; gravestone): [*H*]ic iacet b(ona)e m(emoriae) Maria qui vix | it annis pl(us) m(inus) LX. B(ona)e m(emoriae) Honorn | us qui vixit pl(us) m(inus) | XXX requiebit in pace sub d(ie) | ¶ kal(endas) Iunias.
- CIL X 7752 (Cagliari, 400-600; gravestone): + *Hic iacet b(ona)e m̄(emoriae) B̄ernaceii | qui bissit annis plus min(us) | XX, requiebit in pace X¶ k̄āl(en)d̄(as) | Dece(m)b(res) [i]nd(ictione) X.*
- CIL X 7755 (Cagliari, 400-500; gravestone): [*Hi*]c iacet b(ona)e m(emoriae) Florus qui b | [ix]it ann(is) pl(us) m(inus) LXX quiebit in | [p]ace su(b) d(ie) ¶III kal(endas) Februarias | Hic iacet b(ona)e m(emoriae) Pulceria qui bi | xit ann(is) pl(us) m(inus) LXV quiebit in | pace su(b) d(ie) kal(endas) Ianuarias.
- CIL X 7756 [= ILCV 4692] (Cagliari, 400-500; gravestone): *Hic iacet b(o)n(ae) m(emo)r(i)a(e) Fortuna | qui bissit plus minus | annis XX¶I m(e)ns(ibus) III quie | vit in pace s(u)b d(ie) non(arum) | [...] digna bissit an(nis) | [...] cui bir clusito | clos.*
- CIL XI 2583 (Chiusi, 455; gravestone): *Requiescit | hic Sthefanus | qui vixit annus ¶III | requievit in pace | d(ie) kal(endarum) | Decemb(rium) coss. | Divi Valentiniiani | Augg. ¶II.*
- CIL XI 4043 [= ILCV 3036] (Capena, 395; gravestone): *Anic(i)s Olybrio et Probbino cons. d(e)p(ositio) Iuli(a)e V idus | Decembres qu(a)e vixit annos ¶ et dies XXII | benemerenti in pace | parentes fecerunt.*
- CIL XI 4335 [= AE 2002, 437] (Terni, 503; gravestone): ((palm branch)) + ((palm branch)) | *Hic requies | cit bene me | morie Splen | dida que vi | xit annus | plus minu[s] | XXXV, dep[o] | sita in pa | ce ¶II Kale(ndas) I[a] | nuarias | consula[tu] | Bolu[siani] | v(iri) c(larissimi) | [((palm branch)) ?].*
- CIL XI 1714 (Firenze, 400-550; gravestone): [...]*XXq[...]* | [...]*an(nos) LX[...]* | [...]*recept[...]* | [...]*X¶k(alendas)* + [...]*| [...]est d(... ?) [...]* | [...]*| [...]*.
- CIL XI 3516 [= ILCV 2013] (Tarquinia, 300-500; gravestone): *Euticius | confessor | depositus ¶II | Kal(endas) Septenbris | in pace ¶.*
- CIL XI 3567 [= ICUR I 1093] (Civitavecchia, 557; gravestone): + *hic requiescit in pa | ce VVilifana qui vi | xit annus pl(us) m̄(inus) X¶ depo | sita est ¶III kal(endas) Augustas p̄(ost) c̄(onsulatum) Basili v̄(iri) c̄(larissimi) anno X¶ indi(cione) quinta | D(is) M(anibus) s(acrum).*

- CIL XI 7587b [= ILCV 262] (Civitavecchia, 557; gravestone): + *hic requixscit Iusta in pace | qui vixit plus minus annus LXXV | deposita est XV kalendas | Augustas p(ost) c(onsulatum) Basili v(iri) s(larissimi) an | no XÇ indictione quinta.*
- CIL XI 7589 [= ILCV 03123 add.] (Civitavecchia, 500-600; gravestone): + *hic requ | esci[t] Vincom | al[u]s sub die | sex(to) Ç kal(endas) | Marti.*
- CIL XI 4046 [= ICI IV 28] (Capena, 407; graffito): [...] +++ *Saturnino | [... vixit an]n(is) pl(us) m(inus) LXXV | [... Mart(ias) D(omino) N(ostro) Honor(io) Aug(usto) ÇI.*
- CIL XIV 3418 [= ILCV 2956] (Praeneste, 399; gravestone): *Primenius qui vixit | anus XÇ depotus XVIII | kal(endas) I de(cem)b(res) Th'e odor.*
- Conda CAR114 (Cagliari, uncertain dating; gravestone): [...] | *reg[ui]evit ... | die Ç [...].*
- Eph.Ep. IX 880 [= ILCV 4299] (Praeneste, 300-500; gravestone): *D[ulci]ssime cu[?]ugi Pauline | [marit]us benemerenti in pace | [quae vix]it anus XXXIII. Fecit in m | [atr]m(onio) annus XÇII. Deposita.*
- Fiocchi Nicolai (2006: 25-26) (Nepi / Sutri, uncertain dating; gravestone): *Deposit[io] ? ... qui vixit ann(os) ? | plus min[us - -] | d[ie]s (?) ÇI.*
- ICI IV 40 (Capena, 300-500; graffito in a catacomb): [*Depositio* ?] *Gaudenti (?) qui (?) vixit annos XII decem (?) | [menses ?] quidecem dies (?) XÇ k(a)l(endas) (?) Decem[bres].*
- ICI VIII 57 (Mirabella Eclano – AV, 559; gravestone): *α Ϝ Hic requiescēt | in pace Letus, Benedic | tula | Flora et Lumi | nosus qui vixeruñt | quantu(m) voluit D̄(eu)̄ | D̄ēpositus sub d(ie) XIII | kal(endas) Decembr(es) ind(ictione) Ç | p̄(ost) c̄(onsulatum) Basili v̄(iri) c(larissimi) anno XVIII.*
- ICUR I (n.s.) 3662 [= AE 2003, 299] (Anzio, 300-400; gravestone): *D(is) M(anibus) | Maxxima dece | sit in pas(e) dul | cissima bixxi[t] | annus ÇII et | mensens ÇII | d(iem) I spo(n)sata no(mi) | ne Vincentium [st] | ructorem | V Idu(s) | A(priles) | [...].*
- ICUR V 14815a,b [= AE 1937, 160] (Roma, 200-400; graffito in a catacomb): *cocorum XI | cocorum Ç.*
- ILSard I 102 (Cagliari, 300-400; gravestone): *Puero innocenti E | ytychio filio dulcissi | mo pater Eutychiân | us m̄ater Felicissim̄a | contr̄a votum fecer | uñt qui bixit ann(os) | XXI meses Ç dies XIII.*
- ILSard I 166 (Decimomannu, 400-500; gravestone): [...] *R + + | [... r|d]ec(essit) in | [p]ace Ç ka[l(endas) ...].*
- ILSard I 117 (Cagliari, 300-500; gravestone): *B(onae) m(emoriae) Restituta | [... a] nnis pl(us) m(inus) XXÇIII re | [quievit in] pace sudd(ie) XX | [... qui bissit annis pl(us) m(inus) [...] | qui{a}ebit in pace [...] Nobemb^r re^r.*

- ILSard* I 120 [= *ILCV* 3061] (Cagliari, 400-600; gravestone): + *Hic iacet b(onae) m(emoriae) Thed | ote qui bissit an | nis pl(us) m(i)n(us) XCI re | quiebit in pace su(b) d(ie) VII kalendas | Septemb(res) ind(ictione) | secund(a) +.*
- ILSard* I 122 [= *ILCV* 3061] (Cagliari, 400-600; gravestone): *Hic iacet b(onae) m(emoriae) Vitalis [qui bis] | sit annis pl(u)s m(inu)s XÇ quiev[it in] | pace su(b) d(ie) Ç id(u)s Ianuaria(s) | Hic iacet b(onae) m(emoriae) Mu | sa qui bissit anni[s plu] | s minus XLV requie | bit in pace s(ub) d(ie) ÇI i(dus) | Apriles in[d(ictione) ...].*
- Sc.Ant.* XIX 28 (Civitavecchia, 543; gravestone): [...] + *N* + [... *de*] | [*p*]osi-
ta est XÇII[*I* ? *Kal(endas)*] | [*Ia*]nuarias indictio | ne septima ite | rum p̄(ost)
c̄(onsulatū) Basili Iūnō(ris) | v̄(iri) c̄(larissimi) cōns{s}̄(ulis).
- Slavich* (2019: n. 78) (Roma, 300-430; gravestone): [... *vi*]xit mensis Ç [...] | [... *Sep*]
tombres im[*pace* ? ...].



The origin of the Persian =e copula and related questions. Reflections on the development of copulas in New Persian and Gavruni

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مثال هستی با نیستی روان و تن است
روان حقیقت هستی و نیستی بدن است
نه صرف هست هویدا نه صرف نیست پدید
نمایش خوش از آمیزش دو مقترن است
نه هست نیست شدستی نه نیست هست شود
نه حق جهان نه جهان حق نه جای این سخن است
مرا چه حد که بگویند آنی من است و من او
هر آنچه هست وی است و هر آنچه نیست من است
نه عکس شخص و نه ظل و نه موج بحر و نه یم
که ظل و شخص و یم و بحر جمله خویشتن است
بگوش کس نرود این حدیث نغز نشاط
بدل بگو، نه بهر دل، دلی که ممتحن است

Existence and nothingness are like unto body and soul:
Nothingness is the body – the soul's truth of the Existing all.

Neither is it completely evident, nor is it not obvious,
Of the mixed two binaries, it is the spectacle gorgeous.

'There is' does not become 'is not', nor 'there is not' becomes 'a thing'
Not the truth of the world, nor the world of truth: talk of this here is unfitting.

It concerns me not when they say 'that is I' or 'I am He',
Whatever exists, it is He, and whatever is not – 't is I.

No reflection of the self, no shadow; neither lake nor wave of sea,
The shadow, the self, the lake, the sea are all parts of Me.

This fine speech of Neshat's no ear can rightly hear,
But speak it to the heart: the tested one, so dear.

Neshat Esfahani (1759-1829)¹

¹ Many of the words discussed in this article are found in the poem – it is, of course, not the reason why I chose it as an epigraph. When talking about copulas and the verb 'to be' we assume that there is a common understanding of what "being" means. Yet, the tried heart of the mystic comes to tell us that "to exist" might mean something else alto-

ABSTRACT

In this article, various forms of both copulas and existential verbs in Middle and New Iranian are discussed. The main focus throughout is the origin, development and reflections connected to the Iranian copula paradigm in **b-*. This paradigm has evolved in various ways depending on the dialect and chronological stage, and it is argued that a form thereof is the origin of the Iranian New Persian 3SG copula *=e*, whose origin is presented in detail at the end of the study. To reach this conclusion, various forms of copulas and existential verbs in Early Judeo-Persian and other Early New Persian dialects, but also in another Iranian language (Gavruni), are analyzed

KEYWORDS: Persian studies, Iranian linguistics, Gavruni, historical morphology, morphosyntax

1. *Introduction*

While much has been published on copulas in Iranian languages, the fate of ‘to be’ and the copula in Persian are still mysterious to some extent. For instance, the origin of the spoken Iranian Persian 3SG copula *=e* has not yet been explained. It contrasts with the 3SG copula of Classical Persian and written Iranian Persian (*ast*)², Tajiki (*ast/hay/ay*), and with that of Dari (*asta*). To study these copulas, and the verb ‘to be’ in modern Persian in general is no simple task, and this study tackles only some of the many problems connected to this question. It will lead me to consider the copula and the verb ‘to exist’ in another Iranian language, Gavruni. While this language is not closely related to Persian, and while it has undergone different

gether. In this study, names of famous and modern poets are not transcribed accurately, but according to the common usage. I thank Prof. Judith Josephson for kindly reading a previous version of this article, and providing me with very useful comments and corrections, the two anonymous reviewers for very useful suggestions and references. I also thank my father, Prof. Gilles Bernard, for his help with the organization of the ideas of this study, and my Gavruni informants who have helped me by providing me data and answering questions. I am solely responsible for any mistakes or misconceptions therein. All translations, unless indicated otherwise, are by me.

² An anonymous reviewer has written that it should be emphasized that the *=e* copula is colloquial Persian. I disagree with that point: even in official speeches of politicians, royal family members, etc. *=e* can be heard, and in no way it is colloquial in the sense that it should be viewed as “informal”. However, it is indeed not part of the written language.

processes in its formation of a new copula, the description of these processes is a necessary step in the understanding of the emergence of the colloquial Iranian New Persian =e copula. I will provide a full explanation for the arising of the Iranian Persian 3SG copula ending, but also of that of Dari, both seeming aberrant from a historical point of view. The story I present might seem dissipated over various points, but they are all important pieces to understand, both typologically and diachronically, the development of the copula in Persian. All the points discussed here are needed to understand the origin of the Dari and Iranian Persian copula.

I will first present the paradigm of the indicative present of the Old Iranian verb ‘to be’ (§ 2), and its evolution in Middle Persian (§ 3), the situation in Classical New Persian (§ 4), the negation and its connection to the copula (§ 5) then I will present the copula in some Early New Persian dialects (§ 6), and also in Gavruni, or Zoroastrian Dari, as a parallel example (§ 7), discuss the copula in modern Dari (§ 8), then provide a full explanation for the development of the current Iranian Persian copula endings (§ 9), before concluding (§ 10).

2. *The Old Iranian verb present tense indicative of ‘to be’*

This is the present indicative paradigm we can reconstruct for the verb ‘to be’ in Old Iranian, which is virtually identical to the Avestan one.

1SG	<i>*ábmī</i>
2SG	<i>*áhi</i>
3SG	<i>*ásti</i>
1PL	<i>*^(h)mabī</i>
2PL	<i>*stā</i>
3PL	<i>*hánti</i>
1DU	<i>*usuahī</i>
3DU	<i>*stab</i>

Table 1. Old Iranian ‘to be’ in the indicative present tense.

Next to this there existed a verb **baṣ-/bū-* ‘to become’ (< PIIr. **b^bau-/b^bū-*), with a regular conjugation (**baṣami*, **baṣahi*, etc.), which could already in Old Iranian be used as a virtual future form of the verb ‘to be’. For instance, in Yasna 33:10

vīspā stōi hujītaiiō / yā zī āṣharō yāscā hōṣti
yāscā mazdā buuainṭi [...]

‘All the excellent pleasures to be / those indeed which have been (*āṣharō*), and those which are (*hōṣti*), and those, O Mazda, which will be (*buuainṭi*)’.

In Old Persian, the 1SG of ‘to be’ in the indicative present was spelled *amiy*, with one exception (Xerxes’ inscription in Persepolis: *ahmiy*). The other persons of the paradigm are: *ahay*, *astiy*, *ahmahay* and *haⁿtiy*.

The negation of the verb ‘to be’ was simply expressed by the particle **naiṭ* (Avestan *nōit*) + the verbal form, e.g. **naiṭ ahmi* ‘I am not’ and **naiṭ āsti* ‘he/she/it is not’, or by the same construction, with the *t*-less variant **nai* (typically found in Old Persian, e.g. *naiy āha* ‘there was not’). Besides, the Avestan infinitive of ‘to be’ was *stōi*; other interesting forms include *hqs* ‘being’ (present participle active of ‘to be’) < PIIr. **h_sa-nt-s*.

3. *The Middle Persian copula*

3.1. *The Middle Persian copula paradigm*

At some point between Old Iranian and Middle Persian, this paradigm underwent analogical remodeling on the basis of the 3rd plural form (**hanti*). All the other persons took the *h-* of **hanti* and a termination identical to that of the other verbs (Ferrer-Losilla 2013: 451)³ There are two reasons for this analogy: first, **hanti* was the only person

³ “Podemos considerar que el verbo PM *h-* se había tematizado a partir de la 3^a persona del plural [...] y que sólo la 3^a sg. *ast* procede de la antigua forma atemática **asti*”.

of the verb ‘to be’ with a recognizable primary active ending, and second, the stem *h-* is found in various other tenses and moods of the verb ‘to be’ (and thus could, to some extent, be identified with it), such as the present participle and the subjunctive, encouraging this analogy to happen. The 3SG form *ast* did not undergo the analogy at that point, because it was both seen as a verbal form and as a marker of nominal predication (Josephson 2003: 80). Below is a table of the present indicative for of ‘to be’ in Pahlavi (aka non-Manichaean Middle Persian)⁴ and Manichaean Middle Persian (MMP).

Pahlavi	MMP ⁵
<i>hēm</i>	<i>hēm</i>
<i>hē</i>	<i>hē</i>
<i>ast</i>	<i>ast</i>
<i>hom</i>	<i>hom, hēm</i>
<i>hēd</i>	<i>hēd</i>
<i>hēnd</i> or <i>hand?</i>	<i>hēnd</i>

Table 2. ‘To be’ in Pahlavi and MMP.

In Pahlavi the paradigm is spelled as arameograms (spelled <HWE-> for all endings, except for the 3SG spelled <AYTY>). An exception is found in more recent manuscripts, which have 1SG <hm>, 3SG <st> and 3PL <hnd>: Ferrer-Losilla (2013: 443) rightly warns us that a reading /ham/ and /hand/ for the 1SG and 3PL of these forms could be influenced by the correspondent modern Persian verbal endings. The 3SG negated form was spelled <LOYTY> in Pahlavi and <nyst> in Manichaean Middle Persian (MMP), in both cases it is to be read *nēst* which in turn derives from Old Persian *nai asti* (Ferrer-Losilla 2013: 443).

⁴ Mostly Zoroastrian with some non-religious and Christian material, Pahlavi is written in a different alphabet from Manichaean Middle Persian. It is divided between a book script (Book Pahlavi) and what is called Inscriptional Pahlavi. Unlike Manichaean Middle Persian, Pahlavi frequently uses Arameograms (words written in Aramaic) to denote actual Iranian, Middle Persian words, as in the examples cited below.

⁵ See FERRER-LOSILLA (2013: 443-447).

Importantly, *hēnd* does not go back to **hanti* (< PIE **h₂s-énti-*), but has also been remade and takes the *-ēnd* ending of all other verbs (cf. Ferrer-Losilla 2013: 451). As Ferrer-Losilla indicates (op. cit.), it is possible that the Pahlavi 3PL form was actually **/hand/* (thus a regular reflex of **hanti*). It is spelled <HWEnd>, that is, the <HWE-> arameogram + 3PL ending *-nd*. Skjærvø 1997: 166-168 interpreted it as <HWEND>, cf. however Jügel (2010: 33-35) who argues convincingly against this reading. In any case, it is impossible to tell if it was read */hēnd/* as in MMP or */hand/* (as probably in the later manuscripts which have <hnd>).

To sum up, two phenomena occurred one after the other: on the basis of the 3PL form **hand* < **hanti*, and, in my opinion, with the influence of a few other parts of the paradigm of ‘to be’ such as the present participle **hans*, a new paradigm was generalized: **h-* + verbal ending. In the course of this shift, the very form that was pivotal to it, **hand*, was replaced by *h-ēnd* (at least in MMP), that is, *h-* with the 3PL ending. The only form that resisted this process was the 3SG *ast*. A few examples of enclitic forms of the copula in Middle Persian, such as 2PL <-yt> in <GBRA-yt> ‘you are men’ are attested, always without the initial *h-* (Ferrer-Losilla 2013: 443), which was certainly dropped in this enclitic position.

In Middle Persian, the verb **baw-/bū-* ‘to become’ mentioned above (§ 2) is continued, spelled <bw-> or <b-> in MMP and with an arameogram <YHWWN> in Pahlavi (Ferrer-Losilla 2013: 460-462). It is functionally suppletive to the paradigm of ‘to be’, to the extent that the infinitive of the verb ‘to be’ in Middle Persian is *būdan*, the infinitive of *baw-* ‘to become’, which completely ousted the original infinitive (which one can speculate would have been **st-an*, if not an irregular infinitive **stāy*, cognate of Avestan *stōi* ‘to be’).

3.2. *The Middle Persian 3SG copula and its function*

A last point to take note of concerns the function and use of the 3SG copula in Middle Persian. The usage of 3SG copula *ast* is relatively rare in Middle Persian (Josephson 2003: 79 with references). Even languages which normally use copulas have categories where they can

dispense of them; Middle Persian, however, belongs to a category of languages which only uses copulas and existential verbs in subset of clauses (see Ferguson 1971: 115-117 for a description of the structure of both categories of language). In a major paper on the topic, Josephson (2003) demonstrates that, in Middle Persian, nominal sentences and sentences with *ast* differ in meaning. In nominal sentences, as there is no verb, no time is expressed by the clause (Josephson 2003: 81). Among the multiple examples cited by Josephson, one can cite the following:

- a. *az stāragān ī pad asmān fradom stārag tištar*
 ‘Of the stars in the sky the foremost star is Tištar’
 (Menog-i Xrad 87:5, transl. by Josephson 2003: 82)
- b. *artēštārān xwēškārīh dušmen zadan*
 ‘The duty of warriors is to defeat the enemy’
 (Menog-i Xrad 81:12, transl. by Josephson 2003: 82)

Literally, sentence a. reads as ‘of the stars in the sky, the foremost star Tištar’ and b. as ‘the duty of soldiers to hit the enemy’. One can note that, in some examples given by Josephson, there is expressed what we express in French by a *présent de vérité générale*, a ‘present tense of general truth’, what is called in English a “general statement”. Eternal truths, for which time and place are not relevant are mentioned in those nominal sentences, which is the case for examples a. and b., but also for some proverbs cited by Josephson, such as:

- c. *harwēn kas ošōmand*
 ‘everyone is mortal’ (Josephson 2003: 81)

More systematically, Josephson demonstrates that nominal sentences in Middle Persian are characterizations:

- d. *ēn zan man zan tō a-padixšāyīhā dārē*
 ‘This woman is my wife; you hold her without authority’
 (Mādīgān-i Hazār Dādestān 12:13-14, transl. by Josephson 2003:82)

Literally ‘this woman my woman: you hold her without authority’. What Josephson (2003: 82) means by characterization is that, in these examples, «the subject and predicate are only partially equal». For instance, in d., her being the speaker’s wife is only one aspect of this woman, it is a characterization, not an existential identification; in a. it is only one characteristic, among others, of Tištar to be the foremost star, in b. it is only one characteristic, among others, of warriors’ duty to hit the enemy, in c. as we all know, everyone is mortal, but also so many more things. Sentences with *ast*, however, contain a full identification of the subject to its predicate:

- e. *mayān xwanirah *kē pārag ī mayānag ast*
 ‘In the middle is Xwanirah *which is the middle part’
 (Selections of Zadspram 3:35, transl. by Josephson 2003: 82)
- f. *ēd rāy čē tīr māh čahārom māh ī az sāl ast*
 ‘This is why the month Tir is the fourth month of the year’
 (Selections of Zadspram 3:7, transl. by Josephson 2003: 82)

All the examples provided by Josephson follow the same line: when the copula *ast* is present, the subject is identical to its predicate: Xwanirah is identical to the middle part, Tir is the fourth month of the year. Besides, in Middle Persian, most presentative statements also require *ast*:

- g. *ēn man ast pid ēn man ast mād ud ēn man ast brād ud ēn man ast nārīg*
 ‘This is my father, this is my mother, this is my brother, this is my wife!’
 (Bundahishn 34:9)

It needs to be noted that *ast* is also used to express existence:

- h. *Gannāg-Mēnōg ast*
 ‘The evil spirit exists’
 (Bundahishn 1:12, transl. by Josephson 2003: 85)

In many other examples cited by Josephson (2003: 84), existence or presence (what is usually translated as ‘there is’) is indicated by *ast*.

One cannot but be convinced by Josephson's development: the nominal sentence in Middle Persian is concerned with characterization, the sentence with *ast* with equation, or presentation as existing or being there, so to say. Without *ast*, the sentence is limited to timeless, general characterizations, while *ast* «identifies the subject specifically» (Josephson 2003: 85). Josephson further demonstrates (2003: 85-88) that the copula *bawēd* (3SG of *baw-*, mentioned above) is used when characterization «comes into being as a contingency» (unlike the general truth of the nominal sentence), such as in the example i. below.

- i. *ud ka *be uzmūd ēg gōhr paydāg bawēd*
 'Having been tested, his substance has become manifest'
 (Denkard VI:105, transl. by Josephson 2003: 87)

As Josephson writes, here we are dependent on having tested somebody's nature in order for it to become manifest. The copula *bawēd* thus implies a process. The table below sums up the situation of Middle Persian.

CONTEXT	COPULA USED
General truth, rules, statements	No copula
Existential identification 3SG	Copula <i>ast</i>
Characterization	No copula if timeless, <i>baw-</i> if contingent
Presentatives and exclamations "this is X"	Copula <i>ast</i>
Existence (X exists)	Copula <i>ast</i>
Existential identification (other persons)	<i>h-ēm, h-ē, etc.</i>

Table 3. Presence and absence of copula in Middle Persian.

4. *Classical New Persian copula*

The situation of the copula in New Persian is quite different from that in Middle Persian. It is necessary to remind ourselves of the well-known but never enough repeated fact, that New Persian is not the

descendant of Middle Persian, but rather its sister language, both descending from intermediaries of sister languages of Old Persian. Whatever changes occurred in the prehistory of Middle Persian need not have occurred in that of New Persian, and vice versa. Besides, New Persian itself is rather a group of dialects, some which do not descend from the same ancestor as others, and it is in no way a unified standard language with languages that descend from its earliest form. This is true diachronically: contemporary Tehrani New Persian, for instance, does not directly descend from Classical Persian, as we will see below, and so on, and geographically: not all dialects, not even of Iran, go back to Classical New Persian – let alone Early New Persian, which is itself even less unified, because no standard variety was yet chosen. This was certainly the case for Middle Persian as well, and notable differences between the Zoroastrian and the Manichaean varieties thereof have been observed; nonetheless the language of the books and inscriptions is more standardized and unified, and we do not have access to the variety of Middle Persians that must have existed⁶. These points are very important in order to understand the developments that will follow.

4.1. *The clitic copula in New Persian*

In this section I will limit myself to the description of the copula in Classical New Persian, the standard literary language that imposed itself as the main written language of the Persianate world after the Mongol era, that is, after the 13th century. In Classical Persian, there is no independent *h-* paradigm as can be found in Middle Persian. We know the *h-* paradigm (i.e., the set of copular forms beginning with *h-* used in Middle Persian) must have existed in the precedent stage of the language notably because of the clitic copula found throughout Classical Persian, and because of the form *hast-* (see § 4.2). Some forms with *h-*, or going back to the *h-* paradigm, are also found in some early Persian dialects (see § 6.1).

⁶ It is a very complex and controversial topic, that goes much beyond the scope of the present article, however I believe, as did many scholars such as LAZARD (2003), that some Early Judeo-Persian varieties can be considered as Middle Persian dialects, rather than as New Persian ones. This could also be the case of some rather aberrant “Islamic” varieties as well.

Classical Persian clitic copula
= <i>am</i>
= <i>ī</i>
(=) <i>ast</i>
= <i>im</i>
= <i>ēd</i>
= <i>and</i>

Table 4. The copula in Classical Persian.

The same principle thus applies for Classical Persian as for Middle Persian: as mentioned above (§ 3.1) enclitic forms of the copula, also without *b-*, existed in Middle Persian as well. Nonetheless, they were rare in Middle Persian, and they are very common in New Persian, so much so that this clitic series is one of the primary ways to express identification and characterization. Generally, all persons are spelled as clitics but for the 3SG, which is alternatively spelled independently <ʔst> or as a clitic <-st>.

Although spelling conventions should not be overemphasized, they still say much about the ambiguous status of the 3SG copula *ast*, which existed both as a clitic and persisted as an independent morpheme. This can be observed in the variation in spelling between *ō ast* 'he/she is' (rather rare) and *ō=st* 'id.' (very common). The reason why the 3SG copula kept this status is obvious: it was never part of the *b-* paradigm, and there is no reason for which only a cliticized version thereof would subsist. According to Lenepveu-Hotz (2014: 265), *ast* has, together with *buwad*, the function of marking permanent and generic facts. In this, they are both comparable to the nominal sentence described by Josephson (2003). Lenepveu-Hotz (2014: 265) could find no strict difference as to the function of *ast* and *buwad*. She speculates (2014: 266) that the difference could actually be that *buwad* is used in an emphatic way.

Apart from the 3SG, the clitics of the copula are identical to the Classical Persian verbal endings, and it is only in the 3SG that one can formally differentiate between the copula (=ast, *ast*) and the verbal ending (-ad).

4.2. On *hast-* ‘to be, to exist’

Besides the paradigm of the clitic copula (+ *ast*), a new verbal paradigm came to be, already in Early New Persian (ENP): *hast-*, which is conjugated regularly, apart from the 3SG: *hast-am*, *hast-ī*, *hast* (instead of **hast-ad*), *hast-īm*, *hast-and*. It is a verb ‘to exist, to be’ and not a copula *stricto sensu*. However, its emergence is deeply connected to the copula *ast*. To understand how the paradigm of *hast-* came to be, we have to go back to the discussion by Josephson (2003) presented above (§ 3.2). What Josephson (2003: 90-92) observes for New Persian is that the copula *ast*, not only possesses all of the functions it occupied in Middle Persian, but is also used for the areas of characterization which were expressed by the nominal clause, while *buwad* and *bāšad* are used when «the validity of the identification is limited to a particular instance or circumstance [...]» (Josephson 2003: 91; cf. also Lenepveu-Hotz 2014: 266-267)⁷. We will not dwell on the function of *buw-* and *bāš-* which has been discussed in much detail by Lenepveu-Hotz (2014: 251-268). I will simply note the optative function of *buwad*, which, has not been observed by Lenepveu-Hotz. It is very rare, and certainly absent from her corpus⁸.

⁷ Interestingly, in a parallel way, nominal sentences which were common in Sogdian become less and less common after the 8th century (cf. BENKATO 2020: 177).

⁸ A salient example I could find is in this poem by Rudaki (858-941), the first great Persian poet:

Dīdār ba dil furōxt, nafrōxt garān
Būsah ba rawān furōšad=u hast arzān
Ārē, ki čō ān māh buwad bāzargān
Dīdār ba dil furōšad=u būsah ba jān!

She sold her sighting against one’s heart, ’t was not expensive!
 She sells a kiss for the price of one’s soul, and that is cheap.

Yes! May the merchant be like this Moon Lady,
 Who sells the seeing of her for a heart, and a kiss for one’s life.

What Rudaki means by *Ārē, ki čō ān māh buwad bāzargān* is: may the merchant (= may every merchant) sell as cheap as she does, as she only asks for life and heart in exchange for these precious gifts, her sight and her kiss. In Classical and Modern Persian, this should be expressed by *bāšad* (also *bi-bāšad* in Early and Classical Persian), and such a function is remarkable for *buwad*.

Josephson rightly notes (2003: 89, 92) that the nominal sentence (without *ast*) still exists, but only as a stylistic variant of the *ast*-sentence⁹. Still, there exists a number of words which warrant nominal sentences in Classical Persian (and, to some extent, in contemporary Iranian Persian as well), notably *bih* ‘better, best’. That is, “it is better” or “it is best [to]” will almost always be expressed by *bih* alone. Some examples: Khayyām: *az dars=i ‘ulūm, jumla bu=grīzī bih* ‘if you flee the lessons of science entirely, it [is] best’; Jāmī (1414-1492): *dar kēš=i ‘išq ‘afū zi qātil bih az qīšāš* ‘in the Creed of Love, forgiveness of the killer [is] better than the *lex talionis*’. The word *bih* fell out of use in contemporary Iranian Persian (replaced by *bih tar*, which does usually take a copula). Another such word is *kū* ‘where?’ which is used in nominal sentences in Classical Persian: as in Bidel Dehlavi’s *dar kārgāh=i taslīm kū ‘izzat* ‘where [belongs] honor in the workshop of surrendering?’, but also to this day in contemporary Iranian Persian: *kelid-am ku* ‘where [is] my key?’, *ketāb-et ku* ‘where [is] your book?’, as well as in Tajik: *бибиотун ку?* ‘where [is] the schoolma’am’ (Perry 2005: 125)¹⁰.

While Josephson does provide a sentence where *ast* seems to indicate existence, from a 10th century ENP text, I would argue that existentiality is the one domain which *ast* possessed in Middle Persian and lost in New Persian. Certainly, the Middle Persian model described by Josephson is more archaic, as it is closer to the Old Iranian, and even

⁹ For instance, in a song sung by the famous singer Homeyra (b. 1945), *Darvišān*, one can hear *Amir ol-moʔminīn Heydar, ke ū dāmād-e paygāmbār* lit. ‘the Commander of Believers Haydar, who he the son-in-law of the Prophet’. This is poetic language, of course, but it is still syntactically permitted.

¹⁰ PASTOR (forthcoming) has interpreted *ku* as an interrogative locative copula («copule interrogative locative»), and *kuš-* as a verb, while PERRY (2005: 125) views sentences with *ku* as copula-less sentences. LAZARD (2006: 112) considers *ku* to be a predicative adverb. I believe *ku* is certainly not a verb: it has two main forms, *ku* and *ku=š* (*ku=t* ‘where are you?’ might also be said, although not in Tehrani Persian; *ku=mun*, *ku=tun* will never be found or heard). The morpheme =š is not a verbal ending, but a pronominal one. This form *ku=š* is, by the way, somewhat connected to *hastes* ‘he/she/it is’ (see fn. 53). Now, *ku* does indeed function as a copula, in the bare definition of “copula”, so whether one views sentences with *ku* as nominal sentences or as sentences containing a copula *ku* is a matter of personal preference. However, since using the copula in sentences with *ku* in Persian is ungrammatical, I would agree in considering *ku* as a copula.

Indo-European pattern (Josephson 2003: 92). The copula *ast* was salient enough, in Middle Persian and pre-New-Persian, to fulfill the functions described above. Yet, once it became a general tool, removing the nominal sentence from its place, it lost the required salience it had in order to express existence. In other words, when *ast* is used to express equation and characterizations, a sentence such as *Gannāg-Mēnōg ast* would no longer mean ‘Gannag Menog exists’ but ‘Gannag Menog is’, idem for sentences where *ast* meant ‘there is’.

To fill this gap, a new form emerged: *hast*, which formally is due to the merging of the *h-* paradigm with the *ast* copula. This new form, and the paradigm which ensues (*hast-am*, etc.) is certainly provoked by the fact that the forms of the copula in Middle Persian had gradually become enclitic (cf. LENEVVEU-HOTZ 2023: 264)¹¹. Such a diachronic development is interesting, and should question us more. The primary function of *hast* is to express existence or existence in a place, although it extended to other functions as well. The very word ‘existence’ in New Persian is *hastī*, thus *hast-* ‘exist’ and the *-ī* abstract noun suffix.

Let us quote extracts of a poem by Rudaki (858-941), to illustrate the dichotomy between *ast* and *hast*.

- a. *imrōz ba har ḥāl=ē, baydād buxārā=st*
kujā mīr=i xurāsān=ast, pērōzī ānjā=st
 ‘Today, in any case, Baghdad is Bukhara,
 Wherever is the prince of Khurasan, victory is there!’

¹¹ More specifically, LENEVVEU-HOTZ (2023: 264) writes that the “formes toniques” (*hast-*) were built because the Middle Persian forms had become enclitic in New Persian. She adds that the new “formes toniques” of the copula can be used for emphasis and to avoid a hiatus caused by the vowel of the enclitic forms. I partly adhere to this scenario, although the hiatus avoidance explanation seems unnecessary to me. However, an important point to note here is that LENEVVEU-HOTZ does not seem to accept the fact that Middle Persian had enclitic forms (e.g. LENEVVEU-HOTZ 2023: 263 Table 7), although these did exist (cf. the discussion in FERRER-LOSILLA 2013; see § 4.1 above). One should, in my opinion, rather imagine a scenario where *hast* emerged only after *ast* became a clitic thus not because the other forms had become clitic, but because *ast* had become clitic. This would possibly have occurred in proto-New Persian, later than Sasanian Middle Persian. All evidence suggests that 3SG *ast* became enclitic only after all the other persons of the copula did.

- b. *may hast=u diram hast=u but=i lāla-ruxān hast*
yam nēst, w-agar hast, našīb=i dil=i a'dā=st

‘There is wine and there are dirhams and there are lily-faced idols!

There is no sorrow, and if there is, it is the lot of the heart of the enemies!’

In a., the clitic copula =*ast* shows what Josephson calls identification: Baghdad is Bukhara (metaphorically), wherever the prince/commander of Khurasan might be, that is the specific place where victory is. In b. *hast* just means ‘there exists/there is’ in the first *mišraʿ*, and could be translated, in a less impersonal manner, as ‘we have’: ‘we have wine, we have dirhams, we have lily-faced idols’ (literally ‘and idol of lily-faces’). In the second *mišraʿ*, *wagar hast* can only be translated as ‘and if there is’. Another early New Persian poet, Ayyūqī (11th century), says:

- c. *hamē guft agar jumlagī xās=u ʿām*
jahūdān ki hastand dar šabr=i šām
abā kirdagār āšnāyī daband [...]

‘He was saying, both noble and commoners,

If all the Jews who are in the province of the Levant

Were to acknowledge the Maker [...]

Here too, *hast-* clearly has the meaning of ‘exist, to be somewhere’: ‘if all the Jews who are in the Levant were to acknowledge the Creator’ (and recognize my prophethood, says the following *mišraʿ*). As said above, this is the primary and original function (I argue) of *hast-*, and still its main function in Tajiki Persian (Baizoyev & Hayward 2004: 34). Lazard (1963: 348) considers that *hast* is more emphatic than =*ast*, which is certainly true: it insists on the reality of facts. He cites, among others: *in šamsēr ki dārē ān hast guft ān hast* ‘[I learned that you were given a beautiful saber] is this the one you hold? He said: it is’ from the *Tārīx-i Ṭabarī*, a prose text. Thus *hast* is used for existence, for insistence on existence, and in general as a copula (Lazard 1963: 347). While I am unsure what Lazard’s opinion on the topic is, I do think that these characteristics of *hast-* are specific to it, as opposed to =*ast* which fulfills other roles in the grammar. By ENP, *hast-* could be used in any context =*ast* is, but the opposite was less and less possible.

However, there is an exception to this. Let us study a more recent example, which also displays both *hast* and *ast* in the same distich. It is by Neshat Esfahāni (1759-1829), poet and minister of foreign affairs under Shah Fath-Ali Shah Qajar.

- d. *marā ċi ĥadd ki bigūyand ān man ast=u man, ō*
har-ānċi hast way ast=u har-ānċi nēst man=ast
 ‘How does it concern me when they say <that is I, and I (am) He>
 Whatever exists is Him and whatever exists not is I’

Here there is a contrast between (=)*ast* used as a presentative (*ān man ast* ‘that is I’) and *hast* as a present stem of a verb ‘to exist’. The contrast is bright in *har-ānċi hast* ‘whatever **exists**’ and *way ast* ‘is Him’. This *ast* could be interpreted as either functioning as a general truth indicator (for which there would be no copula in Middle Persian), or as an existential identification or a presentative (for which *ast* would also be used in Middle Persian). In the same example, the poet says *u man, ō* ‘and I (am) He’, where the copula is elliptic. In this context **ān man hast* would not be meaningful: it would mean ‘that, I exists’, while *ān man hastam* could work, although not as ideally as *ān man ast*. There is thus one function fulfilled by *ast* which *hast* cannot fulfill: the function of presentative statements of first and second singular and all three persons of the plural, that is: “X is me” can be said *X hastam* (or *X man-am*) or *man X ast*, but not *man X hast*. In that sense, *ast* is comparable to *buw-*, which – after Early New Persian – is normally never found in other persons than the 3SG.

A last example of contrast – albeit with the deverbal noun *hast* –, in prose, can be found in Maybudi (ed. Hekmat vol. 4 p. 24f.):

- e. *pīr=i tarīqat guft: muxallaṣ hama az ō bīnad, ‘arīf hama ba-ō bīnad, har*
hast ki nām barand ‘arīyyat=ē-st hast=i ĥaqīqī ō-st, dīgar tuĥmiyat=ē
ast [...]

“The Guide of the True Way said: the Pure see everything [as coming] from Him, the Mystic see everything through Him, every **existing** [thing] which is named **is** a loan, the true **existent** He **is**, the rest **is** an illusion [...]

In this prose example, one can see a similar distinction as in the poetic example above: *ast* is contrasted (possibly consciously) with *hast*, the first being used for identification or qualification, the second as a noun ‘existent’. To note, Maybudi also uses *hast* as well as *ast* in the *mihī est* construction (cf. § 4.4).

4.3. On the origin of the verb *hast-* ‘to be, to exist’

Bopp considered the *hast-* paradigm to derive from the root **hišt-* ‘to stand’, with the form *hast* remade after *ast*, against an expected **histad* (followed by Müller 1899: 99; I could not find Bopp’s original statement). This opinion, with some variation, is held by MacKenzie (1984). He holds that the paradigm «*hastam*, etc., is a mixture of 5 parts MP /**istēm*, **istē*, **istēm*, **istēd*, **istēnd*/ and only 1 part /*ast*/, with the /*h-*/ borrowed from MP /*hēm*, *hē*/, etc.» (MacKenzie 1984: 55). The *-st-* should be regular from *išt*, comparable to the superlatives in *-ist* < **išta-* and the stem *ēst-* ‘to stand’ (cf. MacKenzie 1984: 48)¹². However, this hypothesis as presented by MacKenzie mostly serves the purpose of bringing weight to his supposition of a Middle Persian **ist-*, which he himself admits is unsupported by actual evidence (e.g. MacKenzie 1984: 53). The merging, of these two should thus have yielded an irregular paradigm, whose vocalism would have been from **ast* (I extrapolate, as MacKenzie remained vague on this topic); besides the fact that no independent evidence for **ist* comes in support of this. This would also go against the tendency of the 3SG to become regular, which we have seen and will see throughout the present article; the “creation” of a 3SG *hast* from **histad/hēstad* seems completely preposterous¹³.

¹² In any case, this latter argument in order to account for the *-st-* sequence here is unnecessary. Forms going back to **i-st-*, with no RUKI effect, for the verb ‘to stand’ are to be found in many different Iranian languages. There is no phonetic reason behind this: these forms are remade, or re-suffixed, with **staH-* extracted from the unprefixed reflexes (cf. BERNARD 2025a: 80, with a discussion of a similar example in Old Steppe Iranian).

¹³ I think that these scenarii, starting from BOPP, have been – consciously or unconsciously – influenced by the authors’ knowledge of the prehistory of French *être* ‘to be’, which verb is born of the convergence of Late Latin *essere* ‘to be’ and Latin *stāre* ‘to stand’.

In fact, no such complicated scenario is necessary: it is rather obvious that the paradigm of *hast-* specifically arose from the **h-am*, **h-ī*, etc. paradigm of pre-New-Persian (pre-NP), without the intervention of any other verb, in the way shown in the table below.

PRE-NEW-PERSIAN PARADIGM 1	PRE-NEW-PERSIAN PARADIGM 2		NEW PERSIAN PARADIGM 3
<i>*h-am</i>	<i>*h-am</i>	<i>*-am</i>	<i>hast-am</i>
<i>*h-ī¹⁴</i>	<i>*h-ī</i> ↓	<i>*-ī</i>	<i>hast-ī</i>
<i>*ast</i>	<i>*h-ast</i>	<i>*-ast</i>	↑ <i>hast</i> ↓
<i>*h-ēm</i>	↑ <i>*h-ēm</i>	<i>*-ēm</i>	<i>hast-īm</i>
<i>*h-ēd</i>	<i>*h-ēd</i>	<i>*-ēd</i>	<i>hast-ēd</i>
<i>*h-and</i>	<i>*h-and</i>	<i>*-and</i>	<i>hast-and</i>

Table 5. The development and origin of *hast-* ‘to exist’.

My scenario is the following: while the older **h-am* paradigm only survived as a clitic, losing its *h-*, the new New Persian paradigm *hast-* slowly replaced it as an independent copula. In the beginning, at the earliest ENP stage or even before, it was used almost exclusively in contexts of existence, but, as the *ast* copula was – perhaps – perceived as having lost its *h-* as well, and thus belonging to the category of clitics, *hast-* started taking over all the functions of the older series.

4.4. *On the mihi est construction*

Ancient Indo-European languages normally express possession through the *mihī est* construction, namely with a noun or pronoun in the genitive (or oblique, when they lost the genitive), a possessed noun in the nominative, and a reflex of the 3SG copula **h₃ésti*. This is the case

¹⁴ The nature of the 2SG ending vowel in the earliest stages of New Persian is not certain, and it is not relevant to the present study.

in most ancient Iranian languages as well, for instance Sogdian in the Buddhist Sogdian example e. below (Benkato 2020: 175f.). There was simply no verb ‘to have’ in Proto-Indo-European, Proto-Iranian, or even Old Iranian: the verb which later was used as an auxiliary ‘to have’ in a number of Iranian languages, **dār-*, originally meant ‘to hold’ (cf. Edel’man 1975). Yaghnobi, for instance, kept the *mibi est* construction, and did not develop a verb ‘to have’ (Edel’man 1975: 152; Benkato 2020: 180).

- e. *rty=by tw’ ynch ’sty ZY rync’kk z’k-t*
 ‘Sir, you have a wife and small children’ (Benkato 2020: 175)

With the glossing as provided by Benkato (2020: 175):

rty=by *tw’* *ynch* *’sty* *ZY rync’kk* *z’k-t*
 CPL=sir.VOC 2SG.OBL wife there.is and young child-PL

Here we can see *tw’* (2SG oblique) and *’sty* (*asty* = Pers. *ast*) expressing possession. Early New Persian and Classical Persian also have this construction. While it is not the only construction in order to expression possession in ENP and Classical Persian, as the verb ‘to have’ is also used (on this topic, cf. Lenepveu-Hotz forthcoming), it is quite frequent in the texts. On the other hand, both contemporary Iranian Persian (including Standard Iranian Persian, both written and spoken), Dari and as far as I know, Tajiki, lost this construction. A study by Lenepveu-Hotz (forthcoming) based on a corpus of 15 prose texts stretching from ca. 980 to 2004 shows that the *mibi est* construction fell gradually out of use, being completely obsolete from the 18th century on.

As an example of this construction, “thou hast a wife” will commonly be said in both ENP and Cl. Pers. *tu=rā zan=e-st*, with *ast* + the dative construction pronoun + *rā*. A typical example of this is provided by Omar Khayyām’s famous verse:

- f. *harčand ki rang=u rōy=i zibā-st ma=rā*
 ‘Although I have a beautiful complexion and face’

Glossed:

harčand ki rang=u rōy=i zibā-st ma=rā
 how.much that color=and face=EZ beautiful-COP.3SG 1SG=DAT

So, literally: ‘how much to me is beautiful complexion and face’¹⁵. This construction is also common in prose, as in the two examples below from Maybudi’s *Tafsir* of the Qur’ān (early 12th century), one positive and the other, negative.

- g. *wa ēšān rā-st dar ān bihišt zanān=i ādamī har mardē rā du zan wa ḥawrā bar ān ‘adad ki allāh dānad*
 ‘And they have, in that paradise, human women, two to each man; and houri, the number of which Allah knows’
 (*Kashful-Asrār*, ed. Hekmat vol. 1 p. 111)¹⁶

The beginning of the sentence might be clearer with a gloss:

wa ēšān rā-st dar ān bihišt zan-ān=i ādam-ī
 and 3PL DAT-COP.3SG in that paradise woman-PL=EZ human-ADJ
 ‘And to them is, in that paradise, human women’

- h. *‘ālam=i taqwē rā bidāyat nēst*
 ‘The world of piety has no beginning’
 (*Kashful-Asrār*, ed. Hekmat vol. 8 p. 11)

Literally, ‘to the world of piety a beginning is not’. The question we can raise is naturally whether *mihī est* constructions exist with *hast* and how do they differ from those with *ast*. Although only an extensive survey can answer this question, and this is outside the scope of the present study, it seems that many examples of *mihī est* constructions with *hast* in New Persian refer to feelings (Asadi Tusi *ma=rā hast ḥiṣmat* ‘I have shame’) or memory (Asadi Tusi *ma=rā hast yād* ‘to me

¹⁵ In the domain of prose, Maybudi (early 12th century), in his *Tafsīr*, systematically translates Arabic *lahu* ‘to him (is)’ as *ō rā ast*, with a full *ast*, and not **ō rā-st*.

¹⁶ Amir Kabīr editions, Tehrān 1382 (2003/2004 AD).

exists the memory’ = ‘I remember’), but there are counterexamples, and this needs to be explored.

5. Na, nē and nēst in New Persian

In the following, I will provide a short description of the particles *na*, *nē* and of the function of the negated copula *nēst* in New Persian, and then discuss the origin specifically of *na*. The prohibitive preverb *ma-* will not be discussed, as it is very rarely used as a particle (cf. Lazard 1963: 441 for such uses).

5.1. Negation and copula

One should also not underestimate the importance of the negation in the processes described above (§ 4.3), including in the process described in Table 5. The former negation paradigm was **na-ham* ‘I am not’, etc., which is *na-am*, *na-ī*, etc. in documented New Persian, except for the 3SG *nēst* (and not **na ast*). Another negation paradigm which is also in Classical NP is *nē-*, *nēy-am* ~ *nīy-am*, *nē-yī* ~ *nī-yī*, etc. as in this *mišra*‘ by Farrokhi Sistani (11th century).

- a. *si būsah marā bar tū waḏīfa-st walīkin*
āgāh nēyī k-az pas=i har būsah kinārī=st
 ‘It is my duty to give you three kisses. Nonetheless,
 You are not aware that after each kiss is a cuddle’

This can also be found in prose, such as in the following example from ‘Abdullah Anṣārī’s 12th sermon:

- b. *agar dar band=i xayr=i kasān nēyī, xwad rā banda=yi ēšān masāz*
 ‘If you are not bound by people’s kindness, do not bind yourself in service to them’

I will come back to this form of the negation in § 6.2.

Once the pre-NP paradigm 2 (Table 5) arises, and we have the form *h-ast* alongside *ast*, its clitic counterpart, *nēst* becomes the nega-

tion of both *ast* and *hast*. The negation of the other persons of the clitic paradigm is thus *na-am*, *na-ī*, etc., but the negation of *h-ast* is *nēst* as well. Originally, *nēst-* in the other persons, such as *nēstam* ‘I am not’, is specifically the negation of *hast*. One can quote this famous verse by Khayyam.

- c. *čūn āqibat=i kār jahān nēstī=ast*
angār ki nēstī čō hastī xwaš bāš
 ‘Since the end of (all) the world’s affairs are nothingness
 As if you did not exist (*nēst-ī*), while you exist, be happy!’

What Khayyam means is that, since death and destruction is the end of everything, while you still live, be as happy (and carefree) as if you did not exist. Basically: do not worry for a thing. I speculate – with the *caveat* that both forms do not have the same metric value –¹⁷ that the form *nēstī* could not have been replaced by *na-ī* as it would have meant *‘as if you are not’, and a predicate would be lacking (‘as if you are not’ what? – and something to the extent of ‘as if you are not alive’ *angār ki zinda na-ī* or the like would have been said). Obversely, when Firdawsi writes *hamē guft k-īn jāygāh=i man ast* ‘he was saying that «this is my rank»’, a sentence **k-īn jāygāh=i man hast* would have been too ambiguous: “that «my rank exists»” could also have been understood, besides, again, metrical needs. I insist that, while *hast-* can be used as a copula (Lazard 1963: 347), and so can *nēst-*, the clitic series (including the 3SG *ast* which is sometimes spelled in full) cannot be used as an existential verb. This functional distinction remains in modern Persian, spoken and written.

This situation is very complex, and, in the diachrony of the language, a confusion and a simplification occurs. In the table below I present the two series, the clitic one and the *hast-* one, and their negated forms, and in the third column, the negation paradigm which became gradually the main one, for both copula series.

¹⁷ This observation I owe to the reviewer. It is obvious that *na-ī* could not have been chosen here for metrical reasons, which is why my supposition remains speculative.

PERSON	CLITIC COPULA SERIES		HAST- PARADIGM		NEW NEG. PARADIGM
	AFF.	NEG.	AFF.	NEG.	
1SG	= <i>am</i>	<i>na-am</i>	<i>hast-am</i>	<i>nēst-am</i>	<i>nēst-am</i>
2SG	= <i>ī</i>	<i>na-ī</i>	<i>hast-ī</i>	<i>nēst-ī</i>	<i>nēst-ī</i>
3SG	(=) <i>ast</i>	<i>nēst</i>	<i>hast</i>	<i>nēst</i>	<i>nēst</i>
1PL	= <i>īm</i>	<i>na-īm</i>	<i>hast-īm</i>	<i>nēst-īm</i>	<i>nēst-īm</i>
2PL	= <i>ēd</i>	<i>na-ēd</i>	<i>hast-ēd</i>	<i>nēst-ēd</i>	<i>nēst-ēd</i>
3PL	= <i>and</i>	<i>na-and</i>	<i>hast-and</i>	<i>nēst-and</i>	<i>nēst-and</i>

Table 6. The copula, negated copula, *hast-* ‘to be’ and its negated form.

The fact that the negated 3SG form is identical for both series certainly played a role in the extension of function of the *hast-* series.

5.2. ‘No’ in Persian, Dari and Tajiki

The Middle Persian negation particle is *nē*, as in Parthian and Sogdian, for instance. In Dari and Tajiki, the particle ‘no’ is *nē*, in Iranian Persian it is *na*, spelled <nh> in the Arabo-Persian script. The form *nē* does have a reflex in the Iranian Persian particle *ni* ‘it is not; there is not’ which exists in some dialects. The form *na* ‘no’ is also not attested in other varieties of Persian outside of Iran, yet it is the ENP and Classical Persian form, also found in ENP poetry from Afghanistan and Tajikistan. It is found in some Iranian languages in Iran, such as Gavruni *nā* < *na*, but these are most likely borrowings from Persian. Horn (1898-1901: 155) considers that NP *na* is from Old Iranian *na*^o (cf. Vedic *ná*).

First things first: the negation particle spelled <nh> in Persian can theoretically correspond to either *na* as in modern Iranian Persian or to *nī*, the shortened version of *nē*, which is spelled <ny>, exactly as Persian <kh> ‘who’ corresponds to the shortened version of Persian *kē*, spelled <ky>, already in Rudaki (858-941)¹⁸. In fact, *kī* was even spelled <-k> in some manuscripts: e.g. *bidān-kī* ‘know that’ spelled <bd’nk> (بدانك),

¹⁸ JÜGEL (2013: 45-46) seems to consider the shortening of *kē* as a morphosyntactic phenomenon and restricts it to *ki* ‘that’: however, he does not take into account the fact that *kē* ‘who’ was also shortened to *ki*.

ān-kī ‘that which’ spelled <’nk> (آنک) in the Tafsīr-i Nasafī (cf. Joveini 1974). In the absence of vocalization, the form <nh> is not very informative¹⁹. Besides, in Early New Persian <nh> is much more common in verse than in prose, and it is usual for vowels of verse forms to be reduced. Nonetheless, some very early vocalized prose manuscripts such as Or 6573 (early 11th century) do display the form <n^ah> (نہ), and we can thus be certain of its antiquity.

Old Iranian *na*^o is not an independent particle that could have yielded NP *na*. In Early New Persian prose, *na* is mainly used in combination with verbs (Lazard 1963: 439), while *nē* is never used as a verbal negation particle (cf. Lazard 1963: 440). I argue that the very particle *na* in New Persian comes from the negation preverb *na-* combined with verbs in general and clitic copulas in particular. That is, *bad na=am* ‘I am not bad’ → *na bad=am* ‘I am not bad’, from which *na* was generalized as a particle. This phenomenon needs to be earlier than Early New Persian, so basically it needs to date back to Proto-New Persian, because *na* is already an independent particle in the earliest texts. The form *nē-yī* etc. with *nē* which is normally an independent particle not used in combination with verbs must logically be later and in imitation of *na-ī* etc. It is found in various dialects, such as Herati *nī-* (e.g. *balad nīy=om* ‘I do not know’). As to the Hazaragi 3sg *nīya*, Herati *nīye*, it will be treated specifically in § 9.

Let us note the form *nay-*, ex. *nayam*, *nayand* (cf. Lazard 1963: 346) to which we shall come back later (§ 6.2).

The negation form *nī* ‘it is not, there is not’ which we find in some dialects of Iran (e.g. Kāšān) but also in some regions of Afghanistan and Tajikistan under the form *nē* (see however the next paragraph for the Tajiki situation), does not come from *nēst*, but simply from *nē*.

¹⁹ This practice can also be encountered in the Early Judeo-Persian Vat. Pers. 61 manuscript, where we find the variant spellings <’nčy> and <’nč>, for the same word *ānčī* ‘who, what, that, whoever, whatever’. BERNARD (2025b) silently interprets them as reflecting two different pronunciations (*ānčī* vs. *ānčī*). Unless there is a particular reason to trigger one form and not the other, I think this is not evident, as it is a rather unified prose text written by only two hands. It is possible to conceive that the scribes were oscillating between one and the other spelling, but I would hold it in any case likely that they both reflect /ānčī/, as short *i* was not systematically spelled in Vat. Pers. 61, but long *i* was.

Above (§ 3.2) I mentioned the function of the nominal sentence in Middle Persian. In Middle Persian, the sentence containing *nē* was simply the negated nominal sentence, while *nēst* was the negation of an affirmative sentence containing *ast*. This is how both forms could survive in various dialects.

- a. *harwēn kas ošōmand*
‘everyone is mortal’

(Josephson 2003: 81)

Concretely, the negation of this sentence would ideally not have been **harwēn kas ošōmand nēst* but **harwēn kas ošōmand nē* ‘everyone is not mortal’, and this is the origin of *nē* as a copula ‘is not’. Its meaning ‘there is not’ comes from the fact that, in most dialects where it exists, it has completely replaced *nēst*, exactly like *nēst* has taken over *nē* in many other dialects. However, originally, they had two different functions²⁰. This is still the case in spoken Dushanbe Tajiki, for instance. This state of facts reflects the more archaic situation where *nē* and *nēst* did not merge: *nēst* strictly means ‘is not here’ and refers to the location, while *nē* means ‘is not’ and refers to the identity. For instance *ручка нест ručka nēst* means ‘there is no pen’ while *ручка не ručka nē* means ‘it is not a pen’, *и ручка нест ī ručka nēst* means ‘this pen is not here’ while *и, ручка не ī, ručka nē*, means ‘this is not a pen’. This *nē* ‘is not’ can also be found, although it is rather rare, in Early New Persian.

In the table below I summarized what I have suggested in this section.

NEGATION OF THE COPULA		INDEPENDENT NEGATION PARTICLE
= <i>am</i> , = <i>ī</i> , etc.	<i>na-am</i> → (<i>na ... am</i>) →	<i>na</i>
(=) <i>ast</i> , <i>hast</i>		<i>nēst</i>
Nominal sentence	<i>nē</i>	<i>nē</i>

Table 7. The rise of various negation particles in New Persian.

²⁰ In the unnamed dialect of Huart’s “pehlevi-musulman” manuscript (HUART 1889: 267), *nē-* has even replaced *na-* as a verbal negation prefix, as in *nē-bū* ‘he was not’ (instead of **na-bū*).

To this table it should be added that in Persian poetry at least, *na hast* also marginally exists, alongside *nēst*, as a negation of *hast* specifically.

6. *The copula in Early New Persian dialects*

Not all Persian dialects underwent all the changes described above, and this is particularly visible in Early New Persian, which has a richer dialectal attestation than Classical Persian. I will now present the copula in dialects of Early New Persian where it differs from the Classical Persian situation.

6.1. *The Early Judeo-Persian copula*

Below is the paradigm of the copula in Early Judaeo-Persian, based on Paper (1967) and Paul (2013).

PERSON	JUDEO-PERSIAN FORM
1SG	<i>hm ~ hwm</i>
2SG	<i>hy, -yy²¹</i>
3SG	<i>hyst</i> (more rarely <i>hst</i>)
1PL	<i>hym</i>
2PL	<i>hyd</i>
3PL	<i>hnd ~ hynd</i>

Table 8. The copula in Early Judeo-Persian.

²¹ PAUL (2013: 138). PAPER (1967) does not recognize a 2SG form of the copula, but there is <yy> in one of his examples, PAPER (1967: 228) <ytwyy ?frydg^r ?ym^r> (bold mine) ‘and Thou art our creator’ (Isaiah 64:7). The spelling with double *yod* indicates, in my view, a pronunciation */tūyī/ (or */tūyē/). PAUL (2013: 138) also cites the «exceptional verbal form» <-’y> occurring in one text <n’mdh ’y> ‘thou hast not come’. It appears that the 2SG is the only form of the copula that is also found without an *b-* in some texts, but apparently only as a clitic. I do not know the reason for this.

The Early Judeo-Persian paradigm is particularly interesting as it shows how the *h-* of the 3PL took the whole paradigm over, in a way similar to Table 5, but with the complete obsolescence of the *h-*less paradigm. The form *hyst* with *-y-* is the most mysterious of the paradigm. To note, the variation between *hst* and *hyst* in Judeo-Persian is dialectal (cf. Lenepveu-Hotz 2014: 63-64). It would be conceivable to explain <hyst> as the result of a merging of the stem *h-* with *ēst-* ‘to stand’ (as did MacKenzie 1984 for the entire paradigm of *hast-*, see § 4.3). However, it is hard to believe that such a merging would have left no single trace elsewhere in the paradigm, and only apply to the 3SG, which, even worse, should have become **hēstad*, spelled **hystd*. Furthermore, the stem *ēst-* ‘to stand’ exists as a fully-fledged verb in Judaeo-Persian (Paul 2013: 110), rendering this hypothesis even less likely.

Rather, I believe that the 3SG forms <hst> and <hyst> can be explained as being the result of a convergence of **h-ad* and **h-id*, which are simply the expected regular 3SG endings of a verb *h-* in Judeo-Persian together with the nominal predicate copula **ast*²². Since <hyst> and <hst> occur often in the same text, e.g. the Judeo-Persian argument (McKenzie 1968, once even within the same line, cf. MacKenzie 1968: 258), it could be conceivable to read both <hst> and <hyst> as [hist]²³. Its vowel would thus derive from the pre-Judeo-Persian **h-yd*. As a consequence of its mixed origin, continuing both the 3SG of ‘to be’ **h-yd* and the nominal predicate copula **ast*, *hyst* takes the role of both a verbal form and a marker of verbal predication. To cite Paul (2013: 138) «EJP *hest*, etc., covers both meanings of the copula (“he is”) and of the verb of existence (“there is”, “he exists”)». The table below sums up the present hypothesis, and the arrows indicate merging processes.

²² It is unclear how the 3SG verbal ending <-yd> of Judeo-Persian should be read (cf. LENEPVEU-HOTZ 2014: 46-48). Paul 2013:118 reads it as [ed], his reason for doing so being the spelling alternation <-yd> ~ <-d>. LENEPVEU-HOTZ (2014: 46-48) provides good arguments for a pronunciation /id/, notably because of multiple vocalizations as <-yⁱd>. The form <-d> of the 3SG ending could be read either [ed], a reduced form of [i:d] or [e:d] (if one is to read the 3SG ending as such), or [ad], continuing, like the NP 3SG *-ad* (and perhaps influenced by it), the Old Iranian primary 3SG thematic ending **(a)ti*. As this debate does not relate to our present topic, I will adopt LENEPVEU-HOTZ’s interpretation in this article.

²³ In the Judeo-Persian argument, I counted 50 occurrences spelled as <hyst> and only 5 spelled as <hst>.

PERSON	JUDEO-PERSIAN VERB 'TO BE'	NOMINAL PREDICATE COPULA
1SG	<i>h-om, h-am</i>	
2SG	<i>h-ē</i>	
3SG	* <i>h-id</i> (<hyd>) → <i>hist</i> (<hyst>) ←	* <i>ast</i>
1PL	<i>h-īm</i>	
2PL	<i>h-ēd</i>	
3PL	<i>h-ēnd</i>	

Table 9. The origin of the Early Judeo-Persian copula.

Below is an Early Judeo-Persian sentence (from Lazard 1995: 169) which contains multiple copulas. It is useful to look at it to get a better idea of how the Judeo-Persian copula functions (copulas in bold).

a. *hq 'n **hynd** ymn pdyš 'ystydh **hw**m wb'tyl 'n **hyst** kw tw pdyš 'stydh **hy***

'Truth **are** those things which I **am** arguing for, and error **is** that which thou **art** arguing for'

One can first observe the construction "truth are" instead of "truth is": the plural of the copula is agreeing with an absent object, *'truth are [those things] which you argue...' This is unusual for Persian, which may even use a 3SG copula even when the subject of the copula is plural.

The same verb 'to be' built from *h-* + verbal ending is found in at least one poem by Bābā Tāher, an 11th century Iranian poet who composed in a local dialect (on Bābā Tāher in general and on his dates in particular, see Browne 1906: 259-261). This dialect (traditionally called *Fahlavīyāt*) is often viewed to be a form of Persianized Luri. In my view, it is clearly a Persic language (that is, belonging to the so-called "southwestern Iranian language branch"), and a relatively close kin of Persian. The corpus of Bābā Tāher is definitely remarkable, as it provides us with rare and precious dialectal data from a very early period. One finds the following verse among Bābā Tāher's recorded verses:

- b. *basī hand=u basī šand=u basī yand*
 ‘Many are and many go and many come’

While I am uncertain how many more examples of the verb *h-* we can find in Persian literature outside of EJP, its presence in dialectal verse is proof that it was more common than usually assumed.

6.2. *The Tafsīr-i Nasafī, some Tajik dialects and the hay- copula*

Besides Judeo-Persian, another document brings a very important witness of the rich dialectal diversity of Early New Persian²⁴, it is the so-called “Tafsīr-i Nasafī” (henceforth TN), which corresponds to the manuscript n. 34 of the catalog of manuscripts of the Library of the Province of Qods, called by Lazard (1963) “Tafsir de Machhad”. One should not confuse it with the *Qur’ān-i Quds*, a Quran with an inter-linear dialectal Persian translation analyzed and presented by Lazard (1995) and Filippone (2011). The “Tafsir de Machhad” was written by Najm ad-Dīn Abū Ḥafṣ al-Nasafī (1068-1142), a scholar from Nasaf (modern day Qarshi, in Uzbekistan). In the following, I will make some remarks, preliminary as a full study of the whole manuscript is needed, concerning the copula and the verbs of being in TN.

One of the most important points to recall here is that some forms of the copula found in TN are aberrant, yet also found in some Tajik dialects, which is not surprising given the origin of Nasafī. In the table below I list those forms mentioned by Lazard (1963: 122, 347), and those which I found myself in my survey of Joveini’s edition of TN (Joveini 1974). I also list the Tajik dialectal forms given by Rastorgueva (1956: 53). These are from northern dialects, spoken around Khujand, but for the sake of concision I will refer to them here as “Khujandi”. The Tajik dialect forms are obviously close to the TN because they both originate from the same region of the Persian-speaking world.

²⁴ This diversity did not die out so much with Classical Persian emerging as it simply ceased to be documented. The prestige of standard Classical Persian was so loud that nothing else could be heard (cf. LAZARD 2003: 95). So it is again the case today, with Tehran Persian drowning out all other varieties.

PERSON	TAFSĪR-I NASAFĪ		KHUJANDI	
	AFFIRMATION	NEGATION	AFFIRMATION	NEGATION
1SG	n.a. <i>-am</i>	<i>nayam ~ nh-ʻm</i>	<i>hayam</i>	<i>nestam</i>
2SG	<i>hyy</i> <i>-yy</i>	n.a.	<i>hayi</i>	<i>nesti</i>
3SG	<i>hst</i> <i>ʻst</i>	<i>ny</i> <i>nyst</i>	<i>hay</i>	<i>ne</i> <i>nest</i>
1PL	n.a.	n.a.	<i>hayim</i>	<i>nestim</i>
2PL	<i>hyyt</i> <i>-yt</i>	<i>nyyt</i>	<i>hayit</i>	<i>nestit</i>
3PL	<i>hynd</i> <i>-nd</i>	<i>nynd ~ nb-ʻnd</i>	<i>hayan</i>	<i>nestan</i>

Table 10. The copula in TN and contemporary Khujandi.

Even in more southern regions of Tajikistan, a copula *ay* can be found. During my own fieldwork in Tajikistan (in August 2025), I noted the following paradigm for the copula in Fayzobodi, a dialect spoken in Fayzobod, 50km east of Dushanbe, from a native speaker in his 60s named Zafar.

PERSON	FORM
1SG	<i>eyam</i>
2SG	<i>iyī</i>
3SG	<i>ay</i>
1PL	<i>iyīm</i>
2PL	<i>eyīd</i>
3PL	<i>and</i>

Table 11. Forms of the copula in the Fayzobodī Tajik dialect.

The speaker first gave me the form *eyand* for the 3PL, but then insisted that it does not exist, and that Fayzobodī has an (apparently irregular) 3PL *and* (with a distinctly pronounced final *-d*). In Fayzobodī, I could note that the existential verb ‘to be’ is *hast-* (e.g. *mardum ujaʻ hast* ‘there are people there’ = ‘people are living there’), like in all other dialects. I will produce an explanation of the origin of the Fayzobodī paradigm below as well.

To note, in TN, clitic forms of the copula exist, probably for all persons: *man-am xudāy* ‘I am God’ (cf. Lazard 1963: 1223), *girawīda-and* (var. *girawanda-and*) ‘they have believed’ (cf. Lazard 1963: 1223), *kasānē-and* ‘they are people (who...)’ (Q 2:8). It exists also in the nega-

tion: *wa na-and ēšān girawandagān ba-ḥaqīqat*, ‘and them, **they are not** believers in Truth’ (Q 2:8, translating *وَمَا هُمْ بِمُؤْمِنِينَ*). Another example of this copula is discussed in Lazard (1963: 347), and presented below.

- a. *wa duxtarān=i zanān=i šumā ki bayand dar kanār=i šumā*²⁵
‘And the daughters of your wives who **are** by your side’

The negation particle in TN is *nē* (as in *bā way gūyūt bā man nē* ‘speak with him, not with me’, commentary to Q 19:29). This is the original situation I postulated for the earliest stage of Persian, *na-* being initially strictly a verbal negation prefix. I will take the opportunity of citing the TN commentary of Q 2:22, *فَلَا تُجْعَلُوا لِلَّهِ أَدَادًا وَأَنْتُمْ تَعْلَمُونَ*, ‘so do not make Allah rivals while you know [about his creating the earth and sky]’ in order to present some data concerning the use of copulas in this text.

- b. *pas mar xudāy rā šurakā wa nuzarā ma-kunīt wa šumā mē-dānīt ki xāliq=u rāziq way=ast*
but nē wa yakē=st (/ *yakē ast?*) *ba-ḥaqīqat kasē rā bā way širkat nē*
*pas ma'būd way=rā dārīt wa 'ibādat way=rā ārīt wa ba-rasūl=i way wa kitāb=i way bi-grawīt*²⁶
‘So do not make unto God associates and rivals and you know [calque of the Qur’ānic syntax = while you know] that the Creator and Sustainer **is** him (*way ast*),
and not the idols, and [that] he is one: in truth **no one is** associated with him (*ba-ḥaqīqat kasē bā way širkat nē*)²⁷,
so hold him as being worthy of worship and worship him and believe in his messenger and his Book’

This relatively short text still gives us some noteworthy points to discuss. First, *ast* is used for full identification of the subject to the predicate (cf. § 3.2). Second, while the first *nē* could be interpreted as a particle ‘no’: ‘the Creator and Sustainer is him, the idols, no’ (which

²⁵ Translation of *Qur’ān* 4:23 *وَرَبَائِكُمُ اللَّاتِي فِي حُجُورِكُمْ wa-rabā’-ibukumu llāti fi ḥujūrikum* ‘and your step-daughters who are under your guardianship’.

²⁶ Joveini (1974: 8). پس مر خدای را شرکا و نظرا ممکنیت و شما میدانیت که خالق و رازق وی است. است بت فی، و یکی است به حقیقت کسی را باوی شرکت فی پس معبود ویرا داریت و عبادت ویرا آریت و به رسول وی و کتاب وی بگرویت

²⁷ It could also be that *ba-ḥaqīqat* refers to *yakē*: ‘that He truly is one’.

in English sounds very strange, but less so in Persian, even standard Persian), the second one would hardly be considered as a particle ‘no’. In standard literary Persian it would be rendered as *kasē rā bā way šir-kat nēst* literally ‘to somebody **there is no** association with Him’. This is simply the *nē* copula ‘there is not’, which we also find nowadays in various dialects, in Kāšān in Iran for instance. Yet, in TN we also find *nēst* (<nyst>). It is crucial for a better understanding of these questions to look at the entire manuscript and determine whether there is a distribution between both forms. For now, it is sufficient to note this, and also to underline that the northern Tajik dialects described by Ras-torgueva (see Table 10) also have both *ne* and *nest* as negation copulas. In Kashani, there is only *ni* (< **nē*) as far as I could observe.

The future of ‘to be’ in TN is the very stem *buw-* which, although it originally is a verb ‘to become’ (see § 2), normally has a similar function to *ast* in Persian (see § 3.1). We can observe this in the example below, which is the commentary to S 2:16 *وَمَا كَانُوا مُهْتَدِينَ* ‘and they were not guided’:

- c. *wa na-būdand wa na-and wa na-buwand yābanda=yi hudē wa karāmat*²⁸
 ‘and they were not, and are not, and will not be encountering guidance
 and (divine) generosity’

This is probably an archaism²⁹. In TN *hast* translates the Arabic copula *kāna/kānat*, while *ast* is usually used to render the Arabic

²⁸ Joveini (1974: 6). *وَنَبُودِيَدُ وَنَهَائِدُ وَنَبُونِدُ يَابِنْدَةُ هُدَىٰ وَكَرَامَتِ*

²⁹ We can also look at the commentary of Q 19:6, *رَبِّیْ وَرَبِّیْ مِنْ ءَالَ یَعْقُوبَ وَاجْعَلْهُ رَبِّ رَضِیًّا*, namely *که میراث گیرد از من و از آل یعقوب نبوت یعنی شایسته آن بود که به وی وحی فرستی به رسالت و پسندکار* (adapted from Joveini p. 574) ‘who takes on the heritage from me and from the people of Ya‘qūb [in what concerns] prophethood, that is, he *buwad* worthy of Thee sending him revelation for [his] messenger-hood and make him O Sustainer satisfied and pleasing [Thee] by his works’. I would argue that *buwad* here is also used as a future-tense verb and I would translate it as ‘he will be worthy’. In the commentary to Q 19:8 *قَالَ رَبِّ اُنِّیْ یَكُوْنُ لِیْ غَلَمٌ* ‘he said O my Sustainer! how *buwad marā* a son’ one can translate it as ‘how may there be a son to me’ or ‘how will there be a son to me’, and so it is more ambiguous. Here too, a more thorough investigation is required. There definitely are passages where *buwad* does have the same function as in Classical Persian. In Classical Persian, forms other than 3SG *buwad* are rather rare, yet they are common in TN. In the commentary to Q 89:170, those who died on the way of Allah *šādmān buwand* (= Ar. *فَرِحْنَ*) ‘they are happy’. This is clearly a present tense use of the verb, as those fighters are supposedly already happy immediately after their death.

meaning when there is no copula. As is known, Semitic languages, among which Arabic, do not generally use a verb ‘to be’ and the Arabic verb *kāna* renders the notion of ‘existence’ or is used emphatically in the present tense, and can be considered as a past-tense verb ‘was’ in the past. This could be – although a more thorough study is needed – an interesting element pointing towards a difference between *hast* and =*ast* in the dialect of TN. In the commentary to Q 2:26 *إِنَّ اللَّهَ لَا يَسْتَحِي أَنْ يَضْرِبَ مَثَلًا مَا بَعُوضَةٌ فَمَا فَوْقَهَا* (‘Indeed, Allāh is not timid to present an example - that of a mosquito or what is smaller than it’)³⁰, Allah is called *hast kunanda* ‘the maker of existence’:

- d. *wa ċi jāy=i inkār ast ki āfrinanda=yi paša wa pīl way ast*
wa hast kunanda=yi kaṭīr wa qalīl way ast
wa hast kunanda=yi magas wa ‘ankabūt way ast
 ‘And how can it be denied that that the creator of the mosquito and the elephant is Him (*way ast*),
 and he is (*way ast*) the maker of existence (*hast kunanda*) of the much and the few,
 and he is the maker of existence of the fly and the spider’

That *hast kunanda* means more or less ‘bringer into existence’ points towards a meaning ‘existence’ for *hast*. This expression is also found in Maybudi’s *Tafsīr*, for instance (ed. Hekmat vol. 1 p. 228; vol. 9, p. 15). However, for the other persons, *hast-* is not commonly used in TN, but instead the forms mentioned in Table 10 are used, such as in the sentence below, which is the commentary to Q 67:25 *وَيَقُولُونَ مَتَى هَذَا الْوَعْدِ إِنْ كُنْتُمْ صَادِقِينَ* ‘and they say: when is this promise, if [only] you were truthful’.

- e. *wa mē-gūyand kay buwad īn ‘ahd, bi-gūyīt agar hayīt rāstgūyān*³¹
 ‘And they say: when will this promise be, say, if you are truthful’

I could not find an occurrence of the 1SG (nor could Lazard 1963), or of the 1PL, but I have not surveyed the entire text. In comparison

³⁰ Translation of Saheeh International.

³¹ و می گویند کی بود این وعده بگویند اگر هیبت راست گویان

with the northern Tajik dialect forms (see Table 10), we can posit them to be **hayam* and **hayim*.

An important point relative to the *hay-* vs. *h-* clitics, and to the copula in TN is that the 3PL ending in TN is not *-ynd* but *-nd*, so that there is no reason to read *hynd* as *h-* + *-ynd*, as we did for Judeo-Persian above (§ 6.1). One cannot claim with absolute certainty the *-y-* to be a hiatus consonant. Besides, there would be no reason to spell the 2SG as <hyy> if it were simply *h-* + 2SG (*-ī* or *-ē*), and the same argument also works for the 2PL.

First, let us look at the forms of the TN. I believe we should start with the negated forms. In TN, we find forms such *nayam*, *nayīt*, *nayand*: ‘I am not’, ‘you.PL are not’, ‘they are not’. We also have forms such as *na-am*, *na-ī*, *na-and*, as in Classical Persian. The *nay-* forms are certainly more authentic, and the *na-am* etc. series are remade, either after the more standard Persian forms or, more likely, simply on the model of other negative verbs. The *lectio difficilior* principle should be applied here. Besides, *a|a > aya* is a feature found in some dialects of the region to this day. For instance, in Pamir dialects of Persian, *āmadam* ‘I have come’ is pronounced *āmadayam*. We can thus posit the following paradigm of negation for TN: *nayam*, **nayı³²*, *nē* and *nēst³³*, **nayim*, *nayīt*, *nayand*. On the other hand, we originally had two series of copulas, one independent series **ham*, **hī*, **hast*, **hīm*, **hīt*, **hand* vs. an enclitic series *=am*, *=ī*, *=ast*, etc. The negated forms of either series yielded the negation paradigm (either through **na-ham > na-am > nayam* etc. or directly through *na-am > nayam*, etc.). On the basis of this second series, the first copula series would have been remodeled: *nayam* : **ham* → **nayam* : *hayam*. I summarize this in the table below. In view of this, I find it more likely that the forms *na-am*, etc. are synchronically simple negations of the enclitic series.

³² As I have not surveyed the entire text, some of these forms might actually be attested. I write an asterisk in front of the forms which I have not seen.

³³ One could theoretically think that what is spelled <nyst> stands for /nayast/ < **na-ast*. This could explain the two different negation particles. I do not wish to speculate any further on this topic in the frame of the present article.

NEGATION	RECONSTRUCTED 1 ST SERIES OF COPULA	1 ST SERIES OF COPULA
<i>nayam</i> →	* <i>ham</i> →	* <i>hayam</i>
* <i>nayī</i> →	* <i>hī</i> →	<i>hayī</i>
<i>nē</i> <i>nēst</i>	* <i>hast</i> →	<i>hast</i>
* <i>nayīm</i> →	* <i>hīm</i> →	* <i>hayīm</i>
<i>nayīt</i> →	* <i>hīt</i> →	<i>hayīt</i>
<i>nayand</i> →	* <i>hand</i> →	<i>hayand</i>

Table 12. The origin of the copula in TN.

As is apparent from this table, the only person of the negation series which did not have a form with *-y-* in the negated copula paradigm, the 3SG, is also the one person for which we are certain that no form this *-y-* existed in the copula paradigm. This seems to prove my point, that the *hay-* paradigm derives from the negation paradigm.

This theory would also apply to the Northern Tajik dialects mentioned above. However, in those dialects, the *nay-* negation paradigm would have been replaced by the *nest-* paradigm, which was perhaps the negation of the enclitic series of copulas, or rather, due to influence from other dialects. In those dialects, it is the 3SG *hay* ‘he/she is’, which is strange. I see only one possible explanation for it, namely: on the model of *nestam*, *nesti*, *nest* → *hayam*, *hayi*, *hay* would have been produced. This means that this change occurred after the creation of the *nest-* paradigm in these dialects.

For Fayzobodi (see Table 11), we find an apparently strange *e*-vocalism of the copula, which turns to *i-* when preceded or followed by an *ī*, except, as far as I could hear, in the 2PL (e.g. *Šams eyam* ‘I am Shams’, *Tājik iyīm* ‘we are Tajik’)³⁴. For unfortunate material reasons, I have been unable to complete my fieldwork on this dialect, and thus to document the negative copula in Fayzobodi. However, I suppose that it is, or has been at some point, **neyam* < **nē-am*, **neyī* < **nē-ī*, etc. This would explain perfectly the vocalism of all persons of the para-

³⁴ The form *iyīm*, like all other forms of the paradigm, was provided to me both independently and in an illustrative phrase.

digm but that of the 3SG. We would perhaps expect **ey* as a 3SG. Now, a reasonable explanation for the 3SG form *ay* is obviously that there exists no diphthong *ey* in Fayzobodī; *eyam* for instance is syllabically *e|yam* (as I have been able to ascertain while working together with the speaker). A 3SG **ey* (produced analogically as in the model described above) would thus automatically become *ay*³⁵. Again, the form of the 3PL form *-and* remains a mystery to me (but further research is definitely needed on this dialect).

Now, why would negation have such a seminal effect on the copula system in these Transoxania and Fayzobodī dialects? The reason, in my view, is to be sought in the fact that, in those very dialects as in general Tajik, in the spoken language, the copula is usually avoided: *ин китоб* ‘this book’, meaning ‘this is a book’ (Baizoyev & Hayward 2004: 34). If the copula is lacking in common speech, the negative copula can never be absent: you need to say *ин китоб нест* or *ин китоб не* to say ‘this is not a book’. In my view, this is an archaism, continuing the Middle Persian situation to some extent (see § 3.2; § 4.2). This gives precedence to the negative copula over the affirmative copula, and explains the analogical power of the negated copula paradigm over the affirmative copula paradigm³⁶. Obviously, *ин китоб нест* should originally be the negation of *ин китоб аст*, and *ин китоб не* that of *ин китоб*.

The present discussion would not be complete without mentioning the *hay-* forms found in Classical Persian poetry. These are known since the days of yore (cf. Lazard 1963: 347 with references), yet they are scanty, so we can cite most of them here, as found in Dehrodā (1946-1981, s.v. *هی*). Bold mine.

³⁵ I am uncertain how relevant this is to the question of the form of the 3SG, but the 3SG copula appears very frequently in the present perfect *būda-ast* construction (which construction, in Fayzobodī and in Tajiki in general, is not always a present perfect, but should rather be called a “perfectoid imperfect”, cf. NILSSON (2022) for a detailed description of its function, including in New Persian), for instance *panj minut buday* (< *buda-ay*?) ‘it has been five minutes’ (in the context the sentence meant ‘it has lasted five minutes’), *Fayzābād-da tawallud šidagi-ay* ‘he was born in Fayzobod’. One can imagine that *buda-ey* > *buda-y* > *bud-ay*, but this is speculative and unnecessary.

³⁶ I thank Prof. Gilles Bernard for guiding me towards this solution.

- f. Suzanī Samarqandī (d. 1166).
hayam ba-pilla=yi nekī zi yak sipandān kam
ba-pilla=yi badī andar hazār sipandānam
 ‘On the steps of Goodness, **I am** less than a grain of mustard,
 On the steps of Evil, I am thousands grains of mustard’
- g. Rumi (1207-1273)
guft yā rabb gar tū=rā xāšān hayand
ki mubārak da‘wat=u farrux payand
 ‘He said: ‘O Lord! If **there are** to you noblemen,
 Who are auspicious to invite, and well-fated [...]
- h. Hafez (1325-1390)
sāqī agar-at hawā=yi mā hay
juz bāda mabād nazd=i mā, hay!
 ‘Cup-bearer, if you care about us³⁷,
 Let there be nothing but alcohol next to us, hey!’³⁸

The example f. is by Suzanī Samarqandī, who was from the same region as Nasafī, and must probably have spoken a similar or identical dialect. This is simply an addition to the data we have about the early dialects of the region. A welcome addition, as I have not found a form *hayam* in TN. The examples g. and h., by two of the kings of Persian poetry, represent the *mibi est* construction (§ 4.4), and are functional subjunctives (preceded by *gar/agar* ‘if’) which could be rendered by *bāšand* (g.) and *bāšad* (h.) in contemporary Persian. The example g. *gar tū=rā xāšān hay-and* can be glossed as ‘if to thee noble.PL *hay*-3PL’ and the example h. *agar-at hawā=yi mā hay* as ‘if-thee air=EZ we *hay*’ (‘to have somebody’s air’ in Persian means ‘to care about somebody’).

Rather than associating these forms to those of the Transoxania dialects discussed in this section, I would suggest that they go back

³⁷ We may interpret this verse as containing the *mibi est* construction, as the 2SG clitic *-at* has the same function in the phrase as the construction with *tu=rā* ‘to you’, based on the independent 2SG pronoun + the *rā* element in its dative function. Literally this verse can be rendered as: ‘Cup-bearer, if to you is (*hay*) a care of us’.

³⁸ The fourth poem in Dehxodā is by a so-called Najībī, about whom I could find no information. I will refrain from citing it here, however the form in that *bayt* is <hy> 2SG, so it could simply be *h-i*, another remnant of the ancient root *h-* ‘to be’.

to the ancient optative of the verb ‘to be’, 3SG <hy>/<HWE> (cf. Ferrer-Losilla 2013: 77), with a shift in function. This optative form would perhaps have been realized /hay/ in Middle Persian, and this form would have been kept as such. Another possibility is that the 3SG *hē*, generalized to the other persons, would have yielded **hē-am* > **hyam*, **hē-and* > **hyand*, which regularly yielded *hayam*, *hayand* (etc.) in turn. The form *hay* of h. would not be explained thereby, so the mystery remains. Using the 3SG optative to explain the TN forms is difficult, as the 3SG in TN is *hast* / =*ast*, so that we would have to accept that this 3SG optative form disappeared after leveling the entire paradigm. It is, however, possible to use it to explain the Northern Tajik dialect forms as an alternative scenario to the one I suggested above.

7. *The copula in Gavruni (Zoroastrian Dari)*

There are actually many more variants of the copula in Early New Persian dialects and close relatives (cf. Browne 1895 for some examples). These, however, should be treated in separate works, as this one is intricate enough, and as what interests us here is mostly copulas going back to Middle Persian *h-*. To reach the goal of the two next sessions, namely, explaining the formation of the copula in modern Afghanistan Persian (Dari) and Iranian Persian, I will discuss one more linguistic variety, which will serve as an example of the treatment of the development of copulas in Iranian languages. It is the Gavruni language, in its Yazdi variant, which I will take as an example. Gavruni, also called Zoroastrian Dari and Behdini, is the language of Zoroastrians, traditionally spoken in Yazd and Kermān, although it is no longer spoken in Kermān, and only maintains vivacity in Yazd and in the Yazdi community inside or outside of Yazd³⁹.

³⁹ GHOLAMI (2022) argues against the scholarly use of the term *Gavruni*, citing concerns that some members of the Zoroastrian community perceive it as offensive. While her position reflects sensitivities within certain circles, it overlooks the fact that *Gavruni* is the native autoethnonym used by speakers themselves. Indeed, in the language referred to, *Gavruni* simply means ‘Zoroastrian’, and continues to be used self-referentially by many Zoroastrians in Yazd. GHOLAMI (2022: 51) criticizes scholars – including my-

7.1. Presentation of the data

The verb ‘to be/to become’ in Gavruni is *bodvun* (dialectal variants *bodmun*, *bozvun*). I will only discuss the present stem of the verb ‘to be’, and the copula in Gavruni. The situation in Gavruni is different from that in Classical Persian, for multiple reasons, which I will discuss in the next paragraphs. All Gavruni dialects but two (Malati, the prestige dialect of Yazd, and the Kermānī dialect) have the following present tense verbal endings: *-ε*, *-e*, *-a*, *-im*, *-it*, *-en*. For the sake of concision, I will concentrate on the majority forms and leave Malati and Kermānī examples mostly out of the discussion (although they do not differ very much). Below is a table of the copula paradigms in Gavruni.

Person	Gavruni verb ‘to be’	Enclitic verbal copula
1SG	<i>hε</i>	<i>=ε</i>
2SG	<i>he</i>	<i>=e</i>
3SG	<i>ha</i>	<i>=a</i>
1PL	<i>him</i>	<i>=im</i>
2PL	<i>hit</i>	<i>=it</i>
3PL	<i>hen</i>	<i>=en</i>

Table 13. The Gavruni verb ‘to be’ and the copula in Gavruni.

self – who cite the continued use of the term by «a group of Zoroastrians» who «still use the terms Gavr and Gavrī/Gavrūnī to refer to themselves and their language» as an argument to use this name. However, it appears that this usage is in fact widespread among native speakers. While efforts have been made in some intellectual circles to replace the term within the language itself, they have seen limited success. Her conclusion (2022: 68) that «[t]he fact that the pejorative term *Gavr* has been adopted by at least some members of the Zoroastrian community, does not allow scholars to consider this designation to be acceptable» is problematic – not only because Zoroastrians do not constitute a race, but also because the term in question is not a pejorative exonym adopted under duress, but a native, internally used designation. The widespread and continued self-referential use of *Gavruni* argues for its scholarly legitimacy. Cases where genuinely pejorative terms have been reappropriated by communities are rare, and this is not a clear example of such a case. For comparison, the Haitian Creole term *nèg* (‘person, man, Black individual’) ultimately derives from French *nègre*, but the latter was neutral well into the 20th century and is thus not a valid counter-example.

Up to here, the situation seems similar to that of Classical Persian, with the major difference that the independent verb is *h-* and not *hast-*. Like in modern Persian, the enclitic series can indicate location (*me Teyrun=ε* ‘I am in Tehran’ *por=om Teyrun=a* ‘my son is in Tehran’), but unlike in modern Persian, the independent series is generally avoided for this usage (i.e. *Teyrun ha* is less common to express location ‘he is in Tehran’ than *Teyrun=a*, although it will appear normally after a vowel)⁴⁰. The negation of the paradigms of both series is: *na-hε*, *na-he*, *na-ha* or *na* (var. *nȧ*), *na-him*, *na-hit*, *na-hen*, which is very regular. However, identification and predication for the 3SG and 3PL inanimate necessitate a third series, which it is difficult to ascribe diachronically and synchronically to the verb ‘to be’, and which is *-on* or *-one*, depending on the dialect⁴¹. Below I present a more complete table.

PERSON	GAVRUNI VERB ‘TO BE’		NOMINAL PREDICATE COPULA
1SG	<i>hε</i>	<i>=ε</i>	
2SG	<i>he</i>	<i>=e</i>	
3SG	<i>ha</i>	<i>=a</i>	<i>-on ~ -one</i>
1PL	<i>him</i>	<i>=im</i>	
2PL	<i>hit</i>	<i>=it</i>	
3PL	<i>hen</i>	<i>=εn</i>	
3PL inanimate	<i>ha ~ hen</i>		<i>-on ~ -one</i>

Table 14. The present tense of ‘to be’ and the copula in Gavruni.

This situation is remarkably similar to that of the predecessor of Early Judeo-Persian (§ 6.1, Table 9).

7.2. Functions of the Gavruni copulas

As explained above, the two series of Gavruni copulas do not overlap functionally. While Lorimer (1916: 462) initially did not believe these two series were functionally different, he later writes (1928: 315) that *ha* can be equated to modern Persian *hast*, while *on*

⁴⁰ See example h. below.

⁴¹ Some dialects have free variations between both *-on* and *-one*.

and *onε* can be equated to modern Persian *ast*⁴². This is not entirely accurate, but his intuition was good. The “nominal predicate” (*on*) copula expresses predication with adjectives (whether permanent or not, as in *sirat=i mo porog=e pačol=on*, ‘the face of this boy is dirty’, Firuzbaxš 1997: 101), definition and presentation (“this is my father”, “this is a book”). More importantly, it is used for identification. It can take the word-stress in emphasis, hence my classification as a suffix. Below, I will cite examples of both series, both from prose corpora and from verse corpora.

- a. *tars dver=i marg-onε*
‘Fear is the brother of Death’⁴³ (from Mazdāpur 1995: 273)
- b. *Poki ba rāh-e vā:ter*
‘Purity is the best way’⁴⁴
- c. *Greyne āxšiš ba čār to*
‘The elements are four’
- d. *Kad=o bolo droz-onε*
‘[Her] height (= Pers. قد و بالا) is tall’
- e. *Yaki rā dust dore čašāš siyāb-on*⁴⁵
‘I love someone, her eyes are black’
- f. *jun-om še=jun bašta-ne*
‘My soul is bound to her soul’⁴⁶

⁴² IVANOW (1935: 84-85) discusses the *-on/-onε* copula, and is curious as to its origin. Ivanow’s discussion (1935: 85) of the copula “*onit*” of Gavruni deserves to be treated in a separate study. The 3SG copula spelled <yd> (*-īd? -ēd? -ayd?*) of the *Ṭabaqāt-i Anšārī* (IVANOW 1923: 354-356) is real, though (e.g. وی استاد بغدادیان *way ustād=i Baydādīyān* ‘*yd*’ he is the teacher of the Baghdadians’, cf. IVANOW 1923: 354), and also deserves attention; however I am afraid I cannot include it in the present study, together with many other unusual Iranian 3SG copulas.

⁴³ A common Iranian saying. Fear is akin to death.

⁴⁴ From a song, cf. BERNARD (2017: 16), example c. is from the same source, example d. is from BERNARD (2017: 24), e. is from BERNARD (2017: 13).

⁴⁵ I recorded another variant of this song with the pronunciation *siyāw-on*.

⁴⁶ From FIRUZBAXŠ (1997: 122).

In example f. *-ne* is from *-one* (corresponding to *-one* in the Malati dialect, where there is no phoneme /ε/) preceded by a vowel. To note, the copula *-on* is also found in the variety termed “Zoroastrian Persian”, which is the Persian register of Zoroastrian bards of the past (cf. Bernard 2020: 63). A telling example of the function of *-on* is found in one of the oldest recorded Zoroastrian texts in Gavruni, a translation of the Bible dating back to the 1840s or 1850s (cf. Bernard 2016: 129), cited in example g. below.

- g. *o xda rowšnāxi oš-did ke xubon*
 ‘And God saw the light, that it **is** good’
- h. *oš did ser kičē-i ha*
 ‘She saw that **he is** at the end of the street’⁴⁷
- i. *yogaš na ge vešim de=nešunte*
 ‘Its location **does not exist** [anymore] to go show thee’⁴⁸

If we go back to the terminology discussed in § 3.2, *-on/-one* is used for partial characterization, where Middle Persian would use a nominal sentence, such as in example a., where fear is the brother of death – but it is also much more and cannot be equated to just that. Example a. can also be seen as a general truth, in which case a nominal sentence would also be found in Middle Persian. If we take example b. *Pōki ha rāh-e vā:ter* does not carry the same meaning as a sentence **Pōki rāh-e vā:ter-on*: the latter would equate purity with “the better way”, as if, reverting the order, it were in English “the better way is purity”. The phrase as it stands means ‘[out of all the/both ways] purity is the better way’, which is existential identification, for which the copula *ast* would be used in Middle Persian. In example c. I doubt that an alternative sentence with *-on* would even be possible. It is also an example of existential identification. Examples d., e., f. and g. are also characterizations, while examples h. is a locative usage of the verb, and i. an existential. To finish the table, if we take

⁴⁷ From LORIMER (1928: 310-312).

⁴⁸ From BERNARD (2015 fieldwork recordings).

the sentence *vov=i sar-čašma pək=o xaš-on* (Firuzbaxš 1997: 110, my transcription) ‘the water of the source is pure and good’ and make it into a sentence *vov=i sar-čašma pək=o xaš ha*, it would simply mean: ‘there is a pure and good source water’, again, underlining the existential function of *ha*.

Two more examples, provided by Firuzbaxš (1997: 103) also underline the difference between both copulas: *mo gole jvun-on* ‘this flower is beautiful’ vs. *bar=i bə v ha* ‘the door of the garden is open’. The door being open is a state of existence, like the presence in the street (example h.), it is not a characterization: the door is not characterized in any way by its being open. A very important thing to keep in mind is that the negation of both copulas is *naba*, that is, *-on/-one* is only positive/affirmative. In Lorimer (1928: 310) we find the sentence *xudā buzurg ha* ‘God is great’. I am uncertain if this usage of *ha* is due to the age of the text. Rather, as it is in the Kermānī dialect, it is possible that it is influenced by a Persian *xodā bozorg hast* (although less idiomatic than *xodā bozorg=e*). In modern Yazdi Gavruni, this would be said *xə mas-on*, as my informants have confirmed.

When somebody knocks on a Zoroastrian door (or rather, uses the *halqe* to announce their presence) in Yazd, the person inside will traditionally say *ki ha*: ‘who is there?’. A form *ki-on* would mean ‘who is he/she?’ One can also think of sentences such as *num-ot ki-on* ‘who is thy name?’ (= ‘what is thy name’). A sentence **num-ot ki ha* would be ungrammatical. As to the presentative function, only *-on/-one* assumes this role: *mo ktov-on* ‘this is a book’, vs. *mo ktov ha* ‘this book exists’.

What about existential identification, sentences which contain a full identification of the subject to its predicate, and contain a copula *ast* (§ 3.2)? The situation is more complicated. When asked to translate ‘this city about which I am talking to you is Tehran’, speakers of some dialects such as Alyvovai say *mo šāre ge dərə be-de-veje Tebrun=a* with an =a copula, while a speaker of Mabrakai said *mo šābre ge dərə be-de-veje num-oš Tebrun-on* ‘the city about which I am talking to you, its name is Tehran’. I am uncertain if the *-on* is due to the introduction of the word *num* ‘name’. I asked one of my informants,

and he confirmed that this was a dialectal variation. When asked to translate “the first prophet of the world is Saint Zarathushtra”, an Alyavoi speaker said *avalin peyyambar-e dunyo ašu Zartošt-on*. This needs to be tested on a wider scale and with more examples, however, given the general tendency of the *-on* copula to “take over”, I would personally believe that existential identification was originally with *ha/=a*, and that the *-on* copula to express existential identification is a newer usage. The *ha* verb is more and more relegated to an existential and locational usage, and this seems to mirror the divergence in function between *hast* and *=e* in contemporary Iranian Persian (on which see § 9). The difference between *ha* and *-on* is thus not, as Lorimer (1928: 315) wrote, that which exists between Persian *hast* and *ast*, but rather that which exists – albeit not exactly – between Persian *hast* and *=e*. To my knowledge, there is no continuation in Gavruni of the *mihī est* construction.

7.3. A (pre-)history of the Gavruni copula

To sum up the previous section, *ha* mostly expresses existence and existential characterization, for which Middle Persian used the copula *ast*, and it also has a locational function (“he/she is in Yazd”), which, in contemporary Persian, is expressed either by *hast* or by *=e*. The copula *-on* is used for general truth, statements, existential identification (perhaps secondarily), characterization, presentative sentences. In simple terms, *mo porog ha* means ‘this boy exists’ or ‘this boy is [here/there]’ while *mo porog-on* means ‘this is a boy’. To be fair, ‘to exist’ is a verbal function in and of itself and, as insofar it expresses existence, *ha* should not be considered a copula (e.g. Korn 2011: 53). For the purpose of this study, I have sometimes considered it together with the copula and the verb ‘to be’, but in this specific function, it technically is not a copula. Both *ha* and *-on* function with either 3SG animate or inanimate subjects and 3PL inanimate subjects. Their functions are summed up in the Table 15 below.

CONTEXT	COPULA USED
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	MIDDLE PERSIAN	GAVRUNI
General truth, rules, statements	No copula	<i>-on/-onε</i>
Existential identification 3SG	Copula <i>ast</i>	<i>ha/=a</i> or <i>-on/-onε</i>
Characterization	No copula if timeless, <i>baw-</i> if contingent	<i>-on/-onε</i>
Presentatives and exclamations “this is X”	Copula <i>ast</i>	<i>-on/-onε</i>
Existence (X exists)	Copula <i>ast</i>	<i>ha/=a</i>
Existential identification (other persons)	<i>h-ēm, h-ē, etc.</i>	<i>h-ε, h-e, etc.</i>

Table 15. Use of the copula in Middle Persian and Gavruni.

It will be interesting, and relevant to the general discussion, to discern the origin of both the *ha* and the *-on* copula.

The Gavruni paradigm of ‘to be’ in the present tense is simply constituted of the present tense verbal endings added to the *h-* stem, including the 3SG. In Gavruni, there is thus no trace of a reflex of a 3SG **asti*, which should have become *†ašt*. At some point, it was simply eliminated and replaced by the 3SG *-a* < **-at*. This elimination was brutal, so to say, as not even a trace of the 3SG negation particle *nēst* remains: instead we find *naha* and *na*. The particle *nēst* should have yielded Gavruni **nešt* or **ništ*.

The origin of the *ha* copula is thus synchronically self-evident. As to its function, I believe it is a continuation of the function of *ast* in Middle Persian, although perhaps not for presentative sentences (see below). The origin of *-on/-onε* is not as obvious. I will first refer one and all to Agnes Korn’s seminal paper (Korn 2011) which sheds a light on the diachronic development of copulas, and to Benkato’s (2020) article, which is typologically interesting as well. Korn (2011: 54) notes that, in some Iranian languages, pronouns can be used in copular function. «These fall into two groups: pronouns which are used as copula forms and continue to be used as pronouns, and forms that have abandoned their pronominal function entirely» (2011: 54-55). To the first group belongs, for instance, Sogdian, with its demonstrative pronoun (?)*xw* which may be used as a 3SG copula, and

the same applies to Yaghnobi =*x* (cf. Korn 2011: 55f.; Benkato 2020: 173f.). Benkato (2020: 184f.) also suggests that the copulas Yaghnobi *xast* and Sogdian *xy* also derive from the same demonstrative pronoun + *asti*, the ancient Iranian copula. I present an example of the copula in Yaghnobi below, to illustrate this.

- (a) *ax čī man se sol-i mayda=x*
 ‘He is three years younger than me’ (from Benkato 2020: 182)

«As has long been recognized, this =*x* derives from the demonstrative pronoun *ax*, which in Yaghnobi functions as both the 3SG. DIR pronoun and the distal demonstrative pronoun» (Benkato 2020: 182). This *ax* in turn derives from the Old Iranian demonstrative pronoun **hau-/aya-* (cf. Korn 2011: 56, with references to the literature). In Wakhi, even the verb ‘to be, to exist’ *tey* (present) / *tu* (past) derives from a pronoun (cf. Korn 2011: 56, with references to the literature). In general, these demonstratives turned copulas are limited to the 3SG, with some exceptions. The reason is obvious, as demonstrative pronouns, whether they be distal or proximal, usually designate a third object/person. For the same reason, there is often a great semantic fluidity between demonstrative and personal pronouns (Iranian Persian *un* ‘he/she’ ~ ‘that’, Gavruni *in* ‘he/she’ < pre-Proto-Gavruni **ēn* ‘this’, or from Classical Persian *īn* ‘this’, etc.).

Beyond Iranian languages, the same process occurred famously in Chinese (是 *shi*). Benkato (2020: 186; already in gist in Korn 2011: 62-63) even supposes, with an excellent argumentation, that the process described above for Sogdian was reinforced by Chinese influence.

The astute reader sees already since quite some time where I am going. There is every reason to think that the Gavruni *-on/-one* 3SG copula derives from a demonstrative pronoun. Its becoming clitic is no issue, as there exist many parallels for that (see example a. above, or Korn 2011 in general). More specifically, I think that *-one* is simply the grammaticalized semi-distal deictic *one*. The etymology of the demonstrative *one* is, in my view, the *-o-* element, referring to an absent or distant subject in Gavruni + *ne* ‘now’. This could be similar to French *ici là* ‘specifically here’, if one takes *là* in its secondary meaning ‘now’.

In this case, *-on* needs to derive from Proto-Gavruni **ān* ‘that’ (perhaps ultimately from Persian *ān*). A more economic solution, that does not require two different etymologies, would be to derive *-on* from *ān* and *-one* from *-on* + durative particle *e-*. However, we would phonetically expect *-one*, with an /e/, and I believe that the solution to derive *-one* from the demonstrative *one* to be more straightforward.

How did this situation arise, how did this distribution form itself? one might ask. If one looks at Table 15 and if one accepts my proposition that existential identification is originally done with the copula *ha*, it appears that *-on/-one* is mostly found where, in Middle Persian, there was no copula. The main exception being presentative and exclamative sentences. However, these are also found as copula-less constructions in multiple Persian varieties. This is the *ин китоб* ‘this is a book’ construction referred to above (§ 6.2) which I also reconstruct for TN and Northern Tajik dialects. It is conceivable that, while *naha* was the negation of *ha*, the form *na/nā* (which nowadays is a variant of *naha*, but shares the same function) was that of the nominal sentence, exactly like what I suggested for *nē* vs. *nēst* (§ 5.2). It is remarkable that we find yet another Iranian language with both traces of nominal sentences and two different negation particles.

This is to say, in the ancestor language of Gavruni (which is certainly not Old, Middle or New Persian, for the sake of clarity), sentences expressing a general truth, timeless statements, sentences of characterization and presentative sentences did not use any type of copula. ‘This is a book’ was simply **ktov one* (or **dapter one*) ‘that a book’, exactly like in spoken Tajik *ин китоб*. Similarly, ‘he saw that it was good’ was **oš-did ge xub on* ‘he saw that that good’⁴⁹. This is simply how *-on* and *-one* were grammaticalized and became copula suffixes.

⁴⁹ The word *xub* in that Bible translation is certainly a borrowing from Persian, or an archaism at the time of the translation, as the normal Gavruni word is, depending on the dialect, *xəb* or *xib*. Perhaps also it notes */xyb/, the otherwise unattested intermediary form between **xūb* and *xib*. The word *xub* is, in the modern speech, less natural than Gavruni *xəš*.

8. The verb ‘to be’ in Dari

There are many dialects of Dari, as many, I would say, as there are villages in Afghanistan. However, in the group of dialects which forms the bulk of the speakers, the 3SG copula is *asta* as in *xūb asta* ‘it is good’, *maqbul asta* ‘he/she is beautiful’, or, in Aryana Saeed’s famous pop song *بچه کابل* (written and sang in the learned contemporary Kabuli dialect):

- a. *dar bām=e dil nišasta xušbutar az gul asta*
*dar in*⁵⁰ *rōzā=yi tārīk ū nūr-e Kābul asta*
 ‘He sits on the roof of [my] heart, he **is** better smelling than a rose
 In these gloomy days, he **is** the light of Kabul’⁵¹

The 3SG verbal ending in Dari is *-a* (< *-ad*). We know the original paradigm of ‘to be’ to have been *astom*, *astī*, *ast*, *astīm* (or *astēm* depending on the dialect), *astēn*, *astan*, with a thus irregular 3SG *ast* (as in the literary language). What happened thus is a leveling of the paradigm of *ast-*, which became *ast-a* with the *-a* 3SG ending⁵². The result of this leveling is the removal, or rather, the regularization of the only Dari irregular verb as to its person endings. The only part of speech where I regularly heard, no matter the dialect, the form *-as*, in the expression *sayī-s* ‘it is correct’ (literary Persian *ṣaḥīḥ-ast*) and in questions: *ī bača-s, nē?* ‘Is it a boy?’

The same occurred with the negation paradigm, *nēst-*, which originally was *nēstom*, *nēstī*, *nēst*, *nēstīm* (or *nēstēm*), *nēstēn*, *nēstan*. It was leveled, together with *ast-*, which yields the current paradigm of the negation, with *nēsta* ‘he/she/it is not, he/she/it is not there’. While both a copula =*a* (treated in § 9) and a verb *hast-* ‘to exist’ do exist in Dari – not even in all dialects – they are both rare, and in general, one can say that in Dari, unlike in Iranian Persian, the verb ‘to be’ serves as both a copula

⁵⁰ Poetic form of Dari *ī* ‘this, these’.

⁵¹ In the same song we can hear the less common copula =*a*, *waqtī mī-binom-eš hālem bihtar=a* ‘when I see him, my state **is** better’. This copula will be treated in § 9.

⁵² Regularly, the 3SG form should have, at least in some dialects, become *as*. This *as*, however, was leveled paradigm-internally already to *ast*. The same occurred with the negation paradigm. Naturally, whenever we find the 3SG form with the 3SG ending, we hear *as* and not **ast*.

and as a verb ‘to be, to exist’. While some nominal sentences are permitted in Dari, presentative sentences of the type *ин китоб* discussed above are not. ‘This is a book’ will be, in most dialects, *ī (yak) kitāb asta*. The verb *ast-* generally requires a preposition to indicate a localization (*da Kābul=as, da Kābul asta*). The form *as*, as far as I noticed, is strictly enclitic, unlike *asta*. Glassman (1972: 24-26) only knows the form *as*. It probably reflects the speech of Kabul at the time. Times have changed.

ENDINGS	ORIGINAL PARADIGM	NEW PARADIGM
-om	<i>ast-om</i>	<i>astom</i>
-ī	<i>ast-ī</i>	<i>astī</i>
-a	→ <i>as(t)</i>	→ <i>asta</i>
-ēm	<i>ast-ēm</i>	<i>astēm</i>
-ēn	<i>ast-ēn</i>	<i>astēn</i>
-and	<i>ast-an</i>	<i>astan</i>

Table 16. The leveling of the verb ‘to be’ in Dari.

9. *The verb ‘to be’ in contemporary Iranian Persian, and the =e copula*⁵³

To express existence, contemporary Iranian Persian uses the verb *hast*. To some extent, the 3SG *hast* is comparable to the usage and function of *ha* in Gavrūni. To some extent only, because it is permitted to use it as a copula, that is, to express qualification, a general truth, a statement, etc. Yet, this use is secondary, and usually avoided. To discuss an example mentioned above: to say ‘God is great’⁵⁴,

⁵³ Many more issues will not be discussed here, than will be discussed. Among which the contentious Tehrani form *hasteš*, synonymous of *hast* (on which see PASTOR, forthcoming). As Neshat Esfahani said: «Not the truth of the world, nor the world of truth: talk of this here is unfitting».

⁵⁴ This expression means ‘God can do all things, do not despair’ and is not connected with the Arabic phrase *Allāhu akbar*, which means ‘God is greater’ (and not ‘God is the greatest’ or ‘God is great’ as it sometimes is translated). In Iran, *Allāhu akbar* (usually an expression of surprise, despair, shock) is always said in pure Arabic (albeit in a Persian garb), and never translated.

*xodâ*⁵⁵ *bozorg hast* is permitted, but it is generally unidiomatic, and the 3SG copula proper will rather be used. An exception to this, when, namely, *hast* can and will be used with a copular function, is for emphasis, whether contrastive or otherwise: *xodâ bozorg hast, ammâ*, or *xodâ bozorg ke hast, ammâ...* ‘God is [definitely] great, but...’, ‘God is [definitely] great indeed, but...’ *In pesar kučulu hast, ammâ xeyli bâhuš=e* ‘this boy is small, but he is very smart’.

In colloquial Iranian Persian, the standard copula is =*e*, as in the example provided above: *bâhuš=e* ‘he is smart’. Its origin has not yet been discussed in the scholarly literature. In general, it can be said that it is barely mentioned by linguists of Persian, and, when it is, it is discarded as a depraved *ast* (e.g. Browne 1895: 781 “*ast* is shortened to *a, ê*”). Indeed, in the literary language =*ast* and *ast* are found to systematically correspond to colloquial =*e*. For clarity: the origin of colloquial Iranian New Persian =*e* 3SG is completely unrelated to that of Tajiki *hay* and *ay* discussed above (§ 6.2).

To note, *ast* does survive, to some extent, in contemporary Iranian Persian. In the speech of some, =*e* will not be found after a vowel and =*s* (< =*ast*) will be used instead. For instance, *taqsir-e orupâ=s* ‘it’s Europe’s fault’. Yet, even this is limited: after an *-i*, this =*s* will never be encountered in the spoken speech. In spoken contemporary Iranian Persian, we will hear *in lebâs âbi=ye* ‘this clothing is blue’ and never, I insist, never **in lebâs âbi=s*. After *-u*, both clitics are permitted: *in ye hâpu=s* ‘this is a (cute) pet’ vs. *in ye hâpu=e*. Both are common. Never will one encounter, apart from the speech of some people who want to sound important and very respectable, *xodâ bozorg=as(t)* (and some of these people will even add the final *-t*, although it is probably gone from the spoken language since a few centuries). Here, there are some sociolinguistic questions at play which go beyond the scope of this study.

No matter what handbooks will say, these forms do not exist in the wild. Thus, =*ast* does not exist, only =(a)*s* does. It is found either after *-â*, where it is more common than =*e*, or after *-u*, where it is as

⁵⁵ I transcribe contemporary Iranian Persian /b/ as <â>, while in other varieties and earlier texts, I follow the traditional transcription with <â>. This is because the length distinction is no longer relevant, and because we know the exact phonetic realization of this sound in the contemporary variety.

common as =e, and never after -i. *Pedaret injā=s* ‘your father is here’ will sound more natural than *pedaret injā=e*, although both are permitted and will be heard. As to the other two vowels, -o and -e: after -o, =s is very rare. E.g. *in barā-ye to=s* ‘this is for you’ is unusual to say the least, and we will hear *in barā-ye to=e* rather. After -e, the situation is reversed: =e will never appear. Not only that, but it is replaced by -as, and it is not just e=s as for the other vowels. E.g. *in ye madresas* ‘this is a school’, and not **in ye madrese=s*, or **in ye madrese=e*. Diachronically, it is rather that -a, followed by =s, did not undergo the sound law -a > -e, so in fact, we can say that =as does not exist in contemporary Iranian Persian, but only =s does. The phonetic reason for this distribution is that, -ae will consist in two vowels next to each other, phonetically it will be [ɒʔe], which is unnecessarily heavy in the Persian phonological system. For -u, -u=e will permit a glide to appear, so [u^we] (I put the -w- in superscript because it is slight).

This distribution in mind, we can say that there exists in contemporary Iranian Persian a morpheme =e with an allomorph =s, with a largely phonetic distribution. That they are allomorphs and not allophones is obvious from the fact that there is otherwise no context in which /e/ would become /s/ and vice-versa. The very fact that =ast was kept as =s in some contexts – and never as =as, unlike in Dari – is enough to prove that =e is not the reflex of =ast, as has been held until now. To note, the form =e ~ =a (=a is the 3SG copula before the change of -a > -e, and synchronically, it exists in some dialects which did not undergo this change) is a few hundred years old, maybe more (cf. Browne 1895: 781 ff.).

Wherefrom does =e come? The answer is already foreshadowed in the previous sections. In the previous section (§ 8), we saw how the 3SG form *ast* took the 3SG ending of all other verbs in Dari, becoming *asta*. Two sections ago (§ 7), we saw how Gavruni replaced an unattested reflex of *ast* by a regular paradigm based on the verb *h-*, and how it grammaticalized a demonstrative pronoun as a copula. In § 6 we saw a reconstruction of the pre-Early Judeo-Persian paradigm, which was functionally similar to the Gavruni *h-* paradigm, with a 3SG form **h-id*, containing the 3SG verbal ending added to *h-*. We also saw that this form was influenced by the copula *ast*, yielding *hyst*. Old Iranian

athematic verbs underwent a process of thematization in the present and imperfect, which ended in Middle Persian and Parthian verbs all being thematized but for *ast* (cf. Ferrer-Losilla 2015: 103, 103 fn. 19). What we are witnessing here is the continuation of this process, leading to the thematization of *ast*, the last survivor of the process, in a group of New Iranian languages.

We thus have to reconstruct a **h-* paradigm for the ancestor dialect of contemporary Iranian Persian as well. This paradigm is attested in various dialects, in Judeo-Persian, and is required to explain the form *bast-* (cf. § 4.3, Table 5). This *h-* paradigm underwent the same replacement of 3SG *ast* by **h-a* (< **h-ad*) as had occurred in Gavruni. Unlike in Gavruni, this paradigm was soon only enclitic (or perhaps first suffixal, then enclitic), and because of this, like in Gavruni, the /h/ was lost. Thus, **buzurg-ham* ‘I am big’ and **buzurg-ha* ‘he/she is big’ became *buzurg=am* and *buzurg=e*, and remained as such to this day. The origin of the copula =*e* in Persian is thus a form **h-a*, containing the 3SG, built on the stem **h-* ‘to be’ with the addition of the 3SG verbal ending *-a*. At the same time, the form *ast* was not completely lost, and it remained used in positions where phonotactics did not permit the clitic =*e*.

This development, once again, is old. Forms with =*a* are found in many pieces of dialectal poetry. It is also found in Hazaragi, a dialect spoken in Afghanistan by the Hazara people. It is also found in Herati, a dialect spoken near the Iran-Afghanistan border, on the Afghan side (and, due to recent migrations, also on the Iranian side). I believe this =*a/e* copula needs to be treated as an isogloss, grouping Hazaragi, Herati, Iranian Persian together, against Dari, Tajiki, Early Judeo-Persian, etc.⁵⁶ It is naturally possible that two dialects innovated similarly – and, as I have shown, we find an almost identical inno-

⁵⁶ So does the Neyshaburi dialect (from Nishapur, to the west of Mashhad). I possess a recording of a Classical Persian poem by Hafez rendered in the Neyshaburi dialect by a speaker of it (dating back to 2024). The poem is *ay nasīm=i saḥar ārāmgah=i yār kujā-st* ‘O morning breeze, where is the resting place of the Companion?’ Rendered in Neyshaburi it becomes: *i nasīm-e saḥar ārāmgah=e yār kojye*. The word for ‘where’ is *kujī* (as in Hazaragi), but with the =*e* copula, ‘where is’, it turns to *kojye* (and not to **kōji=ye* as one could have expected). The 1PL form *mā kujā=īm* in the poem is rendered as *mā kojīm*. The Neyshaburi dialect is particularly interesting because of its vocalism (partly archaic, partly innovated), and to my knowledge it has not quite received the attention it should have by linguists.

variation in at least one other Iranian language even – but it is an uneconomical solution. There are other features that, in my view, group together phylogenetically Iranian Persian and Hazaragi, although this discussion is outside the scope of the present study.

We can find =a also in some other dialects of Afghanistan, including in Kābuli (see fn. 51); however, I believe this is mostly due to the overwhelming recent influence of Iranian Persian on Dari. In Afghan dialects besides Hazaragi and Herati, =a is relatively limited, and seems to be rather new. In general, I also think we can consider the =a copula as separating, phylogenetically, spoken contemporary Iranian Persian from Classical Persian. This can be seen as a supplementary argument supporting the idea that spoken contemporary Iranian Persian does not derive *recto itinere* from the literary Classical Persian language such as recorded by, for instance, the 13th - 15th century canon literature.

The 3SG negation in standard Iranian Persian is *nīs* ~ *nīst* (< *nēst*). It is the negative form of both *hast* and =e. I discussed the origin of the dialectal variant *nī* above (§ 5.2). In some dialects, including Herati and Hazaragi, a new form was created, influenced by the 3SG copula. It is the form *nīya*, which is also the negative form of both *hast* and =a (e.g. Hazaragi *gap nīya* ‘no problem’, literally ‘there is no word [to say]’ and Hazaragi *xūb nīya* ‘it is not good’). Formally, it can be understood as *nē* ‘no’ + -a 3SG ending. It could also perhaps be viewed as *nē* ‘no’ + =a 3SG copula. In my view, the first solution is more tempting, but at the end of the day, they both are secondary to the process of creation of the 3SG copula =a⁵⁷. Another solution to explain these negation forms consists in departing from the Middle Persian forms *nē h-am*, *nē h-ē*, *nēst*, etc. Let us imagine that, for instance, *nē h-am* had become **nē-am* > *nīyam* (and **nē-om* > *nīyom*), *nē h-ē* > *nīyē*, etc. Then, the 3SG would have also been leveled after these other forms, yielding **nē-ad* > *nīya*, exactly like *ast* was replaced by **h-ad* in the ancestor variety of contemporary Iranian Persian. This is the opposite of what

⁵⁷ We can imagine that, originally, there was **nēst* as a negation of *hast*, and **nē*, a negation of **h-a* (originally a negation of the nominal sentence), which later became (> **nē-a*) > *nīya* and then took over **nēst*.

happened in most other varieties of Persian, including contemporary Iranian Persian, which all generalized the 3SG form *nēst* and built a whole paradigm around it. As to the development of the *nēst*-paradigm, it precedes chronologically the separation of Tat from Persian (cf. Lenepveu-Hotz 2023: 264-265). This separation is dated back to around the 16th century by Lenepveu-Hotz (2023: 267).

10. Conclusion

I discussed many particular points, and an exhaustive conclusion will not be fruitful for the present study, so I propose a reflection instead. Throughout this study, we observed how multiple languages leveled verbs for ‘to be’, copulas, how they remade verbs, how they remade copulas. A constant conclusion has been that the various varieties of Persian behaved differently from each other in their historical developments, in regard to the copula and the verb ‘to be’.

What needs to be done is understanding every system, every paradigm, for itself, within its own wider dialectal system, before comparing it to other varieties. For instance, the comparison of the contemporary Iranian Persian 3SG copula *=e* to the literary form *ast* has led scholars to believe, erroneously, that *=e* is a “deformed” *ast*. This is also true for every other variety I have discussed here. Another conclusion, based on the reconstruction of the state of facts of various dialects studied here, is that in the ancestor variety of multiple New Persian dialects, but also in that of Gavruni, another Iranian language, presentative sentences, among others, were nominal sentences. This is different from the Middle Persian situation. It can be said that dialects almost always derive from proto-dialects hidden in the dark, and that comparison between attested stages is not always enough (if not always not enough) to understand the processes at hand.

This study is an attempt at looking at questions relative to ‘to be’ and the copula in Persian dialects. Such studies are rare: Ferrer-Losilla has provided us with many high quality studies of the Middle Persian verb, and Lenepveu-Hotz has also written masterful works, filled with

valuable insights, on the New Persian verb, but so much remains to be done. As I have hinted at above, I have only chosen a select number of dialects, and other, unrelated, copulas can be found in Early New Persian, and New Persian dialects in general. These remain to be studied and analyzed. I hope my attempt will encourage scholars of the field to look more in detail at some aspects of the verb which are still understudied, especially from a diachronic perspective.

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On the presence of metaphony in feminine plural nouns: New insights from the dialects of Campania*

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ABSTRACT

The paper deals with the extension of metaphony to feminine plural nouns coming from the first Latin declension (e.g. Old Neap. *cure* 'tails', cf. *cora* 'tail' < Lat. CAUDAM), a real puzzle for Romance and Italian dialectology. The phenomenon was attested in the history of Neapolitan until the end of the 19th century and has disappeared from current use. However, it may still be found in some peripheral dialects of Campania. In the present paper, we will present new data from the Irpinian dialect of Montella, which is very relevant for the issue under consideration since it presents a large number of metaphonic feminine plurals, and at the same time it keeps distinct the qualities of the final unstressed vowels. Thanks to these new data, it will be possible to develop a framework that explains both the diachronic data of Neapolitan and the contemporary data of the Irpinian dialects. By assuming a morphophonological perspective on metaphony, we will argue for analogical processes based on the templates available in the feminine plural nouns from the third declension. Unlike previous studies, we will demonstrate that a better fit to the data can be obtained if the templates are conceived as discontinuous, so as to include not only the quality of the final unstressed vowel but also the specific quality of the stressed vowel.

KEYWORDS: metaphony, dialects of Campania, morphophonological patterns, analogy

1. *Introduction*

Recent research on the dialects of the Campania region in Southern Italy is unearthing new relevant data for Italian dialectology, which

* Although the article is the product of a joint endeavour between the two authors, the paragraphs can be attributed as follows: §§ 1, 2, 5 to Giovanni Abete; §§ 3, 4 to Cesarina Vecchia. We wish to thank Marcello Barbato for his valuable feedback on an early draft, which helped clarify and strengthen our arguments. We also appreciate the suggestions from the anonymous reviewers that led to further improvements to the paper. Of course, any remaining flaws are solely our responsibility.

may play a key role in the reconstruction of diachronic dynamics that have not yet been fully clarified (e.g. Abete 2020; Abete & Vecchia 2018). In this context, the present paper will show the contribution that the Irpinian dialects can provide to the understanding of some complex developments concerning the phenomenon of metaphony¹. In particular, the issue of the occurrence of metaphony in some plural feminine nouns and adjectives in the dialects of Southern Italy will be investigated.

The phenomenon appears sporadically in the modern dialects, where metaphony is generally limited to masculine forms, however the situation was quite different in the past. Relevant information in this respect is provided by the Neapolitan dialect, thanks to its rich written documentation starting from the 14th century. Metaphonic outcomes in feminine plurals were indeed relatively common in Old Neapolitan but decreased in number over the centuries and exited from use around the end of the 19th century. The phenomenon concerned, in the first place, feminine nouns coming from the Latin third declension (e.g. *vutte* 'barrel.F.PL') and adjectives of the second class (e.g. *giùvene* 'young.ADJ.F.PL'), but it also extended to some feminine nouns mainly coming from the first declension (e.g. *catine* 'chain.F.PL', *corune* 'crown.F.PL'). The latter case is particularly intriguing since it concerns nouns that had in origin a final *-e which, as is known, could not trigger metaphony. Moreover, the occurrence of metaphony in this class presents some interesting restrictions which also call for an explanation. The extension of metaphony to feminine plural nouns coming from the first declension will therefore constitute the main topic of our research.

¹ This phenomenon, of paramount importance for the evolution of Romance languages, has been studied in depth from different angles and continues to be at the centre of the theoretical reflection of scholars from many subfields of linguistics. From a diachronic perspective, and with a special eye to Italo-Romance, see at least MAIDEN (1991), FANCIULLO (1994), SÁNCHEZ MIRET (1998), BARBATO (2008, 2013), LOPORCARO (2016). For a focus on metaphony in Neapolitan, see RUSSO (2007), LEDGEWAY (2009: 54-71). For an overview of the different approaches to metaphony in the dialects of Italy, see the papers published in TORRES-TAMARIT *et al.* (2016).

A diachronic model that accounts for the presence of metaphony in feminine plurals in the dialects of Southern Italy was proposed by Maiden (1991: 172-175, 220-221). It suited quite well to the data of Neapolitan and was indeed accepted by Ledgeway (2009: 61-65) in his *Grammatica diacronica del napoletano*. However, new data from Campanian dialects provide now a more complex picture and highlight the need for a reconsideration of Maiden's model. In the present paper, we will mainly focus on the dialect of Montella, in the province of Avellino, which presents very interesting features: a) it preserves distinct qualities of the final unstressed vowels, which merged to schwa in other Upper-Southern dialects like Neapolitan; b) it offers an abundant documentation of metaphony in feminine plural nouns and adjectives. Other relevant data will come from other Irpinian dialects on the one hand, and from the dialects of the Phlegrean area, in the gulf of Naples, on the other (see Figure 1). We will therefore develop a new hypothesis on the distribution of metaphony in feminine plurals which takes into account all the available data.

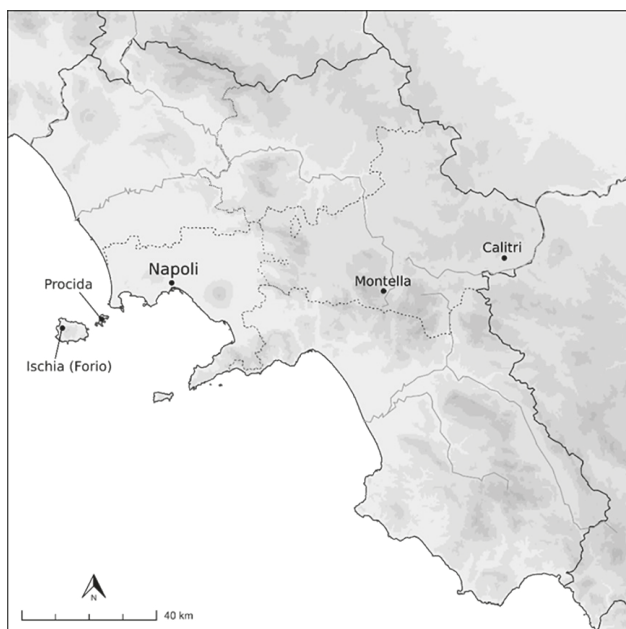


Figure 1. The Campania region with the main places mentioned in the paper.

Being triggered by final vowels which, as known, convey important morphological information, metaphony lies at the border between phonetics and morphology. The evolution of metaphony is indeed conditioned by both phonetic and morphological aspects and the case of metaphony in feminine plurals is exemplary in this respect. In accordance with much literature on this topic, the perspective adopted here is therefore morphophonological (e.g. Maiden 1991; Fanciullo 1994). In particular, we will argue for the analogical extension of some complex morphophonological patterns characterising feminine plural nouns coming from the third declension. Our findings will also shed new light on the complexity of morphophonological patterns that can serve as models for analogical extension.

The paper is structured as follows: in Section 2, we introduce the issue of metaphony in feminine plurals by presenting and discussing diachronic data from the Neapolitan dialect. The analysis of these data by Maiden (1991) and Ledgeway (2009) is also outlined here. Section 3 is devoted to the dialect of Montella: after a description of the main features of this variety, the results of a research by questionnaire are presented in detail. In Section 4, the new picture that emerges from the dialect of Montella is further enriched with other contemporary dialectological data from Irpinia and the Phlegrean area. In Section 5, a diachronic model that explains all the available data is proposed and conclusions are drawn.

2. *Metaphony of feminine plurals through the history of Neapolitan*

2.1. *Preliminary considerations*

Metaphony is a process of assimilation at distance for which the quality of some stressed vowels is influenced to different degrees by the quality of some final unstressed vowels. The phenomenon is widespread in the Italo-Romance dialects with a variety of solutions (see Maiden 1991). In the history of Neapolitan, metaphony involved the stressed mid vowels *e (< ĩ Ē), *o (< ũ Ō), *ɛ (< Ĕ), *ɔ (< Ŏ) under the

influence of the final unstressed vowels **u* (< *ǔ*) and **i* (< *ĩ*). Subsequently, the final unstressed vowels were neutralized to /ə/ by a process of phonetic reduction (Ledgeway 2009: 54-71).

Neapolitan metaphony presents monophthongal and diphthongal outcomes, depending on the vowels involved. High-mid vowels raise by one degree, low-mid vowels diphthongize:

(1) Metaphony in Neapolitan

- **e* > [i]: **mesi* > ['misə] 'month.M.PL'
- **o* > [u]: **rossu* > ['russə] 'red.ADJ.M.SG'
- **ɛ* > [je]: **pɛdi* > ['pjɛrə] 'foot.M.PL'
- **ɔ* > [wo]: **kɔrnɔ* > ['kwornə] 'horn.M.SG'

This process produced a set of stem alternations which were susceptible of morphological interpretation, and indeed some scholars have found evidence of an early morphologisation of metaphony (e.g. Tuttle 1985; Maiden 1989, 1991; Fanciullo 1994). In Neapolitan, as a matter of fact, after the neutralization to /ə/ of the final unstressed vowels, the alternations originated by metaphony became the only explicit marks of the inflectional categories of gender, number, and person in the paradigms of nouns, adjectives, and verbs (Ledgeway 2009: 58):

(2) Examples of morphophonological oppositions originated by metaphony

- **pɛdi* > ['pjɛrə] 'foot.M.PL' vs **pɛde* > ['pɛrə] 'foot.M.SG'
- **rossu* > ['russə] 'red.ADJ.M.SG' vs **rossa* > ['rossə] 'red.ADJ.F.SG'
- **sentu* > ['sjɛntə] 'feel/hear.PRS.2SG' vs **sentu* > ['sɛntə] 'feel/hear.PRS.1SG'

This kind of morphophonological oppositions played a major role in the history of Neapolitan and other Italo-Romance dialects. As demonstrated by Fanciullo (1994), they constituted powerful schemas of alternations, e.g. sg.^{-Mph} vs pl.^{+Mph}, f.^{-Mph} vs m.^{+Mph}, prs.1sg^{-Mph} vs prs.2sg^{+Mph}, which eventually extended also to non etymological cases. For instance, the sg.^{-Mph} vs pl.^{+Mph} schema can explain the absence of metaphony in singular forms like *rèllu* 'cricket.M.SG' < GRÿLLU vs *rillə* 'cricket.M.PL', or *réttsə* 'hedgehog.M.SG' < ERĪCIU vs *rittsə* 'hedgehog.M.PL', which are attested in the Irpinian dialect of Pater-

nopoli (Fanciullo 1994: 585). As we will see in the next sections, the sg.^{-Mph} vs pl.^{+Mph} opposition also characterizes our data since the metaphonic outcomes in feminine plurals conform to this general pattern as well.

Considering the objectives of the research, our discussion will be limited to nouns and adjectives, thus excluding verbs. The distribution of metaphony in such contexts has changed over the centuries. In current Neapolitan, metaphony is mainly found in the following contexts:

- (3) Distribution of metaphony in current Neapolitan
- (a) Masculine singular and plural nouns coming from the Lat. second declension (e.g. [ˈvjentə] ‘wind.SG/PL’ < VĒNTUS/-Ī), as well as masculine singular and plural adjectives of the first class (e.g. [ˈkurtə] ‘short.ADJ.M.SG/PL’ < CŪRTUS/-Ī).
 - (b) Masculine plural nouns coming from the Lat. third declension (e.g. [ˈpjɛrə] ‘foot.M.PL’ < *pɛdi < PĒDES), as well as masculine plural adjectives of the second class (e.g. [ˈdʒuvənə] ‘young.ADJ.M.PL’ < IŪVĒNES).

In other words, in the paradigms of nouns and adjectives, metaphony is limited to masculine forms². However, the situation was different in the past, because in Old Neapolitan and at least until the end of the 19th century, metaphony could also be found in some feminine nouns and adjectives. Adopting a diachronic perspective, the phenomenon appeared in the following contexts (cf. Maiden 1991: 172-177; Ledgeway 2009: 60-65; Russo 2007: 177-200):

- (4) Plural feminine words involved by metaphony in Neapolitan historical texts
- (a) Plural feminine nouns coming from the Lat. first declension (e.g. *bucche* ‘mouth.F.PL’, *catine* ‘chain.F.PL’)³.

² There are only a few exceptions to this, the most notable one being *persune* [pɛrˈtsunə] ‘person.F.PL’, which can be regarded as a relic from a previous stage in which metaphony could also be found in feminine words (see further in the text).

³ As will be argued later on (§ 2.2), the final <e> of such forms found in the written documentation must be phonetically interpreted as schwa, and it is the result of centralization of an original *-i.

- (b) Plural feminine nouns coming from the Lat. third declension (e.g. *frieve* ‘fever.F.PL’, *gruce* ‘cross.F.PL’), as well as plural feminine adjectives of the second class (e.g. *nuobele* ‘noble.ADJ.F.PL’).
- (c) Plural feminine nouns ending in *-ĪTIES* and coming from the Lat. fifth declension (e.g. *bellicze* ‘beauty.F.PL’, *prudizze* ‘bravery.F.PL’).

Metaphony in the plural feminine words is attested from the first documentation of Neapolitan. Ledgeway (2009: 60-65) finds examples for all the classes in (4) in texts dating back to the 14th and 15th century. He also points out that the phenomenon in these contexts has always been highly variable, since metaphonic variants are often in synchronic alternation with non metaphonic forms. See for instance the following alternations attested in the 14th century *Libro de la destructione de Troya* ‘The book about the destruction of Troy’: *alcune nuocce / multe nocte* ‘some nights / many nights’, *Le nuobele dompne / una donna delle plu nobele* ‘the noble women / a woman of the noblest’, *cortise parole / cheste femene* [...] *multo cortese* ‘polite words / these women [...] very polite’ (Ledgeway 2009: 64).

Despite their instability, metaphonic plural feminine forms run through almost the entire history of Neapolitan. Still at the end of the 19th century, Capozzoli (1889: 56-58) reports a long list of examples of metaphony in plural feminine words which are in competition with non metaphonic variants, e.g. *semmènte / semmmiènte* ‘seeds’, *sèpe / sièpe* ‘hedges’, *frézze / frizze* ‘arrows’, *cènnere / cinnere* ‘ashes’, *gròtte / grutte* ‘caves’, *códe / cude* ‘tails’. His source are literary texts from the 17th and 18th century, however many of the metaphonic forms must still have been in use at the time of Capozzoli’s essay. The author indeed states that usage will tell which of the forms is still in use («l’uso dirà quale tuttavia si adopra o no», p. 57), and it seems meaningful that, after a long list of competing forms like *scópe / scupe* ‘brooms’, *segnóre / segnure* ‘ladies’, *tórre / turre* ‘towers’, *trómme / trumme* ‘trumpets’, *vócche / vucche* ‘mouths’, *vóce / vuce* ‘voices’, etc., only of *trumme* and *virpe* he specifies that they are almost out of use («quantunque oggi i plurali *trumme* e *virpe* siano quasi disusati», i.e. ‘although nowadays the plural forms *trumme* and *virpe* are almost out of use’, p. 58).

In fact, it is only in the 20th century that metaphonic plural feminine forms exit from use in Neapolitan. Moro (2003: 105-114) observes their progressive reduction in number in texts ranging from the 17th to the 20th century. This raises the question of how such forms emerged in the first place, and why they disappeared after such a long period. A hypothesis in this regard was proposed by Maiden (1991: 172-177, 220-221) and, more recently, it was accepted by Ledgeway (2009: 61-65) who tested it on a larger diachronic corpus of Neapolitan texts. Their arguments will be discussed below.

Before delving into the question, it is useful to introduce the declensional system assumed by Maiden (1991: 152-153) as historically underlying the modern dialects, including Neapolitan. Based on the inflectional patterns of number and gender, three main classes can be identified, as reported in Table 1. In class one, feminine nouns and adjectives have singular *-a* and plural *-e*; they oppose to masculine forms with singular *-u* and plural *-i*. In class two, gender is not formally distinguished and both masculine and feminine forms have singular *-e* and plural *-i*⁴. In class three, which is less relevant here, singulars are masculine ending in *-u*, while plurals are feminine ending in *-a* or in *-ora*. With reference to Neapolitan, it should also be noted that feminine nouns and adjectives of class one include nouns of the first declension and adjectives of the first class, plus nouns of the fourth and fifth declensions which merged with the first⁵; nouns and adjectives of class two include nouns of the third declension and adjectives of the second class (Ledgeway 2009: 61). Given these premises, the rise and fall of metaphony in feminine plurals of class one and two will be discussed in the next sections.

⁴ In the table quoted from MAIDEN (1991), adjectives are used to exemplify the patterns of inflectional exponence of classes one and two. The case of *bono* 'good.ADJ.N' in class one refers to some dialects that also have a so-called "neuter" inflection.

⁵ The nouns in *-ĭTIES* originally had a singular form ending in *-e* (e.g. *bellezze* 'beauty.F.SG') but then they took a singular *-a* (e.g. *bellezza*), thus merging with the nouns of the first declension (LEDGEWAY 2009: 129).

CLASS ONE		
	Sg	Pl
M	<u>bɔnu</u>	<u>bɔni</u>
F	bɔna	bɔne
N	bɔno	

CLASS TWO		
	Sg	Pl
M/F	verde	<u>verdi</u>

Gender is not formally distinguished in this class.

CLASS THREE		
	Sg	Pl
M	<u>kɔrpu</u>	
F		kɔrpora or kɔrpa

Table 1. Declensional system historically underlying the dialects of Italy according to Maiden (1991: 153, table 15). Forms available to metaphony are underlined. As for the meanings of the examples: *bɔnu* ‘good’, *verde* ‘green’, *kɔrpu* ‘body’.

2.2. *Metaphony in class one feminine plurals*

Etymologically, the presence of metaphony in feminine plurals of class one would not be expected because these forms should have a final *-e* (cf. It. *rose* ‘roses’), which, as such, could not trigger metaphony. However, metaphonic outcomes such as Old Neap. *bucche* ‘mouths’ (cf. It. *bocche*) and *catine* ‘chains, necklaces’ (cf. It. *catene*) led scholars to reconstruct also an inflectional **-i* as plural exponent of this class (Maiden 1991: 172-175; Ledgeway 2009: 127-128): *bucche* with stressed /u/ indeed presupposes an earlier **bokki*; *catine* with stressed /i/ an earlier **kateni*.

Metaphonic forms in class one feminine plurals are attested in many dialects of Southern Italy, alongside the much more common

non metaphonic outcomes. Relying mainly on the data from the AIS and ALI linguistic atlases, Maiden (1991: 172) states that the phenomenon «is chiefly observable in a small area of Campania, in parts of Abruzzo-Molise, Puglia, and in Southern Lucania, Calabria and Sicily»⁶.

With special reference to Neapolitan, Maiden (1991: 172-175, 220-221) observes a few interesting restrictions that are characteristic of this variety (see also LEDGEWAY 2009: 61-64):

- (5) Restrictions to the occurrence of metaphony in class one feminine plurals in Neapolitan
- (a) The phenomenon is limited to nouns: e.g. *cude* ‘tails’, but *rosse* ‘red.F.PL’ and not ***russe*.
 - (b) The phenomenon only involves words with stressed high-mid vowels: e.g. *corune* ‘crowns’, *bucche* ‘mouths’ < *o (< Lat. ŭ ō); *frizze* ‘arrows’, *sirve* ‘woods’ < *e (< Lat. ĭ ē); but *selle* [sellə] ‘saddles’ < *ε (< Lat. ě) and not ***sielle*⁷.

According to the scholar, the first restriction would be very specific of the Neapolitan area, while the second would be confirmed by most of the dialects of Southern Italy (but see Sections 3 and 4 for relevant exceptions).

In order to explain the first restriction, Maiden hypothesizes that, in Old Neapolitan, only nouns developed a metaphonizing inflectional **-i* as an alternative to the more common etymological *-e*. The origin of this **-i* is not clear⁸, however Maiden (1991: 175) highlights that the dialects of Ascrea and Subiaco (Southern Lazio), which retain distinct qualities of the final vowels, testify to a situation just like the one hy-

⁶ Apart from the data summarized by MAIDEN (1994: 172-175), examples of the phenomenon can be found in several dialects of Southern Italy. See for instance *spiëkkiję* ‘heap of stone.F.PL’ vs *spëkkiję* ‘heap of stone.F.SG’ < SPĚCŮLA, or *grüttę* ‘cave.F.PL’ vs *gröttę* ‘cave.F.SG’ < CRŪPTA, signalled by an anonymous reviewer for the dialect of Grumo Appula in Apulia (D’AMATO 1987). Moreover, another reviewer reports that a small set of feminine nouns with metaphonic plural is also attested in the dialect of San Valentino, in the Abruzzo region, in which final vowels are reduced to schwa (PASSINO 2020).

⁷ This last example is from LEDGEWAY (2009: 62).

⁸ But see LEDGEWAY (2009: 127-128).

pothesized for Old Neapolitan, with feminine plural nouns of class one ending in *-i* and feminine plural adjectives of class one ending in *-e*. As we will see in Section 3, this situation is also attested in Campania for the dialect of Montella, which therefore further corroborates Maiden's hypothesis⁹.

On the restriction of metaphony to high-mid vowels, Maiden uses an argument of relative chronology. Relying on a wide survey of metaphony in the Italo-Romance dialects, and using a variety of arguments, the scholar concludes that metaphony of high-mid vowels predates that of low-mid vowels (Maiden 1991: 112-116)¹⁰. This would depend on the fact that lower vowels would be more resistant to the assimilatory force of metaphony, as they are more sonorant than higher vowels (Maiden 1991: 135). Based on this premise, Maiden hypothesizes that, when the metaphonizing **-i* was introduced as plural exponent in the class one feminine nouns, metaphony only involved the high-mid vowels /*ε*/ and /*o*/, i.e. a form like **selli* 'saddle.F.PL' with /*ε*/ could not be affected by metaphony at this stage. Later on, when metaphony was finally extended to the low-mid vowels /*ε*/ and /*ɔ*/, the plural **-i* had now been replaced by the non metaphonizing *-e* in class one; this means that the above **selli* would now be **selle* and it could therefore not be affected by metaphony anymore. In other words, Maiden proposes that the generalization of *-e* as plural exponent of class one feminine nouns in Neapolitan predates the extension of metaphony to low-mid vowels.

Maiden's account also provides that attested metaphonic alternations in class one nouns were already morphologized before the definitive neutralization of the final vowels. More precisely, his hypothesis «entails a stage at which final *-i* still exists in the dialect, since it has still to trigger metaphony of low-mid vowels, but at which metaphonic

⁹ In this regard, a final *-i* in class one feminine plurals was also present in other dialects of Italy (ROHLFS 1968: § 362), like for instance Rieti (CAMPANELLI 1896) or Antrodico (SCORRETTI 2021). We wish to thank an anonymous reviewer for having pointed out these references. The reviewer also notes that the final *-i* was attested in the Judeo-Italian of Tuscan area (HIJMANS-TROMP 1989).

¹⁰ However, it should be noted that a completely opposite chronology has been reconstructed by BARBATO (2013) for Western Romance varieties.

alternation is already morphologized, since it must also occur before feminine plural *-e* (which replaces earlier *-i*): e.g., Sg *koda* – Pl *kude*, etc.» (Maiden 1991: 220)¹¹. In Section 5 we will propose a different account for the distribution of metaphony in class one feminine plurals. For now, it will suffice to remark that, under our approach, there is no need to think with Maiden that metaphony also occurred before final *-e*. On the contrary, we think that metaphonic outcomes and final *-e* are mutually incompatible, as conspicuous data from the dialect of Montella demonstrate (§ 3). The most obvious interpretation of final <e> in forms like Old Neap. *cude* is that it marks a schwa, i.e. the actual pronunciation is something like [ˈkudə]¹².

2.3. Metaphony in class two feminine plurals

In this class metaphonic variants can be found in both high-mid and low-mid vowels, and in both nouns and adjectives (see the examples in 4b). The occurrence of metaphony in these contexts is justified by the presence of an original final *-i*, which can be traced back in some way to *-ES*¹³, i.e. the plural termination of nouns of the third declension (e.g. CRÜCES ‘cross.F.PL’ > *krotʃi > *krutʃi; cf. § 2.1) and adjectives of the second class. However, as for class one feminine plurals, also in this case there is oscillation between metaphonic and non metaphonic outcomes. See for instance the following examples reported in Capozzoli (1889: 56 f.) and quoted by Ledgeway (2009: 64): *semmiente* / *semmente* ‘seeds’, *nive* / *neve* ‘snows’, *feruce* / *feroce* ‘fierce.ADJ.F.PL’, *giuvene* / *giovene* ‘young.ADJ.F.PL’. The presence of metaphonic and non metaphonic forms in class two feminine plurals allows scholars to hypothesize the existence in earlier Neapolitan of two alternative plural exponents: i) a metaphonizing *-i* (< *-ES*); ii) a non metaphonizing **-e*¹⁴. The situation is therefore specular to that of class one feminine

¹¹ Cf. LEDGEWAY (2009: 63).

¹² There is widespread agreement among scholars on the fact that final **-i* and **-e* in Neapolitan were already reduced to schwa since the first literary texts (e.g. DE BLASI 1986: 368; FORMENTIN 1998: 178-188; LEDGEWAY 2009: 77).

¹³ The details of this evolution are not fully clarified. For an overall review of the issue, see FARAONI (2018).

¹⁴ MAIDEN (1991: 175-177) provides many arguments in favour of this reconstruction.

plurals, since now *-i* is the original exponent, while *-e* is the innovative form. According to Maiden (1991: 175-177), this *-e* was derived by analogy from the *-e* of class one feminine plural nouns and adjectives. It became more and more common until it supplanted the alternative exponent *-i*, while, more or less at the same time, *-i* was losing ground in class one feminine plurals too (§ 2.4).

2.4. Rise and fall of metaphony in feminine plurals

If we integrate the data of § 2.2 and § 2.3, the rise and fall of metaphony in feminine plurals can be described as in Table 2. It must be stressed that our reconstruction is partially different from that by Maiden since we do not assume the existence of metaphonic realizations before final *-e* (cf. § 2.2).

	CLASS ONE FEMININE PLURALS	CLASS TWO FEMININE PLURALS
a.	*vokke	*torri
b.	*vokke / *vukki	*turri / *torre
c.	vokkə / vukkə	turrə / torrə
d.	vokkə	torrə

Table 2. Rise and fall of metaphony in feminine plurals.

The underlying system reconstructed for Italo-Romance dialects presented a plural exponent *-e* for class one feminine nouns, and a plural exponent *-i* for class two feminine nouns (a). However, the distribution of metaphony in Old Neapolitan allows us to reconstruct the situation in (b) in which, on the one hand, *-i* also extended to class one feminine plurals and, on the other hand, *-e* also extended to class two feminine plurals. As known, metaphony was triggered by *-i* but not by *-e*. This was a quite instable situation since the innovative forms did not supplant the old forms, so that doublets were created in both classes, like *vokke / vukki* and *torre / turri*. This variability continued also after the neutralization of final vowels to schwa (c), however, in the long time the forms without metaphony were preferred and they became the norm in contemporary Neapolitan (d). The variability that

had characterized for centuries the morphology of feminine plurals has been resolved in the end by restricting metaphonic variants to masculine forms, thus reinforcing the distinction between masculine and feminine paradigms. A role in this process was probably played by the reduction of final vowels to schwa, which favored a reorganization and simplification of morphological classes¹⁵. On this and other aspects, it will be useful a comparison with the dialect of Montella which has preserved the quality distinctions of final vowels.

3. *Metaphony in feminine nouns in the dialect of Montella*

3.1. *Preliminary remarks on metaphony in the dialect of Montella*

Montella is located in Irpinia, part of the mountainous inland of the Campania region. More specifically, Montella is located in the so-called “Alta Valle del Calore” area, of which it constitutes the largest center¹⁶. The Alta Valle del Calore is dominated by the major mountains of the Campanian Apennines, Mts. Terminio and Cervialto, which create the natural borders between Irpinia and the province of Salerno.

Thanks to its mainly mountainous and wooded territory, Montella historically has an economy linked to traditional activities. It is a farmer-pastoral community that only in recent decades has experienced the development of other activities.

Nowadays, the traditional local dialect is still alive in the community, and it is spoken by a substantial part of the population. Although with some differences, dialect is used not only by older and low-educated individuals, but also by younger speakers with a high or medium-high socio-economic and socio-cultural level.

¹⁵ An anonymous reviewer suggests that the pressure of Italian could also have played a role in the disappearance of metaphony in feminine plurals in Neapolitan. On the possible influence of Italian on the regression of metaphony in Neapolitan see DEL PUENTE (1995).

¹⁶ With a population of 7,500 inhabitants, Montella is one of the most populous centers in Irpinia. The municipality has a large territorial extension, although it is mostly made up of uninhabited mountainous or wooded areas.

Within the Upper-Southern group (Pellegrini 1977), the dialect of Montella shares several features with the Neapolitan varieties¹⁷. One of them is the Neapolitan type metaphony. Also in the variety of Montella, the Proto-Romance high-mid vowels *e and *o rise to high vowels /i/ and /u/ when they are followed by original high vowels, while Proto-Romance low-mid vowels *ɛ and *ɔ diphthongized to /je/ and /wo/.

Metaphony affects all word classes: nouns (e.g. ['pworko] 'pork/pig.M.SG'; ['ljetto] 'bed.M.SG'), adjectives (e.g. ['friddo] 'cold.ADJ.M.SG' vs ['fredda] 'cold.ADJ.F.SG'), demonstrative pronouns (e.g. ['kwiro] 'that.M.SG' vs ['kwera] 'that.F.SG'), and verbs, especially in the second singular and plural person (e.g. ['vjeni] 'you come.PRS2.SG' and [vi'niti] 'you come.PRS2.PL' vs ['vene] 's/he come.PRS3.SG').

Due to its linguistic peculiarities, the dialect of Montella is particularly suitable for the study of metaphony. As shown in the examples above, unlike other Upper-Southern varieties, for which final unstressed vowels merged to /ə/, the dialect of Montella preserves all the distinctions among the vowels in final position, but with the merging of *u and *o to /o/: the final unstressed vowels are therefore /i e a o/ (Vecchia 2018: 215). Moreover, it must be pointed out that the final unstressed vowels in Montellese are highly conservative since they conform, in the great majority of cases, to the etymologically expected outcomes. This linguistic property offers important advantages for our study, since it allows us to directly observe the metaphonizing context as a whole. It is therefore possible to analyze not only stressed vowels, as in Neapolitan varieties, but also those in final position. Moreover, the preservation of final vowels has significant effects also on the morphological system, since morphological information is mainly conveyed by the final vowels.

The study of numerous spontaneous speech interviews, collected through fieldwork over several years has allowed an initial recognition of the main inflectional classes of nouns and adjectives in the dialect

¹⁷ However, there are quite a few phenomena that are characteristic of the dialect of Montella which are absent, or no longer attested, in modern Neapolitan varieties. Like other Upper-Southern varieties, in particular the Lucanian ones, the dialect of Montella also seems to anticipate some linguistic peculiarities typical of extreme Southern Italian dialects (ABETE & VECCHIA 2018; VECCHIA 2018).

of Montella¹⁸. Table 3 below illustrates the two inflectional classes of adjectives in the dialect under examination:

	INFLECTIONAL VOWEL		± METAPHONY		EXAMPLES	
	SG	PL	SG	PL	SG	PL
I	<i>-a</i>	<i>-e</i>	-	-	['rossa] red.F.SG	['rosse] red.F.PL
	<i>-o</i>	<i>-i</i>	+	+	['russo] red.M.SG	['russi] red.M.PL
II	<i>-e</i>	<i>-i</i>	-	+	['verde] green.F/M.SG	['viridi] green.F/M.PL

Table 3. Morphological classes of adjectives in the dialect of Montella.

The first inflectional class includes adjectives with final *-a/-e* in the feminine form and adjectives with final *-o/-i* in the masculine. As in contemporary Neapolitan, metaphony occurs only in masculine adjectives.

The second class contains invariable adjectives ending in *-e* in the singular form and in *-i* in the plural. In Montellese, all adjectives of the *-e/-i* class regularly present metaphonic outcomes in the plural, by means of the presence of *-i* in final position. Metaphony applies to adjectives of the *-e/-i* inflectional class also when they modify feminine nouns. See the following examples from spontaneous speech interviews:

(6) Metaphony in feminine plural second class adjectives

- (a) [re kkas'taŋne 'ruʃi]
the.F.PL chestnut.F.PL sweet.F.PL
'sweet chestnuts'
- (b) [re 'ffemmene waŋŋu'lisi]
the.F.PL woman.F.PL from Bagnoli.F.PL
'women from Bagnoli'

¹⁸ Fieldwork research in Montella has exclusively involved elderly speakers with a low level of education (see VECCHIA 2017).

On the contrary, metaphony does not occur in contemporary Neapolitan second class feminine adjectives (see § 2.1):

(7) Neapolitan feminine plural adjectives

(a) [e kkas'taŋŋə 'roʃə]

the.F.PL chestnut.F.PL sweet.F.PL
'sweet chestnuts'

(b) [e 'ffemmənə vaŋŋu'lesə]

the.F.PL woman.F.PL from Bagnoli.F.PL
'women from Bagnoli'

Significant differences between the Neapolitan and Montellese varieties are also attested in nouns. Table 4 summarizes the main noun inflectional classes¹⁹ of the dialect of Montella and its distribution of metaphony:

	INFLECTIONAL VOWEL		± METAPHONY		EXAMPLES ²⁰	
	SG	PL	SG	PL	SG	PL
I	-a	-e	-	-	['femmena] woman.F.SG	['ffemmene] woman.F.PL
II	-o	-i	+	+	['tjembo] time.M.SG	['tjembi] time.M.PL
III	-e	-i	-	+	['pɛre] foot.M.SG	['pjeri] foot.M.PL
					['notʃe] walnut.F.SG	['nnutʃi] walnut.F.PL
IV	-o	-a	+	-	['milo] apple.M.SG	['mmela] apple.F.PL

Table 4. Metaphony in noun classes in the dialect of Montella.

¹⁹ By *main classes* we mean inflectional classes that include the largest number of nouns in the dialect of Montella.

²⁰ Even when indicated in isolation, feminine plural forms are reported as they appear when affected by syntactic doubling (e.g. ['ffemmene] 'women'), since this is by large the most common context in which they are used.

The inflectional *-o/-i* class includes only masculine nouns, for which metaphony is regularly attested in both singular and plural. There is a suitable context for metaphony also in the singular form of the *-o/-a* class. Moreover, inflectional *-i* triggers metaphony in the plural nouns of the *-e/-i* class deriving from Latin third declension. As regards this class, unlike contemporary Neapolitan dialect, metaphonic outcomes are attested not only in masculine plural nouns, but also in the feminine ones. See the following examples:

- (8) Metaphony in feminine nouns of the *-e/-i* class
- (a) CRUČEM > ['krotʃe], ['kkrutʃi] 'cross, crosses.F'
 - (b) MULIĚREM > [moʎ'ʎere], [mmuʎ'ʎjeri] 'wife, wives.F'
 - (c) VŌCEM > ['otʃe], ['bbutʃi] 'voice, voices.F'

Instead, there is no metaphonizing context in the inflectional *-a/-e* class, which includes feminine nouns mainly from the first Latin declension:

- (9) Plural feminine nouns of the *-a/-e* class
- (a) PĚTRAM > ['preta], ['pprete] 'stone, stones.F'
 - (b) RŌTA > ['rŏta], ['rrŏte] 'wheel, wheels.F'
 - (c) CEPŪLLA > [tʃe'podða], [ttʃe'podðe] 'onion, onions.F'

However, a few cases of final *-i* in the plural nouns characterized by inflectional *-a* in the singular have been observed. In fact, in most cases, this type of nouns present a double inflectional marker, as can be seen in Table 5.

It is interesting to note that the same lexical types occur within a same speaker's text, both with inflectional *-i* and *-e*. As in the case of ['ttjerri] 'lands', the final *-i* triggers a metaphonic outcome. As in the history of Neapolitan, metaphony in feminine plural nouns from Latin first declension is also attested in the dialect of Montella. Thus, these data seem to confirm Maiden's hypothesis of an ancient final *-i* to explain metaphonic outcomes in feminine nouns (see § 2).

	SINGULAR	PLURAL
CAPRAM >	['krapa] goat.F.SG	['kkrapɪ] ['kkrape] goat.F.PL
VACCAM >	['vakka] cow.F.SG	['bbakki] ['bbakke] cow.F.PL
CARTAM >	['karta] paper.F.SG	['kkarti] ['kkarte] paper.F.PL
TĔRRAM >	['tɛrra] land.F.SG	['ttjɛrri] ['ttɛrre] land.F.PL

Table 5. Plural nouns in the *-a/-e* class (some examples from spontaneous speech).

The inflectional *-i* does not indifferently affect all nouns of first inflectional class. In fact, it seems to characterize a limited set of lexical types. Unfortunately, data retrieved via the spontaneous speech interview technique are not adequate for a comprehensive detection and identification of lexemes presenting this propriety. Thus, it has been necessary to resort to more targeted techniques capable of eliciting as many potential contexts of this phenomenon as possible. To this end, a translation and acceptability questionnaire has been elaborated.

The questionnaire consists of 290 questions and it has been mainly developed on the basis of Gambone's (2010) dictionary of the dialect of Montella, selecting the words that have been included in the questionnaire under the form of questions, excluding technical terms. Thus, only commonly used words have been taken into account. Specifically, 235 singular feminine nouns ending in *-a* have been selected, mostly from first Latin declension and some metaplasms from both third and fifth Latin declensions. In addition, the questionnaire includes 31 feminine nouns of the *-e/-i* class from the third Latin declension and 24 adjectives, of which 12 belong to the first class and 12 to the second class.

The questionnaire was administered to 5 informants (3 males and 2 females) of different ages and with good competence in the lo-

cal dialect. Each question consists in a dialectal word in the singular form. During a first phase, speakers have been requested to provide the meaning of a word, i.e. they were asked whether they knew or used the word under consideration. Once ascertained the speaker's knowledge of the dialectal words, they were asked to pluralize them. As stated previously, since the metaphonizing context is optional in feminine nouns from the first Latin declension, it was considered appropriate to ask speakers whether a double answer was possible as well.

3.2. Questionnaire results

As regards adjectives, the results of the questionnaire confirm the data provided by the spontaneous speech analysis. As a matter of fact, no case of final *-i* – thus, no cases of metaphony in feminine plural first class adjectives – have been detected. In the first class adjectives, metaphony applies exclusively to masculine.

According to informants' responses, metaphony is quite regular in feminine plural adjectives of the *-e/-i* class. Table 6 below shows the frequency percentage of the phenomenon within this class²¹:

+ METAPHONY	– METAPHONY	NO ANSWER
67%	6%	27%

Table 6 Metaphony frequency rate in feminine second class adjectives.

Data collected from the questionnaire has demonstrated that plural adjectives of *-e/-i* class present metaphonic outcomes in 67% of the cases. See some examples from questionnaire responses below:

(10) Metaphony in feminine *-e/-i* class adjectives

- (a) [re 'ppambane 'virdi]
 the.F.PL leave.F.PL green.F.PL
 'green leaves'

²¹ Responses with at least one metaphonic outcome were counted as “+ metaphony”; therefore, the “– metaphony” group only includes words for which no metaphonic outcome were attested.

- (b) [re 'ffemmene at'tsarjendi]
the.F.PL woman.F.PL brave.F.PL
'brave women'
- (c) [re 'mmano ku'ʃjendi]
the.F.PL hand.F.PL burning.F.PL
'burning hands'
- (d) [re ggwaʎ'ʎotte 'ddzuwini]
the.F.PL girl.F.PL young.F.PL
'young girls'
- (e) [re 'bbrattsa 'fworti]
the.F.PL arm.F.PL strong.F.PL
'strong arms'

Informants have not responded in 27% of the cases. This mainly depends on the fact that some speakers have not recognized some lexemes as dialectal words, but rather as Italian forms²². Therefore, excluding a few percentages of cases, also questionnaire results demonstrate a certain regularity of metaphony in plural feminine adjectives of the *-e /-i* class.

A quite similar result can be observed within the context of feminine third class nouns, for which metaphonic outcomes amount to 86%, as shown in Table 7²³:

+ METAPHONY	- METAPHONY	NO ANSWER
86%	-	14%

Table 7. Metaphony frequency rate in the *-e/-i* nouns class.

²² In particular, adjectives like *vergene* 'virgin.F.SG', *nobbile* 'noble.F.SG', *rebbole* 'weak.F.SG', *feroce* 'fierce.F.SG', for which informants had either not responded or had selected variants devoid of metaphony. Despite the final *-i*, the plural forms ['nobbili] and [fe'rotʃi] provided by some speakers do not present any trace of metaphony.

²³ Also in this case, there are words considered non-dialectal by some speakers. Among these there are *legge* 'law.F.SG', *colazione* 'breakfast.F.SG', and *stazione* 'station.F.SG'. Moreover, regarding questions related to the lexemes *neve* 'snow.F.SG', *póleve* 'dust.F.SG', and *cénner* 'ash.F.SG', informants did not respond since they have considered the plural forms of these words as non-dialectal.

According to informants' answers, metaphony regularly occurs in the following forms:

	SINGULAR	PLURAL	GLOSS
*e > /i/	[ˈledʒe]	[ˈlidʒi]	law.F
	[wəɲnoˈlese]	[bbəɲnuˈlisi]	women from Bagnoli.F
*ɛ > /je/	[moˈʎere]	[mmuˈʎjeri]	wife.F
	[ˈsɛrpe]	[ˈssjɛrpi]	snake.F
	[ˈsɛpe]	[ˈssjɛpi]	bush.F
	[ˈʎɛpre]	[ˈʎjɛpri]	hare.F
	[paˈɾende]	[ppaˈɾjendi]	relative.F
*o > /u/	[ˈotte]	[ˈbɒtti]	barrel.F
	[ˈkrotʃe]	[ˈkkrutʃi]	cross.F
	[ˈnotʃe]	[ˈnnutʃi]	walnut.F
	[ˈtorre]	[ˈtɒrri]	tower.F
	[ˈorpe]	[ˈbburpi]	fox.F
	[neˈpote]	[nniˈputi]	granddaughter.F
	[ˈotʃe]	[ˈbbutʃi]	voice.F
*ɔ > /wo/	[ˈnɔtte]	[ˈnnwotti]	night.F

Table 8. Metaphony in the *-e/-i* nouns class.

It must be noted that in the dialect of Montella the *-e/-i* class has a rather limited number of feminine nouns²⁴.

As previously seen in spontaneous speech data, also questionnaire responses confirm the presence of metaphonic outcomes in the first noun class. Table 9 shows the distribution of metaphony within this inflectional class:

+ METAPHONY	- METAPHONY	NO ANSWER
12%	81%	7%

Table 9. Distribution of metaphony in the *-a/-e* nouns class.

²⁴ For this reason, during the elaboration of the questionnaire, it was decided to include in the questions all feminine lexical types of this class.

Metaphony occurs in 12% of the cases of feminine nouns of the *-a/-e* class characterized by stressed high-mid and low-mid vowels. Thus, for this group a morphophonological alternation in stressed vowels between singular and plural is created, similarly to the *-e/-i* class nouns. See the following Table:

	SINGULAR	PLURAL	GLOSS
*e > /i/	[ˈtemba]	[ˈtɪmbi]	turf.F
*ɛ > /je/	[ˈvrɛspa]	[ˈbbrjɛspi]	bee.F
	[ˈvesta]	[ˈbbjɛsti]	dress.F
	[ˈfɛsta]	[ˈffjɛsti]	festivity.F
	[ˈtɛrra]	[ˈttjɛrri]	land.F
	[ˈpɛdɔda]	[ˈppjɛdɔdi]	leather.F
	[joˈmɛnda]	[ggjuˈmjɛndi]	mare.F
	[ˈsɛrɛva]	[ˈssjɛrivi]	servant.F
	[laˈtʃɛrta]	[llaˈtʃjɛrti]	lizard.F
*o > /u/	[ˈskrofa]	[ˈskrufi]	sow.F
	[pɛrˈsona]	[ppirˈsuni]	people.F
	[koˈrona]	[kkuˈruni]	crown.F
	[ˈrotta]	[ˈggrutti]	cave.F
	[ˈokka]	[ˈbbukki]	mouth.F
	[ˈkora]	[ˈkkuri]	tail.F
	[ˈforka]	[ˈffurki]	pitchfork.F
	[ˈkoteka]	[ˈkkutiki]	pork scratchings.F
	[kanˈdzona]	[kkanˈdzuni]	song.F
[ˈskopa]	[ˈskupi]	broom.F	

Table 10. Morphophonological alternations in first inflectional nouns class.

Metaphonic outcomes are due to the final *-i*, which characterizes all the attestations shown above. However, according to speakers' responses, in most cases the final *-i* is not the only plural marker for this set of nouns. Thus, also variants with final *-e* have been considered

grammatically possible by informants, as can be seen in the following examples:

- (11) Inflectional *-e* in plural feminine nouns of first inflectional class
 ['ttembe] 'turfs'; ['bbeste] 'dresses'; ['bbrespe] 'bees'; ['ttere] 'lads';
 ['ppeɔdɔ] 'leathers'; [gɔjo'mende] 'mares'; ['ssereve] 'servants'; ['skrofe]
 'sows'; [pper'sone] 'people'; [kko'rone] 'crowns'; [ggrotte] 'caves';
 ['bbokke] 'mouths'; ['kkore] 'tails'; ['fforke] 'pitchforks'; ['kkoteke] 'pork
 scratchings'; ['skope] 'brooms'.

Conversely, only inflectional *-i* has been attested for the plural of the lexical type *festa*.

Inflectional *-i* affects not only nouns with original stressed mid-vowels. This phenomenon is also attested in nouns that have different stressed vowels. Table 11 below illustrates the distribution of final *-i* based on the stressed vowel that characterizes nouns of *-a/-e* inflectional class:

	*i	*e	*ɛ	*a	*ɔ	*o	*u
<i>-e</i>	97%	94%	77%	83%	89%	55%	100%
<i>-i</i>	-	2%	18%	11%	-	33%	-
no answer	3%	4%	4%	6%	11%	12%	-

Table 11. Distribution of final *-i* in *-a/-e* inflectional class.

As expected, *-e* as a plural marker is attested in most cases. Informants agree in excluding the possibility of a final *-i* and accept only *-e* as grammatical for most nouns. However, although they are a minority, quite a number of answers proves the dissemination of final *-i* in nouns with stressed *a, *ɛ, and *o.

In addition to the attestations seen in table 10, there are several cases of inflectional *-i* also in nouns with stressed /a/, as can be seen in the following examples:

- (12) Inflectional *-i* in plural nouns with stressed /a/
 ['kkrapɪ] 'goats'; ['bbakki] 'cows'; ['akkwi] 'creeks'; ['kkarti] 'papers/
 documents'; [ggatti] 'cats'; ['kkasi] 'houses'; [kkaʃʃi] 'footlockers';
 [ppakki] 'buttocks'; [ssakki] 'pockets'.

On the other hand, no occurrences of final *-i* have been attested for nouns with stressed vowels *i, *ɔ, and *u, while there are only few cases with *e.

According to this kind of distribution, it is possible to identify a certain correlation between stressed vowels and the occurrence of *-i* as a plural marker. The possibility of having this exponent seems to be constrained by the quality of the stressed vowel.

4. *Data from other dialects of Campania*

Before presenting our proposal, it is useful to outline the situation of other dialects of Campania which still present the results of metaphony in feminine plurals. In this regard, very interesting data come from the dialects of the Phlegrean area, just west of Naples, which show the results of metaphony also on the low vowel *a, in addition to metaphony of high-mid and low-mid vowels²⁵. When *a is involved, metaphony manifests itself as “palatalization”, with *a raising and fronting to [ɛ/e]; as for high-mid and low-mid vowels, the phenomenon was triggered by final *i and *u: e.g. Forio d’Ischia [‘ɛsənə] ‘donkey.M.SG/PL’ (< ASINŮ(M)/*-Ī); Monte di Procida [‘ɛkə] ‘needle.M.SG/PL’ (< ĀCŮ(M)/*-Ī) (Rohlf’s 1966: § 22). As these examples show, unstressed final vowels are reduced to schwa, like in modern Neapolitan.

For our purposes, the most interesting data are those reported by Castagna (1982) for the dialect of Forio, on the island of Ischia (see Figure 1). Castagna draws his data from literary texts of authors from Forio published between 1864 and 1967, so they are necessarily incomplete. Final <e> in the examples marks a schwa, like in the tradition of written Neapolitan. The texts analysed by Castagna attest many cases of metaphony in feminine plurals. They are presented below, organized by morphological class (one or two; see Table 1) and by the proto-Romance vowel that was modified by metaphony:

²⁵ ROHLF’S (1966: § 22) attests metaphony of *a* in the dialects of Ischia, Procida, Monte di Procida, Pozzuoli. A few examples of this phenomenon are also reported by SALVIONI (1911: 488) for the nearby dialect of Giugliano di Campania, in the area north of Naples.

- (13) Class two feminine plurals, Forio d'Ischia dialect (Castagna 1982)
- (a) *e > i: *bbellizze* 'beauties', *bbruttizze* 'uglinesses', *pprudizze* 'braveries' (-ĪTIES), *e ppanzise* 'the women from Panza', *e llacchise* 'the women from Lacco';
 - (b) *o > u: *e rrruce* 'the crosses', *e bbuce* 'the voices', *e nnuce* 'the walnuts', *e rraggiune* 'the reasons', *aspiraziune* 'aspirations', *e ccanzune* 'the songs';
 - (c) *a > ε: *cherre* 'fleshes'²⁶, *furnece* 'furnaces', *treve* 'beams'²⁷.
- (14) Class one feminine plurals, Forio d'Ischia dialect (Castagna 1982)
- (a) *e > i: *rrizze* 'nets', *trizze* 'braids', *le sileve* 'the woods';
 - (b) *o > u: *tre pperzune* 'three persons', *e ccùtene* 'the pork rinds', *cherune* 'crowns';
 - (c) *ε > je: *terre* 'lands';
 - (d) *a > ε: *cherte* 'documents', *e memme* 'the moms'²⁸.

With regard to high-mid vowels, we find a situation similar to Old Neapolitan, with metaphony involving words with stressed *e and *o in both feminine plurals of class two and one. For the rest, there are many differences that are worth noting. *Tierre* shows that in this dialect the extension of metaphony to feminine plurals of class one also involves words with the low-mid vowel *ε. By the way, this form is not unique to the dialect of Forio because it is also documented for the dialect of Bacoli (Retaro 2005: 45), still in the Phlegrean area, and it is quite common in the Irpinian dialects (see § 3.2). Moreover, metaphony also involves nouns with stressed *a, and not only in feminine plurals of class two (*cherre*, *furnece*, *treve*), but also in feminine plurals of class one (*cherte*, *memme*).

Other cases of metaphony in feminine plurals are attested in the dialect of Procida (see Figure 1). In the vocabulary by Parascandola

²⁶ *Chèrre* from *karni with assimilation of rn > rr. Castagna also reports the form without metaphony *carre*.

²⁷ According to LEDGEWAY (2009: 65 n. 19), *treve* 'beams' could also be a masculine form since Neapolitan also has *trave* 'beam.M.SG'.

²⁸ Also *carre* without metaphony. *Memme* 'moms', which is found in a 1967 text by Luigi Polito, is considered a misprint for *mamme* by CASTAGNA (1982: 59), however, for what we know about this dialect, it seems a perfectly plausible form.

(2000), we find the feminine plural of class two *cruce* ‘crosses’ (besides the non metaphonic variant *cróce*) and also the feminine plural of class one *cule* ‘tails’ (besides the non metaphonic variant *cóle*), but the phenomenon could be underestimated given the nature of the source.

Interesting data also come from other Irpinian dialects. The same questionnaire used for the dialect of Montella (see § 3.1) was also submitted to three informants of the dialect of Calitri. This dialect, spoken in Southeast Irpinia, at the border with Basilicata (see Figure 1), has many peculiarities, the most relevant being the so called “vocalismo marginale” (Lausberg 1939: §§ 81-89), i.e. the merging of the outcomes of ĭ Ē and ě > /ɛ/, and of ů Ō and ō > /ɔ/; moreover, all final unstressed vowels are neutralized to schwa with the only exception of /a/, which is commonly realized as [ɐ] (Abete 2020). The main results of the questionnaire are summarized below, focusing on the differences and similarities with the dialect of Montella.

A first difference is that in the dialect of Calitri metaphony is never found in adjectives of the second class (e.g. [ˈvɛrdə] ‘green.F.PL’, [ˈvɛrdʒənə] ‘virgin.F.PL’, [ˈfrɔtʃə] ‘fierce.F.PL’, [ˈfɔrtə] ‘strong.F.PL’). In reference to nouns, there are no cases of *e > i in feminine plurals of class two, nor in those of class one. On the contrary, as in Montellese, *ɛ > je is well attested in feminine plurals of class two ([məʎˈʎjɛrə] ‘wives’, [ˈpʝjɛʝə] ‘leathers’, [ˈsjɛrpə] ‘snakes’, [səmˈmjɛntə] ‘seeds’), and there are also two relevant cases in class one: [rə ˈffjɛstə] ‘the.F.PL holiday.F.PL’ (cf. It. *festā* ‘holiday.F.SG’, *feste* ‘holiday.F.PL’); [r auˈtʃjɛrtələ] ‘the.F.PL lizard.F.PL’ (< LACĒRTA + dim. suffix -ULA). For *ɔ > wo, we only have the feminine plural of class two [ˈnwottə] ‘nights’ and no cases of feminine plurals of class one (e.g. [rə ˈppɔrtə] ‘the.F.PL door.F.PL’ < PŌRTAS and not **[rə ˈppwortə]). For *o > u, it is confirmed that the phenomenon is robustly attested in feminine plurals of class two ([ˈfrunnə] ‘leaves’, [ˈddʒuvənə] ‘young ladies’, [ˈvuttə] ‘barrels’, [ˈkrutʃə] ‘crosses’, [ˈnutʃə] ‘walnuts’, [ˈvurpə] ‘foxes’, [prəddʒəsˈsjunə] ‘processions’, [kuladˈdzjunə] ‘breakfasts’, [nəˈputə] ‘granddaughters’, [ˈvutʃə] ‘voices’), as well as in feminine plurals of

class one ([ˈkurə] ‘tails’, [ˈskrufə] ‘sows’, [ˈkrunə] ‘crowns’, [pərˈsunə] ‘persons’, [ˈgruttə] ‘caves’)²⁹.

Other cases of metaphony in feminine plurals are reported by Abete (2017: 42, n. 21) for the dialects of Southeast Irpinia: [rə ˈʃkrufə] ‘the.F.PL sow.F.PL’ (vs [ˈʃkrofə] ‘sow.F.SG’), and [rə ˈvvrɪkkjə] ‘the.F.PL ears.F.PL’³⁰ (vs [l auˈrekkja] ‘the.F.SG ear.F.SG’) are recorded for the dialect of Sant’Andrea di Conza; [rə ˈffjɛstə] ‘the.F.PL holiday.F.PL’, already met for the dialect of Calitri, is of common use also in the neighboring dialects of Aquilonia and Bisaccia. Such forms emerged spontaneously during conversation and are therefore highly unsystematic.

5. Discussion and conclusions

Based on the data presented in Sections 3 and 4, we have developed a diachronic model to explain the emergence of metaphony in feminine plural nouns of class one and its distribution among stressed vowels. We will first focus on the dialect of Montella which preserves the qualities of the final unstressed vowels and therefore provides evidence that otherwise could only be a matter of speculation.

The dialect of Montella shares several features with Old Neapolitan. In this variety, metaphony is still attested in feminine plural nouns of *-e/-i* inflectional class, and it occurs in some nouns of *-a/-e* class as well. Unlike the *-e/-i* class, for which metaphony is triggered by an etymological final *-i* (cf. § 2), in the case of *-a/-e* class it is necessary

²⁹ Following ABETE (2020), the stressed /u/s of such examples from the dialect of Calitri would be the remnants of a preceding “Sicilian” vowel system (with \bar{u} \bar{u} \bar{o} > /u/), and, as such, would not represent the result of a truly metaphonic process. However, their preservation in this context implies the existence of identical but truly metaphonic forms in the neighbouring dialects (as they are in fact attested in the dialect of Montella), which served as model for the Calitri forms. Otherwise, we would have had in this context a stressed /ɔ/, as regularly happened to the corresponding feminine singular forms (e.g. Calitrano [ˈkrɔʃə] ‘crow.F.SG’). It is not possible to go into further details here but see ABETE (2020) for a full analysis of the Calitrano vowel system.

³⁰ [ˈvrɪkkjə] ‘ears.F.PL’ < AURĪCŪLAS is one of the very few cases of *e > i that we found in the feminine plurals of class one in the Irpinian dialects. The only other one is [ˈttimbi] ‘turf.F.PL’, recorded for the dialect of Montella (§ 3.2).

to resort to another kind of explanation. As already proposed by Maiden for Neapolitan, we also assume an analogical process to explain the emergence of metaphonic outcomes within the *-a/-e* class in the dialect of Montella. The analogical action allowed the extension of final *-i* – and consequently of metaphony – from feminine *-e/-i* class nouns to the *-a/-e* class.

On this point we agree with Maiden, however our proposal differs from his model in many respects. According to Maiden, in Old Neapolitan the analogical final *-i* caused metaphony in the class one only in nouns with stressed high-mid vowels, since the phenomenon had not yet reached low-mid vowels (see § 2.3). However, data collected for the dialect of Montella has revealed a different situation. As observed in § 3, in this variety the analogical final *-i* is restricted to lexical types characterized by the original stressed vowels *a, *ε, *o. Thus, in *-a/-e* class nouns, metaphony affects the high-mid *o and also the low-mid *ε, while only one case of metaphony has been attested in nouns with the high-mid *e. Given these data, the explanation based on a different chronological progression of metaphony between high-mid and low-mid vowels proposed by Maiden for Neapolitan does not seem to apply to the distribution of the phenomenon in the dialect of Montella.

In our opinion, the analogical process involves not only the final *-i*, but rather a morphophonological template consisting of both the stressed vowel and the final unstressed one. The more a given template is represented in the *-e/-i* class nouns, the higher is the probability to attest it in the *-a/-e* class nouns. As seen in Section 3, there is a relatively limited number of feminine nouns in the *-e/-i* class. Among these, the most prominent template is characterized by stressed *o. The templates with stressed *ε and *a are also well represented. On the other hand, there are just a few cases with stressed *e, while only ['nwotti] 'nights' and ['lutʃi] 'lights' are attested respectively for stressed *ɔ and *u. There are no cases of templates with stressed *i.

The available templates in *-e/-i* class nouns of Montellese are reported in Table 12. This can be compared with the list of feminine plurals of *-a/-e* class nouns of Montellese that took an analogical final *-i* (Table 13). The comparison suggests that only templates attested sig-

nificantly in *-e/-i* class nouns have been extended to *-a/-e* class nouns. The distribution of final *-i* in *-a/-e* class seems indeed to conform to the patterns that are well established in *-e/-i* class. The highest percentages of occurrence of analogical final *-i* have been attested in nouns with original stressed *o, *ε, and *a, thus replicating in *-a/-e* class the only robust morphophonological templates of *-e/-i* class. As can be seen, the analogical process affected also nouns with stressed *a, which in this dialect cannot undergo metaphony. On the other hand, it seems that the templates that are not enough represented in *-e/-i* class cannot be analogically extended. The model of [ˈnɲwotti], for instance, is too weak to attract other words, and this is the reason why metaphony does not extend to feminine plural nouns with stressed *ɔ in *-a/-e* class, in Montellese dialect as in other dialects of Campania including Neapolitan. The case of the *e...i template fits into this picture as well: it is only moderately represented in *-e/-i* class and the only case of analogical extension to the *-a/-e* class in the dialect of Montella is indeed [ˈttimbi] ‘turfs’.

TEMPLATES	ATTESTED FORMS
*o...i	[ˈbbutti] ‘barrels’; [ˈkkruʦʃi] ‘crosses’; [ˈnɲuʦʃi] ‘walnuts’; [ˈtturri] ‘towers’; [ˈbburpi] ‘foxes’; [ɲɲiˈputi] ‘grand-daughter’; [ˈbbutʃi] ‘voices’; [pɲiʦʃisˈsjuɲi] ‘processions’; [kkoladˈdʒjuɲi] ‘breakfasts’; [stadˈdʒjuɲi] ‘stations’
*ε...i	[mmuʎˈʎjeri] ‘wives’; [ˈssjɛrpi] ‘snakes’; [ˈssjɛpi] ‘bushes’; [ˈlljɛpri] ‘hares’; [ppaˈrjɛndi] ‘relatives’.
*a...i	[ˈkkjavi] ‘keys’; [kkumˈmari] ‘godmother’; [ˈpparti] ‘parts’; [aˈmandi] ‘lovers’
*e...i	[ˈllidʒʃi] ‘laws’; [bbajɲuˈlisi] ‘women from Bagnoli’ ³¹
*ɔ...i	[ˈnɲwotti] ‘nights’
*u...i	[ˈllutʃi] ‘lights’

Table 12. Templates in *-e/-i* class nouns (Montellese dialect).

³¹ There are also other cases with the suffix *-ese* (e.g. [muntedˈdʒisi] ‘women from Montella’, [kassaˈnisi] ‘women from Cassano’, [milaˈnisi] ‘women from Milan’, etc.

UNDERLYING VOWEL	ATTESTED FORMS
*o	['skrufi] 'sows'; [ppir'suni] 'people'; [kku'runi] 'crowns'; [ggrutti] 'caves'; ['bbukki] 'mouths'; ['kkuri] 'tails'; ['ffurki] 'pitchforks'; ['kkutiki] 'pork scratchings'; ['skupi] 'brooms'
*ε	['bbrjespi] 'bees'; ['bbjesti] 'dresses'; ['ffjesti] 'festivities'; ['ttjerri] 'lands'; ['ppjedqi] 'leathers'; [ggju'mjendi] 'ma- res'; ['ssjerivi] 'servants'; [lla'tjerti] 'lizards'
*a	['kkrapì] 'goats'; ['bbakki] 'cows'; ['akkwi] 'creek'; ['kkarti] 'papers/documents'; [ggatti] 'cats'; ['kkasi] 'houses'; ['kkaʃʃi] 'footlockers'; ['ppakki] 'glutes'; ['ssakki] 'pockets'
*e	['ttimbi] 'turfs'
*ɔ	–
*u	–
*i	–

Table 13. Feminine plurals of *-a/-e* class nouns that took an analogical final *-i*, organized by the historical underlying vowel (Montellese dialect).

This model also fits to the data of the other Campanian dialects described in Section 4. Since in these varieties final unstressed vowels merged to schwa, we use in this case the conventional labels of “class one” and “class two” feminine nouns to refer to historical *-a/-e* class and *-e/-i* class respectively (cf. Table 1). Although the available data for these dialects are quite unsystematic, some clear patterns emerged:

- a. In the Irpinian and Phlegrean dialects metaphony often involves feminine plural nouns of class one with stressed *ε (i.e. *ε > je), while the phenomenon is absent or sporadic with stressed *e, contrary to Maiden’s predictions.
- b. When *e > i is attested, the words involved are much fewer than those attesting *o > u, which is by large the most common case of extension of metaphony to feminine plural nouns of class one; the diachronic model must therefore account for this asymmetry between *e and *o.

- c. There is asymmetry also in the treatment of low-mid vowels: while * $\epsilon > je$ is indeed relatively common, * $\upsilon > wo$ is almost never attested³². This must also be explained.
- d. In the dialect of Forio d'Ischia, metaphony also involved stressed * a , and we find cases of * $a > \epsilon$ in feminine plural nouns of both class two (*cherre* 'fleshes', *furnece* 'furnaces') and one (*cherte* 'documents', *memme* 'moms'); the dialect of Montella does not have metaphony of * a , however it still presents some final *-i* in words with stressed * a in both the aforementioned classes.

Such findings are perfectly compatible with our model of analogical extension which allows us to formulate expectations on the vowels that could present metaphony in feminine plural nouns of class one on the basis of the power of the morphophonological templates available in feminine plurals of class two. A first confirmation comes from the dialect of Calitri, for which we have collected systematic data by questionnaire. The situation of Calitri is very similar to that of Montella, although this dialect reduced to schwa all final unstressed vowels but /a/. The metaphonic patterns attested for feminine plurals of class one are * $o > u$ on the one hand and * $\epsilon > je$ on the other, i.e. the same ones attested for class two. As for Montella, there is no case of * $\upsilon > wo$, given the absence of a robust model in class two (only [¹nwottə]); and there is no * $e > i$ in feminine plurals of both classes one and two.

On this last point, the situation is quite diversified among the dialects but, again, the differences seem to depend on the robustness of the models available in the second class. In the dialect of Montella, for instance, there are a few words with * $e > i$ in class two which account for the only case of * $e > i$ ([¹timbi]) attested in class one³³. Conversely,

³² To be more precise, our model does not exclude the possibility of * $\upsilon > wo$ in feminine plurals of class one; rather, it predicts a lower probability of such an outcome. Indeed, there are sporadic attestations of this phenomenon in the dialects of Southern Italy, such as *la pwoṛti* 'the door.F.PL' in the Cilentan dialect of Omignano (see AIS 880, 'la porta; le porte').

³³ The case of [¹vrikkjə] 'ears.F.PL' (Lat. AURĪCŪLA), occasionally recorded for the dialect of Sant'Andrea di Conza (§ 4), could be explained in a similar fashion, but we miss relevant data on this dialect.

in the dialect of Forio there are many cases of $*e > i$ in both classes (see 6-7), and the same situation is also attested for Old Neapolitan. In this case, a relevant role was plausibly played by some feminine nouns in -ITIES coming from the fifth declension (e.g. *bbellizze* ‘beauties’, *bbruttizze* ‘uglinesses’, *pprudizze* ‘braveries’) which reinforced the $*e > i$ model. These nouns, which were common in Old Neapolitan as well (see 4c), are instead generally unattested in the Irpinian dialects.

Our model can also handle the special case of $*a > \varepsilon$ in the dialect of Forio. With this regard, we can hypothesize that the cases of $*a > \varepsilon$ in class one feminine plurals are due to the analogical pression of the many cases of $*a > \varepsilon$ in class two. This interpretation is also supported by the dialect of Montella which presents many nouns with stressed /a/ and final $-i$ in feminine plural nouns of both classes one and two, although in this dialect /a/ is not affected by metaphony.

Finally, the model we propose can fit quite well with the data of Old Neapolitan with one exception: Neapolitan does not attest $*\varepsilon > je$ in class one feminine plural nouns despite having a potential model for analogy in feminine plural nouns of class two (e.g. *semmiente* ‘seed.F.PL’, *friève* ‘fever.F.PL’). However the absence of the analogical extension could depend on contingent conditions, such as gaps in the documentation, and might as well be random, given the rather irregular nature of analogical processes. The fact remains that the attested extensions of metaphony in class one feminine plurals ($*o > u$ and $*e > i$) had a strong model in class two feminine plurals. On the other hand, the absence of $*\text{ɔ} > \text{wo}$ in feminine plurals of class one is due, as for the dialect of Montella, to the absence of a robust model in class two (only *nuotte*).

In conclusion, we propose that the presence of metaphony in feminine plural nouns of class one is due to analogical processes based on the templates available in the feminine plural nouns of class two. Unlike previous studies, we have demonstrated that a better fit to the data can be obtained if the templates are conceived as discontinuous, so as to include not only the quality of the final unstressed vowel but also the specific quality of the stressed vowel. This way we can predict that the analogical extension will affect only those stressed vowels that

are already affected by metaphony in class two feminine plurals. This prediction is generally borne out by the data currently available, however this is a preliminary research and more data from other dialects are needed for further verification. Research on the minor dialects of Campania is proving to be very fruitful and it is likely that further discoveries will come from this front in the future.

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Я

Léxeis



Some etymological thoughts on latin *aequus* ‘even, level, equal’, with notes on the words for ‘one’ in Indo-European

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ABSTRACT

(Re-)placing Latin *aequus* amongst the Indo-European words for ‘one’. Examining the distribution of the OIE words for ‘one’: *sem- *sib_{1/3}-, *Hoino-/ *hoiwo-/ *Hoik^wo-, and reviewing/revising Thurneysen-Havet’s Law so as to secure *aequus*’s place as a word affected by it.

KEYWORDS: Latin *aequus*, one, Thurneysen-Havet’s Law

1. Introduction

The Latin adjective *aequus* ‘even, level, equal’¹ has had, for the last century or so, no recognized etymology. Thus, both Ernout and Meillet (1967: 18) and de Vaan (2008: 27) say it has «no convincing etymology» or the like. However, in the nineteenth century, when Indo-European comparative linguistics was young, the semantic similarity between Latin *aequus* ‘even, level, equal’, all one-to-one relationships, and Sanskrit *éka-* ‘one’ seemed self-evident and they were unhesitatingly put together as cognates, e.g., by Vaniček in his *Etymologisches Wörterbuch der lateinischen Sprache* (1883) and Monier-Williams in his *Sanskrit-English Dictionary* (1899). However, as the twentieth century moved on, it became clear that, as Indo-European phonology was then known, to equate Sanskrit *éka-* with *aequus* meant that the Sanskrit would be divorced from Latin *ūnus*, Germanic **aina-* ‘one’,

¹ Whence the neuter noun *aequum* ‘level ground; an equal footing, equality; what is fair/equitably’, and the derived denominative verb *equāre* ‘to equate’. In English one can say, using two words that I would say mean one, that if X and Y are the same, then one equates them. The same was true of Latin.

etc., because *ūnus* presupposed a PIE **oino-* rather than **aino-*. Thus, by 1938 and Walde and Hofmann's *Lateinisches etymologisches Wörterbuch*, the equation of *éka-* and *aequus* was one of several etymologies for the latter that were rejected, more or less out-of-hand².

Nonetheless, the semantic rapprochement seen by Vaniček and Monier-Williams remains striking and well-attested elsewhere, as we will see, and I think it worthwhile to re-examine it to see if somehow the etymological connection might be reinstated. The critical issue here is phonological³, but we will ignore that for the moment and look at the recognized words for 'one' in Indo-European, so as to measure the semantic closeness of *aequus* to them.

2. The words for 'one' and their derivatives in Indo-European

As already alluded to, the first thing we should note is that we can reconstruct three words for 'one' for Proto-Indo-European: (1) *Hoino-* (on which see below), (2) **sem-*⁴, and (3) **si(h_{1/3})*⁵.

² Their own suggestion, that *aequus* was a derivative of PIE **ai-* 'give', had, so far as I know, no takers, nor should it have.

³ At the outset there seem to me to be two possibilities: (1) to show that a root **h₂ei-* (> already phonetically **h₂ai-* in later Proto-Indo-European) in *aequus* is possibly an ablaut variant **h₂oi-* (to account for *ūnus*, etc.), or (2) to show that Latin *aequus* possibly represents some inner-Italic or inner-Latin phonological development from an earlier **Hoik^wos*.

⁴ Greek (εἷς/μία/ἕν [*< *sēms/smih₂/sem*]), Armenian (*mi* [*< *smih₂*]), Tocharian (*se* [*< *sēms*]), and possibly Albanian (*një* [*< *myah₂?*]). Some, however, see the Albanian to be somehow from **Hoinos*, e.g., Jokl (*< *Honyóm < *Hoynom*). Neither suggestion is absolutely compelling. And both are phonologically difficult and unparalleled elsewhere in Albanian. BEEKES does not mention Albanian in conjunction with Greek εἷς, but MARTIROSYAN (2010: 468) does with respect to Armenian *mi*. Fortunately, the exact origin of the Albanian word for 'one' does not materially affect the overall argument presented here. It has sometimes been thought that the third form, **si-*, is somehow a reflex of the feminine **smyV-* of **sem-* (e.g., GIPPERT 2004 with previous literature). See now DE VAAN (2017) for a discussion and refutation of that notion.

⁵ It has been seen by many that it would seem redundant for Proto-Indo-European to have two (now three) different words for 'one'. But finding the differences in meaning, if any, between the three words for 'one' is elusive. SZEMERÉNYI (1996: 222), following BRUGMANN (1911: 6-7), suggests that **Hoinos* stressed singleness or isolation while **sēms* stressed togetherness or unity (the latter point emphasized by DE VAAN 2017). All this is a possibility. But what of **si(h_{1/3})*- (unknown to Brugmann and Szemerényi)? Still, some-

2.1. PIE **sem-*

**Sem-* is the primary word for ‘one’ in Albanian (?), Greek, Armenian, and Tocharian, and, in derivatives, it is found in everywhere save possibly in Anatolian⁶. Derivatives of **sem-* often show semantic overlap with the meanings of *aequus*, reinforcing the notion of “oneness” of the latter word. Thus, we have English *same*, Old Norse *samr* ‘same, equal’ (*samfedri* ‘having the same father’ [≈ Greek *ὁμοπάτριος*]), and related Germanic words, Greek *ὁμός* ‘common, one and the same, equal, level’, *ὁμοπάτριος* ~ *ὁμοπάτηρ* ‘having the same father’, Avestan/Old Persian *hama-* ‘equal, same’, Sanskrit *samá-* ‘even, smooth, flat, same’, Tocharian A *ṣoma-pācār* (≈ *ὁμοπάτηρ*) ‘having the same father’, Tocharian B *ṣemé-pälsko* ‘of the same mind/ of one mind’, *ṣemé-yärm* ‘in equal measure’ (= Sanskrit *sama-mātra-*, ≈ Latin *aequālis/aequāliter*).

2.2. PIE **si(h₁₁₃)-*

Though the data is much less abundant, we need to take into account the less familiar third word, **si(h₁₁₃)-*, though its semantics offer little evidence not seen in **sem-* or **Hoino-* (on which immediately below). Hittite, along with Greek, Tocharian A, and probably Albanian offer reflexes for this word. Hittite has *sis* (nom. sg. common gender *sīs*

where in the Indo-European world all mean ‘one’, both ‘one alone’ and ‘one in unity/ be at one with’. And all major branches of Indo-European, save Albanian and possibly Anatolian, have both **Hoino-* or its variants/derivatives and **sem-* or its derivatives. (By contrast, as noted, **si(h₁₁₃)-* has left reflexes in only Anatolian, Tocharian, and Greek, and perhaps Albanian.) In this particular context it is important to note that for Sanskrit *éka-* MONIER-WILLIAMS (1899) gives ‘alone, solitary, single’ and ‘the same, one and the same, identical’.

⁶ KLOEKHORST (2008: 719, 722-723) very cautiously suggests that *sammae-* ‘create’ (if < **sm-no-yelo-* and if ‘bring together?’) and *sani* ‘the same’ might be descendants of PIE **sem-*. For the first, the connection is quite plausible; while for the second the meaning is excellent but the *-n-* rather than *-m-* is difficult, perhaps **sm* > **sam* > **san* + *i*. Lycian *hēmene-* ‘combined, united’ (PUHVEL 2017: 102) and Hieroglyphic Luvian *saman-* ‘contract, agreement’ (PAYNE 2014: 149) would seem also to be reasonable candidates for cognancy with PIE **somo-*. Hittite *sa(m)mana-* ‘setting, layer, grounding, base, foundation’, on the other hand, seems semantically too distant to belong here (contra the cautious suggestion of PUHVEL 2017: 97-102). If either the Hittite words *sammae-* or *sani* are cognate, or the Lycian/Luvian, and they probably are, then PIE **sem-* would be universally represented in the daughter stocks.

[late Hittite also analogical *sias*], acc. sg. common *sian*, neuter nom./acc. sg. *siat* ~ *sie*) ‘one’⁷, Greek (Homeric and some non-Attic dialects) has the psilotic⁸ nom. sg. fem. ἄ ‘one and the same; only, single’ (gen. sg. fem. ἰᾶς [and the sole non-feminine, the nt. sg. dat. ἰῶ]; cf. the discussion of Kloekhorst [2008: 750-751] which, though chronologically earlier, supersedes that of Beekes [2010: 571] which takes the Greek in isolation)⁹. Added by Pinault to this etymon, earlier yet (2006), is the Tocharian A adverb *ši* ‘once; for the first time’¹⁰. Brought to bear, earlier still, is Albanian *gjithë* ‘all’ (< **sih*_x -*ko*-; Demiraj 1997: 188-189; other Albanian etymologists have the equivalent of “no etymology”). A form found in Anatolian, Greek, Tocharian, and Albanian is certainly of Indo-Anatolian age.

2.3. A closer look at **Hoinos*

Though usually cited as **Hoinos* tout simple, we actually have **Hoi-* by itself in Hittite and at least a trio of derivative words to deal with: **Hoiwos*, and **Hoik^wos*, as well as **Hoinos*. Morphologically the pre-Hittite **Hoi-* is the most basic form. It appears as <a-an-ki> (or more commonly as <1-an-ki>) ‘once’. The trio of derivatives appear in the following forms. (1) **Hoiwos* appears as the primary word for ‘one’ in Iranian, e.g., Avestan *aēva-* ‘one’, Old Persian *aiva-* ‘alone, one’, and in Nuristani, e.g., Waigali (aka Kalāṣa-alā) *ew* ‘one’ (Degener 2002: 106). **Hoiwo-* is also found in Greek οἶος (Cypriot *oiwos*) ‘alone, only, sin-

⁷ There is also the Hittite derivative *siela-* ‘by oneself, single, (a)lone, apiece’. The Hittite meanings of the derivatives of this third word for ‘one’ are semantically more closely related to those of **Hoinos* than those of **sem-*, contrary to what one might have expected on the basis of Szemerényi, Brugmann, and de Vaan (fn. 5).

⁸ By crossing/contamination with the pronominal **h₁ei-*?

⁹ PUHVEL (2021: 59-63) treats the Hittite and Greek words very differently (feminine < PIE **swiyah₂*). Tocharian is not brought into the discussion. One might note that an initial PIE **sw-* would be possible in Hittite, Greek, and Tocharian, but not in Albanian.

¹⁰ Pinault is surely correct in taking *ši* ‘once; for the first time’ as belonging with the Hittite and Greek, but not, I believe, in taking the Tocharian B *še* and A *sas* nom. sg. masc. ‘one’ to be from **syó-*. Rather *še/sas* are from PIE **sēm̄s* as usually supposed. Tocharian A *ši* might reflect an old dative **sih_{1/3}-ei* or the like. Albanian *gjithë* ‘all’ is usually taken as a reflex of **sem-ko-* (POKORNY 1959: 903; HULD 1984: 69-70, etc.) but as noted above **si(h_{1/3})-ko-* would do just as well and be easier phonologically. If the latter is the case, we have some data linking **si(h_{1/3})-* semantically with **sem-*.

gle’, οιο-πόλος ‘walking alone’ [homophonous with οιοπόλος ‘herding sheep’], οióθεν ‘all alone’, Sanskrit (in the adverbs *evá* ‘so, just so, exactly, only’ [again one might note the semantic similarity to *aequus*] and *evám* ‘thus’ [Mayrhofer 1956: 129; not adduced by Beekes 2010: 1060]), and Tocharian B (*aiwe-* ‘±unit’, attested only in the plural *aiwenta* ‘±groups’ [see Adams 2013: 111]). (2) Leaving aside for the moment Latin *aequus*, **Hoik^wos* appears as the word for ‘one’ only in Sanskrit *éka-* (and borrowed from pre-Sanskrit into Mitanni horse-racing terminology as *aika* ‘a single turning [in a horse race]’)¹¹. (3) Of the three words beginning in **Hoi-*, **Hoinos* is by far the most common. It occurs as the word for ‘one’ in Balto-Slavic (Old Prussian *aina-*, but see below for East Baltic and Slavic), Germanic (Gothic *ains*, English *one*, NHG *ein*, etc.), Celtic (e.g., Old Irish *óin*), and Italic (e.g., Latin *ūnus*, < Old Latin *oinos*), and as a secondary number-word in Greek (οἷνη ~ οἷνός ‘ace on a die’)¹². Sanskrit shows *ēna-* ‘he’ (< ‘this/that one’); in East Baltic (e.g., Lithuanian *vienas*) and Slavic (Proto-Slavic **edinъ* [~ *edъnъ*]) we have ‘one’ but **jъnokъ* (or **jinokъ*) ‘solitary’ (> Russian *inok* ‘monk’, Old Russian *inokyj* [adj.] ‘only, sole, solitary’, *inokyj* [n.] ‘hermit’)¹³. The East Baltic and Slavic forms require special attention.

2.3.1. *Special issues with East Baltic and Slavic*

These East Baltic and Slavic forms present three problems: the apparent prefix in the numeral itself (but not necessarily in its derivatives) before the **Hoi-*, the intonational contour (acute), and the ablaut of the vowel (**(e)i-*).

¹¹ It must be recognized at the outset that everyone, so far as I can see, routinely reconstructs the PIE antecedent of the *-k-* of Sanskrit *éka-* as **-k^w-*. However, if one believes, as most do (and I do), that PIE had three dorsal series of stops, one cannot exclude the possibility that the *-k-* of *éka-* reflects PIE **-k-* instead. If that should be true, the reader need read no further because the etymology proposed here is crucially dependent on the dorso-velarity of that consonant.

¹² Also Hesychian οἰνίζε/ο- ‘be alone regarding speech’ and οἰνώντα ‘solitary’. Some (e.g., POKORNY 1959; BLAŽEK 1999) see PIE **Hoi-no-* reflected also in Armenian *ēn* ‘god’ (i.e., ‘the One’) but others (e.g., MARTIROSYAN 2010) do not. If belonging here, the Armenian *ēn* may be almost matched by an Oscan feminine theonym *Oinai* (dat. sg.) (WALLACE 2007: 27). Though the form of the Oscan word is sure, its meaning is less so.

¹³ DERKSEN (2008: 138-139, 212-213).

As to the first, as noted, East Baltic has an initial *v-* (e.g., Lithuanian *vienas*) and Slavic an initial *ed-* (Proto-Slavic **edinō* [*~ edynō*] ‘one’). Derksen (2015) takes the East Baltic *vie-* to be from Proto-Baltic **ai-* but without much of a rationale. For Slavic, Derksen (2008) surely correctly suggests a pronominal **h₁ed-*. However, Blažek (1999: 150), with previous literature (including Brugmann 1904: 110; Trautmann 1923; Hamp 1973: 4), takes the East Baltic form to be from **wV-oino-* where the **wV-* is the zero-grade of the pronominal seen in Old Persian *ava-*, OCS *ovī ~ ovŭ* ‘that’, not directly comparable with the Slavic, but similar typologically.

As for the second, the intonational patterns of East Baltic and Slavic suggest to many that a laryngeal preceded the **-n-*, thus **Hoi-Hno-*. That is certainly possible, at least if the laryngeal in question was **-h₁-*¹⁴. The combination **-oih₁C-* becomes Greek *-oiC-* and Indic *-eC-* in the endings of the thematic optative (e.g., third person singular Greek φέροι, Sanskrit *bharet*), so we might well expect the same outcome for ‘one’. If so, the putative **-h₁n-* might be the zero-grade of the definitizing suffix **-h₁e/on-* so prominent in adjective formation in various Indo-European groups, if that suffix begins with a laryngeal¹⁵. Blažek (1999: 151), however, suggests a starting point for the East Baltic-Slavic intonation as **h₁e-e/oino-* with a prefixed pronominal particle

¹⁴ DERKSEN takes the acute accent as secondary, after *ýnas* ‘real’, but the semantic distance makes that quite unrealistic.

¹⁵ OLSEN (2017) has shown how widespread old compounds in **-h₃onh₂-* are, but, such compounds are not relevant to the history of the definitizing adjectives and nouns of Germanic, Tocharian, and Albanian which are derivatives in **(h₁)e/on-*, not **-h₃onh₂-*, as can be seen by the remnants of **-e-* and **-ē-* in the paradigms of both Germanic and Tocharian. Most Germanic languages, but not English any longer, maintain a distinction between definite adjectives (old *n*-stem derivatives) and non-definite adjectives (old non-*n*-stems). Tocharian has but a single declension but one with a mixture of old *n*-stems and non-*n*-stems (ADAMS 1988a: 121-122; 1988b). The earliest attested Albanian (continuous texts of some length only in the late 16th century) has a remnant of a Germanic-like system in having old *n*-stems and non-*n*-stems side-by-side, but apparently completely homonymous at that point. Thus, we have *shenjtë* ‘holy’ (< Latin *sanctus*) beside *shenjtënë* (Gheg)/*shenjtëvë* (Tosk) ‘holy’ (MATZINGER 2006: 200). Some doublets remain even today: e.g., *shurdh/shurdhër* ‘deaf’, *verb/verbër* ‘blind person’. That this process includes Latin/Romance loanwords establishes it as a productive process well into the first millennium AD and perhaps longer. By the time they were first recorded, the Albanian forms had been remodeled to be as if the reflexes of **-o-no/ah₂-*.

creating a long diphthong which was the cause of the acute intonation rather than the presence of a following laryngeal. The same pronominal element is seen in Greek ἐκεῖνος ‘that’, Oscan *eco* ‘hic’, and Russian *étot* ‘that’. This solution obviates the need for a second laryngeal and is typologically consonant with the other prefixes needed to explain the forms found in East Baltic and Slavic¹⁶.

The third issue is less tractable. While the East Baltic forms could be traced to Proto-Baltic **-ai-* (and hence PIE **-oi-*), the Slavic forms seem to require both **-ei-* and **-i-*. Provided the initial laryngeal is **h₁-* that is possible, but neither the *e*-grade, nor the zero-grade, are otherwise paralleled in Indo-European in words for ‘one’. Perhaps the answer lies in the fact that the forms of ‘one’ with **-i-* and **-ei-* are all second members of compounds. They are thus like, for instance, Greek ἀγά-ννίφος ‘snow-capped (of Olympus, say)’¹⁷ (< **ḡ gh₂-* + *snig^{wh}os*), or Sanskrit *yúvan-* (and its widespread Indo-European cognates, < **h₂yú-h₃onh₂-* [see Olsen 2017: 116, 134]) and Greek Ἄγα-μέμνων, with zero-grade (where possible¹⁸), in the first member and zero-grade or *e*-grade in the second¹⁹. In any case, it would seem that our initial **H-* must be **h₁-*. And, clinching the case for **h₁-*, is Hittite *ānki* ‘once’ (< pre-Hittite **ayanki* < PIE **h₁oyṅki*), since either **h₂-* or **h₃-* would have resulted in Hittite *h*-²⁰.

¹⁶ The adduction of Proto-Slavic (DERKSEN 2008: 213, so too DERKSEN 2015: 201) **jónō* [prn.] ‘other’ (> OCS *inō* ‘some[one], other’, Russian *inoj* ‘different, other’) and also Lithuanian *jnas ~ inas* ‘real’ is apparently universal but difficult. The difference in meaning invites much caution. It also separates Proto-Slavic **jónō*, etc., from Latin *iterum* ‘again’ and Sanskrit *itara-* ‘the other of two’, taking the Latin and Sanskrit as belonging to a different etymon (so also both DE VAAN and MAYRHOFER). Derksen does not adduce the Latin/Sanskrit and de Vaan and Mayrhofer do not adduce the Slavic. But, despite the long-standing unity of opinion, I don’t believe it is correct. These latter words, Italic, Indic, and Slavic, can all be derived from a PIE **h_xi-* ‘other’ or the like, a word belonging with ‘two’ semantically and not ‘one’.

¹⁷ More literally, ‘great [with] snow’.

¹⁸ Neither **h₁e* nor **h₁ed* was capable of having zero-grade forms.

¹⁹ Unprefixed derivatives such as ‘solitary’, ‘monk’, ‘hermit’ would have their vowel by analogy with ‘one’.

²⁰ It’s a bit disappointing that the initial **h₁-* is not **h₂-*. If it had been **h₂-*, that would explain *aequus* without further ado and allow us to add the Armenian *ay-* found in the deictic pronouns *ays, ayd, ayn* ‘this one, that one, yon one’.

3. *The possibility of Latin aequus from PIE *h₂oik^wos*

So *aequus*, if related to ‘one’, cannot have its *-a-* from a hypothetical **h₂ai-/h₂oi-* ‘one’. But there is a second possibility, phonologically a bit messy admittedly, as noted above, that Latin *aequus* reflects an unrounding of pre-Latin **oiquos*.

That an **-o-* in an open syllable can sometimes appear as *-a-* before **-w-* in Latin (and Italic) is reasonably well-established as Thurneysen-Havet’s Law²¹. More contemporary discussions of this law can be found in Collinge (1985: 193-195), Schrijver (1991: 463), Vine (2006), and Weiss (2020: 152). On anyone’s account the data are messy, and it is not clear why some words are affected by this change and others not, e.g., *caveō* from **kouh_xéye/o-* is affected but *foveō* from **d^hog^{wb}éye/o-* is not. Is it because in the latter case PIE **-g^{wb}-* had not yet become **-w-* at the time of the change? The change is also restricted by some investigators to pretonic syllables²², but pretonic in Proto-Indo-European terms, not Italic, thus *cavus* ‘hollow’ shows the change because the PIE stress was **kouh_xó-*²³. But both these notions seem impossible to sustain when the change itself is usually dated, when a date is suggested, to around 200 BC. And that date seems reasonably certain: there are unchanged forms preserved in archaic texts or in geographically peripheral areas, e.g., pre-Classical/Republican Latin²⁴ and Iberian Latin *covus* ‘hollow’ (> Spanish *cueva* ‘cave’, Portuguese *covo* ‘hollow’) rather than Classical and general Romance *cavus*.

²¹ THURNEYSEN (1887) [written in 1884] and HAVET (1885).

²² E.g., VINE (2006). Thus *óvis* ‘sheep’, but *avillus* ‘newborn lamb’ (but also restored [or dialect variant?] *ovillus*). DE VAAN (2008: 30) takes *avillus* to be a diminutive of *agnus* ‘lamb’, i.e., from Proto-Italic **ag^wnolo-*, created before the delabialization of **-g^wn-* to *-gn-*.

²³ There are at least an equal number of difficulties if one seeks to use Italic/Latin stress as an environment as VINE (2006) would have it (cf. the problem posed by *manēre* vs. *monēre* in fn. 26).

²⁴ Witness Plautine (c. 254-184 BC) *vacīvus* ‘vacant, free’ vs. Gellius (2nd half of second century BC) *vacīvus* ‘id.’ (but Plautus also has *vacīvitās* ‘state of being empty’), *vacātiō* ‘exemption’ (in an inscription of 123 BC) vs. *vacātio* ‘id.’ (Cicero [106-43 BC] and subsequent authors). And, again, Plautus’ pun in *Cas.517: Fac habeant linguam tuae sedes. Quid ita? Quam ueniam, uocent* (quoted by LINDSAY 1897: 234).

While Thurneysen-Havet’s Law and the contemporary discussions thereof mentioned above are focused on the fate of **-o-* before *-wV-*, there are suggestions that unrounding can occur even in closed syllables, e.g., *vallēs* ‘valley’, though there are no absolutely compelling cases²⁵. Similarly, de Vaan (2008: 8), and others, would see **-o-* > *-a-* in open syllables after *b-*, *m-*, *l-*, and *k^w-*, e.g., *badius* ‘chestnut (of a horse)’ (= Old Irish *buide* ‘yellow’; no other cognates), *mare* ‘sea’ (< **mori*)²⁶, *lacus* ‘lake’ (< **loku-*)²⁷, *canem* ‘dog [acc. sg.]’ (< **k^wonm*)²⁸. The overall situation would appear to be that PIE **-o-* is often, if not with absolute regularity, unrounded in the vicinity of a labial or labiovelar (*b*, *m*, *u*, *w*, *k^w*) either preceding or following. In short, we seem to have a change whose exact scope eludes us. Perhaps we should speak of “Thurneysen-Havet’s Tendency” rather than Thurneysen-Havet’s Law (though we won’t). Certainly, any kind of linguistic change, phonological, morphological, syntactic, begins at a certain point in time and ends (or runs out of steam) at a later point. But, while in operation, that change runs ahead in certain individuals or geographical areas, behind in others, and affects certain possible items earlier or later. Sometimes the process ultimately affects everything possible and, as neogrammarians at heart, we feel satisfaction at its completeness. But sometimes, for whatever reason(s), the change is incomplete. Look at the fate of Middle English stressed *ō* before dentals; sometimes it ap-

²⁵ One might explore the possibility that *vallēs* and *vacca* ‘cow’ owe their unrounded vowels in “semi-open” syllables, i.e., those closed by a geminate (for both, see DE VAAN 2008: 649, 652, for very different [and dubious – as he would admit] suggestions).

²⁶ Another good example would be *manēre* ‘remain’ (< PIE iterative-intensive **moneye/o-* from the root **men-*). The originally homophonous causative (of a different though homophonous root) **moneye/o-* ‘warn’ retains the **-o-* in Latin *monēre*. In this instance adopting the changed (unrounded) variant in one verb and the unchanged (rounded) variant in another allowed a better distinction between the two (cf. the similar, though not identical, discussion of DE VAAN 2008: 362).

²⁷ An /l/ is of course neither bilabial nor quintessentially dorso-velar. But it was in many Italic varieties apparently a “dark l,” which merged with initial **w-* as *w-* (<*v*>) in Umbrian and South Picene (e.g., Umbrian *vuku* ‘in the woods’ [< **loukōd*], South Picene *veiat* ‘rests’ [< **legāti*] [WALLACE 2007: 14, 16]).

²⁸ A further example, which I do not recall being cited in this context, is Latin *varus* ‘pimple’ whose extra-Italic cognates all show regular *e/o/ē*-ablaut in the first syllable (DE VAAN 2008: 654). Thus, *varus* would appear to presuppose an earlier **vorus*.

pears in Modern English shortened and unrounded (e.g., *flood*, *stud* [uniquely respelled]), sometimes only shortened (e.g., *stood*, *good*), sometimes unaffected by either process (e.g., *mood*, *food*)²⁹. And there appears to be no variety of English that doesn't show some mixture of these three outcomes. Absolute certainty is denied us, but the supposition that an original (late Proto-Indo-European/Proto-Italic) **oik^wo-* might show up as Latin *aequo-* by at least a semi-regular phonological development seems well within the realm of possibility.

4. Conclusion

On the basis of the arguments presented here, I think there is a good chance that Vaniček and Monier-Williams were essentially right in equating Sanskrit *éka-* and Latin *aequus*. The equation is, admittedly, not so simple as they supposed. Both are descended from a PIE **h₁oik^wo-* but the Latin word has undergone something like Thurneysen-Havet's "Law" changing an Indo-European **-o-* to *-a-* when in the environment of a labial or dorso-velar. This law is certainly an "unruly" one whose exact scope and environment are difficult to pin down, but its existence in some form or another can hardly be doubted. The ability to give an etymology to *aequus* demonstrates that it may have affected **-oi-* just as it did **-o-*. There are very few etymologies in our science that are so compelling that no doubt can be entertained but that they are true. And this is not one of those. However, as an etymology for *aequus* I think this old/new proposal deserves serious consideration, especially as its only competitor is "no etymology".

Finally, some numbers may provide a bit of overall context. I count seven words for 'one' occurring in Indo-Anatolian stocks: **sem-*, **sih_x-*, **h₁oi-*, **h₁oino-*, **h₁oiwo-*, **h₁oik^wo-*. **sem-* (and/or its derivatives) occurs certainly in eleven stocks and possibly in Anatolian as well, **sih_x-* appears in four stocks. The "family of **h₁oi-*" (**h₁oi-*, **h₁oino-*, **h₁oiwo-*, and **h₁oik^wo-*) occurs in all stocks save Albanian.

²⁹ For English *stud* and *stood*, which "should" be homonyms, compare Latin *manēre* and *monēre*.

Most stocks (7) preserve two words, **sem-* and one of the **h₁oi-* words. Armenian may be exceptional in preserving only **sem-*, Albanian exceptional in preserving **sem-* and **sih_x-*, Anatolian exceptional in only preserving certainly **sih_x-* and **h₁oi-* (but **sem-* likely too). Three stocks certainly preserve three words (Italic, Indic, and Tocharian) and one may (Anatolian); Greek preserves four such terms. Certainly **sih_x-*, and **h₁oi-* are of Indo-Anatolian age, and **sem-* almost surely as well. **h₁oino-* (in five or six stocks), **h₁oiwo-* (in four), **h₁oik^wo-* (in two), all expansions of **h₁oi-*, on the other hand, would appear, on the basis of their distribution, to be of Indo-Tocharian age or, in the case of **h₁oino-* and **h₁oik^wo-*, possibly later, that is of Core Indo-European age.

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Greek μέλω ‘dance and sing’ and Slavic **mlǔcati* ‘be silent’*

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ABSTRACT

It is argued that Greek μέλω ‘to celebrate a deity (with singing and dancing)’ originally meant ‘to appease a deity’ and is cognate with Slavic **mlǔcati* ‘to be(-come) silent’ < *‘to be appeased’.

KEYWORDS: Greek, Slavic, etymology, antiquity, worship

1. Gr. μέλω (H.+) ‘celebrate with song and dance, sing and dance’ is usually regarded as etymologically unclear, cf. Frisk (1960-1972: 204): «Ohne Etymologie», Beekes (2010: 928 s.v.): «No etymology»¹. Time and again the old and intuitively understandable idea that it is somehow related to **mel-* seen in μέλος ‘limb; song’ keeps reappearing. It is accepted e.g. by Diehl (1940: 92-93), who assumes a rather abstract basic meaning ‘division, structure’ (‘Gliederung’) to cover all aspects of Greek μέλω/μολπ-, and by Szemerényi (1954: 169-171), who proposes a basic root **mel-* ‘solemn recital’ enlarged with various elements, whose functions are notoriously undefinable, leading to **mel-p-*, **mel-d^b-* and **mel-g^(h)-*. Stokes (1901: 191) (quoted approvingly

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¹ The root does not seem to have been found in Mycenaean (so far). It has been proposed that *mo-ro-qa* (KN C 954, Xd 7586, PY An 519, Aq 64, Jo 438) represents an earlier form of μολπή (cf. AURA JORRO 1985-1993: s.v.), but it is most likely the title of an official, «perhaps *mo(i)ro-kkwās* ‘possessor of a share’» (cf. KILLEN 2024: 2.991) and it would show an unexpected spelling, if /*molkw̄ā*/ were intended.

by Pedersen 1909: 1.94) took OIr. *-molor* ‘praise’ and cognates such as *molad* ‘praise (n.)’, Welsh *mawl* ‘id.’ to go back to a root **melp-* (with an early Celtic sound change **-lp- > -l-*), assuming a direct connection with the Greek forms («*molad* ‘preis’ (Cymr. *moli*) cognate with Gr. *μολπή*»²), but preforms such as **mōlo-* seem to be more likely³. The connection is still quoted in Chantraine *et al.* (2009: 658), who also points to PIE **mel-*, Hitt. *mald-* ‘to recite’ etc.⁴

2. Various authors have argued that ‘to sing’ is probably not the primary meaning of Greek *μέλω* and its derivatives. In most Homeric instances, *μέλω* seems to evoke both singing and dancing, and in some cases singing does not seem to be necessarily implied⁵. As Diehl (1940: 92) discusses, in *Il.* 7.241 it is likely that Hektor’s ironic remark to Aias refers primarily to the image of dancing⁶:

- (1) *Il.* 7.241 οἶδα δ’ ἐνὶ σταδίῃ δηῖω μέλπεσθαι Ἄρηϊ.
‘And I know how in close fight to **tread the measure** of furious Ares’.

Maybe singing is not excluded here, but it is certainly not the only meaning. The same applies to the chorus in honour of Artemis:

- (2) *Il.* 16.181
...τῆς δὲ κρατὺς Ἀργεῖφόντης
ἠράσατ’, ὀφθαλμοῖσιν ἰδὼν μετὰ μέλπομένησιν
ἐν χορῶ Ἀρτέμιδος χρυσηλακάτου κελαδεινῆς.

² Taken up e.g. by BOISACQ (1916: 625), and PAGLIARO (1951: 13): «sicura connessione con irl. *molaim* ‘lode’, *molad* ‘lode, elogio’ (cf. BOISACQ, p. 625)».

³ Cf. MATASOVIĆ (2009: 275) who tentatively assumes a connection with PIE **meld^b*- via a root noun **mōld^b-s > *mōls* from which the root form **mōl-* would have been generalized. THURNEYSSEN (1946: 95) assumes a geminate as the outcome of **lp-* in *-tella/talla* ‘there is room for’, Lith. *telpiù, tilpti* ‘to find room’; *coll* ‘violation (of a law)’, Lat. *culpa*.

⁴ Cf. on **meld^b*- also KÖLLIGAN (2018).

⁵ On the discussion about the meaning(s) of *μέλω*- in antiquity and Byzantine scholarship cf. BIELOHLAWEK (1922).

⁶ Cf. also DIGGLE (2021: 911 s.v.) referring to this passage: «(fig., of a warrior) dance —W.DAT. for Ares (i.e. fight in battle)».

Diehl *loc. cit.* takes this passage as evidence that μέλω- can exclude singing («den Tänzerinnen im Chor der Artemis»), while Murray & Wyatt stress this aspect in their translation:

- (3) “With her [*sc.* Eumele] the strong Argeiphontes became enamored when his eyes had seen her among the **singing** maidens in the dancing floor of Artemis, huntress of the golden arrows and the echoing chase”.

Singing may or may not be involved in μόλη in the scene in *Od.* 6.101 where it refers to Nausikaa’s and her friends’ ball play. As in *Il.* 7.241 it is clear that singing alone cannot be meant:

- (4) *Od.* 6.101 σφαίρη ται δ’ ἄρ’ ἔπαιζον, ἀπὸ κρήδεμνα βαλοῦσαι
τῆσι δὲ Νηυσικαά λευκώλενος ἤρχετο **μολπῆς**.
‘[They] fell to playing at ball, and whitearmed Nausikaa was leader in
the **song**’. (Murray & Dimock [Loeb])

Murray & Dimock add in a note: «They sing while tossing the ball to one another», which by being an addition to the text betrays its uncertainty. Schadewaldt (1958: 78) translates ‘Spiel’: «Und es führte unter ihnen die weißarmige Nausikaa das **Spiel** an».

The same ambiguity or polysemy seems to apply in *Od.* 4.19 and *Il.* 18.606 where μέλω/μολή refer to the artistic presentation of both an αοιδός and two κυβιστητήρες:

- (5) *Il.* 18. 604-606/*Od.* 4.17-19 μετὰ δέ σφιν ἐμέλετο θεῖος αοιδός
φορμίζων, δοιῶ δὲ κυβιστητήρε κατ’ αὐτούς,
μολπῆς ἐξάρχοντος [v.l. -εσ] ἐδίνεον κατὰ μέσους.
‘And among them a divine minstrel was **singing** to the lyre, and two
tumblers whirled up and down through the midst of them, leading the
dance.’; Schadewaldt: “unter ihnen **spielte** der göttliche Sānger und
rührte die Leier, und zwei Springtānzer führten ihnen das **Spiel** an und
drehten sich mitten unter ihnen’.

Μέληθρον ‘toy, plaything’ in *Il.* 13.233 surely is not meant to evoke the idea of singing dogs. Poseidon says to Idomeneus:

- (6) *Il.* 13.232 “Ἰδομενεῦ, μὴ κείνος ἀνὴρ ἔτι νοστήσειεν
 ἐκ Τροίης, ἀλλ’ αὖθι κυνῶν μέλπηθρα γένοιτο
 ὅς τις ἐπ’ ἤματι τῶδε ἐκῶν μεθήσι μάχεσθαι.
 ‘Idomeneus, never may that man any more return home from the land
 of Troy, but here may he become the **sport** of dogs, whoever in this day’s
 course of his own will shrinks from fight’.

Μέλπηθρον has mostly been interpreted as showing a semantic shift from ‘ball-dance’ or ‘ball-game’ to ‘plaything’ in general⁷. By contrast, Beck in the *Lfgre* starts from the meaning ‘singing/song with choral dance’ and states «thus the meaning should be *occasions* or *instruments for choral performance*, the picture being that [of] a group of snarling, scuffling dogs struggling over the parts (-α) of the corpse». In any case, in both interpretations ‘singing/song’ does not fit here, be it that one takes this as evidence for an earlier meaning (retained in the derivative), or as a development from one of the two senses just mentioned.

3. In his detailed discussion of this root, Pagliaro (1951: 13-19) argues that the earliest meaning we can grasp is ‘to celebrate, honour a divinity’⁸ and that singing and dancing were not part of the original lexical meaning of *μέλπ-*, but were included in it by conversational implicature, due to the fact that ‘to *μέλπ-*’ often enough or in most cases implied singing and/or dancing. A passage that is usually understood to show this meaning⁹ is *Il.* 1.430-487 in which Odysseus returns

⁷ Cf. the references given in the *Lfgre* (SNELL 1979-2010) s.v.

⁸ Cf. also SZEMERÉNYI (1954: 169), quoting Pagliaro, «the earliest meaning» of *μέλπω* is «‘to celebrate (in an eulogy)’», «But the middle form came to mean ‘a combined action of singing and dancing’ performed in honour of the divinity (Iliad), while later (in the Odyssey) it acquired the meaning ‘sing for (others to) dance’ (16 f.)». Also *LSJ* s.v. put ‘celebrate with song and dance’ first in the list of meanings.

⁹ Cf. PAPE (1914: s.v.): «durch Gesang und Tanz im Chore feiern, Ἐκάεργον, *Il.* 1, 474», *LSJ* s.v., MONTANARI (2014: 1308 s.v.): «celebrate with music, song, and dance *Il.* 1.474 ...», BAILLY (1935: 1247): «chanter, célébrer par des chants, *Il.* 1, 474», DIGGLE (2021: 911): «celebrate with song and dance – a god *Il.*, MID. sing and dance *Il.* hHom.; (fig., of a warrior) dance – W. DAT. for *Ares* (i.e. fight in battle) *Il.*».

Chryseis to her father «and after **propitiating** Apollo with prayer and sacrifice, returns with his ship to the Achaean camp near Troy» (Kirk *et al.* 1985: 98; my emphasis)¹⁰:

(7) *Il.* 1.472-474 οἱ δὲ πανημέριοι μολπῇ θεὸν ἰλάσκοντο

καλὸν αἰείδοντες παιήονα κοῦροι Ἀχαιῶν

μέλποντες ἐκάεργον· ὃ δὲ φρένα τέρπετ' ἀκούων.

‘So the whole day long the sons of the Achaeans **sought to appease the god with song**, singing the beautiful paean¹¹, **hymning** the god who works from afar; and his heart was glad as he heard’.

Schadewaldt:

‘Und den ganzen Tag **stimmten sie gnädig** den Gott mit Gesang und Tanz, Singend den schönen Heilsgesang, die Jünglinge der Achäer, **Feiernd** den Ferntreffler; der aber freute sich im Sinn, wie er es hörte¹²

A trivial interpretation of these lines might assume that nearly the same notion is repeated three times in a row, μολπῇ ‘with song (and dance)’, αἰείδοντες ‘singing’, and μέλποντες ‘singing (and dancing)’¹³; as an alternative, one might understand μέλποντες ἐκάεργον as taking up μολπῇ θεὸν ἰλάσκοντο in a tiny ring composition. This could imply that μέλω equals μολπῇ ἰλάσκομαι:

¹⁰ Cf. LATACZ (2009: 147): ‘Chryseis is returned to her father, and in addition Apollo is appeased with a ritual of atonement’ (‘Chryseis wird ihrem Vater zurückgegeben und Apollon zusätzlich mit einem Sühneritual besänftigt’). Sacrifice as a means of propitiation is of course found in many traditions, cf. e.g. AVŚ 19.3.4d *áva devānāṃ yaḥa bēdo agne* ‘O Agni, remove the anger of the gods by (this) sacrifice’ (‘Pacify (*ava-yaj*), O Agni, the wrath (*bēdas*) of the gods’ [WHITNEY 1905: 901]; MENDES VENTUROTT, p.c.).

¹¹ The paean here is, as LATACZ (2009: 156) states, a ‘song of salvation, intended to appease Apollo and drive away the plague’ («Heilslied, das die Besänftigung Apollons und die Vertreibung der Seuche bewirken soll»).

¹² SCHEIBNER (1972): «Den ganzen Tag suchten sie den Gott mit Lied und Tanz zu versöhnen; schön sangen die Jünglinge der Achäer den Paian und feierten mit dem Lied den rettenden Gott. Der ergötzte sich, wie er es hörte». PAGLIARO (1951: 13) refers to the «uso omerico transitivo di A 474 μέλποντες ἐκάεργον dove assai difficilmente si potrà pensare ad un significato diverso da quello di ‘elogiare, celebrare’».

¹³ This was one of the reasons for Aristarchus to reject the last line as it seemed to form an ἄκυρος δισσολογία, cf. PAGLIARO (1951: 13-14); KIRK *et al.* (1985: 103) understand this as «a case of typically Homeric cumulation».

- (8) μέλω ‘to sing and dance (in order to appease)’ = μόλις ἰλάσκομαι ‘to try to appease with song and dance’

If so, μέλω- may originally have referred to the appeasement of a divinity by song and dance (usually accompanying a sacrifice) and gone through a semantic shift from ‘to soothe, to try to appease a deity with song and dance’ to ‘to sing/dance/play to a deity’ to ‘to sing/dance/play (to any audience or without an audience)’¹⁴.

4. A connection of μέλω- with the family of the Slavic words meaning ‘to be/to become silent’ has for obvious reasons not been considered so far: OCS *mlъčati*, well attested in the mss. Zographensis, Marianus, Assemanianus, Savvina kniga, Suprasliensis, etc. (cf. Sadnik-Aitzetmüller & Aitzetmüller 1955: s.v.), translates inter alia Greek σιωπάω and φιμώω, cf. e.g. from the Codex Marianus¹⁵

- (9) Matth. 26.63 ἰϛ̅ же мльчааше
ὁ δὲ Ἰησοῦς ἐσιώπα
‘But Jesus **remained silent**’.

¹⁴ Cf. also PAGLIARO (1951: 17) on *Il.* 7.241 and *Il.* 16.182 quoted supra: «In questi due casi sembra avere già prevalso il significato di danza sebbene nulla esclude che nell’uno e nell’altro caso alla danza si potesse accompagnare anche il canto. Comunque, si tratta sempre di una danza in onore di divinità, in cui il significato primario di ‘celebrazione’ è ancora presente». A comparable nexus of form and function can be seen in the Sumerian *diĝir-ša₃-dab-ba*-incantations, i.e., ‘incantations for appeasing an angry god’, cf. LAMBERT (1974), JACQUES (2015), and GABBAY (2023) on *emesal*-prayers designed to calm the angry god(s) and on the *gala*-priest singing them, and the *er₂-ša₃-huĝ-ĝa₂* ‘laments for appeasing the heart (of a divinity)’ (‘Herzberuhigungsklagen’), cf. MAUL (1988), MAUL (2013), according to whom *ershabunga* were probably recited, not sung, but at least sometimes accompanied by a drum, p. 43: «Es scheint, daß »Herzberuhigungsklagen«, anders als andere Emesal-Gebete, nicht gesungen, sondern gesprochen wurden. Zumindes bisweilen wurde die Rezitation dieser Gebete, etwa durch den »(Klang) der bronzenen Kesselpauke (*lilis siparri*)« musikalisch untermalt».

¹⁵ With the usual confusion of *yers* common in this codex, cf. POLIVANOVA (2023: 95 [§ 155]): «взьми (48), взьми (53), взьми (56), вьзатъ (57); cf. also по томъ (8) and по томъ (9), and many others».

- (10) Matth. 22.12 ι γλῆ εμου δροуже како вниде сѣмо ·не имы одѣваниѣ брачьна ·онъ же **оумлъча**.
 και λέγει αὐτῷ, Ἐταίρε, πῶς εἰσηλθεις ὧδε μὴ ἔχων ἔνδυμα γάμου; ὁ δὲ ἐφίμωθη.
 ‘«My friend», he said to him, «how did you gain entrance here without a wedding garment?» The man was **speechless**’.

Mlъčati has been connected with OHG *mol(a)wēn* ‘tabere, to rot’¹⁶, Lith. *mūlkis* ‘dumbhead’, Latv. *mulkis*¹⁷, and/or with Gr. μάλακός and Arm. *metk* ‘soft’¹⁸. All these proposals have not found general acceptance, however, and e.g. *LIV*² 434 and Derksen (2008: 340) list **melk*^(u)- as limited to Slavic.

The Slavic stem formation in *-(j)a-* is taken by *LIV*² s.v. as going back to a stative form **mlk^(u)-eh₁-*. It is hypothesized here that the meaning ‘to be(-come) silent’ may hail from an earlier meaning ‘to be(-come) content, peaceful’ implying ‘not to protest, be(-come) quiet’ which may relate to the meaning assumed for Greek μέλω ‘to appease’:

- (11) **melk^u-e/o-* ‘to appease’ > Gr. μέλω-ε/ο- ‘to appease by sacrifice,
 song & dance’
 **mlk^u-eh₁-* ‘to be appeased’ > Sl. **mlъč-a-* ‘to be silent’

If, as per *LIV*² s.v., OCS (*iz-*, *u-*)*mlъče* ‘became silent’ goes back to a root aorist, it might continue the original meaning and valency

¹⁶ Cf. TRAUTMANN (1923: 184); phonologically this is impossible, cf. also SPECHT (1934: 33): «Fraglich [...] auch wegen der Bedeutung». *EWAbd* 6.533f. takes the verb to be a derivative of a noun **mol(a)wi* ‘dust’ (cf. the adj. MHG *molwic* ‘dusty’, NHG *mollig*), in turn based on Gmc. **malwja-* (cf. ON *mólva*, Goth. *ga-malwjan* ‘to grind’), PIE **melh₂-* ‘to grind’. This invalidates for this specific pair Slav. **mlk^u-* ‘to be silent’: OHG *mol(a)wēn* Trubačev’s otherwise interesting discussion of roots (or derivatives based on the same root) seemingly showing both meanings (Trubačev 1964), with intermediate meanings such as ‘to crumble, disappear, suffer’. In some cases this comes at the cost of assuming apparently functionless root extensions, e.g., Slav. **tajati* ‘to melt’ next to Lat. *tacēre* ‘to be silent’. The best example seems to be Lith. *tilti/tilti* ‘to become silent’ beside OCS *tolēti, tolējō* ‘to rot, decay’ (Russ. *tlēt’, tlēju*, etc.), which according to *ALEW* s.v. Lith. *tilti/tilti* are «formal leichter als semantisch zu vermitteln».

¹⁷ Cf. SADNIK-AITZETMÜLLER & AITZETMÜLLER (1955: 269-270), referring to Scheftelowitz.

¹⁸ Cf. TRUBAČEV (1974-2014: 21[1994]: 102-104).

of the root, which would seem to conflict with the Greek transitive present. Since there are no indications that Greek has innovated the active inflexion as an oppositional form to an earlier middle, i.e., mid. ‘to be(-come) silent’ > act. ‘to silence s.o.’¹⁹, it may be better to assume that the meaning of the intransitive forms was generalized in Slavic, probably before the root-final stop become an affricate, i.e., **mlbk-ē* ‘to be silent’, whence OCS °*mlbk-nq-ti*, Pol. *milk-nq-ć* ‘to become silent’²⁰.

5. Apart from the general observation that ‘singing’ can be used as a means of appeasement, ranging from the lullaby to the deceitful song of the Sirens, encapsulated in forms such as Greek *θέλω* ‘enchant, bewitch, deceive’, Lat. *incantare* (calqued in Germ. as *einsingen*²¹), the following two examples are meant to show that the semantic shift assumed above between ‘to appease, to soothe’ (whence ‘to be soothed, to be silent’) and ‘to sing (in order to appease)’ may also be found in historical language data:

5.1. ON *gæla*, cognate with Goth. *goljan* ‘to greet’²², and probably OFr. *gêla* ‘to hunt, pursue’²³, means ‘to comfort, soothe, appease’²⁴, e.g. in

¹⁹ Rather the opposite development has been assumed cf. fn. 8.

²⁰ Even under the assumption of an original “labile” root ‘to appease/be appeased’ the (near) zero marking of the OCS root aorist and the Gr. thematic present would seem to conflict.

²¹ Cf. in Goethe’s *Erlkönig*: *Meine Töchter führen den nächtlichen Reihn / Und wiegen und tanzen und singen dich ein* ‘My daughters lead the ring-dance at night, they will cradle you, dance with you and sing you to sleep’, in the *Faust* I.1506f. *Er schläft! So recht, ihr luft’gen, zarten Jungen! / Ihr habt ihn treulich eingesungen!* ‘He is asleep. Well done, you airy, tender boys, you have faithfully sung him to sleep.’

²² Lk 10:4 *ni mannahun bi wig goljaiþ* : καὶ μηδένα κατὰ τὴν ὁδὸν ἀσπάσησθε ‘Do not greet anyone on the road.’

²³ Cf. POKORNY (1959: s.v. *ghel*): «*gêla* ‘jagen’ eigentlich ‘das Wild durch Geschrei aufstöbern» (‘to hunt’, actually ‘to track down game by shouting’). Cf. in the Brokmer Law 217/218 *ef hir en mon flivth inna tsyureka and tha fivnd hine theron gelath, al thet hi thenna bire nedwere deth, thet lidse gresfelle* ‘If a man flees into a church and his enemies pursue him there, whatever he does in self-defence will go unpunished’.

²⁴ Cf. CLEASBY *et al.* (1874: s.v. *gêla*).

(12) Knýtlinga saga ch. 26 *Kunnum vér nú stórleika Knúts, at ekki mun hann goela mega með settarboðum*

‘«We know all about Knut’s pride», said the earl, «There’s no point in trying to **calm** him down with offers of peace»’.

(Pálsson & Edwards 1986: 53)

Gmc. **gōljan-* is built on **galan-* ‘to shout, sing, chant’, cf. ON *gala* ‘to sing’, OE, OHG *galan* ‘to sing, enchant’ (quasi **g^hol-e/o*: **g^hōl-īe/o*)²⁵. So both chronologically and derivationally, the meaning ‘to soothe, appease’ seems to be secondary to ‘to shout, sing’, maybe via ‘call out to s.o., greet, address friendly’²⁶. The form *goida* on the fibula of Frei-Laubersheim (Rheinland-Pfalz, Germany, ca. 520-60), probably to be read as *golida*, attested in the line **þk·dap·ina:goida**, is interpreted by Düwel & Nedoma (2023: 78) as meaning ‘gladdened’ (‘erfreute’) rather than ‘greeted’²⁷. This could be an intermediate meaning between ‘to greet, address (in a friendly manner)’ and ‘to soothe, to calm’.

5.2. Khwarezmian *fn-* ‘to sing’²⁸ is connected by Cheung (2007: 87) with the Iranian root **fraiH-* which he glosses as ‘to rejoice, ?to atone, [med.] please’, assuming (with a question mark) a semantic shift via ‘to praise, please with a song’ for the Khwarezmian form. It would correspond to the nasal present seen in Ved. *prīṇāti* ‘satisfies, makes rejoice’ and YAv. *ā-frīnāmi* ‘I wish someone something [wünsche jmdm. etw. an]’, showing regular loss of /r/ after labial, as argued by Schwartz (2005).

²⁵ E.g., Ps. Lamb. 57.6 *seo ne geherþ stemne galendra* ‘quæ non exaudiet vocem *incantantium*’ (cf. BOSWORTH 2014: s.v.), cf. KROONEN (2013: 164, 185). Beside these forms, there is Gmc. **gullōn-* ‘to shout, sing’ in Nw. *golla*, according to KROONEN (2013: 194) from **g^hl-néh₂-*, serving as iterative to **galan-*, and the basis for the secondary strong verb **gellan-*.

²⁶ The root (not listed in LIV²) is probably **g^hel-*, cf. Arm. *geḡetem* ‘to sing beautifully, to quiver, to vibrate’, *geḡetank* ‘modulation, melody, trill, shake, quaver’ (probably showing a contamination of **g^hel-* and **uel-* ‘to turn’, Arm. *gelowm*), Russ. *galit* ‘to smile’, *na-galit* ‘to shout, sing’, *galit’ja* ‘to mock’, Russ. (dial.) *gal’ f.* ‘fun, laughter’ (cf. VASMER 1976: 254). Further connections are uncertain, e.g., Gr. χελιδών ‘swallow’ and κίχλη ‘thrush’ beside Dor. κίχλη and Hesych. ἔχλα· κίχλα; ἴσκλην· κίχλαι.

²⁷ «>Dich erfreute Dathina [mit der Fibel]< oder >Dich, Dathina, erfreute [er, mit der Fibel]<». For other interpretations cf. e.g. LOOIJENGA (2003: 241) (‘greeted’), and KROGMANN (1978: 96), who reads *goida* and translates ‘[hat] die Zauber- oder Weiheformel gesprochen’ (‘spoke (the magic formula)’), comparing OE *gēn*, *gæn* ‘to lament, groan’.

²⁸ Cf. MACKENZIE (1971: 87).

However one reconstructs the original meaning of **preiH-*, it seems unquestionable that the meaning of the Khwarezmian form has developed out of an earlier meaning in the sphere of ‘to please, satisfy, appease’²⁹.

Taken together, these examples might thus show that a semantic shift is possible in both directions:

- (13) ‘sing’ → ‘appease’ : Gmc. **galan-/gōljan-* → ON *gæla*
 ‘please, appease’ → ‘sing’ : Iran. **frinā-* → Khwar. *fn-*

Greek *μῆλπ/μολπ-* would fit the second pattern, while the Slavic forms developed from ‘to be appeased’ into ‘to acquiesce, to be silent’³⁰.

More speculative would be the assumption that the apparently homophonous root **melk^h-*, reconstructed on the basis of *inter alia* OAv. *vī.mərəncaitē* (Y. 31.1) ‘destroy’, Ved. *marcāya-* ‘to damage’ and Gr. *βλάπτω* ‘to make stumble, damage’, could actually be the same root, if this meant ‘to impede’ originally³¹, cf. e.g. *Il.* 15.489 *Διόθεν βλαφθέντα βέλεμνα* ‘(Teucus’) shafts impeded by Zeus’, with a semantic shift from ‘to impede divine anger’ > ‘to appease’, etc. In Slavic, ‘to be hindered, inhibited (*sc.* in speaking)’ might have developed into ‘to be silent’. However, the distribution of meanings over stem-formations, e.g. Gr. **melk^h-e/o-* ‘to appease → to sing’ vs. **mlk^h-i/e/o-* ‘to impede’, would require further justification.

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²⁹ E.g. ‘to make oneself dear to someone > to satisfy, please s.o.’ or ‘to bring about a state of closeness to a person or god (the latter by ritual means, as a hymn) > appease, please > (finally) bring about a relationship of dearness’ (M. Schwartz *per litt. electr.* 25.01.2024) based on the idea that the verbal root **preiH-* goes back to the preposition **pre(h₂)i-* ‘close by’ (Lith. *priē*, Lat. *prae*, etc.).

³⁰ Conversely to *μῆλπ-*, Gr. *μείλια* (H.+), ‘propitiations, atonement, penalty’ and *μείλιχος* ‘soft, mild, friendly’ might belong to *μέλος* ‘song’, i.e., **mel-no-* → **mel-n-iho-*, cf. *μείλιχος* referring to utterances: Hes. *Th.* 84 *τοῦ δ’ ἔπε’ ἐκ στόματος ῥεῖ μείλιχα* ‘His words flow soothingly from his mouth’, Theogn. 365 *γλώσση δὲ τὸ μείλιχον αἰὲν ἐπέστω* ‘Let there always be sweetness on your tongue’.

³¹ On the meaning(s) of *βλάπτω* cf. BEEK (2017).

Abbreviations

- ALEW = HOCK (2020).
 EWAbd = LLOYD *et al.* (1988-).
 LIV² = RIX (2001).
 LSJ = LIDDELL *et al.* (1996).

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Recensioni



Lucia Tamponi (2022), *Variation and Change in Sardinian Latin. The Epigraphic Evidence*, Pisa University Press, Pisa, ISBN 978-8-8333-9749-8, pp. 289.

1. Il corposo volume di Lucia Tamponi offre un'analisi linguistica di tipo variazionista, attualmente la più completa tra quelle esistenti, del corpus epigrafico latino della Sardegna. Il volume è strutturato in otto capitoli. Il cap. I è dedicato a questioni metodologiche relative all'analisi qualitativa e quantitativa delle iscrizioni latine. Il cap. II traccia un panorama storico e linguistico della Sardegna preromana e di quella romana (la fondazione della provincia *Sardinia et Corsica* è del 227 a.C.). Il capitolo III, dedicato all'epigrafia non latina, documenta la presenza del punico e del neopunico in Sardegna, con dati di grande interesse per l'ipotesi elaborata dall'A., relativa alla possibile influenza di questa varietà semitica sulla formazione del vocalismo sardo (cfr. § 4). Il cap. IV presenta il *corpus* indagato, con l'illustrazione della sua composizione e dei metodi di annotazione adottati. Dal capitolo V si entra nell'analisi linguistica vera e propria, procedendo dall'esame del vocalismo a quello del consonantismo, al quale ultimo è dedicato il capitolo VI. Il capitolo VII presenta alcune interessanti riflessioni, strutturali e sociolinguistiche, relative al contatto tra neopunico e latino nella Sardegna romana e alle affinità tra il latino dell'isola e quello africano. Il capitolo VIII, l'ultimo, offre le conclusioni generali del lavoro. Segue una ricca appendice, contenente la lista delle iscrizioni presenti nel *corpus*, la lista dei luoghi di provenienza e la lista delle forme analizzate nel testo che mostrano soluzioni grafiche divergenti rispetto a quelle previste dalla norma (da qui in avanti: *divergent spellings*).

2. Il metodo adottato nell'analisi unisce diversi approcci della ricerca linguistica sul materiale epigrafico, e si rivela di particolare efficacia. Un primo approccio seguito dall'A., di tipo quantitativo, riguarda il computo in percentuale della frequenza relativa delle grafie erranee rispetto al numero complessivo di quelle redatte secondo la norma. Il secondo approccio è ispirato alla nota metodologia di József Herman (cfr. in particolare Herman 2000). Secondo tale prospettiva di analisi, ciò che si rivela diagnostico per individuare eventuali variazioni diatopiche nel latino epigrafico di una determinata area, prodromi dei successivi sviluppi romanzi, è il calcolo percentuale di una grafia erronea non in termini assoluti, ma in rapporto al numero complessivo di altri *divergent spellings* in un dato numero di testi. Per tale ragione, l'analisi deve limitarsi a quelle epigrafi che rivelino incertezze o deviazioni dall'uso canonico in più punti del sistema linguistico, così da poter escludere che l'impiego isolato di una grafia erronea sia conseguenza del basso livello di alfabetismo dello scrivente. Grazie a questo metodo di analisi, ad esempio, Herman riuscì a mostrare, per il latino epigrafico di Sardegna, una netta differenza, confermata dallo studio qui recensito, tra gli esiti, stabili, del vocalismo, rispetto a quelli, innovativi, del consonantismo: il vocalismo, infatti, presenta una bassa percentuale di grafie erranee (16%), indizio di un sistema tendenzialmente conservativo, in accordo con i successivi sviluppi del vocalismo romanzo dell'isola, laddove l'indice di frequenza relativa nel numero di *divergent spellings* riguardanti il consonantismo (84%) prelude ad alcuni esiti innovativi delle varietà logudoresi e campidanesi, prima tra tutte la confusione tra gli esiti di B e quelli di w. All'analisi quantitativa l'A. affianca un'analisi qualitativa. Questa consente, tra l'altro, di verificare se determinate grafie erranee siano riflesso di determinati fenomeni linguistici o, al contrario, riflettano motivazioni extralinguistiche (come possono essere, ad esempio, i condizionamenti relativi al tipo di supporto utilizzato).

3. Uno dei meriti del volume riguarda la quantità del materiale analizzato e l'estensione temporale, decisamente superiori a quelle degli studi precedenti dedicati ai documenti epigrafici di Sardegna. Il lavoro di Herman (1985), incentrato esclusivamente sulla Sardegna, è

infatti limitato alle alternanze vocaliche <E, O> ~ <I, V> in un corpus che comprende principalmente testi dei secc. III e IV d.C. Herman (2000) analizza le epigrafi cristiane (relativamente al vocalismo e agli esiti betacisti del consonantismo) in diverse aree dell'Impero. Lupinu (1999) analizza un corpus di circa 200 iscrizioni databili tra IV e VI sec. d.C. Lupinu (2000), infine, analizza le iscrizioni cristiane dell'isola fino al VII sec. d.C.

L'analisi di Tamponi prende in considerazione un arco temporale che va dal I sec. a.C. al VII sec. d.C., e comprende 1184 iscrizioni, da cui sono stati estratti 14.423 token. L'analisi epigrafica è stata effettuata attraverso la sezione *Sardinia* del database CLaSSES (*Corpus for Latin Sociolinguistics Studies on Epigraphic texts*, <https://classes-latin-linguistics.fileli.unipi.it/>, cfr. Marotta et al. 2020), elaborato secondo un approccio variazionista, e annotato con informazioni linguistiche, metalinguistiche ed extralinguistiche. L'unità di base per la costruzione dei singoli *token* è la parola ortografica; i casi di mancata univerbazione (ad es. *sub praefectus* in luogo di *subpraefectus*) sono stati trattati come casi di token complessi e considerati varianti di uno stesso lemma. I tipi testuali inclusi nel corpus comprendono: *tituli honorarii*, *tituli sepulcrales* (in assoluto, i *tituli* più attestati nel corpus), *tituli sacri* (*publici* e *privati*) e *instrumenta domestica*. L'inclusione di tali tipologie testuali nell'annotazione del corpus permette di individuare eventuali variazioni diafasiche, in un *continuum* che vede al polo di massima formalità i *tituli honorarii* e in quello caratterizzato dal maggior grado di informalità gli *instrumenta domestica*. Ugualmente annotata è l'indicazione del luogo di ritrovamento, il che consente di osservare una distribuzione diatopica tutt'altro che uniforme, con la maggior parte delle epigrafi latine concentrate nella zona costiera dell'isola, in particolare nell'area meridionale intorno a *Carales* (oggi Cagliari). Sul piano cronologico, la maggioranza delle iscrizioni databili si concentra tra il I sec. a.C. e il III sec. d.C.

4. L'analisi del vocalismo dimostra con chiara evidenza documentaria un sistema decisamente stabile, confermando quanto già emerso negli studi precedenti: numericamente esigue risultano infatti le grafie erronee che rivelano l'eventuale fusione timbrica tra /i/ ed /e/ in /e/, e

tra /u/ ed /o/ in /o/, secondo lo sviluppo del vocalismo romanzo centro-occidentale (“romanzo comune”). Inoltre, la rappresentazione grafica delle vocali medie è nettamente distinta da quella delle vocali alte, il che mostra un sistema vocalico che prelude agli sviluppi del vocalismo sardo, nel quale, come noto, il collasso della quantità vocalica non è accompagnato dalla fusione timbrica tra Ī ed Ē in /e/ e tra Ō e Ū in /u/. Più nello specifico, Tamponi dimostra che le grafie erronee in cui appare <E> in luogo dell’atteso <I> (per /i/) costituiscono una percentuale irrisoria, esattamente lo 0.1% dei casi contro una schiacciante dominanza della resa grafica conservativa (99.9%). Allo stesso modo, <V> (/u/) è notato come <O> nello 0.2% dei casi, contro la stragrande maggioranza di casi che documentano la resa standard (99.8%). Anche le grafie inverse, ovvero i casi di /e:/ notata per mezzo di <I> e di /o:/ notata per mezzo di <V> sono quasi inesistenti (0.3% in entrambi i casi). All’analisi interna, l’A. affianca, qui come nel resto del volume, anche un’analisi di tipo comparativo con altre aree latinizzate. Il confronto mostra una nettissima separazione tra l’Africa e la Sardegna, da un lato, con un indice bassissimo di grafie devianti dalla norma (per la Sardegna solo lo 0.6% di /i/ rappresentato con <E>; lo 0.3% di /u/ rappresentato come <O>; lo 0.3% di /e:/ rappresentato come <I>; lo 0.5% di /o:/ rappresentato come <V>), e Roma e la Gallia, dall’altra, quest’ultima, come noto, tra le aree latinofone dove le confusioni grafiche nel vocalismo sono particolarmente ricorrenti, come mostrato già da Gaeng (1968).

Nel cap. 7, Tamponi riprende i dati qui riassunti, proponendo un’ipotesi sulla genesi del vocalismo sardo, per il quale l’A. propone un’influenza di adstrato esercitata sul latino regionale dell’isola dal neopunico, ipotesi che a mio avviso non risulta però convincente. Tale influenza, sul piano strutturale, sarebbe resa possibile dal fatto che il neopunico perse la distinzione fonologica della quantità vocalica intorno al II sec. d.C., mantenendo le opposizioni timbriche originarie (p. 86). La neutralizzazione fonologica in questione è ricavabile dall’esame delle iscrizioni latino-puniche del Nord Africa (ossia iscrizioni puniche in caratteri latini), che presentano un indebolimento delle vocali atone, rivelato dall’impiego dei grafemi <E> e <Y> (quest’ultimo equivalente a tale altezza cronologica a [i]) per rappresentare verosimil-

mente /ə/. Da qui l'ipotesi che il neopunico abbia sostituito alla lunghezza vocalica fonologica una lunghezza contestualmente determinata, con le vocali toniche lunghe e le vocali atone brevi, a prescindere dalla quantità originaria (pp. 84-85).

Sul piano corografico, l'ipotesi di un tale condizionamento sarebbe sostenuta dal fatto che, come ben noto dalle fonti documentarie (cfr. in particolare Agostino, *Doctr. Chr.* IV.10.24; Consenzio, Keil V 392), il latino africano, con i suoi successivi sviluppi romanzi, presenta un esito analogo a quello sardo, caratterizzato almeno dal IV-V sec. d.C. dal collasso della quantità, senza una fusione dei timbri vocalici (cfr. in particolare Fanciullo 1992). In quest'area latinizzata dell'Africa settentrionale, neopunico e latino erano parte del multilinguismo coloniale di questi territori, e, dalla testimonianza di Agostino (*Epist.* 17.2), sappiamo che il neopunico sopravviveva tra i ceti popolari ancora nel V sec. d.C. (Rovai 2015: 210).

Date queste premesse, Tamponi (p. 221) ipotizza, appoggiandosi anche a confronti tipologici, che i parlanti neopunico, non essendo più in grado di percepire la differenza quantitativa tra vocali omotimbriche presente in latino, avrebbero neutralizzato tale opposizione attraverso un processo di ipodifferenziazione fonologica, diffondendo questa innovazione nelle comunità linguistiche sia della Sardegna che dell'Africa latinizzata. La conclusione che ne deriva è che il vocalismo sardo, anziché essere conservativo, andrebbe considerato innovativo, in quanto risultato del contatto linguistico qui descritto.

L'A. offre una serie di prove documentarie, sulla base della letteratura esistente, a dimostrazione di una presenza tutt'altro che marginale del neopunico nella Sardegna romana, evidenziando, a premessa della sua analisi, come questa varietà semitica godesse di una considerazione tutt'altro che marginale nel mondo romano. Tamponi (p. 87ss.) fornisce, specie sulla scorta di Adams (2003), ampia testimonianza che, almeno dal II sec. a.C., il punico era tenuto in una certa considerazione tra le classi colte di Roma, e, relativamente all'Africa romana, richiama in particolare la già citata testimonianza di Agostino (*Epist.* 17.2), da cui si ricava che questa varietà semitica godeva di un certo prestigio.

Tuttavia, che il neopunico, confinato nelle campagne dell'Africa settentrionale (cfr. Agostino, *Epist.* 66.2) e chiaramente residuale, fosse in grado di esercitare un influsso così profondo sul latino africano (anche quello medio-colto delle epigrafi, molte delle quali, in *Proconsularis* e in Numidia, metriche), tale da condizionare il sistema fonemico di quest'ultima lingua, pare difficilmente dimostrabile.

Quanto alla Sardegna, diverse iscrizioni attestano la presenza del neopunico nell'isola anche secoli dopo la caduta di Cartagine, in una situazione di bilinguismo con il latino.

L'A. ricorda in particolare la celebre iscrizione votiva trilingue ad Asclepio di Pauli Gerrei (CIL X 7856), della prima metà del II sec. a.C. L'ordine di successione delle tre lingue presenta prima il testo latino, poi quello greco, infine quello punico, segno della primazia del latino, evidentemente anche per un non *native speaker* come il committente Cleone (grecofono secondo Consani 2018; semitofono secondo l'A.), in quanto il latino costituiva «la lingua ufficiale del potere politico e amministrativo» (Consani 2018: 111). Tuttavia, tra i tre testi quello neopunico è il più lungo e il più ricco di informazioni, segno indiretto della presenza di potenziali lettori in grado di comprendere l'enunciato e di riconoscere in questo gli elementi religiosi e culturali indicati analiticamente nel testo (Consani 2018: 104).

Anche nell'altra iscrizione discussa dall'A., CIL X 7513 (I sec. a.C.), situata alla base di una statua ritrovata a Sant'Antioco, l'ordine di successione presenta prima il latino e poi il neopunico, ma, come nell'altra iscrizione, la sezione neopunica è più informativa della prima.

Va comunque evidenziato che testi epigrafici del II-I a.C. potrebbero essere scarsamente indicativi rispetto a quanto avvenuto diversi secoli dopo, relativamente al supposto influsso del vocalismo neopunico su quello latino. Inoltre, non va trascurato il fatto che le colonie cartaginesi in Sardegna erano poche e collocate solo lungo le coste.

In definitiva, se i dati storici e linguistici ricostruibili per l'Africa romana e per la Sardegna latinizzata attestano la presenza del neopunico ancora all'epoca della latinizzazione di questi territori, ciò non basta ad avallare l'ipotesi dell'A.

Oltre alle difficoltà qui menzionate, c'è inoltre un problema, a mio modo di vedere, insormontabile: la presenza del vocalismo sardo nell'area Lausberg, per la quale la supposta influenza neopunica va naturalmente esclusa. Tamponi evidenzia la notevole variazione degli esiti vocalici in quest'area, che, diversamente da quanto si verifica in Sardegna e nell'Africa romana, presenta sia esiti siciliani, sia esiti tipologicamente riconducibili al sistema napoletano. Da qui la conclusione che il vocalismo della Sardegna e del romanzo africano vada separato da quello dell'area Lausberg: «[...] [W]e endorse the hypothesis put forward by scholars such as Parlange (1971), Mancarella (1989) and Fanciullo (1988; 1992), who proposed to exclude the Lausberg Zone from the regions displaying the Sardinian vowel system» (p. 223).

A favore dell'identità strutturale del vocalismo sardo dell'area Lausberg con quello afro-romanzo e della Sardegna parlano a mio avviso almeno due argomenti. Il primo proviene dall'esame del latino epigrafico dell'area grosso modo compresa tra Potenza e Cosenza. Come nel caso dell'epigrafia sarda, anche per i documenti epigrafici provenienti dalla *regio Lucania et Bruttii* esaminati da Angius (2009) (in totale 654 iscrizioni, per lo più funerarie), si evidenzia una ridottissima confusione tra i grafemi indicanti Ē ed Ī, ed Ō e Ū, rispettivamente, confusioni quasi tutte dovute o a voluti arcaismi oppure a condizionamenti di natura morfologica (per lo più in seguito a processi analogici). Molto diversa appare la situazione nell'area comprendente Sannio e Irpinia, scelta da Angius come termine di paragone per la vicinanza geografica di questi territori con quelli dell'area Lausberg. Qui, a fronte di più di 1225 iscrizioni, il numero di grafie erronee relative al vocalismo tonico è sensibilmente più alto (57 rispetto a 9 della Lucania), e, in termini relativi, l'incidenza del fenomeno risulta 3 volte più frequente rispetto all'area calabro-lucana. Ciò sembrerebbe confermare l'esattezza della tesi del Lausberg, ovvero la presenza nell'area in questione di un vocalismo che non presentava, almeno in origine, fusioni timbriche, e al quale solo successivamente si sono sovrapposte condizioni siciliane e napoletane.

Il secondo argomento deriva dalla constatazione dell'esistenza, all'interno dell'area definita da Lausberg *Mittelzone*, di una sottosezione della *Nordzone*, denominata da Martino (1991) *severior*

(corrispondente grosso modo alla bassa valle del Sinni: Nova Siri, Rotondella, Valsinni, Colobraro, Tursi), dove è assente la dittongazione metafonetica (Lausberg [1939] 2019: § 1.2; Martino 1991: 15; Del Puente 2018; Panella 2021), e nella quale, al pari del vocalismo sardo di Sardegna, si ha la sola neutralizzazione della quantità senza successive fusioni timbriche (fatti salvi alcuni esiti metafonetici per innalzamento).

Eccetto esiti di tipo siciliano $\bar{e} > /i/$, $\bar{o} > /u/$ anche in posizione non metafonetica, presumibilmente dovuti all'influsso di superstrato bizantino in questi territori (Panella 2021 per Colobraro e Tursi), e, almeno in alcuni di questi centri, pur in un quadro di notevole microvariazione diatonica (Panella 2019), la diversa realizzazione delle medie in dipendenza dalla struttura sillabica (chiuse in sillaba aperta vs. aperte in sillaba chiusa, cfr. ad es. Del Puente 2024 per il vocalismo tursitano), tale vocalismo non si differenzia strutturalmente dal vocalismo pentavocalico della Sardegna, a meno di una *petitio principii*.

Semmai, una diversità tra il vocalismo sardo dell'area Lausberg e quello della Sardegna riguarda la presenza, specie in una sezione di tale area (*Nordteil der Mittelzone*), di una metaforesi differenziata in base alla vocale media originaria (Lausberg [1939] 2019: § 1.2.11), in cui, cioè, l'esito di \bar{e} è [i], quello di \bar{o} è [u], laddove \bar{e} dà [jé] e \bar{o} dà [wó] (in entrambi i casi con successivi sviluppi), cfr. ad es. Senise (Potenza) [pjérə] 'piedi' < *PĒDI (sg. [pērə]) vs. [mīsə] 'mesi' < *MĒ(N)SI (sg. [mēsə]) (Fanciullo 1988: 676)¹; Francavilla sul Sinni [i 'ðjendə] 'i denti' (sg. [u 'ðendə]) (A.L.Ba. I.2.15) vs. [i 'mīsə] 'i mesi' (sg. [u 'mēsə]) (A.L.Ba. II.2.26). In base a tali sviluppi metafonetici, il vocalismo pentavocalico di una parte della *Mittelzone* si configurerebbe in realtà, sul piano fonologico, come eptavocalico, con /ε/ che, in base ai diversi

¹ Va precisato che tale distinzione non si verifica in tutti i punti dell'area Lausberg, cfr. LAUSBERG ([1939] 2019: §1.1.3.11) e MARTINO (1991: 14). Lausberg specifica, almeno per la sezione nord-orientale della Calabria, che la dittongazione metafonetica coinvolge anche /ε/ < \bar{e} , cosicché «la confusione di \bar{e} con \bar{e} latina risulta [...] essere precedente alla dittongazione» (LAUSBERG [1939] 2019: §1.1.3.11). Ne è un esempio tra i tanti, nella *Zwischenzone*, il dialetto cosentino di Verbicaro (LOPORCARO & SILVESTRI 2011: 327), cfr. ad es. [s'iaβə] 'grasso bovino' < SĒBUM = [p'iaəkəra] 'pecora' < PĒCORĀ.

esiti metafonetici, si scinde in / ε^1 / (corrispondente nel diasistema a /e/ del vocalismo napoletano) e in / ε^2 / (corrispondente a / ε / del vocalismo napoletano); allo stesso modo, / ϑ /, in base ai diversi esiti metafonetici, si scinde in / ϑ^1 / (corrispondente nel diasistema a /o/ del vocalismo napoletano) e in / ϑ^2 / (corrispondente a / ϑ / del vocalismo napoletano) (così Fanciullo 1988: 677-678).

Non sarà però superfluo osservare che i rapporti linguistici tra Napoli e la Lucania sono stati, anche solo per vicinanza geografica, tali da poter giustificare il mutamento di un sistema pentavocalico in direzione di quello eptavocalico in seguito a un adeguamento superiore del primo al secondo, con Napoli che, divenuta alla fine del Duecento con gli Angioini capitale del regno, ha veicolato una serie di innovazioni al restante Mezzogiorno (Barbato 2008: 15). D'altra parte, quello della *Mittelzone* lausberghiana non è l'unico caso in cui, all'interno del Regno di Napoli, sistemi vocalici di tipo non napoletano si sono solo secondariamente conformati a quest'ultimo. Ne sono esempi diversi dialetti salentini settentrionali, rientranti nel *Randgebiet* lausberghiano, in cui la progressiva "sensibilizzazione secondaria" (così Fanciullo 2013: 84) al sistema eptavocalico, avvenuta sempre a partire dagli alternanti metafonetici (Fanciullo 2012, 2013, 2014), ha intaccato un sistema che, dopo diverse incertezze negli studi, è stato definitivamente classificato come siciliano, con residui dell'assetto originario conservati in diverse località (De Angelis 2025).

Una volta chiariti gli esiti metafonetici come un adeguamento reenzioso al sistema napoletano, anche il vocalismo dei punti dell'area Lausberg con due esiti metafonetici distinti (uno per dittongamento, l'altro per innalzamento) non può essere giudicato, in un'ottica diacronica, meno sardo del vocalismo della Sardegna.

Ciò che consente di considerare strutturalmente accostabili i sistemi di tipo sardo dell'area Lausberg al vocalismo sardo della Sardegna è la mancata confluenza di \bar{e} con \bar{i} e di \bar{o} con \bar{u} , che a me pare la cifra più peculiare di questo tipo di vocalismo, e che lo distanzia sia dal sistema napoletano (al quale il vocalismo sardo di una parte dell'area Lausberg si adegua solo tramite gli sviluppi metafonetici delle medie),

sia da quello siciliano, i cui influssi sono comunque presenti in tutta l'area calabro-lucana².

In definitiva, se consideriamo gli esiti metafonetici differenziati (della media lunga rispetto alla media breve) come innescati da un'esigenza di adeguamento al modello di prestigio napoletano, il parallelismo strutturale tra il vocalismo sardo dell'area Lausberg e quello della Sardegna resta a mio avviso valido. Questo, però, riduce drasticamente la validità dell'ipotesi di Tamponi, relativamente al peso da assegnare all'influsso neopunico sulla formazione di questo tipo di vocalismo.

5. Il secondo aspetto fonetico affrontato dall'A. riguarda la neutralizzazione fonologica tra i fonemi /b/ e /w/ nel latino di Sardegna e le eventuali spie grafiche di tale processo nel corpus epigrafico sardo. Gli scambi grafici tra e <V> ammontano a un totale di 158 occorrenze: in particolare, l'uso del grafema in luogo dell'atteso <V> (cfr. ad es. *bixit* per *vixit*, *requiebit* per *requievit* etc.) è molto più frequente dell'impiego di <V> in luogo di (*Olviae/Olvia* per *Olbiae/Olbie*), rispettivamente il 12% *versus* l'1%³. Tale confusione è un dato di grande interesse, in quanto è segno di un mutamento che caratterizza le varietà sarde (logudoresi e campidanesi) nel loro complesso, dove [w] e [b], divenuti allofoni di /b/, presentano una distribuzione complementare, regolata dalla posizione forte o debole in cui si collocano (cfr. pp. 167-168 e v. Krefeld 2017: 331-333 per un quadro sinottico). La rilevanza

² Non va taciuto che gli esiti siciliani in area Lausberg, i quali verosimilmente comprendono anche una serie di lemmi per i quali LAUSBERG ([1939] 2019) aveva fornito spiegazioni *ad hoc* (FANCIULLO 1988: 677), sono ritenuti così frequenti da alcuni studiosi da ipotizzare per la *Mittelzone* lausberghiana un vocalismo in origine siciliano piuttosto che sardo (cfr. in particolar modo PARLANGELI 1971: 359, nota 16). Tuttavia, ricerche recenti sul campo in seno al progetto A.L.Ba. hanno mostrato che almeno in alcuni punti della Lausberg *severior* gli esiti sardi superano di gran lunga quelli siciliani, cosicché le forme siciliane potrebbero rappresentare un esito cristallizzato e di natura non sistematica proveniente dal superstrato bizantino, sovrapposti all'originario sistema sardo (PANELLA 2021 per le varietà di Colobraro e Tursi). Che tutta l'area Lausberg presentasse in origine un sistema sardo (e non metafonetico) è sostenuto da DEL PUENTE (2010).

³ L'A. non chiarisce il perché di questa differenza, che verosimilmente, almeno per la posizione iniziale, dipende da quanto osservato da PARODI (1898: 180-182) (citato in LOPORCARO 2007: 103), ossia dalla maggiore frequenza lessicale di *v-* rispetto a *b-*.

statistica di tali grafie erronee è confermata da un'analisi comparativa con altre regioni dell'Impero, resa possibile dal confronto con studi precedenti (cfr. in particolare Barbarino 1978), in un arco temporale che va dal III al VII sec. d.C.: le confusioni grafiche tra e <V> nell'epigrafia latina di Sardegna ammontano a un totale del 20% rispetto ai casi di grafie corrette, un numero che è inferiore soltanto a quello di Roma (27%) ed è immediatamente seguito da quello dell'Africa romana (16%). Interessante è anche l'esame diacronico del fenomeno: le confusioni aumentano in particolare dal IV sec. d.C., in linea con una tendenza di sviluppo osservabile anche in altre aree dell'Impero, e che annuncia gli esiti betacisti di diverse aree della Romània.

L'esame è arricchito da un'analisi posizionale. La sostituzione di <V> con è particolarmente frequente, se confrontata con l'esito atteso dalla norma classica, in posizione intervocalica (*requiebit* per *requievit*). Tuttavia, tale confusione si rivela particolarmente significativa anche in posizione iniziale assoluta, se paragonata con quanto si verifica in altre aree dell'Impero: dal confronto dei dati sardi con quelli di Barbarino (1978), si ricava infatti che la Sardegna (con il 26% di grafie erronee) è preceduta solo da Roma (32%)⁴ ed è seguita dall'Africa romana (13%) (cfr. tav. 53, p. 180). Anche il confronto con i dati di Adamik (2017) mostra un indice particolarmente alto per la Sardegna che, insieme a Roma, appare nelle prime posizioni nella confusione tra e <V> specie in posizione iniziale.

Questi dati cambiano tuttavia in modo radicale quando si consideri la posizione iniziale in contesto di *sandhi* esterno: assegnando alla posizione intervocalica i casi in cui in fonosintassi la consonante iniziale di parola è preceduta da una vocale finale della parola precedente (-/V#CV/- = -/VCV/-), è la posizione intervocalica ad emergere come quella privilegiata per le confusioni grafiche qui in oggetto (cfr. tabelle 57 e 58 a pp. 182-183), specie col passare del tempo: dopo il III sec. d.C., infatti, decrescono i casi di confusione in posizione ini-

⁴ Per la confusione tra /b/ e /v/ anche in posizione iniziale nel latino di Roma, fornisce utili indicazioni anche l'*Appendix Probi III* (V sec. d.C.): *baculus non vaclus* 9, *vapulo non baplo* 215, come pure la testimonianza di Consenzio (GL V: 392, 15-17), che evidenzia la confusione tra *b-* e *v-* iniziali (*bobis pro vobis*) come un'innovazione «[...] che distingue la parlata della *plebs Romana* dal proprio latino di Gallia» (L'OPORCARO 2007: 103-105).

ziale assoluta e postconsonantica, e aumentano quelli in posizione intervocalica, compresi quelli in *sandhi* esterno (cfr. tabella 60 a p. 183)⁵. Secondo l'A., questo stato di cose rifletterebbe uno stadio diacronico precedente alla neutralizzazione, in sardo, tra /b/ e /w/ in posizione iniziale assoluta e postconsonantica, neutralizzazione che nelle varietà sarde si risolve, come in castigliano, generalmente a favore della variante forte (cfr. Blasco Ferrer 1984: 70; Fanciullo 1997; ma cfr. Lai 2022: 81ss. e vedi nota 6). Tale fase diacronica sarebbe in parte riflessa da quanto si verifica ancora oggi, in particolare, in alcune varietà conservative nuoresi settentrionali, che tengono generalmente distinti /b/ e /v/ in posizione iniziale assoluta, cfr. ad es. Bitti *vakka* 'vacca', *videre* 'vedere' vs. *biere* 'bere', *bukka* 'bocca', laddove in posizione intervocalica si ha neutralizzazione in [v], come anche dopo [r] (Wagner [1941] 1984: 165-166; Pittau 1972: 59; Lupinu 2023: 39 e n. 36)⁶.

Per inciso, osservo qui, data la costante attenzione dell'A. alle continuazioni romanze di questo fenomeno, che gli esiti della Sardegna si sono poi separati da quelli di altre aree romanze che presentano tendenze simili a quelle dell'isola nella documentazione epigrafica. Ad esempio, come abbiamo già ricordato, l'epigrafia di Roma rivela un numero elevato di grafie erronee in cui <V>- iniziale è rappresentato tramite -, precedendo in tale confusione grafica la stessa Sardegna e l'Africa romana. Sennonché, a differenza degli sviluppi sardi, il romanesco di prima fase, ossia la varietà precinquecentesca ancora non toscanizzata, si conforma al *pattern* dei dialetti centro-meridionali, mostrando, a differenza del sardo, l'esito debole [v]- in posizione iniziale (sia da b- che da w- etimologici), cfr. ad es. *vaca* 'vacca' vs. *versaglia* 'bersaglio', *voccha* 'bocca', *vosto* 'busto', *vasato* 'baciato', *vasapiedi* 'baciapiedi' (Ernst 1970: 67).

L'esito debole [v]- in posizione iniziale assoluta nei dialetti meridionali (ai quali va associato il romanesco di prima fase, come mostrano gli esempi sopra citati) è spiegato da Fanciullo (1997: 38ss.) come determi-

⁵ Riguardo a quest'ultima posizione, c'è tuttavia da aggiungere che prima del 300 a.C. la percentuale di confusione era per la Sardegna la più alta di tutte le aree dell'Impero (58%, cfr. tab. 59 a p. 183).

⁶ Secondo CONTINI (1987: 220), a Bitti e Onanì b > [β]-, mentre w dà [β]- o [v]-.

nato da un accento originariamente debole (al quale si ricollega un generale indebolimento consonantico), come mostrano i frequenti casi di mantenimento della vocale intertonica in tali varietà, segno di una scarsa intensità di tale accento (cfr. it. merid. *ilice* vs. it. *elce*, *pèrsika* vs. *pesca*, *pùlice* vs. *pulce* etc.). Il problema di questa spiegazione è che il mantenimento delle vocali brevi pre- o post-toniche è mostrato anche dal sardo, come rivela la resistenza alla sincope, già a partire dalle testimonianze del latino regionale dell'isola. Tamponi (pp. 225-227 del libro recensito e cfr. anche Tamponi 2020) conta nel corpus epigrafico indagato solo 4 esempi di sincope (*oclos* per *oculos*⁷, *clavicularius* per *clavicularius*, *Stabularius* per *Stabularius*, *incomparabl(is)* per *incomparabil(is)*), un numero irrisorio se confrontato con altre aree dell'Impero. Tale conservazione risulta in linea con le continuazioni romanze, a partire dai documenti medievali, che mostrano tale resistenza sia nelle varietà logudoresi che campidanesi (Blasco Ferrer 1984: 66ss.), fino alla conservazione delle vocali postoniche e intertoniche delle varietà moderne, specie quelle barbaricine (Blasco Ferrer 2017: 93).

In base a questi dati, le cause della diversità tra gli esiti sardi e quelli italo-romanzi meridionali relativamente agli sviluppi di B-/w- in posizione iniziale assoluta richiederebbero di essere ulteriormente chiarite. Una via forse percorribile sarebbe quella di ipotizzare che l'esito forte in posizione iniziale assoluta del sardo sia dovuto a una generalizzazione in tale posizione dell'esito forte post-consonantico *-/C#C/-* nel quale tale allofono viene frequentemente a trovarsi in fonosintassi, a causa della conservazione in sardo delle consonanti finali, specie di *-s* e di *-t*, che non si mantengono invece nei dialetti centro-meridionali, eccetto nell'area Lausberg e nelle aree adiacenti della Calabria settentrionale. Così, ad esempio, nel caso dell'articolo definito plurale, cfr. ad es. logud. *sar* (*/sas/*) *bákkas* 'le vacche' (Wagner [1941] 1984: 167ss.), campid. (e, più in generale, sardo centro-meridionale) [i 'βɔizi] (*/is 'bɔes/*)

⁷ *Oclus* è peraltro una forma che doveva essere di notevole diffusione nel latino standard ed è dunque poco indicativa di un fenomeno specifico connotato diatopicamente: compare infatti nell'*Appendix Probi III* (*oculus non oclus*, in un "pacchetto" di lemmi che lascerebbe ipotizzare non solo la sincope, ma anche la geminazione: [ˈok:lus]), oltretutto in numerosi trattati grammaticali relativi ai barbarisimi, quale esempio di *detractio* (MANCINI 2007: 82).

'i buoi'⁸, ogliastr. [ir 'βuk:aza] 'le bocche' (posizione forte) vs. [sa 'uk:a] 'la bocca' (posizione debole) (Lai 2022: 79)⁹; logud. centr. (Buddusò) [sol 'vœʃe] 'i buoi' ([sol] /sos/), con [v]- esito forte vs. il dileguo totale come esito debole, cfr. ad es. [sa 'ukka] 'la bocca' (Molinu 1992); nel caso del pronome personale di 3^a plur., cfr. ad es. Nuoro ['is:or 'benini] 'essi vengono' (/is:os/) (Pisano 2016: 20); nel caso dell'aggettivo dimostrativo plurale, cfr. ad es. Pula ['kus:u 'b:el:us 'kanizi] (/kus:us/) 'questi bei cani'; o, ancora, nel caso di sintagmi verbali con il mantenimento di -s finale in alcune desinenze, cfr. ad es. Pula [tui 'ðeni 'b:ɔizi] (/tenis/) 'hai buoi' (Molinu & Pisano 2016: 133). Per la conservazione di -r nella 3^a persona sing. del verbo (e, in alcune varietà campidanesi e di transizione, nella 3^a persona pl., Pisano 2016: 19)¹⁰, cfr. ad es. nuor. *fi* (/fit/) *bbellu* 'era bello' (Pittau 1972: 96).

Rispetto ai contesti -/C#C/- dei dialetti centro-meridionali, nelle varietà sarde nel loro complesso il mantenimento in particolare di -s e di -r finali in occorrenze come quelle qui esemplificate ha accresciuto notevolmente il numero di potenziali contesti in cui /b/ iniziale veniva a trovarsi in posizione postconsonantica in fonosintassi, fatto che potrebbe aver favorito la generalizzazione dell'esito forte, originariamente solo postconsonantico, anche in posizione iniziale assoluta.

6. Il terzo fenomeno fonetico considerato riguarda le scrizioni alternative del grafema <x> per rappresentare il nesso [ks]. Quelle più frequenti nell'epigrafia di Sardegna, in particolare nelle iscrizioni funerarie, sono <xs> e <ss>/<s> (*bixsit*, *bissit*, *visit* etc. per *vixit*),

⁸ L'esito fricativo [β], con la cosiddetta pseudo-lenizione (BOLOGNESI 2012), è da considerarsi esito forte in varietà nelle quali l'esito debole è -Ø-.

⁹ In alcune varietà marginali del campidanesi, la posizione iniziale assoluta presenta il dileguo, come avviene in posizione intervocalica, cfr. ad es. Tertenia ['inu o'k:an:u 'v:at:u n'deizi] 'Vino, quest'anno ne avete fatto?', cfr. LAI (2022: 82). Ciò, insieme ad altri indizi, indurrebbe a pensare che almeno in queste varietà la posizione iniziale sia da considerare come posizione debole.

¹⁰ Nei dialetti meridionali, fuori dall'area Lausberg e dall'amfizona del calabrese settentrionale a ridosso di tale area, la conservazione di -r finale della desinenza di 3^a persona singolare è invece limitata ai soli ESSE e HABÈRE (quest'ultimo solo in funzione di ausiliare), cfr. FANCIULLO (1997: 25).

così distribuite: 11 occorrenze di <xs>, 9 di <ss>, 3 di <s>¹¹. La prima soluzione, <xs>, è motivata, secondo l'A., da ragioni di trasparenza, secondo un principio di corrispondenza 1:1 tra grafema e fono; la seconda (<s(s)>), invece, riflette l'assimilazione regressiva del nesso. Qui l'A. poteva forse specificare, relativamente alla scrizione <xs>, che tale esigenza di trasparenza è motivata da quanto ha messo in luce Mancini (2019): l'introduzione della digrafia <xs> sul finire del III sec. a.C. è parte di un processo di "cospirazione grafica" al quale prende parte anche l'introduzione grosso modo coeva della *geminatio consonantium* al fine di rappresentare nella scrittura un fatto di natura prosodica, in base «[...] [al]l'esigenza di far emergere il margine sillabico per lettere con funzione amfisillabica» (Mancini 2019: 45).

Riguardo all'origine dell'assimilazione del nesso, Tamponi passa in rassegna le ipotesi che attribuiscono questo mutamento, come pure quello di [kt] in [tt] e quello di [ps] in [ss], al sostrato italico. Tuttavia, come ormai ampiamente mostrato e come l'A. opportunamente evidenzia, l'argomento si rivela privo di fondamento¹². Difatti, tra la documentazione italica e quella latina del fenomeno c'è un significativo iato cronologico, giacché tale cambiamento è attestato in latino solo a partire dall'epoca imperiale e tardo-imperiale, soprattutto in registri substandard¹³. Il contributo dell'epigrafia sarda al dibattito sull'origi-

¹¹ Come ha mostrato definitivamente MANCINI (2023, ma cfr. già MANCINI 2020: 306-307, nota 35) in riferimento a /ps/, le grafie alternative <ss>/<s> (come pure le scrizioni di altri nessi risultati da processi assimilatori) non coprivano due referenti fonologici diversi, ma entrambe notavano una consonante intensa, risultato dell'assimilazione, con la prima scrizione più frequente e più antica della seconda.

¹² In diversi contributi, Mancini ha mostrato con abbondante evidenza documentaria come le poche testimonianze scritte che sembrerebbero rappresentare casi di assimilazione dei nessi occlusiva + /s/ (come pure di altri nessi consonantici) nel latino di età repubblicana siano in realtà solo apparenti e diversamente motivabili. Ne è un esempio la forma *issula* 'padroncina', che compare in un luogo filologicamente tormentato della *Cistellaria* di Plauto (v. 450), attribuibile agli ultimi anni del sec. III a.C. Se la trafila semantica che riconduce questo eufemismo socialmente condizionato (così MANCINI 2020: 309) al pronome *ipse* è corretta, si rivela invece erronea l'ipotesi secondo la quale *isse* (da cui *issula*) rappresenti una forma assimilata di *ipse*, riproducendo in tal modo una pronuncia popolare del pronome già nel latino arcaico. Mancini ha invece dimostrato che si tratta piuttosto di un processo di rimotivazione morfologica condotto attraverso il pronome anaforico *is, ea, id: i-pse → is-se*.

¹³ Più precisamente, MANCINI (2023: 21) documenta l'assimilazione di /ks/ (come pure di /kt/ e /pt/) dalla metà del II sec. a.C. e, più frequentemente, a partire dal I sec. d.C.

ne dell'assimilazione [ks] > [s(s)] conferma l'infondatezza dell'ipotesi italica: l'attestazione di tale fenomeno in Sardegna, infatti, con un'incidenza statistica media rispetto ad altre aree dell'Impero, è un chiaro indizio diatopico contro l'origine italica di tale fenomeno, come peraltro confermano le stesse *regiones* più esposte all'influsso italico, le cui testimonianze epigrafiche ugualmente non presentano una particolare frequenza delle scritture <ss>, <s> in luogo di <x>.

7. L'ultimo fenomeno considerato è quello della scrizione non etimologica di consonanti doppie. In Sardegna si contano poche occorrenze, 10 in totale, che coprono solo l'1.3% dei *divergent spellings* riscontrati nel corpus. L'A. indaga in particolare forme quali *Aurellius* per *Aurēlius* e *Ruffiae* per *Rūfiae*, che documentano la cosiddetta *littera-rule*, secondo cui in sincronia si danno alternanze del tipo V:C ~ VCC, con la prima soluzione che diacronicamente precede la seconda. La presenza di tali alternanze, regolate sociolinguisticamente (la prima caratteristica del registro alto, la seconda di quello basso), si spiegherebbero come motivate dall'esigenza di mantenere immutato il peso della rima sillabica, specie della sillaba tonica (vocali lunghe in sillaba aperta vs. vocali brevi in sillaba chiusa), in una fase in cui la quantità vocalica non era più distintiva (cfr. Giannini & Marotta 1989). Andrebbero inquadrati in questa regola prosodica anche casi quali *Iannuario* per *Iānuario* e *Sabbatius* per *Sābatius*, in cui la geminazione consonantica è presente in sillaba atona. Nonostante la predilezione delle sillabe atone per le rime leggere, l'A. ricorda i frequenti casi in cui una rima pesante occorre in sillaba interna, possibilità offerta dal suo basso rendimento funzionale in tale posizione (di fatto limitato a coppie minime dei genitivi plurali, quali ad es. *pōpulorum* ~ *pōpulorum*).

L'A. collega queste testimonianze epigrafiche al collasso della quantità così come emerge dall'esame del vocalismo tonico (cfr. § 4): la datazione delle epigrafi che documentano tali forme, infatti, si colloca tra la fine del III-inizi del IV sec. d.C., in linea con le conclusioni dell'A., che assegnano la perdita della quantità vocalica distintiva in Sardegna ai primi secoli dell'Impero.

In conclusione, il libro di Lucia Tamponi ha il merito di offrire agli studiosi un'analisi esaustiva dell'epigrafia latina di Sardegna, utile agli studiosi del latino epigrafico e regionale, ai romanisti, in particolare agli esperti di linguistica sarda, e, più in generale, a tutti coloro che coltivano interessi di sociolinguistica storica.

Il dato epigrafico è inquadrato, là dove possibile, all'interno del contesto storico e sociolinguistico, in modo da affiancare all'analisi quantitativa, caratterizzata da indispensabili rilevazioni statistiche, quella qualitativa.

Chiunque si occupi delle varietà romanze dell'isola in ottica diacronica, come pure dell'afro-romanzo, dovrà necessariamente prendere le mosse dal volume qui recensito, e dalle conclusioni a cui giunge l'A. sui fenomeni più caratteristici di queste aree, a partire dal vocalismo tonico e dalla neutralizzazione fonologica tra /b/ e /w/.

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Federico Dragoni (2023), *Watañi lāntaṃ. Khotanese and Tumshuqese Loanwords in Tocharian*, Dr. Ludwig Reichert Verlag, Wiesbaden (Beiträge zur Iranistik, Band 50), ISBN 978-3-7520-0690-2, pp. 332.

Federico Dragoni's *Watañi lāntaṃ* seeks to document, date and investigate the linguistic contact between the Tocharian languages on the one hand and Khotanese and Tumshuqese on the other. Tocharian A and Tocharian B are the conventional names of two closely-related Indo-European languages once spoken in the northern part of the Tarim Basin (present-day Xinjiang, Northwest China). The oldest linguistic neighbours of the Tocharians in the region were the speakers of the easternmost branch of the Iranian languages, once erroneously considered to be the language of the Sakas (Peyrot 2018). This branch is witnessed during the Middle Iranian period by two closely-related languages, Khotanese and Tumshuqese, named after the cities of Khotan and Tumshuq and spoken respectively in the southwestern and northwestern part of the Tarim Basin.

This dense and rich book is a revised version of the PhD dissertation with the same title discussed by the Author in 2022. It is the result of a four-year research endeavour at the Leiden University Centre for Linguistics (LUCL) as part of the project 'Tracking the Tocharians from Europe to China: a linguistic reconstruction', led by M. Peyrot. The overarching objective of this project was to reconstruct the hypothesised migration route of the Tocharians from the Proto-Indo-European homeland in Eastern Europe to the Tarim Basin by tracing the linguistic influence exerted by the various peoples encountered along the way. In this framework, the Author's subproject focussed on the contact between the Tocharians and the Khotanese and Tumshuqese peoples after the Tocharians had reached their historic site in the Ta-

rim Basin. Accordingly, the main goal of the book is to compile a comprehensive corpus of reliable Khotanese and Tumshuqese loanwords in Tocharian A and B.

The core of the book is represented by Chapter 2, which comprises ninety-nine loanword studies and proposes to identify forty-eight cases of borrowing. It is preceded by a brief introduction (Chapter 1), in which the Author presents the aims of his work, provides a brief description of Tocharian, Khotanese and Tumshuqese and a concise overview on the literature concerning their contacts, and finally lays down his criteria to identify a reliable loanword. Chapter 2 is divided in two parts. The first part (§2.1) is organised as a dictionary of borrowed lexical items (more on the structure below). The second part (§2.2) consists of a reference list of reliable (48 items), doubtful (29 items) and rejected loanwords (18 items), plus three more words for which a different Iranian origin is acknowledged. Chapter 3 and 4 are concerned with two main questions: how old is the contact between the Khotanese and Tumshuqese peoples and the Tocharians and what areas of the lexicon were subject to borrowing? In order to address these issues, the Author builds on the new collection of reliable loanwords and attempts to classify them from a chronological and semantic point of view. In Chapter 3, the Author divides the loanwords into four chronological layers, corresponding to different linguistic stages:

- from Proto-Tumshuqese-Khotanese (PTK) into Proto-Tocharian (PT), approximately 1000-500 BCE;
- from Pre-Khotanese (PK) into Pre-Tocharian A and/or Pre-Tocharian B, appr. 500 BCE-400 CE;
- from Old Khotanese (OKh.) into Tocharian A (TA) and/or Tocharian B (TB), from the 5th c. CE onwards;
- from Late Khotanese (LKh.) into TA and/or TB, from the 6th to 7th c. CE onwards.

The first two stages belong to the pre-documentary phase and are distinguished on the assumption that in the earliest stage (PTK → PT) loanwords entered the common ancestor of TA and TB and were inherited by both languages, whereas the second stage (PK → pre-TA, pre-TB) begins after the split of TA and TB. According to the semantic

analysis conducted in Chapter 4, the loanwords entered during the prehistoric phases mostly pertain to the administrative, political and economic spheres, whereas loanwords from Old and Late Khotanese are predominantly medical and Buddhist terms. This qualifies the contact during the historic phase (from 5th c. CE onwards) as mostly taking place through written sources in a learned milieu, as opposed to earlier contact being between travellers and merchants. Chapter 5 further explores the interactions between the two groups by switching sides and discussing a few possible cases of Tocharian loanwords in Khotanese and Tumshuqese, confirming that the dominant direction of borrowing was from Khotanese to Tocharian. As for the fragmentarily attested Tumshuqese, the Author notes that the influence was rather reverse: while he could not find any reliable Tumshuqese loanword in Tocharian (cf. p. 203; p. 39 fn. 50), he acknowledges one Tocharian loanword in Tumshuqese, along with a few words of Tocharian origin that are not integrated into the language and should thus be regarded as foreign words. Finally, Chapter 6 summarises the results and draws conclusions from the book's findings. The book is closed by a set of useful indexes that make it readily consultable for specific queries. Beside the traditional indexes of quoted words and passages (in many ancient and modern languages), this part also includes a list of relevant paragraphs for the discussion of each reliable loanword.

This work immediately qualifies as a fundamental starting point for future investigations on many related subjects of Central Asian studies, from the historical phonology of Khotanese and Tocharian to the broader question of the sociolinguistic dynamics in prehistoric times within the Tarim Basin.

Among the most evident accomplishments of this book is the expansion of the corpus of Khotanese loanwords from fifteen to forty-eight items, making Tocharian the first language for number of lexical items borrowed from Khotanese. Secondly, the identification of an ancient layer of loanwords predating both the split of Tocharian A and B and that of Khotanese and Tumshuqese offers an important argument in favour of an early dating of the first encounter between the Tocharians and the Tumshuqese/Khotanese peoples. This is of

course a crucial point for the ‘Tracking the Tocharians’ project. While none of the languages involved is attested earlier than the 5th century CE, ancient contacts between Tocharians and Iranians have been assumed since K. T. Schmidt (1985) identified an early layer of loanwords from an Old Iranian language into Tocharian. Parallel research carried out within the same project by Ch. Bernard (2023) assigned part of these loanwords to an otherwise unattested Iranian language belonging to the Old Iranian stage, perhaps spoken by inhabitants of the Eastern Eurasian steppe that came into contact with the Tocharians before they entered the Tarim Basin (hence the proposed name ‘Old Steppe Iranian’). The Author’s hypothesis is that another source for loanwords of Old Iranian provenance was the common ancestor of Tumshuqese and Khotanese (Proto-Tumshuqese-Khotanese). The presence of loanwords at this early age would provide a *terminus ante quem* for the contact between Proto-Tumshuqese-Khotanese and Pre-Tocharian speakers: as the split of the two Tocharian languages is dated approximately between 1000 BCE and 500 BCE (Peyrot 2015), the first encounter between the Tocharian and Tumshuqese/Khotanese peoples would have taken place during the first half of the 1st millennium BCE. This would also confirm the presence of Iranians in the Tarim Basin around the year 1000 BCE, as suggested by Peyrot (2018: 275) on archaeological grounds.

The extent to which the book succeeds in demonstrating the thesis of prehistoric contact between Proto-Tumshuqese-Khotanese and Pre-Tocharian speakers deserves closer examination, as the evidence collected is interesting but needs to be treated with some caution. However, the Author’s research into the non-inherited component of the Tocharian lexicon yielded several valuable results beyond the scope of the project from which it stems. As a byproduct of its primary aims, this book offers meticulous analyses of more than a hundred Tocharian words of uncertain etymology and provides new insightful translations to a wealth of obscure passages from both Tocharian and Khotanese texts, often proposing compelling new etymologies for difficult words. Another result of the utmost importance is the contribution to future investigations into the historical phonology of Khotanese, for which this book will serve as a foundational preliminary.

It may be useful to have the philological and linguistic contributions contained in this book all gathered in one place. The Author proposes new readings or translations of the following Tocharian texts:

- THT 108 b9: reading of TB *suwāññe* *u* *wātatane* as *suwāññe*-*u* *wātanane* ‘(in the tune) of golden Khotan’. TB *suwāññe* is interpreted as an adjectival formation based on Middle Indic *suwaṇṇa* ‘golden’, whereas TB *u* *wātano** is interpreted as the Tocharian rendition of the name of Khotan. (This and the following four entries first appeared in Dragoni 2023);
- A 24 b5, A 163 b2: interpretation of TA *watañi-lāntam* (loc.sg.) as ‘(in the tune) of the king of Khotan’, with TA *watañi* being an *-i* adjective formed on TA *watam** (from TB *u* *wātano** ‘Khotan’, cf. previous entry);
- A 71 b3, A 260 b2, THT 1464 b2: interpretation of TA *watañinam* as ‘(in the tune) of Khotan’, loc.sg. of TA *watañi* ‘of Khotan’ (cf. previous entry);
- THT 2688.10: interpretation of TB *u* *watanams* as ‘of the Khotanese people’ (gen.pl.m.);
- THT 2709.2-3: interpretation of TB *u* *wātane* as ‘the Khotanese people’ (nom.sg.m.);
- PK AS 8B a2: identification of *keto* as nom.sg. of *keta* ‘estate’;
- PK AS 7H b3-4, THT 31 a2-3; THT 33 b6-7; THT 42 b5: new translation of TB *koto** as ‘excrement’ instead of ‘hole, pit’;
- THT 325 a1: new translation of the perlativ TB *kontsaisa* as ‘by mistake’ and tentative interpretation of TB *āmāpi* as ‘by intention’ (but the form remains unclear);
- THT 577 a1: new translation of TB *kompo** as ‘plain’ or ‘*yोजना* (measure)’;
- THT 91 b6, IOL Toch 5 b2-3: new translation of TB *twār* as ‘moreover’ instead of ‘consequently’;
- THT 554 a6: TB new translation of *paño** as ‘binding’;
- A 14 a6-b1, PK AS 8C a3-4, PK AS 9B b5, PK AS 9D b3, THT 29 a8, THT 229 b4, THT 281 b5, THT 364 a5, THT 385 b4, THT 1252 b2, THT 2377.v a2, THT 108 a6-7, PK AS 4B a5 (parallel M 500.1 b4-5), IOL Toch 369 a2, THT 274 b4: new translation of TAB *pānto* as ‘friend’;

- THT 282 b1: new translation of TB *wiñcaññe* as ‘pertaining to a sparrow’;
- Km-034-ZS-L-01 a6, PK AS 17A b1-2, PK NS 399 a3, THT 588 a2, IOL Toch 116 a1, THT 382 a1, THT 1104 a4: new translation of TB *śarko** as ‘singing, song’;
- YQ I.9 a2, YQ I.9 b3, A 318 a2, A 318 a6, A 126 a6, A 15 b1: new translation of TA *tsärk* as ‘singing, song’ instead of ‘lute’;
- PK AS 8A b7-8: new translation of TB *sumo* as ‘broth’.

New translations of Khotanese texts:

- P 2782.26; P 2781.71: interpretation of LKh. *auska*, *auski* as variant spellings of the adverb *uska* ‘up’ instead of a feminine noun meaning ‘dwelling place’ (as already suggested for IOL Khot S. 6.9 and P 2786.70);
- JS 37r3; P 4099.19-21: new translation of LKh. *kīḍa-* as ‘stake’, interpreted as an Indic loanword, cf. Skt. *kīla-/khīla-* ‘id.’;
- IOL Khot 102/1v2 (*Jivakapustaka*), Fol. 91v2, 91v3: new translation of LKh. *graysāñ-* as ‘to make lament’ instead of ‘to cause to go wild, to cause miscarriage’;
- Hedin 3.15: new translation of LKh. *peri* as loc.sg. of Khot. *pāra-* ‘debt’;
- JS 28r1: new reading of Khot. *samuvā* as *samū* ‘only’ + particle *vā*;
- P 2739.19: tentative interpretation of the sequence *śau rraha: śīyi ttrihe:* as ‘one (portion) of red radish and white radish’;
- Z 4.114 (OKh.), Sudh 406, 414-15, Or.11252/4v (LKh.): new translation of OKh. *hambälke*, LKh. *habvakya-* as ‘without permission’.

New Khotanese etymologies:

- LKh. *aišta* (*bā*) ‘Boerhavia diffusa’ (attested in various spellings) < OKh. **älsta*, an inflected form of a reconstructed *i*-stem noun **älsti-*, *h*-less variant of OKh. *hālsti-* ‘spear’ < PIr. **Hṛṣti-* (already published in Dragoni 2021). The Author compares the Latin term *lanceolātus* ‘spear-shaped’ to refer to the form of some leaves, but observes that the term may refer to the roots rather than the leaves of the *Boerhavia diffusa*;

- LKh. *maśpa-* ‘road’ (also attested as *maśapa-*, *māśpa-*, *maśma-*, *magpa-*), perhaps connected to a verbal root **maś-* < PIr. **maj-(a)ya-* ‘to break’;
- OKh. *haḍa-* ‘envoy’ < PIr. **Harta-*, pp. of **Har¹* ‘to go to(wards)’ or **Har²* ‘to set in motion’ (but see the discussion below);
- Khot. *karāśśā-* ‘creeper’, loanword from an Indo-Aryan language, cf. Skt. *karś-* ‘to be lean, thin’ (but cf. Del Tomba (2023: 212 fn. 278) for the reconstruction of an *i*-stem *karāśśi-* rather than an *ā*-stem, and consequently an earlier dating for the borrowing of the word in Tocharian);
- LKh. *gr(r)aysa-* ‘grief, torment’: nominal derivative of a verb *grays** (cf. the causative LKh. *grays-āñ-*) < PIr. **garj-* ‘to lament, weep’;
- LKh. *ttūṃgara-* ‘ginger’ < PIr. **tvāna-kara-* ‘strong-maker’, the first member of the compound being the present middle participle of the root *tv-* ‘to be strong’ (already published in Dragoni 2021);
- OKh. *pārgyiña-* ‘garden’: *-iña-* derivative from *pārgya** ‘having leaves’ (cf. OKh. *°vārgya-* ‘id.’) < PIr. **parnakika-* (suggested by Mauro Maggi);
- OKh. *bilsamga-*, *bālsamg(h)a-* < OKh. **balysa-samga-* ‘Bud-dha-samgha’, used to translate Skt. *bhikṣusamgha-*;
- Khot. *tcāmph** ‘to be violent, destroy’ < PIr. **čamf-*, palatal variant of the root **čap/f-* ‘to seize, attach, stick, strike’ with nasal infix as in Balochi *čāmp-* ‘to snatch’ and Yaghnobi *čūmf-* ‘to push (to)’;
- Khot. *tcarkā-* ‘play, delight, amusement’: nominal *ka*-derivative of a verb meaning ‘to sing’, from the root PIr. **čarH-*, variant of PIr. **karH-* ‘to praise, celebrate’, cf. Sariqoli *čīr-* ‘to sing, twitter, chirp’;
- LKh. *śīmjā-* name of various trees, originally a Central Asian Wanderwort, whose pre-form may be reconstructed as **sinjata-* > OKh. **śsinjsata-* > **śsinjsaa-* or **śsinjsā-*. The Late Khotanese form may be derived through haplology from LKh. **śīmjīmjā-*, the denominal adjective formed with the fem. suffix *-īṃgyā-*;
- Khot. *jsīr-* ‘to deceive’ < PIr. **jar-ya-* from a palatal variant of the root **garH-* ‘to greet, call’, although semantically the proposal is not very compelling.

New reconstructed Old Steppe Iranian word:

- OSIr. **dzara-* < PIr. **jarH-* ‘to hurt, wound, anger (with words)’.
- Loanwords in Tocharian from other Iranian languages:
- TB *armañik* a kind of textile < Sogdian *rm’nykh* ‘id.’.

Moreover, it is proposed that the name of Khotan was rendered in Bactrian as **χο/ωδανο* or **χο/ωτανο* or **χοαδ/τανο*, as suggested by the Niya Gāndhārī form *khotana-*, which appears to be borrowed from Bactrian. The Author argues that the name OKh. *hvatana-* was borrowed again in later times as Bactr. *οατανο*, attested in the Bactrian documents as a personal name.

As noted above, the core of the book is represented by the dictionary of loanwords in §2.1, on which I shall now focus my attention discussing some points of detail. Each entry in §2.1 contains: 1) a list of the Tocharian and Khotanese/Tumshuqese occurrences; 2) a discussion of the forms and their possible connection; 3) a summary of the results. In the Discussion sections, the Author first addresses any potential philological problem connected to the lexemes under analysis to determine their precise phonological shape and/or meaning, then proceeds to evaluate whether the lexical pair can be considered a case of borrowing. This operation often requires the setting up of proto-forms obtained through internal reconstruction based on what we know of both Tocharian and Khotanese historical phonology. In this way, the Author seeks to identify patterns of phonological adaptation and establish fixed correspondences between Khotanese and Tocharian sounds. This sometimes leads to the Author formulating rules of adaptation based on very small evidence and apply them rather rigidly. While this is sometimes unavoidable when dealing with ancient, fragmentarily attested languages, it is risky to draw too far-reaching conclusions from such hypotheses, however plausible they may be. In the following, I will discuss some entries where, in my opinion, this risk is more concrete.

(In quoting the entries, I follow the numbering system adopted by the Author).

- (5) TB *eñcuwo* TA *añcu** ‘iron’ < PTK **hens’wanya-* ‘id.’ (cf. OKh. *hīśśana-* ‘id.’).

The connection between the Khotanese and Tocharian words for ‘iron’ was first suggested by the Author in a cowritten paper (Peyrot *et al.* 2022), whose results are only briefly summarised in the book¹. In the article, it is argued that the Tocharian forms are based on a proto-form **henswanya-*, which is in turn traced back to PIr. **ham-ćwanya-*. In the book (§3.2.1.1), the Author dates this borrowing to the earliest chronological layer (PTK → PT), among other things because of the correspondence PTK **e* (OKh. *ī*) ~ TB *e* TA *a*². This implies the preverb PTK **hen-* (< PIr. **ham*) was adapted as PT **en* and then underwent regular changes in TB and TA. However, the same preverb **ham-* appears to be lost in another loanword of the same stage: (16) TB *keś* TA *kaś*, which is connected to OKh. *hamkhīs-* ‘to count’ (p. 102). To explain this inconsistency, the Author establishes the following rule: the preverb **ham-* was preserved in Tocharian only if it was stressed, otherwise it was dropped. External support for this hypothesis comes from the reconstructed position of the accent in PTK **henswanya-* < PIr. **ham-ćwanya-*. It is argued that the vowel of the prefix was stressed because it could be affected by the *i*-umlaut triggered by the *-y-* in the last syllable (p. 62, point b). Indeed, it is generally accepted that umlaut phenomena in Iranian are confined to stressed syllables³.

¹ The borrowing of such an important cultural word is of course relevant to date the first encounter between the Tocharians and the Proto-Tumshuqese-Khotanese, as the first iron finds in the Tarim Basin are dated around the early 1st millennium BCE. In §6.2.2.1, the Author surmises that the Proto-Tumshuqese-Khotanese speakers may be responsible for the introduction of iron in the Tarim Basin and that Pre-Tocharian speakers may have borrowed the term from them together with the new technology. This reasoning corroborates the proposed dating of the first encounter between the two peoples to the first half of the 1st millennium BCE.

² Note that the Author reconstructs a short PTK *e* instead of a long *ē* for the Proto-Tumshuqese-Khotanese outcome of umlaut phenomena (cf. p. 209). In this way, he distinguishes it from the outcome of the monophthongisation of PIr. **ai* > PTK *ē*. However, both PIr. **ai* and PIr. **a_y* resulted in a long *ī* in Old Khotanese. Thus, it seems preferable to posit a long **ē* for the Proto-Tumshuqese-Khotanese phase, consistently with its Old Khotanese outcome. Indeed, MAGGI (2024: 171, fn. 23) recently described the *i*-umlaut as a palatalisation originating from «a palatal epenthesis of stressed **a* > **ai* > **ē* > *ī* due to a following *i/ī*». This implies that, historically, the vowels affected by *i*-umlaut became indistinguishable from the monophthongised outcomes of the PIr. **ai* diphthongs and both were treated in the same way, ultimately resulting in OKh. *ī*.

³ Although the topic still needs further investigation, cf. KÜMMEL (2014).

However, this outcome does not align with what is now known about palatalisation and umlaut phenomena in Khotanese. In his account of synchronic umlaut, D. Hitch (1990: 187) identified Khot. *n* /n/ as one of the «umlautable» consonants, i.e. consonants that are palatalised when followed by a palatalisation-triggering suffix (e.g. the loc.sg. ending *-i-a*), distinguishing them from the consonants that «absorb» the umlaut and those that are «neutral» to it. Only in the latter case palatalisation is observable on the stressed vowel (e.g. *pajsa-ma* ‘honour’ > loc.sg. *pajsi-ma*), whereas, with palatalisable consonants («umlautable» in Hitch’s use), the palatalising effect is visible on the adjacent consonant but does not affect the stressed vowel (e.g. *uryā-na* ‘garden’ > loc.sg. *uryāñā*). A. Del Tomba (2024) recently showed that the cases of diachronic palatalisation, i.e. caused by suffixes that are no longer productive (e.g. **-ya-*), follow the same pattern as that described by Hitch for the synchronic palatalisation (e.g. *kīra* ‘action’ < PIr. **kar-ya-*: «neutral» consonant /r/ allowing palatalisation of the stressed vowel vs. *°hvāñā* ‘speech’ < PIr. **hwān-ya-*: «umlautable» consonant /n/ being palatalised instead of the stressed vowel). Therefore, returning to PIr. **ham-ćwanya-*, we would have expected the final *-ya-* to cause palatalisation of the preceding *-n-* (PTK **ham-śwañā-*) rather than *i*-umlaut of the prefix **ham-* (PTK **henśwanya-*). The development PIr. **ham-* > PTK **hen-* is described by the Author as a case of trajected umlaut, i.e. an umlaut crossing the second syllable. In the original article (Peyrot *et al.* 2022: 407), two parallels were mentioned for this development, following H. W. Bailey (1979: 352b, 444b, 481b): Khot. *ysīrra-* ‘gold’ < PIr. **jaranya-* and LKh. *hījsara-*, loc.sg. of *ha(ṃ)jsarā-* ‘scope, range, place’ < PIr. **ham-čarā-*. In the loc.sg. form LKh. *hījsara-*, the palatalisation of the prefix **ham-* is allowed by the “neutral” consonant /r/ as the final consonant of the lexical morpheme, a condition that is not satisfied by PIr. **ham-ćwanya-*. As for Khot. *ysīrra-*, the *-ī-* is not an instance of trajected umlaut but rather a regular outcome of the process described above: the palatalisation must have occurred after the loss of the intermediate vowel of PIr. **jaranya-* which led to the development PIr. **rn* > OKh. *rr*, otherwise the expected form would be ***ysarñā* (*-rr-* is another case of «neutral»

consonant, cf. Hitch 1990: 189)⁴. All in all, it appears that the long *-ī-* in OKh. *hīśšana-* can hardly be due to a trajected umlaut, as we would expect the palatalisation to affect the consonant of the stem, and thus it cannot be used to determine the position of the stress on the prefix.

This remark does not invalidate the proposal of a connection between OKh. *hīśšana-* and TB *eñcuwo* TA *añcu**, which is based on various, rather sophisticated arguments. The Khotanese form is arguably still the best match for the Tocharian forms. However, the reconstruction of the stress on the first syllable of the PTK proto-form can be seriously called into doubt. Therefore, it does not seem advisable to formulate an adaptation rule based solely on this evidence.

The argument just presented against the role of the stress in the adaptation of PIr. **ham-* affects two items in Chapter 2. It only slightly affects the derivation of TB *ampoño* ‘rottenness, infection’, for which the Author presents two possible sources: LKh. **hambvauña-* ‘infection’ or a Tocharian formation based on the verb TB *ampa-* ‘to rot, decay’, which is in turn derived from LKh. *hambva-* ‘fester’ (pp. 35-36). After establishing the stress rule, he chooses the second option on account of the fact that TB *ampoño* is not stressed on the first syllable as one should expect if it were a loanword from LKh. **hambvauña-*. Setting the stress rule aside, both options can be considered as plausible.

The other item deserves more extensive comments:

- (16) TB *keś* TA *kaś* ‘number’ ← PTK pres. inf. **ham-xēzi* ‘to count’ (cf. OKh. *hamkbīs-* ‘id.’).

The Author proposes to identify the Tocharian word for ‘number’ as a Proto-Tumshuqese-Khotanese loanword and sets up as a source PTK **ham-xēzi* (with stress on the root according to the alleged stress rule), a reconstructed present infinitive form of the verb *hamkbīs-* ‘to count’ (OKh. *hamkbīsä** < PIr. **ham-xaijyai*). The preservation of the initial syllable **ham-* in three cases (TB *ampa-*, TB *ampoño* and

⁴ As a side note, this example qualifies the palatalisation in Khotanese as a relatively recent process (surely subsequent to the development **rn > rr*), rather than one being active already in the Proto-Tumshuqese-Khotanese period.

TB *eñcuwo* TA *añcu**), when separated from the stress rule discussed above, speaks against a connection between TB *keś* TA *kaś* and a PTK form with **ham*. Another issue is the absence of the final vowel in the Tocharian forms. This is the only case of a noun borrowed during the PTK → PT phase that does not show any trace of the Khotanese ending (cf. p. 219)⁵. The Author speculates that the PTK final *-i* of the infinite ending «could have been borrowed into Tocharian as *-ə* after a palatal, cf. the ending TB */-cə/, /-ścə/, /-ñə/* etc. Tocharian *i* was not suitable because it was probably felt as long (< **-əy*)». It is assumed that final *-ə* of the PT form **keśə* was subsequently dropped in TA and TB. If this is an adaptation pattern attested in loanwords from other languages, one feels the need to be directed to the relevant literature on the subject. Should it be considered a hypothetical statement, it is perhaps more cautious to qualify this connection as doubtful.

Additionally, the reconstruction of the form PTK **ham-xēzi* < PIr. **ham-xaijyai* with short **-i* for the pres. inf. ending entails some problems. Why is the monophthongisation of the PIr. diphthong **-ai-* still at the stage **-ē-* in internal position but has already progressed to **-ī* > **-i* in final position? Considering that the Proto-Tumshuqese-Khotanese stage is described as an Old Iranian language spoken around 1000-500 BCE, one does not expect the infinitive form to be so close to the phonological shape attested in Old Khotanese, i.e. *-ā, -i* ([ə], [i]) (Emmerick 1968: 218). Perhaps a later dating for the stage *-i* would be more appropriate (cf. the next entry for a similar argument). The Author's main reason for assigning this loanword to such an early phase is the correspondence TB *e* ~ TA *a*, which points to PT **e* and thus to a PTK source with **ē* < PIr. **-ai-* (the vowel of the root in **ham-xēzi*). However, since this leads to a chronological inconsistency with the reconstructed infinitive ending **-i*, it is perhaps best to regard the origin of TB *keś* TA *kaś* as still unclear.

(30) TB *parso* TA *pārs* 'letter' ← PTK acc. sg. **pṛsu* 'request' (cf. OKh. *puls-* 'to ask').

⁵ Apart from (35) TB *wanc** 'sparrow', which is however not directly attested but reconstructed from the denominative adjective TB *wiñcañne* based on the treatment of the final vowel in TB *keś* TA *kaś*.

The Author elaborates on a proposal by L. Isebaert (1980: 104) to connect the Tocharian word for ‘letter’ to the Khotanese verbal root *puls-* ‘to ask’. The source for the Tocharian forms is identified in PTK **pṛsu*, a reconstructed noun meaning ‘request’ that may have undergone a semantic change to ‘letter’ within Tocharian. The final **-u* in the reconstructed Khotanese form is required to explain the fact that the word is integrated in Tocharian B as a noun with the inflectional pattern nom.sg. *-o*, obl.sg. *-o*. One of the book’s discoveries is that nouns borrowed during the Proto-Tumshuqese-Khotanese, Pre-Khotanese and Old Khotanese stages were predominantly adapted in Tocharian B as nouns with a nom.sg. *-o*. The Author argues that this is an adaptation of the Khotanese acc.sg.m. ending *-u* (§3.4.10, cf. further on this argument). For the matter at hand, since no noun ***puls-a-* ‘question’ is attested in Khotanese, the Author assumes that the word entered Tocharian as an infinitive present with final *-ä*, which was interpreted as the nom. sg. ending *-ä*. This in turn led the Tocharian speakers to «set up an acc. sg. in *-u* that they borrowed as a substantive with nom. sg. *-o*» (p. 138). Such a process appears rather complicated for a borrowing, for a few reasons. First, it gives the impression that the Tocharian speakers deliberately inflected the noun before borrowing it, which appears unlikely: it is hardly plausible that, once it had entered Tocharian, the loanword would be inflected by the Tocharian speakers according to the Khotanese declension. Secondly, to be reanalysed as a nom.sg. *-ä* of the *a*-stems, the ending of the pres. inf. must have been homophonous to it ([ə]). This is of course applicable to Old Khotanese, where the pres. inf. ending is attested as *-ä*, *-i* ([ə], [i]) (cf. above). However, the borrowing is dated to the Proto-Tumshuqese-Khotanese stage, when, as discussed above, the pres. inf. ending (PIr. **-ai*) was in all likelihood still clearly differentiated from the nom.sg.m. ending of the *a*-stems (PIr. **-ah*), even though their exact phonological shape is hard to determine. As a side note, the assumption that the pres. inf. ending was already *-ə* in PTK conflicts with the reconstruction of PTK **ham-xězi* (on which see above).

Perhaps it would be more convenient to move the date of the borrowing to a later stage. The main reason for the dating to the Proto-Tumshuqese-Khotanese phase is that the TB form *parso* /párso/ presupposes a vocalic *ʕ in the source, which fits nicely with an archaic phase of the language and is suggested by at least another loanword (TB *ṣart-* TA *ṣārttw-* (PT **ṣartw-*) ‘incite’ ← PTK past ptc. **ṣrtu* ‘id.’). However, the Author also admits the possibility of a source-form PTK **pursu*, with «early vocalisation» of *ʕ during the Proto-Tumshuqese-Khotanese phase and internal PTK **-u-* borrowed as TB /ə/ (p. 138, fn. 276). There would be no need to postulate an «early vocalisation» if the borrowing happened during the Pre-Khotanese stage. It is also important to note that the Pre-Khotanese stage is reconstructed as a period spanning over one millennium (500 BCE - 400 CE), during which *ʕ may have been first vocalised as /ər/, as witnessed by the Tocharian form, before it underwent assimilation to /ur/. As for the final vowel, it may be worth rehabilitating Isebaert’s idea of a substantive PIr. **pṛsā-* ‘question’ (cf. Av. *frasā-* ‘id.’).

(3) TA *ārt** ‘envoy’ ← PTK acc. sg. **(h)ardu* ‘id.’ (cf. OKh. *haḍa-* ‘id.’).

To establish this loanword, the Author suggests that the noun OKh. *haḍa-* ‘envoy’ should be connected to the ppp. of the PIr. verb **Har⁻¹* ‘to go to (wards)’ or **Har⁻²* ‘to set in motion’, which he purposefully reconstructs as **Harta-* instead of **Hṛta-*, as one would expect. According to this reconstruction, PIr. **Harta-* then resulted in PTK **(h)arda-*, which provides a nice match for the TA word *ārt** ‘envoy’⁶. The Author’s reasoning for rejecting a form PIr. **Hṛta-* is that the vocalic *ʕ is expected to be still preserved in Proto-Tumshuqese-Khotanese (cf. above), whereas the TA form *ārt** /ər/ clearly shows that the vocalisation had already taken place. To avoid admitting an early vocalization of *ʕ in the Proto-Tumshuqese-Khotanese stage, he therefore posits PIr. **Harta-* as a starting form. Again, it is perhaps worth considering the hypothesis of a later borrowing. A Pre-Kho-

⁶ The initial OKh. *b-* is traced back to a Proto-Iranian laryngeal, following a proposal by KÜMMEL (2018).

tanese form **harta-* as a source for TA *ārt** would have two advantages⁷:

- the vocalisation of **r̥* would have happened during the Pre-Khotanese stage, as is expected (p. 39, point 3);
- since the borrowing would have happened after the split between Tocharian A and Tocharian B, there would be no need to reconstruct an inherited TB form **ārto* that was later replaced by TB *šīto* ‘envoy’ (p. 39, point 4). The word would have simply entered Pre-TA and regularly result in TA **ārt*.

As both a Proto-Tumshuqese-Khotanese and a Pre-Khotanese borrowing are theoretically feasible, I would suggest including this particular case among the loanwords that are generically from the pre-historic stage, i.e. among the items listed in §3.2.2.2.

A similar caution can be extended to entry (9) TB *kāmarto** TA *kākmart* ‘chief’. The source form is reconstructed as the acc.sg. form PTK **kamardu* ‘head’ (cf. OKh. *kamala* ‘id.’), from PIr. **kamr̥da-* with «early vocalisation of PIr. **r̥* > **ar*». Perhaps a smoother solution may be to consider **kamardu* as a Pre-Khotanese form, as this would make the *ad hoc* assumption of an «early vocalisation» of **r̥* unnecessary.

(12) TB *kito** (*ekita*) ‘help’ ← PK acc.sg. *gīḍu-* ‘id.’ (cf. OKh. *ggīha-* ‘id.’).

The origin of the TB word *ekita*, which is only attested in the phrase *ekita yam-* ‘to help’, has been much debated, and scholars are still not sure as to which part of speech it should be assigned (either a noun or an adverb). The Author successfully identifies a compelling match for this form in the Khotanese word for ‘help’, i.e. OKh. *ggīha-*. This allows for the reconstruction of a PK acc.sg. *gīḍu-* ‘id.’ as a source for the Tocharian form. As for the etymology for OKh. *ggīha-*, the Author accepts Skjærvø’s proposal (2004: 260), who derived it from

⁷ I posit a PK form **harta-* rejecting the idea that the group PIr. **-rt-* had already progressed to **-rd-* in Proto-Tumshuqese-Khotanese (cf. p. 39, point 2). The reconstruction of a PTK stage **(h)arda-* (which implies PK **harda-*) is problematic because the group **-rd-* < PIr. **-rt-*, *-r̥t-* would be confused with the outcome of the original PIr. **-rd-*. The two consonant clusters must have remained distinguished because they resulted in OKh. *-d-* and *-l-* respectively.

PIr. **gaiḍa-*, the masculine counterpart to PIr. **gaiḍā-* ‘livestock, cattle’ (cf. Av. *gaēḍā-* ‘living being, world’, OP *gaiḍā-* ‘livestock, flock’) with roughly the same meaning. Phonologically, this etymology works perfectly for OKh. *ggīha-*, but the semantic development from ‘livestock’ to ‘help’ is not as straightforward. The Author proposes the following semantic passages: from the Old Iranian meaning ‘cattle’ to ‘property, subsistence’ (cf. MMP *gyh* ‘property, flock, herds’), to the abstract ‘strength’, which in Khotanese took the sense of ‘military force’, and ultimately that of ‘support, help’. The shift to ‘military force’ would be witnessed by a passage of the Old Khotanese *Suvarṇabhāsottamasūtra* (Suv 1.15), in which *ggīha-* translates Skt. *bala-* ‘strength, military force, army’. However, from the context of the passage it is clear that Skt. *bala-* could be interpreted as ‘auxiliary troops’ (Skjærvø 2004: 98). Thus, rather than attesting the retention of the original Middle Iranian of ‘flock, group’ in Khotanese, it is likely that the word *ggīha-* was simply chosen by the Khotanese translator to match the meaning conveyed by the Sanskrit word in that specific context. Therefore, this parallel only confirms the meaning ‘help’ for the Khotanese form.

An alternative etymology for the Khotanese form may be PIr. **haka(t)-yaḍ-ya-* ‘help’, a deverbative formation from the verb **haka(t)-yaḍ-ya-* > OKh. *ggīh-* ‘to help’ (ppp. *gīsta-* < **haka(t)-yasta-* with extension of the full grade of the present stem; for the root **yat-* cf. MP *frayād-* ‘to help, assist’, Sogd. *βr’yt-* ‘id.’)⁸. This form has the advantage of providing a perfect semantic match for the Tocharian word. As the source of TB *ekita*, one can reconstruct a PK form **əgīḍa-* or **əkīḍa-*, with the regular developments PIr. **-aya-* > OKh. *-ī-*, PIr. **-VḍV-* > OKh. *-h-*. It is possible that the Tocharian form bears a trace of the initial syllable of the preverb **haka(t)-*: TB *e-* could render the reduced vowel **ə* (from PIr. **ha-*). To account for the initial *e-* in the Tocharian form, the Author suggested an adverbial formation with the Tocharian prefix *e(n)-* added to a reconstructed obl.sg. *kita**, which presupposes a nom.sg. form *kito**. However, the derived TB *ekitatstse* ‘helpful’ and *ekītatsñe* ‘helpfulness, assistance’ do not appear to be built on a noun

⁸ For a detailed analysis of this and other Khotanese words with a preverb *gga-* going back to PIr. **hakat* (cf. Av. *hakat*) see FATTORI & MICHETTI (2024).

*kito**, but rather to a form like *ekita*. This points to *ekita* being a noun rather than an adverb, as is suggested by the proposed connection with PK **əgīḍa-* / **əkīḍa-* ‘help’.

Summing up, the dating of some of the items discussed in §2.1 which the Author assigned to the most ancient layer of loanwords are perhaps better assigned to the later phase (30), or should be considered as generically prehistoric (3, 9). Only in one case, namely (16), I would go as far as to say that the proposed loanword from the Proto-Tumshuqese-Khotanese stage should not be considered as reliable as the book treats it.

These observations do not undermine the general picture presented in the following chapters dealing with the chronological and semantic classification of the loanwords. In Chapter 3, as noted above, the loanwords are distributed into four chronological phases. Each layer of borrowing is described listing the relevant phonological criteria (§3.2). From this classification, a set of phonological correspondences between the (reconstructed) Khotanese and Tocharian forms is extracted for each phase (§3.3), providing the reader with a practical tool to verify the various patterns of adaptation in the different periods. In §3.4 the borrowed nouns are grouped according to the Tocharian inflection class. The Author notes that nouns borrowed during the prehistoric stages of the language (PTK → PT, PK → Pre-TA, Pre-TB) were mostly adapted as members of the *-o/-a* class, whereas the *-o/-ai* class does not feature any loanword from the Proto-Tumshuqese-Khotanese stage. This aligns with the idea that the *-o/-ai* class is secondary (Del Tomba 2023: 160-166). More lists can be found in §3.5: according to part of speech, gender, and borrowing pattern.

Some of the correspondences identified in §3.2 for the PTK → PT phase are worth discussing in some detail. One such correspondences is TB *ś* ← PTK **č*, which is established based on two proposed loanwords:

- (38) TB *śāmpo** TA *śāmpām* ‘haughtiness, pride’ ← PTK acc.sg. *čamfu* ‘violence, disturbance’ (cf. OKh. *tcampha-* ‘disturbance, tumult’);
- (39) TB *śarko** ‘song, singing’ ← PTK acc.sg. **čarko* ‘song’, TA *tsärk* ‘song, singing’ ← PK **tsarko* ‘song’ (cf. OKh. *tcarkā-* ‘play, amusement’).

The Author argues that PIr. *č was still a palatal sound in Proto-Tumshuqese-Khotanese, since it is reflected by TB ś. He suggests that PTK *č may have entered in PT as *č, later resulting in TB ś. The reconstruction of a palatal *č for the Proto-Tumshuqese-Khotanese phase may appear surprising, since one of the isoglosses shared by Khotanese and Tumshuqese is the depalatalisation *č > *ts before non-palatal sounds (cf. Khot. *tcera-*, Tq. *tsārya-* < PIr. *čārya-). Thus, one would assume the depalatalisation had already occurred in their common ancestor. However, the Author collects interesting evidence supporting this reconstruction, namely the couple of lexemes TB śarko* ‘song, singing’ TA tsārk ‘id.’ Both terms are connected by the Author to OKh. *tcarkā-* ‘play, delight, amusement’, a noun going back to a PIr. root *čarH- ‘to praise, celebrate’ (see above). The two Tocharian forms have different initial consonants (TB ś TA ts), pointing to two different dates of borrowing: one before the depalatalisation of *č (TB śarko* < PTK *čarko), one after it (TA tsārk < PK *tsarko). The only drawback of this hypothesis, as recognised by the Author himself (p. 177), is that the semantics of both Tocharian words is unclear, and the translation ‘song, singing’ should be viewed a working hypothesis.

Another phonological feature attributed to the Proto-Tumshuqese-Khotanese period has more impact on the patterns of morphological adaptation. As already mentioned, most borrowed nouns in Tocharian B have a final -o in the nom.sg. The Author considers it an adaptation of the endings -u, -o of the acc.sg. of the Khotanese *a-* and *ā-*stems respectively (from PIr. *-am and *-ām), and points out a parallel pattern of adaptation in the Middle Iranian loanwords in Armenian (§3.4.10). According to the chronological classification of Chapter 3, loanwords from three different stages were integrated in Tocharian B as nouns with a nom.sg. in -o: Old Khotanese, Pre-Khotanese and Proto-Tumshuqese-Khotanese. While this explanation works neatly for the Old Khotanese loanwords, and can be reasonably extended to the Pre-Khotanese period, I find it harder to apply it to the Proto-Tumshuqese-Khotanese loanwords, an Old Iranian language that is dated back to the first half of the 1st millennium BCE. In order to accept this hypothesis, one needs to assume that the acc.sg. endings PIr. *-am,

*-ām were already developed into -u, -o, the value that they have in Old Khotanese more than a millennium later. Again, the possibility of a later date of borrowing may be envisaged, or, alternatively, there may have been other reasons for the adaptation as Tocharian nouns with nom.sg. -o.

Finally, the correspondence TB *rt* < PTK **rd*, as suggested above, may perhaps be extended to the Pre-Khotanese phase.

The last three chapters add the final touches to the general picture, as the Author aims to connect the data collected in the preceding pages to the historical context. In Chapter 4, he notes that the loanwords belong to four semantic macro-areas: medicine (especially from Old Khotanese); administration, politics and economy (since prehistoric times); moral qualities; Buddhist terms (not earlier than the Old Khotanese stage, mostly found in Tocharian A). The presence of Buddhist loanwords from Khotanese into Tocharian A points to a direct contact between these two languages, a further argument to suggest that there existed a Khotanese community in the Tocharian A linguistic area, perhaps in Šorčuq. Chapter 5 has a similar structure to §2.1, but analyses the possible loanwords from Tocharian into Tumshuqese (1 item) and Khotanese (2 items). As the Tocharian loanwords into Khotanese are limited to learned Buddhist terms, it can be surmised that the Tocharian influence on Khotanese was minimal. Finally, Chapter 6 defines the contact situation between Tocharian and Khotanese as «slightly more intense» than the «casual» contact defined by Thomason and Kaufman in their classic work on linguistic contact (Thomason & Kaufman 1988), and as one of *adoption* rather than *imposition* according to the definition given by Haspelmath (2009).

Overall, this book provides the reader interested in the interactions between the Khotanese, the Tumshuqese and the Tocharian peoples within the Tarim Basin with all the relevant data available at present, presented in an insightful way and cleverly organised in order to allow any specific query to be answered quickly. While certain criticisms may be directed towards the manner in which the data are handled, particularly with regard to the phonological characteristics of the Proto-Tumshuqese-Khotanese phase, this weakness is probably

also its strength. Like with any significant development in a discipline, it presents a clear, systematic view, in which each piece of evidence fits neatly into the general picture. In this way, it encourages other scholars to investigate the topic further, introduce different perspectives, try to move pieces of the puzzle around, and perhaps mitigate some clear-cut statement. In short, this book will be an incentive and an obvious starting point for many future studies to come.

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