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## A historical grammar of Phrygian

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## III Nominal Morphology

Phrygian nominals consist of nouns and adjectives. These two parts of speech formally behave almost identically and, in a language as poorly understood as Phrygian, it is very often impossible to ascertain whether any given nominal form ought to be analysed as a noun or an adjective (LL 1824). While identifying when a specific nominal is used as a noun is generally easier for purely syntactic and semantic reasons, the adjectives complicate the picture by virtue of allowing substantivization (i.e. the use of an adjective to mean something that has the property of that adjective), which was evidently quite productive in Proto-Graeco-Phrygian and later in Phrygian itself. In terms of derivational processes, it is usually clear on the basis of comparative or language-internal data whether some nominal formation is explicitly a noun, but the extensive use of substantivization beginning in PIE itself has obscured the synchronic nature of many other nominal formations. It is for this reason that no formal distinction will be drawn between nouns and adjectives in this section, except in cases where such a distinction is clearly evident. Adjectives are generally used to modify nouns and agree with them in case and number.

Phrygian nominals appear to distinguish three genders (masculine, feminine, neuter), at least four cases (nominative, genitive, dative, accusative), and two numbers (singular and plural) (PhL 76, LL 1824).<sup>186</sup> Phrygian possesses a fusional morphology, meaning that any combination

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<sup>186</sup> To the best of our knowledge. While the number of grammatical genders is practically a certainty and the number of cases is strongly suggested by the functions of the cases and the forms we have identified, it is plausible that Phrygian also possessed a dual number.

of gender-case-number shows an inflectional ending that encodes all three simultaneously. The type of ending that is used in a specific form depends on the gender and stem type of a nominal.

A Phrygian nominal stem is necessarily composed of a lexical root, which may, but need not, be followed by one or more derivational suffixes. The stems generally belong to the vocalic (*o-*, *a-*, *e-*stems) or consonantal type. The consonantal stems are generally categorised on the basis of the last consonant that appears in a non-nominative singular form of a nominal when the inflectional ending is removed.

This chapter is composed of two major parts: the first analyses the inflectional endings used in the various stem types and the second analyses the stem-types and their variants on an individual basis.

## **III.1 Phrygian nouns**

The cases are generally used as following.

**Nominative:** The nominative case is used as one means of expressing the direct agent of a simple clause, either transitive or intransitive (PhL 114).<sup>187</sup> Much of the time, the agent of a clause need not be explicitly stated and is implicitly expressed in a conjugated verbal form. The nominative case is

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<sup>187</sup> Strictly speaking, in clauses whose verb has a modal meaning, the agent is only potential. In syntactic terms, there is no distinction between a proper and potential agent, so there is no need to add the semantic category of ‘potential agent’ to the list of uses of the nominative case.

used for the semantic function of facilitator in a causeless causative construction (§V.1.3).

Agent: *baba* [...] *sikeneman edaes* °M-01b (‘Baba [...] this=niche placed’ “Baba placed this niche”)

Facilitator: *va knais manuka odeketoy* °B-07 (‘his wife Manuka caused-it-to-be-made’ “his wife Manuka caused it to be made”)

**Genitive:** The genitive case pretty much uniformly indicates ownership by the head of a nominal phrase (cf. PhL 115). A genitival adjunct can be pre- or post-posed; both are equally viable.

By the New Phrygian era, the genitive case may have begun to become conflated with the dative case, presumably by absorbing some of its functions.

Ownership: γεγραμμεναν κ εγεδου τιος ουταν °32<sup>E</sup> (‘written may-he-hold of-Ti- punishment’ “may he hold the written punishment of Ti-”)

Quasi-dative: ις κε σεμουμ κ<v>ουμινος <κακουν> αδακεν °5<sup>W</sup> (‘whoever to-this grave <something-bad> would-do’ “whoever would do <something bad> to this grave”)

**Dative:** The dative case in Phrygian encodes a plethora of functions.

Primary among these is the use of the dative to indicate the indirect object of a verbal action (PhL 115).

In addition to this unmarked function, the dative could apparently be used for a variety of locatival meanings which would in some instances require

the use of a specific preposition (*ibid.*); generally, we would expect the dative to encode the function of a pure locative, giving information where something is located without any reference to previous or further motion, though this may turn out not to hold in every instance.

The dative was also used to encode an instrumental meaning (i.e. ‘by means of which’).

Finally, in passive clauses, a bare dative or a dative appearing with the preposition  $\alpha\delta$  would be used to indicate the agent of a verbal action (*ibid.*).

Indirect object:  $\iota\omicron\varsigma$   $\nu\iota$  σεμωνν κνουμανει κακουν αδακετ  $^{\circ}87^W$  (‘whoever to-this to-grave something-bad would-do’ “whoever would do something bad to this grave”)

Locatival:  $\alpha\iota\upsilon\iota$   $\omicron\upsilon\epsilon\beta\alpha\nu$  δεδασσι $\nu\iota$  πατρος σεμωνν κορο[υ]μ $\alpha\upsilon\eta$  σ $\omega\varsigma$  κη γ $\omicron\upsilon\mu\epsilon\iota\varsigma$   $^{\circ}130^{NW}$  (‘when/if monument they-would-place of-the-father on-this graveplot and in-these grounds’ “when they will place the monument of the father in this graveplot and in these burial grounds”)

με ζεμελω $\varsigma$  κε δεω $\varsigma$  κε (‘among men and gods’)

Instrumental:  $\iota\omicron\varsigma$   $\nu\iota$  σεμωνν κνουμανει κακουν αδοκετ ζειραι  $^{\circ}106^E$  (‘whoever to-this to-grave something-bad would-do by-hand’ “whoever would do something bad to this grave by hand”)

Agent: τιε τιτετικμενος ειτου  $^{\circ}115^W$  = ατ τιε τιτετικμενος ειτου  $^{\circ}94^S$  (‘by-Ti- condemned may-he-become’ “may he become condemned by Ti-”)

**Accusative:** The accusative case in Phrygian is primarily used to designate the direct object of a verbal action (PhL 114).

When used with a locative meaning, it is preceded by a preposition; generally, we would expect the accusative to adopt allative semantics (motion toward), though the examples we have are ambiguous in this regard.

In passive clauses, an accusative appearing with the preposition  $\alpha\varsigma$  can be used to designate the verbal agent.<sup>188</sup>

Direct object: *baba* [...] *si keneman edaes* °M-01b (‘Baba [...] this niche placed’ ‘Baba placed this niche’)

Locative: *πουρ ουανακταν κε ουρανιον ιστ’εικετ διουνσιν* °88<sup>C</sup> (‘and before/to’ the king heavenly may-he-*isteike*- Dionysos’ ‘and may he expose’ himself’ before the heavenly king Dionysos)

Agent: *τιτετικμενος* *αζ τιαν* *ειτου* °99<sup>NW</sup> (‘condemned by Ti- may-he-become’ ‘may he become condemned by Ti-’)

*τιτετι[κ]μενος* *ειτου* *εικ’* *αδ αυτον μεκαν Τιαν* °130<sup>NW</sup> (‘condemned may-he-become *eik’* by himself great Ti-’ ‘may he become condemned by the great Ti- himself’)

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<sup>188</sup> In inscription °130<sup>NW</sup>, the preposition  $\alpha\delta$  is used instead of  $\alpha\varsigma$ .

## III.2 Case endings

The Phrygian nominal endings broadly fall in two different categories: vocalic-stem endings and consonant-stem endings. The vocalic-stem endings are used with the *o*-, *a*-, and *e*-stem nominals, whereas the consonant-stem endings appear with all other nominals. The six subcategories of resonant-stem nouns (i.e. *-m*, *-n*, *-r*, *-l*, *-i*, *-u*) each show certain peculiarities. These, along with the peculiarities of the other types, will be more thoroughly discussed in §III.3, where each attested stem-type will be examined individually.

### III.2.1 Vocalic type

	<i>o</i> -stems		<i>a</i> -stems		<i>e</i> -stems	
	OPh.	NPh.	OPh.	NPh.	OPh.	NPh.
nom. sg.	<i>-os</i> <i>-on</i> (neut.)	<i>-oç</i>	<i>-a</i> (fem.) <i>-a</i> , <i>-as</i> (masc.)	<i>-α</i> , <i>-αç</i> (masc.)	<i>-es</i>	
gen. sg.	<sup>+</sup> <i>-ovo</i>	<i>-ov</i>	<sup>+</sup> <i>-as</i> (fem.) <sup>+</sup> <i>-avo</i> (masc.)	<i>-αç</i> (fem.)	<i>-evo</i>	
dat. sg.	<i>-ōi</i>	<i>-ov</i>	<i>-āi</i>	<i>-α</i> , <i>-αi</i>	<sup>+</sup> <i>-ey</i>	
acc. sg.	<i>-un</i> (/on/)	<i>-ov</i> , <i>-ouv</i>	<i>-ān</i>	<i>-αv</i>	<i>-in</i> (/en/)	<i>-tv</i>

nom.	<sup>+</sup> -oi	-oi	<sup>+</sup> -ai	-α		
pl.	-a (neut.)	-α (neut.)				
gen.	-un (< -ōn)	?-ουv				
pl.						
dat.	<sup>+</sup> -ōis	-ως	<sup>+</sup> -āis	-ας		
pl.						
acc.	-ois	<sup>+</sup> -oiς	-ais	-αις		
pl.	-a (neut.)	-α (neut.)				

Table #17: The vocalic-type nominal endings of Phrygian.

### III.2.1.1 Nominative singular

Endings:<sup>189</sup>

Old Phrygian: -os (*k↑iyanaveyos* ‘PN’<sup>?</sup> °M-01b), -a (fem.) (*kubeleya* ‘DN’ °B-01), -a (masc.) (*Baba* ‘PN’ °M-01b), -as (*Midas* ‘PN’ °B-01dI), -es (e.g. *Ates* ‘PN’ °M-01a)

New Phrygian: -ος (τιττετικμενος ‘condemned’ °78<sup>E</sup>), -α (fem.) (νεvνερια ‘PN’ °9<sup>W</sup>), -α (masc.) (Μιτραφατα ‘PN’ °48<sup>NW</sup>), -ας (πουντας ‘Pontic’ °48<sup>NW</sup>)

The *o*-stem nominative singular is characterized by the ending -s appended after the thematic vowel (PhL 79). This state of affairs is directly descended from PIE, where \*-os was the thematic nominative singular ending (*ibid.*, LL 1824), as found reflected also in Greek -ος and Sanskrit -as (CIEL 212).

<sup>189</sup> For each ending, only a single attested example will be provided, even if more exist.

The feminine *a*-stems have an ending  $-\emptyset$  appended to the stem-forming suffix  $-\bar{a}$ -, which reflects the PIE feminine nominative singular desinence  $*-eh_2-\emptyset$  (PhL 76, LL 1825), also found directly reflected in Greek  $-\bar{a}$  and Sanskrit  $-\bar{a}$  (Fortson 2004: 119).

Proto-Graeco-Phrygian innovated the new category of masculine *a*-stem nouns (cf. Sihler 1995: 273-275). These initially differed from their feminine counterparts only in the nominative singular, where they are additionally characterized with the ending  $*-s$ , which was associated with the masculine gender due to the thematic nominative singular ending  $*-os$ . This addition of  $*-s$  was apparently not obligatory and there existed masculine *a*-stems without its addition; in Greek, we may adduce Boetian Πυθιονίκα ‘winner at the Pythian games’,<sup>190</sup> and in Phrygian we occasionally find masculine names without  $-s$  in the nominative singular (cf. *ata* and *atas*) (PhL 76-77, LL 1825). Nevertheless, the optional addition of  $*-s$  for the masculine *a*-stems had likely already begun to take place in Proto-Graeco-Phrygian, since we find it extensively used in both languages.

Other than in the nominative and possibly the genitive singular, the *a*-stem endings are identical to those of the *o*-stems, the only difference being the vowel preceding the ending.

The nominative singular of the *e*-stems is most commonly  $-es$  (PhL 82). The category is almost exclusively composed of masculine personal names of unclear (and likely non-native) origin, so the  $-s$ , where it was not already present, must have been added as a marker of masculinity. In an extremely small number of examples, where the names are written in complete

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<sup>190</sup> I thank Daniel Kölligan for bringing this example to my attention.

isolation, we find some of the *e*-stem names written without *-s* (cf. *ate* for usual *ates*) (*ibid.*).

The *e*-stems are para-thematic and have the same basic set of endings as the *o*-stems, only differing by the vowel used.

### III.2.1.2 Genitive singular

Endings:

Old Phrygian: <sup>+</sup>*-o-vo*, OPh. (fem.) <sup>+</sup>*-as*, OPh. (masc.) <sup>+</sup>*-a-vo*<sup>?</sup>, OPh. *-e-vo* (*atevo* ‘PN’ °W-10),

New Phrygian: *-ov* (αργου ‘?’ °30<sup>S</sup>, °98<sup>NW</sup>), NPh. (fem.) *-ας* (ουεναουιας ‘PN’ °88<sup>C</sup>)

The genitive singular ending of the *o*-stems was likely to have been <sup>+</sup>*-ovo* in Old Phrygian and is attested as *-ov* in New Phrygian (LL 1825); the existence of <sup>+</sup>*-ovo* is suggested by the pronominal GSg ending *-ovo* and the *e*-stem GSg ending *-evo*, the latter of which must have developed analogically.

The ending is cognate with Greek *-ov* < <sup>\*</sup>*-o.o* (PhL 79). Both the Phrygian and Greek endings are descended from the PIE pronominal ending <sup>\*</sup>*-oso* (*ibid.*), which began to replace the usual PIE nominal thematic ending <sup>\*</sup>*-osyo* in Proto-Graeco-Phrygian already (cf. García Ramón 2017: 659). In Proto-Graeco-Phrygian, PIE <sup>\*</sup>*-oso* would have developed into <sup>\*</sup>*-oho*, which then developed into a disyllabic <sup>\*</sup>*-o.o* in Proto-Phrygian when <sup>\*</sup>*h* was lost. This disyllabic vowel sequence did not contract (presumably for reasons of morphological transparency) and *-v-* was inserted as a hiatus-filler (LL 1822). The New Phrygian *-ov* < pre-NPh. <sup>\*</sup>*-ō* most likely emerged as the result of a post-Old Phrygian contraction of <sup>+</sup>*-ovo* (PhL 79).

While Greek still preserves the reflex of PIE \*-o-sio as -oio in certain dialects, but has mostly replaced it by the classical era, there is no evidence of Phrygian preserving any trace of the original \*-o-sio ending (PhL 79).<sup>191,192</sup>

There is a single example of an *e*-stem in the genitive singular: *atevo* (nom. sg. *ates* ‘PN’) (PhL 83). Since the category of *e*-stems is new, the ending -*vo* must have been imported from the *o*-stems (LL 1825). This suggests that while -*v*- did initially emerge as a hiatus-filler, it had become an integral part of the ending by the time the transfer took place. Alternatively, -*v*- was also the hiatus-filler in the sequence \*-*e.o*. Since no genitive of an *e*-stem noun is known in New Phrygian, it is unknown what this ending would have developed into by that stage of the language.

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<sup>191</sup> The issue is admittedly complicated, since the reflex of \*-*VsiV*- in Phrygian is not known. In principle, Old Phrygian -*ovo* could be a direct reflex, if intervocalic \*-*sj*- were lost just like \*-*s*- was, but positing this development is not necessary. For purely structural reasons, assuming that \*-*sj*- and \*-*s*- behaved identically (where they certainly did not in Proto-Graeco-Phrygian) seems dubious. The Proto-Graeco-Phrygian reflex of PIE \*-*sj*- was probably already -*hj*-, in which case we may compare PIE \*-*sr*- > PGPh. \*-*hr*- > OPh. -*r*- with compensatory lengthening, as well as the initial development PIE \*-*sw* > PGPh. \*-*hw* > OPh. *v*, with the preservation of the resonant; either with or without compensatory lengthening, we would expect the presence of \*-*j*- in the Phrygian reflex, and there is no known sound law that could remove it. Thus, while the possibility of Phrygian -*ovo* reflecting PIE \*-*osio* cannot be entirely discounted (a possibility might be assuming PIE \*-*osio* > PGPh. \*-*ohjo* > PPh. \*-*ohho* > \*-*o.o* > OPh. -*ovo*), it is an unnecessary structural complication. In any case, the matter can only be fully resolved once an unambiguous reflex of PIE \*-*sj*- is found in Phrygian.

<sup>192</sup> In light of the previous footnote, the questionable proposition that Greek -*ov* is the result of a late contraction of -*oo* < -*o-jo* < \*-*o-sjo* due to a loss of intervocalic -*j*- (Sihler 1995: 259) is now on even shakier grounds. Since Phrygian shows the proliferation of the -*ovo* < \*-*o.o* < \*-*o-ho* < \*-*o-so* pronominal ending throughout its thematic system, it serves to further reinforce the suggestion, otherwise made on the basis of Greek data alone, that the pronominal to thematic shift in the genitive was already a feature of Proto-Graeco-Phrygian and that the two endings co-existed for a time, until the pronominal one ultimately won out in both languages.

The genitive singular ending of the feminine *a*-stems was *-a-s*, though the ending is only attested in New Phrygian (LL 1825). This ending faithfully reflects PIE *\*-eh<sub>2</sub>-es* (Clackson 2008: 97), which is also seen reflected in the Greek feminine *a*-stem genitive singular  $\bar{\alpha}\varsigma$ .

The genitive singular ending of the masculine *a*-stems is not known in Phrygian. Since Proto-Graeco-Phrygian innovated this category and the Greek ending is  $\bar{\alpha}o < *-\bar{a}-ho$ , using the pronominal ending otherwise found in the masculine *o*-stems, it is likely that the same holds for Phrygian. In that case, the expected ending would be  $^+ao$  or, rather, with the hiatus-filler either emerging organically or being imported from the *o*-stems,  $^+avo$  (cf. PhL 77).

### III.2.1.3 Dative singular

Endings:

Old Phrygian: *-oi* (*Adoikavoi* ‘PN’ °G-02a), *-ai* (*niptiyay* ‘niece, granddaughter’ °B-05)

New Phrygian: *-ou* (*σopou* ‘coffin’ °124<sup>C</sup>), *-α* (*μavκα* ‘stele’ °97<sup>W+</sup>) ~ *-αι* (*μavκαι* °2<sup>W</sup>)

The dative singular ending of the *o*-stems is Old Phrygian *-oi* / $\bar{o}i$ /, New Phrygian *-ou* (PhL 80, LL 1825). This is a direct reflex of PIE *\*-o-ei* (cf. PhL 80), also found reflected in Greek  $-\omega$ , Sanskrit  $\bar{a}y-a$ , etc. (CIEL 212-213)<sup>193</sup>

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<sup>193</sup> When the contraction of *\*-o-ei* into *\*-ōi* took place is difficult to determine. It likely took place before the disintegration of Proto-Graeco-Phrygian, in any case, since Phrygian tends not to contract vowels, but rather inserts a hiatus-filler, which would have probably produced an ending *\*\*-ovei* or *\*\*-ojei*, unless we resorted to an analogical explanation.

The *a*-stems uniformly show Old Phrygian *-ai* /*-āi*/, New Phrygian *-α*, *-αι* (PhL 77).<sup>194</sup> This is a direct reflex of PIE *\*-eh<sub>2</sub>-ei* (*ibid.*, LL 1825), as found reflected in Greek *-α*, Latin *-ae*, etc. (Clackson 2008: 97)

The dative singular ending of the *e*-stems was most likely *⁺-e-i* (cf. PhL 81). Such an ending would have been the result of analogical levelling: an original *\*-e-ei* would have likely produced *\*\*-āi* and would be a rare instance of the *e*-stem vowel not being identical to that found in the other cases. Even if we assume that *e*-stems only emerged as a category in the language after *\*ē > ā* had already run its course, the resulting vowel would be *\*ēi*, a diphthong that does not synchronically exist elsewhere in Phrygian. In either case, then, the ending *-ey* would need to have been analogically created, most likely following the masculine *a*-stem type: nom. sg. *-ās* :: dat. sg. *-āi* = nom. sg. *-es* :: X, X = *-ei*.

### III.2.1.4 Accusative singular

Endings:

Old Phrygian: *-un* (*akaragayun* ‘?’ °M-02), *-an* (*niptiyan* ‘niece, granddaughter’ °B-05), *-in* (*Manin* ‘PN’ °B-07)

New Phrygian: *-ouv* (δετουv ‘monument’ °31<sup>S</sup>) ~ *-ov* (δετον °116<sup>W</sup>), *-av* (γγειμεvαν ‘written’ °76<sup>E</sup>), *-iv* (ευκiv ‘vow’ °98<sup>NW</sup>)

The ending of the accusative singular of the *o*-stems is Old Phrygian *-un* [-ϝn] and New Phrygian *-ouv/-ov* [-ϝn].<sup>195</sup> This is a reflex of PIE *\*-o-m*,

<sup>194</sup> This double reflex in New Phrygian is mostly likely the result of dialectal differentiation. See further in §II.3.3.1 and §II.3.3.3.

<sup>195</sup> The graphic representation of the sequence *-on* [-ϝn] in final position is almost uniformly <*-un*> in Old Phrygian, but the New Phrygian vacillation between *-ov* and *-ouv*

which developed into PGPh. \*-on (PhL 79, LL 1825); cf. Greek -ov. The PIE ending is also found reflected in Skt. -am, Lat. -um, etc. (CIEL 212)

The accusative singular ending of the *a*-stems is Old Phrygian -an /-ān/ and New Phrygian -av. This directly reflects PIE \*-eh<sub>2</sub>-m (PhL 77, LL 1825), also found reflected in Greek -āv, Sanskrit -ām, etc. (Clackson 2008: 97)

The accusative singular ending of the *e*-stems is found at least once, in *Manin* (acc. sg. of *Manes* ‘PN’) (cf. PhL 82). The raising of the vowel before a nasal has a parallel in the raising of -o- in the *o*-stems, and the ending must have phonologically simply been /-en/.

The accusative singular ευκiv, if adopted from Greek εὐχή ‘vow’ as an *e*-stem (cf. PhL 234), shows the expected New Phrygian ending -iv.

### III.2.1.5 Nominative plural

Endings:

Old Phrygian: -oi (*agarittoi* ‘PN’ °G-02 (Kloekhorst 2015: 116)), <sup>+</sup>-ai

New Phrygian: -oi (τιττετικμενοι ‘condemned’ °71<sup>W</sup>), -α (ζεира ‘hand’ °12<sup>S</sup>)

The ending of the nominative plural in the *o*-stems is Old Phrygian -oi and New Phrygian -oi. The original PIE ending \*-o-es or \*-ōs (found reflected in Skt. -ās, etc.) (CIEL 212) was entirely replaced in Proto-Graeco-Phrygian by the pronominal nominative plural ending \*-oi (PhL 80, LL 1826; cf. García Ramón 2017: 659).

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clearly shows that /o/ before a nasal did not merge with /u/ in Old Phrygian. See further in §II.1.2.4 and §II.3.2.2.

In the same vein, the original PIE *a*-stem nominative plural ending *\*-eh<sub>2</sub>-es* was remade in Proto-Graeco-Phrygian on the basis of the pronominal ending and was *\*-ǎi* (PhL 77-78, *contra* LL 1826). This ending surfaced as *-α* in New Phrygian, though that is likely to be a simplification of earlier *+αi* (PhL 77-78). The expected Old Phrygian ending is *+ai*.

Since the *e*-stem nouns are almost exclusively personal names, it is not surprising that no *e*-stem plural forms are attested.

### III.2.1.6 Genitive plural

Endings:

Old Phrygian: *+ōn* (cf. *torvetun* ‘tree?’ °B-05)

New Phrygian: *-ουv* (τιτετουκμενουv’ ‘condemned’ °28<sup>SW</sup>)

On the basis of the Greek ending *-ων* (CIEL 212), it is likely that the Phrygian genitive plural ending was inherited from Proto-Graeco-Phrygian *\*-ōn*, which would have developed into Old Phrygian *+ōn* and New Phrygian *+ουv*. In the *o*-stems, I suggest that the genitive plural ending might be present in the form *torvetun* °B-05;<sup>196</sup> by the time of this inscription, the *ō > u* sound change had already taken place, producing the ending *-un*.

The form *τιτετουκμενουv* °28 has been proposed to show the GPI ending *-ουv* (PhL 80, LL 1826), though this is uncertain, as Ligorio and Lubotsky note themselves. Perhaps we may interpret the apodosis *ιος τιτετουκμενουv ειτου* as meaning something like ‘may he become one of the condemned’.

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<sup>196</sup> See further in §III.3.1.6.

On the other hand, since *τιτετουκεμενο-* is evidently a misspelling of usual *τιτετικμενο-*, the ending may simply be another misspelling.<sup>197</sup>

### III.2.1.7 Dative plural

Endings:

Old Phrygian: <sup>+</sup>*-ois*, <sup>+</sup>*-ais*

New Phrygian: *-ως* (δεως ‘god’ °97<sup>W+</sup>), *-ας* (ονομανιας ‘named’ °116<sup>W</sup>)

The dative plural ending of the *o*-stems is *-ois* /-ōis/ in Old Phrygian and *-ως* in New Phrygian (PhL 80, LL 1826).<sup>198</sup> This ending is a direct reflex of the PIE ending *-ōis*, which was most likely a late variant of the thematic instrumental plural ending (CIEL 212). In Phrygian, this PIE instrumental plural variant ending *\*-ōis* presumably replaced an older instrumental ending *\*-b<sup>hi</sup>i* once the dative and instrumental cases had merged.

The instrumental ending *\*-b<sup>his</sup>* > *-p<sup>hi</sup>i* still appears in Mycenaean and Homeric Greek (Goldstein 2020; cf. García Ramón 2017: 656).

The dative plural ending of the *a*-stems was presumably <sup>+</sup>*-āis* in Old Phrygian and is attested as *-ας* in New Phrygian (PhL 78). Whether this ending is of the same age as the PIE ending *\*-ōis* or if it is a later analogical creation of Proto-Graeco-Phrygian is unclear.

In Greek, the two Proto-Graeco-Phrygian endings, *\*-ōis* and *\*-āis* regularly developed into *-οις* and *-αις* via Osthoff’s law, i.e. the shortening of a long vowel before a resonant and an obstruent (cf. Rix 1992: 140, CIEL 145).

<sup>197</sup> For the particulars of the spelling choices in this inscription, see §IV.6 and footnote #379.

<sup>198</sup> For the regular development OPh. *-ōis* > NPh. *-ως*, see §II.3.3.1.

The different New Phrygian reflexes of *\*-ōis* > -ως and *\*-ois* > -οις show that the long diphthongs were distinct from their short counterparts; the Phrygian endings then preserve a more archaic state of affairs, which was not affected by Osthoff's law.

### III.2.1.8 Accusative plural

Endings:

Old Phrygian: *-oys* (*ktevoys* 'acquisition' °B-01), *⁺-ais*

New Phrygian: *⁺-οις*, *-αις* (*δεκμουταις*? '⁺' °9<sup>W</sup>)

The accusative plural ending of the *o*-stems is *-ois* in Old Phrygian (PhL 80, LL 1820) and was presumably *-οις* in New Phrygian. The ending regularly descends from the PIE accusative plural ending *\*-o-ns*, also found reflected in Greek *-ους*, Sanskrit *-ān*, etc. (CIEL 212)

The accusative plural ending of the *a*-stems was presumably *-ais* in Old Phrygian and is attested as *-αις* in New Phrygian (PhL 78, LL 1820). This is likewise a regular continuation of the PIE ending *\*-eh<sub>2</sub>-ns* (*ibid.*), also found in Greek *-ᾱς*, Sanskrit *-ās*, etc. (Fortson 2004: 119)

### III.2.1.9 Neuter nominative/accusative plural

Endings:

Old Phrygian: *-a* (*kaka* 'bad thing' °B-05)

New Phrygian: *-α* (*μμυρα* 'foolish thing' °25<sup>SW</sup>)

The nominative/accusative plural ending is  $-\alpha$  in New Phrygian and was  $-a$  in Old Phrygian. This ending is regularly descended from the PIE neuter collective ending  $*-h_2$  (PhL 80, LL 1826), which was used to refer to a multitude of neuter gender nouns, as also found reflected in Greek  $-\alpha$ , Sanskrit  $-\bar{a}$ , etc. (Fortson 2004: 115, 118)

### III.2.2 Consonantal type

	masc. / fem.		neut.	
	OPh.	NPh.	OPh.	NPh.
nom. sg.	$-s, -\emptyset$	$-\zeta, -\emptyset$	$-\emptyset$	$^+-\emptyset$
gen. sg.	$-os$	$-o\zeta$	$^+-os$	$-o\zeta$
dat. sg.	$-ei$	$^+-\epsilon\iota/\epsilon/\iota/\eta$	$^+-ei$	$-\epsilon\iota/\epsilon/\iota/\eta$
acc. sg.	$-n, -an$	$^+-v, -av$	$-\emptyset$	$-\emptyset$
nom. pl.	$-es$	$-\eta\zeta$	$^+-a$	$-\alpha$
gen. pl.				
dat. pl.	$^+-eis$	$^+-\epsilon\iota\zeta$	$^+-eis$	$-\epsilon\iota\zeta$
acc. pl.	$-ais$	$^+-\alpha\iota\zeta$	$^+-a$	$-\alpha$

Table #18: The consonantal-type nominal endings of Phrygian.

#### III.2.2.1 Nominative singular

Endings:

Old Phrygian:  $-s$  (*Alus* ‘PN’ °W-09),  $-\emptyset$  (*matar* ‘mother’ °B-01),  $-\emptyset$  (neut.) (*bevδος* ‘statue’ °B-01)

New Phrygian:  $-\zeta$  ( $\beta\alpha\zeta$  ‘DN’ °99<sup>NW</sup>),  $-\emptyset$  ( $\mu\alpha\tau\alpha\rho$  ‘mother’ °18<sup>W</sup>),  $^+-\emptyset$  (neut.)

In the consonant stems, there is no formal distinction between the masculine and feminine nouns, so the two will be treated together throughout the section. Both the masculines and the feminines do, however, contrast in their declension with nouns of the neuter gender in the nominative and the accusative cases (as is the case in PIE (Meier-Brügger 2010: 335-336)).

Nouns of the masculine and feminine gender synchronically show two allomorphs of the nominative singular ending. In the first type of stems, i.e. nominal stems ending in *-r*, *-l*, *-m*, *-n*, and *-s*, the nominative singular ending is simply not expressed and is  $-\emptyset$  (PhL 80, LL 1825).

The masculine/feminine nouns that did not belong to the first type, i.e. the stems ending in *(-p)*, *-t*, *-k*, *-i*, and *-u*, received the ending *-s* in the nominative singular (PhL 80, LL 1825). In the plosive stems (*(-p)*, *-t*, and *-k*), this sigmatic ending was eventually lost through regular simplification of final clusters (PhL 80, LL 1821). The examples are: Βασις ‘DN’ < *\*b<sup>h</sup>eh<sub>2</sub>-t-s* (cf. acc. sg. Βασιαν < *\*b<sup>h</sup>eh<sub>2</sub>-t-m*), *vanak* ‘king’ < *\*vanaks*, μορτις ‘death’ < *\*m<sub>1</sub>-ti-s*.

Consonant stem nouns of the neuter gender do not receive an ending in the nominative/accusative singular case (PhL 80), e.g. in *bekos* ‘bread’ < *\*b<sup>h</sup>eg-os- $\emptyset$* .

### III.2.2.2 Genitive singular

Endings:

Old Phrygian: *-os* (*Artimitos* ‘Artemis’ °B-05)

New Phrygian: *-ος* (Τιος ‘Ti-’ °36<sup>E</sup>)

Consonant-stem nouns in Phrygian that have so far been identified as appearing in the genitive singular case all take the ending *-os* (PhL 81, LL 1825).

It is probable that some types of consonant stems would have preserved a reflex of the old ending *\*-s*. Perhaps, for some types of nouns, the genitive singular ending could have even been more radically reworked (for instance, by contamination with the thematic ending *-vo*), though this must currently be considered as purely speculative.

### III.2.2.3 Dative singular

Endings:

Old Phrygian: *-ey* (*materey* ‘mother’ °W-01b)

New Phrygian: *-ει/ε/ι/η* (*κνουμανει* ‘grave’ °118<sup>W</sup>, *κνουμανε* °97<sup>W+</sup>, *κνουμανι* °86<sup>W</sup>, *κνουμανη* °114<sup>SW</sup>)

The dative singular ending of the consonant stem is *-ey* in Old Phrygian and *-ει/ε/ι/η* in New Phrygian. These endings are direct reflexes of PIE dat. sg. *\*-ei* (PhL 81, LL 1825).

### III.2.1.4 Accusative singular

Endings:

Old Phrygian: *-an* (*imenan* ‘monument’ °B-05), *-n* (*areyastin* ‘DN epithet’ °W-01a), *-∅* (neut.) (*keneman* ‘niche’ °M-01b)

New Phrygian: *-av* (Βαταν ‘DN’ °33<sup>E</sup>), *⁺-v*, *-∅* (neut.) (βεκος ‘bread’ °99<sup>NW</sup>)

The ending of the masculine/feminine accusative singular of the consonant stems in Old Phrygian and New Phrygian has two allomorphs (PhL 80-81). The first allomorph, OPh. *-an* and NPh. *-av*, appears in all the consonant stems with the exception of the *i*- and *u*-stems. It is a direct reflex of PIE acc. sg. *\*-ŋ* > PGPh. *\*-ŋ*, which would have originally appeared behind inert consonants (PhL 80-81, LL 1825-1826).

The second allomorph, OPh. *-n* and NPh. *-v*, appears in the *i*- and *u*-stems alone. It is a direct reflex of PGPh. acc. sg. *\*-n* < PIE *\*-m*, which would have appeared after vowels, vocalised semi-vowels, and diphthongs (PhL 80-81).

The same two allomorphs appear in Greek, meaning that the two allomorphs existed in Proto-Graeco-Phrygian already: cf. acc. sg. λιμέν-α < *\*-ŋ* < *\*-ŋ*, but πόλι-ν < *\*-n* < *\*-m* (García Ramón 2017: 656).

The neuter nouns would not have distinguished the nominative from the accusative case. The nom./acc. singular of the neuter stems did not receive an ending (PhL 81, LL 1826).

### III.2.2.5 Nominative plural

Endings:

Old Phrygian: *-es* (masc., fem.) (*petes* ‘foot’ °G-02), *⁺-a* (neut.)

New Phrygian: *-ης* (masc., fem.) (*πατερης* ‘father’ °93<sup>SW</sup>), *-α* (neut.)  
(*ακαλα* ‘(a type of bread)’ °35<sup>E</sup>)

The masculine/feminine consonant stem nouns had the ending OPh. *-es*, NPh. *-ης*. This is a direct reflex of the PIE nom. pl. ending *\*-es* (PhL 81-82, LL 1826).

The neuter consonant stems did not distinguish between the nominative and accusative cases. In the plural, their nom./acc. ending was OPh. *⁺-ǎ*, NPh. *-ǎ*. This is a direct reflex of the PIE collective neuter ending *\*-h<sub>2</sub>* (PhL 82, LL 1826).

### III.2.2.6 Genitive plural

No example of a genitive plural consonant stem ending is known in Phrygian. Presumably, it would have developed from the PIE genitive plural ending *\*-om* (CIEL 186) or *\*-ōm* (Fortson 2004: 106). In Greek, the ending is *-ων* in both the thematic and athematic (i.e. consonant) stems. Depending on one’s reconstruction of the PIE genitive plural ending, the Greek ending is either a faithful reflex of the PIE ending *\*-ōm* or a generalisation from the *o*-stems.

In Phrygian, then, the expected ending for the genitive plural in the consonant stems would have been *⁺-ǎn* (if one assumes PIE *\*-om*) or *⁺-ōn*

(if one assumes either PIE  $*-\bar{o}m$  or that the possible generalization found in Greek took place in PGPh. already).

### III.2.2.7 Dative plural

Endings:

Old Phrygian:  $^+eis$

New Phrygian:  $-εις$  (γουμεις ‘ground’ °130<sup>NW</sup>)

The dative plural ending of the consonant stems was presumably  $^+eis$  in Old Phrygian and is attested as  $-εις$  in New Phrygian.

This is not the continuation of the PIE state of affairs, where the dative plural ending would have been  $*-mus$  (CIEL 186),  $*-mos$  (Ringe 2006: 41), or  $*-b^hos \sim *-mos$  (Sihler 1995: 248, 251-252). It is clear that in the  $o$ -stems, Phrygian adopted the instrumental plural ending for the dative plural. This did not happen in the consonant stems, however; the Phrygian data is incompatible with the PIE athematic instrumental plural ending:  $*-b^hi$  (CIEL 186) or  $*-b^his \sim *-mis$  (Sihler 1995: 248).<sup>199</sup> Rather, the Phrygian ending  $-eis$  is a comparatively trivial analogical creation on the basis of the thematic type of endings: Proto-Phrygian  $o$ -stem dat. sg.  $*-\bar{o}i$  : dat. pl.  $*-\bar{o}is = a$ -stem dat. sg.  $*-\bar{a}i$  : dat. pl.  $*-\bar{a}is =$  consonant stem dat. sg.  $*-ei$  : dat. pl. X; X =  $*-eis$ .

<sup>199</sup> While Phrygian did not preserve an instrumental case into the historic period, the fact that PGPh. still possessed a separate instrumental plural case ending in  $*-b^hi-$ , as we can surmise on the basis of Mycenaean  $/-p^hi/$  (García Ramón 2017: 655-656), means that this case form was still present in the earliest stage of Proto-Phrygian. Some fossilised forms showing this ending could have in principle been preserved into the historic period, though no such example is currently known. The expected reflex of PGPh.  $*-b^hi$  would have been  $^+bi$  or  $^+b$  with  $i$ -syncope.

The Greek dialects are notorious for showing a number of consonant-stem dative plural endings that must all be secondary creations of one kind or another: cf. Attic  $-\sigma\iota$ ,  $-\varepsilon\sigma\iota$ , Aeolic  $-\varepsilon\sigma\sigma\iota$  (cf. Rix 1992: 157-158). These forms all show that a canonical ending for the consonant stem dative plurals had not emerged by the end of the Proto-Greek era, and, by extension, in the Proto-Graeco-Phrygian era either. Presumably, at the PGPh. stage, various innovative analogical endings would have been in competition in this category.

### III.2.2.8 Accusative plural

Endings:

Old Phrygian:  $-ais$  (masc., fem.) (*braterais* ‘brother’ °B-04),  $^+a$  (neut.)

New Phrygian:  $^+-\alpha\iota\zeta$  (masc., fem.),  $^+-\alpha$  (neut.)

In the masculine/feminine gender of the consonant stems, the Phrygian ending was OPh.  $-ais$ , which would have presumably developed into NPh.  $^+-\alpha\iota\zeta$  (PhL 82, LL 1820, 1826). This is a direct reflex of PGPh. acc. pl.  $*-\eta s < \text{PIE acc. pl. } *-ms$  (PhL 82, LL 1826).<sup>200</sup>

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<sup>200</sup> No accusative plural of an  $i$ - or  $u$ -stem is attested, but they are potential exceptions. As in the accusative singular of those stems, the nasal of the reflex of PIE  $*-ms$  would not have been vocalic in Proto-Graeco-Phrygian if the semivowel were the vocalised segment, giving PGPh.  $*-i-ns$ ,  $*-u-ns$ . Whether such a PGPh. ending could have existed in the plural depends on whether an ablaut pattern that would see the semi-vowel vocalised was even possible at that stage. If so, the Phrygian reflexes of this type would have been PPh.  $*-ijs$ ,  $*-uj s$ , though the type would be extremely marginal and quite likely to be replaced with the far more common  $*-ais$  type ending.

The neuter accusative plural would not have been distinguished from the neuter nominative plural. The ending must then have been OPh. <sup>+</sup>-a, NPh. <sup>+</sup>-α (*ibid.*).

### III.2.2.9 s-stem contractions

Due to operation of regular phonological developments, the original PGPh. *s*-stems would have been exceptional among the Phrygian consonant stems by having its suffixal consonant lost between two vowels. This would not have been problematic in the nominative/accusative singular, where the consonant would have been preserved in final position: e.g. nom./acc. sg. *bekos* ‘bread’ < PIE *\*b<sup>h</sup>eg<sup>-</sup>os* (cf. PhL 81). In every other case-number form, the loss of an original intervocalic *\*-s-* would have resulted in two adjacent vowels: gen. sg. *\*-es-os*, dat. sg. *\*-es-ei*, nom./acc. pl. *\*-es-h<sub>2</sub>*, etc. > PPh. *\*-e.os*, *\*-e.ei*, *\*-e.a*.

The rules of vowel contraction are poorly understood in Phrygian, and the attested reflexes of sequences of vowels that emerged through phonological developments are difficult to analyse due to analogical processes that would have affected such forms, not to mention the different chronology of when specific vowel sequences would have arisen. The only really unambiguous example of how an early vowel sequence developed is PIE gen. sg. pronominal *\*-o-so* > PGPh. *\*-oho* > OPh. *-ovo* (LL 1822).

The one likely attested case form that may show how vowel contraction affected the *s*-stems is the nom./acc. pl. form *ακαλα* (if belonging to the *s*-stem *ακκαλος* ‘(a type of bread)’,<sup>201</sup> which is an appealing possibility) and the nom./acc. pl. form *κενα* (if belonging to <sup>+</sup>*κενος*, which is far from

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<sup>201</sup> For a discussion of the *ακκαλος* nominal, see §III.3.9.

secure). Based on this case form, the nom./acc. pl. of the *s*-stems would have developed from PIE *\*-es-h<sub>2</sub>* > PGPh. *\*-eh-a* > EPPh. *\*-e.a* > Phr. *-a*, with a contraction of the two vowels. If this example is taken as valid, we can at least see that the *s*-stems would not have restored any consonantal element once it was lost. The actual desinences of the other *s*-stem case-number forms would then have most likely developed according to regular phonological developments that affected sequences of vowels, whatever those may have been.

### III.3 Nominal stems

There are two basic ways to form a nominal stem in Phrygian. The more common of the two nominal stem types are suffixed nouns, composed of a lexical root and one or more suffixes. The far rarer nominal stem type are the root nouns, whose nominal stem is simply identical to the root. This is basically how nominal stems were treated in PIE as well (CIEL 179).

A number of nominal stem types show two variants, one used in the strong cases (i.e. the nominative singular and plural and accusative singular) (cf. Meier-Brügger 2010: 336),<sup>202</sup> and one used in the oblique cases (i.e. all the rest). There is no indication that such an allomorphy ever appears in the thematic stem type (i.e. the *o*-stems and the *a*-stems) in PIE (cf. CIEL 211), a state of affairs that is continued in Phrygian.

From a PIE point of view, however, the distinction between the strong and weak-stem variants is expected to occur in all the non-static consonant-

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<sup>202</sup> Do note that the strong stem can show two variants, one used for the nominative singular, and the other for the rest of the cases requiring the strong stem form.

final nominal stems.<sup>203</sup> Unfortunately, due to the sparsity of the Phrygian corpus, the number of instances where a noun is attested in both the strong and weak-stem variants is exceedingly small. Indeed, the only actual unambiguous example is: nom. pl. *πατηρες* ‘father (NPl)’, gen. sg. *πατρος* ‘id. (GSg)’.

The distinction between the two variants was probably preserved synchronically in at least some stem types. By comparing attested Phrygian nominal stems that only appear in one of the two variants to the corresponding types in Greek and PIE, however, it will become clear that the distinction between the strong and weak stem variants in consonant stems was pervasive in Proto-Graeco-Phrygian and remained highly relevant in Proto-Phrygian as well. In PIE, the distinction between the strong and the weak stem variants was the result of ablaut. As a rule of thumb, the accent was moved rightward in the oblique stem variant (Meier-Brügger 2010: 336). \**e*-vocalism was strongly associated with the placement of the accent in mobile stems, but no longer absolutely correlated by the latest stage of PIE (CIEL 176-177).

As in the other Indo-European languages, there is a marked tendency to reduce or remove the distinction between the strong and weak stem variants through analogical processes. Some of these date to the Proto-Graeco-Phrygian era already, whereas others only took place in Proto-Phrygian or later.

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<sup>203</sup> For the purposes of classifying stem types, the synchronic Phrygian vowels /i/ and /u/ are to be understood as consonants, since they continue PIE \**i*/*i̯* and \**u*/*u̯* which were originally consonants in phonological and phonotactic terms.

The aim of this section is to examine the development and the synchronic status of all attested nominal stem-types in Phrygian.

### III.3.1 Thematic stems

The thematic stems are by far the most common nominal stem type in Phrygian. They are defined as those nominals that form a stem ending with the thematic vowel *o* or *a*. As a result, we may subdivide thematic nominal stems into *o*-stems and *a*-stems.

In general terms, the thematic vowel *o* is characteristic of nominal formations in the masculine and neuter genders.<sup>204</sup> The thematic vowel *a* is usually characteristic of nominal formations in the feminine gender, but a number of masculine *a*-stems nouns exist which differ from the feminines in some case forms.<sup>205</sup>

Synchronically, for the most part, the *a*-stems serve as feminine counterparts to *o*-stem masculines and neuters. This is illustrated by thematic adjectives, which will, as a rule, decline as *o*-stems in the

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<sup>204</sup> There do exist some *o*-stem feminines. These always take feminine syntactic agreement (e.g.  $\sigma\alpha$   $\sigma\omicron\pi\omicron\tau$  W-11 'to this casket (dat. sg.)'), but most likely decline entirely identically to their masculine counterparts. Only a handful of *o*-stem feminine forms are attested, so this is not secure, but expected in light of Greek, where feminine *o*-stems are not declined any differently from the masculine *o*-stems. Henceforth, whenever masculine *o*-stems are mentioned, it is to be understood that feminine *o*-stems behave identically outside of syntactic agreement.

<sup>205</sup> These are treated in §III.3.1.10.

masculine and neuter genders, and as *a*-stems in the feminine gender (cf. PhL 76, 78).<sup>206</sup>

Thematic nominal formations display no ablaut alternations within a single paradigm, meaning there is no strong-weak stem distinction. In principle, then, any single case form can be used to extract the nominal stem from which all other case forms are predictable.<sup>207</sup> In the case of thematic adjectives, a single form in any gender should be enough to predict all other gender-case-number form combinations of that adjective.

A great number of Late PIE nominal suffixes were thematic in nature, composed of the thematic vowel (i.e. *\*o* or *\*ā* < *\*eh<sub>2</sub>*) preceded by varying consonantal elements. The majority of these suffixes were used to form adjectives, which could subsequently be substantivized. Phrygian shows a considerable number of these; where identifiable, each will be treated in a separate section below.

### III.3.1.1 *o*-stem basics

The *o*-stems are primarily of masculine or neuter gender, though a limited number of feminine nouns also belong to the category of *o*-stems (PhL 78-80).<sup>208</sup> The masculine/feminine and neuter *o*-stems only decline differently in the nominative and the accusative of both singular and plural, but are treated identically in all other cases.

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<sup>206</sup> This still mostly holds for male-female noun pairs, but it is also possible such a pair may differ in terms of word-formation as well. Such disparate pairs may be archaic or innovative.

<sup>207</sup> This is notably not the case in athematic, i.e., consonant stems.

<sup>208</sup> See footnote #204 above.

The masculine *o*-stems take the ending *-os* in the nominative singular, *-on* in the accusative singular, *-oi* in the nominative plural, and *-ois* in the accusative plural (§III.2.1).

The neuters never distinguish between the nominative and accusative cases. The neuter *o*-stems take the ending *-on* in the nominative-accusative singular and *-a* in the nominative-accusative plural (§III.2.1).

### III.3.1.2 *a*-stem basics

The *a*-stem nominal formations are normally associated with the feminine grammatical gender. The *a*-stem adjectives all exclusively refer to the feminine gender (PhL 76-78).<sup>209</sup>

The *a*-stem masculine nouns are an innovation of Proto-Graeco-Phrygian that persevered into attested Phrygian. The majority of attestations of this type are for personal names, which suggests the category was heavily bolstered by incorporation of non-native onomastic material (PhL 77, LL 1825). For further discussion, see §III.3.1.10 below.

### III.3.1.3 Simple thematic stems

Relevant examples: *benagono-* ‘PN<sup>2</sup>’, *deo-* ‘god’, *kako-/κακο-* ‘bad’, *vreko/a-* ‘sculpture’, *μανκα-* ‘stele’

The simple thematic stems are characterized by being composed of a lexical root and a suffix that consists of the thematic vowel alone.

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<sup>209</sup> The one known exception is the adjective *meka-/μεκα-* ‘great, big’, which declines as a masculine *a*-stem in that gender.

The examples we have available suggest that the pure thematic vowel suffix could attach to a root in either *e*- or  $\emptyset$ - ablaut grade:

$\emptyset$ -grade:        \**d<sup>h</sup>h<sub>1</sub>s-o-* > *deo-*  
                       \**m<sub>1</sub>k<sup>h</sup>-eh<sub>2</sub>-* > *μανκα-*  
*e*-grade:         \**u<sub>1</sub>reǵ-o/eh<sub>2</sub>-* > *vreko/a-*

The example *vreko/a-* appears to be descended from a Schwebeablaut variant of the PIE root \**u<sub>1</sub>erǵ-*. Greek ἔργον and ἔρδω preserve the ablauting vowel in the expected slot, as reconstructible from other IE languages (LIV<sub>2</sub> 686-687), though there also exists a verbal form ῥέζω < \**u<sub>1</sub>reǵ-je/o-* with the full grade vowel in the historically unexpected slot. We might attempt to explain this disparity between Greek and Phrygian as arising from the co-existence of both \**u<sub>1</sub>erǵ-* and \**u<sub>1</sub>reǵ-* in PGPh.<sup>210</sup> We may suppose that PGPh. reflexes of the root \**u<sub>1</sub>erǵ-* only appeared in zero-grade formations, once such example being Mycenaean *wo-ze* ‘work (3sg ind. present)’ < \**u<sub>1</sub>reǵ-je/o-*, and that the full grades were secondarily reintroduced into the formations we find attested.<sup>211</sup> At the Proto-Phrygian stage, the simple nominal formation would have actually been \**u<sub>1</sub>rk-o/a-*. Only subsequently would the full-grade be re-introduced into the root, presumably on the basis of other full-grade simple thematic nominal stems (which might have coded for some specific semantics), with the full-grade

<sup>210</sup> Most accounts of Schwebeablaut presuppose it emerged when a formation in zero-grade could not be synchronically related to a full-grade root, thereby necessitating the creation of a neo-full-grade which need not have placed the ablauting vowel into the historically expected slot. If the inherited full-grade version of the root actually appeared in a transparent manner, there would have been no reason to create a neo-full-grade and there would have existed no Schwebeablaut variant.

<sup>211</sup> The vowel appearing in the expected slot in Greek ἔργον, when compared with, e. g. German *Werk* < PIE \**u<sub>1</sub>erǵom*, would then be the result of chance.

vowel *-e-* appearing in a historically unexpected place. This explanation is attractive in light of the proposal given in §II.3.2.2.2 that Proto-Phrygian *\*CrC-* would vocalize as *CrōC* (or, at the very least, *CrVC*): the re-inserted vowel *e* would have then taken the place of the vowel that appeared in zero-grade forms. The sequence of developments would then be: PPh. *\*urk-o-* > (regular phonetic development) *\*urok-o-* >> (re-introduction of the full grade) *vrek-o-*. This scenario suggests, if nothing else, that pure-thematic-vowel suffixes with *e*-grade in the root were still a productive category of word-formation in Phrygian after the resonants had vocalized.

The use of an *o*-grade in the lexical root in this type of construction is not attested in Phrygian. Due to the fact that some other thematic suffixes do appear with *o*-grade in the root (i.e. *korvo-*, *ordo-*) and that *o*-grade pure-thematic-vowel suffixed nouns and adjectives were an extremely common type in Greek and PIE, suggesting they held this status in PGPh. as well, we would certainly expect this type to appear in Phrygian as well. The lack of examples must be due to chance.

Nevertheless, the example *vrek-o-* shows that its immediate predecessor *\*vroko-*, where the root would have been synchronically misanalysed as appearing in the *o*-grade, but actually originating in *\*urk-o-*, shifted its apparent *o-o* type ablaut to an *e-o* type. Precisely why such a shift from an *o-o* type to an *e-o* type could have occurred and how common the development was is unclear. A phonological explanation that would assume some sort of vowel dissimilation or vowel disharmony does not appear to be supported by language internal evidence; most likely, an *e-o*

type noun would have had some specific semantic nuance that would differentiate it from an *o-o* type.<sup>212</sup>

### III.3.1.4 *-(e/i)jo-* suffixed nominal formations and reflexes of *\*-ih<sub>2</sub>-stems*

Relevant examples:

*jo-* and *ijo-* types: *a↑io-*, *patriyo-* ‘fatherly?’, *(por)niyo-*, *ονομανια-* ‘named’, *(ποκ)γονιο-*, *ποκραιο-*

*ejo-* and *eja-* types: *dumeya-* ‘pertaining to the religious community’, *evememesmeneya*, *imeneia*, *kubeleya* ‘DN’, *k↑ianaveyo-* ‘PN’, *lagineyo-*, *mireyo-*, *tiveia* ‘PN?’, *γλουρεο-* ‘golden’, *μαιμαρηα-*, *ρεκτεο-* ‘monument’, *τεμρογειο-* ‘of Temrogis’

*iya-* type: *kraniya-* ‘spring, fountain?’, *niptiya-* ‘niece, granddaughter’, *venuepια* ‘PN’, *ουεναουια-* ‘PN’

The analysis of thematic adjectives that were suffixed with *-(e/i)jo-* is greatly complicated by how precisely we analyse the attested material. There can be no doubt that *-ejo/a-* was a prominent suffix in Old Phrygian, as evidenced by OPh. *dumeya-* ‘pertaining to the religious community’, *evememesmeneya-* ‘(?)’, *teveya-* ‘(?)’, *kubeleya-* ‘Cybele (divine name)’, *tiveya-* ‘PN?’, etc. (PhL 84-85) On the other hand, formations derived with

<sup>212</sup> Whether this means that one can consider this particular segment of Phrygian morphology as fundamentally non-concatenative, i.e. transfixal, depends greatly on how one interprets the underlying system. We may only note that this derivational pattern would not have been fundamentally innovative: a change in an ablaut pattern (such as the one underlying Gk. *πόντος* ‘sea’ ~ *πάτος* ‘path’) would have been semantically distinctive, if perhaps only marginally, in Late PIE already. That situation can also be synchronically analysed as showing the presence of transfixes, if one followed a specific framework of analysis.

the suffix *\*-jo-* would have seen the coalescence of *\*-j-* with a previous consonant in many environments, presumably not all of them identifiable or even synchronically parseable to the speakers, with some *\*-jo-* formations appearing with the *\*-ijo-* Sievers variant of the suffix.

The inherited *\*-ih<sub>2</sub>* feminines of PIE are covered in this section as well (cf. PhL 85). One example of an *\*-ih<sub>2</sub>* feminine we have attested can hardly be disputed: *nīptiya* ‘granddaughter, niece’ quite faithfully reflects PIE *\*nep-t-ih<sub>2</sub>* ‘id.’ > *\*nept-ija* > *nīptiya*,<sup>213</sup> with the caveat that its suffix appears in its Sievers variant *\*-ijh<sub>2</sub>* (PhL 85). Another example of a *-ja* feminine is *kraniyas* °B-05, though this is most likely a secondary derivation of a noun ultimately loaned from Aeolic κράννα ‘spring, fountain’ (PhL 279). It should be noted here that *\*-ih<sub>2</sub>* was the suffix most commonly used in PIE to derive feminines from masculine nouns in athematic stems.

In synchronic Phrygian, the evidence quite clearly suggests that feminine nominal derivatives to non-feminine consonant-stem nouns are formed by the addition of the suffix *-ja-*. This is evidenced by the pairs: *tiv-* ‘Ti-’ ~ *tiveya-* ‘PN (pertaining to Ti-), δοῦμ ‘religious community’ ~ *dumeya-* ‘pertaining to the religious community’. Comparing this to the PIE pattern and the still preserved pair *nepos* ‘grandson, nephew’ (< *\*nep-ōt-s* ‘id.’) ~ *nīptiya* (< *\*nep-t-ih<sub>2</sub>*), *iman* ‘memorial; PN’ ~ *imeneya* ‘pertaining to Iman’, there is an unmistakable pattern. If we take *tiveya* and *dumeya* at face value,<sup>214</sup> the *-Vja-* suffix seems to have been used in a feminizing function, to form either a related adjective or a noun.<sup>215</sup> The non-low

<sup>213</sup> With the *i* of the first syllable being the result of a regular development PPh. *\*e*<sub>[-accent]</sub> > OPh. *i* / CC. See §II.3.4.

<sup>214</sup> That is, not assuming they are spelling or phonetic adaptations of earlier *\*tiviya* and *\*dumiya*.

<sup>215</sup> Indeed, in some cases the *eyo-* derivative would become used as a generic noun (e.g., in *kubeleya* from *\*Kubela* (cf. Gr. Κυβήλη)).

vowels are known to have been somewhat phonetically ambiguous in certain environments, e.g. before a nasal. Quite likely, old sequences *\*-ej-* and *\*-ij-* might have resulted in phonetically very similar realizations, and it is questionable whether we can expect complete consistency in their spelling.<sup>216</sup>

By New Phrygian times, the issue of identifying historically entirely different formations would be further compounded by spelling ambiguities; for instance, *ονομανια-* ‘named?’ may just as well reflect an earlier *+onoman-ja-* or *+onoman-ija*, with the Sievers variant of the suffix. The nominal derivations *ρεκτηο-* ‘monument?’ and *γλουρεο-* ‘golden (things?)’, on the other hand, see the *j* graphically dropped in intervocalic position.<sup>217, 218</sup>

The suffix *-ejo/a-* certainly appears to have been used at some stage to form adjectives out of a previous nominal formation (PhL 84-85); *γλουρεος* and *dumeya* seem to confirm this view. Most likely, the suffix *-ejo/a-* was originally an adjective-forming suffix that subsequently saw some of the derived adjectives nominalized (e.g. *tiveya* ‘PN’, *k↑ianaveyos* ‘(religious title)’). Its primary function, at least outside the feminine gender, must have remained adjective-forming (PhL 84-85), as suggested by *Τεμρογειος*

<sup>216</sup> Such a conflation would undoubtedly be related to the spelling uncertainty regarding the reflex of *\*e<sub>2</sub>*.

<sup>217</sup> There is no evidence that *j* was actually dropped phonetically. Rather, this is the result of the conventions of spelling contemporary Greek, which had no phonemic /j/.

<sup>218</sup> There is no way to be certain *ρεκτηον* actually reflects an *-ejo-* formation and not an *-evo-* formation, other than supposition. On the other hand, *γλουρεος* is supported by the Hesychian glosses *γλουρος* ‘golden’ and *γλουρεα* ‘golden things’, suggesting this derivation is an *-ejo-*adjective of material, with the meaning ‘made of gold’, of the type paralleled in Greek; cf. *ἀργυροῦς* < *\*αργυρέος* < *\*h<sub>2</sub>(e)rgu-r-ejo-* (Risch 1974: 131-134).

‘pertaining to Temrogis’, an adjective derived from the (possibly non-native) river name Temrogis.

The simple suffix derived from PIE *\*-io-* > PGPh. *\*-jo-*, as mentioned, is not as readily identifiable. *ονομανια-* and *patriyo-* ‘fatherly?’, however, are quite clear examples of this suffix being used; it is ambiguous whether *ονομανια-* represents /onomanja-/ or /onomanija-/ , but it seems quite clear *patriyo-* shows a Sievers variant *\*-ijo-* in its expected environment, i.e. after a heavy syllable. We may conclude on the basis of *patriyo-* that when forming a denominal adjective, the *jo-* suffix attaches itself to the weak stem of the noun, in this case *patr-*.

The pervasiveness of these types of constructions suggests that other attested forms ending in *-iyo/a-* or *-eyo/a-* or some variants thereof are likely to belong to this class, though this is by no means certain for all.

### III.3.1.5 *-(e)vo-* suffixed nominal formations

Relevant examples: *ktevo-* ‘acquisition?’, *ordo-* ‘proper?’, *κοποα-* ‘girl’

The Phrygian forms that appear to show the presence of the suffix *\*(e)uo-* are few and somewhat ambiguous to analyse. While *ktevo-* showing this suffix is beyond reproach, *ordo-* and *κοπο-ο/α-* /koru-o/ā-/ are more ambiguous and will be treated first.

The interpretation of *ordo-* as showing a reflex of the PIE *\*uo-* suffix is predicated entirely on one’s analysis of *ordoineten* °B-07. As argued elsewhere (see §V.3.1.2), *in=et-* is a verbal form cognate with Greek

\*ἐνέδω (only attested in the aorist as ἐμφάγω ‘to eat one’s full’), with *ordo-* modifying the verb. The context of the inscription in question does lend itself to an analysis that sees the verbal form *ordoinet-* as referring to someone executing the funerary feast (i.e. ‘to eat one’s full’ (ἐμφάγω) = ~ *inet-*), where *ordo-*, as a modifier of the verb, can be understood as being etymologically related to Greek ὀρθο-, with the whole verbal complex *ordoinet-* meaning ‘to eat/feast in a proper/proscribed manner’. If this is the case, both Phrygian <sup>+</sup>*ordo-* and Greek ὀρθο- are regular developments of a PGPh. adjective *\*ord<sup>h</sup>-uo-* ‘proper, straight, correct’ (EDG 2010: 1101).<sup>219</sup> Obrador-Cursach (2021b: 54), though differing in his analysis of the entire form *ordoineten*, likewise assumes that Phrygian <sup>+</sup>*ordo-* is cognate with Greek ὀρθο-. PGPh. *\*ord<sup>h</sup>-uo-* is itself a regular reflex of a PIE adjective *\*h<sub>3</sub>(e)rd<sup>h</sup>-uo-* ‘upright, erect, straight’, which also has attested descendants in Skt. *ūrdhvā-* and Latin *arduus* (EDG 2010: 1101). Phrygian <sup>+</sup>*ordo-* and Greek ὀρθο- are wholly ambiguous in terms of the ablaut grade found in the lexical root, but since both Sanskrit and Latin suggest the adjective had a zero-grade in PIE, the same likely holds for Proto-Graeco-Phrygian.<sup>220</sup>

The existence of a Phrygian <sup>+</sup>*korvo-* is assumed on the basis of two forms found in MPh. inscription °W-11, assuming the segmentation is correct: κοροος ‘boy’ and κοροαν ‘girl (ASg)’.<sup>221</sup> Lubotsky (2017: 440) suggests that κοροαν /koruān/ is actually the Phrygian word for ‘girl’ in the

<sup>219</sup> The loss of *\*u* in Proto-Phrygian is regular before *\*o*.

<sup>220</sup> While ὀρθοέδω is not attested in Greek, the use of ὀρθο- in a complex verb meaning ‘to do X properly’ is attested copiously in Greek (e.g. ὀρθογνώμειω, ὀρθογνώμονέω ‘to think properly’ and others). The use of *\*ord<sup>h</sup>-uo-* as a verbal prefix is likely of Proto-Graeco-Phrygian age already.

<sup>221</sup> Segmentations have been attempted where κορο is taken as a separate word, but Lubotsky (2017: 440) makes a compelling argument that κοροαν [*korwān*] is a single word, which applies equally for κοροος [*korwos*].

accusative singular case, with this noun being directly comparable to Greek κόρη < PG *\*koruā-*. If this is upheld, κοροός, in a more uncertain semantic context, can also be interpreted as <sup>+</sup>*korvo-*, comparable to Greek κοῦρος < PGr. *\*koruo-* (Chantraine 1999: 567-568). <sup>+</sup>*korva-* ‘girl’ and <sup>+</sup>*korvo-* ‘boy’ are clearly simply a pair of thematic nouns, the feminine one being an *a*-stem and the masculine one being an *o*-stem. An important question regarding these two terms is whether they are native, i.e. inherited from Proto-Graeco-Phrygian, or loaned from Greek, specifically from a dialect that preserved the old *\*ru* cluster, i.e. a loan from Proto-Greek *\*κορφο/ā-* or dialectal Greek *\*κορφο/ā-* regularly descended from this Proto-Greek term. A Proto-Graeco-Phrygian *\*kor-uo/ā-* would have regularly developed into the attested Greek and Phrygian forms.<sup>222</sup> On the other hand, the attested Middle Phrygian term may well have ultimately been borrowed from Greek at any point since the two languages separated.<sup>223</sup> For the time being, no clear judgement is possible. It is true that κορο-*o/a-* is only attested after Phrygian found itself spoken in an increasingly Hellenized environment in the 4<sup>th</sup> century BCE, but the presence of /*u*/ suggests that the term, if it were borrowed this late, would need to have been adopted from some local variety of Greek that differed quite substantially from canonical Koiné; there is, however, no evidence that the local variety of the Koiné at the time of Alexander preserved any trace of an old digamma. More likely, if the term were borrowed in the Koiné era,

<sup>222</sup> While it is true that PPh. *\*u* was lost before *\*o*, meaning we would expect a masculine PGPh. *\*kor-uo-* to surface as Phrygian *\*\*koro-/κορο-*, the close association of masculine *\*kor-uo-* > PPh. *\*kor-o-* ‘boy’ and feminine *\*kor-uā-* > PPh. *\*kor-uā-* ‘girl’ would have greatly facilitated the re-introduction of *\*u* into the masculine paradigm once the sound law was no longer operational. Such a development is so trivial that it can hardly be an argument against direct descent of attested Phrygian κοροός.

<sup>223</sup> Depending on when such a supposed borrowing would have taken place, the argument from the previous footnote applies equally.

it would need to have originated in a sub-standard local dialect, which seems somewhat dubious. Thus, there is hardly any reason to assume that the borrowing of *korvo/a-* would have been in any way related to the Hellenization of Asia Minor in the 4<sup>th</sup> century BCE; rather, if the term was indeed loaned from Greek, it would have been due to the simple fact that Greek and Phrygian were spoken in close proximity, not due to a situation where Greek was a clear superstrate. In this case, then, there is no reason to assume that the borrowing must be late (though, admittedly, it may well have been). Thus, there really are no clues which could help us ascertain whether Phrygian <sup>+</sup>*korvo/a-* was loaned from a Greek dialect or whether it developed regularly from a Proto-Graeco-Phrygian *\*kor-uo/ā-*. Ultimately, the question hinges on what the etymology of Greek *\*koruo/a-* actually was.

The nominal stem *ktevo-*, appearing in the dative plural *ktevoys*, cannot be divorced from the verbal form *ektetoy*, which appears in the same inscription.<sup>224</sup> The nominal form itself is fairly uninformative in context beyond suggesting that the suffix appearing in it is either *-evo-* or *-vo-*, depending on the type of formation being used. An analysis of the verbal form performed in §V.3.2.2 shows that the second *e*-vowel of *ektetoy* is not an element of the lexical root (i.e., not a reflex of an earlier *\*h<sub>1</sub>*), but rather the thematic vowel. On this basis, then, we must conclude that *ktevo-* is an *evo*-type formation belonging to a lexical root that surfaced as *kt-* in this context, thereby necessarily being in the zero-grade. Based on a contextual reading and further formal analysis of the verbal form, the lexical root underlying *ktevo-* ultimately likely originated in PIE *\*g<sup>h</sup>ed-* ‘to seize’ (cf.

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<sup>224</sup> As well as, possibly, in New Phrygian εκτε[.

Gr. *χανδάνω*) (cf. LIV<sub>2</sub> 194). The nominal formation *ktevo-* is likely to mean ‘an acquisition *vel sim.*’.

### III.3.1.6 *-(e)to-* suffixed nominal formations

Relevant examples: *spereto-* ‘seed?’, *torveto-* ‘tree?’, *δετο-* ‘monument’, *ομαστο-*

The nominal forms with a(n) *(e)to-* suffix in Phrygian seem to behave roughly the same as *(ε)το-* suffixed nominals in Greek.

In PIE, the suffix *\*-to-* was used to form verbal adjectives from verbal stems (Meier-Brügger 2010: 421). The function of the suffix was evidently expanded in Proto-Graeco-Phrygian to allow its use in denominal constructions as well (Risch 1974: 21). The distribution of the variants *-to-* and *-eto-* in Greek is still contested.

Of the four nominal forms with the suffix *-(e)to-* that are attested in Phrygian, one, *ομαστο-*, is entirely enigmatic; the meaning of the term (which syntactically appears to be used as a noun, not an adjective) is currently unclear (PhL 317) and, as such, no further comment is possible.

*δετο-* most likely means ‘monument’ and is apparently a nominalized verbal adjective originating in PIE *\*d<sup>h</sup>h<sub>1</sub>-to-* ‘placed’, with the semantic development ‘a thing placed’ >> ‘monument’ (PhL 212). We may note that the formation was formed in zero-grade. In any case, the specific formation *\*d<sup>h</sup>h<sub>1</sub>-to-* is surely old, as is evidenced by the comparanda Gr. *θετός*, Skt.

*dhita-*. The semantic development into ‘monument’ appears to be a Phrygian innovation.

*torveto-* has only recently been associated with PIE *\*doru* ‘tree’ on the basis of a Greek addition to inscription °B-05 including the term  $\delta\rho\nu\nu$  (cf. Hämmig 2013: 150-152, LL 1823). The protasis of the imprecative formula in the inscription reads *ivimun inmeney asenan daket torvetun  $\uparrow$ iray* ‘(whoever) to-this’ memorial *asenan* does *torvetun* by-hand’.<sup>225</sup> Hämmig (2013: 150) and Obrador-Cursach (PhL 364) argue that the form *torvetun* is a nominative singular form of the participle of a verb derived from the noun for ‘tree’ that pertains to the cutting of trees (presumably *\*torv-e-t-on(t)*); the protasis would then mean something like ‘(whoever) to-the memorial *asenan* does cutting-the-trees by-hand’. But more attractive is the interpretation that *torvetun* is a noun in the genitive plural derived from the noun for ‘tree’ with a similar meaning that modifies the noun *asenan*; the protasis can then simply read ‘(whoever) to-the memorial does an *asenan* of-trees by-hand’.

Derivationally, it is simplest to posit that PIE *\*doru* ‘tree’ was extended with the suffix *\*-eto-*: *\*doru-* + *-eto-* > *\*dor $\upsilon$ eto-* > *torveto-*. This specific form is likely quite old: it must have originated at a point when the vocalization of semi-vowels was still allophonic, which was almost certainly before the disintegration of Proto-Graeco-Phrygian.<sup>226</sup> Assuming a participle to a verb with the stem *\*torvet-e/o-* derived from the word for ‘tree’ is more problematic, since it is difficult to explain a participial formation having an *\*-et-ont-* conglomeration of suffixes.

<sup>225</sup> The expected indefinite pronoun *yos* ‘whoever’ is not explicitly expressed in this protasis due to having already appeared earlier in the inscription. See further in §IV.10 under *ivimun*.

<sup>226</sup> Otherwise, we would expect PPh. *\*toru* + *\*-eto-* to surface as *\*\*toruveto-* vel *sim*.

Finally, *spereto-* also appears to use the suffix *\*-eto-* and syntactically functions as a noun, but the semantics are not perfectly clear. As has been suggested before (Lubotsky 1997: 125), *spereto-* may mean ‘seed’, which would mean the root element was a reflex of PIE *\*sper-* ‘to sprinkle, scatter’, which underlies Greek σπείρω ‘to sow’. Semantically, this may fit: the clause in which this word appears reads *yos tivo ta spereta ayni kin telemi* °B-01 ‘whosoever *tivo* these *spereta* or some *telemi*’, but the following clause is too fragmentary to be properly analysed. If this identification is correct, in terms of word formation, *spereto-* is an *eto-* adjective built to a verbal root *\*sper-* in the full grade.<sup>227</sup>

### III.3.1.7 *-ro-* suffixed nominal formations

Relevant examples: μακρο- ‘big’, μμυρο- ‘foolish’, δρεγρο- ‘edible’

Two *ro-* stem nominals that appears in Phrygian both have clear cognates in Greek: NPh. μακρο- ‘long’ is cognate with Gr. μακρό- (cf. CIPP2 18), both originating in PGPh. *\*makro-*, and NPh. μμυρο- ‘foolish’ with Gr. μωρό- ‘stupid, foolish’, both presumably originating in PGPh. *\*mōro-* (Orel 1997: 446).<sup>228</sup>

<sup>227</sup> While the semantic context is admittedly ambiguous, it seems questionable with our current knowledge of Phrygian suffixes and Indo-European word-formation patterns to attempt to decompose *spereto-* into anything beyond a lexical root *sper-* and a derivational morpheme *-eto-*. A Phrygian lexical root *sper-* can hardly reflect anything other than PIE *\*sper-*.

<sup>228</sup> It is also possible that the Greek and Phrygian terms are not related at all and that Phrygian μμυρο- is actually a reflex of older *\*mūrō-*, in which case the closest comparandum of the Phrygian term is Skt. *mūrā-* ‘foolish’ (cf. EDG 992).

PGPh. *\*makro-* is a reflex of a PIE adjective *\*mh<sub>2</sub>kro-* ‘long’, also reflected in Latin (*macer*) and Germanic (OHG *magar*) (EDG 2010: 895). The short vowel of Greek confirms that the root of this adjective was in the zero grade in PGPh.; presumably, the vowel remained short in Phrygian.

PGPh. *\*mōro-* has no cognates outside the Graeco-Phrygian subgroup. If the lexical root descends from PIE, it can be transposed as *\*meh<sub>3</sub>-*. Should that be the case, a full grade is needed in *\*meh<sub>3</sub>-ro-* > PGPh. *\*mōro-* to account for Greek μωρό- and NPh. μμυρο- < OPh. <sup>+</sup>*mōro-*.

Another *ro*-nominal appearing in Phrygian is τιδρεγρουν < *\*tis-dreg-ro-*, where the root element *\*dreg-* is cognate with Greek τρέφω ‘to feed’, both from the PIE root *\*d<sup>h</sup>reg<sup>wh</sup>-* (PhL 358). The whole nominal likely means ‘inedible’, composed of the particle τι- ‘un-, dis-’ and the adjective δρεγρουν ‘edible’ derived from the full-grade of the verbal root (*ibid.*).

Little more can be said about the class of *ro*-nominals in Phrygian; the treatment and development of this class of nominals appears to be identical to that of Greek based on the data that is currently available.

### III.3.1.8 *-elo*-suffixed nominal formations

Relevant example: ζεμελο- ‘man’

The only Phrygian nominal form with a suffix *-(e)lo-* is the copiously attested ζεμελο-, which appears exclusively in the dative plural form ζεμελωσ (PhL 85).

The meaning ‘man’ has been ascertained early in the history of Phrygian studies (Ramsay 1905 *apud* Lubotsky 1998: 419) and the term is also attested as a Hesychian gloss: ζεμελεν . Ανδραποδον. Φρύγες. ‘slave. Phrygian’ (Lubotsky 1998: 419).<sup>229</sup>

Etymologically, the element ζεμ- is derived from the PIE noun *\*d<sup>h</sup>eg<sup>h</sup>om-* ‘earth, ground’<sup>230</sup> and the attested nominal form ζεμελο-, originally ‘earthling’, can be transposed in its entirety as PIE *\*d<sup>h</sup>g<sup>h</sup>em-elo-*. A similarity between Phrygian ζεμελο-, Greek χθαμαλός ‘low, near the ground’, and Latin *humilis* ‘low’ is evident, but the Greek and Latin terms are adjectives, whereas Phrygian ζεμελο- is a noun. In any case, the three forms cannot be formally reconciled (cf. de Vaan 2008: 292); Greek χθαμαλός shows *a*-vocalism that suggests a preform *\*d<sup>h</sup>g<sup>h</sup>mh<sub>2</sub>-elo-* (with the unexplained addition of *\*h<sub>2</sub>*), while Latin *humilis* is synchronically an *i*-stem that developed from an original *l*-stem: *\*d<sup>h</sup>g<sup>h</sup>em-el-* > *\*hum-il-* + *-i-*. Most likely, then, Phrygian ζεμελο- is a language-internal creation, though one potentially based on the same *l*-stem that developed into Latin *humilis*.

### III.3.1.9 The adjective *meka-*

The adjective *meka-* ‘great, big’ occupies a special place in Phrygian grammar (PhL 78). Originally belonging to an ablauting paradigm, it developed a special type of a declensional pattern. The masculine and

<sup>229</sup> The translation is apparently somewhat imprecise. The unexpected spelling of the expected accusative singular ending -o(v)ν as -εν needs to be understood in the context of the New Phrygian development  $-V_{[-low]n} > [\varepsilon]$ , which would not have a clear phonetic equivalent in Greek.

<sup>230</sup> For the semantics, compare Latin *homō* ‘man’, Gothic *guma* ‘id.’, Old Lithuanian *žmuō* ‘person’, all from PIE *\*d<sup>h</sup>g<sup>h</sup>(e)m-on-*, which is a derivation from *\*d<sup>h</sup>eg<sup>h</sup>om-* (de Vaan 2008: 287).

feminine forms of the pronoun are identical, which separates *meka-* from the usual *a-*stem type.

The attested case forms of the adjective *meka-* ‘great’, all in the masculine/feminine gender are:

	<i>meka-</i>	
	OPh.	NPh.
nom.	<i>mekas</i>	μεκας
dat.		μεκα
acc.		μεκαν
dat. or acc. pl.	<i>mekais</i>	

Table #19: The attested case forms of the Phrygian lexeme *meka-* ‘great, big’.

In PIE, the adjective *\*meg-h<sub>2</sub>-* declined as a very archaic holodynamic *h<sub>2</sub>-*stem: nom. sg. *\*meg-h<sub>2</sub>* ~ acc. sg. *\*mġ-éh<sub>2</sub>-m* ~ obl. *\*mġ-h<sub>2</sub>-*’ (EDG: 8, 917-918).

This declensional type must have persisted into Proto-Graeco-Phrygian, at least initially, as is clear from the following Greek forms: nom. sg. μέγας, descended from PIE nom. sg. *\*megh<sub>2</sub>s*, the adverb ἄγαν from acc. sg. *\*mġeh<sub>2</sub>m*, neuter nom./acc. sg. μέγα from *\*megh<sub>2</sub>* (EDG: 7, 8, 917-918). The original masculine/feminine accusative ἄγαν of Greek was later replaced in the masculine by an analogical μέγαν, but remained preserved as a fossilized form in the adverb ἄγαν ‘too much’.

The oblique masculine/neuter singular forms of the adjective in Greek show the addition of a suffix *-λο-*: gen. sg. μεγάλου, dat. sg. μεγάλῳ (*ibid.*). The same suffix was also used to create an entirely innovative separate Greek feminine paradigm μεγάλη, and provided the stem for the non-

singular numbers. The only forms in Greek that preserve the stem without the addition of *-λο-*, then, are: nom. sg. masculine μέγας, old acc. sg. masculine/feminine \*ἄγᾶν, analogical acc. sg. masculine μέγαν, nom./acc. sg. neuter μέγα.

Greek is exceptional among the Indo-European languages by preserving the direct reflex of nom. sg. masculine \**még-h<sub>2</sub>-s* > μέγᾶς and acc. sg. masculine \**még-eh<sub>2</sub>-m* > ἄγᾶν.

Phrygian is, perhaps, even more exceptional in this respect. While it is true that we cannot graphically ascertain the length of the vowel in Phrygian nom. sg. *mekas*/μεκας, the exceptional nature of the Phrygian declension lies in the fact that the nom. sg. of both the masculine and the feminine forms ends in *-s*: *Iman mekas* ‘great Iman (masc.)’ °P-03, *devos ke mekas* ‘great god (masc.)’ °P-03, *μανκα μεκας* ‘great stele (fem.)’ °W-11. Even if the quantity of the preceding vowel changed (and that is unlikely), this serves as a remarkable proof that the original PIE *h<sub>2</sub>-adjective* \**még-h<sub>2</sub>* did not distinguish between the masculine and feminine genders, but rather preserved the ancient animate-inanimate distinction.

Also highly relevant is the fact that the Phrygian oblique cases were not formed with the addition of a *lo-*suffix, which was the case in Greek. Certainly, the Germanic data suggests that there did exist a *lo-*derivative from \**még-h<sub>2</sub>* in PIE already (EDG: 918), one which ultimately supplied the Greek stem μέγαλο- of the oblique stems, but its absence from the Phrygian paradigm shows that the generalisation of the *lo-*type in Germanic and the *lo-*type in the oblique cases in Greek were independent processes.

Let us elaborate on the identity of the masculine and feminine nominative singular endings in Phrygian. In Proto-Graeco-Phrygian, old *h<sub>2</sub>-stems*

developed into the non-ablauting  $\bar{a}$ -stems of the feminine gender that served as counterparts to the  $o$ -stem nominals (cf. also Fortson 2004: 119). Proto-Graeco-Phrygian is exceptional in its treatment of old  $eh_2$ -stems by way of having innovated a masculine  $\bar{a}$ -stem category: the usually feminine  $eh_2/\bar{a}$ -stems could be assigned a masculine gender by changing their declension by using endings of the  $o$ -stem type, i.e. by optionally adding an ending  $*-s$  in the nominative singular (adopted from the masculine  $o$ -stem  $*-o-s$ ) and also, most likely, by using the genitive singular ending  $*-so$  after  $*-\bar{a}-$  (adopted from the masculine  $o$ -stem  $*-o-so$ ) instead of the usual feminine  $\bar{a}$ -stem desinence  $*-\bar{a}s$ .<sup>231</sup>

In this highly relevant innovation of Proto-Graeco-Phrygian, a fundamental formal difference would begin to emerge between the feminine  $\bar{a}$ -stems and the masculine  $\bar{a}$ -stems. The nominative singular case form of the former would have been  $*-\bar{a}$ , whereas the latter would have also begun to utilize the ending  $*-\bar{a}s$ . In addition, the vowel length of the two types of neothematic  $\bar{a}$ -stems would have certainly been levelled throughout the paradigm.

Taking into account the Phrygian and Greek data combined, the declension of the reflexes of the paradigm of PIE  $*meg-h_2$  would have been entirely dissimilar to both types. As we may glean from Greek μέγας, the declension of this adjective certainly did not belong to the masculine  $\bar{a}$ -stem type, which should have shown a long vowel. Conversely, the Phrygian nominative singular forms of both the masculine and the feminine were identical and, as such, cannot be a part of the emerging masculine-feminine  $\bar{a}$ -stem differentiation.

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<sup>231</sup> For the genitive singular of the  $a$ -stems, see §III.2.1.2.

The PIE adjective *\*meg-h<sub>2</sub>* must have then showed an idiosyncratic, or at least uncommon, paradigm type in Proto-Graeco-Phrygian, as neither of the languages show the expected productive differentiations at that point. The Greek example ἄγᾶν definitely confirms that, at least initially, Proto-Graeco-Phrygian still preserved an ablauting paradigm in this adjective (EDG 8).<sup>232</sup> Nevertheless, since Greek only preserved this archaic accusative singular form as an adverb, it is possible that the form became fossilised early in Proto-Graeco-Phrygian already, with both languages adopting PGPh. *\*ngǎn* in an adverbial sense and Phrygian either losing the expected *\*ankan* entirely or it not being attested. Should that have been the case, this old accusative would have been replaced by an analogical PGPh. *\*megǎn* that would regularly develop into Greek μέγᾶν and Phrygian *mekan*. If we assume the old ablaut pattern to have persisted until after the disintegration of Proto-Graeco-Phrygian, both languages would need to have independently innovated their new accusatives singular on the basis of the nominative singular.

What we may be sure of is that the declension of PGPh. *\*megǎ-* certainly did not adopt the long *ā* vocalism of the *ā*-stems before the two languages separated; otherwise, the short vocalism of the Greek-specific *λο*-derived stem μέγᾰλο- cannot be explained.

It is unclear whether the Phrygian adjective *meke-* ever adopted *ā*-vocalism in any of its case forms, since we can make no judgement regarding the

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<sup>232</sup> Also of note is the fact that the zero grade of the adjectival root *\*meg-* ‘big’ underlies the Greek intensifying prefix ἄγα- (< PIE *\*mgh<sub>2</sub>-*), comparable to the Avestan intensifying prefix *aš-* (< PIE *\*mgs-*) (EDG 7).

length of the vowel in nom. sg. *mekas*/μεκάς, acc. sg. *μεκάν*, dat. sg. *μεκά*, or dat. pl. *mekais*.<sup>233</sup>

### III.3.1.10 Masculine *a*-stems

Relevant examples: *atas* ‘PN’, *atatas* ‘PN’, *baba* ‘PN’, *iyungidas* ‘(patronymic)’, *kaliya* ‘PN’, *kuliyas* ‘PN’, *mamutas* ‘PN’, *midas* ‘PN’, *tatas* ‘PN’, *μας* ‘DN’, *μιτραφατα* ‘PN’, *πουντας* ‘Pontic’

The masculine *a*-stems are declined identically to the feminine *a*-stems, with the exception of the nominative singular, where they often have a sigmatic desinence *-as* (PhL 76-77; §III.2ff.). This addition of *\*-s* to *a*-stems of a masculine gender is an innovation of Proto-Graeco-Phrygian. The genitive of the masculine *ā*-stems is not attested in Phrygian, but it likely adopted the pronominal ending *\*-ho*, as was the case in Greek (i.e.  $\bar{\alpha}o < *ā-ho$ ) (García Ramón 2017: 658, §III.2.1.2).

In Phrygian, the attested masculine *a*-stems are primarily personal names of a non-native origin: *Atas*, *Atatas*, *Midas*, *Mamutas*, *Tatas*.

In some cases, masculine *a*-stem names do not show the expected desinence *-as*, as is the case in *Baba*, *Μιτραφατα* (loaned from Iranian), and *Kuliya* (PhL 76-77). Indeed, one personal name appears in the corpus in isolation as both *Ata* and *Atas*.

*Πουντας* is used as an epithet of the deity Bas and, due to the preservation of the *nt*-cluster, cannot be native. The lexical stem *pont-* is presumably ultimately borrowed from Greek *πόντος* ‘sea (or specifically Black Sea)’

<sup>233</sup> Dat. sg. *μεκά* in particular can just as easily be a reflex of *\*mekāi* or of *\*mekāi*, since both could have developed into NPh. *μεκά*; see §II.3.3.1. Note that the variant with *ā*, i.e. *\*mekāi*, can be directly compared to Skt. *mahé* < *\*meg-h<sub>2</sub>-ei*.

or a derivation of it, with Πουντας Βας meaning ‘Pontic Bas, Bas of the Pontus’ (LL 1822).

*Iyungidas* is a patronymic appearing in °B-07 in the onomastic sequence *Manes Iyungidas Manitos* ‘Manes, son of *Iyung-*, of Manit’. Synchronically, it is quite clearly a masculine *a*-stem in the nominative singular case. The similarity of the suffix *-idas* to Greek *-ίδης/-ιδᾶς* can hardly be a coincidence, but both cannot be derived from a single Proto-Graeco-Phrygian suffix. This leaves us with two options: 1) the suffix *-idas* is ultimately of Greek origin, but became productive in Phrygian, presumably by being extracted from loaned patronyms;<sup>234</sup> 2) the entire patronym *Iyungidas* is an adaptation of an ultimately Greek form. The latter option seems preferable in light of the fact that no other *idas*-type patronyms are attested in Phrygian. On the other hand, the appearance of such a patronym in an inscription written in the era when Phrygia was under the control of the Persian empire may suggest that Greek-styled patronyms may have been more common than the rest of the corpus suggests.<sup>235</sup>

A masculine *a*-stem with what appears to be a more transparent derivational history is *umnota-*, likewise appearing in inscription °B-07. It appears as part of the nominal phrase *devun umnotan* in the accusative singular case, where *devo-* is well known to be a masculine *o*-stem meaning

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<sup>234</sup> Dardano (2011: 54-59ff.) has proposed that the Greek patronymic suffix *-ιδᾶς* was an adaptation of the Lydian suffix *-(i)da-* used for forming relational adjectives. If that is the case, the same could hold for Phrygian. Against this proposal, Obrador-Cursach (2021a: 61-63) notes that Mycenaean names in *-ιδᾶς*, such as *ti-wi-so-ni-ta-se* Διφισωνίδας, are attested centuries earlier than the Lydian language and that the Lydian suffix *-(i)da-* is not known to form patronyms.

<sup>235</sup> The issue with interpreting *Iyungidas* as being loaned from Greek is that the element *iyung-*, which would have been a part of the father’s name, looks wholly un-Greek in its structure. One could perhaps speculate that the father was referred to, in a Phrygian speaking environment governed by Persians, as Ἴωνικός *vel sim.* ‘the Ionian/Greek’ and that *Iyungidas* is an adaptation of Ἴωνκίδης with syncope of the second *i*-vowel.

‘god’ (cf. Gr. θεός), meaning that *umnotan* must be of the masculine gender as well. *umnota-* is then either the name or the description of some deity. Since *umn-* is known to be a derivational base,<sup>236</sup> *-ota-* is best analysed as a suffix and, in comparative terms, is best directly compared to the Greek agentive suffix *-ό-της* < *\*-o-teh<sub>2</sub>-s* (Risch 1974: 31-38). This suffix, then, must be of Proto-Graeco-Phrygian age already and was likely one of the forms from which the masculine *a*-stem category originated. For further analysis of *umnota-* and the associated verbal form *umnise-*, see §III.3.10.1.2 and §V.3.5 below.<sup>237</sup>

### III.3.1.11 Non-native thematic stems

Phrygian, like any other language, adopted a number of loanwords into its vocabulary. With few exceptions, these tended to be adopted into the language by being assigned to the most common declensional type, i.e. the thematic declension. For the most part, these tended to take the gender that

<sup>236</sup> Compare the clearly related verbal stem *umnise-/ομνισι-*.

<sup>237</sup> One could argue that *umnota-* is the name or the epithet of a deity and that the *a*-stem declension is secondary, only being adopted at a late stage on the basis of other *a*-stem masculines being used for the same purpose. In that case, the sequence *-ota-* would not have been directly inherited from Proto-Graeco-Phrygian. Such an analysis has the issue that one would then need to propose what the form was before the adoption of the *a*-stem declension, but no option is satisfying in that case: an original *t*-stem, i.e. *umnot-*, would be wholly bizarre in derivational terms, apparently being a secondary *t*-stem built to a previously thematic *umno-*, whereas a *to*-type *umno-to-* is incompatible due to the fact that no *-to-* > *-ta-* derivation is known in either Phrygian or Greek. Alternatively, if one adopted the view that *umnota-* shows some non-native derivational base, while no analysis is possible in terms of the lexical root itself, one would still need to account what would have needed to be a synchronic derivational relationship between *umnise-/ομνισι-* and *umnota-*, or rather between the verbal suffix *-sī-* and thematic nominal forms. Such a relationship can be established in a PGPh. framework and is analysed in §III.3.10.1.2. The assumption of a non-native origin for the entire form *umnota-*, rather than the lexical root alone, would need to ascribe such a relationship to chance resemblance.

would be expected from their phonetic make-up in synchronic Phrygian grammar.

Phrygian loaned the following terms from Greek: ακροδμα- from Greek \*ἀκρόδμη ‘high beam’ (PhL 134), ανανκα- from Greek ἀναγκή ‘necessity, force’ (*ibid.*), αωρω from Greek ἄωρῶ ‘untimely’ (*ibid.*), ειλικρινη<ς> from Greek ἐλικρινής ‘pure’ (*ibid.*), ευκι- from Greek εὐχή ‘vow’ (Orel 1997: 329), ζως from Greek ζῶς ‘living’ (PhL 134), καρπο- from Greek καρπός ‘fruit’ (Avram 2015: 211), κορου- from Greek χωρό- ‘land, earth’ (PhL 134), λατομειο- from Greek λατομεῖον ‘grave’ (*ibid.*), ουρανιο- from Greek οὐρανόσ ‘heavenly’ (Orel 1997: 465), *panto*-/*παντο*- from Greek παντ- ‘all, everything’ (LL 1822), σορο- from Greek σόρος ‘coffin’ (PhL 134). Possibly loaned from Greek are *kraniya*- from Aeolic κραννα ‘spring, fountain’ (PhL 134) and *stala*- from Aeolic στάλλα ‘stele’ (PhL 133-134).

It has been proposed that NPh. σαυναμα- is a loan of Hittite *šam(a)na*- (Lubotsky 1993: 132).

*Surgasto*- is possibly a divine name (cf. Gr. Ζεῦς Συργαστής) (Orel 1997: 459) or simply a personal name (cf. Lyd. *śrkaštus* ‘PN’) (PhL 350-351); whatever the donor language whence the Phrygian term was directly adopted was, it has been proposed to ultimately derive from Hittite *šarku/šargau*- ‘eminent, illustrious, powerful’ (Gusmani 1980-1981: 21-27 *apud* PhL 142).

σκελεδρια-/σκερεδρια- ‘?’ is obviously a loanword, since there is no known Phrygian process that could result in an ρ/λ consonantal alternation; the inconsistent spelling must be an attempt at writing a foreign resonant that did not exactly match any Phrygian segment. It is unclear which language

this term was borrowed from; presumably, it was one of the Anatolian languages.

### III.3.1.12 Thematic nominals not otherwise specified

In a language as sparsely attested and as poorly understood as Phrygian, a great number of seemingly nominal forms can only be tentatively assigned to certain broad categories and cannot be internally analysed any further. This sub-category of thematic nominals, then, is populated by those thematic-type nominal formations whose derivation is obscure, either because some of their constituent elements are otherwise unknown or because the derivation had become obscured through other processes.

## III.3.2 *e*-stems

Relevant examples: *ates* ‘PN’, *bateles* ‘PN’, *manes* ‘PN’, *(per)bastidages* ‘PN?’, *polodretes*, *tates* ‘PN’, *voine(s)* ‘PN’, ειλικρινη ‘pure (API?)’, ευκι- ‘vow’, ξευνε- ‘PN’

The *e*-stem nominals are an innovation of the Phrygian language. Due to the fact that they end in a vowel, they may be understood as being parathematic in a sense: the *e*-stems exhibit no ablaut alternations and have the same stem form throughout the paradigm.

Practically all of the *e*-stems that can be identified at this point are either personal names or loanwords (PhL 82-83). Since variants of these names appear in other Anatolian material as well, it is best to conclude that the entire category of *e*-stem nominals emerged after the Phrygian migration

into Anatolia and is, as such, exceedingly young (*ibid.*). The creation of the category would have been primarily fuelled by the adoption of non-native names ending in *\*-e* or *\*-es* (*ibid.*).<sup>238</sup>

Since the loaned names had an unchangeable stem and ended in a vowel, it is not surprising that the Phrygians would have analogically constructed the endings of what is in essence a third vocalic declension on the basis of the *o-* and the *a-*stems.

The endings are:

	ending	origin/analogy
nom. sg.	<i>-es</i>	<i>-e</i> + masc. nom. sg. <i>-s</i>
gen. sg.	<i>-evo</i>	NSg <i>-os</i> : GSg <sup>+</sup> <i>-ovo</i> = <i>-ās</i> : <sup>+</sup> <i>-āvo</i> = <i>-es</i> : X; X = <i>-evo</i>
dat. sg.	<sup>+</sup> <i>-ey</i>	NSg. <i>-ās</i> : DSg <i>-āi</i> = <i>-es</i> : X; X = <i>ei</i>
acc. sg.	<sup>+</sup> <i>-en</i>	NSg <i>-os</i> : ASg <i>-on</i> = <i>-ās</i> : <i>-ān</i> = <i>-es</i> : X; X = <i>-en</i>

Table #20: The *e*-stem endings of Phrygian (cf. PhL 83).

No plural forms of *e*-stems are attested, which is hardly surprising given the fact we are dealing with a category mostly restricted to personal names.

One example of an *e*-stem nominal that seems to have been created entirely within the Phrygian languages is the personal name *Bateles*. Obrador-Cursach (2022: 147) suggests that we are dealing with a derivation from

<sup>238</sup> Brixhe (CIPP2 77) has proposed that some of what are referred to here as *e*-stems emerged from nouns ending in an ablauting suffix *\*-h<sub>1</sub>*, where *e* is simply the vocalized zero-grade *\*-h<sub>1</sub>*. This assumption is unlikely in light of the fact that, at least at the earliest stages, we are dealing with a category restricted to onomastic material that has widespread comparanda throughout other local languages; there is no need to assume an Indo-European origin for a category that evidently emerged to accommodate non-native material.

the name of the deity Bas (stem *bat-*) with the first part of the suffix comparable to the known suffix *-elo-*: *bat-el-*. It seems reasonable to assume that an adjective <sup>+</sup>*batelo-* ‘pertaining to Bas’ could have been remade into a personal name by being transferred into the *e*-stems, a category replete with onomastic material.

ειλικρινη is evidently a loan from Greek ειλικρινής ‘pure’ (PhL 134), though the ending it uses is unexpected: the two nominal elements of the phrase καρπυς ειλικρινη ‘fruits pure (dat. pl.)’ (where *-υς* is a variant spelling of *-οις*, i.e. the dative plural *o*-stem ending) do not seem to syntactically agree. However one analyses this phrase,<sup>239</sup> what is clear is the fact that the Greek masculine *η*-stem (where Greek <η> had the phonetic value [ē] at the time) was adopted as an <η>-stem in New Phrygian, and, since Phrygian at the time would not have distinguished vowel length, it would have presumably been an *e*-stem.<sup>240</sup>

This example suggests that, by the New Phrygian era, Greek *η*-stems would have been loaned into Phrygian as *e*-stems. The other New Phrygian example of a loanword from a Greek *η*-stem noun is the accusative singular form εικιν, loaned from Greek εὐχή ‘vow’ (cf. Orel 1997: 329). In that specific case, the noun was evidently borrowed as an *e*-stem εικε-.<sup>241</sup>

<sup>239</sup> Either by taking ειλικρινη as an adverbial form of some kind or by assuming that /-eis/, the expected *e*-stem accusative plural form, which we would expect to have been written <εις> or <ης>, lost its final *-s* for some unknown reason.

<sup>240</sup> Note that /i/ would never have been rendered as <η> outside a pre-vocalic environment. On the other hand, /e/ or /ei/ could have been written as <η>.

<sup>241</sup> The spelling <ιν> for /en/, found in the accusative singular ending, is a common occurrence in New Phrygian.

### III.3.3 *i*-stems

Relevant examples: *kelmi-* ‘DN’, *saragi-* ‘(the river) Saragis’, διουνσι- ‘Dionysos?’, οινι- ‘?’

The attested *i*-stem nouns in Phrygian are generally poorly understood. The forms that do admit an analysis appear in either the nominative or the accusative singular cases (PhL 80-81, LL 1825). The remainder of the forms either display enigmatic endings or may not belong to this category at all.<sup>242</sup>

The attested endings of the *i*-stems are:

	ending
nom. sg.	- <i>i-s</i>
acc. sg.	- <i>i-n</i>

Table #21: The *i*-stem endings of Phrygian.

διουνσι- and *kelmi-* are probably not of native origin; the former is most likely the Phrygian adaptation of Greek Διόνυσος ‘Dionysus’ (PhL 213) and the latter is the name of one of the three Dactyls, known in Greek as Κελμῖς (Neumann 1997: 22).<sup>243</sup>

<sup>242</sup> The accusative singular ending /in/ would have been spelt <in>/<iv>, which could also be used to spell /en/. Determining whether a specific lexeme belongs to the *i*- or the *e*-stems, when its only attestation is in the accusative singular case, then, is contingent on other considerations.

<sup>243</sup> The actual etymological origin of Gr. Κελμῖς and Phr. *kelmis* is unclear, but it is unlikely to have originated in either of those languages. \**kelm-* cannot be an Indo-European root, and it is difficult to derive \**kelmi-* from a PIE root \**Kel-*. More likely, the naming and concept of *kelmis* was adopted from some Anatolian tradition, either into both languages and cultures or, more likely, into one of the two, presumably Phrygian, whence it was diffused into the other.

οιτι- currently defies interpretation (PhL 315).<sup>244</sup>

*saragi-* is a river-name without a clear etymology. By virtue of the fact that it begins with *s-* followed by a back vowel, a Phrygian origin is less likely than an origin in some other language (for the loss of inherited initial *\*s*, see §II.3.1.2.5).<sup>245</sup>

### III.3.3.1 *ti*-stems

Relevant examples: *toti-* ‘gift’, *tuvati-* ‘PN?’, μορτι- ‘death’

In PIE, the *ti*-suffix was used to form abstract nouns in the feminine gender. The original ablaut declensional pattern of *ti*-suffixed nouns was proterodynamic: strong stem *\*CeC-ti-* ~ weak stem *\*CC-tei-* (Meier-Brügger 2010: 342-343).

Greek is known to have levelled the root vocalism of the oblique cases, as evidenced by examples like NSg *στάσις* ~ GSg *στάσεως* (Risch 1974: 39).<sup>246</sup> The primary question that needs to be answered in respect to Graeco-Phrygian *ti*-abstracts is, then, whether the levelling of the oblique root vocalism took place in Proto-Graeco-Phrygian already.

The prime example of a *ti*-abstract in Phrygian is *toti-* ‘gift’, appearing in the accusative singular form *totin*, which has been identified by Ligorio (2018). Since the word is only attested in Old Phrygian, which does not

<sup>244</sup> Since only the nominative *οιτις* is known, it is also entirely possible that we are dealing with a *t*-stem, i.e. *\*oinit-*. Indeed, this might be the preferable interpretation, since we have an attested form *οιτιου* (presumably an *o*-stem in the accusative singular) and *iT*-type nouns were likely derivationally paired with *o*-stem nouns. See further in §V.3.5.

<sup>245</sup> The only source of initial *sa-* that is conceivable would have likely been early sequences *\*tja-* or *\*kja-*, but such a development is by no means secure. See §II.3.2.3.5.

<sup>246</sup> Many other Indo-European languages likewise show the levelling of oblique root vocalism in its *ti*-abstracts, e.g. Latin in NSg. *mors* < *\*mr-ti-s*.

graphically distinguish between *o* and *ō*, the word could theoretically continue both a levelled *\*dh<sub>3</sub>-ti-* and an archaic *\*deh<sub>3</sub>-ti-*, though Ligorio opts to interpret it as arising from the former based on a comparison with Greek *ti*-abstracts, thereby implicitly assuming that the levelling took place in Proto-Graeco-Phrygian already. The rest of the simple *ti*-suffixed nouns that we have attested in Phrygian are not understood well. Nevertheless, the word *μροτις* fortunately seems to provide us with enough information to come to a conclusion. The only sensible interpretation of the word is as a *ti*-noun: *μρο-* functions as the root element and *-τι-* is the suffix. Structurally, the element *μρο-* can really only be understood as a zero-grade of a root *\*mer-*: the inscription in which it appears post-dates the *ō > u* development (as evidenced by *γλουρεος* ‘golden’ < *\*glōrejos* < *\*gh<sub>3</sub>-r-eio-*). In simple mechanical terms, other reasonable possibilities for what the root element might have been are effectively disproven by this fact: *\*mreh<sub>3</sub>-ti-* > *\*\*μρουτι-*, *\*mrh<sub>3</sub>-ti-* > *\*\*μρουτι-*. Unless one is willing to conceive of some variant of *ti*-derivation that would see the suffix appended to a thematic noun with an *o*-grade, the conclusion must be that the form *μροτις* can only have arisen from an earlier *\*m<sub>ɣ</sub>-ti-*. This, then, effectively answers the question of which ablaut grade of the strong stem of *ti*-nouns was synchronically preserved in Phrygian: the zero grade. We may thus endorse Ligorio’s assumption that the zero-grade of the root was levelled throughout the paradigm of *ti*-nouns in Proto-Graeco-Phrygian. The rest of the *ti*-stems are not analysed as easily. They appear in contexts where their meaning is unclear, so our ability to interpret them is severely hampered.

### III.3.3.2 *sti*-stems

The term *areyasti-* ‘(divine epithet)’ appears as an epithet of Mother Kybele in the syntagm *materan areyastin* (PhL 181). At first glance, it appears to be a *ti*-stem noun in the feminine gender. The precise meaning of *areyasti-* is unknown, though one cannot but be struck by the similarity to Greek ἄριστος ‘best’. It is indeed quite likely that both terms do indeed originate in the PIE root *\*h<sub>2</sub>er-* (cf. LIV<sub>2</sub> 269-270), though their derivational histories must be quite different, since no single antecedent, even if part of an ablauting paradigm, can explain the co-occurrence of Greek short *-i-* and Phrygian *-eja-*. Even a fully hypothetical transponate *\*h<sub>2</sub>(e)r-ih<sub>2</sub>-s/T-* ~ *\*h<sub>2</sub>(e)r-e-ih<sub>2</sub>-s/T-* or a Sievers doublet *\*h<sub>2</sub>(e)r-ih<sub>2</sub>-s/T-* ~ *\*h<sub>2</sub>(e)r-ijh<sub>2</sub>-s/T-* simply cannot be reconciled with the short *ι* of Greek. For this reason, the two words, while likely ultimately stemming from the same PIE root, must have entirely separate derivational histories. Greek presumably formed an *isto*-type superlative adjective from the root: *\*h<sub>2</sub>er-isto-*.

The derivational history of Phrygian *areyasti-* is apparently complex. The *-eja-* element obviously brings to mind the very common *eja*-feminines (for which see §III.3.1.4), but the presence of the cluster *-st-* is puzzling; since the form is not simply *areyati-*, which we would expect if a *ti*-noun were formed directly on the basis of an *ejo*-type *areya-*, such a derivation is impossible. Also unlikely to bear fruit is any explanation that would connect this *st* with the same cluster in the Greek adjectival suffix *-ιστο-*, which derives from the zero-grade of a comparative suffix *\*-is-* and the adjective forming suffix *\*-to-* (Risch 1974: 88-89): the Phrygian form is not *\*\*areyaysti-*, so the disappearance of *\*i* is unmotivated, and, in

addition, the Phrygian form is not thematic. The suffixes Phr. *-sti-* and Gr. *-ιστο-*, then, can hardly be related.

Two Phrygian forms do seem to show the presence of the same suffix: the personal name *Αγδιστις* (PhL 181) and the Hesychian gloss *ἄκριστιν . πέπτριαν. ἀλετριδα. Φρύγες*. ‘female baker. female slave who grinds corn. Phrygian’ (PhL 414-415).<sup>247</sup> *areyasti-*, *Αγδιστις*, and *ακριστι-* refer to female figures. Clearly, then, the suffix *-sti-* was used to create a form that refers to a female individual, possibly having an agentive function.<sup>248</sup>

The etymology of this suffix is currently a mystery, since too many possible antecedents could underlie it, especially if one takes into account the possibility of suffixal re-analysis and backformation. For the time being, we must content ourselves with having identified the suffix at all.

Obrador-Cursach (PhL 181), on the other hand, rather derives the term *areyasti-* from a local place name (likely related to Luwic *\*ariyatt(i)-* ‘elevation’) (as proposed by Berndt-Ersöz (2006: 84)), citing *Αγδιστις* as a derivation from *Agdus*. This is also an entirely valid possibility but it is conspicuous that three different feminine nominals end in *-sti-*.

<sup>247</sup> Obrador-Cursach (PhL 414-415) supposes that *ακριστιν* was in fact a local Greek word, where it would have been related to *ἀχρησία* ‘disuse’, *ἀχρηστός* ‘useless’, and *ἀκρηστής* ‘useless’ (all from *\*ἀ-χρησ-*, with the second element derived from *χράσμαι* ‘to yearn, desire’), with the semantics having to do with slaves being called ‘useless’ in some dramatic sources. This is not the only possibility, however. If we take *-sti-* as a native Phrygian suffix, the similarity could be coincidental, and the Phrygian term could in principle derive from the word for field, Gk. *ἀγρός*, which would presumably surface in Phrygian beginning with *\*akr-*. The meaning ‘baker, someone who grinds corn’ could have easily developed from ‘someone who works the field’: *\*akr-i-sti-*.

<sup>248</sup> Taking into account the previous footnote, even if *ἄκριστιν* is in fact loaned or not a Phrygian word at all, the existence of *Αγδιστις* and *areyasti-* is sufficient to postulate the existence of a Phrygian *-sti-* suffix.

### III.3.3.3 “Unexpected” *i*-stems and *i*-stem endings

A number of forms that appear at first glance to belong to the *i*-stem declension seem to show a word-formation pattern that is generally unexpected for this category. They are characterised by the fact that they cannot have originated as *i*-stems that were formed directly from a lexical root and show the presence of unexpected suffixal elements or by exhibiting otherwise unattested endings.

The forms in question are: <sup>+</sup>ακρι-, ματι, ματια, ζελκια ‘greens, vegetables’, τακρις, παρτιας, *toʃia*, *kelmi-* ‘Kelmis, one of the Dactyls’, *klami-*, *derali-*, *telemi-*. To the best of our knowledge, none of these are personal names, with the possible exception of *toʃia*.

Let us first consider the clusters of a resonant followed by *i*: in <sup>+</sup>ακρι-, τακρι-, *kelmi-*, *klami-*, *derali-*, and *telemi-*, we find a nominal form that seems to behave like an *i*-stem and where the preceding sequence cannot directly derive from an inherited lexical root, since PIE roots could not end with a sequence *\*-CR*.<sup>249</sup> Thus, these seem to be either secondary or non-native *i*-stems at first glance.

*kelmis* presumably declines like a normal feminine *i*-stem, but the term is obviously loaned from some other local language: it refers to one of the Idaean dactyls, so it is a divine name (Neumann 1997: 22, PhL 269). This name is derivationally unlikely to be Phrygian since it includes a suffix *-mi-*, which is not known to underlie a Phrygian derivational pattern. We may note that both *kelmis* and *klami(v)* seem to share both the first two consonants *k-l* and the derivationally suspect element *-mi-*. This is quite a

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<sup>249</sup> The *i*-less stem *deral-* does not end in a *-CR* sequence, but is nevertheless treated here, since there is no way to segment this word in a manner that would be congruent with the *i*-stem being derived directly from a lexical root.

remarkable coincidence. While it is highly unlikely that the two could be related in terms of Phrygian word-formation processes, some ultimate relationship between *kelmi-* and *klami-*, presumably in the donor language, appears likely.<sup>250</sup>

The endings of *deraliv* and *klamiv* have not been explained satisfactorily so far. The desinence *-iv* is reminiscent of *tubetiv* found in the same inscription, though that form appears to be a verbal form with the ending *-ti*, with *-v* appearing as a written hiatus filler before a rounded vowel. The inscription in question does write a word-final vowel with an accompanying glide at least three times (e.g. *dedasitiỵ t-*, *tubetiṽ o-*, *ituỵ##*); this glide would have presumably been the result of a dialectal phonetic breaking of a word-final vowel ( $i > ij$ ,  $u > uv$ ) and would assimilate in terms of labiality to a following segment.<sup>251</sup> While the inscription is unreadable immediately following *klamiv*, *deraliv* appears immediately before *mekas*, explaining the presence of *v* through /*derali*/ > dialectal [*deraliṽ*] > [*deraliṽ*] /  $\_C[+labial]$ . We may reasonably suppose that the final glide of *klamiv* can be explained in the same manner as well. There is little reason to suppose that an actual ending *-iv* existed (*contra* LL 1819), since it is not found anywhere else. *derali* and *klami*, then, show a simple desinence *-i*. There can be no other option but to interpret them as synchronic *i*-stem neuters in the NASg case form.

We must similarly interpret *telemi-*. The form appears immediately following an nom./acc. sg. neuter indefinite pronoun *kin* (PhL 355),

<sup>250</sup> Both were apparently easily taken over into Phrygian as *i*-stems (as was the case for Κελμίς in Greek). The pattern *kel-mi-* ~ *klV-mi-* has a notably Indo-European feel to it, i.e. it appears as if the two variants could derive quite easily from PIE *\*kel-m-* ~ *\*k<sub>l</sub>-m-*. The donor language may well have been Indo-European.

<sup>251</sup> For another example of an assimilation of a word-final glide, consider also *apeley porniyoy* °B-07 < dat. sg. *\*apeley*, though the glide was phonemically and etymologically present in this case.

presumably with indefinite nominal semantics: *kin telemi* ‘some *telemi*’. While the meaning of *telemi* cannot be ascertained at this point, interpreting the form as a nom./acc. sg. (*ibid.*) of an *i*-stem neuter works well in the immediate syntactic context, where a nominal phrase in the accusative seems to be linked to another nominal phrase in the accusative through the conjunction *ayni* ‘or’: *yos tivo ta* (acc. pl.) *spereta* (acc. pl.) *ayni kin* (acc. sg.) *telemi* (acc. sg.) ‘whosoever *tivo* these *spereta* or some *telemi*’.

Another attested form that may have ended in *-i* is  $\mu\alpha\tau\iota$ , though this is ultimately unlikely: Brixhe has proposed previously that a *-nm-* sequence was disallowed in Phrygian, simplifying into *-m(:)-*, possibly even across word boundaries (CIPP2 18).<sup>252</sup>  $\mu\alpha\tau\iota$  appears immediately before  $\mu\alpha\kappa\rho\alpha\nu$ , where the second element is most likely the accusative singular of the feminine adjective *makra-* ‘big, great’. If  $\mu\alpha\tau\iota-$  declined as a feminine *i*-stem (NSg.  $^+\mu\alpha\tau\iota\varsigma$ ), its expected accusative singular form would have been  $\mu\alpha\tau\iota\nu$ ; indeed, the form  $\mu\alpha\tau\iota\nu$  appears in the same inscription. The phrase  $^+\mu\alpha\tau\iota\nu \mu\alpha\kappa\rho\alpha\nu > \mu\alpha\tau\iota \mu\alpha\kappa\rho\alpha\nu$  would then be syntactically perfectly correlated (PhL 294-295), meaning something like ‘the big *mati*’. Since the inscription in question is poorly understood, one may argue that no final *-v* was present on the phonemic level and that  $\mu\alpha\tau\iota$  does represent an *\iota*-final form (*ibid.*); nevertheless, the assumption of an *-v* lost through assimilation is more elegant.

Four other forms that need to be discussed together are  $\mu\alpha\tau\iota\alpha$ ,  $\zeta\epsilon\lambda\kappa\iota\alpha$ ,  $\pi\alpha\rho\tau\iota\alpha\varsigma$ , and  $to\uparrow ia$ . What these forms share is the presence of an *i*-formant

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<sup>252</sup> Consider also Vine (2010), who argued that *imen-* is ultimately derived from *\*en-men-*, suggesting the same development. The form *immeney* would have been a graphical or an etymological restoration of the original constituent parts.

that obviously cannot belong to the lexical root, but does not show any of the otherwise attested *i*-stem declensional endings either. All of these forms show the addition of the vowel *-a* after the *i*-formant, which is a curious state of affairs; in a masculine/feminine *i*-stem paradigm, there is no case form that includes *-a-*. One other option must be considered in these examples: we know that in New Phrygian, the vowels /i/ <ι> and /e/ <ε> merge when immediately preceding the vowel /a/ <α> (and presumably other vowels as well) and are written interchangeably (cf. the pair *τεαμας* ~ *τιαμας*). Presumably, such a graphical sequence of a non-low front vowel and /a/ included a glide [j], which could but need not be phonological, between the two vocalic elements: <εα>/<ια> [ejja]. In the examples *ματια*, *ζελκια*, and *παρτιας*, the written <ι> may then just as well represent the phonological vowel /e/, meaning that the forms in question need not be in any way related to *i*-stems.

The Hesychian glosses are usually given in the accusative case, so we may note that *ζελκια* is translated with a Greek form showing the NAPL neuter ending *-α*, i.e. Gr. *λάχανα* ‘vegetables’. *ζελκια*, at least, then, must show the NAPL neuter declensional ending *-a*. For this form, there are, in principle, three possibilities: 1) *ζελκι-* is a neuter *i*-stem (NASg. <sup>+</sup>*ζελκι*), 2) the actual neuter stem was thematic *ζελκιο-* (NASg. <sup>+</sup>*ζελκιον*), 3) the neuter stem was a thematic *ejo*-formation *ζελκε/ιο-* /*zelkejo-* (NASg. <sup>+</sup>*ζελκε/ιον*). *ζελκια*, insofar as it can be trusted as a gloss, is likely to have as its underlying lexical root a reflex of PIE *\*ǵ<sup>h</sup>elh<sub>3</sub>-*. The manner in which this root element developed so as to result in the form found in *ζελκια* must have been quite convoluted, but the semantic match and the regular development of the PIE initial *\*ǵ<sup>h</sup>el-* into Phr. *ζελ-* are too congruent for one to dismiss the etymological equation (PhL 419). The creation of a stem

ζελκ- requires one to explain the lack of  $*h_3 > o$  and the addition of κ, for both of which there exist a number of possibilities.<sup>253, 254</sup>

Let us now consider whether ματια and *to↑ia* need to be analysed as *i*-stems. In the case of ματια, the clearly related ματι discussed above seems to decline like a regular feminine *i*-stem.<sup>255</sup> We may suppose that ματια did decline as a neuter *i*-stem, which would explain its ending -α from PIE  $*-i-h_2$ . In that case, however, if we wished to claim that ματι and ματια must be case forms of the same word, as opposed to being merely derivationally related, since the ending -α of ματια cannot be a part of the feminine *i*-stem paradigm, we would have to assume that ματι is of the neuter gender as well. As we have noted above, while this cannot be excluded, the perfect syntactic convergence of a feminine  $^+ματιν$  and a feminine μακραν would need to be abandoned. Note that both ματι and ματια appear as the penultimate words in their respective verses. A parallel situation is found

<sup>253</sup> For the apparent lack of  $*h_3 > o$ , Orsat Ligorio (p.c.) has suggested to me that the root ζελ- was extracted from a thematic formation  $*g^helh_3-o- > *dzēl-o-$ , with the element  $*o$  reinterpreted as belonging to the thematic stem.

<sup>254</sup> The -κ- likely belonged to a derivational suffix. One possibility is that Phrygian created a -ko- nominal derivative:  $*dzēl-ko-$  (as assumed by Obrador-Cursach (PhL 419)).

<sup>255</sup> Note that the unwritten word boundary in the sequence ματια οινουν, which ends a verse, is assumed on the basis of οινις, seemingly somehow related to οινουν, appearing as the final word of its verse. A segmentation ματι οινουν would then suggest that the two are wholly unrelated, which seems questionable, especially in light of the repetition of ματι and ματια as the penultimate words in their respective verses. Also note that οινουν cannot reasonably write a Phrygian word: a word initial [aoi] would be wholly unprecedented, whereas οαι cannot spell [aui], since this inscription consistently writes [u] as <υ> before high vowels (cf. κινυ and κισυις) and as <ο> before low vowels (cf. κοροαν and κοροος). If one rejected the form ματια outright, the only other reasonable solution would be to segment the sequence as ματι α οινουν, with α acting as a preposition to οινουν. This runs into unsurmountable difficulties as well. There is no preposition α in Phrygian at all, there is only evidence for αδ and ας. ας is known to attach to a noun in the accusative case: no matter the phonetic realisation of οινουν, a final -ς of ας would not be lost before it (cf. the preserved word-internal [su] of κισυις). If αδ were nevertheless used with the accusative case, we would expect such a sequence to be written  $**αδ οινουν$ , which is also evidently not the case.

with οἰοῦν and οἶος appearing as the final word in their respective verses. The latter two are evidently derivationally related in some manner, but cannot be case forms of the same word. The poetic figure underlying this parallelism is the polyptoton, the poetic repetition of two or more synchronically clearly related non-identical derivations. There is no reason to assume that ματι and ματια cannot have also been used in the same manner. Following this line of reasoning, the lexemes underlying ματι and ματια would not have been the same. Assuming that ματι- was a feminine *i*-stem, it is questionable to propose that a neuter *i*-stem ματι- (whose NAPI case form would have been ματια) could have also existed. Rather, it is far simpler to assume that the neuter stem underlying ματια was ματιο- (NSg <sup>+</sup>ματιον). Derivationally, such a ματιο- can be either: a) a thematic derivative of some kind from the feminine *i*-stem ματι-, either with the direct addition of -ο- or by the addition of the suffix -ijo-, i.e. *mati-* + -ο- >> ματιο- [matijo-] (with automatic insertion of the glide) or *mati-* + -jo- >> ματιο- /matijo-/; b) a thematic derivative in -ijo- (the Sievers variant of the suffix -jo-) to a root or stem ματ-, i.e. *mat-* + -ijo- >> ματιο- /matijo/; c) a thematic derivative in *ejo* to an already existing nominal stem ματ-, i.e. *mat-* + -ejo- >> ματιο- /matejo-/.<sup>256</sup>

Ultimately, the matter hinges on whether the lexical root underlying ματι and ματια was <sup>+</sup>*ma-* or <sup>+</sup>*mat-*; if the former, ματια must be derived from a *ti*-stem ματι- (i.e., options a) or b)); if the latter, ματια may just as well be an *ejo*-adjective (i.e. option c), in addition to options a) and b)).

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<sup>256</sup> Since we have now abandoned the idea that ματια must be a case form of an *i*-stem, if we are dealing with a thematic derivative, we no longer need to assume that the ending -α must necessarily encode the neuter NAPI ending. This final -α may just as well be the nominative singular of the *a*-stems. Since the syntactic function of ματια is currently unknown, no secure verdict is possible.

The form *to↑ia* is, in some ways, more problematic. This word is actually spelt as *toTia*. Since <T> is also used to write Greek *sampi*, we cannot be absolutely certain what the phonetic value of this sign was. It is most likely to have been a local variant of <↑>, and it will be treated as such here. The inscription in which *to↑ia* appears reads: *deΨetito↑iatiei*. We may clearly delineate word boundaries for *deΨeti* and for *tiei*, the former being the verbal form (cf. PhL 159) and the latter being the indirect object in the dative singular ('to Ti-') (PhL 358). We will follow the assumption that the verbal root underlying *deΨeti* is PIE *\*d<sup>h</sup>eg<sup>h</sup>-* 'to burn' (§II.1.1.4 and §V.3.9.3); the meaning of the verb is largely irrelevant for the syntax, so alternative meanings may be substituted if one were to disagree with this proposal of the meaning of the verb.

It is disputed whether the sequence *to↑ia* represents a single word. Obrador-Cursach (PhL 368) claims that *to↑i* must be an *i*-stem personal name in the nominative singular without the usual ending *-s*, functioning as the only possible agent of the sentence, where *a* must then be a preposition governing the indirect object (i.e. presumably <sup>+</sup>*ad* with its final stop assimilating to a following consonant, as is the case in New Phrygian). This need not necessarily be the case, however. Since the verbal agent is marked in the verbal ending, the subject of the sentence may also have been unexpressed if it were understood from the context. While Phrygian does sometimes drop the word-final *-s* of masculine *a*- and *e*-stem names, no such dropping of the nominative ending is found in *i*-stem personal names (though, admittedly, the examples of *i*-stem personal names in the nominative singular are few in number). Furthermore, the use of a preposition like *ad* before a dative case form that encodes the indirect object, i.e. the generic beneficiary of a verbal action, is actually far rarer than its absence for this specific function. It seems more likely that *to↑ia*

must be taken as a single word, again showing the desinence *-ia*. We then have two options on how to analyse this form: 1) following Obrador-Cursach's reasoning that this clause must, or is at least likely to, include a named agent, *to↑ia* is a masculine *a*-stem name appearing without its word-final *-s* or, alternatively, a feminine *a*-stem name; or 2) the desinence of *to↑ia* is either the desinence of the NAPL of a neuter *i*-stem *to↑i-*, the neuter NAPL or feminine *a*-stem NSg of a thematised *i*-stem *to↑i-(j)o-*, or the neuter NAPL or feminine *a*-stem NSg of a thematic *ijo*-derivation to a stem *to↑-*, i.e. *to↑-ijo-*.<sup>257</sup> If the former analysis of *to↑ia* as a personal name is correct, it would function as the agent and no further commentary is necessary; the sentence would translate as '*To↑ia(s)* ought-to-burn to/for-Ti-'. If the latter is correct, however, *to↑ia* can be interpreted both as possibly representing the verbal agent or not. If *to↑ia* was not a personal name, but nevertheless represented the verbal agent, *-ia* can only be the NSg of a feminine or masculine *a*-stem. If *to↑ia* is not the verbal agent, however, *-ia* can only reasonably represent a NAPL neuter ending, either from a neuter *to↑i-* or from a neuter *to↑i(j)o-* (NASg <sup>+</sup>*to↑ion*), with the form being the direct object. In that case, *deΨeti to↑ia tiei* would translate as '(s)he-ought-to-burn the *to↑i(o)s* to/for-Ti-'. None of the given options appear inherently superior to the others; if some reasonable etymology for *to↑i(o)-*, or, alternatively, some attestation of an Anatolian name that could have surfaced as <sup>+</sup>*to↑i(a)* in Phrygian could be found, the matter may yet be resolved.

<sup>257</sup> Note that, in contrast to ζελκία and ματία, the *-ia* is unlikely to represent a phonological sequence /eja/. The merger of the front non-low vowels before another vowel is a feature of New Phrygian. While such a merger may have already been somewhat productive in some variants of Old Phrygian, Old Phrygian seems to distinguish etymological sequences of /eja/ and /ija/ well, as is suggested by *nīptiya* < \**-ija* ~ *tiveya* < \**-eja*.

Finally, we may examine the form *παρτιας*, which we cannot do without also taking into account the forms *παρτης*, *παρταν*, and *παρτυς* (PhL 327). Even if none of the forms have a good explanation at this point, it ought to be clear that they all ultimately derive from a stem *παρτ-*. Whether *παρτ-* is itself is a lexical root or already a secondarily derived stem from some earlier *παρ-* is irrelevant for the purposes of analysing *παρτιας*. At least in this case, the origin of the desinence is unambiguous: no *i*-stem nominal could have ever appeared with the desinence *-ιας*. In this case, we are explicitly dealing with a thematic case form of an *a*-stem, almost certainly the genitive singular. The derivational history of *παρτια-* does remain obscure, however. We may equally suppose that: 1) an *i*-stem noun *\*parti-* became thematised (with an addition of *-o-* or *-jo-*); 2) an early stem/root *\*part-* was extended with the thematic suffix *\*-ije/o-*; 3) an early stem/root *\*part-* formed an *\*-ih<sub>2</sub>* feminine noun, with the suffix being in the Sievers variant *\*-ija-*; 4) a nominal stem *\*part-* or *\*parto-* formed a nominal *ejo*-derivative *\*partejo-*. The forms we have attested give some minor clues on how they themselves and how *παρτιας* ought to be analysed. *παρταν* and *παρτυς* obviously cannot derive from *i*-stems; it may be appealing to consider them case forms of a thematic nominal *παρτο-*, with *παρταν* showing the acc. sg. feminine *a*-stem desinence, and *παρτυς* being an adverbial form in *-ōs* derived from a nominal stem (cf. the pair adjective *mekā-* ‘big, great’ >> adverb *mekōs* ‘greatly’, as well as Greek adverbs in *-ως*),<sup>258</sup> though deriving them both from a consonant stem *παρτ-* is just as reasonable, with *-αν* being the consonant stem acc. sg. ending, and the adverbial formant *-ōs* quite clearly not being limited to thematic stems. The only form that can be theoretically analysed as an *i*-stem in addition to

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<sup>258</sup> See §VI.4.

παρτιας, and this is speculative, is παρτης, whose syntactic function cannot be clearly determined. It could theoretically derive from a nom. pl. *i*-stem \**part-ej-es*, a dat. pl. *i*-stem \**part-ej-eis*, but, more likely, from the nom. pl. or dat. pl. of a consonant stem \**part-* (cf. the nom. pl. form πατερης of the consonant stem πατερ- and the dat. pl. consonant stem ending *-eis* in γουμεις °130<sup>NW</sup>). Assuming a dative plural could have a locative meaning, as would not be unexpected, the form παρτης may well have functioned in an adverbial fashion, which would at least explain its clear use as an adjunct in inscription °118<sup>W</sup>: τετι(ο)κμενος ειτου διωσ κε ζεμελωσ κε παρτης ‘condemned may-he-become among both gods and men *partης*’.

Thus, when comparing παρτιας to the other form showing a stem παρτ-, the simplest solution that accounts for all the forms is to assume the existence of a *t*-stem παρτ-, of which παρταν and παρτης would be case forms, παρτυς a derived adverb, and παρτια- a derived thematic *-ejo-* or *-ijo-* or an athematic *-ija* < \**-ih<sub>2</sub>* nominal formation. Other analyses are possible, of course, but they all require a greater number of derivational differentiations between the attested forms. For the time being, then, it is most parsimonious to assume that the stem παρτ- did not form a derived *i*-stem.<sup>259</sup>

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<sup>259</sup> We may note that it is difficult to imagine a PIE lexical root that would surface as παρτ- in Phrygian. The vocalism is especially problematic: it cannot originate from a zero-grade formation like \**prt/d-*, since a vocalic \**r* next to a labial apparently developed into *-ro-* in Phrygian (cf. μορτι- < \**m<sub>r</sub>-ti-*; see further in §II.3.2.2.2). The *a*, if inherited, could only have originated from the presence of \**h<sub>1/2</sub>* or from a long grade \**ē*. Neither option seems particularly appealing: if the former, the lexical root would need to be of the shape \**peh<sub>1/2</sub>rt/d-* or \**ph<sub>2</sub>ert/d-*, both of which are mere transponates, as no such root is known; if the latter, the lengthened grade needs to be explained in some way. Even assuming a lexical root that would surface as Phrygian *par-*, from which παρτ- would be a derived *t*-stem, has some issues. In terms of a laryngeal explanation for Phrygian *-a-*, there is no comparative evidence that would suggest a PIE root \**peh<sub>1/2</sub>r-* ever existed. For any derivation of *part-*, the lengthened grade of a lexical root would need to be explained.

The forms we have not analysed yet are <sup>+</sup>*akri-* and τακρι-. Ultimately, whatever the derivational sequence is, τακρις is likely to be in the nominative singular case (PhL 352, CIPP2 19): it appears in the syntactic phrase βλασκον κε τακρις κε, a clearly coordinated nominal phrase, where it is difficult to conceive of some analysis where the two elements would not be syntactically coordinated, with the NASg neuter ending -ov corresponding to a NSg ending -ις. τακρις, then, may be a synchronic feminine *i*-stem. Derivationally, however, interpreting τακρις as such is extremely suspect in Indo-European terms: the reflex of the lexical root would need to be *\*tak-*, to which two separate derivational formants, first *\*r* and then *\*i*, would need to be added. Since only the nominative singular case form of τακρι- is known, a derivational analysis that does have precedent within Phrygian is possible. A lexical root *\*tak-* would first be extended with a thematic adjective-forming suffix *\*-ro-*, giving *\*takro-*. Thematic forms were apparently the base from which *\*iT*-abstract nouns were formed, thus *\*takro-* ‘pertaining to *tak-*’ >> *\*takrit-* ‘*tak*-ness’.<sup>260</sup> The nominative singular case of the *iT*-abstracts in Phrygian would regularly surface as *-s*, which would then explain τακρις.

As far as <sup>+</sup>*akri-* is concerned, the form is hypothetical, since we have extracted it from ακριστι-, a *sti*-derivation from, presumably, a nominal formation. Formally, the same analysis as for τακρις applies.<sup>261</sup>

<sup>260</sup> For the *it*-stems in Phrygian, see §III.3.10.1.2. One such pair of a thematic formation associated with an *it*-abstract is <sup>+</sup>*umno-* (extended into an agent noun *umnotā-*) ~ <sup>+</sup>*umnit-* (in a denominal aorist stem *umnis-* < *\*umnit-s-*). Another such pair may be οivo- (of acc. sg. οινου) ~ οινις (nom. sg.). This derivational association is also known in Greek, cf. πύξιδ- ~ πύξο- ‘box’.

<sup>261</sup> An interpretation of <sup>+</sup>*akri-* as actually being an *it*-stem <sup>+</sup>*akrit-* is likewise possible; <sup>+</sup>*akrit-* + *-sti-* would certainly also surface as ακριστι-.

### III.3.4 *u*-stems

Relevant examples: *alus* ‘PN’, *nidus* ‘PN<sup>?</sup>’, *ti(v)*-/τι- ‘Ti-’, *vasu-* ‘PN’, μδυ- ‘part of the grave’

The attested *u*-stems of Phrygian appear to have generally shown the same stem throughout the paradigm, with the exception of the PN *vasu-* (PhL 80-82).

The attested endings of the *u*-stems are:

	ending
nom. sg.	- <i>u-s</i>
gen. sg.	- <i>os</i>
acc. sg.	- <i>u-n</i>
dat. pl.	- <i>u-ei[s]</i>

Table #22: The *u*-stem endings of Phrygian.

*alus* is likely a personal name appearing three times, always alongside the apparently verbal form *si↑eto*.

The meaning of *nidus*, presumably in the nom. sg. case, is not known (PhL 310).

μδυ- is a term that refers to some part of a grave complex (Haas 1966: 78).

It appears as an addition to the curse formula: ιος νι σεμουν κνουμνι κακον αββερετορ αινι σας μδυει[ °73<sup>W</sup>. The use of αινι and a nominal form in the dative case after the verb usually introduces a second part of the grave that ought not to be damaged. In the case of μδυει[, the -ει- suggests that the form is dative, but since the inscription is broken off immediately afterwards, we cannot be certain whether the form was actually dat. sg.

μδυει or the expected dat. pl. μδυει[ς]. The preceding demonstrative pronoun σας is best analysed as being in the dative plural case of the feminine gender (+*sāis*) (§IV.3.3),<sup>262</sup> which then suggests that the same holds for the following word, meaning that μδυ- was a noun of the feminine gender (as also assumed by Obrador-Cursach (PhL 296)).

The initial cluster of μδυ- has long been noted as likely being of a non-native origin. Haas (1966: 78) was the first to propose that μδυ- is the Phrygian adaptation of Lydian *mruwa-/murwa-* ‘stele’ or some other closely related Anatolian lexeme; cf. the apparently related Lyd. *mlōla-*, *mlwēnda-* *mlwēsi-*, which refer to some part of the grave complex (Melchert 1994: 373). Since μδυ- seemingly appears in the plural, it is unlikely that it would have meant ‘stele’. As such, it is unlikely that Phrygians borrowed Lyd. *mruwa-* with its original meaning intact. Either the term underwent some slight semantic shift, or the original term underlying Phrygian μδυ- was one of the other candidates mentioned above or some other related variant.<sup>263</sup>

The personal name *vasu-* appears three times in the corpus, in the forms *vasus*, *vasos*, and *vasous* (PhL 238). In all three instances, it appears close to the term *kanutievān-*, an *-evān-*-type noun that is used to form either a

<sup>262</sup> It is true that we cannot entirely discount the possibility that σας is in the genitive singular case of the feminine gender and that its use next to the apparently dative μδυει[ς?] is due to case syncretism, though actual examples of similar conflation are few and far between (cf. ιος σαν κακουν [...] μικκαι °60<sup>E</sup>, though in that case, the unexpected use of the accusative singular form of the pronoun is likely the result of the unexpected word order where σα- is not immediately followed by the noun it refers to). Since a reading μδυει[ς] is not counterindicated in any way, proposing that we are dealing with an instance of case syncretism is wholly unnecessary.

<sup>263</sup> The adaptation of a non-native /mr/ as a Phrygian μδ makes the most sense if one assumes that the non-native /r/ was a tap or a flap in this environment, whereas the native Phrygian /r/ would have been a trill, meaning that the speakers found [d] to be a closer approximation of the non-native rhotic.

title or a patronymic. The appearance of *vasu-* in °P-02 is comparatively easy to understand: *sest bugnos vasos kanutievanos*. Since *kanutievanos* is in the genitive singular case, the same is likely to hold for *vasos*. The inscription then translates as ‘this [is] Bugnos [son of] Vasus *kanutievais*’. The fact that *vasos* seems to show no evidence of *-v-* has led Brixhe (1990: 70-71 *apud* PhL 238) to suppose that *v* was lost before *o*, which is indeed very likely; gen. sg. *\*vasvos* > *vasos* (LL 1822, PhL 238).<sup>264</sup>

The forms *vasous* °P-03 and *vasus* °P-05 are likely to be the forms of the nominative singular (LL 1825). In °P-03, all other nouns are in the nominative singular forms: *vasous iman mekas kanutievais devos ke mekas* ‘*Vasous*, *Iman* (PN) great, *kanutievais* and the god great’ (PhL 238). For *vasus*, which appears as part of a broken off initial sequence *vasus kanutie[*, Obrador-Cursach (*ibid.*) assumes it to be in the nominative singular on the basis of the ending *-us*, which can indeed hardly be anything else in the context of a *u*-stem. The spelling *vasous*, he suggests, shows hesitation between *o* and *u*, and may even be an attempt at a correction during engraving.<sup>265</sup> In his reckoning, the name *vasus* was /*vasus*/ in phonological terms.

Brixhe (1990: 70), on the other hand, has suggested that the spelling vacillation between *u* and *ou* rather suggests an attempt at spelling some vowel other than /*u*/, presumably [ō], which would have developed from earlier *\*ōu*. The name would then have originally had the nominative singular form *vasōus* (LL 1820, 1825).

Orel (1997: 292, 466) has proposed that the name *vas(o)u-* derives from some reflex of Proto-Anatolian *\*uaššu-* ‘good’. Similar sounding names

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<sup>264</sup> Such a development will also serve to explain the declension of *tiv-* further below in this section.

<sup>265</sup> For a similar hesitation between *o* and *u*, he compares the fragment *]eivanous[* °G-250, which can hardly be anything other than a spelling variant of gen. sg. *-evanos*.

can be found in the area: Οασις and Ουασσης (in Cilicia), Ουασασας (in Lycia); Obrador-Cursach (PhL 238) suggests that the Phrygian name is the hypocoristic of a Luwian personal name like *Wasurunti(ya)-* or *Wasusarma-*. Since the Phrygian name is of a non-native origin, it seems preferable to assume that the spellings *-ou-* and *-u-* were meant to represent /u/, rather than the reflex of *\*ōu-*; the ablaut pattern nom. sg. *\*vasōus* ~ obl. *\*vasu-* would be quite unexpected in a personal name that was only loaned into the language after the Phrygians had already migrated into Anatolia.

The divine name *Tiv-* < PIE *\*diu-* needs to be analysed in light of the declensional pattern its PIE antecedent had.<sup>266</sup>

Originally, the PIE root *\*dei-* ‘day, sky’ formed a *u*-stem noun: nom. sg. *\*dēi-u-* (EDG 498-499). Subsequently, this noun was re-analysed as a root noun that had the following declension: nom. sg. *diēu-s*, gen. sg. *diu-o/es*, dat. sg. *diu-ei*, acc. sg. *\*diēm* > *\*diēm* (via Stang’s law).

The case forms of *tiv-* ‘Ti-’ attested in Phrygian are: gen. sg. NPh. τιος (LL 1825), dat. sg. OPh. *tiei*, NPh. τιε, τη, τι (the latter before vowels) (LL 1825),<sup>267</sup> acc. sg. OPh. *tivan*, NPh. τιαν (LL 1825).

In the New Phrygian era, the stem of this lexeme in the oblique cases and the accusative was τi-. In the Old Phrygian era, the stem was likely to have been *tiv-*, directly reflecting PIE *\*diu-*. The loss of *-v-* in the stem was a comparatively late development, as is suggested by the etymology, the form *tivan*, and what appears to be the feminine derivative *tiveya* ‘PN?’.

<sup>266</sup> This divine name is commonly translated as “Zeus” on the basis of the etymological connection to Greek Ζεύς. I follow those scholars who use the Phrygian stem *Ti-* as a translation, as the nominative is still unknown.

<sup>267</sup> Brixhe (2002: 7) gives that possibility that Old Phrygian *tiei* °NW-101 is the dative singular form of the divine name also attested in New Phrygian GSg τιος, DSg τιε, ASg τιαν. Should Brixhe be correct, the form would imply that the *-v-* was analogically lost in the dative in the Old Phrygian era already.

The loss of *-v-* in the stem by the New Phrygian era was analogical from the genitive singular case form: the original gen. sg. *\*tiv-os* would have regularly lost *v* before the vowel *o* (cf. *\*vasvos* > *vasos*), giving the attested gen. sg. *tios/τιος* (cf. LL 1822). This oblique stem would have then spread to the remainder of the paradigm.

The accusative singular case form OPh. *tivan*, NPh. *τιαν* presents an interesting conundrum.<sup>268</sup> In Old Phrygian, the *-v-* is apparently present in the accusative case, and, since the PIE acc. sg. form *\*d(i)iēm* did not preserve a *\*u*, we must conclude that the introduction of *v* into the accusative singular case was analogical.

In principle, there are two explanations for the form *tivan*:

- 1) *tivan* is an entirely innovative acc. sg. form, created from the oblique stem *tiv-* while it still showed *-v-* and the acc. sg. consonant stem ending *-an* (cf. Greek acc. sg. *Δία*);<sup>269</sup>
- 2) the original PIE acc. sg. form *\*dijēm* developed regularly into PPh. *\*tijān*, and then had its stem analogically levelled into *tiv-* on the basis of the oblique cases, while preserving the original ending: *\*tijān* >> *tivān*.

The subsequent loss of *-v-* in NPh. *τιαν*, if directly descended from OPh. *tivan*, is likely to be analogical, as was the case in dat. sg. *τιε*.<sup>270</sup>

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<sup>268</sup> The sequence *tiv[ | n* in °B-07 where there is enough room for one letter can hardly be read as anything other than *tivan*; the missing letter must certainly be a vowel, and no other vowel seems a likely substitution. Syntactically, the form in question must be an accusative singular, as it is part of a coordinated nominal sequence *tiv[.]n ke devu[.] ke umnotan*. Semantically, the reference to the divine name *tiv-* is extremely fitting; the following element of the sequence is *devun* ‘god (acc. sg.)’. The whole phrase *tivan ke devun ke umnotan* means ‘both *Tiv-* and the god *umnotan*’, with all its elements in the accusative singular case.

<sup>269</sup> Greek *Δία* was created in the same manner (oblique stem *\*δι(F)-* + acc. sg. consonant stem ending *-α*) and replaced earlier *Zῆν* < *\*djēm* (Chantraine 1999: 399).

<sup>270</sup> Obrador-Cursach (PhL 359) assumes NPh. *τιαν* to be a direct reflex of PIE *\*djēm* (or, rather, its Sievers variant *\*dijēm*): PIE *\*dijēm* > PPh. *tijān* > OPh. *\*tian* > NPh. *τιαν*. Such a development cannot explain the OPh. form *tiv[a]n*, however, which Obrador-Cursach

The developments of the divine name *Tiv-/Ti-* were then:

	gen. sg.	dat. sg.	acc. sg.
PIE/PGPh.	* <i>diuos</i>	* <i>diuei</i>	* <i>d(i)iēm</i>
PPh. I	* <i>tivos</i>	* <i>tivei</i>	* <i>tijān</i>
PPh. II	* <i>tivos</i>	* <i>tivei</i>	* <i>tivān</i> / * <i>tivan</i>
OPh.	* <i>ti.os</i>	* <i>tivei</i> / <i>ti_ei</i>	<i>tivān</i> / <i>tivan</i> = < <i>tivan</i> >
NPh.	<i>ti(j)os</i> = <τιος>	<i>ti(j)ej</i> = <τη>	<i>ti(j)an</i> = <τιαν>

Table #23: The development of the case forms of the PIE noun \**diēus*. The underlined elements in the forms are analogical. Otherwise, regular phonetic developments are assumed.

### III.3.4.1 The masculine personal suffix *-avos*

A nominal with the apparently thematic suffix *-avo-* always appears as a designation for some individual or as part of a sequence including a personal name (PhL 86-88):

*adoikavoi* ‘to Adoikavos (dat. sg.)’ °G-02, *ates arkiaevais akenanogavos* (nom. sg.) °M-01, *bonok akenanogavos* (nom. sg.) °W-01a, *akinanovagan tiyes modrovanak* °M-04, *olgiavos asakas* °G-150, *baba memevais proitavos* kΦ*iyanaveyos* °M-01b, *bba memeveis protaitavo[s]* k↑*ianaveyos* °M-02.

Such nominals must have been used for designating some individual. It seems unlikely these would have been proper personal names; rather, the

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considers an “unclear sequence”. The only other possibility is that NPh. *τιαν* does directly reflect PIE \**dijēm* and that OPh. *tivan* is a dialectal form that had the intervening *-v-* introduced analogically and which was not a direct antecedent of *τιαν*. Postulating the existence of a dialectal form seems unnecessary to me, however, since it needlessly complicates the scenario for no additional explanatory benefit, especially in light of the fact that we know that *-v-* was in fact lost in the oblique case forms of this lexeme by the New Phrygian era.

context suggests that these were either additions to personal names (such as, for instance, patronyms) or titles of some kind.

Most likely, *akenanogavos* was a religious title of some sort.

First of all, that *akenanogavos* is a title is already explicitly clear from the fact that the term appears alongside two different personal names: *ates arkieavais akenanogavos* °M-01a, *bonok akenanogavos* °W-01a (PhL 170).

Inscription °M-01a reads: *ates arkieavais akenanogavos midai lavagtaei vanaktei edaes*. In this sentence, *ates* (personal name) *arkieavais* (addition to personal name) *akenanogavos* (title) is the subject of the sentence and the indirect object (i.e. beneficiary of the verbal action) is Midas, given in the dat. sg. case: *midai lavagtaei vanaktei* ‘to Midas, commander and king’. The whole sentence ultimately translates as ‘Ates [...] to Midas [...] placed’. The object being placed is not directly expressed, but it is clear from the context that it refers to the monument on which the inscription appears (cf. CIPP 8-9).

°M-09 is fragmentary and entirely uninformative: ]*ake-ano*[.

We may attempt to analyse inscription °W-01a: *bonok akenanogavos materan areyastin vrekun tedatoy; yostutut---a-m-noy akenanogavos aey* ‘Bonok, the *akenanogavos*, had the sculpture (of) Mother Areyastis made. Whosoever *tutut---a-m-noy*, *akenanogavos* may-he-be.’ (cf. CIPP 36-39, Lubotsky 1988) In the first segment of this inscription, we learn that Bonok, who is *akenanogavos*, commissioned a monument for the Great Mother. The latter segment seems to be a conditional sentence of some sort. The actual conditional relative clause is unfortunately too poorly attested to be read and analysed, beyond noting that it begins with the pronoun *yos* typical for this type of syntactic constructions. Our analysis proceeds from the

assumption that *akenanogavos aey* is the resultative clause that lays out the consequence of the condition being fulfilled, in this case, ‘may-he-be *akenanogavos*’, with *aey* being the 3sg perfect subj. form of the verb ‘to be’ with a jussive meaning.<sup>271</sup> Following such a syntactic framework, the meaning of the sentence is clearly not imprecative. We may interpret this segment of the monumental inscriptions as a set of instructions on how to become *akenanogavos* or how to properly emulate the qualities of *akenanogavos*: ‘Bonok, who is *akenanogavos*, did this. Whosoever [does X], may they (also) be *akenanogavos*.’. In this case, ‘doing X’ would presumably mean doing something similar or identical to Bonok.

Such an interpretation does hinge on how we approach reading the monument as a whole, however. Lubotsky (1988) has previously analysed the form *aey* as a 3sg indicative perfect of the verb *\*h<sub>1</sub>es-* ‘to be’. While this is ultimately unlikely, his reading of the inscriptions on the monument as a whole is certainly a viable possibility; we need only substitute his interpretation of *aey* as an indicative perfect form for a subjunctive perfect. Lubotsky took the whole sequence *yostutut [...] aey* to be a single relative conditional clause meaning ‘whosoever [afterwards] is *akenanogavos*’.<sup>272</sup> This clause would be followed by another relative conditional clause found

<sup>271</sup> No analysis of *aey* as a nominal form seems viable. Lubotsky (1988) has previously interpreted *aey* as a 3sg perfect form of the verb ‘to be’ (< *\*h<sub>1</sub>e-h<sub>1</sub>s-e + -i*), but the addition of a primary *-i* to an indicative perfect form is an unlikely development. An analysis of the form as a subjunctive *\*h<sub>1</sub>eh<sub>1</sub>s-e-i* > PPh. *\*āei* with the regular athematic subjunctive ending *-ei* (>> *aey*) is more probable. See further in §V.2.5.

<sup>272</sup> With there being only two examples of the subjunctive known in Phrygian, *aey* and *podaskai*, the actual functions of the subjunctive in Phrygian, beyond it being an *irrealis* mood, are not known. Thus, while we know from *podaskai* that a subjunctive has a jussive meaning in a main clause, we cannot say anything about its function in a dependent clause, which may well have been simply conditional. The same situation is found in the *sigmatic optatives*, which encode potentiality in relative conditional clauses and jussivity in main (resultative) clauses. See further in §V.1.2.

on the same monument: *yosesait materey eveteksetey ovevin onoman daΨet* ‘whosoever to this Mother *eveteksis* [his own?] name puts’. The consequence is laid out in the third clause: *lakedokey venavtun avtay materey* ‘may he himself be seized by Mother herself’. In this interpretation, Bonok, who is *akenanogavos*, is warning the following *akenanogavos* to refrain from putting their own name on the monument that he commissioned: ‘Bonok, the *akenanogavos*, had this monument made for Mother *Areyastis*. Whoever should be *akenanogavos* after me (and) should put their own name on the monument, may they be seized<sup>7</sup> by the Mother.’

The novel analysis given above and Lubotsky’s analysis ultimately differ in terms of which segments of the monument ought to be read as continuous.

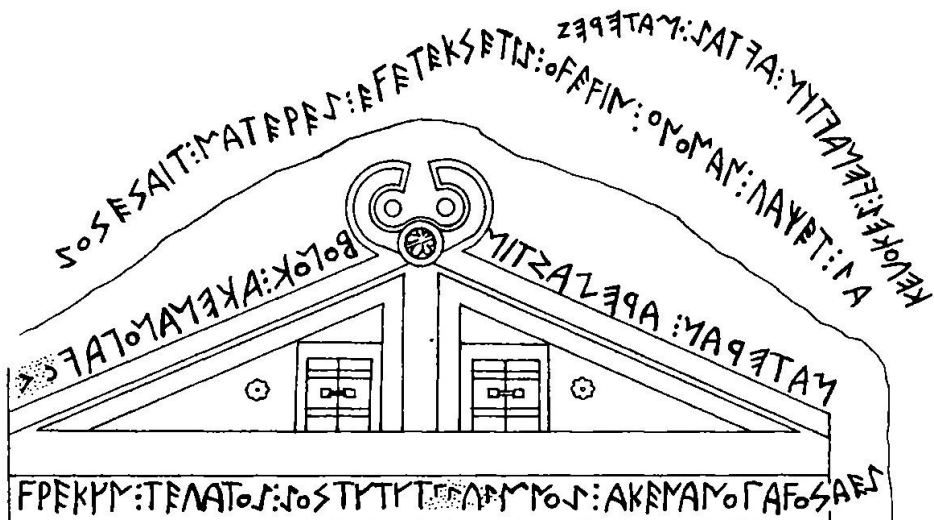


Image #4: A drawing of the *Areyastis* monument (Lubotsky 1988: 10).

The inscription(s) of the *Areyastis* monument are separated into the following segments by Brixhe-Lejeune (CIPP 36-41):

W-01a-II [A] *materan areyastin*;

W-01a-III [B] *bonok akenanogavos*;

W-01a-I [C1] *vrekun tedatoy* [C2] *yostutut[-----] akenanogavos aey*;

W-01b [D] *yosesait materey eveteksetey ovevin onoman daΨet, lakedokey venavtun avtay materey*.

The first sentence in any justifiable reading is clearly comprised of *A-B-C1*.<sup>273</sup> Lubotsky (1988) takes the approach that this is then immediately continued by *C2-D*, which forms an imprecative sentence of its own.

The approach taken in this work is that the *A-B-C* segments comprise a separate section of the inscription that is more concerned with the placement of the monument (*A-B-C1*) and the title *akenanogavos* (*C2*), with section *D* being a separate imprecative formula that applies generally with no direct relation to the other segments. At least to the author of this work, this seems more likely than Lubotsky's reading, where *C2* and *D* would constitute the same sentence, despite the physical distance between the end of *C2* (in the lower left corner of the monument) and the beginning of *D* (in the upper right part of the monument).

The meaning of *akenanogavos* as a title of some sort also seems to be confirmed by the syntax of °M-04: *akinanogavan tiyes modrovanak* [. Without delving on the ending *-an* too much at this point, we may note that the form is quite clearly in the accusative case, whereas the other elements

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<sup>273</sup> In syntactic terms, it is entirely irrelevant whether the sequence is *A-B* or *B-A*. Whenever *A-B* is written, *B-A* is also a possibility with no change in meaning.

are most likely in the nominative singular. The beginning (and only readable part) of this inscriptions then has *tiyes modrovanak* (nom. sg.) ‘Tiyes, the *Modro*-king’ as the subject of the sentence, with *akinanogavan* being the direct object (CIPP 23).

Clearly, then, *akenanogavos* must be a title of some sort (PhL 170). The clear association of the title with Mother *Areyastis* in °W-01 and the contrast between <sup>+</sup>*Midas lavagtas vanak*, who seems to hold no religious function, and *Ates Arkiaevais akenanogavos*, who placed the monument for the former’s benefit, likely indicates that the secular and religious hierarchies were separate, with *akenanogavos* belonging to the latter.

The other two nouns in which the suffix *-avo-* appears are less informative. *proitavos* appears twice, but always in the same onomastic sequence: <sup>+</sup>*baba memevais proitavos k↑ianaveyos* (CIPP 10, 257). In both cases, the entire sequence clearly refers to the same individual, *Baba*. There is very little we can say about this sequence, beyond noting that all the elements are masculine and in the nominative singular and that *avo-*stem follows the *evan-*stem which follows the personal name, as in *ates arkiaevais akenanogavos*. The precise function and meaning of *proitavos* remain ambiguous in this case, however. Whereas we have enough examples of *akenanogavos* to draw the conclusion we are dealing with a title of some sort, the same claim cannot be made for *proitavos* (cf. PhL 336-337).

The final instance of the suffix *-avo-*, in *olgiavos*, appearing in °G-150 *olgiavos asakas* (CIPP 135-137), gives no further clues, beyond suggesting that an *avo-*nominal can appear after what seems to be a personal name (in this case, *asakas* (PhL 184).

What we may clearly see from the examples that are available to us, the suffix *-avo-* was used in at least one religious title and in a possible element of the onomastic formulae. Based on this consideration and the sequence *av*, it has been suggested that *-avo-* ultimately derives from a masculine personal suffix *\*-eu-* (nom. sg. *\*-ēus*) (PhL 86-88).<sup>274</sup> In Greek, the reflex of this suffix formed the *-εύς* type nouns, which refer to masculine individuals, agents in some instances, but other types of masculine derived nouns with a reference to some specific individual in others (Risch 1974: 156-159). The inheritance of *-avo-* for a Proto-Graeco-Phrygian suffix with a strong stem *\*-ēu-* and a weak stem *\*-eu-* is both formally and semantically fitting.

This etymological identification now allows us to further analyse the Phrygian suffix *-avo-*. If the element *av* of the suffix originated in PGPh. *\*ēu*, there is nothing peculiar about the first stage of its development: as we already know, Phrygian did not undergo Osthoff's law. As such, *\*ēu* would develop regularly into *\*āu* > OPh. /āu/ <*av*>.

The attested nom. sg. form *-avos* suggests that this suffix was secondarily thematised before the advent of the Old Phrygian era (Lubotsky 1988: 12, PhL 86-87). This is, however, where we run into an issue. The nominative singular forms are all congruent with this explanation.

The form *akinanogavan*, with its unexpected ending, seems to appear as the direct object of the sentence with its final word poorly readable in inscription °M-04: *akinanogavan* (acc. sg.) : *tiyes* (nom. sg.) : *modrovanak* (nom. sg.) : *avara*? Lubotsky (1988: 12) has proposed that the ending *-an* belongs to a feminine *a*-stem accusative singular. In this case, the stem

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<sup>274</sup> Cf. Gr. *ἰππεύς*.

*akinanogava-* would be a feminine thematic counterpart to the masculine thematic *akenanogavo-* and would be a religious title used to refer to Mother Kybele herself. Since inscription °M-04 actually appears on the goddess's throne itself, this interpretation of the form is extremely fitting.

The suffix *-av(o)-* is also found in an onomastic element that is repeated twice: *k↑iyan-av-eyo-*, which is an *ejo-*derivative from a noun *+k↑iyan-av(o)-*.<sup>275</sup> The meaning of this onomastic element or, rather, of *+k↑iyan-* remains obscure (PhL 283). The cluster *k↑-* is only found in this one lexeme and it is difficult to ascertain what sound(s) it would have transcribed to begin with. Certainly, this would not have been a native sound or combination of sounds.<sup>276</sup> The entire term may well have been derived from a local title of some kind, though most authors prefer to derive it from a geographical term. A connection with the city name Tyana (Gr. Τύανα, Hitt. *Tuwanuwa*) has been proposed (Vassileva 2008: 167), but as Brixhe-Lejeune (CIPP 257) point out, it is difficult to connect the initial Phrygian consonant cluster with the Anatolian form. Obrador-Cursach (PhL 283) suggests a possible connection with the Bithynian city Κίος (also Κιανίς), but this also fails to properly explain the initial consonant cluster of Phrygian.

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<sup>275</sup> The suffix *-ejo-* appears to have attached itself primarily onto both thematic and athematic nominals. The suffix has an identical shape for both, so if the underlying noun is not known, we cannot ascertain its thematic or athematic nature on the basis of an *ejo-*derivation. See also in §III.3.1.4.

<sup>276</sup> It is more or less impossible to imagine any inherited sequence of segments that would produce a result written with *k↑-*. The only possibility for this sequence to be in any way inherited would be to assume an earlier *\*kV↑-* that underwent syncope into *kə↑-* that was written without the schwa (noted as a possibility by Brixhe (1982: 233)). Otherwise, we would expect the resulting inherited cluster as a whole to undergo voicing assimilation into *\*\*g↑-*. There is some marginal evidence that syncope could have produced a reduced vowel ə (§VI.2.4), but that process only appears to have been operational in the proclitic reduction of *-i* after the Old Phrygian era.

We may note that <↑> spelt either /dz/ or /z:/; at this point presumably still the former. From a purely graphical rendering, we should then read a preliminary /kdz/. Phrygian does not allow clusters of mixed voicing, so, more properly, we are dealing either with /gdz/ or /kts/. While assimilation of voice is usually anticipatory in Phrygian, if the cluster as a whole were actually voiced, there would have been no reason to write it with initial <k> instead of <g>. What we are dealing with, then, is a non-native sequence that would have been interpreted or at least thought to be best spelt as if being /kts/.<sup>277</sup> What non-native sound the Phrygians who used the term would have interpreted as /kts/ is difficult to guess at. There are a number of possibilities, from *bona fide* consonant clusters of [k] and an affricate or sibilant, to affricates such as [ts] or [tʃ],<sup>278</sup> sounds that would have sounded vaguely affricate-like to the Phrygians, like [tʰ] or [kʰ], or something else entirely. As a result, it is easy to project all kinds of possible local terms into <sup>+</sup>k↑iyan-, with the only constraint being which phonetic characteristics one is willing to ascribe to the donor language and how the Phrygians would have interpreted those: e.g. even a slight secondary articulation of the initial dental in Tyana/Τύανα/Tuwanuwa, [tʰuana-] or [tiyana-], could be argued to have been re-interpreted by the Phrygians as some sort of an affricate that they would have written with <k↑>,<sup>279</sup> or a slight fronting of

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<sup>277</sup> Compare also <↑s>, the only other written consonant cluster that includes the arrow sign. In this case, <↑s> = \*/dzs/ can really only write [ts] or some other voiceless affricate, which would not have been a native phoneme or consonant cluster in Old Phrygian. k↑- would have been seen as sufficiently clear way to write a non-native otherwise unknown \*kts-, instead of needlessly complicating the spelling by using something like \*\*<k↑s>.

<sup>278</sup> While <↑s> does almost certainly spell a voiceless affricate of some kind, a different strategy for spelling a voiceless affricate could have easily been adopted by the scribe(s) of this inscription if no such sound existed in Phrygian at all.

<sup>279</sup> Or a local alveolar value for [t] that would be seen as closer to an affricate, or a local slightly delayed release of a stop when compared to Phrygian, among many other theoretical possibilities.

the velar in Κιωνίς could have had the Phrygian re-interpret [k̄iani-] as [k̄jiani-] = [k<sup>dj</sup>iani] with an affricated release.

As such, it is currently a fruitless endeavour to speculate on which exact local term could formally fit the spelling of <sup>+</sup>k̄↑iyan-. Any possible candidates, while certain needing to phonetically broadly fit the Phrygian form, ought to be evaluated from a semantic and a locally contextually pertinent perspective first, as well as from the standpoint of what meaning an *-av(o)-eyo-* construction in Phrygian would have actually encoded. With this in mind, no final verdict on the origin of this term will be made here.

Returning to the matter of the *avo-*suffix, it was apparently used as a personal suffix used to specify some individual, by forming a title (*akenanogavos*), an individual designation (*adoikavos* ‘PN or some means of designating a specific individual’), and perhaps other types that could be used to refer to individual actors.

The original suffix PPh. *\*-āv-* was thematised (Lubotsky 1988: 12, PhL 86-87), with the *o*-stem variant *-avo-* used to refer to masculine and the *a*-stem variant *-ava-* used to refer to feminine entities.

### III.3.5 *r*-stems

Relevant examples: *brater-/βρατερ-* ‘brother’, *daker-/δακερ-* ‘monument *vel sim.*’, *mater-/ματερ-* ‘mother’, *αναρ* ‘husband’, *πατερ-* ‘father’

The *r*-stems are unique in Phrygian in that every known instance of an *r*-stem noun seems to faithfully reflect the change in vocalism of nouns belonging to this type in PIE: nom. sg. *\*-ēr* ~ acc. sg. *\*-er-m* (PhL 80-81, 85-86, LL 1820, 1825).

The attested endings of the *r*-stems are:

	ending
nom. sg.	<i>-r</i>
gen. sg.	<i>-r-os</i>
dat. sg.	<i>-r-ey</i>
acc. sg.	<i>-r-an</i>
nom. pl.	<i>-r-es</i>
acc. pl.	<i>-r-ais</i>

Table #24: The *r*-stem endings of Phrygian.

The two most transparent examples in perhaps the entire Phrygian corpus are NPl πατερ-ης < PIE *\*ph<sub>2</sub>ter-es* ~ GSg πατρ-ος < PIE *\*ph<sub>2</sub>tr-os* and NSg *matar* < PIE *\*meh<sub>2</sub>tēr* ~ ASg *mater-an* < PIE *\*meh<sub>2</sub>ter-m* both of which preserve the characteristic ablaut pattern of PIE (PhL 198, 294, 328).

What shape the oblique stem variants of non-familial *r*-stems would have taken is unclear. We may only speculate how well the ablaut alternations of *r*-final suffixes would have survived into the various periods of Phrygian; they may either have been levelled (giving obliques of the type *\*-er-*) or preserved (their shape being *\*-r-*).

The singular example of an oblique *r*-stem is the gen. sg. form πατρος ‘of the father’, which clearly shows that this particular word did preserve its ancient oblique stem variant. This also seems to be confirmed by the adjective *patriyo-* ‘fatherly’, which is a *jo*-adjective built to the oblique stem *patr-*. We would do well not to take this example as particularly informative for the situation of *r*-stems in general; as part of the most basic vocabulary, it may well have preserved a more archaic declension than

other members of its morphological category (as is, indeed, the case in Greek) (Chantraine 1999: 863-865).

NSg δακαρ ~ ASg *dakeran* ‘monument *vel sim.*’ is not of PIE age, but was created in either PGPh. or PPh. from the neo-root \**dak-* ‘to make’ (cf. §V.3.9.2) and behaves like a typical hysterodynamic *r*-stem: transponate \**d<sup>h</sup>eh<sub>1</sub>k-ēr*, acc. sg. \**d<sup>h</sup>eh<sub>1</sub>k-er-m* (CIPP2 54, *contra* PhL 86, who assumes the form must have been \**d<sup>h</sup>eh<sub>1</sub>-k-tēr-*).

The noun ↑*ira-*/ζειρα- ‘hand’, which was historically an *r*-stem, has been transferred to the *a-*, i.e. the feminine thematic, declension (PhL 247). Its prehistory merits further consideration, since it provides evidence for two heretofore rarely acknowledged Phrygian phenomena.

The fact that ↑*ira-* and ζειρα- do mean ‘hand’ in Phrygian is difficult to dispute at this point. It was Neumann (1997: 25) who first proposed an association of OPh. ↑*ira-* to NPh. ζειρα-. Formally, associating both with PIE \**ǵ<sup>h</sup>es-(ō)r* ‘hand’ (Hämmig 2013: 150-151) fits if one assumes: 1) a palatalization of PIE \**ǵ<sup>h</sup>* before a front vowel; 2) OPh. <↑> and NPh. <ζ> are used to write the same lineage of phonemes; 3) the vocalism of OPh. and NPh. forms can be reconciled; and 4) the semantics fit.

Probably the biggest breakthrough in terms of understanding the semantics was made once Kloekhorst (2015: 115) identified OPh. *petes* as having the meaning ‘feet’. This suddenly thrust the poorly transcribed (and later lost) inscription °12<sup>S</sup> in an entirely new light; the precative apodosis previously read as ζειρα κε οι πειεξ κε τιττετικμενα ατ τιε αδειννου ‘*zeira* and his *peies* condemned may-they-become’ (cf. Haas 1966 and others) now suddenly made perfect sense once one emended πειεξ into πετεξ: ζειρα(ι) κε οι πετεξ ‘hand(s) and his feet condemned may-become’ (cf. PhL 331).

Following this interpretation, the protasis of °106<sup>E</sup> is also suddenly clear: ιος νι σεμουν κνουμανει κακουν αδοκετ ζειραι ‘whosoever to-this grave a-bad-thing would-do by-hand’ (Hämmig 2013: 150-151).

With regards to the vocalism, we have now managed to identify evidence that OPh. <e> and <i> are used to write a segment /ē/, which corresponds to NPh. <ει> or <ι>. The spelling difference in ↑*ira-* ~ ζειρα- then no longer poses a problem.

For the assumption that the initial segment represents the same phoneme lineage, we may note that the graphemes OPh. <↑> and NPh. <ζ> are extremely rare in the corpus. While no direct identity exists between ↑ and ζ beyond in the word for hand, it would be extremely unlikely for the two graphemes to encode wholly dissimilar sounds, considering hardly any other marginal grapheme could fit the same distribution, both in phonological environment or relative frequency (§II.3.2.3.4).

Finally, the palatalisation of inherited \*ǵ<sup>h</sup> is supported by additional evidence. The Phrygian reflex of \*ǵ<sup>h</sup>*esr-* as ↑*ir-/ζειρ-* is one of the best examples in favour of Phrygian palatalization, i.e. PIE \*ǵ<sup>h</sup>*e* > PGPh. \*ǵ<sup>h</sup>*e* > PPh. \**dze*, but the other evidence in favour of Phrygian palatalization is robust as well (§II.3.2.3.4).

As such, the etymology of ↑*ira-/ζειρα-* as originating in PIE \*ǵ<sup>h</sup>*es-r-* ‘hand’ is difficult to dispute in light of all the evidence. The one apparent issue, the development of \*-*sr-*, will be treated below.

The Proto-Indo-European antecedent of ↑*ira-* was the holokinetic *r*-stem noun \*ǵ<sup>h</sup>*esr*, with its three stem variants being nom.sg \*ǵ<sup>h</sup>*es-r* ~ acc. sg. \*ǵ<sup>h</sup>*s-er-m* ~ obl. \*ǵ<sup>h</sup>*s-r-* (Kloekhorst 2013: 111-115).<sup>280</sup>

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<sup>280</sup> This account of the development of the words for hand in the various Indo-European languages is adopted from Kloekhorst (2013: 111-115 *et passim*), which in my view best

The Phrygian noun  $\uparrow ira-$  is best explained as deriving from the oblique stem of  $*g^hesr-$  which also underlies all the attested forms of the Greek word for ‘hand’, Attic-Ionic χείρ, χεῖρός; Aeolic χήρ, χεῖρός. While there can be no doubt that the Proto-Graeco-Phrygian oblique stem was  $*g^hehr-$ , what its nominative was can only be speculated upon. If the oblique stem had already been adopted to form the nominative at this point, the nominative form would need to be  $*g^hehr$ , surfacing either as  $*g^hehr$  or  $*g^hehr$ . The former option seems suspect in light of the phonotactics of Proto-Graeco-Phrygian. The latter option is then preferable. In any case, this nominative form was replaced in both the daughter languages with a new form based on the oblique stems.<sup>281, 282</sup>

The transfer to the *a*-stems was possibly the result of the noun for ‘hand’ having acquired a feminine gender in PIE, or at least in PGPh., already (cf. Gr. fem. χείρ). We can speculate that the noun was absorbed into the characteristically feminine *a*-stems as a means of saliently marking its grammatical gender.<sup>283</sup>

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explains the Hittite reflexes NSg *keššar*, ASg *kiššeran*, GSg *kišraš*. This account is not universally accepted, however, with the most common alternative appearing in the literature being a reconstruction  $*g^hes-ōr$ ,  $*g^hes-or-m$ ,  $*g^hes-r-$ . Since Phrygian  $\uparrow ir-$  only requires the existence of the (neo-)oblique  $*g^hesr-$  to be explained, both models are compatible with it, with Kloekhorst’s account simply requiring the levelling of the vocalism of the strong stem  $*g^hes-$  into the oblique cases, which likely happened in post-Anatolian PIE already in any case.

<sup>281</sup> The new nominative in the Greek dialects would need to have been independently created multiple times after the disintegration of Proto-Greek itself, i.e. after the resolution of  $*hr$  clusters, which had different reflexes in the dialects, with all the neo-nominatives being extracted from the oblique forms specific to the individual dialects.

<sup>282</sup> Since the nominatives were in any case replaced entirely by a new form originating in the oblique cases, if one adheres to the  $*g^hesōr$  scenario, that nominative would likewise have been entirely replaced. In other words, Greek and Phrygian shed no light on what the nominative singular in PIE, or even PGPh., would have been.

<sup>283</sup> The *r*-stems in PIE did not morphologically distinguish between the feminine and masculine genders, only between animate and inanimate. Once more Phrygian *r*-stems are known, it might be worth examining whether the category itself might not have pivoted in general towards a non-feminine grammatical gender (*matar* being the obvious exception

An important question in the case of  $\uparrow ira-$  is the nature of its vocalism, i.e. why  $*g^hehr-$  +  $*-ā$  should surface as Old Phrygian  $\uparrow ira-$  and New Phrygian  $\zeta\epsilon\rho\alpha-$ . Both of the spellings taken together seem to suggest that the vowel of the first syllable was  $\bar{e}$ .<sup>284</sup> This suggests that a PGPh. cluster  $*ehrV$  developed into PPh.  $*\bar{e}rV$ , with the reflex of this vowel then written as  $\langle i \rangle$  in Old Phrygian (as in *dedasitiy*  $\langle *-s\bar{i}-$ ) and  $\langle \epsilon i \rangle$  in New Phrygian (as in  $\tau\omicron\tau\omicron\sigma\sigma\epsilon\iota\tau\iota$   $\langle *-s\bar{i}-$ ). This would be a development practically identical to that observed in Attic-Ionic.<sup>285</sup>

### III.3.6 *n*-stems

The *n*-stem nominals in the Phrygian corpus can currently be subdivided into three broad categories (PhL 80, 83-84): 1) neuter nouns with a suffix  $-m(e)n$ ; 2) personal names with a suffix  $-evan$ ; 3) *n*-stem nominals not otherwise specified.

One peculiarity of Phrygian *n*-stems is the fact that those *n*-stem nouns which receive a nominative singular ending  $-s$  will show a nominative singular ending  $-is$  rather than  $*-ns$ , in accordance with the usual development of this cluster in Phrygian (i.e.  $*-an + -s > -ais$ ,  $*-on + -s > -ois$ ,  $*-en + -s > ^+eis$ ) (§II.3.2.3.8). In PIE terms, *n*-stems did not possess a sigmatic nominative, so this development is not expected to be found in

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for semantic reasons), which would then explain why the word for ‘hand’ had to have been additionally characterised for feminine gender.

<sup>284</sup> At first glance, one would assume that the vocalism being reflected by these spellings was  $**\bar{i}$ . We may be quite certain, however, that the reflex of PGPh.  $*\bar{i}$  was OPh.  $\bar{e}$ , based on its spelling as either  $\langle e \rangle$  or  $\langle i \rangle$ . There is no reason to presume that Old or New Phrygian ever possessed a vowel  $\bar{i}$  that would have phonologically differed from  $\bar{e}$ .

<sup>285</sup> We may note that Phrygian does not seem to possess any clusters of the  $-sR-$  type, suggesting that these were removed through the operation of sound laws.

strictly inherited material. It applies to the category of names in *-evan-*, which are synchronically declined as *n*-stems, but originated from a sequence *\*-e-uant-*, declined originally as dental stems. As such, while unexpected in synchronic terms, the sigmatic nominative *-evais* of these names is diachronically entirely regular.

The attested endings of the *n*-stems are:

	ending	
	masc.	neut.
nom. sg.	<i>-n-∅ / -i-s</i>	<i>-n-∅</i>
gen. sg.	<i>-n-os</i>	
dat. sg.	<i>-n-ey</i>	
acc. sg.	<i>-n-an</i>	<i>-n-∅</i>

Table #25: The *n*-stem endings of Phrygian.

### III.3.6.1 Neuter nouns with a suffix *-m(e)n*

Examples: *keneman* ‘niche’, *onoman* ‘name’, κνουμαν ‘grave’, κολταμαν- ‘deathbed?’, κορουμαν- ‘graveplot?’

The PIE ablauting suffix *-m(e)n* in the neuter was primarily used to form action or resultative nouns from a verbal root (e.g. *\*genh<sub>1</sub>-* ‘to beget’ >> *\*genh<sub>1</sub>-m<sub>ṅ</sub>* ‘that which is begotten’ > Skt. *jāniman* ‘generation’, Lat. *genimen* ‘fruit’) (PhL 83).

In Phrygian, the suffix is used in much the same manner (PhL 83, LL 1825-1826):

*keneman* ‘niche’ < ‘that which is dug’ < PIE *\*k<sup>w</sup>(H)enh<sub>1</sub>-mn* (PhL 269-270);

κνουμαν ‘grave’ < ‘that which is scratched/scraped’ < *\*knuH-mn* (PhL 274-275);

*onoman* ‘name’ < ‘that which is named’ < *\*h<sub>3</sub>nh<sub>3</sub>-mn* (PhL 317).<sup>286</sup>

The suffix was apparently also productively used to form new nouns with a specialized meaning from other nouns into at least the post-Old Phrygian era. An example of this use is κορουμαν ‘graveplot’, which sees κορο-, a loan from Greek χώρο- ‘land’, extended with the suffix *-man* to form a new Phrygian noun with a more specific meaning (Avram 2016: 125; PhL 83, PhL 278).<sup>287</sup>

κολταμαν- apparently shows this suffix as well, but the preceding structure κολτα- appears to be nominal in origin (possibly *\*g<sup>h</sup>ol(H)-teh<sub>2</sub>-*, though the initial consonant does not match) (PhL 83), suggesting that the suffix *-m(a)n-* was likewise used to form a new noun from an earlier *+kolta-*.<sup>288</sup>

While the use of the suffix *-m(a)n-* is synchronically understood rather well, we ought to turn our attention towards the ablaut pattern seen in the forms and what they suggest more broadly. In PIE, the suffix *\*-m(e)n* was

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<sup>286</sup> I follow van Beek (2011: 52-53) and others who assume that the word for name is not derived from a root *\*h<sub>1</sub>neh<sub>3</sub>-* or *\*neh<sub>3</sub>*. As a rule, the nature of an initial laryngeal can only be ascertained by looking at Greek, Phrygian, Armenian, and Anatolian data, with Graeco-Phrygian being the only branch that faithfully preserves three different reflexes for the three laryngeals. The fact that both Greek and Phrygian agree in the nature of the first vowel proves beyond reproach that the initial vowel in the word for ‘name’ was *\*o* in at least in Proto-Graeco-Phrygian already. There is in any case no good evidence to suppose that the word for ‘name’ began with *\*h<sub>1</sub>* in PIE (*ibid.*).

<sup>287</sup> The fact that κορουμαν- has its first vowel rendered as <o> dates the loan of χώρο- to a point after the *ō > u* change had taken place, which happened after the end of the Old Phrygian era, i.e. the 5<sup>th</sup> century BCE.

<sup>288</sup> For more on the possible meaning and etymology of κολτα-, see PhL 276. The most likely meaning of κολταμαν is ‘deathbed’.

ablauting, following a proterodynamic pattern  $*CeC-mn \sim *CC-men-$  (PhL 83) (Meier-Brügger 2010: 344).

To tackle the issue of root vocalism first, we seem to have two witnesses that support the proposition that the root vocalism was levelled into the zero-grade on the basis of the oblique cases:  $\kappa\nu\omicron\upsilon\mu\alpha\nu < *knuH-mn$ , *onoman*  $< *h_3nh_3-mn$ .

The case of *keneman* is somewhat more complex. In principle, simply looking at the structure of the *kene-* element, the verbal root underlying this noun would need to be  $*K^w enh_1-$ , with the whole construction preserving a full grade:  $*K^w enh_1-mn > keneman$  (cf. Lubotsky 1988: 15). The usual connection made is that to Sanskrit *khan<sup>i</sup>-* ‘to dig’, a root that must have prehistorically shown two laryngeals in Indo-Iranian: one to account for the aspiration in *kh* and another to justify its status as a *set*-root (LIV<sub>2</sub> 344). Further, its initial velar could not have arisen from a palatovelar. An earlier form of *khan<sup>i</sup>-* must then have been  $*k^{(w)}HenH-$ . If we directly compare Phrygian *kene-* to this structure, we must identify the two laryngeals as being  $*h_1$  and the initial velar as being a labio-velar. The final reconstruction of the root (or, rather, stem) in question is  $*k^wh_1 enh_1-$ , whose zero- and full-grade would both surface as Phrygian *kene-*;<sup>289</sup> since the two stem variants would have been identical in Proto-Graeco-Phrygian already, no levelling would be necessary at any point to produce the attested *keneman*.

Since two of the attested inherited *mn*-neuters show a levelling of the zero grade in the root (PhL 83), and the third could not, apparently, distinguish different ablaut grades, we may, for the time being, speculate that *mn-*

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<sup>289</sup> The aspiration in Skt. *khan<sup>i</sup>-* would need to have developed from  $*h_1$ .

neuters as a class were formed with a generalized zero grade in the root in Proto-Phrygian.

The suffix *\*-m̃ñ* was apparently levelled from its nominative-accusative singular variant *-man*; the oblique cases almost uniformly show *-man-* (as in, e.g. DSg κνου-μ̃αν-εἰ) instead of a reflex of the original oblique variant *\*-men-* (PhL 83). The form κνουμ̃ινοϝ, however, has been interpreted as preserving a relic of an unlevelled *\*-men-* in the genitive singular case (which is not attested for *mn*-neuters outside this specific example) (as argued by PhL 83, 275). It is difficult to imagine how this suffix could have remained unlevelled in only a single case form for such a long time. More likely, if the spelling is to be taken at face value at all, the unexpected vocalism is due to some kind of a vocalic reduction, though we must admit that no other case of *a > i* is known.<sup>290</sup>

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<sup>290</sup> The stem κνουμ̃αν- is written in an unexpected fashion in two other examples: κνουμ̃ιαν- and κνουμ̃ιαν-. We have interpreted these two spellings as showing an allophonic nasalization of the initial vowel between two nasals, [knūman-], in §II.2.3.1.3. In κνουμ̃ινοϝ, the unexpected <ι> also appears between two nasals. Perhaps, then, the suffix *-μ̃αν-* may have been realised as [-m̃ān-] at times. If this [ā̃] were reduced in some fashion, presumably due to not being accented, it could have been realised as [ā̃̃]. We know from other New Phrygian examples that <ιν> and <εν> could be used to render [ā̃̃]. This would then explain κνουμ̃ινοϝ as representing a spoken [knūm̃ā̃̃nos]. As such, the phonetic reduction in question would not be [a] > [i], but rather the far more natural [a] > [ə̃], with the use of <ι> being the result of there being no dedicated grapheme for this segment and the coalescence of /in/ and /en/ sequences into [ā̃̃].

### III.3.6.2 *n*-stems originating from *nt*-stems

#### III.3.6.2.1 Personal names with the suffix *-evan-*

Relevant examples: *arkiaevais* ‘PN’, *memevais* ‘PN’, *kanutievan-* ‘PN’

Nominal forms with the suffix *-evan-* appear either alone or next to a personal name, suggesting that we are dealing with either an addition to a name, like a patronymic, or a title of some kind (PhL 83-84).

The suffix *-evan-* had the ending *-s* in the nominative singular and the resulting form ending in *\*-evans* underwent the characteristic Phrygian sound change *\*-ns > -js* (PhL 83-84, LL 1820, 1825). The resulting nominative is attested as *-evais* a total of three times. Note that the nom. sg. ending *-s* would not have been used with an original *n*-stem; the fact that it appears here clearly shows that the suffix was originally declined as part of a non-resonant consonant stem.

The only other case form that we have attested is the genitive singular *kanutievanos*, which shows that the suffix *-evan-* was synchronically declined as an *n*-stem.

Etymologically, the suffix *-evan-* is most likely composed of the thematic vowel *-e-* and the PIE suffix of appurtenance *\*-u(e)nt-* (as reconstructed on the basis of Sanskrit *-vant*) in the zero-grade: *\*-e-unt-* > *\*e-vant-* (PhL 83-84, LL 1820, 1825). The loss of *\*t* would have been automatic in the

nominative singular in the Proto-Graeco-Phrygian era already: pre-PGPh. *\*-e-unt-s* > PGPh. *\*-e-un-s* > PPh. *\*-e-van-s* > OPh. *-evais*.<sup>291</sup>

In the other cases, the expected development is *\*-e-unt-V* > PPh. *\*-e-vann-V*, with a geminate nasal (PhL 84, Hämmig *apud* LL 1822). Since Old Phrygian does not distinguish geminates in spelling, the genitive singular spelling <-evanos> likely actually represents /-evannos/, which we would expect on the basis of known sound developments. On the other hand, the geminate *\*-nn-* of the non-nominative-singular cases could just as well have been levelled into a single *\*-n-* on the basis of the nominative singular *\*-evan-s* without a geminate at some later point.<sup>292</sup> Both options remain possible until an oblique case form from the New Phrygian era is found, as New Phrygian does consistently distinguish <v> < \*n and <vv> < \*nt.

### III.3.6.2.2 Other *nt*-stem nominals

A Phrygian nominal that ultimately derives from an *nt*-stem is *kuryaneyon* ‘commander, lord’. This is a loan from an unattested early Greek term *\*korjanejōn* whose cognate in epic Greek is κορυανέων ‘commander, lord’ (LL 1820, 1825).

In Greek, the nominative singular form *\*korjanejōn* belongs to an *nt*-stem *\*korjanejont-*. The nominative singular form of this stem was not formed

<sup>291</sup> The spelling *memeuis* for expected *memevais* must represent some secondary development, if not due to scribal error. Obrador-Cursach has proposed that the development is due to areal influence, based on a Luwic contraction identified by Rieken (2001 *apud* PhL 84).

<sup>292</sup> This change would need to have happened before the *\*ns* > *js* development took place, since there would have been no forms with a single *\*-n-* left remaining in the paradigm after it. Since the sound law in question very likely happened quite late in Phrygian pre-history, this poses little issue.

with an addition of \*-s, but rather with the lengthening of the vowel, as we would generally expect in Greek for non-neuter *n*-stems.

Phrygian seems to have loaned the nominative singular form unchanged: the desinence *-on* of the Phrygian form is not raised to \*-*un*, meaning that the vowel of the final syllable was long (Tamsü Polat et al. 2020: 51).

### III.3.6.3 *n*-stem nominals not otherwise characterized

Relevant example: *iman* ‘memorial’, ↑*emen-*, ορουεν- ‘keeper, protector’

The noun *iman* ‘memorial’ has three attested case forms: nom. sg. *iman*, dat.sg. *inmeney*, and acc.sg. *imenan* (PhL 252-253). The fact that the nominative and accusative singular are not identical is evidence that the noun was non-neuter, and the agreement in the phrase *sint imenan*, with the demonstrative pronoun *si-* being in the masculine accusative singular, shows that the noun was of masculine gender. The lengthened vowel in the nominative singular is inherited and represents the same fundamental phenomenon that underlies the other resonant-final nouns with a pattern nom.sg. \*-ē*R* ~ acc.sg. \*-e*R*-*ṃ*. The vocalism of the accusative case was apparently levelled into the oblique case forms, as evidenced by *inmeney*.<sup>293</sup>

Vine (2010) has proposed that *iman* developed from an original root noun *\*men-* (nom. sg. *\*mēn*, acc.sg. *\*men-ṃ*) from the PIE root *\*men-* ‘to remain’ (cf. Gr. μένω ‘I remain’, Lat. *maneō* ‘I stay’, etc. (LIV<sub>2</sub> 437)). A root noun *\*mēn* ‘a remaining’ would have been prefixed with *\*en* ‘in’,

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<sup>293</sup> For the unexpected *-n-* in the first syllable of DSg *inmeney*, see §II.1.2.3.

giving the meaning ‘memorial’ (Vine 2008), which seems semantically viable.

The nominal form  $\uparrow emeney$  appears in the dative case (Neumann 1997: 25, PhL 247). It is found in what appears to be a conditional clause: *yos isekosos  $\uparrow emeney pupratoy$ , veban ituv* °B-05. The meaning of  $\uparrow emeney$  is unclear; it seems to function as the indirect object of the verb *pupratoy*, but it may just as well have some adverbial meaning. The ending *-ey* is athematic. The structure suggests that the root element was  $*g^hem-$ , presumably in full grade, extended with the suffix *-en-*. The suffix was likely ablauting, so one of the two full grades of the root and suffix has presumably been levelled from another form, suggesting that the original declensional pattern was proterodynamic; the fact that the initial consonant is palatalized, however, suggests that the levelling of the full-grade in the root-element must have taken place before the Phrygian palatalization took place.<sup>294</sup> The pattern of this declension in PPh. would then have been  $*zem-n- \sim *zem-en-$ .

Alternatively, Lubotsky (p.c.) has proposed that the element  $\uparrow e-$  is a reflex of PIE  $*g^hei-$  ‘winter’ (NIL 162-169); in that case, *-men-* would have been the suffix still remaining in its expected full-grade form in the oblique cases. However, the sequence  $\uparrow e-$  is spelt with <e>, which was never used to spell the reflex of an earlier  $*i$ . At best, <e> could only spell the reflex of older  $*ey$ , assuming that it was understood as  $\bar{e}$ ; inscription °B-05 does also show the spelling of  $*ey$  as <i> in *ituv* (PPh.  $*/eit\bar{o}$ ), while its rendering of  $\bar{e}$  is inconsistently both <e> and <i>, so suggesting that this

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<sup>294</sup> Otherwise, the alternation of a palatalized and non-palatalized velar that would be expected from  $*g^hem-n- \sim *g^hm-en- > * \uparrow em-n- \sim *gm-en-$  would have likely been levelled in favour of the non-palatalized variant, resulting in  $**gem-$ . See also §II.3.2.3.4.

particular inscription shows a dialectal merger of /ei/ with /ē/ is not a problematic proposition. This would still mean, however, that the full grade in the root would need to have been levelled throughout the paradigm to produce the required  $\uparrow e-$  / $z\bar{e}-$ / in the dative case. The fact that it was the full grade of the root that would be levelled in this scenario is incompatible with an interpretation of this noun as a *mn*-neuter, which apparently levelled the zero-grade of the root. Other *\*m(e)n*-type formations did exist in PIE and PGPh.,<sup>295</sup> however, so Phrygian  $\uparrow emen-$  may well belong to one of those, if an allowance is made for the merger of *ey* and  $\bar{e}$ .

Another Phrygian *n*-stem is  $\text{ορουαν}$  ‘keeper, protector’, an epithet of Ti-, nom. sg.  $\text{ορουαν}$ , gen. sg.  $\text{ορουενοϲ}$ , acc. sg.  $\text{ορουεναν}$  (PhL 320-321), which Lubotsky (1997: 127-128) has etymologized as deriving from *\*sorūēn* (cf. Gr.  $\text{οὔροϲ}$  ‘watcher, guardian’). In this word we find the characteristic lengthened grade of the final syllable of the resonant stems in the nominative singular and the full grade in the accusative singular (LL 1820). The full grade of the suffix in the genitive case form  $\text{ορουενοϲ}$  must have been levelled from the accusative.

Some other attested words with an indeterminate meaning that could conceivably be analysed as *n*-stem nominal formations are: *murtan*, *aken-*, *asen-*, *ataniyen*.

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<sup>295</sup> As evidenced by Greek nouns like  $\text{λειμων}$  < *\*lei-mōn* and  $\text{λιμην}$  < *\*li-mēn* (Chantraine 1999: 627).

### III.3.7 *l*-stems

Relevant example: *apel* ‘fruit?’

The Phrygian corpus is known to possess only a single *l*-stem noun: *apel-*, which appears in three case forms, nom. sg. *apel* °G-342, dat. sg. *apele(y)*<sup>296</sup> °130<sup>NW</sup> and acc.sg. *apelan* °M-05 (PhL 179).

The stem *apel-* can, in principle, be derived from either a root noun derived from the root *\*h<sub>2</sub>p/bel-* or a noun with an ablauting *l*-suffix added to a root *\*h<sub>2</sub>ep/b-*. Since the meaning of this noun is not established, deciding between the two options must proceed on purely formal grounds.<sup>297</sup>

If we assume that we are dealing with a noun with an ablauting *l*-suffix, we must consider the place of *l*-stems in other Indo-European languages. The only two existing *l*-stems in PIE, *\*h<sub>2</sub>eb-l-* ‘apple’ and *\*seh<sub>2</sub>-l-* ‘salt’, follow the hysterodynamic inflectional type.<sup>298</sup> It seems quite natural to assume,

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<sup>296</sup> The form is actually spelt *apelev* °B-07, but the final *-v* is likely due to anticipatory assimilation to following *p-*.

<sup>297</sup> Obrador-Cursach (PhL 179) supposes that we are dealing with a personal name, but while this is possible, it is suspect. Especially in °B-07, it is difficult to see how *apelev* could have functioned as a personal name, since the person who commissioned the grave and is interred in it is already mentioned in the same clause (*Manes [...] apelev porniyoy estaes* ‘Manes [...] for/to-*apel* for/to-*porniyos* erected’, Manes also being the person buried.) The form *apelan* formally also seems far more likely to be in the accusative singular case, belonging together with a nominative *apel*, rather than itself being a nominative singular form of a personal name.

<sup>298</sup> The two *l*-stems in question have, admittedly, been the subject of much debate. In the case of *\*seh<sub>2</sub>-l-* ‘salt’, scholars who assume the existence of a vowel *\*a* in PIE tend to reconstruct it as an ablauting root noun *\*sāl-* ~ *\*sal-*. The word for ‘apple’, *\*h<sub>2</sub>eb-ōl*, is usually considered problematic for one of two reasons: 1) the initial vowel is uniformly reflected as *\*a* in the languages having this lexeme, leading many to reconstruct the its PIE antecedent as showing the vowel *\*a*; 2) the stop that needs to be reconstructed is *\*b*, a notoriously rare segment in PIE (though some have attempted to explain the presence of *\*b* as arising from a cluster *\*ph<sub>3</sub>*, giving a reconstruction *\*h<sub>2</sub>eph<sub>3</sub>-l-/aph<sub>3</sub>-l-*) (e.g. Matasović 2009: 23). On the basis of these two extraordinary correspondences, it has been

then, that the attested Phrygian forms must have been in some way derived from an original hysterodynamic (CIEL 195) or amphikinetic (cf. Meier-Brügger 2010: 351-352) declension.

The only known *l*-stem noun in Greek, assuming that its *-l-* was suffixal, is ἄλς ‘salt’, which shows no synchronic ablaut, suggesting it was entirely levelled. In the declensional model proposed by Lubotsky (1989c: 59-61), in PIE itself, this noun would have shown nom.sg. *\*seh<sub>2</sub>-l-(s)* ~ acc.sg. *\*sh<sub>2</sub>-el-ŋ* ~ obl. *\*sh<sub>2</sub>l-’*. Since its vowel in Greek was short, the vocalism could only have been levelled from the accusative singular or the oblique cases. Taking into account *apel*, if it was indeed a noun formed by adding a suffix *\*-l-*, it would appear that Proto-Graeco-Phrygian *l*-stems, few as they were, levelled the vocalism of the accusative singular.

Our best approach now is to attempt to discern whether an etymological connection can be found. Since *l*-final nouns are so rare in PIE, we can immediately note a striking similarity of *apel* with the reconstructed PIE word for ‘apple’, NSg *\*h<sub>2</sub>eb-ōl* ~ ASg *\*h<sub>2</sub>b-el-m* ~ GSg *\*h<sub>2</sub>b-l-ós*, whose accusative would have regularly developed without any morphological alterations as *apelan*, precisely the form we find in Phrygian. On the basis of such a strong formal identity, also bolstered by the observation that the vocalism of the Greek *l*-stem ἄλς was likewise adopted from the accusative singular case throughout the paradigm, I propose that *apel* is indeed the continuation of the PIE word for ‘apple’.

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proposed that the word for ‘apple’ is not properly PIE at all and was loaned into it at a comparatively late time from some substrate source. This objection, however, in no way changes the fact that this noun shows an ablauting *l*-suffix and is declined in accordance with the pattern observed in the hysterodynamic type 3 (CIEL 190, 195) or amphikinetic (as given in Fortson 2004: 109) declensional types, with the *l*-suffix alternating between strong *\*-ōl/\*-el-* and weak *\*-l-’*.

It is a matter of debate how well a meaning ‘apple’, or perhaps some semantic development from it, e.g. ‘fruit, product *vel sim.*’, fits the contexts where *apel-* appears. *apelan* is found in an unclear context, *apelan* (vac.) *mekas tevano* [ °M-05, and making any judgement is currently difficult. *apel* is the only word in °G-342 and whether a meaning related to ‘fruit’ is suitable depends greatly on the semantic latitude one is willing to admit the word and the functions one is willing to ascribe to this particular inscription. The function of *apelev* in °B-07 is hard to ascertain and it is difficult to see how a meaning ‘apple’ or ‘fruit’ could apply in that context: *Manes [...] apelev porniyoy estaes*. One may, however, note the existence of the phrase *καρπυς ειλικρινη* in inscription °130<sup>NW</sup> as part of a benediction formula. The two words are loans from Greek *καρπός* ‘fruit’ and *ειλικρνής* ‘pure’. There is, then, at least one example of the term for ‘fruit’ appearing in a funerary inscription, though seemingly in a different immediate context.

The attested endings of the *l*-stems, based on *apel*, are:

	ending
nom. sg.	<i>-l</i>
dat. sg.	<i>-l-ey</i>
acc. sg.	<i>-l-an</i>

Table #26: The *l*-stem endings of Phrygian.

### III.3.8 *m*-stems

Relevant examples: δουμ- ‘religious community’, γουμ- ‘ground’

The Phrygian corpus currently includes two *m*-stem nouns.

The attested endings of the *m*-stems are:

	ending
dat. sg.	- <i>m-ey</i>
acc. sg.	- <i>m-an</i>
dat. pl.	- <i>m-eis</i>

Table #27: The *m*-stem endings of Phrygian.

The dative plural γουμεις appears twice in inscription  $\circ 130^{\text{NW}}$ , in the protasis of two funerary formulae, one maledictive and one benedictive, both types as part of a sequence κορουμανη ανι σως κε γουμεις ‘in the grave-plot or in these γουμ-’. κορουμαν- is likely to mean ‘grave-plot’ and is in the dative singular case; likewise, γουμεις appears in the dative case, though in the plural number.<sup>299</sup> The object of the verb, ουεβαν, some part of the grave, appears in the accusative singular case (Avram 2015: 208). Syntactically, in funerary formulae, the object subjected to the verbal action is traditionally in the dative case, while what is being performed appears in the accusative case (cf. σεμουν κνουμανει κακουν αδδακετ ‘to-this grave (dat.sg.) something-bad (acc.sg.) would-do’). Such an analysis does not seem possible for inscription  $\circ 130^{\text{NW}}$ ; the accusative ουεβαν refers to a

<sup>299</sup> The identification of the form as a dative plural is firmly supported by preceding σως ‘these’, the expected dative plural form of the demonstrative pronoun *si-*.

material object. The datives κορουμαν- and γουμ- can thus hardly refer to a beneficiary of the action; rather, since the meaning of κορουμαν- ‘grave-plot’ is likely (Avram 2016: 125) and refers to a location, the dative appears to be used in a locative sense: *in/on/at the κορουμαν=grave-plot, in/on/at these γουμ-*. γουμ- can morphologically only be understood as an *e-* or an *m-* stem; if the former, we would most likely be dealing with a loanword, though no local comparanda are forthcoming. Alternatively, if we interpret γουμ- as an *m-* stem, the attractive possibility emerges that we are dealing with a Phrygian cognate of Greek χθών. In PIE, the word for ‘earth’ was *\*dʰeǵʰōm*, a rare example of an *m-* stem; the full-grade of the root was lost after the Anatolian split, giving a post-Anatolian PIE form of *\*dʰgʰōm* (giving rise to Skt. *kṣā́m*, and Greek χθών (cf. Kloekhorst 2008: 991-996; EDG 1632-1633)). It is extremely conspicuous that a possible *m-* stem in Phrygian corresponds to one of the only *m-* stems found in PIE in both semantics and its basic phonetic make-up. The descent of γουμ- from *\*dʰǵʰom-* is not absolutely beyond reproach, but the assumptions required to account for the Phrygian form are extremely trivial. First of all, initial *\*dʰǵʰ-* would need to surface as Phrygian γ-. This is not problematic; one simply needs to assume that an initial cluster *\*dʰǵʰ-* > *\*dg-* simplified into *\*g-* in Proto-Phrygian (see §II.3.1.2.2). Comparatively, such an independent development is well-supported, cf. Latin *humus* < *\*gʰom-* < *\*dʰǵʰom-* (de Vaan 2008: 292) and PSI. *\*zem-* < *\*ǵʰem-* < *\*dʰǵʰem-* (Derksen 2008: 541). Phrygian ζεμελο-, a derivation from the root *\*dʰeǵʰ-*, would presumably likewise have arisen from a form with a simplified cluster, i.e. *\*gʰem-elo-* < *\*dʰǵʰem-elo-*.<sup>300</sup>

<sup>300</sup> We should note here that the pre-historic phonetic result of a palatalized *\*gʰ-* in Phrygian is unknown. If it was originally *\*dz*, as seems likely, and the cluster *\*dʰǵʰ-* > *\*dg-* were preserved up to the point of palatalization, the development would be *\*dʰǵʰe-* > *\*dge-* > *\*ddze-*, which would presumably develop into *\*dze-*, making it indistinguishable

The use of the vocalism of the nominative  $*d^hg^h\bar{o}m$  in the oblique stem  $\gamma\omicron\mu-$  <  $*g\bar{o}m-$  would need to have been the result of levelling. This is hardly a problematic proposition; indeed, in Greek, we find the levelling of nominative consonantism  $-v$  throughout the paradigm ( $\chi\theta\acute{\omega}v \sim \chi\theta\omicron v-$ , as opposed to  $**\chi\theta\omicron\mu-$ ). As such, any argument that levelling of stem forms must always have been in favour of the oblique stem is on shaky grounds. The stem final  $-m$  of  $\gamma\omicron\mu-$  is apparently directly descended from the PGPh. oblique stem  $*d^hg^hom-$ , indicating that the levelling of Greek  $-v$  must be posterior to Proto-Graeco-Phrygian. The nominative singular form of the word in Proto-Graeco-Phrygian was likely to have been  $*d^hg^h\bar{o}n$ , in accordance with the proposed PGPh. development  $*-m > *-n$ . The nominative singular form of  $\gamma\omicron\mu-$  in Phrygian would then be expected to be  ${}^+\gamma\omicron\upsilon v$ .<sup>301</sup>

$\delta\omicron\mu-$  is most likely being a loanword from some other language spoken in Anatolia (*contra* PhL 215, where Greek  $\theta\omega\mu\acute{\omicron}\varsigma$  ‘heap’ and Gothic *doms*

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from the reflex of a simple  $*g^he- > *ge- > *dze-$ . For this reason,  $\zeta\epsilon\mu\epsilon\lambda\omicron-$  is actually uninformative in this regard. Rather, it is  $\gamma\omicron\mu-$  that informs the likely development of  $\zeta\epsilon\mu\epsilon\lambda\omicron-$ .

<sup>301</sup> There is an interesting alternative possibility. Assuming that Phrygian was averse to consonantal alternations like the  $*-n \sim *-m$  assumed for  ${}^+\gamma\omicron\upsilon v \sim \gamma\omicron\mu-$  and taking into account that it is the  $m$ -stem that is preserved, the only way for Proto-Phrygian to preserve a nominative singular with  $*m$  would have been to assign it to a vocalic stem class. Since the form  $\gamma\omicron\mu\epsilon\iota\varsigma$  cannot belong to the  $o$ - or the  $a$ -stems, the noun might have been assigned to the innovative  $e$ -stem class, giving a neo-nominative singular  ${}^+g\bar{o}m-e-s$ . In that case, the datives would have been the fulcrum of this transfer:  $e$ -stem dat.sg.  $-ei$  :  $e$ -stem nom.sg.  $-es = m$ -stem dat.sg.  $-ey$  :  $m$ -stem nom.sg.  $X, X = -es$ . Since the dative apparently also had a locative function, it is not unlikely that a noun meaning ‘earth’ would have been reshaped on the basis of a synchronically locative form. On the other hand,  $\delta\omicron\mu-$  is synchronically an  $m$ -stem that has not been absorbed into the  $e$ -stem declension, as evidenced by its acc. sg. form *duman*, suggesting that the  $m$ -stems as a category were not ousted from the language. Since its nominative singular form is unknown, we may only speculate whether it was  ${}^+\delta\omicron\upsilon v$ , reshaped into  ${}^+\delta\omicron\upsilon\mu\epsilon(\varsigma)$ , or perhaps simply  ${}^+\delta\omicron\upsilon\mu$ , if the  $-m > -n$  sound law was no longer operational.

‘judgement’ are adduced as comparanda).<sup>302</sup> This lexeme appears throughout Anatolia, but its origin remains obscure. If it is a borrowing into Phrygian, it must have taken place at an early date, since the vast majority of loans into Phrygian do not preserve a consonantal declension.<sup>303</sup>

### III.3.9 *s*-stems

Relevant forms: *bevδος* ‘statue’, <sup>+</sup>*kenos*<sup>?</sup>, <sup>+</sup>*vetos*<sup>?</sup>, βεκος ‘bread’

The Phrygian *s*-stems are characterized by the addition of a suffix *-(V)s-* to a nominal or verbal root. As in PIE and Greek, the *s*-stems in Phrygian are neuters.<sup>304</sup>

In Core PIE, the *s*-stems are proterokinetic; i.e. the strong and weak stem variants are: *\*CéC-os-* ~ *\*CeC-és-* (CIEL 204-205). The only remnants of the presumed older pattern without levelled root vocalism, *\*CéC-(o)s* ~ *\*CC-és-*, are known from the Anatolian branch of Indo-European, but even there the type is generally the same as in late Core-PIE, with only a handful of forms still preserving the original ablaut pattern (most notably Hitt. nom. sg. *aiš* ~ obl. *išša-* ‘mouth’) (Kloekhorst 2008: 200-202). As such, there can be very little doubt that the *e*-grade vocalism of the root was present in every case form of the *s*-stem paradigm in the stage of PIE immediately

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<sup>302</sup> The proposal that it is a development from PIE *\*dōm* ‘home’, as appealing as it may seem, is no longer tenable in light of the *Lautverschiebung*. At best, Phrygian may have borrowed the word from another IE language that does go back to PIE *\*dōm*, but unless this is confirmed by additional evidence, we are dealing with pure speculation.

<sup>303</sup> For the derivative *dumeya-*, see §III.3.1.4.

<sup>304</sup> The nominative/accusative singular ending of PIE, Phrygian, and Greek *s*-stems appears identical to the nominative singular ending of the *o*-stems, *\*-os*, *-os*, *-ος*, respectively, but the two types are not to be equated.

preceding the split of Proto-Graeco-Phrygian and that the same holds for PGPh. as well.

In Greek, a clear example of an *s*-stem is γένος ‘offspring’, which declines as following:

nom. sg. γένος < \*gen-os-∅ < \*génh<sub>1</sub>-os-∅ (> Skt. *jánas*)

gen. sg. γένουος < \*gen-eh-os < \*génh<sub>1</sub>-es-e/os (> Skt. *jánasas*)

dat. sg. γένει < dat. sg. \*gen-eh-i < loc. sg. \*génh<sub>1</sub>-es-i (> Skt. *jánasi*)

acc. sg. γένος < \*gen-os-∅ < \*génh<sub>1</sub>-os-∅ (> Skt. *jánas*)

In Phrygian, the *s*-stems are only attested in the nominative/accusative case singular and plural, as far as we are able to tell. We must operate under the assumption that the type of declension would have been fundamentally identical to the PIE and Greek prototypes, at least at first.

The attested endings of the *s*-stems are:

	ending
nom./acc. sg.	-os
dat. sg.	-ey <sup>2</sup>
nom./acc. pl.	-a

Table #28: The *s*-stem endings of Phrygian.

An example of an *s*-stem that matches the PIE prototype perfectly is *bevdos*, which Lubotsky (2008) has identified as meaning ‘statue, visage (< image)’, from the PIE root \*b<sup>h</sup>eud<sup>h</sup>- ‘to be aware of’. Phrygian *bevdos* was loaned into Greek as nom. sg. βεῦδος (an *s*-stem neuter) ‘a woman’s dress’. The nominative/accusative singular case form is entirely transparent: \*b<sup>h</sup>eud<sup>h</sup>-os-∅ ‘image (< what one sees < what one is aware of)’. This Phrygian noun is certainly of the neuter gender, since it is preceded

by the demonstrative pronoun form *si* in *si bevdos* °B-01, which is known to be used alongside a neuter noun on the basis of the phrase *si keneman* (where *keneman* is a \*-mḡ type neuter noun).

The rest of the known *s*-stems in Phrygian are more difficult to analyse, however.

One possible example of an *s*-stem is the nom./acc. pl. form κενα. The ending -α is not overly problematic if we assume a simple contraction; in an *s*-stem declension, the sequence of developments would be the following: PIE \*-es-h<sub>2</sub> > PGPh. \*-eh-a > PPh. \*-e-a > PPh. \*-a > OPh. <sup>+</sup>a > NPh. -α.

On the basis of the clause (ας αναγκαι) οι παντα κενα ιννου °35<sup>E</sup> '(to mischief)<sup>2</sup> his all *kena* ought-to-(be)come', we can be certain that the form is plural, meaning it can also only be of the neuter gender, since no other plural ending -α exists besides the nom./acc. pl. ending.

More problematic is the root element. Usually, the form is taken to mean 'offspring (pl.)' and is derived from the PIE *s*-stem noun *ǵenh<sub>1</sub>-os* from the root \*ǵenh<sub>1</sub>- 'to beget' (Lubotsky 2004: 233); in that case, <sup>+</sup>κενος would be a perfect cognate of Greek γένος. Such a development would be in conflict with the Phrygian palatalization law: PIE \*ǵenh<sub>1</sub>-os > PGPh. \*gen-os > PPh. \*\*senos. Since we can also be reasonably sure that the root *e*-vocalism of the *s*-stems was present in every case form of the paradigm, we cannot invoke intra-paradigmatic levelling as an explanation for the persistence of κ-. This derivation is, then, untenable.<sup>305</sup>

<sup>305</sup> If a direct descent of <sup>+</sup>κενος from \*ǵenh<sub>1</sub>-os is assumed, this would be the only viable counterexample to the Phrygian palatalization. It is true that there are no examples of PGPh. \*g undergoing palatalization in Phrygian, while examples exist for PGPh. \*k and \*g<sup>h</sup>, so it is in principle possible that \*g was exempted from palatalization. Nevertheless,

We are left with two possibilities: 1) the form  $\kappa\epsilon\upsilon\alpha$  is ultimately entirely unrelated to the PIE root  $*\acute{g}enh_1-$ ; or 2) the initial  $\kappa-$  was levelled from some other related nominal or verbal stem deriving from  $*\acute{g}enh_1-$  that did not undergo palatalization by appearing consistently in the zero or  $o$ -grade. Certainly, the meaning ‘offspring (pl.), progeny’ for  $\kappa\epsilon\upsilon\alpha$  fits the context of a malediction formula:  $\omicron\iota\ \pi\alpha\upsilon\tau\alpha\ \kappa\epsilon\upsilon\alpha\ \iota\upsilon\upsilon\omicron\upsilon$  ‘(to mischief) his all progeny may-come’. But other meanings and syntactic analyses may fit the context just as well.<sup>306</sup> Also note that  $\kappa\epsilon\upsilon\alpha$  need not necessarily be an  $s$ -stem at all: the ending  $-\alpha$  would just as well fit a neuter  $o$ -stem  $*\kappa\epsilon\upsilon\omicron\nu$ , or even an  $n$ -stem  $*\kappa\epsilon\nu$  ( $< *Ken-h_2$ ).

Thus, deciding between the two possibilities is difficult. Perhaps it is better to err on the side of caution; since the only reason  $\kappa\epsilon\upsilon\alpha$  is assumed to reflect an  $s$ -stem is the fact that  $*\acute{g}enh_1-$  formed an  $s$ -stem with a meaning that is plausible in context, among many other possibilities, and which would formally fit under an outdated understanding of Phrygian phonetic developments, it is ultimately best to take it out of consideration in an analysis of the  $s$ -stems and declare the meaning and the morphological characterisation of the form as uncertain.

One noun that unambiguously declines as an  $s$ -stem is the famous Phrygian word  $\beta\epsilon\kappa\omicron\varsigma$  ‘bread’ (PhL 196). Its status as an  $s$ -stem neuter is unimpeachable; when functioning as a direct object in the accusative case, the form still ends in  $-s$ :  $\mu\epsilon\ \kappa\epsilon\ \omicron\iota\ \tau\omicron\tau\sigma\sigma\epsilon\iota\tau\iota\ \beta\alpha\varsigma\ \beta\epsilon\kappa\omicron\varsigma$  ‘may Bas give away his bread’  $\circ 99^{NW}$ ,  $\beta\alpha\varsigma\ \iota\omicron\iota\ \beta\epsilon\kappa\omicron\varsigma\ \mu\epsilon\beta\epsilon\rho\epsilon\tau$  ‘may Bas bring away his

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it is more likely that the palatalization was systemic and affected all the three pure velar stops,  $*k$ ,  $*g$ , and  $*g^h$ . For the time being, then, it is better to operate under the assumption that PGPh.  $*g$  was palatalized before front vowels in Phrygian. See also §II.3.2.3.4.

<sup>306</sup> For which see the final paragraphs of §II.3.2.3.4.

bread' °86<sup>W</sup>, °111<sup>NW</sup>. The meaning 'bread' is well known from Herodotus (2.2) and the Hesychian gloss βεκος . ἄρτος. Φρύγες 'bread. Phrygians'.

Obrador-Cursach (PhL 196) made a brief note of an appealing possibility regarding the origin of this word, but did not explore it much further. He suggested that βεκος 'bread' could potentially derive from a PIE root \**b<sup>h</sup>eg-* 'to break' (cf. Arm. *bekanem* 'to break', Ved. *bhanákti* 'to break', Lith. *bengiù* 'to break up'). Semantically, the development of 'to break' >> 'a broken piece' > '(a piece of) bread' is actually paralleled in full in Proto-Slavic \**kruš-i-* (\**krous-eje-*) 'to break' >> PSl. \**kruxb* 'a broken off piece' > CSl. *kruxb* 'broken piece, crumb', dial. Russian *krúx* 'end piece of bread, lump', Croatian *kruh* 'bread', Slovenian *kruh* 'bread' (Snoj 2009: 331). Yet another semantic parallel can be found in Modern Greek ψωμί 'bread' << Gr. ψωμός 'a piece, bite' (*ibid.*).

More commonly, the noun βεκος is assumed to be derived from the PIE root \**b<sup>h</sup>eHg-* 'to bake'; cf. Gr. φάγω 'to bake' < \**b<sup>h</sup>e/oHg-e/o-*; English *bake* < Old English *bacan* 'bake' < \**b<sup>h</sup>Hg-e/o-*; perhaps Russ. *bažù*, *bažit* 'to wish, desire' < causative \**b<sup>h</sup>oHg-eje-* (LIV<sub>2</sub> 70)) (PhL 196). On the basis of these cognates, we cannot ascertain the nature of the laryngeal; LIV<sub>2</sub> assumes \**h<sub>3</sub>* due to Greek, with φάγω being a reflex of \**b<sup>h</sup>eh<sub>3</sub>g-e/o-*, where an *e*-grade would be generally expected in PIE terms. Thus, the non-Phrygian languages do seem to suggest that the laryngeal of the root was \**h<sub>3</sub>*. Such an assumption does decouple \**b<sup>h</sup>eHg-* from the root \**b<sup>h</sup>eh<sub>1</sub>-* 'to warm' (only reconstructed on the basis of Old High German), from which it could have reasonably arisen by the addition of a root enlargement (PhL 196, LIV<sub>2</sub> 70). If Phrygian βεκος is added to the list as a derivation from the root \**b<sup>h</sup>eHg-*, however, reconstructing any laryngeal other than \**h<sub>1</sub>* in

the root would be absolutely untenable, since the vowel appearing in any synchronic form would not have been *e*.<sup>307</sup>

Any derivation of an *s*-stem βεκοϝ from the root *\*b<sup>h</sup>eHǵ-*, however, immediately runs into a major issue. Since the slot of the vowel is known, as is the ablaut pattern of the *s*-stems, which always shows root *e*-vocalism, no possible development of *\*b<sup>h</sup>eHǵ-os* could produce the attested form βεκοϝ; the sequence of *\*e* and a laryngeal would develop into a long vowel that could not have the same quality as ε, i.e. *\*eh<sub>1</sub>* > *\*ā* > NPh. α, *\*eh<sub>2</sub>* > *\*ā* > NPh. α, *\*eh<sub>3</sub>* > *\*ō* > NPh. ου. The usual approach found in the literature was to assume an *s*-stem pre-form *\*b<sup>h</sup>h<sub>1</sub>ǵ-os* with a zero grade (Lubotsky 2004: 233), but no explanation is ever provided for why an *s*-stem nominal would have a zero grade in its root syllable; as we have seen, zero grades in the root syllable of *s*-stems are already extremely marginal and only appear in the oblique cases in the Anatolian languages, which presumably split from the rest of the Indo-European family first (Fortson 2004: 155). To posit that a type of archaic *s*-stems that preserved a zero grade in the root persisted until the ultimate disintegration of PIE, is not preserved in any other of the post-Anatolian languages, and just happens to be attested in one of the three or four identifiable Phrygian *s*-stems, would be remarkable. If Phrygian βεκοϝ does derive from *\*b<sup>h</sup>eh<sub>1</sub>ǵ-*, the vocalism of the first syllable must be secondary.

In light of clear semantic parallels and the formal issues underlying a derivation of βεκοϝ from *\*b<sup>h</sup>eHǵ-*, the optimal solution is to derive the Phrygian term for ‘bread’ from a PIE lexical root ‘to break’, *\*b<sup>h</sup>eǵ-*. Such a derivation provides no semantic or formal issues: PIE *\*b<sup>h</sup>eǵ-* ‘to break’

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<sup>307</sup> And if the root was *\*b<sup>h</sup>eh<sub>1</sub>ǵ-*, Greek φώνω would need to ultimately derive from *\*b<sup>h</sup>oh<sub>1</sub>ǵ-e/o-*. The Old English reflex remains entirely ambiguous in terms of the laryngeal.

>> PIE *\*b<sup>h</sup>eg-os* ‘that which is broken /a broken piece’ > PGPh. *\*b<sup>h</sup>eg-os* ‘id.’ > PPh. *\*bek-os* ‘bread’ > NPh. βεκος ‘bread’.

Having now decoupled Phrygian βεκος from Greek φώγω and Old English *bacan*, the nature of the laryngeal in the PIE root *\*b<sup>h</sup>eHǵ-* ‘to bake’ continues to remain uncertain.

Another example of a likely *s*-stem noun in Phrygian is found in the sequence ακκαλος/ακαλα. Considering the sequence ακκαλος first, it appears in the following phrase, repeated twice: ακκε οι βεκος ακκαλος τιδρε(γ)ρουν ειτου °33<sup>E</sup>, °76<sup>E</sup> ‘and to-him bread *akkalos* inedible may-become’. What is immediately clear is that βεκος and ακκαλος are ultimately nominally coordinated; they match τιδρε(γ)ρουν in the sense of being neuter nouns in the nom./acc. sg. case form. Thus, ακκαλος must be an *s*-stem.

The form ακαλα, presumably in the neuter nom./acc pl. form (*\*-es-h<sub>2</sub>* > *\*-es-a* > -α), appears as part of a clause appearing in a maledictive inscription: υκε ακαλα ουιτετου ουα °2<sup>W</sup>. υκε likely stands for (ι)οι κε, ουιτετου is almost certainly a verbal form with the 3sg imp. ending, and ουα and ακαλα appear to be nominally coordinated, with ουα being a form of the possessive adjective *vo-* ‘his’.<sup>308</sup> That ακαλα ουα is in the plural number, whereas the verb is conjugated in the singular is hardly problematic: it is a well-known feature of ancient Indo-European languages that plural neuter subjects appear with a verb conjugated in the singular number (Fortson 2004: 118). Most likely, then, we may translate the clause as ‘and to/for-him his-own *akala* may-ovite’. Quite clearly, ουιτ(ε)- refers to something

<sup>308</sup> For which see §IV.11.

unpleasant, but the only syntactic conclusion we may draw is that οοιτ(ε)- is likely a non-transitive (i.e., intransitive or stative) verbal stem.

Since we already know βεκος to be an *s*-stem noun meaning ‘bread’, what, then, are ακκαλος and ακαλα? Obrador-Cursach (PhL 171-172) has listed a handful of earlier proposals (see therein for a list), but, as he rightly notes, none are particularly likely. Finally, he cites Brixhe and Neumann (1985: 176) and Lubotsky (2004: 236) who saw ακκαλος as a noun in an adposition to βεκος; i.e. an ακκαλος-type bread (cf. a *naan* bread, a baguette bread). Obrador-Cursach (*ibid.*) ultimately proposes that Phrygian ακ(κ)αλο/α- is a borrowing from Assyrian *akalu* ‘bread’, with the syntagm βεκος ακκαλος meaning ‘*akalu* bread (i.e., a specific type of bread)’, whereas the use of ακαλα °2<sup>W</sup> would see the term <sup>+</sup>*ak(k)alos* used as a generic term for bread.

As Obrador-Cursach (PhL 172) rightly notes, this account leaves the geminate spelling of ακκαλος unexplained. There is a clear solution to this issue, however. We may assume that the Akkadian noun *akalu* ‘bread’ or some closely related Semitic nominal derivation from the Proto-Semitic root \**ʔkl* ‘to nourish’, none of which show a geminate consonant, would not pass into Phrygian directly. Phrygian was not spoken adjacent to the Semitic languages in any case; as such, any potential Semitic terms would have presumably been adopted into Phrygian through an intermediary language. Since the Anatolian languages, which were spoken to the east of the Phrygian-speaking area, generally distinguished between fortis (long) and lenis (short) stops (Melchert 1994: 62 *et passim*), it may well be that the geminate originated in some intermediary Anatolian language.

One other possible example of an *s*-stem is known: dat. sg. *vetei*, appearing in the enigmatic sequence *otuvoiveteietlnaie* °P-04a. No other case forms

other than *vetei* are attested and the entire sequence currently defies interpretation. It has been suggested that *vet-* is the same element as that found in PIE *\*uet-* ‘year’ (Woudhuizen 1993: 13), in which case the attested form *vetei* may well have actually been an *s*-stem: nom.sg *\*vet-os* ~ dat.sg. *\*vet-es-ei* > *\*vet-eh-ei* >> *vet-ei*,<sup>309</sup> or a locative *\*vet-es-i* > *\*vet-eh-i* > *vet-ei*. On the other hand, *vet-* may well simply be a *t*-stem in synchronic Phrygian. Its analysis as an *s*-stem is only one, though admittedly attractive, possibility until the context in which *vetei* appears becomes better understood or until another case form of this noun is found.

### III.3.10 Stop-final stems

#### III.3.10.1 Dental stems

All Phrygian nouns whose stem ends in a dental are here subsumed under the heading “dental stems”. This is due to the fact that the language itself precludes us from distinguishing between earlier PGPh. *\*-t* and *\*-d*, while there is no evidence in the language for the existence of *\*d*-stems (from earlier *\*d<sup>h</sup>*-stems, which was never a productive category in PIE or PGPh.). The dental stems are declined with the same set of endings as the other athematic stems, with the exception of nominative singular form that had a sigmatic nominative, where the final dental of the stem and the *\*-s* ending

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<sup>309</sup> With the sequence *\*-eh-ei* contracting into *\*-ēi* after the loss of *\*h*, and this *\*ēi* diphthong developing into *\*ei* due to the lack of a phonemic *\*-ēi* diphthong. Since there appears to have never been a proper phonemic distinction between *\*ē* and *\*ei* in word-final position, this would have either happened through a simple shortening *\*ēi* > *ei* or through *\*ēi* > *\*ē*, with a subsequent merger of *\*-ē* into *-ei*.

produced an illicit cluster *\*-ts*, which was simplified into simply *-s* (e.g. nom. sg. *Bas* derives from an earlier *\*bat-s*) (LL 1821, 1825).

The attested endings of the *t*-stems are:

	ending
nom. sg.	<i>-s &lt; *-t-s</i>
dat. sg.	<i>-t-ey</i>
acc. sg.	<i>-t-an</i>
nom. pl.	<i>-t-es</i>
acc. pl.	<i>-t-ais</i>

Table #29: The *t*-stem endings of Phrygian.

### III.3.10.1.1 Simple dental stems and dental stems without further characterization

Relevant examples: *bat-/βατ-* ‘DN’, *artimit-* ‘DN, Artemis’, *pet-/πετ-* ‘foot’, *vanakt-/ουανακτ-* ‘king’, (θαλαμειδ- ‘sepuchral chamber’)

This category includes primary *t*-derivatives (i.e. *Bat-* < *\*b<sup>h</sup>eh<sub>2</sub>-t-*) and root nouns endings in a dental (i.e. *pet-* < *\*ped-*).

*pet-* is the Phrygian word for ‘foot’, which appears twice, both times in the nominative plural form *petes/πετες*. It is a root-noun directly descended from the PIE root noun *\*po/ed-*. Since it is only attested in a single case form, we cannot be certain whether it exhibited synchronic ablaut alternations. The PIE root noun is infamous for showing all possible ablaut grades in the various languages (i.e. *\*ped-* > Skt. *pád-*, *\*pod-* > Gr. ποδ-, *\*pēd-* > Lat. *pēs*, *\*pōd-* > PGrm. *\*fōt-*). Most commonly, the noun is

interpreted as an acrostatic root noun, appearing as *\*pod-s* in the nominative singular and as *\*ped-* in the oblique cases (Schindler 1975: 4; cf. Meier-Brügger 2010: 350-351).<sup>310</sup>

We may use Greek and Phrygian data to arrive at a Proto-Graeco-Phrygian paradigm:

	Greek	Phrygian
strong stem	-o-	?
oblique stem	-o-	-e-

Table #30: The distribution of the ablaut grades in the Greek and Phrygian words for ‘foot’.

Since the two languages disagree in vocalism, we must first conclude that the original Proto-Graeco-Phrygian paradigm must have been alternating, i.e. showing the vowel *\*o* in some case forms, and the vowel *\*e* in others. This is also supported by related terms in Greek, e.g. *πέδη*, *πέζα*, *πεζός*, etc. (Chantraine 1999: 933) The *o*-vocalism must then have been levelled throughout the paradigm in Greek. The issue with the Phrygian *e*-vocalism is that the nominative plural can be more closely associated with the strong or the oblique cases, depending on one’s approach towards the reconstruction of ablaut-accent paradigms, meaning that determining whether *e*-vocalism in the nominative plural is an archaism or a levelling from the oblique cases hinges on this point as well. There are no other acrostatic nouns with this type of ablaut known to us in Phrygian, whereas Greek remains thoroughly uninformative, consistently showing levelled *o*-vocalism in all nouns that may be conceivably analysed as having shown

<sup>310</sup> Though the matter is far from resolved; cf. Kloekhorst (2013: 111).

*o/e*-ablaut in the past. It is up to the reader, then, to form their own opinion on the matter: if *o/e*-ablauting nouns showed *o*-vocalism in the nominative plural, the Phrygian form must be innovative, with its vocalism levelled from the oblique cases, suggesting that the Phrygian nominative singular would have presumably received this vocalism and surfaced as <sup>+</sup>*pes*; conversely, if these types of nouns showed *e*-vocalism in the nominative plural, the attested form is archaic, and we can make no judgement as to whether the nominative singular vocalism was likewise levelled (giving <sup>+</sup>*pes*) or remained preserved as *o* (giving <sup>+</sup>*pos*).

The divine name *Bat-* is attested in two case forms: nom. sg. *Bas* and acc. sg. *Batan*. The nominative singular form shows the expected reduction of word-final *\*-ts* > *-s*.

Obrador-Cursach (Obrador-Cursach 2017: 311-313) has recently convincingly suggested that this divine name is derived from the PIE root meaning ‘to shine’, *\*b<sup>h</sup>eh<sub>2</sub>-*, and may be compared to the Greek *t*-stem nom. sg. φώς ‘man, hero’, gen. sg. φωτός < *\*b<sup>h</sup>oh<sub>2</sub>-t-* (*ibid.*). Derivationally, Phrygian *bat-* was formed with the addition of a noun forming *t*-suffix that was attached to the stem in the *e*-grade: *\*b<sup>h</sup>eh<sub>2</sub>-t-*. Whether the noun exhibited any synchronic ablaut is impossible to determine: a proterodynamic *\*b<sup>h</sup>eh<sub>2</sub>-t- ~ \*b<sup>h</sup>h<sub>2</sub>-et-* alternation of the stem would have seen the two stem variants spelt identically in both Old and New Phrygian.<sup>311</sup>

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<sup>311</sup> Through *\*b<sup>h</sup>eh<sub>2</sub>-t- ~ \*b<sup>h</sup>h<sub>2</sub>-et- > \*bāt ~ \*bat-*, both spelt <*bat*>/<βατ> due to the writing system not distinguishing vowel length.

*vanakt-* ‘king’, is most likely a loanword from Mycenaean *wa-na-ka* (Attic ἄναξ ~ ἄνακτος) (PhL 133). It is used once to explicitly refer to Midas, next to *lavagta-*, another Mycenaean loanword, which corroborates this idea.<sup>312</sup> Synchronically, the declension of *vanakt-* is irregular in the nominative singular, though the situation makes perfect sense in diachronic terms: the declension of the terms was apparently borrowed from Greek initially, giving NSg *\*vanaks*, oblique *vanakt-*.<sup>313</sup> The specifically Phrygian simplification of final consonant clusters was what eventually resulted in the somewhat irregular nominative singular: *\*vanaks* regularly developed into the attested nominative singular *vanak*. Since this development only took place in word-final position, the oblique stem remained unchanged, as evidenced by dat.sg. *vanaktei* and acc.sg. *ουανακταν*.

*artimit-* is the Phrygian term for the Greek goddess Artemis (Ἄρτεμις, -ιδος). Both Lydian *artimu-* and Mycenaean DSg *a-ti-mi-te* show the same *i*-vocalism that is found in the Phrygian term (EDG 142; PhL 183). This divine name was most likely borrowed after the Phrygians had settled in Anatolia from some local source with *i* in the second syllable.

θαλαμειδ- ‘sepuchral chamber’ was loaned from Greek θαλαμῖς, -ίδος.

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<sup>312</sup> Since the etymological origin of ἄναξ is not understood well, it is possible that both the Greek and Phrygian terms derive from a Proto-Graeco-Phrygian *\*uanakt-*. The primary reason for assuming that *vanakt-* is a loan from Mycenaean is the fact that it appears alongside the obviously loaned term *lavagta-*: *midai vanaktei lavagtaei* ‘to Midas, king and leader’. *lavagta-* must be loaned from Greek, since it does not show the effects of the Phrygian *Lautverschiebung*.

<sup>313</sup> Proto-Phrygian at that point would have still synchronically allowed a word final cluster *\*-ks*. There would have also been an implicit understanding that a nominative ending in *-s*, without *-t-*, could pair with an oblique stem ending in *-t-*. The declension of *vanakt-* would, then, not have been borrowed as such; rather, the speakers at the time would have had no trouble understanding that the underlying stem was *\*uanakt-* throughout, since at the time both Greek and Phrygian would have dealt with a *-kt-* stem in the same manner.

III.3.10.1.2 *iT*-stems

*-it*: *evetekset-*, *+tekit-*, *+umnit-/ομνιτ-*, *+γαριτ-* ‘charity’<sup>314</sup>

In Phrygian, we find the suffix *-it-*, which can be a regular reflex of earlier *\*-it* or *\*-id*.

Greek nominals with the suffix *-ιδ-* are numerous (Meier 1975; cf. Risch 1974: 141ff.). Other than *χάρις* (gen. sg. *χάριτος*) ‘grace’, on the other hand, which is most likely a secondary *t*-stem build to an original *i*-stem (Chantraine 1999: 1247-1248), there is no evidence for an *-ιτ-* suffix in Greek.

As such, the best course of action is to assume that the Phrygian suffix is a reflex of Proto-Graeco-Phrygian *\*-id-*.

The Proto-Graeco-Phrygian suffix *\*-id-* was associated with the feminine gender and was athematic (cf. Risch 1974: 141ff.). In Greek, it was primarily used to derive nouns and adjectives of belonging to the referent (*ibid.*). One peculiar characteristic that will become relevant later in this analysis is the fact a few of the Greek nouns in *-ιδ-* had associated thematic counterparts, with the two either exhibiting no semantic difference or with the former functioning as an abstract noun of some sort.<sup>314</sup>

How prevalent this category of nouns was in Phrygian remains an open question: of the four examples we have, three are only known from denominal verbs.

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<sup>314</sup> Cf. Gr. *πύξις* ‘box’ ~ *πύξος* ‘id.’, *ύπνις* ‘sleep’ ~ *ύπνος* ‘id.’.

The only example of an *it*-derivation appearing as a noun is *eveteksetey*. It appears as part of a nominal phrase *materey eveteksetey* ‘to Mother *eveteksis*’, obviously functioning as some kind of an epithet to the Mother (i.e. Kybele). The element *ev-* is traditionally assumed to originate from PIE *\*h<sub>1</sub>su* ‘good’ (cf. Gr. εὖ-, Skt. *su-*, etc.); the length of the word does suggest the word is composed of more than one element and ‘good’ fits the context well in semantic terms. No good suggestion exists for what the middle element *teks-* might mean; there have been attempts to link it to the PIE root *\*tek-* ‘to beget’ as a secondary *t*-stem *\*tek-t-* (cf. Woudhuizen 2008-2009: 185, PhL 223), but this is incongruent with our analysis of the treatment of dental-velar clusters in Phrygian.<sup>315</sup> The term appears in the dative singular case and is syntactically bound to *materey*, but the scholarship so far has mostly glossed over the puzzling fact that *evetekset-* is synchronically quite clearly a *t*-stem. If we proceed from this fact, we may broadly segment the word as *ev(e)-tekse-t-*, which then begs the question how *-tekse-*, with what appear to be two full grades, could have emerged. The possibilities available to us are *tek-se-t-*, *tek-s-et-*, or *teks-et-*. Quite clearly, *tek-* or *teks-* must be the actual lexical root, with *-(s)et-* being one or two suffixes. Based on our knowledge of PIE ablaut, we may dismiss *tek-se-t-* as a possibility: no ablauting suffix in the full grade would have had its vowel appear after a consonant. In that case, whatever the segmentation of *teks-*, the *-et-* element as a whole functions as a single suffix. Such a suffix may perhaps be compared to the *-ητ-* suffix of Greek γυμνητ- (NSg γυμνής) ‘lightly armed warrior’ (Chantraine 1999: 241),<sup>316</sup> or of κουρητ- (NPl κούρητες) ‘young warrior’ (Chantraine 1999: 567). It is noteworthy that *evetekset-*, γυμνητ-, and κουρητ- are all used to

<sup>315</sup> For which see §II.3.1.2.2.

<sup>316</sup> I would like to thank Daniel Kölligan for drawing my attention to this example.

refer to a person, suggesting a similar semantic function of the suffix. Though the two suffixes, Phr. *-et-* and Greek *-ητ-*, do not match in the length of the vowel, that could conceivably be due to Greek and Phrygian levelling different ablaut grades of an original PGPh. ablauting suffix *\*-ēt-* ~ *\*-et-*, with Greek generalizing the former and Phrygian generalizing the latter.

Another possibility is to make an emendation to the form and interpret it as underlyingly being *eveteksetey*, i.e. *eve=teks-it-*, a noun with an *it*-suffix. Of course, the reading of the penultimate *e* in *eveteksetey* is secure, which means we need to posit either scribal error or some specific phonetic realisation of the segment that was heard by the scribe as closer to [e] than [i]. One may rightly regard this proposal as *ad hoc*, and it must be conceded that the solution is not elegant.<sup>317</sup>

The clearest of the three nominal stems with an *it*-suffix that appears in a denominal verb is undoubtedly the copiously attested γαρτ-, which appears in the middle perfect participle γεγαριμενο-. This non-finite verbal form

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<sup>317</sup> One highly speculative explanation may be proposed. As we have noted above, the *-s-* of *(e)teks-* remains unexplained. Recalling that the suffix *-sti-* was apparently used to form feminine nouns that denoted a female individual, perhaps even having an agentive function, we may hit two birds with one stone, so to speak, if we assumed the following chain of nominal derivation: *\*tek-* ‘(lexical root)’ >> *\*tek-* + *-sti-* > *\*teksi-* ‘she who does *tek*’ (with simplification of a tri-consonant cluster *\*kst* > *\*ks*) >> *\*teksi-* + *-it-* > *\*teksīt-* = *\*teksēt-* ‘the property of one who does *tek*’. In this manner, the segment *-s-* is derivationally explained, as well as the spelling <*ks*> instead of <Ψ>, as it would now originate in a *\*kst*-cluster and not undergo the same shift that characterised original intervocalic *\*ks* > <Ψ>. More crucially, however, the unexpected spelling <*e*> is also explained: we know from other examples that <*e*> could be used to spell Old Phrygian /ē/ < *\*ī*. Assuming that *\*tek-* is actually a reflex of PIE *\*tek-* ‘to beget’, the *t*-stem *teksēt-* would basically mean ‘the property of she who begets’, perhaps ‘fertility’. Using an abstract noun for the title of a divinity is not as odd as it seems: consider divine names like Gr. Ὑγεία ‘Health’, Lat. Fortuna ‘Good Fortune’, etc. Kybele having an epithet meaning literally ‘fertility’ would be nothing out of the ordinary, *mater- evetekset-* simply meaning ‘Mother Fertility’.

has a perfect cognate in Laconian Greek κεχαριτέμενος.<sup>318</sup> The two forms evidently originate in PGPh. *\*g<sup>he</sup>-g<sup>h</sup>arit-meno-*. *\*g<sup>he</sup>-g<sup>h</sup>arit-* is a reduplicated perfect stem belonging to a denominal verb with a present stem *\*g<sup>h</sup>arit-je/o-* >> Gr. χαρίζω and an aorist stem *\*g<sup>h</sup>arit-s-* > Gr. ἐχάρισα. The original Proto-Graeco-Phrygian noun was *\*g<sup>h</sup>ar-it-* ‘charity *vel sim.*’, itself a secondary *t*-stem to an original *i*-stem noun belonging to the PIE root *\*g<sup>her</sup>H-*: *\*g<sup>hr</sup>H-i-t-* (Chantraine 1999: 1247-1248; EDG 1606-1607).

The nature of the dental element in the suffix *\*-iT-* is somewhat difficult to ascertain in this word. The Phrygian evidence provides no clues, since PGPh. *\*t* and *\*d* merged into PPh. *\*t*. In Greek, there is an incongruence between the verb χαρίζω, which ostensibly derives from *\*g<sup>h</sup>ar-id-je/o-*, and the noun χάρις ~ χαριτός, which indicates an original *\*t*. Since the thematic suffix *-ίζω* was productive in Greek, however, and could easily be analogically introduced on the basis of the aorist stem χαρισ-, and the fact that Laconic κεχαριτέμενο- seems to suggest an original *\*t*, we may conclude that the suffix in this specific noun was in fact originally *\*-i-t-*; the Proto-Graeco-Phrygian noun in question was then *\*g<sup>h</sup>arit-*.

The remaining two nominal stems with a suffix *-it-* that appear in Phrygian denominal verbs, i.e. *+umnit-* and *+tekit-*, are more contentious. The existence of both is suggested by an internal analysis of the sigmatic optative verbal stems *umnise-/ομνισι-* and *tekise-* and not independent attestation.<sup>319</sup>

<sup>318</sup> Attic κεχαριστέμενος apparently saw the stem modelled after the aorist stem χαρισ- < *\*χαριτ-σ-*.

<sup>319</sup> For why *+umni(t)-* and *+teki(t)-* need to be analysed as *it*-nouns underlying the denominal verbal stems *umnise-/ομνισι-* and *tekise-*, see §V.3.5.

A nominal form <sup>+</sup>*umnit-* must clearly be compared to *umnotan*, an *a*-stem noun in the accusative singular. It appears that the underlying derivational base for both was *\*umn-*, with the former adding the nominal suffix *\*-id-* and the latter adding *\*-o-tā-*. *\*umn-*, however, cannot be an original PIE root.<sup>320</sup> Thus, *\*umn-* must either be a non-native derivational base or *\*umn-* is itself already a derived stem. The best explanation, bearing in mind that thematic nouns could form abstracts through the replacement of the thematic vowel with the PGPh. suffix *\*-id-* > Phr. *-it-*, is that an original thematic noun *\*um-no-* formed an abstract noun *\*um-n-it-* and an agent-noun *\*um-n-o-tā-*.<sup>321</sup> The abstract noun *\*umnit-* was the basis for the creation of a denominal verb *\*umnit-je/o-* (aor. *\*umnit-s-*).<sup>322</sup>

Obrador-Cursach (2021b) interprets the form in an entirely different way. Comparing inscription °B-07, where *umnotan* appears, to Aramaic inscription °KAI 318, he reads the sequence *tivan ke devun ke umnotan* °B-07 as basically a translation of the Aramaic model: *hwmytk bl wnbw* ‘I

<sup>320</sup> Both *\*uemn-* and *\*umen-* are not permissible in the phonotactic patterning of PIE roots.

<sup>321</sup> The fact that *umnota-* is itself an agent noun formed with the suffix *-o-tā-* is well supported. It appears in a nominal phrase *devun umnotan* ‘god *umn-*er’, where *devo-* is well known to be a noun of the masculine gender, which necessitates *umnota-* being of the same grammatical gender as well. Masculine *a*-stems are comparatively rare and appear in only a handful of formations. The suffix *-o-tā-* certainly cannot be some derivation from a *to*-adjective; these never appear with a masculine *a*-stem declension (Brixhe (CIPP2: 84) argues that *umnotan* is a *to*-adjective in the ASg of the feminine gender, but this is not syntactically viable). Any analysis that would see *umnotan* as being a *t*-stem, i.e. *umnotan* < *\*-o-t-m* (the nominative then being *\*umnos* < *\*umn-o-t-s*), must be considered invalid: a secondary athematic dental stem built on top of a thematic noun is a derivational sequence that would need extraordinary evidence to justify.

<sup>322</sup> Attempting to ascertain which PIE root underlies Phrygian *\*um-* is, naturally, difficult. Ola Wikander (p.c.) and I speculate that Phrygian *umno-* can be directly compared to PIE *\*sup-no-* ‘sleep’ (> Gr. ὕπνος) with assimilation of the sequence *\*-pn-* to *\*-mn-* (cf. Latin *somnus*, where the exact same process takes place). The deity *devos umnotas* would then be ‘the sleeping god’, perhaps referring to the deceased. This identification has the benefit of providing some directly comparable Greek data: the Greek noun ὕπνος ‘sleep’ forms the basis of a dialectal ἰζω-verb ὑπνίζω ‘to cause to sleep’, derivationally identical to Phrygian *\*umnit-je/o-*. While the contexts where *umniset/ομνισττους* appear are not well understood, there is no inherent semantic objection one can make against them meaning ‘will/ought to cause to sleep’, especially if one assumes some semantic shift.

adjure you by Bel and Nabu’. He directly compares Bel and Nabu to *Ti-* and *Devo-* (*ibid.*: 52-53), which is quite reasonable, and concludes that the equivalent of *hwmytk* ‘I adjure you’ should be sought in *umnotan*, which he suggests originates in PIE *\*h<sub>3</sub>emh<sub>3</sub>-* ‘to swear’ (*ibid.*: 53), with *umno* being the 1sg thematic verbal form and *tan* being the 2<sup>nd</sup> person pronoun (otherwise unattested). This is problematic, since there is no source given for the *-n-* found in *umnotan*, *umniset*, and *ομνιστ(ουζ)*. A direct comparison of *umn-* with Greek *ὄμνῶμι* ‘to swear, affirm with an oath, take a vow’ from the same PIE root (*ibid.*) cannot be upheld, since that is a verb with the suffix *-vō-* and there is no trace of *u* in any of the Phrygian forms; even if we disregard the lack of *-ū-*, it would be extremely unexpected for such a verb to be transferred to the thematic conjugation and simultaneously keep an element of the athematic suffix *\*-nū-*.<sup>323</sup>

The analysis of *umniset/ομνιστουζ* as originating in a denominal *\*umnit-je/o-* (aor. *\*umnit-s-*) can further serve as a basis for analysing the form *tekiseton*, a sigmatic optative with a 3pl imperative active ending, ‘may

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<sup>323</sup> A direct comparison with the Aramaic model is also not borne out by the syntax: *tivan* and *devun* are in the accusative case in Phrygian, which is an unexpected choice to render the “by” of Aramaic. Furthermore, the Phrygian sentence begins with *yos* ‘whoever’, as is common for Phrygian, and then continues with *ordoineten*, meaning that the clause *tivan ke devun ke umnotan* would need to be embedded within another clause, i.e. “Whoever, I adjure you by *Ti-* and *Devo-*, would do X, ...” In Aramaic °KAI 318, the clauses are successive: *hwmytk bl wnbw zy ṛrh? znh yhwh* “I adjure you by Bel and Nabu, [you] who would pass the road, ...” It is unclear why such a strategy would be adopted in what is presumed to be a more or less faithful translation of an existing model; especially in light of the fact that a hypothetical *umnotan yos* “I adjure you, who ...” would actually use *yos* with the function of a relative pronoun, directly comparable to Aramaic *zy*, rather than with an indefinite function, which *yos* has at the beginning of conditional protases. These syntactic mismatches are especially problematic since Obrador-Cursach (2021b: 51ff., 54) argues that the entire final clause *mekos anivaΨeti smanin*, which he translates as “let nobody do harm” (Aramaic °KAI 318 *ḡyš ḡl yšml* “let no one do harm”) is a calque, so influenced by the Aramaic original that the wholly unexpected indefinite pronoun *ko-* is used instead of the expected anaphoric pronoun *to-*. See also §VI.4.

they *teki-*'. As in *umnise-*, *tekise-* is a denominal verb built to an *it*-abstract *tekit-*: pres. \**tek-it-je-* ~ aor. \**tek-it-s-* > *tekis-*. What the noun <sup>+</sup>*tekit-* actually meant cannot currently be ascertained. Any attempts at an etymological connection are fraught with difficulty: the voicedness of both stops is unknown and the uncertain quality of the velar poses an additional problem.<sup>324</sup> As such, the number of possible antecedents for \**tek-* is simply too great to allow any fruitful speculation at this time.

One additional issue with the analysis of the *it*-nouns is an unavoidable consequence of the fact that three of them are only directly attested as parts of apparently denominal verbal stems. While the comparison of Greek *χάρις* to Phrygian <sup>+</sup>*χαριτ-* does suggest that the latter did exist as a noun either synchronically or at some point in Phrygian pre-history, this need not necessarily have been the case for <sup>+</sup>*umnit-* and <sup>+</sup>*tekit-*. We may observe in Greek that the verbal suffix *-ίζω*, while initially originating in denominal verbs, later became a productive verbal suffix that no longer required the existence of an associated noun ending in *-ιδ-* (Risch 1974: 296). The same may hold for Phrygian; the verbal suffix \**-id-je/o-* (which would develop into \**-it-je/o-* in Phrygian) might have become productive in PGPh. already, or it might have become such independently in Phrygian as well. Thus, the existence of <sup>+</sup>*umnit-* and <sup>+</sup>*tekit-* in Phrygian is inherently speculative; either could potentially be a mirage forged by the productivity of an \**-id-je/o-* denominal verbal pattern. However, the existence of this pattern in and of itself confirms that verbalization of *id*-abstracts was a

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<sup>324</sup> Since the derivational history of the verb can only be speculated on, the velar could have originally been either a palato- or a labiovelar. While a palatovelar in an old formation \**tek-it-* would have been palatalized, giving \**tes-it-*, if the formation of the *it*-abstract was more recent or synchronically seen as sufficiently closely associated with some other nominal form, perhaps \**tek-o-*, the velar could have remained unpalatalized or been restored.

productive process at some point in Phrygian pre-history, even if the two examples we have actually reflect a later expansion of this derivational type.

### III.3.10.2 Velar stems

Only three velar-final stems can be more or less securely identified in the corpus, *αδιθρερακ* ‘PN’, *bonok* ‘PN’, and *knaik-* ‘woman, wife’.

*αδιθρερακ* and *bonok* are personal names and appear to be in the masculine nominative singular case. The ending *-k/-κ* is the regular development of what would have been an older nominative singular ending *\*-k-s*; since Phrygian began to prohibit final clusters at some point after the disintegration of Proto-Graeco-Phrygian, the desinence was simplified in favour of the stop (LL 1821, 1825).<sup>325, 326</sup>

The noun *knays* ‘wife, woman’ deserves special consideration.

	ending
nom. sg.	<i>knays</i>
gen. sg.	<i>knayko</i> <sup>?</sup>
acc. sg.	<i>κναικαν</i>
nom. pl.	<i>knaykes</i>

Table #31: Attested forms of the noun *knays* ‘wife, woman’.

<sup>325</sup> Contrast the development of a nominative singular in dental stems: *\*-t-s* > *\*-s*. See further §III.3.10.1.

<sup>326</sup> More commonly, the spelling of *αδιθρερακ* with final *-κ* is taken to be due to assimilation with the following particle *κε*. The nominative singular of the name would, according to such a reading, then actually be *\*αδιθρερας*, making it either a masculine *a-* or dental stem. For the proposed assimilation *\*-s#k-* > *\*-k#k-* see §II.2.3.2.1. There is no good reason to outright reject the reading of this personal name as a velar stem.

It has been recognized for quite some time that this word is somehow derived from the PIE word for woman, *\*g<sup>w</sup>enh<sub>2</sub>* (cf. Greek γυνή ‘woman’; PhL 273). The peculiar stem-final addition of *-aik-* in the oblique cases can be directly compared to the Greek oblique stem γυναικ-, and on this basis we can certainly reconstruct a PGPh. oblique stem that ended in *\*-aik-*.

It appears that the Phrygian nominative stem of the word for woman was simply *knay-*, with the addition of the characteristic nominative singular athematic ending *-s*. In this case, one may directly compare the nominative stem more directly to the Armenian oblique stem *kanay-* ‘woman’, apparently an *i*-extension of the PIE term: *\*g<sup>h</sup>(e)n(e)h<sub>2</sub>-i-*. If the two are comparable, this would be highly relevant data in light of the Greco-Armenian hypothesis, suggesting that a Proto-Armeno-Graeco-Phrygian language first innovated a stem in *-i*. The addition of *-k* to this stem would then be a subsequent development of Proto-Graeco-Phrygian. In Greek, there may be some evidence of a previous existence of an *i*-extended stem, namely the Homeric adjective gen. pl. γυνάϊων (belonging to nom. sg. <sup>+</sup>γύναιος) and Mycenaean *ku-na-ja*, if from *\*g<sup>w</sup>Vnaj-jo-* (cf. Opfermann 2017: 62ff.), which cannot originate in a simple *\*g<sup>w</sup>Vna-jo-* due to loss of intervocalic *\*j*.<sup>327, 328</sup>

If the Greek and Phrygian words for ‘woman’ are directly compared, the vocalism of the two needs to be reconciled somehow. The origin of the first

<sup>327</sup> One may also wonder whether the nominative singular γυνή itself may be a reflex of earlier *\*g<sup>w</sup>Vnāj*, with loss of final *\*j* after a long vowel. Compare the οι-stems: NSg *πειθῶ* (oblique stem *πειθοι-*), NSg *ἤχώ* stem (oblique *ἤχοι-*), etc., which are likewise accented on the final syllable in the nominative and are of the feminine gender.

<sup>328</sup> Szemerényi (1960 *apud* EDG 291-292) has suggested that the Greek *-ικ-* extension is a result of de-thematization of the *\*-iko-* adjectival suffix. A more appealing possibility to explain the addition of *\*-k-* in the oblique stem is to suggest it is the result of the feminine *\*-h<sub>2</sub>* undergoing “laryngeal hardening” of the type suggested by Olsen (2009) or Kortlandt (2018) (cf. Opfermann 2017: 67ff., though the details may differ).

vowel of Greek γυv- is a vexed question; Opfermann (2017: 62ff.) suggests an origin in the *o*-grade (i.e. γυv- < \*g<sup>w</sup>on-) against the possibility of an origin in the zero-grade (for which cf. EDG 292, where the zero-grade is suggested throughout, though the difficulty in vocalism is acknowledged, or Vine 1999: 560-562), but the Boetic NSg βανά in any case suggests the existence of a zero-grade nominative singular form in the paradigm (Opfermann 2017: 60), namely \*g<sup>w</sup>nh<sub>2</sub>-. For Phrygian, an *o*-grade is clearly impossible, since there is no vowel between the first two consonants at all; the only possibility for the onset kn- is an origin in the zero-grade. Thus, even if the -υ- of Greek did originate in the *o*-grade, zero-grade forms must have existed in the Proto-Graeco-Phrygian paradigm or in some closely related form. The mismatch between Boetic Greek βαν- and Phrygian kn- can be explained as a result of the different reflexes of an older \*CRH-sequence appearing in an ablauting paradigm: the former vocalism would originate in those forms where the sequence was followed by a vowel (\*CRh<sub>2</sub>V- > \*CəRV-), and the latter in those where the sequence was followed by a consonant (\*CRh<sub>2</sub>C- > \*CRāC-).

To end up with the attested paradigms we need to assume considerable analogical remodelling in both Greek and Phrygian.