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The place of Armenian in the Indo-European language family: the relationship with Greek and Indo-Iranian*

The main purpose of this paper is to present lexical correspondences that unite Armenian with Greek and/or Indo-Iranian. They include shared innovations on the one hand, and isolated lexemes on the other. These two lexical corpora — lexical innovations on an inherited basis and isolated words — can be placed within the same temporal and spatial framework. After the Indo-European dispersal Proto-Armenian would have continued to come into contact with genetically related Indo-European dialects. Simultaneously, it would certainly also have been in contact with neighbouring non-Indo-European languages. A word can be of a substrate origin if it is characterized by: (1) limited geographical distribution; (2) unusual phonology and word formation; (3) characteristic semantics. The material presented here, albeit not exhaustive, allows to preliminarily conclude that Armenian, Greek, (Phrygian) and Indo-Iranian were dialectally close to each other. Within this hypothetical dialect group, Proto-Armenian was situated between Proto-Greek (to the west) and Proto-Indo-Iranian (to the east). The Indo-Iranians then moved eastwards, while the Proto-Armenians and Proto-Greeks remained in a common geographical region for a long period and developed numerous shared innovations. At a later stage, together or independently, they borrowed a large number of words from the Mediterranean / Pontic substrate language(s), mostly cultural and agricultural words, as well as animal and plant designations. On the other hand, Armenian shows a considerable number of lexical correspondences with European branches of the Indo-European language family, a large portion of which too should be explained in terms of substrate rather than Indo-European heritage.

Keywords: Armenian historical linguistics, Armenian etymology, Indo-European comparative linguistics, Indo-Iranian lexicology, Greek lexicology, Mediterranean substrate.

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Introduction

The dialectal position of Armenian has attracted the attention of Armenologists ever since Heinrich Hübschmann (1875/1877) proved that Armenian does not belong to the Iranian group of Indo-European languages and should be treated as an independent branch of the Indo-European family. Mainly under the influence of the *centum* / *satəm* division, Armenian was considered to be in close relationship with the Aryan and Balto-Slavic languages for a long period, until Pedersen (first in 1906: 442), Meillet and others noted that the number of Greek-Armenian agreements is greater than the number of agreements between Armenian and any other Indo-European language. The relations between Armenian and Greek are sometimes regarded within a larger Balkan context including Phrygian, Thracian and Albanian.

Some scholars argued that there are a large number of similarities between Greek and Armenian, which allow for the postulation of a common Graeco-Armenian language.[1] It is now clear, especially after Clackson's (1994) thorough, albeit somewhat hypercritical treatment, that this case is not as strong as it is for Indo-Iranian and Balto-Slavic. The contact relations between Proto-Greek and Proto-Armenian may have been intense, but these similarities are considered insufficient to be viewed as evidence for discrete Proto-Graeco-Armenian.[2]

There are also connections between Armenian and Indo-Iranian on the one hand, and between Armenian, Greek and Indo-Iranian on the other. Armenian is usually placed between Indo-Iranian to the east and Greek to the west, and on the northern side it might neighbour Balto-Slavic (and/or Germanic and others). The dialectal unity of Armenian, Greek, (Phrygian,) and Indo-Iranian is often discussed.[3]

[1] Note the term Helleno-Armenian in Hamp 1979: 4–5; 1983: 6; 1992: 58.

[2] For such a moderate approach, see Meillet 1936: 9, 141–143. For more literature and different discussions of this and related issues, see Meillet 1922/1950; Pedersen 1924; Bonfante 1937, 1981; Adjarian 1937, AčarHLPatm 1, 1940: 23–99; Makaev 1967; Schmitt 1972–74: 34–40, 64–67; 1975: 27; Širokov 1977, 1980; de Lamberterie 1978–79; 1992: 236–239; J̌ahukyan 1980; Wyatt 1982; Hamp 1983a; Beekes 2003: 152–153; Ringe / Warnow / Taylor 2002: 102–106. See especially the monographs: Arutjunjan 1983; Clackson 1994. For the relationship of Armenian with Balkan (and Asia Minor) languages, see J̌ahukyan 1970; 1987: 296–306; Diakonoff 1984: 103–104, 110–112, 120–121, 184_{17}, 188–190; Holst 2009: 49ff; Kortlandt 2010: 4–6, 31–32, 78; de Lamberterie 2012 and 2013; individually: Phrygian (Pedersen 1925: 44–49; Haas 1939; Bonfante 1946; J̌ahukyan 1968; Orel 1993; Clackson 2008: 124), Albanian (Pedersen 1900; Kortlandt 1980, 1986; Rusakov 1984), Thracian (Kortlandt 2003: 83–87; Beekes 2003: 153). For Urartian names of Balkan origin, see Petrosyan 2002: 179–182 and 2005 (with literature).

[3] For various views and discussions, see Meillet 1896: 149–155; 1936: 142; Pedersen 1924: 224–225 = 1982: 307–308; Specht 1935: 29–30, 102–103; 1939: 8, 12–14; AčarHLPatm 1, 1940: 85–86; Thieme 1954: 582–590; Porzig 1954: 162–164; Birwé 1956: 6; Solta 1960: 459ff; Schmitt 1967: 259–260; Makaev 1967: 453–455, 461; Xač'aturova 1973, 1979; Pisani 1979: 210; Euler 1979: 18–23; J̌ahukyan 1980: 4; Wyatt 1982: 27; Gamkrelidze/ Ivanov 1984, 1: 417–418 = 1995:

After the well-known large-scale investigations of Porzig (1954) and Solta (1960), in the period between 1970's and 1990's there have been made a number of attempts to study the relations between Indo-European branches by means of statistics: Tischler 1973, Davies / Ross 1977, Bird 1982 (updated 1993), Coleman 1992, etc. With respect to Armenian one has to mention especially the works of J̌ahukyan, 1980, 1983, and 1987: 86–222. For a critical account of these studies, see Clackson 1994: 7–8, 193–198. For a recent attempt to recover the first-order subgrouping of the Indo-European family using a new computational method, see Ringe / Warnow / Taylor 2002: 102-106.

As far as the morphological and lexical isoglosses are concerned, in these statistical investigations Greek and Indic mostly appear among the closest languages to Armenian. As an example, in the table below I present J̌ahukyan's data on the first five language branches displaying the highest number of common features taken from his lists of 27 phonetic, 35 morphological, and 1400 lexical isoglosses.

	Phonological	**Morphological**	**Lexical**
1.	Greek 14	Indic 20,5	Greek 878
2.	Phrygian 12,5/13,5	Greek 18	Germanic 783,5
3.	Thracian 11/13	Anatolian 17	Indic 661,5
4.	Slavic 11	Tocharian 16,5	Italic 636
5.	Iranian 10,5	Italic 16	Baltic 625,5
6.	Baltic 10	Iranian 13,5	Slavic 579,5
7.	Celtic 9,5/10,5	Slavic 13	Celtic 542,5

Rather than discuss here the different theories of the relationships between Armenian and other language branches and tackle every individual isogloss, which would require a copious monograph, I shall limit myself to a general outline of the most relevant issues regarding Greek and Indo-Iranian. After a short methodological outline (§1) and sections on phonological and morphological agreements (§§2–3), I shall turn to the main goal of this paper, the lexical material. Applying the methodology outlined in §1, I shall select the most illustrative examples from the lists that have been used before and will add some new material that has not been discussed in this context before. Additionally I present a number of new etymologies which are marked as HM.

In cases where I give no references, the relevant etymological material can be found in HAB and Martirosyan 2010 s.v.

1. Method

The methodological and thematic background of this paper largely coincides with that of Clackson 1994, so I simply omit these discussions and refer the reader to this exemplary monograph.

A crucial methodological point of departure is that archaic features and independent developments are not significant for determining a close genetic relationship between two languages or dialects. Instead, one should rely on shared innovations from the outset. The draw-

365; de Lamberterie 1986; Mańczak 1987; Pisowicz 1987; Schmidt 1987; Hamp 1992; Lehmann 1993: 19; Clackson 1994: 201–202; 2008: 124; Mallory/Adams 1997: 29; 2006: 78–79, 109–110, 455; Stempel 2000; Ritter 2006; Schmitt 2007: 22–23; Fortson 2010: 203, 383.

back with this method is that there is often (if not always) the possibility of independent innovations yielding similar results. Nevertheless, the cumulative evidence decreases the likelihood of chance in such cases.

On the other hand, if a competing feature is present in a certain group of dialects that is otherwise confirmed by a number of isoglosses, it should be taken into account even if we cannot formally decide whether we are deling with an archaism or innovation. Thus Armenian, Greek, Phrygian and Indo-Iranian make use of the *e*-augment (§3.1) whereas other dialects do without it, and it is impossible to decide whether the presence or absence of an augment is to be regarded as dialectal innovations made in late Proto-Indo-European. Nevertheless, this is a significant isogloss, because a similar dialectal distribution is found, as we shall see, for a number of morphological and lexical variables.

In the case of, e.g., the genitive ending **-osi̯o-*, however, some archaic traces are also found in other branches, for example Italic and Celtic (see §3.2). This is reminiscent of e.g. IE **h₂nēr*, gen. **h₂nr-ós* 'man' that is basically represented by the dialect area under discussion (Armenian *ayr*, gen. *aṙn*, Skt. *nár-*, Greek *ἀνήρ*, gen. *ἀνδρός*, Phryg. *αναρ*, cf. also Alb. *njeri* 'human being, person') but has also left some traces in Italic (Osc. *ner-*) and Celtic (Mir. *ner* 'boar', MWelsh *ner* 'chief, hero').[4] A similar case is **h₂erh₃-uer/n-* 'arable land'. Such cases cannot be regarded as significant for the purpose of subgroupping or establishing areal contacts.

When an etymon is only found in two or three non-contiguous dialects, it may theoretically represent an archaic PIE lexeme that has been lost elsewhere[5] and is thus not significant for our purpose. But when an etymon appears in a few dialects that can be regarded as contiguous at a certain stage, we should take it seriously even if the etymon has no PIE origin and cannot be thus treated as a shared innovation in the genetic sense. Two Indo-European dialects that were spoken in the same geographical area at a period shortly before and/or after the Indo-European dispersal could both develop shared innovations as a result of their interaction with neighbouring non-Indo-European languages.

After the Indo-European dispersal Proto-Armenian would have continued to come into contact with genetically related Indo-European dialects. Simultaneously, it would certainly also have been in contact with neighbouring non-Indo-European languages. A word can be of a substrate origin if it is characterized by: (1) limited geographical distribution; (2) unusual phonology and word formation; (3) characteristic semantics.

Theoretically, these two lexical corpora — lexical innovations on an inherited basis and substrate words — can thus be placed within the same temporal and spatial framework. As far as the relationship between Armenian and Greek is concerned, matters are particularly complicated for two principle reasons: (1) it is often very difficult to know whether we are dealing with an innovation or a substrate / cultural word, and (2) aside to lexical correspondences confined to only Armenian and Greek, there are also a large number of lexical agreements between Armenian, Greek and a few other European dialects. Many of these words belong to the semantic fields of the physical world, fauna, flora, agriculture and crafts. They may, therefore, shed some light on cultural and geographical characteristics of the environment where Proto-Armenian might have contacted Proto-Greek and other dialects in a late period around the time of the Indo-European dispersal. For these reasons, in section six, following the subsection on Armenian and Greek only, I also provide a few characteristic examples reflecting the broader areal context. I then present a brief discussion on

[4] On this etymon see de Vaan 2008: 406–407; Matasović 2009: 289; Martirosyan 2010: 61–62; Beekes 2010, 1: 103–104.

[5] For the problem of determining a PIE word, see e.g. Mallory/Adams 2006: 107–110.

the substrate (section 7) and add a summarizing table divided into semantic fields. Wherever a lexical agreement is likely to be an innovation rather than an isolated etymon, I mark it by shading.

2. Phonological isoglosses

2.1. A major and very complicated issue is the ***centum* / *satəm* division** which puts Greek and Armenian on different sides of the line. Together with Indo-Iranian, Balto-Slavic and Albanian (the situation in Luwian is disputed), Armenian belongs to the *satəm* group of languages which show palatalisation of the palatovelars and absence of a labial element in their reflexes of the labiovelars.[6]

2.2. Another phonological feature that unifies Indo-Iranian, Balto-Slavic and partly Armenian is the ***ruki*/*iurk*-rule**, the special development of **s* after *r, k, i,* and *u*.[7] It is interesting that Armenian shows a twofold development of ***-rs-** as reflected in *t'aršamim* and *t'aṙamim* 'to wither'; the *-rš-* reflex is in line with the ruki-development, whereas *-ṙ-* betrays an assimilation of **-rs-* to **-rr-*, also seen in Greek. This issue can be placed within the framework of the development ***s > h** in Armenian, Greek, Iranian, Phrygian and Lycian (and also Brythonic Celtic). Both developments may have resulted from a common change, although independent innovations are not unlikely either.[8]

2.3. The so-called **"prothetic vowel"**, viz. Gr. *ἀ-* (and *ὀ-*) : Arm. *a-*, and Gr. *ἐ-* : Arm. *e-* vs. zero in other languages, is now interpreted as a vocalized reflex of the PIE initial laryngeal followed by a consonant (see the table below). It is considered an important isogloss shared by Armenian and Greek, and possibly also Phrygian and Albanian.[9] Clackson (1994: 36) notes that this may represent an areal feature since initial laryngeals might also have left vocalic reflexes in the Anatolian languages. However the latter statement seems to be uncertain.[10]

PIE	Gloss	Greek	Armenian	Other
**$h_1$reg^{w}os-*	'darkness'	*ἔρεβος*	*erek*(*-oy*)	Goth. *riqis*
**$h_1$neu̯n̥*	'nine'	*ἐννέα*	*inn*	Skt. *náva*
**$h_2$le/o(u)pe$\hat{k}$-*	'fox'	*ἀλώπηξ*	*aɫuēs*	Skt. *lopāśá-*
**$h_2$ster-*	'star'	*ἀστήρ*	*astł*	Hitt. *ḫašter-*
**$h_3$néh$_3$mn*	'name'	*ὄνομα*	*anun*	Skt. *nā́man-*

[6] See Pedersen 1925: 7, 44–47; Allen 1978; Shields 1981; Gamkrelidze/ Ivanov 1984, 1: 417 = 1995: 365; Clackson 1994: 54–55. It is remarkable that Luwian preserves the original labialized reflexes of labiovelars (for relevant literature, see Szemerényi 1996: 61_1).

[7] See Martirosyan 2010: 709–710; Beekes 2011: 30, 126–127, 137. I do not share the view (see Olsen 2011: 26–27 with lit.) on the final *-r* as a *ruki*-development in Armenian.

[8] For references and a discussion of these two issues see Clackson 1994: 54, 210_{86}; for **s > h*, cf. Szemerényi 1985; Schmidt 1988: 602. Note that the change *s > h* in Lycian and Brythonic Celtic is certainly not a common archaism with Greek, Armenian, and Iranian according to received opinion on the matter (cf. already Meillet 1896: 151 on Celtic).

[9] For literature and a discussion, see Martirosyan 2010: 714–716; de Lamberterie 2013: 29–34. See also Schmidt 1988: 602. For Phrygian, see Ligorio / Lubotsky forthc. (section 4.3); for Albanian, see Demiraj 1994.

[10] For a discussion, see Kloekhorst 2006 and his manuscript monograph on Hittite accentuation, notably the section "Words containing *aC*(-)".

2.4. Vocative accent. Armenian manuscripts and dialects provide rich evidence for vocative forms accented on the first syllable: *háyrik* 'o father', *máyrik* 'o mother', *Kárapet*, etc.; dial: T'iflis *áxpɛr* 'o brother', *vúrt'i* 'o son'; Loṙi *órdi* 'o son'; Hamšen *háyr-i* 'o father', *máyri* 'o mother'; Akn *hársnuk* 'o sister-in-law', *márik* 'o mummy'; Moks *xrółper* 'o uncle', *t'ágävur* 'o king', Nor-Bayazet *hárs-ɛ* 'o sister-in-law', *Hóṙomsim*, *Máyran*, *Márgarit*, *tnákolner* "you whose house may be destroyed!", even word combinations, such as *ṫúrban harsɛ* "you, dear sister-in-law (to whom I may be sacrificed)", *Hṙóp'sama Xat'un* 'o you, Lady Hṙop'sim'.

The vocative with initial accentuation may be considered an Indo-European inheritance. In Vedic Sanskrit, the vocative, when accented, has the acute on the first syllable, e.g., voc. *pítar* vs. nom. *pitā́*. The same is found in Greek: *ἄδελφε* vs. *ἀδελφός* 'brother'; *δέσποτα* vs. *δεσπότης* 'master (of the house), lord'; *πάτερ* vs. *πατήρ* 'father', etc.; in modern Iranian languages: in Persian, the stress is on the initial syllable of the vocative noun or phrase. In Kurdish Awroman, when no vocative particle is present the stress is brought forward to the first syllable of a noun.[11] This isogloss is highly hypothetical.

3. Morphological isoglosses

3.1. One of the most significant morphological isoglosses shared by Armenian, Greek, Phrygian and Indo-Iranian is the ***e*-augment** (cf. §1), e.g. Arm. 3sg aorist **e-ber** 'brought' from PIE **é-bʰer-et*: Skt. *á-bhar-at*, Gr. *ἔ-φερ-ε*; Arm. 3sg aorist **e-git** 'found' from PIE **é-u̯id-et*: Skt. *á-vid-at*, Gr. *εἶδε* < *ἔ-ϝιδ-ε*; Arm. 3sg aorist **e-d** 'put' from PIE **é-dʰeh₁-t*: Skt. *á-dhā-t*, Gr. dial. *ἔ-θη*, cf. suffixed forms, Gr. *ἔ-θη-κα*, Phrygian *e-daes*.[12]

3.2. The genitive ending ***-osi̯o-** (Skt. *-asya*, Gr. *-οιο*, Arm. **-oy**,[13] etc.) of the nominal *o*-stems has been taken over from the pronominal declension. It is basically restricted to Indo-Iranian, Greek and Armenian and has been interpreted as either a dialectal Indo-European innovation or a morphological isogloss.[14] Given the appearance of this genitive singular ending in Italic (*-osio* in early Faliscan inscriptions and in one early Latin inscription, the *Lapis Satricanus*, c. 490 BC, and in the name *Mettoeo Fufetioeo*) and Celtic (*-oiso* in three or four Lepontic inscriptions from before 400 BC), it is now possible to argue that the spread of a genitive singular*-ī* took place relatively recently, not much earlier than the period of Italo-Celtic unity. It has been argued that the ending **-osi̯o-* was also present in Anatolian. As an archaism it cannot, therefore, be used as an isogloss. Nevertheless, it is somehow significant that, as in case of the *e*-augment, Armenian sides with Greek and Indo-Iranian in having **-osi̯o-* as a specific genitive marker of *o*-stems.[15]

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[11] See Martirosyan 2010: 748–749 and Martirosyan forthc.

[12] For a discussion, see Meillet 1950: 97–101; Birwé 1956: 18–19; Meid 1975: 214–215; Schmidt 1980: 2–5; 1987: 39; 1988: 601–602; Gamkrelidze/ Ivanov 1984, 1: 388–390 = 1995: 340–341; de Lamberterie 1986: 48–49; 1992: 237; Abaǰyan 1991; Clackson 1994: 9–10; Meier-Brügger 2003: 182; Mallory/Adams 2006: 75; Kocharov 2008: 32–33; Fortson 2010: 92, 101, 392. For Phrygian, see also Ligorio / Lubotsky forthc. (section 5.3)

[13] Meillet 1900: 17.

[14] See e.g. Gamkrelidze/Ivanov 1984, 1: 375–379 = 1995: 329–332; Kortlandt 1984: 99–100 = 2003: 47.

[15] For some other possibly related forms and a general discussion, see Lehmann 1981; Gamkrelidze / Ivanov 1984, 1: 377_1 = 1995: 330_3; Schmidt 1987: 40–42; Beekes 1990–92; Morani 1992; Hamp 1992: 59; Clackson 1994: 8, 14; Szemerényi 1996: 184, 187_6; Clackson/Horrocks 2001: 16–17, 32, 69; Eska/Wallace 2001; Fortson 2010: 127. On Anatolian, see Szemerényi 1996: 184; Kloekhorst 2008: 216; and especially Yakubovich 2008.

3.3. A commonly cited morphological feature found in Armenian, Greek and Indo-Iranian (and perhaps also Celtic) is the instrumental marker ***-b^{h}i(s)**. Furthermore, Greek and Armenian share the use of **-b^{h}i-* as the instrumental singular marker, probably due to extension of the athematic instrumental plural marker **-b^{h}is* that is also shared by Indo-Iranian. After a lengthy discussion, however, Clackson (1994: 68–74, 87) concludes that the two languages are likely to have made independent developments and denies the significance of this isogloss. He does admit the importance of this feature, however, for the dialect group Armeno-Graeco-Indo-Iranian.[16]

3.4. *meh$_1$ prohibitive particle: Arm. **mi**, Skt. *mā́*, Av. *mā*, Gr. *μή*, Alb. *mo*.[17] The Armenian prohibitive particle *mi* is probably reflected in Urartian *me*(*i*).[18] The value of this isogloss is uncertain in view of Toch. AB *mā* 'not, no', which expresses both simple negation and prohibition (Adams 1999: 445–446).

3.4. *h$_2$oiu-k^{w}i(d): Arm. **oč‘** 'not', Gr. *οὐκ*, *οὐκί* 'not'. However, an inner-Armenian development is not excluded.[19]

3.5. *-nu-presents are attested in Armenian, Greek and Indo-Iranian in a number of verbs that lack them outside this area: **h$_2$r-nu-*: Arm. **aṙnum** 'to gain, obtain, take' (Armenian, Greek, and probably Iranian, see §4.1.9); **u̯es-nu-*: Arm. **z-genum** 'to put on clothes' (Armenian and Greek, see §6.1.16); **g^{wh}er-nu-*: Arm. **ǰeṙnum** 'to be/become warm, burn' (Armenian and Indic, see §5.2.13).[20]

As an example of the *-nu-*extension on Armenian grounds, note Arm. **lnum**, 3sg.aor. *e-lic‘* 'to fill, be filled' from QIE **pleh$_1$-*: Gr. *πίμπλημι*, *-αμαι* 'to fill, make full', *πλέως*, Ion. *πλέος* 'full', Lat. *plēre* 'to fill', Skt. *par^{i}* 'to fill', pres. **píprati*, etc. (cf. Arm. **li** 'full, abundant, whole' and **lir**, *i*-stem 'plenitude' vs. Gr. *πλήρης* 'full; in full'). The aorist **e-li-c‘** derives from **e-plē-ske*, with **-ske/o-* added to the old root aorist **plē-*(*s*)*-*, cf. Ved. *áprās*, Gr. *ἔπλησε*, etc.

3.6. The *ni- preverb in Armenian and Indo-Iranian.

ni-si-sd-e/o-*: Arm. **nstim, 3sg.aor. *nst-a-w*, impv. *nist* 'to sit' < **nihist-e-*; Skt. *ní ṣīdati*, Av. *nišhiδaiti*, MPers. *nišastan* 'to sit'. The form is based on the reduplicated present form **si-sd-* from PIE **sed-* 'to sit': Skt. *sī́dati*, Gr. *ἵζω*, Lat. *sīdō*, etc. The verbal form **ni-si-sd-e/o-* 'to sit' is a significant isogloss shared by Armenian and Indo-Iranian. Other languages only have the deverbative noun **ni-sd-o-*: Lat. *nīdus* m. 'bird's nest, residence', OHG *nest* 'nest', cf. Arm. *nist*, *o*-stem 'seat, site, base; royal residence, capital', Skt. *nīḍá-* m.n. 'nest, lair, bird's nest', etc.[21]

3.7. *-n̥-presents in Armenian (*-anem*) and Greek (*-άνω*).

li*(*n*)*k^{w}-n̥-* 'to leave': Arm. **lk‘anem, 3sg.aor. *e-lik‘* 'to leave', Gr. *λείπω*, *λιμπάνω* 'to let, leave'; cf. Skt. *rec-*, pres. *riṇákti* 'to leave, let, release', Iran. **raič* 'to leave, let, abandon', Lat. *linquō*, *līquī* 'to leave, quit, forsake; to abandon', OIr. *léicid* 'leaves'. Arm. 3sg.aor. *e-lik‘* is de-

[16] For references and a general discussion of the **-b^{h}i-* ending, see Meillet 1896: 153; Pedersen 1924: 223 = 1982: 306; Gamkrelidze / Ivanov 1984, 1: 379–382 = 1995: 332–335; Kortlandt 1984: 101–102; 2010: 40, 44–45; Schmidt 1987: 40; Martirosyan 2010: 751; Beekes 2011: 30–31, 187–189.

[17] Martirosyan 2010: 468–469. For Albanian *mo*, see Demiraj 1997: 275–276.

[18] J̌ahukyan 1963: 124; Arutjunjan 2001: 454b; Yakubovich 2010.

[19] For references and a critical discussion, see HAB 3: 561–562; Clackson 1994: 158; 2004–05: 155–156; Martirosyan 2010: 531. The most recent treatment of this correspondence is found in de Lamberterie 2013: 21.

[20] See Clackson 1994: 83–84, 178–180 and Martirosyan 2010 s.vv., also Schmidt 1988: 601; Fortson 2010: 97, 214. For an extensive discussion on *nu*-verbs I refer to Kocharov 2008: 39–40, 126–155, 182–185.

[21] See de Lamberterie 1986: 49–57 and Martirosyan 2010: 505–506 with lit.

rived from thematic aorist **é-lik^{w}-e-t*, cf. Gr. *ἔλιπε*, and the imperative *lik‘* reflects IE **lík^{w}e*, cf. Gr. *λίπε*. PIE nasal-infixed present **li-n-k^{w}-* was remodelled to **li(n)k^{w}-n̥-*: Gr. *λιμπάνω* and Arm. *lk‘anem* (cf. **b^{h}eg-* ‘to break’, nasal present **b^{h}-n-eg-*: Arm. *bekanem*, 3sg.aor. *e-bek* ‘to break’, Skt. *bhañj-*, *bhanákti* ‘to break, shatter’, OIr. *bongid*, *-boing* ‘breaks’, etc.). I agree with the view[22] that this is likely to be a shared innovation (pace Clackson 1994: 84–85).

This type of presents became productive in Armenian, cf. e.g. **pr̥k̂-ske/o-* (*sk*-present): Arm. **harc‘anem**, 3sg.aor. *e-harc‘* ‘to ask, question, inquire’, Ved. *pr̥cchā́mi*, MPers. *pursīdan* ‘to ask’, Lat. *poscō* ‘to ask, demand’, etc. Arm. 3sg.aor. *e-harc‘* derives from thematic imperfect **e-prk̂-sk̂-et*, cf. Skt. *ápr̥cchat*. Note also Arm. imper. *harc‘* vs. Skt. *pr̥cchá*.

3.8. The **-n̥-*presents (see the previous paragraph) and a few other Graeco-Armenian isoglosses are treated by Clackson (1994: 74–87) as ambiguous with respect to the question of whether they represent shared innovations or independent developments: the suffix **-olā-* in Greek *-όλης* (e.g. *μαινόλης* ‘raving, frenzied’) vs. the Armenian quasi-participles in *-oł*, the usage of the PIE verbal suffix **-sk̂-* (Greek *-σκ-* in Ionic iteratives and *-c‘-* in the Armenian aorist) with restriction to past time, peculiar verbal reduplication seen e.g. Gr. *δαιδάλλω* ‘to embellish’ and Arm. *cicałim* ‘to laugh’, etc. Naturally, one should welcome such a sound and cautious approach. However, the cumulative strength of these morphological (and a few phonological) features and a great number of such lexical agreements gives additional weight to the evidence.

4. Lexical isoglosses between Armenian, Greek and Indo-Iranian

4.1. Material.

4.1.1. **pl̥h$_1$u̯-* ‘Pleiades’: Arm. **alaw(s)unk‘** ‘Pleiades’, YAv. acc.pl. f *paoiriiaēiniias* < **paru̯i̯ainī-*, NPers. *parvīn* ‘Pleiades’, Gr. *Πλειάδες* ‘id.’; cf. Arm. **y-olov** ‘many’ < **polh$_1$us*: Gr. *πολύς* ‘many’, Skt. *purú-* ‘much, abundant’, etc. (Martirosyan 2010: 12–13).

4.1.2. **polio-/*polieh$_2$*: PArm. **(p)olíya-* > Arm. **ali-k‘$_1$**, obl. *ale-a-* ‘wave’; **ali-k‘$_2$** obl. *ale-a-* ‘grey hair; old age’; Gr. *πολιός*, fem. *πολιάς* ‘whitish grey (of hair and of foaming seas)’ (cf. especially *πολιαί* ‘grey hair’ which stands for Arm. *alik‘* e.g. in Proverbs 20.29); MPers. *pīr* ‘old, aged’ < **parya-*, Kurd. *pēl* ‘wave, billow’, etc.[23] In view of Mycenaean *po-ri-wa*, the Greek word has been reconstructed as **πολιϜο-* and its close connection with Arm. *ali-k‘* has been doubted (Clackson 1994: 163–164). Beekes (2010, 2: 1219), however, notes that the appurtenance of the Mycenaean word is quite uncertain and prefers to reconstruct **polio-*.

The Armenian, Greek and Iranian (if **parya-* is reliable) words are particularly close to each other in having both meanings (‘wave’ and ‘grey hair, old’) and reflecting **polio-*. Perhaps we can also add Skt. *palitá-* ‘grey, grey of old age, aged’, though this is uncertain.[24] Other languages have **polu̯o-* ‘pale, grey’, which seems to be unrelated: Lat. *pallidus* ‘pale’ < **palwo-*, OHG *falo* ‘faded’ < PGerm. **falwa-*, OCS *plavъ* ‘white’, etc.[25]

4.1.3. **h$_2$(e)lh$_1$-/*h$_2$l̥-n(e)h$_1$-*: Arm. **ałam** ‘to grind’ < **al-n-*, Gr. *ἀλέω* ‘to grind’, MInd. *āṭā* ‘flour’, Av. *aša-* ‘ground’ < **arta-*, MPers. *ārd* ‘flour’ < **ārta-*, Khot. *ārr-* and Sogd. *’rn* ‘to grind’ from Iran. **arna-*. See also §4.1.4.

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[22] Hamp 1975; Wyatt 1982: 29; Stempel 2000: 517. For an extensive discussion I refer to Kocharov 2008: 34–39, 73–101, 172–180.

[23] Martirosyan 2010: 14–15.

[24] See Mayrhofer EWAia 2, 1996: 103–104.

[25] See de Vaan 2008: 440–441; Derksen 2008: 412.

4.1.4. **h₂(e)lh₁-tr-i-*: Arm. **aławri**, *ea*-stem 'mill; female grinder (of corn)', Gr. *ἀλετρίς* 'woman who grinds corn'. If Pers. *ās*, *āsya* 'mill', Sogd. *'rδ* 'mill' and other Iranian forms reflect **a/ārθra-* 'mill', a similar **-tr-*formation of **h₂(e)lh₁-* 'to grind' (see §4.1.3), then this is a lexical isogloss between Armenian, Greek and Indo-Iranian, as is the root **h₂(e)lh₁-*. Note also Arm. *alewr* 'flour' and Gr. *ἄλευρον* 'flour' (§6.1.1).[26]

4.1.5. **h₂lōpe/ēk̂-* / **h₂le/oupēk̂-* 'fox': Arm. **ałuēs**, gen. *ałues-u* 'fox', Gr. *ἀλώπηξ*, *-εκος* 'fox', Skt. *lopāśá-* probably 'fox', Proto-Iranian **raupāśa-* 'fox' (Parth. *rwb'ṣ* [rōbās], MPers. *rōbāh* 'fox', Oss. *rūvas/robas* 'fox', Sogd. *rwps-*, Khwar. *rwbs* 'fox', Khot. *rrūvāsa-* 'jackal', etc.). Despite the vocalic problem, I agree with Mayrhofer EWAia 2, 1996: 482 in that Indo-Iran. **Raupāća-* is "nicht zu trennen" from Arm. *ałuēs* and Gr. *ἀλώπηξ*. Further, note Av. *urupi-* 'dog', *raopi-* 'fox, jackal', Celtic **lop-erno-* (Welsh *llewyrn* 'fox', Bret. *louarn* 'fox', etc.), Lat. *volpēs* f. 'fox', Lith. *lãpė*, Latv. *lapse* 'fox', etc.[27]

4.1.6. **h₂(e)iĝ-* 'goat': Arm. **ayc**, *i*-stem, 'goat', **ayc-i**, obl. *aycea-* (probably from fem. in **-ih₂-*), Gr. *αἴξ*, *αἰγός* f. 'goat' (compositional *αἰγί-*), YAv. *īzaēna-* 'leathern', perhaps also Skt. *eḍa-* m. 'a kind of sheep' and Alb. *dhi* f. '(she-)goat'; note also the *i*-less form: Skt. *ajá-* 'goat', YAv. *aza-* 'goat', Lith. *ožỹs* 'goat', etc.[28]

4.1.7. **h₂nēr*, gen. **h₂nr-ós* 'man': Armenian **ayr**, gen. *aṙn*, Skt. *nár-*, Av. *nar-*, Greek *ἀνήρ*, gen. *ἀνδρός*, Phryg. *αναρ*, cf. also Alb. *njeri* 'human being, person'; note also traces in Italic (Osc. *ner-*) and Celtic (Mir. *ner* 'boar', MWelsh *ner* 'chief, hero'). For the areal distribution, compare, e.g., gen. **-osi̯o-* and **h₂erh₃-uer/n-* 'arable land'.

4.1.8. PIE **h₁r̥s-en-* 'male, male animal': Arm. **aṙn** 'wild ram' (acc.pl. *z-aṙin-s*), Gr. *ἄρσην*, *-ενος*, Att. *ἄρρην*, Ion., Lesb., Cret. *ἔρσην*, Lac. *ἄρσης* adj. 'male', Av. *aršan-* m. 'man, male', OPers. *aršan-* 'male, hero, bull', cf. Skt. *ṛ̥ṣabhá-* m. 'bull'.

In view of the vocalic discrepancy in the Greek forms *ἔρσην* and *ἄρσην*, two different roots may be posited: **h₁r̥s-en-* (with Arm. *aṙn* and Indo-Iran. **Hr̥šan-*) and **h₂u̯r̥̄sen-* (with Skt. *vṛ́ṣan-* 'manly; male animal, bull, stallion, etc.', Lat. *verrēs* 'boar', Lith. *veršis* 'bull, ox, ox calf', etc.), respectively.[29] According to Pronk (2010), the second part of the Proto-Indo-European determinative compound **g^{w}(e)h₃u-ursēn* 'bull', lit. 'cow-male' (Toc. A *kayurṣ* 'bull', B *kaurṣe* 'bull', OIc. *kursi*, later *kussi* 'bull calf', Skt. *gó-vṛṣa-* and *gó-vr̥ṣabha-* 'bull', etc.), was reanalyzed in Greek, Indo-Iranian and Armenian as **-rsēn* and started to lead an independent life.[30] Whether one accepts this attractive scenario or not, we are nonetheless dealing with a lexical isogloss between these three branches (pace Pronk 2010: 176_{14}). Note the abundance of such isoglosses in the domain of animal husbandry (see Table set A).

4.1.9. **h₂r-nu-*: Arm. **aṙnum** 'to gain, obtain, win, take, grasp', Gr. *ἄρνυμαι*, aor. *ἀρόμεν* 'to win, gain', probably also Av. *ərənauu-* 'to grant, allot, provide' (see §3.5 on *nu*-verbs).

4.1.10. **sru-ti/to-*: Arm. **aṙu**, *i*-stem, *o*-stem, *a*-stem 'brook, tributary; channel, ditch, trench'; the threefold declension of the Armenian word points to different derivatives: **sru-ti-* (cf. Skt. *sru-tí-* f. 'way, path', Gr. *ῥύσις* f. 'flowing, flow', etc.), **sru-to-* (cf. Gr. *ῥυτός* 'flowing') or **sroutos-* n. (cf. Skt. *srótas-* n. 'stream, current', OPers. *rautah-* n., Pahl., NPers. *rōd* 'stream'),

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[26] See Bailey 1979: 22a; Clackson 1994: 90–95; ÈtimSlovIranJaz 1, 2000: 200–204; Beekes 2010, 1: 65; Martirosyan 2010: 13–14, 26–27, 31.

[27] Clackson 1994: 95–96; Martirosyan 2010: 42; Beekes 2010, 1: 78–79.

[28] Euler 1979: 167–168; Clackson 1994: 88–90; Martirosyan 2010: 58; Beekes 2010, 1: 40–41; cf. also Clackson 1994: 182, $237_{6/4}$.

[29] For references and a discussion, see Martirosyan 2010: 112.

[30] Note that, in the Atharva-Veda, Skt. *ṛ̥ṣabhá-* is usually a real male animal, whereas *vṛ̥ṣabhá-* is generally used symbolically, often referring to, e.g., Indra or Agni (Lubotsky apud Pronk 2010: 172, 175–176).

sr(o)u-ieh₂* (cf. Lith. *sraujà*, Latv. *strauja* 'stream', Russ. *strujá* 'stream', etc.). The forms derive from PIE **sre/ou-* 'to stream, flow': Arm. **a/oṙog(an)em 'to water, irrigate', Gr. *ῥέω* 'to flow, stream', etc.

4.1.11–12. **h₂r̥ĝipió-*: **arcui** 'eagle' and **tḱiH-(i)no-*/**tḱiH-eno-*: **cʻin** 'kite' (§4.2).

4.1.13. **u̯r̥h₁ēn*, gen. **u̯r̥h₁no-*: Arm. **gaṙn**, *in/an*-stem: gen. *gaṙin*, instr. *gaṙam-b*, nom.pl. *gaṙin-kʻ*, gen.dat.pl. *gaṙan-cʻ* 'lamb', Skt. *úran-*, nom. *úrā*, acc. *úraṇam* m. 'lamb', NPers. *barra* 'lamb' < PIr. **varn-aka-*, Gr. *ἀρήν* m., *ϝαρήν* 'lamb', *πολύ-ρρην-ες* 'possessing many lambs' < **-urh₁-n-*.

4.1.14. **dʰm̥bʰ-*: Arm. **damban**, **dambaran** 'tomb, grave'; Gr. *ταφή* f. 'interment', *τάφος* m. 'funeral rites; grave, tomb', *τάφρος* f. 'ditch, trench', *θάπτω* 'to bury' from **dʰm̥bʰ-i̯ō*. Probably here also belongs YAv. *daxma-* 'grave' (dissimilated from **dafma-* < **dʰm̥bʰ-mo-*). The appurtenance of Old Pruss. *dambo* 'ground' is uncertain. PArm. **damb(a)r-* 'tomb' (< **dʰambʰ-ro-/-reh₂-*, cf. Gr. *τάφρος*) may have been borrowed into Abkhaz *a-damra* 'tomb, grave, dolmen'. Note also Arm. *tʻumb* 'mound; fence, wall around a house' and Gr. *τύμβος* m. 'mound, burial mound, grave' (see §6.1.18). In view of the aberrant vocalism comparable to *burgn* and *durgn*, as well as Arm. *tʻ-* instead of *d-*, here we may be dealing with a substrate intermediation.[31]

4.1.15. **h₁eg^wh-i-*: Arm. **iž**, *i*-stem 'viper', Gr. *ἔχις*, *-εως*, gen. *ἔχιος* 'viper; name of a monster', Skt. *áhi-* m. 'snake, adder', YAv. *aži-* m. 'snake, dragon'. The assibilation **-g^wʰi̯-* > **-yžy-* and the problem of the Armenian vocalism are due to a generalization of the genitive **eǐyo-* from gen. **h₁(e)g^wh-i̯-ós* (cf. Gr. gen. *ἔχιος*). If the Indo-Iranian forms belong rather to PIE **h₂(e)ng^wh-i-* (Arm. **awj**, *i*-stem 'snake', Lat. *anguis* m.f. 'snake', Lith. *angìs* f. 'snake'), then we are left with a correspondence between Armenian and Greek.

4.1.16. **ĝerH-*: Arm. **cer**, *o*-stem 'old man; old', **cer-anam** 'to become old', Skt. *jar^i* 'to age, grow old', *jarás-* f. 'old age', YAv. *zar-* 'to age, grow old', *γέρας* n. 'gift of honour' (originally 'old age'); **ĝerH-ont-*: Arm. **cer-un(-i)** (*ea*-stem) 'old', Skt. *járant-* 'old', Oss. *zærond* 'old', Gr. *γέρων* 'old man'. A different formation: OIc. *karl* 'old man', OHG *karal* 'old man', etc.[32]

4.1.17. **g^woṷ-io-* (or **g^wh₃eṷ-io-*): Arm. **kogi**, gen. *kogw-o-y*, ins. *kogw-o-v* 'butter', Skt. *gávya-*, *gavyá-* 'consisting of cattle, coming from or belonging to a cow (as milk, curds, etc.)', YAv. *gaoiia-* 'coming from cattle, consisting of cattle', Gr. adj. *-βο(ϝ)ιος*, e.g. *ἐννεά-βοιος* 'worth nine beeves'. This isogloss[33] is based on the PIE word for 'cow' (Arm. *kov*; cf. nom. *arew* vs. oblique *areg-* 'sun'). SEE AUTHOR'S ADDITION ON P. 137.

4.1.18. **h₂erh₃-uer/n-*: Arm. **harawun-kʻ** (acc.pl. *harawun-s*) 'sowing, seeds; sowing-field; arable land', Gr. *ἄρουρα* f. 'tilled or arable land; pl. corn-lands, fields', Skt. *urvárā-* f. 'arable land, field yielding crop', Av. *uruuarā-* f. pl. 'food plant, plant, ground covered with plants, flora'. As in cases of e.g. gen. **-osi̯o-* and **h₂ner-* 'man', Celtic and Italic are added: MIr. *arbor*, NPl *arbanna*, OIr. gen. *arbe* 'grain, corn', Lat. *arvum* 'ploughed land'. Armenian, Greek and Indo-Iranian are unified by the **-r/n-* heteroclitic declination (seen also in Celtic) and the semantics. If the original meaning was 'grain, crop' (cf. Iranian and Celtic), we might treat the semantic shift as an innovation. However, the **-r/n-*declension is rather archaic. The value of this isogloss is uncertain.

4.1.19. **mr̥to-*: Arm. **mard**, *o*-stem 'man, human being' (renders Gr. *ἄνθρωπος* or *βροτός* in the Bible), Gr. *βροτός* m., f. '(mortal) man; mortal'; Skt. *mr̥tá-* 'died, dead'(verbal adj.), Av. *mərəta-* 'dead'; cf. privative **n̥-mr̥to-*: Skt. *amŕ̥ta-* 'immortal', YAv. *amə̊ša-* 'immortal', Gr. *ἄμβροτος* 'immortal, divine'; with different vocalism: Skt. *márta-* m., Av. *marəta-* m. 'the mortal

[31] For a discussion, see Clackson 1994: 120–121; Martirosyan 2010: 232–233; Beekes 2010, 1: 534, 1517–1518.

[32] Mallory/Adams 1997: 409–410; Olsen 1999: 611; Martirosyan 2010: 339; Beekes 2010, 1: 268–269.

[33] See already Meillet 1896: 152.

one, man', Gr. *μορτός· ἄνθρωπος, θνητός* 'man' (Hesychius); the other cognates continue a form in **-tu-o-*: Lat. *mortuus*, OCS *mrъtvъ* 'dead', etc.[34] Armenian, Greek and Indo-Iranian agree in **-to-* as well as the semantic shift from 'dead' to 'mortal' and therefore represent a significant isogloss (cf. Meillet 1896: 151).

4.1.20. **ḱie/ou̯-*: Arm. **č'uem** 'to go, set forth, march off, break camp', **č'og-,** suppletive aorist of *ert'am* 'to go, set off'; Skt. *cyav-* '(to start) to move, stir; to undertake'; OAv. *šauuaitē* 'to move', YAv. *fra-šūiti-* f. 'approach', OPers. *šiyav-* 'to set forth, go, march'; Gr. *σεύομαι* 'to be in violent motion, hurry; to walk, rush (to)'; participle **ḱiu-to-* 'moved': Arm. **č'u**, *o*-stem 'setting out, departure; campaign, expedition; journey', Skt. *cyutá-* 'moved (wankend, in Bewegung geraten)', YAv. *mainiiu.šūta-* 'vom Geist angetrieben', Gr. *ἐπί-σσυτος* 'rushing, gushing'. This isogloss is based on PIE **kei*(h_2)-, cf. Gr. *κίω*, *κινέω* 'to set in movement, drive away, shake', Lat. *ciēre* 'to move, stir up', *citus* 'fast'.[35]

4.1.21. **g^{wh}er-os-* 'warmth', PIE *s*-stem neuter: Arm. **ǰer**, *o*-stem 'warmth; warm and bright weather; warm', Skt. *háras-* n. prob. 'flame, glow', Gr. *θέρος* n. 'summer; harvest'.[36]

4.1.22. **(p)ste/ēn(-o)-*: Arm. **stin**, gen. *stean* 'breast of a woman'; Skt. *stána-* m. 'breast of a woman, mother's breast, nipple'; YAv. *fštāna-* m 'breast of a woman', MPers., NPers. *pestān* 'breast'; Gr. *στήνιον· στῆθος* (Hesychius); probably also Toch. A *päśśäṃ*, B *päścane* dual 'woman's breasts' < PIE thematic dual **pstenō*. The other cognates have an initial **sp-*, cf. Lith. *spenỹs* 'nipple', OIc. *speni* 'teat, nipple', etc.[37]

4.1.23 **ĥ(e)rH-* 'to tie, attach, bind': Arm. **sarem** 'to form, make; to equip, prepare; to stretch; to weave, etc.' (Middle Armenian and a number of non-contiguous dialects); **sard**, *i*-stem 'spider' (Bible+; dial.) from **ĥr̥(H)-ti-;* Iranian **sar-* 'to tie, attach, link': OAv. *sār-* 'to mix, unite with', Parth. *sar* 'community' (only in *pd … sr* 'together with'),[38] Pashto *sará* adv. 'together', etc.

ĥ(e)r(H)-ieh*$_2$ 'band': Arm. **sari-k', *ea*-stem 'chain, fetters, bands' (5th century onwards); Gr. *καιρία* 'tape or cord used for ligatures', *κειρία* f. 'girth of a bedstead; swathing-band, bandage', *καιροσέων* (Homer) 'close-woven', *καιρόω* 'tie the *καῖροι* onto the loom'.[39]

The Iranian verb is usually derived from IE **ĥerh*$_2$- 'to mix, tie': Skt. *á-śīrta-* 'mixed (with milk)'; Gr. *κεράννυμι*, aor. *κεράσ(σ)αι* 'to mix, mix up (especially of wine with water); to temper (of the climate)'. However, this is uncertain, as is the appurtenance of Skt. *śr̥ṅkhalā-, śr̥ṅkhala-* 'chain, fetter'.[40]

4.1.24. **(s)peud-* 'zeal, haste': Arm. **p'oyt'**, *o*-stem (also *i*-stem) 'zeal, diligence; haste; zealous, diligent; hastily', **p'ut'am** 'to hasten, hurry, strive'; Gr. *σπουδ-ή* f. 'haste, zeal', *σπεύδω* 'to hasten, hurry, strive'; MPers., NPers. *pōy-* 'to run', ManParth. *pwd-* 'to hasten'. The problem of Arm. *-t'* can be solved by positing **(s)peud-to-* > **p^{h}oy(t)t^{h}o-*.[41] Beekes (2010, 2: 1381–1382) notes

[34] Clackson 1994: 237$_{6/4}$; Mayrhofer EWAia 2, 1996: 318, 327; de Vaan 2008: 389–390; Derksen 2008: 342; Martirosyan 2010: 452–453; Beekes 2010, 1: 242–243. It has been assumed that Lat. (*im*)*mortālis* might be based on earlier **morto-* rather than *mors* 'death' (de Vaan 2008: 390; cf. Euler 1979: 125), but this is not compelling.

[35] Schrijver 1991: 237–238; Mayrhofer EWAia 1, 1992: 552–553; Olsen 1999: 41; de Vaan 2008: 113–114; Martirosyan 2010: 547–548; Beekes 2010, 1: 700, 707; 2: 1321–1322. On the pure velar **k-* in **kei-*, see Beekes 2011: 126.

[36] On the isogloss, apart from the standard literature, see Euler 1979: 224; Wyatt 1982: 31–32; Schmidt 1987: 37; de Lamberterie 2013: 19–20; cf. Hamp 1992: 57–58. For the Armenian etymon, see Martirosyan 2010: 556–557.

[37] See Euler 1979: 33–34; Stempel 1990: 52; Olsen 1999: 135–136; Martirosyan 2010: 584–585.

[38] Durkin-Meisterernst 2004: 308b.

[39] HAB 4: 183–184, 186, 187–188; J̌ahukyan 2010: 670–672 (mentioning only the Greek cognates).

[40] For the forms and a discussion, see Schwartz 1986: 359–360; Mayrhofer EWAia 1, 1992: 178; Clackson 1994: 139–140; de Vaan 2003: 99–100; Cheung 2007: 337; Martirosyan 2010: 573–574; Beekes 2010, 1: 617, 664, 675.

[41] Klingenschmitt 1982: 167; Clackson 1994: 155; Martirosyan 2010: 652 (with more references).

Lith. *spáusti* ‘to press, squeeze; to push, drive on; (intr.) to hurry’ as the only certain cognate for the Greek and does not mention the Armenian and Iranian forms. If the Baltic form is indeed related, the isogloss becomes less significant, although the semantic identity of the Armenian, Greek and Iranian cognates is more impressive.

4.2. Pair isoglosses. If two lexemes are contextually related with each other and both represent the same dialect area, the significance of these isoglosses increases. In this section I present two such pairs.

4.2.1. **h₂r̥ĝipió-*: Arm. **arcui**, *ea*-stem: gen.sg. *arcu-o-y*, gen.pl. *arcue-a-c‘* ‘eagle’; Skt. *r̥jipyá-* ‘epithet of an eagle’, m. ‘eagle’, YAv. *ərəzifiiō.parəna-* adj. ‘having eagle-feathers’, MPers. *’’lwf* ‘eagle’ (= phonetically */āluf/*), *āluh* ‘eagle’, etc.; Gr. *αἰγυπιός* m. ‘vulture’, *αἰγίποψ· ἀετός ὑπὸ Μακεδόνων*, cf. also *ἀργιόπους· ἀετός. Μακεδόνες*. The formal difficulties of Gr. *αἰγυπιός* (the expected form is **ἀργι-πιός*) may be due to folk-etymological association with *αἴξ* ‘goat’, *αἰπύς* ‘high and steep, sheer’ and *γύψ* ‘vulture’.[42]

4.2.2. **tḱiH-*(*i*)*no-* or **tḱiH-eno-* ‘bird of prey’: Arm. **c‘in**, *o*-stem ‘kite’, Skt. *śyená-* m. ‘bird of prey, falcon, eagle’, Av. *saēna-* ‘a big bird of prey’, Gr. *ἰκτῖνος* m. ‘kite’.[43]

Discussion: **h₂r̥ĝipió-* and **tḱiH-*(*i*)*no-*/**tḱiH-eno-* (4.2.1+2). In RV 4.38.2, etc. the horse *Dadhikrā́-* is compared with *r̥jipyáṃ śyenám*. Vedic *r̥jipyá-* is an epithet of *śyená-* ‘bird of prey, falcon, eagle’. It is remarkable that both **h₂r̥ĝipio-* ‘epithet of a bird of prey’ and **tḱiH-*(*i*)*no-* or **tḱiH-eno-* ‘bird of prey’ belong to the Armeno-Graeco-Indo-Iranian dialect group. Within this group we can speak also of the Armeno-Aryan poetic language, notably *arew* ‘sun’, *erg* ‘song’, *ji* ‘horse’, perhaps also *surb* ‘pure, holy’ (see §§5.2–5.3).

Arm. *arcui* (gen. *arcu-oy*) is the principal word for ‘eagle’, and its derivation from **h₂r̥ĝipio-* in native terms is secure both formally and semantically. The contextual relation with **tḱiH*(*i*)*no-*/**tḱiHeno-* ‘bird of prey’ (from which Arm. *c‘in*, *o*-stem ‘kite’ certainly derives as a native word) that belongs to the same isogloss area makes the native origin of *arcui* impeccable. I therefore see no reason for denying a direct derivation of *arcui* from late Indo-European **h₂r̥ĝipio-* and treating it as an Iranian or Urartian loanword. Urartian *arṣibi-* that is found in a horse-name and has no Hurrian match should be regarded as an Armenian loanword.

Armenian *arcui* largely functions in poetic association with a swift horse and in figures such as ‘eagle-winged’ and ‘sharp-flying as an eagle’. In the epic fragment on the abduction of the Alan princess *Sat‘inik* by King Artašēs (Movsēs Xorenac‘i 2.50), the horse of Artašēs is compared with *arcui srat‘ew* ‘sharp-winged eagle’. In Aždahak’s dream (Movsēs Xorenac‘i 1.26), the dragon-riding hero was dashing with eagle’s wings: *arcuoy imn ardarew slac‘eal t‘ewovk‘*. In a *kafa*-poem to the Alexander Romance we find *srənt‘ac‘ arciw* ‘sharp-riding eagle’.

These figures probably go back to the Armeno-Graeco-Indo-Aryan poetic language, cf. Skt. *āśu-pátvā* ‘swift-flying’ as epithet of *śyená-* ‘eagle’ (cognate with Arm. *c‘in* ‘kite’), Gr. *ὠκυ-πέτης* ‘swift-flying’ (used of horses and hawks), *ὠκύ-πτερος* ‘swift-winged’; cf. also Av. *ərəzifiiō.parəna-* ‘eagle-feathered (arrow)’, Lat. *acci-piter* ‘hawk’, etc.[44]

4.2.3. **ḱe/omieh₂*: Arm. pl. **sami-k‘**, gen. *samea-c‘* ‘the pair of yoke sticks; rudder’; Skt. *śámyā-* ‘pin of a yoke, peg, wedge’, *yuga-śamyá-* n. ‘yoke and yoke-pin’; Av. *simā-* f. ‘yoke-pin’ (Yašt 10.125, perhaps for **səmā-*), dual *yuii*(*uu*)*ō.səmī-* ‘(having) yoke and yoke-pin’ (Videv-

[42] See Pedersen 1924: 224 = 1982: 307; Schmitt 1970: 66–67$_{17}$; de Lamberterie 1978: 251–262; Euler 1979: 88–89; Meier-Brügger 1995; Watkins 1995: 170–172; Balles 1997: 148–150; Beekes 2010, 1: 33, 126; Martirosyan 2010: 139–141.

[43] Clackson 1994: 45–46, 143–144; Martirosyan 2010: 627.

[44] Watkins 1995: 170–172, 252–253. For references and a thorough etymological discussion of Arm. *arcui*, see Martirosyan 2010: 139–141.

dad 14.10) for **yuuō.səmi-* from Indo-Iran. **i̯uga-ćam-ī*;[45] Western Iranian: Takistani *sāme*, Aštiyani *sama* 'yoke-peg'; Šughni, Bajui *sim-δōrg* (with *δōrg* 'wood, stick' < Iran. **dāruka-*), Khufi *sim* 'peg for fastening yoke to bullock's neck'.[46] Outside of Indo-Iranian, note Gr. *κάμαξ*, *-ακος* f. m. 'pole, shaft; pole to support the vine; shaft of a spear; tent pole', MHG *hamel* 'shaft, pole', etc.

4.2.4. **deh*$_1$- 'to bind': Arm. ***ti-** 'tie, bond' in **sami-a-ti* > **sameti-k'** and **sametay(-k'/n)** 'the tie of *sami*, yoke band', Gr. *δέω* 'to bind', Skt. *dā-/dyáti* 'to bind', Av. *dā-* 'to bind'.[47] This etymon is restricted to Armenian, Greek, and Indo-Iranian, possibly also Hittite, *ti̯e/a-*^{zi} 'to bind?' (cf. Skt. *dyáti*), *ti̯amar* / *ti̯aman-* n. 'cord, string'[48] and Alb. *dúaj* 'sheaf'.[49]

To the best of my knowledge, the Armenian by-form ***tay-** 'bond' (*sametay-k'*; dial. **sametay-n*, **samotay*; other dial. compounds: **beran-tay*, **bn-a-tay*, **vz-tay*, etc.) has not yet received an explanation. I propose to derive it from **dh*$_1$*-ti-*: Gr. *δέσις* 'binding, joint', and Skt. *-diti-* 'Gebundenheit, Fesselung' (in *á-ditiḥ* 'boundlessnes').

Discussion: **k̂e/omieh*$_2$ and **deh*$_1$- (4.2.3+4). Armenian **sami-k'**, gen. *samea-c'* 'the pair of yoke sticks; rudder' (Severian of Gabala, John Chrysostom, Grigor Narekac'i, etc.; preserved in a number of dialects) is mostly attested in a compound with ***ti/tay** 'tie, band' which is represented in several forms: **sameti-k'**, ins.pl. *sameteawk'* (Sirach 28.23–24, 30.27);[50] **sametē-k'**, acc. *sametē-s*, ins. *sametēiw-k'* (Jeremiah 5.5, Severian of Gabala, John Chrysostom, etc.);[51] **samet**, *i*-stem (ins. pl. *samet-i-w-k'* [var. lect. *sameteawk'*, *sametēiwk'*, etc.] in Job 39.10, see Cox 2006: 251); **sametay-k'** (Commentary on Jeremiah by Mxit'ar Goš, 12th cent.); **samotik'** (Grigor Narekac'i, Oskip'orik); **sametēn-k'** (Grigor Tat'ewac'i), all meaning 'the tie of *sami*, yoke band'. The compound corresponds to Gr. *δεσμός* 'band, fetter' or *ἱμάς* 'leathern strap or thong' in the Bible translation.

The component ***tay** in *sametay*, albeit attested in a Middle Armenian source only, seems to be reliable and old since it is confirmed by data from both western and eastern dialects. In a folk incantation against the Evil Eye from the J̌avaxk' region one finds *samota* < **sam*(*w*)*oy-tay* (Lalayeanc' 1892: 13a). Identical to this are *samoda* and *somat'a* found in ritual songs of Palm Sunday in Basen and J̌avaxk' respectively (Grigoryan 1970: 323). In Xotorǰur, a dialect that is both geographically and linguistically close to the Karin/Ērzrum group, to which Basen and J̌avaxk' belong too, one finds *samɔtɛk'* (YušamXotorǰ 1964: 506b), obviously from **samotay-k'*. In these forms the first component comes from *sam*(*w*)*oy*, the genitive singular of *sami*. It is also found in *samotik'* (Grigor Narekac'i and Middle Armenian). As for the eastern dialects, we find Łarabał, Hadrut', etc. *səmbɛ́tan* and Łazax *sametan*,[52] which presuppose **sametay-n*. The widespread form *samɛtɛn* may also be derived from **sametayn*, with a common development *ay* > *ɛ*.

[45] For the Indo-Iranian forms, see Mayrhofer EWAia 2, 1996: 412–413, 613; Skjærvø 1997: 119–121; de Vaan 2003: 470.

[46] Morgenstierne 1962: 207; 1974: 31b, 73b.

[47] Bugge 1893: 25; Hübschmann 1897: 488; HAB 4: 403–404; Mayrhofer EWAia 1, 63, 1992: 716–717; for the Indo-Iranian forms, see also Mayrhofer KEWA 1, 1956: 29, 547; 2, 1963: 69; ÈtimSlovIranJaz 2, 2003: 444–445; Cheung 2007: 47).

[48] See Kimball 1998: 338; Melchert apud Kloekhorst 2008: 880–881; Beekes 2010, 1: 321–322.

[49] Frisk GEW 1, 1960: 374–375; Mayrhofer KEWA 2, 1963: 69; Demiraj 1997: 128, 149–150.

[50] In the Sebastac'i Bible, we find *šłt'ay* 'chain' instead of *sametik'*.

[51] The form *sametē* (ins. *sametēiw-k'*) vs. *sameti* is reminiscent of the puzzling auslaut of *aštē* / *aštē* (ins.pl. *aštēiwk'*) 'spear' from Iran. **aršti-* 'spear', cf. OPers. and Av. *aršti-*, etc. (HAB 1: 221a; Olsen 1999: 865). If the *-ē* proves to be original, one might think of a possibility that IE **dh*$_1$*-ti-* yielded **tey-* > **tē*, with a development **-h*$_1$- > Arm. *-e-* between consonants. More probably, however, *-ē* was taken from obl. *aštē-* and *sametē-*.

[52] Davt'yan 1966: 467; HayLezBrbBaṙ 5, 2008: 259b.

In dialects we also find compounds with *beran* 'mouth' (**beran-tay*), *bun* 'trunk, shaft' (**bn-a-tay*), *oṙ* 'buttocks' (**oṙ-ti-k‘* and **oṙ-tay-n*), *viz* 'neck' (**vz-tay*), etc.

Since Bugge,[53] Armenian *sami-k‘* has been interpreted as an inherited word. Some scholars are inclined toward an Iranian origin of the Armenian word.[54] However, there is no compelling reason for this. There are no Iranian forms that would be formally and semantically compatible with the Armenian word as a source of borrowing.[55] Note that the second component of the compound *sameti* is not attested independently, and this is another (albeit not decisive) indication that *sami* is archaic.

It is especially important that both *sami* and **ti/tay* belong to the same dialect area, namely Armeno-(Graeco-)Indo-Iranian. This situation is reminiscent of another case, PArm. **andi-* 'doorframe, threshold', that has been preserved only in the compound *dr-and-i* (*ea*-stem) and can be derived from **h₂(e)nHt-ieh₂-*, which is also to be regarded in terms of an interchange between feminine suffixes, cf. YAv. *ąiϑiiā-* f.pl. 'door-post' vs. Av. *aϑā-* 'house', Skt. *átā-* f.pl. 'door-frame, door-posts' and Lat. *antae* f.pl. 'square pilasters, wall posts of a temple'.

Taking into account all that has been said above, I am inclined to treat Arm. *sami-k‘* / *samea-* 'the pair of yoke sticks' as a native match of Skt. *śámyā-* 'pin of a yoke'. Theoretically, the Armenian form may be derived from **samíya-* < **k̂omieh₂*.

5. Lexical isoglosses between Armenian and Indo-Iranian

5.1. Armenian and Indo-Iranian.

5.1.1. **h₂énHt-i(e)h₂-*: Arm. **(dr-)and**, *i*-stem, **(dr-)and-i-,** *ea*-stem 'door-frame, threshold, vestibule' (perhaps also 'house, estate', cf. dial. ***andiwor** 'family'), **(h)and**, *i*-stem and *o*-stem 'cornfield, arable field, pastureland'; YAv. *ąiϑiiā-* f. pl. 'door-post', *aϑāhuua* 'house' (loc.pl. of *aϑā-* 'house', with extension of 'doorposts' to 'house', cf. Arm. **and-i-* 'house', 'cornfield'); further: Skt. *átā-* f. pl. 'door-frame, door-posts', Lat. *antae* f. pl. 'square pilasters, wall posts of a temple', OIc. *ǫnd* f 'front room, corridor'.[56]

5.1.2. **n̥-bʰudʰno-* 'bottomless': Arm. **andund-k‘**, *o*-stem, Skt. *a-budhná-* 'bottomless', MPers. *a-bun* 'baseless, bottomless' (compare Skt. *budhná-* 'bottom, depth, the root of a tree', Gr. *πυϑμήν, -ένος* 'bottom, depth, base', Lat. *fundus* 'bottom', OHG *bodam*, etc.).

The close relationship between the Armenian and Aryan words is also seen in the mythological context: Arm. **Andndayin awj** 'the Abyssal Serpent' (in an incantation against the snake and scorpion); a black serpent (*sev ōj*) at **Andndayin caṙ** 'the Abyssal Tree' (in an incantation from the Akn area); **Andndayin t‘agavor** "Abyssal King" in a New-Year's ritual formula related to a spring in Kamarkap, a village in the same area of Akn.[57] Compare the Rigvedic primordial Serpent of the Depth, *Áhi- Budhnyà-*, whose origin and abode is the dark bottom of the waters, as well as the Cosmic tree in the bottomless (*a-budhná-*) abyss.[58]

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[53] Bugge 1893: 24–25; Hübschmann 1897: 488; HAB 4: 167; J̌ahukyan 2010: 665b.

[54] Benveniste 1964: 2; Olsen 1999: 906; Mayrhofer KEWA 3: 302 (not mentioned in EWAia 2, 1996: 613); hesitantly: Pokorny 1959: 556. The etymon is absent in Gamkrelidze/Ivanov 1984 and Mallory/Adams 1997. Beekes (2010, 1: 629) is sceptical about the connection.

[55] J̌ahukyan 1987: 174–175, 551; Hovhannisyan 1990: 213–215; cf. also Schmitt 1983: 108; 1987: 446b. J̌ahukyan (2010: 665b) is quite positive about the native origin of the word.

[56] Martirosyan 2010: 72–77.

[57] Čanikean 1895: 48–49, 167; K‘ēč‘ean/ Parsamean 1952: 78; Łanalanyan 1969: 110[Nr304]; S. Harut‘yunyan 2006: 91a, 152a.

[58] Martirosyan prepar 2.

5.1.3. **b^{h}eh$_2$g-*: Arm. **bak**, *a*-stem 'courtyard; sheep pen; sun or moon halo' (this tentative etymology implies that the original meaning of the Armenian word was 'landed allotment, encircled estate'); Indo-Iranian **b^{h}āg-á-*: Skt. *bhāgá-* m. 'part, portion, share, lot, destiny' (RV+), OAv. *bāga-* 'part', Aram.-Iranian **bāga-* 'landed property, estate, fief', Sogd. *β'γ* 'garden', MPers. *bāw* from *bāγ* 'garden, orchard', NPers. *bāγ* 'garden, orchard', Tadj. *boγ*, Baluchi *bāg* 'garden', etc.; cf. Skt. *bhága-* m. 'prosperity, good fortune, property, personified distribution' (RV+), *bhaj* (pres. *bhájati*, aor. *ábhakṣi*, perf. *babhā́ja*, etc.) 'to share, partake, divide, distribute, apportion; to receive, enjoy' (RV+), *bhaktí-* f. 'distribution, apportioning' (RV+), OAv. *baxštā* 'genießt, hat Anteil', YAv. *baγa-* m. 'god, distribution', *baxta-* 'allotted; allotment', OPers. *baga-* m. 'god', *bāǰi-* m. 'tribute, tax', MPers. *bāǰ* 'tribute, tax', *bay* [bg] 'god, lord', *baxš* 'allotment, grant', *baxt* 'luck, fate, fortune', Parth. *baxš-* 'to divide, distribute, bestow', *baxtag* 'divided'. Further: Gr. *φαγεῖν* 'to eat, consume, swallow' (< *'to enjoy, share').[59]

The etymon may broadly be ascribed to the Armeno-Graeco-Indo-Iranian dialectal area. Arm. *bak* 'courtyard, pen, circle, halo' matches the Indo-Iranian noun **b^{h}āgá-* from **b^{h}eh$_2$go-* both formally and semantically. The semantic specification 'portion, share, allotment' > 'landed allotment' is also seen in Iranian languages (Aram.-Iranian **bāga-* 'landed property, estate, fief', Sogd. *β'γ* 'garden', MPers. *bāγ* 'garden', etc.) and may be due to independent developments. Compare the case of *haraw* 'south'.

However, the Armenian word has an *a*-stem instead of the expected *o*-stem. If the *a*-stem is old (note that we have no evidence for any declension class from the so-called Golden period), we can posit a feminine or collective **b^{h}eh$_2$g-(e)h$_2$*. Alternatively, we might assume an old Aryan borrowing: **b^{h}āgá-* 'portion, share, allotment' > PArm. **b^{h}ag-a-* > **bak-a-* 'landed allotment, encircled estate', with the consonant shift *g* > *k* (cf. the well-known case of *partēz* 'garden', which is usually treated as a very old Iranian loan reflecting the devoicing shift *d* > *t*).

The basic meaning of the Armenian word thus is 'landed allotment, encircled estate', which easily developed to 'courtyard', 'sheep pen', 'circle', etc. For the semantic fluctuation between 'courtyard, pen' and 'garden, estate', note, e.g., Goth. *garda* 'Viehhürde', *gards* 'house, family; court', OHG *garto* 'garden', OEngl. *geard* 'enclosure', Engl. *yard* 'yard', Lat. *hortus* 'garden; pleasure-grounds', etc. For the semantic shift 'courtyard, pen' > 'halo', cf. Turk. *ayəl* and *kutan*, both displaying the meanings 'overnight sheep pen' and 'moon halo'. An older example is Hitt. ^{É}*ḫīla-* c. 'courtyard; halo (of the moon or the sun)'. We can see that this pattern is widely represented in Asia Minor and adjacent areas.[60] (HM)

5.1.4. **h$_1$eĝ^h-ih$_2$-*: Arm. **ezn,** gen.sg. *ezin*, nom.pl. *ezin-k'*, *ezan-c'* 'bullock, ox'; Skt. *ahī́-* f. (*vṛkī*-inflection) 'cow, female of an animal' (RV), Av. *azī-* (*devī*-inflection) 'milking (of cows and mares)'; the appurtenance of OIr. *ag* n. 'cow, cattle' (< **aĝ^{h}es-*) is uncertain. Arm. *ezn* (gen. *ezin*) may be a frozen accusative in **-ih$_2$-m*. The gender change is somehow reminiscent of the other important designation of bovids, Arm. *kov* 'cow' from the PIE generic name for 'bovid'.

5.1.5. **pro-h$_2$enh$_1$-o-* 'breath, air': Arm. **eran** 'gentle breeze; winnowing wind; a wind-spirit' (**pro-hán-o-* > **e-ra(h)án-o-* with a regular prothesis before *#r-*); Skt. *prāṇá-* m. 'breath, breathing out, air'; MidIran. **frāna-* 'air' (cf. Sogd. *βr'n*, *βr''n*, etc.), **pati-frāna-* 'ouverture d'aération' > Arm. *patuhan* 'window'. The Indo-Iranian form is composed of PIE **pro-* (cf. Skt. *prá* 'before,

[59] The Tocharian (A *pāk*, B *pāke* 'part, portion, share') and the Slavic (OCS *bogatъ* 'rich', *u-bogъ*, *ne-bogъ* 'poor', Russ. *bogátyj* 'rich', OCS *bogъ*, Russ. *bog* 'god') cognates reflect loanwords from Iranian (see Adams 1999: 363–364 and Derksen 2008: 50).

[60] If this etymology of Arm. *bak* is accepted, we have to treat Georg. *bak'i* 'hedged pen for cattle; yard; moon halo' and the related forms as armenisms. Georgian-Zan **baga-* 'sheep-pen, goat-pen, crib', if related, can have been borrowed from Proto-Armenian **baga-* prior to the devoicing consonant shift.

forward, forth, in front', Arm. *era-* 'first', etc.) and **h₂enh₁-* 'to breathe': Skt. *an^{i}* 'to breathe', 3sg.pres. *ániti*, cf. **h₂enh₁-mo-*: Gr. *ἄνεμος* m. 'wind', Lat. *animus* m. 'mind, soul; the element of air (as the principle of life); spirit', *anima* f. 'breath; soul, life; disembodied spirit, soul, ghost; soul, spirit; air as the substance of wind, an air current, wind, breeze', etc. (HM)

5.1.6. **loukeno-*: Arm. **lusin**, *o*-stem 'moon', Skt. *rocaná-* n. 'light, luminous sphere, firmament', YAv. *raocana-* adj. 'shining, light' (see §5.3.2 for the discussion).

5.1.7. **pr̥Hu̯o-*: Arm. **haraw**, *o*-stem 'south; southern wind', Skt. *pū́rva-* 'being before, going in front, first, former; eastern', OAv. *pouruuiia-* 'first, intial, former', YAv. *pauruua-*, *paouruua-*, *pouruua-* 'being in front, first, former, southern'; OCS *prъvъ* 'first', Toch. B *parwe* 'earlier; first', Alb. *pārë* 'first', etc.; with a different suffix: Lith. *pìrmas* 'first', Lat. *prīmus* 'first'.[61] This etymology has been proposed by J̌ahukyan[62] and, with few exceptions,[63] has largely remained outside the scope of Indo-European etymological studies. Armenian and Indo-Iranian are unified by **-u̯o-* (this is also found in Slavic and Tocharian, for example) and the meaning 'going in front' with a further shift to a compass direction. The direction ('south') is identical in Armenian and Iranian, but it is difficult to ascertain whether this is due to chance or not.

5.1.8. **h₃meig^{h}-o-*: Arm. **mēg**, *o*-stem (also *i-* or *a*-stem) 'mist, fog, darkness', Skt. *meghá-* m. 'cloud, gloomy weather', Av. *maēγa-* m. 'cloud', Parth. *mēg* 'cloud, mist'. The other cognates continue **h₃mig^{h}-leh₂*: Gr. *ὀμίχλη* 'mist, fog', Lith. *miglà*, OCS *mъgla* 'fog'. Arm. *mēg* may also be an Iranian loanword. However, this is not compelling. Note the *o*-stem of the word, as well as the dialectal **mg-l-im* 'to cloud' comparable to Dutch dial. *miggelen* 'staubregnen', etc.[64]

5.1.9. **pe/orĥ-u-* 'rib, side': Arm. **yorsays** adv. 'supinely, lying on the back' (John Chrysostom, Philo, etc.), *yorsayseal* 'id.' (Proverbs 6.9;[65] *yorsayseal ankeal* in Canon Law, with *ankanim* 'to fall down'), *yorsaysem* 'to cause to lie down; to let fall, overthrow' (Paterica, Grigor Narekaci, etc.); without *y-*: *orsays* 'lying on the back' (Paterica), *orsayseal* 'supine' (Movsēs Xorenac'i 1.12);[66] Skt. *párśu-* f. 'rib', *pārśvá-* n. 'the region of the ribs, side, flank', YAv. *pərəsu-* 'rib', Khot. *pālsuā-* 'rib; spoke', MPers. *pahlūg*, NPers. *pahlū* 'side, rib', Oss. *fars* 'side', etc. The connection of this Indo-Iranian word with OCS *prъsi* 'chest, bosom', Russ. *pérsi* 'breast, bosom', Lith. *pìršys* 'chest of a horse', etc. is considered uncertain.[67] This attractive etymology has been proposed by J̌ahukyan (1991: 42; 2010: 556a)[68] but has remained outside the scope of standard Indo-European etymological studies.

The Armenian word is composed of the prefix *y-* 'at, in, on' and an otherwise unattested word for 'rib, side', **ors-* < **porĥ-u-*. The semantic pattern is widespread in Armenian: *t'ekn* 'shoulder, back' > *t'ikn tal* / *t'iknel* 'to recline', *koł* 'rib, side' and *kołmn* 'side' > *ən-kołnim* and *ən-kołmanim* 'to recline, lie down', *kṙt'-un-k'* 'back' > *kṙt'n-il* 'to lean, recline', *paṙak* 'rib, side' > *paṙakim* 'to lie down'.[69]

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[61] For the forms, see Mayrhofer EWAia 2, 1996: 157; Demiraj 1997: 311; Adams 1999: 360; Derksen 2008: 430; de Vaan 2008: 488–489; Martirosyan 2010: 393–394.

[62] J̌ahukyan 1973: 20–21; 1986–87: 30; 1987: 143, 186; 2010: 450–451.

[63] Clackson 1994: 39; Olsen 1999: 26.

[64] Martirosyan 2010: 457–458, 466, 715 (with a hypothetical explanation for the loss of an initial **h₃-* before **-m-* in Armenian); Beekes 2010, 2: 1077.

[65] In Proverbs 6.9 (Zōhrapean 1805, 3: 149): *Minč'ew yerb yorsayseal kas óv vat, kam erb i k'noy zart'ic'es* "How long wilt thou lie (*ὀκνηρὲ κατάκεισαι*), o sluggard, and when wilt thou awake out of sleep" (Brenton 1851: 793).

[66] In Movsēs Xorenac'i 1.12 (1913=1991: 38^{L17}; transl. Thomson 2006: 86): *Ew zdaštn arewelic' gogc'es imn ibrew orsayseal* "The eastern plain, you might say, was supine".

[67] Mayrhofer KEWA 2, 1963: 229, 261; EWAia 2, 1996: 100–101; Derksen 2008: 429.

[68] No acceptable etymology is recorded in HAB 3: 408–409.

[69] See HAB s.vv. and Martirosyan 2010: 368–369, 376.

J̌ahukyan does not specify the nature of *-ays*. I propose to explain *-ay* as a (collective) suffix seen in a few formations such as *ap‘-ap‘-ay-k‘* ‘rocky and steep place’, *bał-ay-k‘* and *bałbał-ay-k‘* ‘pretext, ostensible reason or accusation’.[70] It probably has an adverbial origin, cf. Arm. *i ver-a-y* ‘on, over’, Gr. *ὕπερ* ‘over, plenty; beyond; above’, *ὑπέρα*, pl. *-αι* f. ‘upper ropes on the sails’, Lat. *s-uper* ‘above, on, over’, *suprā* ‘above, over, on the upper side of’ (see Martirosyan 2010: 592–593). We can posit an underlying **orsay(-k‘)* ‘the region of the ribs / Rippengegend’.

The “pure” form **(y)orsay* has been preserved in the dialect of Nor-J̌uła: *hɔṙsa əngnel* ‘to lie down or recline like a superior’ from **yorsay ankan-* (cf. *yorsayseal ankeal* in Canon Law), and **yors-ank- > hɔṙsang tal* ‘id.’; the development *y- > h-* is exceptional in this dialect.[71]

The *o*-vocalism is found in a number of words in the same semantic field, such as *koł* ‘rib, side’, *ołn* ‘spine, back’, *oṙ* ‘buttocks’, *p‘or* ‘belly’ and *k‘ov* ‘side’. An astonishing parallel for *y-orsays-eal* ‘supinely, lying on the back’ (from **orsay-* ‘rib, side’) is *y-ołn-eal* ‘id.’ (from *ołn* ‘spine, back’).

The final *-s* points to a frozen accusative-locative plural **ors-ay-s*. There are a number of similar frozen formations belonging to the same semantic sphere, such as **beran-s-i-vayr* ‘lying face downward’ > Nor-J̌uła *b‘arazvɛr* (with *beran* ‘mouth’), **p‘or-s-i-vayr* ‘(lying) belly downward’ > Łarabał *p‘ərsəvəɛr* (with *p‘or* ‘belly’).[72]

5.1.10. **k̂e/omieh₂*: Arm. pl. **sami-k‘**, gen. *samea-c‘* ‘the pair of yoke sticks; rudder’; Skt. *śámyā-* ‘pin of a yoke, peg, wedge’, Av. *simā-, -səmī-* f. ‘yoke-pin’; further: Gr. *κάμαξ, -ακος* f. m. ‘pole, shaft’, MHG *hamel* ‘shaft, pole’, etc. (for a thorough discussion, see §4.2.3–4).

5.1.11. **k̂ubʰ-ro-* or **(s)kubʰ-ró-*: Arm. **surb**, *o*-stem ‘pure, clean; holy’, Skt. *śubhrá-* ‘shining, glimmering, beautiful’, cf. *śobh-/śubha-* ‘to be beautiful; to shine’, *śúbh-* f. ‘beauty, splendour, ornament’, etc. Note also Khotanese *suraa-* ‘clean, pure’ (for a discussion, see §5.3.1).

5.2. Armenian and Indo-Aryan.

5.2.1. **sm̥(H)-eh₂-* ‘year’: Arm. **am,** *a*-stem ‘year, age’, Skt. *sámā-* ‘year, season’; further: YAv. *ham-*, OIr. *sam* ‘summer’; note also Arm. *amaṙn* and OHG *sumar* ‘summer’. The original meaning was ‘summer’.[73] Arm. *am* and Skt. *sámā-* agree both in **-ā-* and semantics.

5.2.2. **h₃nēbʰ-* ‘nave, hub of wheel’: Arm. **aniw**, *o*-stem (also *a*-stem) ‘wheel; axle of a chariot; wheel as a torture instrument’; Skt. *nā́bhi-* f. ‘nave, hub of wheel; centre; navel (of the body or the world); origin, relationship, family’, *nábhya-* n. ‘nave, hub of wheel’; cf. also YAv. *nāfa-* m. ‘navel, origin, blood relationship’ (for the semantic relationship cf. Arm. *port* ‘navel’, ‘tribe, generation’), OPr. *nabis* ‘hub, navel’, OHG *naba* ‘hub’, *nabalo* ‘navel’, Lat. *umbilīcus* m. ‘navel; centre, middle’ < **h₃nbʰ-*, Gr. *ὀμφαλός* m. ‘navel, umbilical cord’. This isogloss can be considered valid only if Skt. *nā́bhi-* indeed reflects **h₃nēbʰ-i-* (vr̥ddhi-derivation) rather than **h₃nobʰ-i-*.[74]

5.2.3 **s(e)Hdʰ-i̯o-* ‘successful’ and **s(e)Hdʰ-i̯e/o-* ‘to succeed, be successful’: Arm. **aǰ**, *o*-stem ‘right’, **aǰ-oł** and **y-aǰ-oł** ‘skilful, successful’, **(y-)aǰ-oł-em** ‘to have success’; Skt. *sādhyá-* m. ‘a class of divinities’, *sā́dhati* ‘to succeed, reach the goal’, *siddhá-, sidhrá-* successful’, *sādhú-* ‘straight, effective’, *sídhyati* ‘to succeed, be successful’.[75]

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[70] For more examples and a discussion, see J̌ahukyan 2010: 796.

[71] HAB 3: 408–409; Ačaṙean 1940: 21, 76, 127, 378a.

[72] Alternatively, one might treat the final *-s* as a relic of **si-* from PIE **k̂ei-* ‘to lie’ (cf. Gr. *κεῖμαι* ‘to lie’, etc.), which is visible in Armenian *hiwsis(i)* ‘north’ if indeed from **seukoi-k̂i(y)o-* (see Martirosyan 2010: 412 with ref.). This is less probable, however.

[73] The original paradigm has been interpreted as follows: **s(e)m-eh₂-*, genitive **sm̥h₂-ós*.

[74] Ritter 1983; Martirosyan 2010: 89–90.

[75] Martirosyan 2010: 99–100.

5.2.4. **h₂reu̯-i-*: Arm. **arew**, *u*-stem, old gen. **areg** 'sun; sunlight; life': *Areg k'ałak'* 'the city of the Sun' (Gr. *Ἡλίου πόλις*, e.g. Genesis 41.45, 50), *areg*, gen. *aregi* 'the 8th month', *areg* 'eastern', *areg-akn* 'sun', etc.); Skt. **ravi-** m. 'sun, sun-god' (Upaniṣad+), *ravi-putra-* m. 'son of the Sun' (Kāṭhaka-Brāhmaṇa); probably derived from a PIE verb that is reflected in Hitt. *ḫaru(u̯a)nae-zi* 'to become bright, get light, dawn'. According to Demiraj (1994: 71), Alb. (*vë*) *rē* 'klar, deutlich machen, sehen' also belongs here.

In view of the *-i* of Sanskrit *ravi-*, Arm. *arew*, *u*-stem 'sun' and gen. *areg* < **areg-i-* may be interpreted as reflecting an old HD *i*-stem: nom. **h₂réu-ōi* > PArm. **arew-u(y)*, gen. **h₂r(e)w-i-ós* (rather than **h₂reu̯-os*, as is frequently assumed) > PArm. **areg-i-*.

5.2.5. **Hkeĥ-ih₂-*: Arm. **ak'is**, *i*-stem 'weasel'; Skt. **kaśīkā́-** f. 'Ichneumonweibchen' or 'weasel' (RV 1.126.6), and **kā́śa-** 'weasel'. Skt. *kaśīkā́-* f. is considered a derivation from **kaśī-* f. The connection with MPers., NPers. *xaz* 'marten' and Lith. *šẽškas* 'Iltis' is uncertain. The absence of palatalization of **-k-* before a front vowel in Armenian is perhaps due to dissimilative influence of the palatal **-ĥ-*: **k-ĥ* > *k'-s*. Possible reconstruction: nom. **Hkēĥ-s*, oblique **Hkeĥ-*. Compare the analyses of *ałuēs* 'fox' (*u*-stem) and *iž* 'viper' (*i*-stem). We may be dealing with a common borrowing from an unknown source. (HM)

5.2.6. **u̯eh₂g-nu-*: Arm. **gang** 'sound', Skt. **vagnú-** m. 'sound, noise'; cf. Lat. *vāgīre* 'to cry, wail', etc. For the metathesis (**wāgn-* > **wāng-* > **gang-*), cf. **bʰudʰno-*: Lat. *fundus* 'bottom' and Arm. *andund-k'*, *o*-stem 'abyss' vs. Skt. *a-budhná-* 'bottomless'. (HM)

5.2.7. **h₁erkʷ-o-*: Arm. **erg**, *o*-stem 'song; poem; 'playing (music)', **ergem** 'to sing; to play a musical instrument; to praise'; Skt. thematic noun **arká-** m. 'ray, light, shine; song, magic song', root noun *ŕc-* f. 'song of praise, poem, stanza, verse', *árcati* 'to sing; to praise; to shine'; Hitt. *ārku-zi*, *arku-* 'to chant, intone' (from **h₁erkʷ-*/**h₁rkʷ-*), Toch. A *yärk*, B *yarke* 'worship, reverence', probably also OIr. *erc* 'sky'. Arm. *erg*, *o*-stem 'song' and Skt. *arká-* m. 'shine, song, magic song' represent a thematic noun and should be regarded as a shared innovation.

5.2.8. **sing̑ʰo-*: Arm. **inj**, *u*-stem 'panther, leopard' (renders Gr. *πάρδαλις* 'panther, leopard' in the Bible, e.g. *nman ənju* : *ὅμοιον παρδάλει* in Revelations 13.2; *i leranc' ənjuc'* : *ἀπὸ ὀρέων παρδάλεων* in Song of Songs 4.8); Skt. **siṁhá-** 'lion'. The connection with Toch. A *śiśäk*, B *ṣecake* 'lion' is uncertain.[76]

The assumption that the Armenian word has been borrowed from an unattested Iranian form is not compulsory. Nor is it plausible, since: (1) none of the Iranian languages have preserved a trace of this etymon; (2) the loss of the PIE initial **s-* is regular in native Armenian words, whereas in Iranian loanwords Armenian preserves the *h-;* and (3) the semantic difference indicates that it is an old word. Note especially that Arm. *inj* and Skt. *siṁhá-* are found in a comparable mythical context. In Armenian incantations the Evil Eye often appears as an *inj* 'panther', an *arǐwc* 'lion', and a *višap* 'dragon' coming up out of the sea (compare *inj* etc. in the famous dream of Daniel 7,[77] and in Aždahak's dream in Movsēs Xorenac'i 1.26); he roars like a cloud (*amp/b*) or a lion (*arǐwc/arǔc*) or a bull (*c'ul*).[78] The animals *inj* 'panther' and *arǐwc* 'lion' are also listed with *gɛl* 'wolf' and *ɔj* 'snake' in a Daralagyaz incantation (K'aǰberuni 1902:

[76] Hübschmann 1877: 25; 1897: 450; Meillet 1936: 142; HAB 2: 243; Specht 1939: 14; Xačaturova 1973: 196; 1979: 363; Gamkrelidze/Ivanov 1984, 2: 507 = 1995: 427; Clackson 1994: 13; Olsen 1999: 110. Müller (1870: 452–453) considers a loan from lost Iranian **hinza-* beside Skt. *siṁhá-* 'lion'. Bailey (1979: 484a, cf. 421; 1987: 461a; see also Mayrhofer EWAia 2, 1996: 727; ÈtimSlovIranJaz 3, 2007: 332) connects the Sanskrit word with Iran. **haiz-*, **hiz-* 'to mount' assuming a basic meaning 'pouncer' and considers Arm. *inj* as a loan from an Iranian unattested **hinzu-*. Thieme's (1954: 54–56) sceptical approach is rightly criticized by Makaev 1967: 453–454.

[77] Cowe 1992: 195–199.

[78] Abeghian 1899: 124; Ališan 1910: 412; Ōdabašyan 1986: 141.

112a^{Nr1}), which starts with the name of *Surb Daniɛl* 'St. Daniel' (cf. the aforementioned vision of Daniel).[79]

For the association of Arm. *inj* (**sinĝʰo-*: Skt. *siṁhá-*) with thunderous cloud note RV 5.83.3 where the thunder of Parjanya is compared to the thunder roar of a *siṁhá-* 'lion'.[80]

In view of the absence of secure IE cognate forms, one may assume that the Aryan and Armenian (possibly also Tocharian) forms reflect a common borrowing[81] from a North Pontic or Near-Eastern source. Possibly related forms in non-IE languages are: the old Central Asian word for 'lion', **sengha/singha*, Tibetan *seṅge*, *siṅge*, Zhaṅ Zhuṅ *saṅgo*, etc.; North Caucasian: PEC **ɕä:nɋV* 'lynx, panther', Chechen *ɕoɋ* 'snow leopard', Avar *ɕirɋɋ*, Akhvakh *ɕiɋɋo* 'lynx', Lak *ɕiniɋ* 'tiger, leopard', Akusha *ɕirɋ* 'panther', etc.; Akkad. *sin/mk/gurru* 'a hunted mountain feline, gepard'; Chadic: Kwang *sèmk-, sémgí* 'lion', Chibak *zing'é* 'lion', etc.[82]

5.2.9. **gʷou-dʰeh₁-eh₂-* 'a lizard', lit. 'cow milker/sucker': Arm. **kov-a-di-ac'** (also *kovideay*, *kov-di-c'*) 'a kind of lizard' (renders Gr. *καλαβώτης* 'spotted lizard, gecko' in Leviticus 11.30) reshaped from an older **kov-di-a-;* Skt. **godhā́-** f. 'Iguana, a species of big lizard'. In later literature (Nonnus, Galen) and dialects the Armenian word has been replaced by *kov*(*a*)*cuc* 'a kind of lizard', composed of *kov* 'cow' and *cuc* 'sucking'. There are many semantic parallels in other languages: Xurāsānī Pers. *boccoš* (preverb *bi* + *čōš-* 'Sauger') 'eine Art Eidechse, die nach dem Volksglauben nachts in die Hürden schleicht und den Ziegen am Euter saugt', Ukr. *moloko-sis* 'lizard', etc.[83]

5.2.10. **h₃eui-peh₂-* 'shepherd': Arm. **hoviw**, *a*-stem 'shepherd', Skt. *avi-pā-lá-* 'shepherd', cf. also *go-pā́-* m. 'herdsman', lit. 'cowherd'.

5.2.11. **ĝʰei-o-*: Arm. **ji**, *o*-stem 'horse', Skt. **háya-** m. 'horse'. Skt. *háya-* is usually derived from *hay-* vs. *hinóti* 'to impel, set in motion; to hurl; to help' (presumably derived from PIE **ĝʰei-* 'to drive; to throw'). Arm. *ji* 'horse' and Skt. *háya-* m. 'horse' represent a poetic word, belonging to the "language of gods", as opposed to the PIE word for 'horse', viz. **h₁eḱuo-* > Arm. *ēš* 'donkey'.[84]

Kurdish *dēlazī* 'horse' is only recorded by Chodzko in 1857 among the Kurds of the Rishvand tribe in Iran near Alamut, between Qazvin and Rudbar. It is composed of *dēl* 'female' (cf. *dēlagur* 'female wolf') and the otherwise unknown *zī*, which was earlier considered to be a loan from Arm. *ji* (HAB 3: 152b). Garnik Asatrian (1997)[85] rejects this view saying that this Kurdish dialect had no contact with Armenian during the whole period of its history. He therefore treats this word as the only remnant of Iranian **zaya-*, the theoretical cognate to Skt. *háya-* 'horse'. If this interpretation is accepted, we are dealing with an isogloss between Armenian and Indo-Iranian.

5.2.12. Arm. **marmin**, *o*-stem 'body; flesh'; Skt. **márman-** n. 'vulnerable point of the body', MInd. *mamma-* n. 'weiche Körperstelle'. There is no consensus about the origin of the Indo-Aryan word. If the Aryan word is related with Lith. *mélmenys* 'die um die Nieren liegenden

[79] For a discussion and parallels from other traditions, see Ivanov/Toporov 1974: 169–170; Watkins 1975: 20f; Gusejnov apud MifNarMir 2, 1982: 342; Mawet 1983: 182–183; Gamkrelidze/Ivanov 1984, 2: 500–503 = 1995: 420–423; Cowe 1992: 399–401; Petrosyan 2002: 16. For biblical parallels and an extensive discussion, see Xalat'janc 1896: 172–200; see also Thomson 2006: 112_{230}.

[80] Cf. Gamkrelidze/Ivanov 1984, 2: 510_1 = 1995, 1: 430_{27}.

[81] Cf. Blažek 2005: 67–68, 91–92.

[82] For the forms and a discussion, see Pinault 2002: 330–331; Witzel 2003: 14–15, 45, 47; Behr 2004–05; Blažek 2005.

[83] Martirosyan 2010: 372–373; Olsen 2011: 25.

[84] The vocalism is slightly problematic. Alternative: a substantivized **-to-*participle **ĝʰi-to-* (de Lamberterie apud Olsen 1999: 40; see also Viredaz 2005–07: 7–9).

[85] I am indebted to Garnik Asatrian and Vardan Voskanian for this information and a copy of the paper.

Fleischteile' and others, Arm. *marmin* cannot be treated as a native word because of the vocalism and the *-r-*.[86] Compare Arm. **šałił** 'raw flesh, body, corpse' vs. Skt. **śárīra-** n. 'the body, bodily frame, solid parts of the body'.

5.2.13. *g^{wh}(*e*)*r-nu-* 'to be warm, burn': Arm. **ǰeṙnum** or **ǰeṙanim** (aor. *ǰeṙ-a-* from sigm. aor. *g^{wh}*er-s-*) 'to be/become warm, burn'; Skt. *ghṛṇóti* 'to glow, light' from *g^{w}*hr̥-n*(*e*)*u-* (see §3.5 on *nu*-verbs).

5.2.14. *$\hat{k}$*Hl-eh₂*: Arm. **sal**, *i*-stem (prob. also *a*-stem, as reflected in a borrowing into Georgian *sala* 'a flat roundish stone to play with') 'a large flat block of stone; anvil'; Skt. *śilā́-* 'stone, rock, crag'. The appurtenance of Goth. *hallus* 'rock' and others is uncertain.

5.2.15. *$\hat{k}$*Hs-ti-*: Arm. **sast**, *i*-stem 'rebuke, scolding, censure, castigation, punishment, chastisement, threat; indignation, wrath',[87] **sastem** 'to rebuke, remark indignantly, reprimand angrily, threat', **sastik** 'intense, hard, violent, rigid'; Skt. *śiṣṭi-* 'punishment, command, instruction'; from the root *$\hat{k}$*(*e*)*Hs-*: Skt. *śā́sti* 'to punish, control, command, instruct', Av. *sāh-* 'to teach', *sāsti* 'lehrt', *sāxᵛan-* 'doctrine', *sāsnā-* 'doctrine, command', *sāstar-* 'commander', ManMPers. and Parth. *sāstār* 'commander, tyrant'[88], probably also Alb. *thom* 'to say' and Toch. A *kāṣ* 'to scold, reprimand'.[89]

Since Hübschmann,[90] Armenian *sast* has been interpreted as an inherited word although some scholars are inclined toward an Iranian origin instead.[91] However, there is no compelling reason for the latter, and I do not understand the extreme confidence of, e.g., Xačaturova (1979: 372), who claims that Arm. *sast* is indisputably ("бесспорно") an Iranian loanword. There are no Iranian forms that would be formally compatible with the Armenian word as a source of borrowing. Besides, the Armenian word is semantically closer to the Indic than the Iranian forms. I therefore follow Hübschmann, Ačaṙyan and J̌ahukyan in directly deriving Arm. *sast*, *i*-stem 'rebuke, punishment, indignation' from *$\hat{k}$*Hs-ti-* and thus identifying it with *śiṣṭi-* 'punishment, command, instruction' and positing an Armeno-(Indo-)Aryan isogloss.

5.2.16. *$\hat{k}$*er-e/os-* n. 'cream of milk': Arm. **ser** 'cream of milk, skin on milk or sour clotted milk' (Zgōn-Afrahat, Middle Armenian; widespread in the dialects); Skt. **sáras** n. 'cream, skin on milk'. [92] Mayrhofer (EWAia 2, 1996: 617–618) hesitantly derives the Sanskrit form from the root *śar-* (*śr̥ṇā́ti*) 'to smash, crush, break' from *$\hat{k}$*erh₂-*, cf. Gr. *κεραΐζω* 'to destroy', etc. (HM)

5.2.17. **skHel-*: Arm. **sxale/im** 'to err, be mistaken; to stumble; to fail, miss'; Skt. **skhálati** 'to stumble, stammer, fail'. Here belong also Arm. **šeł** 'slanting, crooked, oblique', **šil** 'squint-eyed', dial. 'mistake; disorder'; Lat. *scelus*, gen. *sceleris* n. 'misdeed, crime', Gr. *σκελλός* 'crook-legged', *σκολιός* 'wicked, crooked' (on the other hand, note Gr. *σφάλλομαι* 'to fall, stumble, be mistaken'). The twofold development of **skH-* as Arm. *š-* and *sx-* is puzzling. Most probably, *sxale/im* is a loan from the Indo-Aryan language of the Near East,[93] while *šeł/šil* has been inherited from Indo-European.

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[86] For a critical discussion of the etymology of *marmin*, see de Lamberterie 2013: 44–47.

[87] In the Bible translation, Arm. *sast* corresponds to, e.g., Gr. *ἐπιτίμησις* 'castigation, censure, criticism' and *ἀγανάκτησις* 'vexation, wrath'.

[88] See Durkin-Meisterernst 2004: 306a.

[89] For the forms and a discussion, see Mayrhofer KEWA 3, 1976: 319–320, 330–331; EWAia 2, 1996: 632–633; Schrijver 1991: 101; Demiraj 1997: 399–400.

[90] Hübschmann 1897: 488–489; HAB 4: 178; J̌ahukyan 1987: 130, 173, 551 (hesitantly); 2010: 669a.

[91] Pokorny 1959: 533 (with a question-mark); Benveniste 1964: 2; Mayrhofer KEWA 3, 1976: 330 (not mentioned in EWAia); Schmitt 1983: 108; 1987: 446b; Olsen 1999: 906.

[92] Martirosyan 2010: 574–575; welcomed in Olsen 2011: 26.

[93] Another possible case of such a borrowing is Arm. **buṙn** (*i*-stem, cf. adv. *bṙn-i-w* 'violently' in Eusebius of Caesarea) 'strong, violent', 'violently', 'violence, strength; tyrant', if indeed from Skt. *bhū́rṇi-* 'zealous, wild'.

5.3. Discussion.

5.3.1. Native or loan? The examination of Armenian-Indic correspondences is complicated in several respects. Firstly, scholars often state that Arm. *arew*, *erg* and others were borrowed from Aryan in the middle of the second millennium BC. This view is untenable since at that period the development PIE **e* > Aryan *a* had already taken place, as is seen in Mitanni *panza* 'five'. Besides, these poetic words are culturally and/or semantically associated with each other and are all Armeno-Indo-Aryan (or Armeno-Graeco-Aryan) correspondences, and some of them clearly preclude the loan theory: *arcui* 'eagle', *ji* 'horse', *cʻin* 'kite', etc. For the association between 'bird, eagle', 'horse' and 'sun' in poetic language, cf. e.g. Skt. *pataṅgá-* adj. 'flying', m. 'bird; flying horse; sun'.

Secondly, there is always a possibility that the Indic might have had an Iranian cognate even if it is not attested in the Iranian languages themselves. This point is often illustrated using the Armenian word **nirh** 'dormancy, slumber'. On the basis of its appearance, the word is seen as a loan from an Iranian **niδrā-*. In Iranian such a word is not attested, but we do know that it exists in the Indo-Iranian subgroup at large because of Vedic Skt. *nidrā́-* f. 'slumber, sleepiness'.

Thirdly, in individual instances it is often very difficult to identify a word as an inherited word or an Iranian borrowing. Armenian and Iranian are independent branches of Indo-European but sometimes parallel phonetic developments complicate a judgement on the status of a lexeme. A frequently cited example is Arm. **naw** 'boat, ship': is it an Iranian loan (cf. Oss. *naw*/*nawæ* 'boat', Khot. *no* 'boat', Parth. *nāwāz* 'skipper' > Arm. *nawaz* 'boatman') or an inherited word next to Skt. *náu-* 'boat', Gr. *ναῦς* 'ship', Lat. *nāvis*, *is* 'ship', OIr. *nau* 'ship'?

It is usually the cumulative evidence that tips the balance. Arm. **surb**, *o*-stem 'pure, clean; holy' (Bible+) has been taken as cognate to Skt. *śubhrá-* 'shining, glimmering, beautiful'. On the other hand, the Armenian word may have been borrowed from Middle Iranian **subra-*, itself a lost cognate of Skt. *śubhrá-*. A number of circumstances point to the native origin of the Armenian form, though, individually taken, none of them is decisive: (1) the *o*-stem of the Armenian; (2) the metathesis **-bʰr-* > Arm. *-rb-;* (3) the semantic difference; (4) the absence of direct evidence for this lexeme in the Iranian language group. The last two arguments have become insignificant in view of Khotanese *suraa-* 'clean, pure', which has been regarded as reflecting the theoretical Iranian form **subra-ka-*.[94] On the whole, it seems more likely that we are dealing with an Armeno-Indo-Iranian lexeme rather than an Iranian loanword in Armenian.

See also the discussions on **ji** 'horse' (§5.2.11) and **sami** (§§4.2.3–4).

5.3.2. Armeno-Indo-Iranian poetic or mythical lexicon. We have discussed poetic words inherited from the Armenian-Greek-Indo-Iranian dialect union (see *arcui* 'eagle' and *cʻin* 'kite'). As for the Armeno-Aryan poetic words, we have already discussed *ji* 'horse' and *arew* 'sun'. We have also discussed two Armeno-Aryan words in the mythological context: *andund* 'abyss' and *inj* 'panther'. Here I shall elaborate on 'sun' and 'moon'.

Arew, gen. **Areg-** 'Sun God' is attested in Movsēs Xorenacʻi 2.8 and in folkloric texts. Most explicit is the following folk prayer from Łarabał: *Astco cʻncułn tvac ərignak, im eress kʻo otand takə, du im xoxekʻs pahes* "O du göttlich strahlende Sonne! Dein Fuss ruhe auf meinem Antlitz! Bewahre meine Kinder" (transl. Abeghian 1899: 43). Note also that this word appears as an oath formula or as an interjection of astonishment. Arm. *arew*/*g-* 'sun, Sun God' and Skt. *ravi-* m. 'sun, Sun God' (Upaniṣad+) derive from a proto-form **h₂reu-i-* and may be regarded as an Armeno-Aryan poetically or sacredly marked designation of 'sun' replacing the PIE unmarked profane word for 'sun', **seh₂ul-*.[95] This is reminiscent of the case of Arm. *ji* vs. Skt. *háya-* which we have already discussed.

[94] Emmerick apud Schmitt 1987: 446b; Emmerick / Skjærvø 1997: 155; see also Lubotsky 2001: 51_{51}.

[95] Martirosyan 2010: 135–138.

It is remarkable that the Armenian word for 'moon', **lusin**, is also in a way related to the Armeno-Aryan unity. The word has an *o*-stem (abl. *i lusn-o-y* in Eznik Kołbac'i, ins. *lusn-o-v* in Jeremiah 8.2) and is usually derived from **loukeno-*: Skt. *rocaná-* n. 'light, luminous sphere, firmament', YAv. *raocana-* adj. 'shining, light'. Next to this, however, there is also reliable evidence for gen. *lusn-i* (abundant in the Bible) which may point to both *i-* and *a*-stems; this can be confirmed by ins. *lusn-i-w* (Movsēs Xorenac'i 2.77, etc.) and ins. (*z-*)*lusn-a-w* (Anania Širakac'i, 7th cent., Abrahamyan 1940: 58[L20f]) respectively.

This leads us to the derivation[96] of *lusin* from **louksneh₂-*: Lat. *lūna* (Praeneste *losna*) f. 'moon, month' and OCS *luna* f. 'moon', cf. Av. *raoxšna-* adj. 'shining', OPr. *lauxnos* nom.pl. 'luminary', as well as Arm. *lusn* 'white spot'. The internal *-i-* may be analogical (cf. *kałin* 'acorn' vs. Gr. *βάλανος* 'acorn'). In view of the *o*-declension of *lusin*, however, it is tempting to assume a blend with **loukeno-* 'light, luminous (sphere)'.

My working hypothesis can be formulated as follows: Armenian inherited PIE **louksneh₂-* f. 'moon', cf. Lat. *lūna* (Praeneste *losna*) and OCS *luna* f. 'moon'. In a late period around the Indo-European dispersal, Proto-Armenian shared the thematic innovation **loukeno-* 'light, luminous (sphere)' with Indo-Iranian (cf. Skt. *rocaná-* and YAv. *raocana-*). Subsequently, PArm. **lúsna-* f. 'moon' blended with **lowsíno-* 'luminous' and resulted in *lusin* 'moon', displaying *o-*, *a-*, and *i*-stem forms.

5.3.3. Other issues. A lexical correspondence, albeit perfect both semantically and formally, cannot be considered as significant for the purpose of this paper unless we demonstrate that we are dealing with a shared innovation rather than an archaism. In some cases we are dealing with very interesting correspondences, the nature of which is quite hard to determine. Such ambiguous correspondences, even those which are more likely to be archaisms, should not be ignored if they display recurrent patterns. Future studies should gather all such correspondences and try to estimate their cumulative strength.

Armenian **y-aṙnem** (aor. stem *y-ari*, imper. *ari*) 'to rise, arise, get up, stand up, wake, resurrect' derives from PIE **h₃r-i-* 'to rise': Hit. *arai-ⁱ* / *ari-* 'to rise, arise, lift; to raise', CLuw. *ari*(*ia*)- 'to raise' < **h₃r-oi-* / **h₃r-i-*; Lat. *orior*, *-īrī*, *ortus* 'to appear above the horizon, rise; to rise from bed, get up; to begin, be born'; Skt. *ar-*, 'to set in motion, move; to arouse, excite', *ṛṇváti* 'to rise, move', Av. *ar-*, redupl. pres. *īra-* 'to reach', *īra-* n. 'attack', YAv. *ərənao-* 'to set in motion'; Gr. *ὄρνυμι* or *-ύω*, med. *ὄρνυμαι* 'to rise, rouse, stir (up), urge on, move'.

3sg.pres.act. *íyarti*, med. *ír̥te* < **Hi-H(a)r-*. Armenian **y-ar-i-* and impv. **ari* derive from **h₃r-i-* (cf. Hit. *arai-ⁱ* / *ari-* 'to rise', perhaps also Lat. *orior*, *-īrī* 'to rise'). The initial *y-* in **y-ar-* (vs. imperative **ar-*) is puzzling. It is tempting to explain the problem by assuming a redupl. pres. **Hi-H(e)r-* > PArm. **Hīyar-* > **(i)yar-*. This would match Skt. *íyarti* (next to *ar-*). One is tempted to treat this as an Armenian-Aryan isogloss; note especially **ni-si-sd-e/o-*: Arm. **nihist-e-*, Skt. *níṣīdati* and Av. *nišhiδaiti* 'to sit' (see §3.6). However, the reduplicated present seems to be an archaic feature in Indo-European and is not productive in Armenian. The reduplicated structure of PArm. pres. **(h)ipe-* (with suppletive aor. *arb-*) 'to drink' from PIE **pi-ph₃-e-* > **pibeti* (Skt. *píbati*, Lat. *bibō*, OIr. *ibid*) ceased to be sensed at a very early stage, and a new present was made by a nasal affix: **(h)ipném(i)* > *əmpem*.

Another complicated but intriguing example is Armenian **targal** 'spoon' (attested in Movsēs Xorenac'i 2.47 and ubiquitous in the dialects) that seems to derive from **dr̥u-*, a zero-grade form of the PIE word for 'wood'. A perfect semantic match is Skt. *dárvi* f. / *darvī́* f. 'spoon', though this has a full grade in the root. But now we have a wonderful match that can solve even the problem of the suffix: Hitt. GIŠ*tar̥u-āli-* n., which refers to an implement used for

[96] Meillet 1936: 21. For a full discussion of *lusin* and related words, see Martirosyan 2010: 320–322.

grinding or crushing, probably something like 'pestle'. For **-al(i)* in designations for implements or the like cf., e.g., Hitt. ^{GIŠ}*ḫulāli-* n. 'distaff'. I wonder, therefore, whether Arm. *targal* is an Anatolian loanword.

There is a better Armenian match for Skt. *dárvi* f. and *darvḯ* f. 'spoon', namely **torg** 'wooden framework, loom'. Here again we find an interesting Anatolian cognate: HLuw. *tarw-i(ia)-* prob. 'wooden beam'. Further, note Arm. **toṙn** 'pestle' and Skt. *dróṇa-* n. 'wooden vessel, trough, bucket'.[97]

Onomatopoeia and nursery words are usually considered insignificant for the problems of reconstruction. However, identical onomatopoeia and nursery words are not necessarily independent creations. Here again, cumulative strength can play a certain role in estimating a genetic relationship between two languages or dialects. Note correspondences such as Arm. **ałałak**, obl. *ałałak-a-* 'shouting' vs. Skt. *alalā* and Gr. *ἀλαλαγή* 'shouting'; Arm. **atta** 'mother' vs. Skt. *attā* 'mother, older sister' (other cognates differ in their semantics).

Table set A (sections 4–5)

Lexical isoglosses: Armenian, Greek and Indo-Iranian.

Physical world, time, space.

Proto-form	Gloss	Sanskrit	Iranian	Armenian	Greek
**pl̥h₁u̯-*	Pleiades		**paruii̯ainī-*	*alawunk'*	*Πλειάδες*
**polio-/-ieh₂*	wave; grey	(*palitá-*)	**parya-*	*ali-k'*	*πολιός, -ιάς*
**sm̥(H)-eh₂-*	year	*sámā-*	(*ham-*)	*am, -a-*	
**n̥-bʰudʰno-*	bottomless	*a-budhná-*	MP *a-bun*	*andund-, -o-*	
A **sru-tí-*	stream, etc.	*srutí-*		*aṙu, i*-stem	*ῥῠσις*
B **sr(o)u-to-*	stream, etc.	*srótas-*	OP *rautah-*	*aṙu, -o-*	*ῥυτός*
**h₂reu̯-i-*	sun	*ravi-*		*arew*	
**pro-h₂enh₁-*	air, breeze	*prāṇá-*	**frāna-*	*eran*	
**loukeno-*	luminous	*rocaná-*	*raocana-*	*lusin, -o-*	
**pr̥Hu̯o-*	east./south.	*púrva-*	*pauruua-*	*haraw, -o-*	
**h₃meigʰ-o-*	cloud, mist	*meghá-*	*maēγa-*	*mēg, -o-*	
**k̂Hl-eh₂*	stone, rock	*śilā́-*		*sal, -i-* (*-a-*)	
**k̂ubʰ-ro-*	shiny, pure	*śubhrá-*	Khot. *suraa-*	*surb, -o-*	

Human, age, kinship.

Proto-form	Gloss	Sanskrit	Iranian	Armenian	Greek
**h₂nēr*	man	*nár-*	*nar-*	*ayr*, gen. *aṙn*	*ἀνῆρ*
A **ĝerH-*	old	*jarás-*	*zar-*	*cer*	*γέρας*
B **ĝerHont-*	old	*járant-*	Oss. *zærond*	*cer-un(-i)*	*γέρων*
**mr̥to-*	mortal	*-mŕ̥ta-*	*-məšа-*	*mard, -o-*	*βροτός*

[97] For a discussion of all these words, see Martirosyan 2010 s.vv.

Body, perceptions, mentality, belief.

Proto-form	Gloss	Sanskrit	Iranian	Armenian	Greek
*u̯eh₂g-nu-	sound	vagnú-		gang	
*pr(e/o)Hk̂t-	buttocks	(pr̥ṣṭhá-)	(paršta-)	erastan-kʻ	πρωκτός
*h₁erkʷ-o-	song	arká-		erg, -o-	
*m(e/o)rmen-	body	márman-		marmin	
*skHel-	to err	skhálati		šil / sxal	σφάλλομαι
*pe/ork̂-u-	rib, side	párśu-	pərəsu-	(y-)ors-	
A *gʷʰer-os-	warmth	háras-		jer, -o-	θέρος
B *gʷʰ(e)rnu-	to be warm	ghr̥ṇóti		jerm	
*(p)ste/ēn-	wom. breast	stána-	fštāna-	stin	στῆνιον

Movements, speech and other activities.

Proto-form	Gloss	Sanskrit	Iranian	Armenian	Greek
*s(e)Hdʰ-i̯o-	succeed	sídhyati		aǰ(-)	
*h₂r-nu-	gain; allot		ərənauu-	arnum	ἄρνυμαι
A *ki̯e/ou̯-	to go, move	cyav-	šauuaitē	čʻog-	σεύομαι
B *ki̯u-to-	moved	cyutá-	-šūta-	čʻu, -o-	-σσυτος
*k̂Hs-ti-	punish, etc.	śiṣṭi-		sast, *i*-st.	
*(s)peud-	zeal, haste		Parth. *pwd-*	pʻoytʻ	σπουδ-ή

Fauna.

Proto-form	Gloss	Sanskrit	Iranian	Armenian	Greek
*h₂lV(u)pēk̂-	fox	lopāśá-	*raupaśa-	ałuēs	ἀλώπηξ
*h₂r̥ĝipió-	eagle, etc.	r̥jipyá-	ərəzifiiō.	arcui	αἰγυπιός
*tk̂iH-(e)no-	bird of prey	śyená-	saēna-	cʻin, *o*-stem	ἰκτῖνος
*Hkek̂-ih₂-	weasel	kaśīkā́-		akʻis, *i*-stem	
*h₁egʷʰ-i-	snake, adder	áhi-	ažonly-	iž, *i*-stem	ἔχις
*sinĝʰo-	lion, panther	siṁhá-		inj	
*gʷou̯-dʰeh₁-	lizard	godhā́-		kov-a-di-acʻ	
*ĝʰei-o-	horse	háya-	(*zaya-)	ji, -o-	

Animal husbandry.

Proto-form	Gloss	Sanskrit	Iranian	Armenian	Greek
*h₂(e)iĝ-	goat	(eḍa-)	(īzaēna-)	ayc	αἴξ
*h₁r̥s-en-	male anim.	(r̥ṣabhá-)	aršan-	arn	ἄρσην
*u̯r̥h₁ēn	lamb	úran-	*varn-	gaṙn	Ϝαρήν
*h₁eĝʰ-ih₂-	cow, ox	ahī́-	azī-	ezn, g. ezin	
*gʷou̯-io-	of cow	gávya-	gaoiia-	kogi	-βο(Ϝ)ιος
*h₃eui-peh₂-	shepherd		avi-pā-lá-	hoviw, -a-	
*k̂er-e/os-	cream	śáras		ser	

Agriculture.

Proto-form	Gloss	Sanskrit	Iranian	Armenian	Greek
**h₂leh₁-uŗ*	flour			*alewr*	*ἄλευρον*
**h₂(e)lh₁-*	to grind	(MInd. *āṭā*)	**arna-*	*ałam*	*ἀλέω*
**h₂(e)lh₁-tr-*	grinder		**a/ārθra-*	*aławri*	*ἀλετρίς*
**h₂erh₃uer/n-*	arable land	*urvárā-*	*uruuarā-*	*harawun-k‘*	*ἄρουρα*
**k̂e/omieh₂*	yoke-pin	*śámyā-*	*simā-/səmi-*	*sami, ea*-st.	(*κάμαξ*)

House, housekeeping, crafts, implements, building.

Proto-form	Gloss	Sanskrit	Iranian	Armenian	Greek
**h₂énHt-ieh₂*	threshold	(*ắtā-*)	*aiϑiiā-*	**and-i-*	
**h₃nēbʰ-*	nave, hub	*nắbhi-*		*aniw* ‘wheel’	
**bʰeh₂g-*	lot, estate	(*bhāgá-*)	**bāga-*	*bak*	(*φαγεῖν*)
**dʰm̥bʰ-*	tomb, grave		**daf-ma-*	*damban*	*τάφος*
**k̂(e)r(H)-*	to tie, form		**sar-*	*sarem*	
**k̂(e)r(H)ieh₂*	band			*sari-k‘, -ea-*	*κε/αιρία*
**deh₁-*	to bind	*dā-/dyáti*	*dā-*	**ti-*	*δέω*
**dh₁-ti-*	bond	*-diti-*		**tay*	*δέσις*

6. Lexical isoglosses between Armenian, Greek and European dialects

6.1. Armenian and Greek: innovations.

6.1.1. **h₂leh₁-uŗ*: Arm. **alewr**, **aliwr**, gen. *aler* (later also *o*-stem) ‘flour’, Gr. *ἄλευρον*, *ἄλευρος* ‘flour’. See also *ałam* ‘to grind’ and *aławri* ‘mill, female grinder’ (§4.1.3–4).

6.1.2. **aĝu(s)ieh₂-*: Arm. **acu** ‘garden-bed’, Gr. *ἄγυια*, pl. *ἀγυιαί* f. ‘street, road’; probably a shared innovation based on PIE **h₂eĝ-*: Arm. **acem** ‘to bring, lead’, Skt. *ájati*, Gr. *ἄγω* ‘lead’, etc.[98] For the semantic relationship between ‘garden-bed’ and ‘street’, compare Arm. *marg* ‘meadow’ (dial. ‘garden-bed’), which has been borrowed from Parth. *marγ* ‘wood, meadow’. Sanskrit has *mŗgá-* m. ‘wild animal’ (cf. Wakhi *mɛrg* f. ‘female ibex’) and *mārga-* ‘(wild) path, road’. The latter is comparable to the Armenian dialectal meaning ‘garden-bed’.[99]

6.1.3. **h₃kʷkʷon* ‘eye’: Arm. **akn** gen. *akan* ‘eye’, Gr. *ὄκκον· ὀφθαλμόν* ‘eye’ (Hesychius); derived from PIE **h₃(o)kʷ-* ‘eye’: Skt. *ákṣi-*, Gr. *ὄσσε*, Arm. *ač‘-k‘*, etc.

6.1.4. **antḗr* / **an(n)ēr* ‘cave’: Arm. **ayr**, *i*-stem ‘cave’, Gr. *ἄντρον* n. ‘cave’.[100] The development of **-nt-* is problematic, however.[101] Perhaps one can assume a substrate origin with a nasal vacillation, **an(n)ēr* vs. **antēr*, somehow comparable to another substrate term, Arm. *kamurǰ* ‘bridge’ vs. Gr. *γέφῡρα* ‘bridge’. The by-form **an(n)ēr* could easily develop into *ayr* (cf. **h₂nēr* > *ayr* ‘man’).

[98] On Gr. *ἄγυια*, Arm. *acu* and various explanations of *-u*, see Clackson 1994: 117, 225$_{124}$; Martirosyan 2010: 17–18; Beekes 2010, 1: 17 (not mentioning the Armenian word).

[99] For these Armenian and Indo-Iranian words, see HAB 3: 275–276; Mayrhofer KEWA 2, 1963: 626, 669; EWAia 2, 1996: 370–371; Dočkalová / Blažek 2011: 323, 327.

[100] De Lamberterie 1978: 243–245; 1992: 238; Olsen 1999: 92; Martirosyan 2010: 62–63 with lit.

[101] Clackson 1994: 98; Beekes 2010, 1: 110.

6.1.5. **h₁os-r̥-(e)h₂* 'harvest, summer': Arm. ***ar-a-** 'harvest, harvest time', seen in **ar-a-c'** 'harvest time, harvest of grape/fruit', the sixth month (17th August to 15th September); Gr. *ὀπ-ώρα* f., Lac. *ὀπ-άρα* 'end of the summer, beginning of autumn; harvest, fruit'; cf. also CS *jesenъ*, Russ. *osen'* f. 'autumn', Goth. *asans* f. 'harvest, summer', OHG *aran*, Germ. *Ernte* 'harvest', etc. Arm. **ar-a-* derives from PArm. **o(h)ár-a-* < neuter plural or collective **h₁os-r̥-h₂* 'harvest, summer' (or **h₁os-r̥* >> fem. **h₁os-r̥-eh₂*). Note the remarkable contrast with the preceding month name, **k'ał-o-c'** 'mowing time', deriving from *k'ałem* 'to pluck, weed, mow, harvest' < **(s)kl̥-ne/o-*, which is a Graeco-Armenian agreement too, cf. Gr. *σκάλλω* 'to stir up, hoe' from **σκάλ-νω* (see §6.1.30).

For the typology of such a contrast between the fifth (reaping/mowing) and the sixth (harvest — grape/fruit) months, compare e.g. the contrast between the fifth month (July-August) as "reaping/mowing time" ("урожайная пора") vs. the sixth month (August-September) as "beginning of the pressing of grape-juice" ("начало выжимания виноградного сока") in the Khwarezmian calendar.[102] (HM)

6.1.6. **h₂er-* 'to fix, put together': Arm. **aṙnem**, 1sg.aor *ar-ar-i*, 3sg.aor. *ar-ar* 'to make; to create': Gr. *ἀραρίσκω*, aor. *ἤραρον* 'to fit, equip', etc. The agreement is unobjectionable both formally and semantically, but it may be an archaism.[103]

6.1.7. **Héh₂m-(ō)r*, gen. **Hh₂m-(e)n-*: Arm. **awr**, gen. *awur*, instr. *awur-b* 'day; time, age'; Gr. *ἦμαρ*, Arc. *ἄμαρ*, *-ατος* n. 'day', *ἡμέρα*, Dor. *ἀμέρα* 'id.'. Arm. *aw(u)r* may be explained as follows: **a/āmōr* > PArm. **amur* > **aʷmur* > **awur* > Arm. *awr*, gen. *awur*.[104]

6.1.8. **h₃bʰel-*: Arm. **awel** 'broom', later denominative *awelem* 'to sweep, broom'; Gr. *ὀφέλλω* 'to sweep, broom', *ὄφελμα*, *ὄφελτρον* 'broom'; Arm. ***awel-** 'increase' in *aweli* 'more', *aṙ-awelum* 'to increase', *y-awelum* 'to add to'; Gr. *ὀφέλλω* 'to increase, enlarge, augment, advance' (cf. Myc. *no-pe-re-a₂* /nōpheleha/ 'useless' < **n̥-h₃bʰel-es-h₂*: **νωφελής*). There is no cognate to this root in other Indo-European languages.[105]

J̌ahukyan (1970: 21$_{39}$) admits the possibility that Arm. *awel-* 'to increase' has been borrowed from Urartian *abili-d(u)* 'to join, increase'. Arutjunjan (1983: 339$_{195}$) notes that in this case the comparison between Arm. *y-awelum* and Gr. *ὀφέλλω* would be impossible. However, the etymological connection between these Armenian and Greek words is unobjectionable, and the apparent contradiction can easily be removed if we assume the opposite direction of borrowing, namely from Armenian into Urartian.[106] Compare the cases of *arcui* 'eagle' and *burgn* 'tower' (§§4.2.1–2 and 6.1.10).

The remarkable agreement between Armenian and Greek in both meanings, 'sweep' and 'increase', makes this one of the most important isoglosses.

6.1.9. **bʰh₂-ti-*: Arm. **bay**, *i*-stem 'speech, word, verb', Gr. *φάσις*, *φάτις* f. 'declaration, enunciation, rumour'; a zero-grade *ti*-derivative of PIE **bʰeh₂-* 'to speak': Arm. *bam* 'to speak, say' vs. *φημί* 'to say'.

6.1.10. **bʰurgʰ-* 'tower': Arm. **burgn**, gen. *brgan* 'tower; pyramid'; Gr. *πύργος* m. (also *φύρκος*) 'tower'. Notwithstanding the formal problems, which might suggest a substrate in-

[102] See Martirosyan prepar. 1.

[103] Clackson 1994: 101–102; Martirosyan 2010: 112; de Lamberterie 2013: 18.

[104] The appurtenance of OIr. *amm* 'time, season' (from **Hh₂m-n-*?) and Arm. *amanak* 'time' is uncertain. For a discussion, see Clackson 1994: 96–97; Martirosyan 2010: 46, 156.

[105] HAB 1: 356–358 with lit.; de Lamberterie 1992: 238; 1992a; Clackson 1994: 33–35,156–158; Olsen 1999: 211, 436; Beekes 2010, 2: 1133.

[106] J̌ahukyan 1987: 433; 2010: 100–101. For the Urartian word and its connecton to Armenian *awel-*, see N. Arutjunjan 2001: 431a.

termediation, this cultural term seems to be based on *$b^herĝ^h$-,*$b^hr̥ĝ^h$-u-, *$b^hr̥ĝ^h$-(*e*/*o*)*nt*-: Arm. **barjr**, gen. *barju*, **-berj** 'high', **baṙnam** 'to lift, raise' < **barj-nam*; Hitt. *parku-* 'high', Skt. *bṛhánt-* 'large, wide, abundant, lofty, high, strong, dense, loud', etc. Urart. *burgana* 'fortress' (if the meaning is reliable) may be an Armenian loanword. For another cultural term of a similar structure, cf. **durgn**, gen. *drgan* 'potter's wheel' vs. **daṙnam** 'to turn; to return' < **darj-nam* (see §6.5.2).

6.1.11. *d^hlh_1ro-: Arm. **dalar**, *o*-stem 'green, fresh'; **dalar-i**, *dalarw-o-y*, *-o-ǰ* 'greenery, grass, herb'; Gr. θαλερός 'blooming, fresh'. The root is visible in Gr. θάλλω 'to bloom, flourish, grow', θάλος n. 'sprout', θαλλός m. 'green twig, esp. of the olive, sprout', MIr. *duilne*, *duille* 'leaf, foliage', OEngl. *dile* 'dill', Alb. *dal* 'to sprout', etc., as well as Arm. **deł**, *o*-stem 'herb; medicine; poison'. Notwithstanding the problems concerning the reconstruction of the root (*d^hlh_1- or *d^heh_2l-) and the suffix (**-ero-* or **-ro-*),[107] I see no solid reason for separating Arm. *dalar* (*o*-stem) from Gr. θαλερός.

It is also worth considering whether Arm. *deł* 'herb' and Gr. θαλλός m. 'green twig, sprout' derive from an old *n*-stem: nom. *$d^hél(H)$-n-, gen. *d^hl-nós.

6.1.12. *$d^h(e)h_1s$- 'god': Arm. **di-k'**, gen.pl. *di-c'*, instr.pl. *di-a-w-k'* (compositional *diwc'-*) 'god', Gr. θεός 'god'. With a different meaning: Lat. *fēriae* < OLat. *fēsiae* 'festival days', *fēstus* 'festive', *fānum* < **fas-no-m* 'hallowed place', Osc. **fiísnú** 'templum', etc.

6.1.13. *$pr(e/o)H\hat{k}t$-/*$pr(ō)\hat{k}t$-: Arm. **erastan-k'**, *a*-stem 'buttocks', Gr. πρωκτός m. 'anus'. Clackson (1994: 166–167) takes this as an Armenian-Greek-Aryan correspondence, cf. Skt. *pr̥ṣṭhá-* n. 'back, mountain-ridge, top', *pr̥ṣṭí-* f. 'rib', cf. YAv. *paršta-* m. 'back, spine, support in the back', *paršti* 'back'. However, the Indo-Iranian words appear to be derived from **pr-sth*$_2$*-o-* and are thus unrelated.[108] Even if they are related (which would create an isogloss between Armenian, Greek and Indo-Iranian), Armenian and Greek are certainly closer to each other since they agree in both vocalism and semantics.

6.1.14. *$pre(i)sg^wu$-: Arm. **erēc'**, *u*-stem (adj.) 'elder; presbyter'; Gr. πρέσβυς m. 'old man; the elder; ambassador; president'; perhaps also Lat. *prīscus* 'ancient'.[109]

6.1.15. *$d\underset{\sim}{u}eh_2$-*ro*-: Arm. **erkar** 'long' (in both temporal and spatial aspects), Gr. *δϜᾱρός: δηρός, Dor. δᾱρός 'lasting long'; with a different vocalism: Lat. *dūrō* 'to endure, last out, survive', Skt. *dūrá-* 'far', etc.; *$d\underset{\sim}{u}eh_2$-*n*-: Arm. **erkayn** 'long', Gr. δήν 'long, far' < *δϜᾱν.[110]

6.1.16. *$\underset{\sim}{u}es$-*nu*-: Arm. **z-genum**, 3sg.aor. *zge-c'-a-w* 'to put on clothes', Gr. ἕννυμι 'to clothe; to put on, clothe oneself'; cf. Hitt. *u̯eš-* 'to be dressed', Skt. *váste* 'to be clothed, wear', etc. (see §3.5 on *nu*-verbs).

6.1.17. **pter-* 'feather, wing, blade': Arm. **t'er** (widespread in the dialects: Hamšen, Axalc'xa, Łarabał, Ararat, J̌uła, Sebastia, etc.) 'leaf; leaf of dough or paper; petal', ***t'el** (dial.) 'id.'; **t'er**, abl. *i t'erē* 'side' (from earlier 'wing, feather');[111] **t'ert'**, *i*-stem 'leaf of a flower, plant or paper; plate' (Philo, Paterica, etc., and dialects); Gr. πτερόν n. 'feather; bird's wing; wings of a bat and of insects; any winged creature, such as the Sphinx; anything resembling wings or feathers, such as oars and parasols; side-walls of Egyptian temples; drawbridge', πτέρυξ f. 'wing of a

[107] For a discussion, see Clackson 1994: 118–120; Matasović 2009: 88, 102–103; Martirosyan 2010: 231–232, 237–238; Beekes 2010, 1: 530–531.

[108] Mayrhofer EWAia 2, 1996: 165–166; Beekes 2010, 2: 1244. For a discussion of the Armenian word and literature, see Martirosyan 2010: 258.

[109] Clackson 1994: 165; Martirosyan 2010: 262–263; Beekes 2010, 2: 1231–1232; de Lamberterie 2013: 15.

[110] Meillet 1924: 1–4; de Lamberterie 1992: 257; Clackson 1994: 114–115; Martirosyan 2010: 266–267.

[111] For the semantic development, cf. the meanings 'side-walls of Egyptian temples' and 'drawbridge' of Gr. πτερόν 'wing'. Note also Arm. *kuṙn* 'back, arm' and 'side'; Engl. *wing* 'wing' and 'side, flank'.

bird; winged creature, bird; blade'; the other cognates represent **pet-r-*: Skt. *pátra-* n. 'wing, feather, leaf', OHG *fedara* 'feather', Hitt. *pattar*, obl. *pattan-* 'wing, feather', etc.; derives from **pet(H)-* 'to fly': Skt. *pátati* 'to fly, rush, fall', Gr. *πέτ-ο-μαι*, *πτ-έ-σθαι* 'to fly', etc.

Arm. *t'er* and Gr. *πτερ-* correspond to each other both semantically (pace Beekes 2010, 2: 1248) and formally. Notwithstanding the formal problems, here may also belong Gr. *πτίλον* n. 'soft feathers, down; wing (properly of insects); the wing-like membrane on a kind of serpent',[112] Arm. *t'el* 'leaf, leaf of dough' and 'wing of a bat' (the latter meaning is seen in *mašk-a-t'el* 'bat', with *mašk* 'skin' as the first member) and redupl. *t'it'eln* / *t'it'erṅ* 'butterfly'.[113]

6.1.18. **tumbo-* 'mound': Arm. **t'umb** 'mound; fence, wall around a house', Gr. *τύμβος* m. 'mound, burial mound, grave' (see §4.1.14 on **d^{h}m̥b^{h}-*: Arm. *damban* 'tomb, grave').

6.1.19. **ĝelh₂-ōs*, gen. **ĝlh₂-s-e/os*:[114] Arm. **całr**, gen. *cał-u* 'laugh, laughter; joke, mockery'; Gr. *γέλως*, *-ωτος* m. 'laughter', *γέλασμα* 'laughing', *γαλήνη* f. 'stillness of the sea', *γελάω* 'to shine'. Note also Arm. *całik* 'flower' and the Hesychian gloss *γελεῖν· λάμπειν, ἀνθεῖν* 'shine, bloom'.[115]

6.1.20. **g^{w}l̥h₂-eno-*: Arm. **kałin**, *o*-stem 'acorn', Gr. *βάλανος* f. 'acorn'; with a different suffix: Lat. *glāns*, *glandis* f. 'acorn', SCr. *žȅlūd* 'acorn', Lith. *gìlė*, etc.[116] It is tempting to identify Arm. dial. Łarabał *tkɔ́łɛn* 'hazelnut' (< **tu-kúłin* < ***tu-kałin**) with Gr. *δι̯ός βάλανος* 'chestnut' (cf. Lat. *iūglāns* 'walnut') from **diu̯os-g^{w}l̥h₂-eno-* 'divine acorn' (Martirosyan 2010: 348–349).

6.1.21. **g^{w}neh₂ik-* 'woman': PArm. ***kan-ay-** (seen in pl. *kanay-k'* vs. sg. *kin*), Gr. *γυναι-κ-*, voc. *γύναι*, nom. *γυνή* f. 'wife, woman'. This is a remarkable agreement, though its nature is debated.[117]

6.1.22. **per-(i)on-* 'piercing implement': Arm. **heriwn**, ins. *hereamb* 'awl', Gr. *περ-όνη* f. 'pin or tongue of a brooch or buckle' from IE **per-* 'to pierce': Gr. *πείρω* 'to perforate, pierce, pervade', etc.[118] The suffixes are different in the two languages.[119]

6.1.23. **mar-mar-*: Arm. dial. ***mar-m(a)r-il** 'to shimmer, flicker, glimmer, extinguish gradually (said of e.g. a candle)', Gr. *μαρμαίρω* 'to flash, sparkle, gleam' (said of any darting, quivering light), which is analyzed as a reduplicated intensive *yod*-present **mar-mar-i̯e-*. For the other Armenian and Greek forms, see HAB 3: 248–249, 262, 263, 365 and Beekes 2010, 2: 906–907. (HM)

6.1.24. **meh₂trui(e)h₂* 'stepmother': Arm. **mawru**, *a*-stem 'stepmother' (dial.: Hamšen *mɔru* 'stepmother', Muš *muri* 'step-', Šatax *muru mɛr* 'stepmother', Muš / Bulanəx *xort'umuru* < **xort'-u-mōru*); Gr. *μητρυιά* 'stepmother'; further: OEngl. *mōdrige* (*n*-stem) 'mother's sister'. This is an innovation shared by Armenian and Greek (and, more distantly, Germanic). It is based on PIE **meh₂ter-* f. 'mother'.[120]

6.1.25. **me-ĝ^{h}sr-i* 'near', lit. 'in the hand': Arm. **merj** 'near', **merjenam < *merji-anam** 'to approach, touch'; Gr. *μέχρι* 'as far as; up to, about, nearly; until; as long as, whilst'.

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[112] For various views and references, see Beekes 2010, 2: 1249.

[113] For a thorough discussion of all these Armenian words, see Martirosyan 2010: 286–294, 450–451.

[114] Alternative: an old *u*-stem with nom. **-ōu(s)*.

[115] De Lamberterie 1978: 269–276; Klingenschmitt 1982: 147–148; Clackson 1994: 126–132; Kortlandt 2003: 117–119; Martirosyan 2010: 336–338, 340–341; Beekes 2003: 193–194; 2010, 1: 257–258, 264–265.

[116] Clackson (1994: 135–136) is positive about this isogloss.

[117] Clackson 1994: 136–137; Martirosyan 2010: 363–365; Beekes 2010, 1: 291–292.

[118] Hübschmann 1897: 467; Pedersen 1924: 225 = 1982: 308; HAB 3: 86; Meillet 1936: 142.

[119] De Lamberterie 1982: 66–67; Clackson 1994: 159; Olsen 1999: 492.

[120] For a discussion and literature, see HAB 3: 246b; Szemerényi 1977: 60; Beekes 1976: 55–58; Clackson 1994: 145–147; Martirosyan 2010: 453–454; Beekes 2010, 2: 949. For the element **-u-*, cf. Gr. *μήτρως* m. 'male relative of the mother, maternal uncle, grandfather' from **meh₂tr-ōu-* 'relative of the mother', perhaps also Arm. *mi-a-mawr*, gen.pl. *-u-c'* 'the only (offspring) of one mother'.

6.1.26. **mēd-es-(e)h₂* 'mind, counsel': Arm. **mit**, *a*-stem, mostly in pl. *mit-k'*, gen. *mt-ac'* 'mind, intelligence', Gr. *μήδεα* 'counsels, plans, arts' (pl. of the unattested **μῆδος*, *-εος*, *s*-stem neuter), *μήδομαι* 'to be minded, intend; to take care, keep watch', cf. *μέδω* 'to protect, rule over', *μέδομαι* 'to provide for, be mindful of; to plan, contrive, devise', Lat. *medeor* 'to heal, cure', Umbrian *mers* 'law, justice' < **medos*, etc. from PIE **med-*. The Armenian and Greek forms agree in both vocalism and semantics.

6.1.27. **h₁en-h₃orĝʰi-* 'testicled, uncastrated, male (ram or buck)': Arm. **y-orj**, *i*-stem 'male sheep, ram'; Gr. *ἔν-ορχις* 'provided with testicles, uncastrated', cf. *ἔν-ορχ-ος*, *ἐν-όρχ-ης* meaning also 'buck'; note also Arm. **xol-orj(n)** 'orchis' vs. Gr. *ὄρχις* m. 'testicles', 'the plant orchid (because of the shape of the root)'.[121] (HM)

6.1.28. **h₁e/oĝʰīn(i)o-* 'hedgehog': Arm. **ozni** 'hedgehog', Gr. *ἐχῖνος* m. 'hedgehog, sea-urchin'; cf. OHG *igil* 'id.', Phryg. *εζις* 'hedgehog', Lith. *ežỹs*, Russ. *ёж* 'id.', etc.; note also Oss. *wyzyn/uzun* 'hedgehog'.

6.1.29. **sy̯eḱur-(e)h₂*: Arm. **skesur**, *a*-stem 'husband's mother', Gr. *ἑκυρά* 'mother-in-law'. Other cognates continue **sy̯eḱru-h₂* f.: Skt. *śvaśrū́-*, NPers. *xusrū*, Pashto *xwāše*, Lat. *socrus*, OHG *swigar*, OCS *svekry*, etc. Arm. *skesur*, *-a-* and Gr. *ἑκυρά* derive from QIE fem. in **-ur-* which has been taken from the PIE form for 'father-in-law', **sy̯eḱur-o-*: Skt. *śváśura-*, YAv. *xᵛasura-*, Gr. *ἑκυρός*, Lat. *socer*, OLat. *socerus*, OHG *swehur*, CS *svekrъ* (**swešur-* was replaced by **swekr* < **sweḱr-* analogically after *svekry* 'mother-in-law'), Lith. *šẽšuras*, etc.

6.1.30. **(s)kl̥-ne/o-*: Arm. **k'ałem** 'to pluck, weed, mow, harvest', Gr. *σκάλλω* 'to stir up, hoe' prob. from **σκάλ-νω*; further: Lith. *skeliù*, *skélti* 'to split', etc.[122] Note Arm. **k'ał-o-c'** 'mowing time', the 5th month (18 July–16 August). See **ar-a-c'** 'harvest time, harvest of grape/fruit', the sixth month (§6.1.5).

6.2. Armenian and Greek: isolated words.

These words have no Indo-European etymologies and may therefore be treated as words of substrate origin, that is to say, common borrowings from an unknown language (for a discussion of the substrate, see section 7).

6.2.1. **antʰ(-r)-* 'coal': Arm. **ant'-eł** 'hot coal, ember' (Łazar P'arpec'i, Hexaemeron, etc.), dial. **ant'(e)ł-oc'* 'metal rod for poking or stirring a fire, poker', dial. ***ant'-(a)r-** 'coal, ember' in **ant'-r-oc'* and **ant'-ar-oc'* 'poker' (note also *ant'ayr* 'spark' in *Baṙgirk' hayoc'* and NHB, probably from **ant'-ar-i̯V-*); Gr. *ἄνθραξ* m. 'charcoal'.[123]

6.2.2. **drepan-eh₂*: Arm. **artewan-un-k'**, gen.pl. *artewan-a-(n)c'* 'eyelashes; eyebrow' (Bible+), Gr. *δρεπάνη*, *δρέπανον* 'sickle' (from *δρέπω* 'to pluck, cut off'). According to this fascinating etymology suggested by de Lamberterie (1983; 1992: 239; 2013: 22), the human eyebrow (and/or eyelash, see below) is taken as sickle-shaped.[124]

The basic meaning of *artewanunk'* is usually presented as 'eyelid' since it usually corresponds to Gr. *βλέφαρον* 'eyelid' in the Bible. NHB and HAB, however, describe the Armenian word as 'eyelashes', and so does de Lamberterie (1983: 21) in French, 'cils'. Indeed, in some

[121] Martirosyan 2010: 329–331, 538–540.

[122] Beekes 2010, 2: 1340–1341.

[123] HAB 1: 194; Martirosyan 2010: 85; J̌ahukyan 2010: 57a; Beekes 2010, 1: 105 (here the dialectal forms in *-r-* are not mentioned). For the dialectal forms, see NHB 2: 1060abc; Amatuni 1912: 4a; Ačaṙean 1913: 48b, 98–99 HayLezBrbBaṙ 1, 2001: 9a. The nasalless by-form *at'ar-oc'* may be due to folk-etymological association with *at'ar* 'dry dung used as fuel'. For the suffix *-oc'*, see Olsen 1999: 533–537.

[124] For a discussion, see Clackson 1994: 109–112; Olsen 1999: 296–297; Beekes 2010, 1: 353; cf. J̌ahukyan 2010: 96b. Ałayan (1974: 34) derives the word from **drep-* 'to see'.

biblical passages ‘eyelash’ (or ‘eyebrow’) would make more sense than ‘eyelid’, e.g. Proverbs 6.25 (*mí yap‘štakic‘is artewanambk‘ nora* “do not be captivated with her eyelashes/eyebrows”) or Jeremiah 9.18 (*ew artewanunk‘ jer błxesc‘en ǰur* “and let your eyelashes drop water”). Note also that the derivatives of Gr. *βλέφαρον* display a semantic vacillation between ‘eyelid’ and ‘eyelash’. And finally, a few passages from original (non-translated) literary sources make the meaning ‘eyelash’ quite clear (e.g. *maz artewanac‘* “hair of eyelashes”).

In a remarkable passage from Movsēs Xorenac‘i 2.42 we reed: “a multitude of vineyards resembled the beautiful crescent of thick lashes (*zartewananc‘ xit ew gełec‘ik cir*); on the northern side its curved form truly imitated the arching brows of charming maidens (*geławor kusic‘ yōnic‘*)” (transl. Thomson 2006: 180). We can see that *artewanunk‘* cannot mean ‘eyelid’ here since it is compared to vineyards. Nor does it mean ‘eyebrow’ since the latter is present here by its main designation, *yōnk‘*. There can be no doubt that Thomson’s translation as ‘eyelash’ is correct.

6.2.3. **sep^{h}-s-* or **seps-* ‘to boil, cook’: Arm. **ep‘em** ‘to cook, boil’; Gr. *ἕψω* ‘to boil, seethe (of meat and the like); to smelt, refine (of metals)’.[125]

6.2.4. **t(a)rp-eh$_2$*: Arm. **t‘arp‘ / t‘arb** (abl. *i t‘arb-ē*) ‘large wicker fishing-basket, creel’, Gr. *τάρπη* f., *ταρπός*, *τερπός* m., *ταρπόνη* f. ‘large wicker basket’; probably a common borrowing from a lost source.[126]

6.2.5. **ĝinγl(u)m-* ‘hinge’: Arm. **cłxni**, *ea*-stem (loc.sg. *i cłxnw-oǰ*, gen.dat.pl. *cłxn-e-ac‘*), *čxni*, *čx/łan*, dial. *člxan* ‘door hinge’; Gr. *γί(γ)γλυμος* m. (dimin. *γι(γ)γλύμιον* n.) ‘hinge, joint, pivot, gudgeon’. Mediterranean word (Martirosyan 2012). (HM)

6.2.6. **kalam-* ‘aspen; plane’: Arm. **kałamax(i)** ‘white poplar, aspen’; Gr. *καλαμίν-δαρ· πλάτανος ἡδονιεῖς* ‘plane’, obviously with **dar* ‘tree’ (Hesychius); in neighbouring non-Indo-European languages: Salmast Turk. *k‘äläm-bär* ‘aspen’, T‘avriz Turk. *qälämä* ‘poplar’; in Daghestan languages: Lak *kalaxi*, Rutul *kalax* ‘aspen’. For the semantic relationship, cf. Arm. *čandar* ‘poplar’ and ‘plane’; *op‘i* ‘poplar, aspen’ and Łarabał **hop‘i* ‘plane’. The ending *-ax* in Armenian may be a suffix, possibly seen also in *meł-ex* ‘the handle of an axe’ (if related with Gr. *μελία* ‘manna ash, ashen spear’) and *taws-ax* ‘box-tree’. The correspondence Arm. *k* vs. Gr. *κ* here and in a few of the lexemes that follow points to a later stage of Mediterranean substrate vocabulary.

6.2.7. **kast(an)-* ‘chestnut’: Arm. **kask-eni** ‘chestnut-tree’ if from **kast-(u)k-eni* (for the suffix, cf. *hačar-uk* and dial. *hačar-k-i* ‘beech-tree’); Gr. *κάστανον* n. ‘chestnut’, *καστανέα* f. ‘chestnut-tree’.

6.2.8. **karid-* ‘crayfish’: Arm. **karič**, *a*-stem ‘scorpion’, dial. ‘crayfish’ < **karid-i̯ā* f.; Gr. *κᾰ́ρις*, *-ίδος*, *-ῑ̆δος* (also *κουρίς*, *κωρίς*) f., probably a general term for small crustaceans, including shrimp and prawn. For the (old feminine) suffix **-ieh$_2$*, note Arm. dial. **mormonǰ* ‘ant’ < **mormon-i̯eh$_2$* (cf. *morm* ‘tarantula’ and Gr. *Μορμώ̄ν* ‘bogey, bugbear’, see §6.4.8). Note also Arm. **kor**, gen. *kor-i* ‘scorpion’ (Dersim dial. *gɤr-ǰ*), which is reminiscent of the Greek by-forms *κουρίς*, *κωρίς*.

6.2.9. **gorio-* ‘drain’: Arm. **kori** ‘drain, channel’, Gr. *γοργύριον* n. ‘subterranean channel’. (HM)

6.2.10. **g^{w}(e)m/b^{h}ur̥i̯eh$_2$* ‘bridge’: Arm. **kamurǰ**, *a*-stem ‘bridge’, Gr. *γέφῡρα* f. (Boeot. *βέφυρα*, Cret. *δέφυρα*, Lac. *δίφουρα*) ‘bridge’; in non-Indo-European languages: Hatt. *ḫamuru(wa)* ‘beam’, Abkhaz **q^{w}ə(m)bələ-ra* ‘beam over the hearth, cross-beam’, etc. The Proto-Armenian theoretical by-form **kaburǰ-* may have been reflected in Urart. *qaburzani* possibly meaning ‘bridge’ in a recently discovered inscription.

[125] NHB 1: 705c; Hübschmann 1897: 446; HAB 2: 72–73; Arutjunjan 1983: 282–283; Clackson 1994: 172–173; Beekes 2010, 1: 492.

[126] Clackson 1994: 183. For an etymological discussion, see Martirosyan 2010: 281–283. The Armenian form is absent from Beekes 2010, 2: 1453.

6.2.11. **mosĝʰ-o/io-* 'young bovine': Arm. **mozi** 'young bovine, calf',[127] dial. **mozi** or diminutive **mozik**, mostly 'male or female calf', in some dialects: 'young ox', 'female foal, filly', 'young buffalo'; Gr. *μόσχος* m.f. 'calf, young bull, any young animal', metaphorically 'boy' or 'girl, maid', m. 'young shoot or twig', *μοσχάς*, *-άδος* f. 'shoot, slip; heifer', *μοσχίας* 'like a calf (used of any young animal); three-year-old ram'; diminutives: *μοσχίον* 'young calf', *μοσχίδιον* 'small shoot', *μοσχ-άριον* n. 'young calf'.[128]

Clackson (1994: 153–154) assumes that the word "is of later origin in Armenian, and it may even be a loan from Greek". This is not plausible, however. This Armenian word, albeit attested late, is reliably old since it is found in a great number of non-contiguous dialects, such as Hamšen, T'iflis, Ararat, Karin, Muš, Svedia and Łarabał. Besides, Arm. *-z-* can hardly be explained from Gr. *-σχ-*. In my opinion we are dealing with a Mediterranean word: **mosĝʰ-o-* 'young bovine' (with Gr. *μόσχος* m.f. 'calf, young bull, any young animal') > Parm. **moz(o) + -i* as in other animal designations, such as *ayci* 'goat', *mari* 'female bird', *mak'i* 'ewe' (Martirosyan 2010 s.vv.), or directly **mosĝʰ-i̯o-/-i̯ā-* (cf. Gr. *μοσχίον* 'young calf', *μοσχίας* 'like a calf; three-year-old ram', etc.) > Parm. **mozzíyo/a-*[129] > Arm. *mozi* 'young bovine, calf'. For the semantic relationship between 'young shoot' and 'young animal', compare, e.g. ClArm. *erinǰ* 'heifer' > Ararat dial. *ɛrinǰ* 'a three-year-old sprout of grapes'.[130]

6.2.12. **notii̯eh₂* 'wetness': Arm. **nay**, gen. *nay-i* 'humid, moist; wetness, moisture; (phonet.) liquid' (Dionysius Thrax, Book of Chries, Grigor Magistros, Esayi Nč'ec'i, etc.), **nayac'uc'anem** 'to wet, moisten, water, irrigate' (Philo, Book of Chries), **nayakan** 'humid, moist' (John Chrysostom); Gr. *νοτία*, *-ίη* f. 'wetness'.

The Armenian word is usually derived from PIE **sneh₂-* 'to swim': Skt. *snā́ti* 'to bathe', Gr. *νέω*, *νήχω* 'to swim', Lat. *nāre*, *natāre* 'to float, swim', etc.[131] The Armenian word may be derived from **n(e)h₂-ti-*, cf. Avest. *u-snāiti-* f. 'Abwaschung'. However, semantically more attractive is the comparison of Arm. *nay* with Gr. *νοτία*, *-ίη* f. 'wetness' (cf. Scheftelowitz 1904–05, 2: 24). According to Beekes (2010, 2: 1025), the latter should be separated from **(s)neh₂-* 'to swim' because of the vocalism and may be Pre-Greek. Gr. *νοτία* f. 'wetness' and Arm. *nay*, *i*-stem 'humid, wetness' may have been borrowed from a (substrate) proto-form like **notii̯eh₂* > PArm. **notíyā* > **nayí(ya)* > *nay*.

6.2.13. **(H)olur-*: Arm. **oloṙn**, *an*-stem 'pea, bean', dial. *hŭlɛ(ɔ)ṙnə* (Goris, Łarabał *hŭlɛṙnə*); Gr. *ὄλυραι* f. pl. 'spelt; rice-wheat' (cf. Akkad. *ḫallūru*, *ḫi/ullūru*, etc.).

6.2.14. **osp-* 'pulse, legumen': Arm. **ospn**, *an*-stem 'lentil', Gr. *ὄσπριον* n. 'pulse, legumen'.[132]

6.2.15. **pʸortʰo-* or **(t)portʰo-* 'sprout, young twig': Arm. **ort'**, *o*-stem 'vine', Gr. *πτόρθος* m. 'sprout, shoot, young twig', *πόρθος· πτόρθος, κλάδος, βλάστος* (Hesychius).[133]

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[127] Attested in the 11th century commentary of Grigor Magistros on the Armenian translation of Dionysios Thrax (Adonc 1915: 240L7, 241L6):

[128] The appurtenance of Skt. *mahiṣá-* 'great, mighty; buffalo', Lith *mãzgas* 'bud' and others is uncertain. For an etymological discussion, see Hübschmann 1883: 43; 1897: 475; Meillet 1898: 282; Patrubány 1902–03: 124; Scheftelowitz 1927: 226, 232; HAB 3: 338; Pisani 1950: 171; J̌ahukyan 1987: 139, 298–299, 302; Clackson 1994: 152–154; Olsen 1999: 489; Beekes 2010, 2: 970–971.

[129] The pretonic **-o-* has not yielded *-a-* because the syllable was closed due to the geminate *-zz-* (see Kortlandt 2003: 40; Beekes 2003: 157).

[130] For more detail and other examples, see Clackson 1994: 230214; Martirosyan 2010: 264–265, 785–787.

[131] HAB 3: 426–427; Pokorny 1959: 972; Frisk GEW 2, 1970: 310–311, 324–325; Schrijver 1991: 168–169; Mayrhofer EWAia 2, 1996: 769–770; Beekes 2010, 2: 1012–1013.

[132] NHB 2: 522a (s.v. *ospneay*); Olsen 1999: 141; Holst 2009: 126, 143, 188, 231. According to Katz (2000: 84–85), Gr. *ὄσπριον* derives from **u̯ospr-* 'having a shroud, covering'.

[133] Petersson 1916: 271–273; Pokorny 1959: 823; Furnée 1972: 317, cf. 261; Kortlandt 1986: 40 = 2003: 70; Olsen 1999: 24; Beekes 2008: 52; 2010, 2: 1250; cf. Kloekhorst 2008: 645–646.

6.2.16. **k^{h}san-t(e)r-* ‘wool-carder, comb’: Arm. **santr / sandr**, ins.sg. *santr-o-v* (Łazar P‘arpec‘i 3.61), abl.sg. *i sandr-ē* (Ephrem) ‘comb; weaver’s comb’, dial. *sander-k‘* (Karin *santr-ɛ-k‘*) ‘weaver’s large comb’;[134] Gr. *ξαίνω* ‘to card, comb wool’, *ξάντης* m. ‘wool-carder’*ξάντριαι* (title of a play by Aeschylus).[135] In view of the incompatibility of the Armenian initial *s-* with Greek **ks-* in Indo-European terms, this comparison is considered to be uncertain.[136] I assume that we are dealing with a substrate word: **k^{h}san-t(e)r-* > Arm. *sandr*, pl. *sander-k‘*.

6.2.17. **si/ek^{h}u-* ‘melon, gourd’: Arm. **sex** (gen. *sexoy* in Hexaemeron) ‘melon’, Gr. *σικύα*, Ion. *-ύη* f. ‘bottle-gourd, round gourd; gourd used as a calabash’, *σέκουα* ‘id.’ (Hesychius), *σίκυος*, *σικυός* m., *σίκυς* f. ‘cucumber’, *σίκυος πέπων* ‘a kind of gourd or melon, not eaten till quite ripe’. The relationship with Russ. *týkva* ‘pumpkin’ and Lat. *cucumis* ‘cucumber’ is unclear.

6.2.18. **k̂eno-/*k̂en(e)u̯o-*: Arm. **sin**, *o*-stem ‘empty’, Gr. Att. *κενός* and Ion. *κεινός* from **κενϜός*, Epic *κενε(Ϝ)ό*, ‘empty, idle’.

6.2.19. **ste/oibo-* or **ste/ibeh$_2$*: Arm. **stēp**, *o*-stem, *a*-stem ‘haste, alacrity; zeal, diligence; frequent, frequently; hastily, quickly, **stipem** ‘to constrain, compel, force; to urge, hasten’; Gr. *στείβω* ‘to tread (on something), densify by treading, trod, trample, trend’, *στοιβή* f. ‘stuffing, cushion, bulge’, *στίβος* m. ‘trodden road, path, footstep, trail’. The appurtenance of OLith. *staibus* ‘strong, brave’ and other cognates is uncertain.[137]

6.2.20. **srung^h-* ‘snout, nostrils’: Arm. **ṙungn**, mostly pl. **ṙng-un-k‘**, instr. *ṙng-am-b-k‘*, ***ṙung-k‘**, *a*-stem ‘nostrils’; Gr. *ῥύγχος*, *ῥύγχεος* n. ‘snout (e.g. of a pig), muzzle, beak’.

6.2.21. **ps(e)ud-e/os-*: Arm. **sut**, *o*-stem ‘false; falsehood, lie’, Gr. *ψεῦδος* n. ‘lie’, also *ψύδος*.

6.2.22. **skórp-i-*, gen. **(s)kr̥p-i-ós*: Arm. **k‘arb**, *i*-stem ‘basilisk, asp’; Gr. *σκορπίος* m. ‘scorpion; a sea-fish’, *σκορπίς*, *-ίδος* f. ‘a sea-fish’. These words have been claimed to be derived from IE **(s)ker(-p)-* ‘to cut’: Arm. *k‘er-(t‘)-*, *k‘er-b/p‘-* ‘to scratch, chop, carve’, Gr. *κείρω* ‘to cut (off), shave, mow off, ravage’, OHG *sceran* ‘to cut’, OEngl. *sceorfan* ‘to scratch’, etc. However, scholars are now more inclined towards a substrate origin.

6.3. Armenian, Greek and Albanian.

6.3.1. **h$_2$n(e/ōr)i̯o-* ‘dream’: Arm. **anurǰ-k‘**, *i*-stem, *o*-stem ‘dream, day-dream, prophetic vision, vision’; Gr. *ὄνειρος* m. ‘god of dreams, dream’, Aeol. *ὄνοιρος* m., Cret. *ἄναιρον· ὄνειρον*, cf. *ὄναρ* n. ‘dream’, especially ‘fortune-telling dream, vision’, *ἄναρ· ὄναρ* (Hesychius); Alb. *âdërrë* (Geg.), *ëndërrë* (Tosc.) ‘dream’ from **andërrë* < **Hnr-i̯o/ā-*. Probably derived from PIE **h$_2$enh$_1$-* ‘to breathe’ > ‘(vital) breath, energy’ (de Lamberterie 2012a).

6.3.2. **b^{h}e/or-(e)n-* ‘load’: Arm. **beṙn**, gen. *beṙin*, ins. *beṙam-b*, vom.pl. *beṙin-k‘* ‘burden, load; bag, sack; freight, cargo’;[138] Gr. *φερνή* f., Aeol. *φέρενᾰ* ‘dowry’, Dor. *φερνά* f. ‘god’s share at the sacrifice’, Alb. *bárrë* ‘burden, load; freight, load; foetus’ < **b^{h}or-neh$_2$*; with a different meaning: Lith. *bérnas* ‘boy, (farmer’s) servant’, Latv. *bę̀rns* ‘child, baby’; with *o*-grade: Goth. and OIc. *barn* n. ‘child’ < “what was borne”.[139] This word is a verbal noun from PIE **b^{h}er-* ‘to bring, bear’.

The Greek meaning ‘dowry’ probably derives from ‘load, bag’ (both nuances are attested in Armenian). Concerning the meaning of Dor. *φερνά*, ‘god’s share at the sacrifice’,

[134] See Ačaṙean 1913: 954; HAB 4: 174–175; HayLezBrbBaṙ 5, 2008: 266.

[135] Liddell / Scott / Jones 1996: 1188a.

[136] Hübschmann 1897: 488; HAB 4: 174–175; J̌ahukyan 2010: 668a.

[137] HAB 4: 273–274; Olsen 1999: 196; Beekes 2010, 2: 1393–1394.

[138] In the Bible, *beṙn* corresponds to *φορτίον* ‘burden’ (Job 7.20), *βάσταγμα* ‘load’ (Jeremiah 17.21), *μάρσιππος* ‘bag’ (Genesis 44.11, 13), *γόμος* ‘freight, cargo’ (Revelations 18.11), etc.

[139] Hübschmann 1897: 429; Pedersen 1905: 217 = 1982: 79; HAB 1: 440a, 441a; Pokorny 1959: 129; Chantraine 1968–80: 1180; Stempel 1990: 51; Clackson 1994: 111, 135, 183; Demiraj 1997: 92–93; Olsen 1999: 120–124, 140, 833–834; Beekes 2010, 2: 1562. For Slavic **bèrmę* ‘load, burden’, see Derksen 2008: 37.

compare the semantic shift 'share' > 'dowry' (cf. Arm. *bažin* 'share' > *bažin-k'* 'dowry', Martirosyan 2010: 803).

We can postulate **b^{h}er-(e)n-* 'load' ('that is borne'), a verbal noun from PIE **b^{h}er-* 'to bring, bear' (cf. Arm. *berem*, Gr. *φέρω*, etc.) shared by Armenian, Greek, Albanian, Baltic and Germanic. The Armenian is particularly close to the Greek (*e*-grade and semantics) and is semantically identical with the Albanian. They point to **b^{h}e/or-neh$_2$* 'load, freight', with a secondary transfer to the *n*-stems in Armenian (cf. *eɫn* 'deer cow', §6.7.3) or **b^{h}e/or-(e)n-*.

6.3.3. **g^{h}rī(d^h)* 'barley': Arm. **gari**, *ea*-stem, *o*-stem 'barley'; Gr. *κριθ-ή* f. 'barley-corns', usually pl. 'barley', from an original root noun **κρῑθ* > Ep. *κρῑ* n.; Alb. *drithë* 'cereals, wheat, barley'. A different formation: Lat. *hordeum* 'barley', OHG *gersta* 'barley', and Hitt. *karaš* n. 'wheat, emmer-wheat'.[140]

6.3.4. **sk$^{(h)}$odoro-* or **sk$^{(h)}$orodo-* 'garlic': Arm. **xstor**, *i*-stem and *o*-stem, **sxtor** 'garlic'; Gr. *σκόρ(ο)δον* n. 'garlic', Alb. *húrdhë*, also *húdhër* (Schriftsprache) f. 'garlic'.

6.4. Armenian, Greek and Latin.

6.4.1. **b^{h}rug/ĝ-* 'dewlap': Arm. **erbuc**, *o*-stem 'breast of animals', Gr. *φάρυγξ*, gen. *-υγος*, *-υγγος* 'throat; dewlap of a bull', Lat. *frūmen* 'throat' < **frūg-smen*.

6.4.2. **el(e/a)iw-* vel sim. 'olive, oil': Arm. **ewɫ**, gen. *iwɫ-oy*, dial. ***eɫ** 'oil'; Gr. *ἐλαίᾱ*, Att. *ἐλᾶα*, Ion. *ἐλαίη* f. 'olive-tree; olive', *ἔλαιος* m. 'wild olive', *ἔλαιον* n. 'olive-oil; anointing-oil; any oily substance'; Lat. *oleum* n. 'olive-oil; oil'.

6.4.3. **ptel-* 'elm': Arm. **t'eɫi** 'elm'; Gr. *πτελέ-α*, Ion. *-η* 'elm, Ulmus glabra'; cf. also Lat. *tilia* 'linden'.

6.4.4. **t^{h}uōiǐko-* or **tū(i)ǩo-* 'fig': Arm. **t'uz**, *o*-stem 'fig', dial. (Aslanbek and Ozim) 'female genitals'; Gr. *σῦκον*, Boeotian *τῦκον* n. 'fig; *pudenda muliebria*, female genitals'; Lat. *fīcus*, *ī* and *ūs*, f. 'fig; fig-tree'.

6.4.5. **h$_1$ul(e/o)h$_1$r-o-* n.pl. **-h$_2$* 'rope, thong, rein': Arm. **lar**, *o-*, *i-* and *a*-stems 'rope, rein, cable, cord, string; plumbline of stone-masons; snare; tendons of the neck; string of a musical instrument'; Gr. *εὔληρα*, Dor. *αὔληρα*, Hesychian *ἀβληρά* n.pl. 'reins'; Lat. *lōrum*, *-ī*, n. 'thong, rawhide whip, rein'. We can reconstruct a Proto-Armenian paradigm **ulár-o-*, pl. **ulár-a*.

6.4.6. **g̊lgt-* 'milk': Arm. **kat'n**, gen. *kat'in*, instr. *kat'am-b* 'milk', Gr. *γάλα*, *γάλακτος* n. 'milk', Lat. *lac*, *lactis* n. 'milk'. The **-l-* has been preserved in the Armenian dialects of Agulis and Meɫri, where we find *kaxc'* pointing to **kaɫc'* (the development *a* > Agulis *ɔ* has been blocked in position before *ɫ*). Kak'avaberd has *kaxc'* in the village of Varhavar vs. *kát'nə* in the other three villages of the region. The conditions responsible for the loss or preservation of the **-l-* are not clear.[141] Nevertheless, I do not think that this comparison should be abandoned.[142] We are probably dealing with a cultural word of Mediterranean origin.

6.4.7. **mor-* 'blackberry': Arm. **mor**, gen. *mor-i* 'blackberry (fruit of the bramble)', **mor-(en)i** 'bramble, blackberry (plant, shrub)', dial. **mor-m-eni** 'blackberry', **mo(r)š(-i)** 'tamarisk; blackberry, bramble'; Gr. *μόρον* n. 'black mulberry; blackberry', *μορέα*, *-έη* f. 'mulberry-tree, Morus nigra'; Lat. *mōrum*, *ī*, n. 'fruit of the black mulberry', *mōrus*, *ī*, f. 'black mulberry-tree' (sometimes considered a Greek loanword).[143]

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[140] Demiraj 1997: 145–146; Orel 1998: 75; de Vaan 2008: 288–289; Kloekhorst 2008: 444–445; Martirosyan 2010: 199; Beekes 2010, 1: 779.

[141] For references and a discussion, see Martirosyan 2010: 345–346.

[142] Pace Olsen 2011: 24. The etymology is accepted in de Vaan 2008: 320 and Beekes 2010, 1: 256.

[143] The Celtic forms (Welsh *mer-wydden* 'mulberry, blackberry', OIr. *smér* 'blackberry', etc.) point to a different proto-form, namely **smēro-* (Matasović 2009: 347).

6.4.8. **mor-m-* 'she-monster, spinning demon/goddess': MidArm. and dial. **mor-m** and **mor(i)** 'spider, tarantula, phalangium'; Gr. *Μορμώ*, *-όος -οῦς*, *Μορμών*, *-όνος* f. 'she-monster, bogey' (also used by nurses to frighten children), generally 'bugbear', Lat. *formīdō*, *inis* f. 'fear, terror; a thing which frightens, bogey'. (HM)

The Greek and Latin words are related, either etymologically or secondarily, with the word for 'ant', cf. Lat. *formīca* f. 'ant', Gr. *μύρμηξ*, *-ηκος*, Dor. *μύρμᾱξ*, *-ᾱκος* m. 'ant; fabulous animal in India' (by-forms: *μύρμος*, *βύρμαξ*, *βόρμαξ*, *ὅρμικας*), etc. This connection or conflation becomes quite transparent in view of the following forms and meanings: *μυρμήκ-ειον* n. a species of *φαλάγγιον*, the latter being 'a kind of venomous spider, especially Lathrodectus or malmignatte', *μυρμήκ-ιον* n. 'a species of spider'. Note also *μόρμορος* and *μύρμος* 'panic fear' (glossed by *φόβος* in Hesychius), the former of which strikingly resembles Armenian dialect of Polis/Stambul **moṙmoṙoz*, Crimea and Nor Naxiǰewan **mṙmṙas* 'Easter bogey'.

A similar kind of conflation is seen in some dialectal forms of *mrǰiwn*, the Armenian word for 'ant': Loṙi *mɤrmɔnǰ* and Šamaxi *mɤrmɤrinǰ*. Since Gr. *Μορμών* is feminine, one may identify it with Loṙi *mɤrmɔnǰ*, which probably reflects fem. **mormon-i̯eh₂*. Structurally, compare another insect-name of Mediterranean origin: *karič*, *a*-stem 'scorpion', dial. also 'crayfish' < **karid-i̯eh₂*, cf. Gr. *κᾱρίς*, *-ί/ῑδος* f. 'Crustacea' (§6.2.8). That 'ant' is associated with 'bogey, ghost' is not surprising. According to Armenian folk beliefs, the ant, sometimes called a 'devil', is an evil night animal. Like the snake, frog and other fauna, it causes the skin disease called *mrǰm-uk* 'little ant', cf. Gr. *μυρμηκ-ία* 'wart that spreads under the skin, *also* the irritation caused thereby, which was compared to the creeping of ants' (from *μύρμηξ*, *-ηκος* 'ant') vs. *μυρμήκ-ιον* n. 'a species of spider'.

It is remarkable that Armenian has both **mor-* and **mor-m*, whereas Greek and Latin only display forms going back to **mor-m-*. The root **mor-* is probably related with European forms reflecting **morā-*: OIc. *mara*, OHG *mara* 'nightmare', Germ. *Mahr* 'nightmare', Engl. (*night*)*mare*; OIr. *mor-*(*r*)*īgan* 'lamia', lit. 'Alpkönigin'; Bulg. *morá* 'nightmare', dial. 'evil spirit', SCr. *mòra* 'nightmare, incubus', *mora* 'a kind of night butterfly', Czech dial. *mora* 'night butterfly; a mythical evil creature', Russ. dial. *móra* 'a female mythical being which in the night, under the moonlight, spins the yarn that has been left unfinished by a woman', Russ. *kikí-mora* 'a kind of brownie who spins in the night', etc.[144] We may posit European substrate ***mor-ā-** 'nightmare; a mythical creature; an insect that is associated with mythical beings (butterfly, spider. etc.)' vs. Mediterranean substrate (probably a broken reduplication[145]) ***mor-m-** 'she-monster, bogey; spider, tarantula'.

Armenian thus takes an intermediary position because it has both forms. We may tentatively assume a PArm. ***mor(m)** referring to *Lady of the Beasts*, an Athena/Artemis-like female mythical personage, a protector of weaving and spinning (cf. the semantics of Russian *mora*) and personified as a spider. Note also Armenian dialectal *mamuk* 'spider', literally 'grandmother'. That this goddess is continued by a mythological figure of lower rank is not surprising. A very clear case is that of the Armenian goddesses Astłik and Anahit, attested as being of the state pantheon in Classical Armenian sources, and as female spirits or nymphs in a few later sources. In some folk tales, Anahit is represented as a wise queen who makes wonderful rugs, or the daughter of a dragon. Compare also Russian *Mokoši*, a female divinity who spins wool and whose name comes to denote 'evil monster'.[146]

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[144] For the forms reflecting **morā*, see Pokorny 1959: 736; ÈtimSlovSlavJaz 19, 1992: 211–214, cf. 17, 1990: 204–207; HerkWört 1997: 434b; Derksen 2008: 324–325; Matasović 2009: 278. For the forms reflecting **mor-m-*, see Pokorny 1959: 749; de Vaan 2008: 234–235; Beekes 2010, 2: 967. Both are discussed in Nocentini 1994: 399–401. For an etymological discussion of the Armenian word, see Martirosyan 2010: 478–480, 787.

[145] Cf. Gamkrelidze/Ivanov 1984, 1: 222 = 1995, 1: 191.

[146] For more data on this and a thorough discussion, see Martirosyan prepar. 3.

6.4.9. **sp^{h}ongos* / **p^{h}songos* ‘sponge, mushroom’: Arm. **sunk/gn** ‘(tree-)mushroom’, Gr. *σπόγγος*, *σφόγγος* m. ‘sponge; any spongy substance, e.g. tonsils’, Lat. *fungus* m. ‘fungus, mushroom’.

6.5. Armenian, Greek and Germanic and/or Celtic.

6.5.1. **b^{h}reh$_1$-ur* (obl. **b^{h}run-*): Arm. **ałbewr**, **ałbiwr**, *r*-stem: gen. *ałber* ‘fountain, spring’, Gr. *φρέᾱρ*, *-ᾱτος* ‘an artificial well, spring’; cf. Goth. *brunna*, etc.

6.5.2. **d^{h}ōrg^{h}-*/**d^{h}rog^{h}-*: Arm. **durgn**, gen. *drgan* ‘potter’s wheel’, Gr. *τροχός* m. ‘wheel; potter’s wheel’, OIr. *droch* ‘wheel’. Notwithstanding the formal difficulties, this etymon may be derived from IE **d^{h}r̥ĝ^{h}-* ‘to turn’: Arm. *darj-, daṙnam* ‘to turn; to return’ < **darj-nam*, cf. Gr. *τρέχω* ‘to run, hurry’, etc. For another cultural term of a similar structure, cf. **burgn**, gen. *brgan* ‘tower; pyramis’ vs. **baṙnam** ‘to lift, raise’ < **barj-nam* (see §6.1.10).

6.5.3. **tr̥so-*/**tors-eh$_2$*: Arm. **t‘aṙ** ‘perch, roost for birds’ (MidArm.; ubiquitous in the dialects), ‘bar for drying grapes’ (Mid Arm.) < **tr̥sos*: Gr. *ταρσός*, Att. *ταρρός* m. ‘frame of wicker-work, crate, flat basket for drying cheeses on’, *τρασιά*, *ταρσιή*, *τερσιά* (*-ε-* after τέρσομαι) f. ‘hurdle for drying figs; dried figs; drying-place for corn, cheese or bricks’; Germ. **torsā*: OHG *darra* f. ‘apparatus for drying fruits, etc.’, Swed. and Norw. *tarre* m. ‘frame for drying malts, etc.’.[147] This implement designation is usually derived from PIE **t(e)rs-* (cf. Skt. *tarṣ-* ‘to be thirsty, crave’, Gr. *τέρσομαι* ‘to become dry’, OHG *derren* ‘to make dry’, Hitt. *tarš-* ‘to make or become dry’, Arm. *t‘aṙamim* / *t‘aršamim* ‘to wither’, etc.),[148] although there are phonological difficulties in Greek (Beekes 2010, 2: 1453–1454). We may posit an innovation shared by Armenian, Greek, and Germanic.

6.5.4. **i̯ork̂-o-* ‘deer, roe, game’: Arm. **ors**, *o*-stem ‘hunt, game’; Gr. *δορκάς*, *-άδος* f. (Herodotus 7.69), *ζορκάς* (Herodotus 4.192), *δόρξ*, *δόρκος*, *ζόρξ*, *ἴορκος*, etc. ‘a kind of deer, roe, antelope, gazelle’; Corn. *yorch* ‘roe’, MWelsh *iwrch* ‘roe-deer (caprea mas)’. (HM)

6.5.5. **k̂ī(u̯)ōn* ‘column, pillar’: Arm. **siwn**, gen. *sean* ‘column, pillar’; Gr. *κί̄ων*, *-ονος* ‘column, pillar; flogging post’, Myc. *ki-wo-qe* ‘and a pillar’. According to Clackson (1994: 141, 142–143), **k̂īu̯ōn* represents a borrowing into Greek and Armenian from a lost non-Indo-European source. Recently,[149] these words have been derived from PIE **(s)kiHu-* ‘shin’, which is attested in Balto-Slavic and Germanic languages, cf. Russ. *cévka* ‘bobbin, hollow bone, shin-bone’, OCS *cěvьnica* ‘flute’, OEngl. *scīa* ‘shin, leg’, MHG *schīe* ‘post’, OHG *skena*, *skina* ‘post’, etc. Lubotsky (2002) connected these words to Skt. *aṣṭhīvá*(*nt*)- ‘shin, shank’ with Av. *ascuua-* (attested in ASg. *ascūm*) ‘shank’, reconstructing an Indo-Iranian **HastčiHu̯a-*. He interprets this form as a compound of the word for ‘bone’, viz. Skt. *ásthi-* and Av. *ast-*, with a reflex of PIE **(s)kiHu-* ‘shin’.

The second member of the Indo-Iranian compound, viz. **čiHu̯a-*, is not attested anywhere independently. However, the existence of Iranian **čīva-* ‘shank’ can be proven by Arm. **čiw** ‘shank, leg’. This is attested in Classical Armenian only in the compounds *men-a-čiw* ‘having one hoof’ (translating Gr. *μονώνυχος*) and *erk-a-čiw* ‘having two hoofs’. Further, *čiv* is attested in Middle Armenian and in dialects, mostly meaning ‘leg’, ‘shin, shank’.[150]

As for the semantic development from ‘shin, shank’ to ‘pillar, post’, Lubotsky mentions a number of parallels: Engl. *shank* ‘shank’ and ‘shaft of a column’; Latv. *stulps* ‘shank’ and ‘post, pole’; OEngl. *scīa* ‘shin, leg’, *scinu* ‘shin’, MHG *schīe* and OHG *skena*, *skina* ‘post’.[151] The last set

[147] HAB 2: 154–155; Arutjunjan 1983: 284–285.

[148] Martirosyan 2010: 281. On Hittite, see Kloekhorst 2008: 848.

[149] Praust apud Lubotsky 2002: 323b.

[150] Martirosyan 2005; 2010: 579–580, 803–804.

[151] Note also Arm. dial. Moks *srung^{y}* ‘the stem ends of wheat remaining attached to the soil after mowing (stubble)’ from *srunk‘* ‘shin, shank’; Oss. *zæng* / *zængæ* ‘shin’ and ‘stalk’ (Martirosyan 2010: 585–586, 804).

of words is etymologically related to the etymon being discussed here. Note that Germanic **skinō* 'post' is reminiscent of the *n*-stem in Armenian *siwn* and Greek *κίων* 'column, pillar'.[152] It is remarkable that we have yet another lexical correspondence with the same meaning and dialect distribution, namely **stl̥neh₂* 'post, pillar': PArm. **stał-a-*, Gr. *στήλη*, OHG *stollo* (see §6.5.7).

If this attractive explanation is accepted, then this is a shared innovation between Armenian, Greek, and, somewhat distantly, Germanic. Otherwise, it should be treated in the section on substrate.

6.5.6. **k̂eud^h-* 'to hide': Arm. **soyz-: suzanem**, 3sg.aor. *e-soyz* 'to plunge, sink; to hide, cover' (probably from sigmatic aorist **k̂eud^h-s-*);[153] Gr. *κεύθω*, aor. *κεῦσαι* 'to cover, hide; to be concealed, lie hidden', *κευθῆνες* 'subterranean deities'; OEngl. *hȳdan* 'to hide' from **hūdjana-*, Goth. *huzd* 'treasure' from **k̂ud^h-to-*.[154] Skt. *kuhū́-* f. 'new moon' and others are hardly related.[155]

6.5.7. **stl̥neh₂*: PArm. **stalnā-* > ***stał-a-** 'post, pillar' in **aṙa-stał,** *a*-stem 'ceiling, roof'; Gr. *στήλη* 'block or slab used as a memorial; monument, gravestone; post, pillar; boundary-post'; OHG *stollo*, MHG *stolle* 'support, post'. Probably derived from IE **stel-*: Gr. *στέλλω* 'to put in order, equip, prepare', OHG *stellen* 'to array, establish, arrange', OCS *stьlati* 'to spread', etc.[156] Note the semantic closeness to another agreement between Armenian, Greek and Germanic: Arm. *siwn*, Gr. *κίων*, and OHG *ske/ina* (see §6.5.5).

6.5.8. **dig/g^h-* 'goat': Arm. **tik**, *a*-stem 'wineskin, a vessel made of an animal's skin (for wine, oil, water, etc.)' < 'goat, skin of goat', dial. Agulis *tag^y/tayg^y* pointing to an older **tig*; Gr. Laconian *δίζα· αἴξ. Λάκωνες* (Hesychius), unless a corruption for **αἴζα*; Germ. **tigō* 'goat, he-goat': OHG *ziga*, Germ. *Ziege*, etc.). The vacillation **-g/g^h-* points to a non-Indo-European origin; a well-known root structure constraint does not permit two unaspirated voiced stops within a root. Compare Arm. *kacan* 'path' vs. SCr. *gàziti* 'to step, trample, wade', Arm. *karkut* 'hail' vs. OCS *gradъ* and Lat. *grandō* 'hail'.

6.5.9. **p(o)Hl-* or **p(ō)lH-*: Arm. **ul**, *o*-stem (secondarily: *u*-stem) 'kid' (probably also **amul** 'childless', as well as **al-oǰ** 'female kid' from a zero-grade form, with an ending comparable to *oroǰ* 'lamb'); Gr. *πῶλος* m. f. 'young horse, foal, filly', secondarily also of other young animals, metaph. 'young girl, youth'; Goth. *fula*, OHG *folo* 'id.'; Alb. *pélë* 'mare' < **pōl-n-*.[157]

6.6. Armenian, Greek and Balto-Slavic.

6.6.1. **h₂(e)g^{h}l-* 'darkness, fog, mist': Arm. **ałǰ-** 'darkness, fog, twilight' (*ałǰ-a-mułǰ* 'darkness', *ałǰ-ut'iwn-k'* 'darkness', *ałǰ-ałǰ* 'fog'); Gr. *ἀχλύς*, *-ύος* f. 'mist; darkness', OPr. *aglo*, *u*-stem n. 'rain'. Arm. **ałǰ-* probably reflects a frozen locative **h₂(e)g^{h}l-i* > PArm. **algi* (regular metathesis).

6.6.2 **h₂(e)rti* 'now, near' (probably a locative formation from the root **h₂er-* 'to fit together, join', with the original meaning 'fittingly, suitable, at hand'): Arm. **ard(i)** 'now', dial. *ard-ak*

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[152] Beekes 2010, 1: 707.

[153] For literature and other examples of sigmatic aorist in Armenian, see Martirosyan 2010: 757 and s.vv.

[154] For the etymology and various explanations of Arm. *-z*, see Bugge 1893: 38–39; Pedersen 1906: 381–382, 425 = 1982: 159–160, 203; de Lamberterie 1978: 281; Mallory/Adams 1997: 268b; Olsen 1999: 782; Kortlandt 2003: index; Kocharov 2008: 100; Beekes 2010, 1: 682. The solution with the sigmatic aorist (**-d^h-s-* > *-z-*) is advocated by Pedersen, Kortlandt and Kocharov; Kocharov explicitly cites Gr. aor. *κεῦσαι* in this context. Some scholars are sceptical about the etymology: Meillet 1925: 5; HAB 4: 241–242; Clackson 1994: 116; J̌ahukyan 2010: 687a. On Germanic, see also Mayrhofer 1986: 116$_{78}$; Lehmann 1986: 196b.

[155] See Mayrhofer EWAia 1, 1992: 383; cf. Beekes 2010, 1: 682.

[156] Martirosyan 2010: 107–108; Beekes 2010, 2: 1397–1398, 1404; for Slavic, see Derksen 2008: 473.

[157] Lehmann 1986: 130b; Clackson 1994: 183; Demiraj 1997: 314; Martirosyan 2010: 15–16, 53, 631–632. Sceptical on the etymology: Olsen 1999: 185 and Beekes 2010, 2: 1266.

'immediately, on the spot'; Gr. *ἄρτι* 'just now', *ἄρτιος* 'suitable; ready'; Lith. *artì* 'near' (referring to proximity of space rather than time).[158]

6.6.3. **dĝʰuH-* 'fish': Arm. *jukn*, gen. *jkan*, pl. *jkun-k‘* 'fish'; Gr. *ἰχθῦς*, *-ύος* m. 'fish'; OPr. *suckans*, Lith. *žuvìs*, Latv. *zuvs* 'fish'.

6.7. Armenian and Greek in a broader European context.

6.7.1. **h₁o(h₁)i-u̯eh₂*: Arm. **aygi**, *ea*-stem 'vineyard; vine', Gr. *οἴη* f. 'service-tree', Lat. *ūva* 'grapes', Russ. *íva* 'willow', Czech *jíva* 'willow', SCr. *ìva* 'willow', Lith. *ievà* 'bird-cherry', OIr. *eó* m. 'yew', OHG *iwa* f. 'yew', OPr. *iuwis* 'yew'. The appurtenance of Hitt. ^{GIŠ}*e̯ian-* n. 'a tree (evergreen)', perhaps 'yew' is uncertain (Kloekhorst 2008: 233–234).

6.7.2. **u̯reh₂d-* 'branch; root': MidArm. and dial. **argat** 'superfluous branches cut off from the vine and used for kindling', Gr. *ῥᾰ́δῐξ* m. 'branch, twig', Lat. *rādīx* f. 'root; radish', *rāmus* m. 'branch, twig' if from **wrād-mo-*, MWelsh *gwreid* < **u̯rh₂d-i̯o-* 'roots', OIc. *rót*, Goth. *waurts* 'root', Alb. *rrẽnj/ë*, *-a* (Tosk), *rrã*(*n*)*jë* (Gheg) 'root'. The appurtenance of Toch. B *witsako* (from **u̯rdi-k-eh₂-*?) is uncertain.

6.7.3. **h₁el-*(*h₁*)*en-* or **h₁el-no-*: Arm. **ełn**, nom.pl. *ełin-k‘*, gen.pl. *ełan-c‘* 'deer cow, hind'; Gr. *ἐλλός* 'deer-calf, fawn' < **h₁el-no-*, *ἔλαφος* m. f. 'deer; deer cow, hind' < **h₁el-n̥-bʰo-*; cf. also **h₁el-h₁en-i-* 'deer, hind': OCS *jelenъ* 'deer', *alъnii* 'doe', SCr. *làne* 'doe', Russ. *lan'* 'fallow deer, doe', *olén'* 'deer, stag-beetle', dial. *elén'* 'deer, stag-beetle', Lith. *élnis* 'deer'; further: MIr. *ailit* f. 'doe, hind' < **h₁el-*(*H*)*n-t-iH-* or **h₁el-en-t-iH-*, etc.

If Arm. *ełn* derives from **h₁el-no-* (with Gr. *ἐλλός* 'deer-calf, fawn') rather than **h₁el-h₁en-* (with Balto-Slavic), it parallels *beŕn*, pl. *beŕin-k‘*, gen. *beŕan-c‘* 'burden, load' from **bʰe/or-neh₂*: Gr. *φερνή* f. 'dowry' (see §6.3.2).

6.7.4. **lu*(*n*)*k̂-* 'lynx': Arm. ***lusan-n** (pl. *lusanunk‘*) 'lynx', dial. ***lus(e)amn** also meaning 'hyena' and 'marten'; Gr. *λύγξ*, gen. *λυγκός* (*-γγός*) 'lynx'; Lith. *lū́šis*, dial. (Žem.) *lųnšis*, *lųnši*, OPr. *luysis*, Russ. *rýsь*; MIr. *lug*; OHG *luhs* 'id.'.

6.7.5. **gli̯eh₂* / **glineh₂* 'glutinous substance, clay': MidArm. and dial. **kałǰin** 'mortar, clayey soil'; Gr. *γλία* f., *γλοιός* m., *γλίνη* 'any glutinous substance, gum'; Russ. *glej* (dial.) 'clay, loam', *glína* 'clay', Ukr. *hlej* 'moist clay', Lith. *gléinė* 'moist clay'; OEngl. *clǣg*, Engl. *clay* and MLG *klei* 'clay' from Germ. **klai̯ia-*, etc. (HM)

6.7.6. **k̂ik̂er-* 'chick pea': Arm. **siseŕn**, gen. *sis*(*e*)*ŕan* 'chick pea', Gr. *κίκερροι* 'bird's pease' (Hesychius: Maced.), Lat. *cicer* n. 'chick pea', OPr. *keckers* 'chick pea', Alb. *thjer*(*r*), *thíerr* 'lentil, Ervum lens'.

7. Armenian, Greek and the Mediterranean/European substrate

In recent years, the methodology of dealing with substrate words has been developed and applied by several scholars.[159] It has been pointed out that an etymon is likely to be a loanword if it is characterized by some of the following features: (1) limited geographical distribution; (2) unusual phonology and word formation; and (3) specific semantics.[160]

The Armenian words that are frequently considered to be of Mediterranean origin are: *gini* 'wine', *ewł*/*iwł* 'oil', *t‘uz* 'fig', *spung* 'sponge', *sring* 'pipe, fife', *sunk*/*g*(*n*) 'mushroom'.[161] The

[158] See Clackson 1994: 103–104; Martirosyan 2010: 135.

[159] Kuiper 1995; Beekes 1996, 1998, 2000, 2003; Schrijver 1997; Lubotsky 2001a.

[160] See Schrijver 1997: 293–297; Beekes 2000: 22–23; Lubotsky 2001a: 301–302.

[161] In fact, *gini* 'wine' and *spung* 'sponge' should be excluded from the list since the Indo-European origin of the former is more probable, and the latter is likely to be a Greek loan.

actual number is much higher. In Martirosyan 2007 and 2010, I have applied the aforementioned methodology to a number of such words, mostly plant names, animal names and cultural words. In these cases, an etymon is attested in Armenian, Greek, Latin and/or another Indo-European language of south-east Europe (such as Albanian or Phrygian) or Anatolian, but the phonological or word-formative correspondences are irregular with respect to the Indo-European system, and they cannot be considered loanwords from one another.

Bearing in mind that Greek and Latin on the one hand and Armenian on the other are historically located on the opposite sides of the Black Sea, as well as that in some cases Mediterranean words have related forms in the Caucasus and Near East, I prefer not to confine myself strictly to the notion of so-called Balkan Indo-European. I conventionally use a term Mediterranean-Pontic Substrate. In some cases (e.g. Arm. **pal** 'rock' vs. Gr. *πέλλα* 'rock', OIr. *ail* 'cliff' < **pal-i-*, MIr. *all* < **pl̥so-*, OIc. *fell* 'mountain, rock', OHG *felisa* 'rock, cliff' prob. from **palis-*), an etymon is also present in other European branches, such as Celtic and Germanic, thus we are faced with the European Substrate in the terms of Beekes 2000. Whether the Mediterranean-Pontic and European substrata are identical or related is difficult to say with confidence.

There are words belonging to the same semantic categories (plant names, animal names, cultural words) that may be treated as innovations shared by Armenian and Greek etc. For instance, the morphological agreement between Arm. **kałin**, *o*-stem 'acorn' and Gr. *βάλανος* f. 'acorn' (vs. Lat. *glāns*, *glandis* f. 'acorn, beech-nut', Russ. *žëlud'*, SCr. *žȅlūd* 'acorn', Lith. *gìlė*, dial. *gylẽ* 'acorn', Latv. *zīle* 'acorn', etc.) may reflect a common innovation undergone jointly by Greek and Armenian (Clackson 1994: 135–136, 200/237$_2$). Such words do not belong with the substrate since they are of Indo-European origin and do not reflect any phonological or morphological deviation. Nevertheless, these innovations are relevant to our topic in that they may be ascribed to the same Mediterranean-Pontic area and period. In other words, after the Indo-European dispersal, Proto-Armenian, Proto-Greek and some other contiguous language-branches (e.g. Phrygian and Thracian[162]) may have remained in contact somewhere in the Mediterranean and/or Pontic areas, probably in the 3rd and 2nd millennia BC and have shared both IE innovations and substrate words.

The consonantal correspondences between substrate words in Armenian and other languages are of two kinds:

1) archaic, matching the correspondences of the native Indo-European heritage:

**-ri̯-* > Arm. *-rǰ-* and **g/g^w* > Arm. *k*, e.g. Arm. *anurǰ* 'dream' vs. Gr. *ὄνε/οιρος*, Arm. *kamurǰ* 'bridge' vs. Gr. *γέφῡρα*;

**k̂* > Arm. *s*, e.g. Arn. *siseṙn* 'chick pea' vs. Lat. *cicer* 'chick pea', Arm. *siwn* 'column, pillar' vs. Gr. *κί̯ων*;

**ĝ* > Arm. *c*, e.g. Arm. *erbuc* 'breast of animals' vs. Gr. *φάρυγξ*, gen. *-υγος*, *-υγγος* 'throat, dewlap';

p-* > Arm. *h-* or zero, e.g. Arm. *aławni* (aławun*), *ea*-stem 'pigeon, dove' vs. Lat. *palumbēs* 'wood-pigeon, ring-dove' (**pl̥lh$_2$-b^h-ōn*, gen. **-b^h-n-os*); Arm. *hec'*, gen. *hec'-i* 'felloe', if from **pelk̂-s*, cf. OHG *felga*, OEngl. *felg*(*e*) 'felloe', etc.; Arm. *ort'*, *o*-stem 'vine' vs. *π(τ)όρθος* 'sprout'.

2) relatively young:

**k* > Arm. *k*, e.g. Arm. *kałamax*(*i*) 'white poplar, aspen' vs. Hesychian *καλαμίνδαρ* 'plane'; *karič*, *a*-stem 'scorpion', dial. 'crayfish' vs. Gr. *κᾰ̄ρίς*, *-ίδος*, *-ῑ̄δος* 'crayfish';

**p-* > Arm. *p*, e.g. Arm. *pal* 'rock' vs. OIr. *ail* 'cliff' < **pal-i-*, MIr. *all* < **pl̥so-*, Gr. *πέλλα* 'rock';

[162] Cf. Kortlandt 2003: VIII, 83–87.

s > Arm. *s* (unless these words have been borrowed from lost satəm-forms in *$\hat{k}$), e.g. Arm. *sayl*, *i*-stem and *o*-stem 'wagon; Ursa Major and Minor, Arcturus' vs. Gr. *σατίνη* f. 'chariot' and Hesychian *σάτιλλα· πλειὰς τὸ ἄστρον*, the constellation being regarded as a car (considered to be of Phrygian or Thracian origin); Arm. *sring* 'pipe, fife' vs. Gr. *σῦριγξ*, *-ιγγος* f. 'shepherd's pipe, panpipe', which is considered to be of Phrygian or Mediterranean origin.

This implies that we have to deal with at least two chronological layers, and that the Proto-Armenians must have remained in or close to the Mediterranean-Pontic areas for a long period of time.

In Table set B, the lexical correspondences of section 6 are grouped according to semantic fields. As in the Table set for sections 4 and 5, here also the correspondences that are likely to be innovations are marked by shading. The others probably have a substrate origin. Needless to say, all the lists in this paper are provisionary and are subject to corrections and additions.

If we collate the two sets of tables, we observe that both sets have a roughly equal number of lexical agreements in each semantic field, with a remarkable exception: in A, we find zero and five lexemes in the domains of flora and agriculture respectively, whereas B has 13 lexemes for each domain. Especially remarkable are sets of correspondences within a narrow semantic group, e.g. the three designations of plants of the legume family, all of Mediterranean origin: *olorn* 'pea, bean', *ospn* 'lentil', and *siseṙn* 'chick pea'. Interestingly, all three Armenian words display an additional *-n* and belong to the *an*-declension class.

Another remarkable difference is that, in the domain of technical activities, set A has lexemes with more general meanings, such as 'bond', 'grave' and 'threshold', whereas B displays a number of specific technical terms such as 'bridge', 'drying implement', 'hinge', 'pillar', 'potter's wheel' and 'rein'.

These sketchy conclusions probably indicate that, after the separation of the Indo-Iranians, Proto-Armenian remained close to Proto-Greek and some other dialects and, approaching Mediterranean or Pontic regions, developed a high number of lexical agreements, both innovations and borrowings from neighbouring non-Indo-European languages, especially in the domains of agriculture and technology.

Table set B (sections 6–7)

Lexical isoglosses: Armenian, Greek, etc.

Physical world, time, space.

Proto-form	Gloss	Armenian	Greek	Other 1	Other 2
**ant^h-r-*	coal	**ant'-(a)r-*	*ἄνθρακ*		
**h$_2$(e)g^{h}l-*	mist, fog	*ałǰ-*	*ἀχλύς*	OPr. *aglo*	
**an(t)ér*	cave	*ayr*	*ἄντρον*		
**h$_2$(e)rti*	now, (near)	*ard(i)*	*ἄρτι*	(Lith. *arti*)	
**Héh$_2$m-(ō)r*	day	*awr*, g. *awur*	*ἦμαρ*		
A **dṷeh$_2$-ro-*	long	*erkar*	**δϜᾱρός*		
B **dṷeh$_2$-n-*	long	*erkayn*	**δϜᾱν*		
**tumbo-*	mound	*t'umb*	*τύμβος*		
**mar-mar-*	to shimmer	**mar-m(a)r-*	*μαρμαίρω*		

Proto-form	Gloss	Armenian	Greek	Other 1	Other 2
**me-ĝʰsr-i*	near	*merj(i-)*	*μέχρι*		
**notii̯eh₂*	wetness	*nay*, *i*-stem	*νοτία*		
**ĥken(e)u̯o-*	empty	*sin*, *-o-*	**κενϜός*		

Human, age, kinship.

Proto-form	Gloss	Armenian	Greek	Other 1	Other 2
**pre(i)sgʷu-*	elder	*erēc‘*, *u*-st.	*πρέσβυς*		
**gʷneh₂ik-*	wife, woman	**kanay-*	*γυναι-κ-*		
**meh₂truieh₂*	stepmother	*mawru*, *-a-*	*μητρυιᾰ́*		
**su̯ekur-eh₂*	moth.-in-law	*skesur*, *-a-*	*ἑκυρά*		

Body, perceptions, mentality, belief.

Proto-form	Gloss	Armenian	Greek	Other 1	Other 2
**h₃kʷkʷon*	eye	*akn*	*ὄκκον*		
**h₂n(e/ōr)i̯o-*	dream	*anurǰ*, *-i-*/*-o-*	*ὄνε/οιρος*	Alb**andërrë*	
**dʰ(e)h₁s-*	god	*di-k‘*	*θεός*	(Lat. *fēriae*)	
**pr(e/o)Hkt-*	buttocks	*erastan-k‘*	*πρωκτός*		
**u̯es-nu-*	put on cloth.	*z-genum*	*ἕννυμι*		
**ĝ(e)lh₂-s-*	laughter	*całr*, g. *cału*	*γέλως*, *γαλ-*		
**mēd-es-h₂*	mind	*mit-k‘*, *mt-a-*	*μήδεα*		
**mor-m-*	she-monster	*mor-m*	*Μορμώ(ν)*	Lat. *formīdō*	
**srungʰ-*	snout	*ṙung(n)*	*ῥύγχ(ε)ος*		
**ps(e)ud-os-*	false, lie	*sut*, *-o-*	*ψεῦδος*		

Movements, speech and other activities.

Proto-form	Gloss	Armenian	Greek	Other 1	Other 2
A **h₃bʰel-*	to sweep	*awel(-)*	*ὀφέλλω*		
B **h₃bʰel-*	to increase	*awel-*	*ὀφέλλω*		
**bʰer-(e)n-*	load	*beŕn*	*φερνή*	Alb. *bárrë*	(‘child’)
**bʰh₂-ti-*	word,rumour	*bay*, *i*-st.	*φάσις*, *φάτις*		
**ĥ(e)r(H)ieh₂*	band	*sari-k‘*, *-ea-*	*κε/αιρία*		
**ĥeudʰ(-s)-*	to hide	*soyz*	*κεύθω*	OEng. *hȳdan*	

Fauna.

Proto-form	Gloss	Armenian	Greek	Other 1	Other 2
**h₁el-(h₁)n-*	deer	*eł n*	*ἐλλός*	Lith. *élnis*	MIr. *ailit*
**pter-*	feather, wing	*t‘er(t‘)*	*πτερόν*		
**lu(n)ĥ-*	lynx	*lusa(m)n-*	*λύγξ*	Lith. *lūšis*	OHG *luhs*
A **karid(-i̯ā)*	crayfish	*karič*, *-a-*	*κᾰ́ρις*, *-ί/ῐ̄δος*		
B **ko/ōr-i-*	crayf., scorp.	*kor*, *-i* scorp.	*κουρίς κωρίς*		

Proto-form	Gloss	Armenian	Greek	Other 1	Other 2
*$d\hat{g}^huH$-	fish	*jukn*	*ἰχθῦς*	Lith. *žuvìs*	
*$h_1e/o\hat{g}^hīno$-	hedgehog	*ozni*	*ἐχῖνος*	(OHG *igil*)	(Oss. *wyzyn*)
*$i̯or\hat{k}$-o-	deer, game	*ors*, -*o*-	*ἴορκος ζορκ*-	Corn. *yorch*	
*sk(*o*)rp-*i*-	asp, scorpion	*k'arb*, *i*-stem	*σκορπίος*		

Animal husbandry.

Proto-form	Gloss	Armenian	Greek	Other 1	Other 2
*$h_2(e)i\hat{g}$-	goat	*ayc*	*αἴξ*	(Skt. *eḍa*-)	(Av.*īzaēna*-)
*$b^hrug/\hat{g}$-	dewlap	*erbuc*, -*o*-	*φάρυγξ*	Lat. *frūmen*	
*$g_{\mathring{e}}lgt$-	milk	*kat'n*	*γάλακτ*-	Lat. *lact*-	
*$mos\hat{g}^h$-o/*io*-	young bov.	*mozi*	*μοσχ*-		
*$h_1enh_3or\hat{g}^h$-	male anim.	*y-orj*	*ἔν-ορχ*-		
*dig/g^h-	goat	*tik*, -*a*-	*δίζα*	OHG *ziga*	
*poHl-/*pōl*-	young anim.	*ul*, -*o*-	*πῶλος*	Goth. *fula*	Alb. *pélë*

Flora.

Proto-form	Gloss	Armenian	Greek	Other 1	Other 2
*$h_1oi(h_1)u̯eh_2$	yew, vine	*aygi*, -*ea*-	*οἴη*	Lat. *ūva*	OHG *īwa*
*$u̯reh_2d$-	branch, root	*argat*	*ῥάδιξ*	Lat. *rādīx*	Goth. *waurts*
A *d^hlh_1ro-	green, fresh	*dalar*, -*o*-	*θαλερός*		
B *$d^hél(H)$-*n*-	twig, herb	*deł*, -*o*-	*θαλλός*	(MIr. *duilne*)	(OEngl. *dile*)
*ptel-	elm, Ulmus	*t'eł*i	*πτελέα*	(Lat. *tilia*)	
*$t^hu(ō)i\hat{k}o$-	fig, (vulva)	*t'uz*, -*o*-	*σῦκον*, *τῦκον*	Lat. *ficus*	
*$g^wl̥h_2$-*eno*-	acorn	*kałin*, -*o*-	*βάλανος*	(Lat. *gland*-)	(SCr. *žȅlūd*)
*kalam-	aspen, plane	*kałam-ax*(*i*)	*καλαμίν-δαρ*		
*kast(*an*)-	chestnut	*kas*(*t*-)*k*-	*κάστανον*		
*mor-	blackberry	*mor*(*š*)	*μόρον*	(Lat *mōrum*)	
*p^yort^ho-	sprout, twig	*ort'*,- *o*-	*π*(*τ*)*όρθος*		
*$h_3or\hat{g}^hi$-	orchis	(*xol*)*orj*	*ὄρχις*		
*spongos	mushroom	*sunk*/*gn*	*σπ*/*φόγγος*	Lat. *fungus*	

Agriculture.

Proto-form	Gloss	Armenian	Greek	Other 1	Other 2
A *h_2leh_1-$u̯r̥$	flour	*alewr*	*ἄλευρον*		
B *$h_2(e)lh_1tr$-	grinder	*aławri*	*ἀλετρίς*	Iran*$ārθra$-	
*h_1os-$r̥$-(*e*)h_2	harvest	**ar-a*-	(*ὀπ*-)*ωρα*	(Goth *asans*)	(CS *jesenъ*)
*drepan-eh_2	*sickle	*artewan*, -*a*-	*δρεπάνη*		
*$g^hrī(d^h)$	barley	*gari*, -*ea*-	*κριθ-ή*, *κρῖ*	Alb. *drithë*	OHG *gersta*
*el(*e*/*a*)*iw*-	olive, oil	*ewł*, *iwł*-*o*-	*ἔλαιος*	Lat. *oleum*	
*sk$^{(h)}$odoro-	garlic	*xstor*/*sxtor*	*σκόρ*(*ο*)*δον*	Alb. *húrdhë húdhër*	

Proto-form	Gloss	Armenian	Greek	Other 1	Other 2
**gorio-*	drain	*kori*	*γοργύριον*		
**(H)olur-*	pea; spelt	*olorn̊, -r̊an*	*ὄλυραι*		
**osp-*	legumen	*ospn* 'lentil'	*ὄσπριον*		
**si/ekʰu-*	melon,gourd	*sex*	*σικύα*		
**ǩiǩer-*	chick pea	*siser̊n, -r̊an*	(*κίκερροι*)	Lat. *cicer*	OPr. *keckers* Alb. *thjer(r)*
**(s)kl̥-ne/o-*	to hoe, weed	*kʻatem*	*σκάλλω*	(Lith. *skélti*)	

House, housekeeping, crafts, implements, building.

Proto-form	Gloss	Armenian	Greek	Other 1	Other 2
**aĝu(s)ieh₂-*	path, road	*acu*	*ἄγυια*		
**h₂er-*	fix, put tog.	*arn̊em, ar-ar*	*ἀραρίσκω*		
**bʰurgʰ-*	tower	*burgn*	*πύργος*		
**dʰrogʰ-*	wheel	*durgn*	*τροχός*	OIr. *droch*	
**sepʰ-s-*	to boil, cook	*epʻem*	*ἕψω*		
**t(a)rp-eh₂*	basket	*tʻarpʻ / tʻarb*	*τάρπη*		
**t(o)rs-*	drying impl.	*tʻar̊*	*ταρσός*	OHG *darra*	
**h₁ul(e/o)h₁ro-*	thong, rein	*lar, -o/i/a-*	*ἔλληρα*	Lat. *lōrum*	
**ĝinɣl(u)m-*	hinge	*cłxni, -ea-*	*γί(γ)γλυμος*		
**gl̥ieh₂/glineh₂*	clay	*kaɫǰin*	*γλία, γλίνη*	Russ. *glína*	Engl. *clay*
**gʷem/bʰur̥ieh₂*	bridge	*kamurǰ, -a-*	*γέφῡρα*		
**per-(i)on-*	awl, pin	*heriwn, -ean*	*περ-όνη*		
**kʰsan-t(e)r-*	comb	*sant/dr*	*ξάντρ-*		
**(s)ǩī(u̯)ōn*	pillar	*siwn*	*κίων*	OHG *skina*	
**stl̥neh₂*	post, pillar	**staɫ-a-*	*στήλη*	OHG *stollo*	

Preliminary conclusions

We may preliminarily conclude that Armenian, Greek, (Phrygian) and Indo-Iranian were dialectally close to each other or even formed a dialectal group at the time of the Indo-European dispersal. Within this hypothetical dialect group, Proto-Armenian was situated between Proto-Greek (to the west) and Proto-Indo-Iranian (to the east). On the northern side it might have neighboured, notably, Proto-Germanic and Proto-Balto-Slavic.

After the Indo-European dispersal, Armenian developed isoglosses with Indo-Iranian on the one hand and Greek on the other. The Indo-Iranians then moved eastwards, while the Proto-Armenians and Proto-Greeks remained in a common geographical region for a long period and developed numerous shared innovations. At a later stage, together or independently, they borrowed a large number of words from the Mediterranean / Pontic substrate language(s), mostly cultural and agricultural words, as well as animal and plant designations.

On the other hand, Armenian shows a considerable number of lexical correspondences with European branches of the Indo-European language family, a large portion of which too should be explained in terms of substrate rather than Indo-European heritage.

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Грач Мартиросян. Место армянского языка в индоевропейской семье и его связь с греческим и индоиранским.

Основной задачей статьи является каталогизация лексических этимологий, сближающих армянский язык с греческим и/или индоиранским. Предлагаемые списки включают в себя как общие инновации, так и изолированные ареальные термины. Обе группы этимологий (армяно-греческие и армяно-индоиранские) могут рассматриваться в рамках одной и той же пространственно-временной модели. В процессе расселения носителей индоевропейских языков протоармянский продолжал контактировать с как соседними индоевропейскими диалектами, так и с неиндоевропейскими языками. Слова субстратного происхождения выделяются ограниченной географической дистрибуцией, необычной фонологией или словообразованием, характерной семантикой. Материал, представленный в настоящей работе, не претендуя на исчерпывающую полноту, позволяет, тем не менее, сделать предварительный вывод о диалектной близости армянского, греческого, (фригийского), и индоиранских языков. Внутри данной гипотетической диалектной группы ареал протоармянского языка занимал промежуточное положение между ареалом протоиндоиранцев на востоке и ареалом протогреков на западе. Впоследствии протоиндоиранцы сдвинулись далее на восток, тогда как протоармяне и протогреки продолжали оставаться в смежных географических ареалах на протяжении длительного прериода, развив многочисленные общие инновации. В последующий период они заимствовали, совместно или поодиночке, множество лексем, принадлежащих к черноморско-средиземноморскому субстрату, по преимуществу культурные и сельскохозяйтвенные термины, а также обозначения флоры и фауны. С другой стороны, армянский язык содержит значительное число лексических соответствий индоевропейским языкам Европы, существенная часть которых также должна объясняться в терминах общего субстрата, а не индоевропейского наследия.

Ключевые слова: армянская историческая лингвистика, армянская этимология, индоевропейская сравнительная лингвистика, индоиранская лексикология, греческая лексикология, средиземноморский субстрат.

AUTHOR'S ADDITION TO P. 94:

4.1.17. *$g^{w}o\underset{\cdot}{u}$-io-* (or *$g^{w}h_{3}e\underset{\cdot}{u}$-io-*): Arm. **kogi**, gen. *kogw-o-y*, ins. *kogw-o-v* 'butter', Skt. *gávya-*, *gavyá-* 'consisting of cattle, coming from or belonging to a cow (as milk, curds, etc.)', YAv. *gaoiia-* 'coming from cattle, consisting of cattle', Gr. adj. *-βο(ϝ)ιος*, e.g. *ἐννεά-βοιος* 'worth nine beeves'. This isogloss[33] is based on the PIE word for 'cow' (Arm. *kov*; cf. nom. *arew* vs. oblique *areg-* 'sun'). Armenian and Indic are closer to each other since they show a semantic development to 'a dairy product'. Now we also have a wonderful match in Toch. B, *kewiye* 'pertaining to cow; butter' < **kăwiyă* < **kăwäyă* < **g^{w}ow-iyo-*.[33a] Although this makes the isogloss less significant, I nevertheless included it in order to emphasize its semantic closeness to another agreement between Armenian and Indic: Arm. **ser** 'cream' and Skt. *śáras* n. 'cream' (see §5.2.16).

[33] See already Meillet 1896: 152.

[33a] Pinault 1989: 53. I am indebted to James Clackson for this information. For the Tocharian word, see also Adams 1999: 198.