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.\(^3\)

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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 Jahukyan, 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 Jahukyan’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.

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

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-

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 dealing 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 *-osjo-, 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 *h₂srār, gen. *h₂sr-ōs 'man' that is basically represented by the dialect area under discussion (Armenian ayr, gen. ayr-, Skt. nár-, Greek ἄνηπ, gen. ἀνδρός, Phryg. avap, cf. also Alb. njer 'human being, person') but has also left some traces in Italic (Osc. ner-) and Celtic (Mir. ner ‘boar’, MWelsh ner ‘chief, hero’). A similar case is *h₂erh₂-uer/n- ‘arable land’. Such cases cannot be regarded as significant for the purpose of subgrouping 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 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

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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 / satem 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 satem 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 \(u.\) 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. \(ā-\) (and \(ό-\)) : Arm. \(a-\), and Gr. \(ē-\) : 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.\(^10\)

<table>
<thead>
<tr>
<th>PIE</th>
<th>Gloss</th>
<th>Greek</th>
<th>Armenian</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>(^<em>)h₁reg(^</em>)os-</td>
<td>‘darkness’</td>
<td>ἐρέβος</td>
<td>erēk(-ov)</td>
<td>Goth. riqs</td>
</tr>
<tr>
<td>(^*)h₁heψη</td>
<td>‘nine’</td>
<td>ἐννέα</td>
<td>inn</td>
<td>Skt. náva</td>
</tr>
<tr>
<td>(^*)h₂lo(e)(a)pek-</td>
<td>‘fox’</td>
<td>ἀλωπης</td>
<td>āluēs</td>
<td>Skt. lopāsā-</td>
</tr>
<tr>
<td>(^*)h₂ster-</td>
<td>‘star’</td>
<td>ἀστήρ</td>
<td>astl</td>
<td>Hitt. ḫašker-</td>
</tr>
<tr>
<td>(^*)h₃heψ,un</td>
<td>‘name’</td>
<td>ὄνομα</td>
<td>anun</td>
<td>Skt. nāman-</td>
</tr>
</tbody>
</table>


\(^7\) 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\(\_\)n; 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 forthcoming (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(-)”.

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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 áxp/er ‘o brother’, vúrt/i ‘o son’; Lóri órdi ‘o son’; Hamșen háyr-i ‘o father’, máyri ‘o mother’; Akn hárs/nuk ‘o sister-in-law’, márik ‘o mummy’; Moks xrółper ‘o uncle’, t’ágävur ‘o king’, Nor-Bayazet hárs-e ‘o sister-in-law’, Hóromsim, Máyran, Márgarit, ñákolner “you whose house may be destroyed!”, even word combinations, such as túrban harse “you, dear sister-in-law (to whom I may be sacrificed)”, Hṙóp’soma Xat’un ‘o you, Lady Hṙop’sim’.

The vocative with initial accentuation may be considered an Indo-European inheritance. In V edic Sanskrit, the vocative, when accented, has the acute on the first syllable, e.g., voc. pítar vs. nom. pit/amacron. 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 Kurd- ish 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-b/hsuperer-et: Skt. á-bhar-at, Gr. ἐ-φερ-ε; Arm. 3sg aorist e-git ‘found’ from PIE *é-/uvaultbelowid-et: Skt. á-vid-at, Gr. ἐἶδε < ἐ-ϝιδ-ε; Arm. 3sg aorist e-d ‘put’ from PIE *é-d/hsupereh1­­t: Skt. á-dhā-t, Gr. dial. ἐ-θη, cf. suffixed forms, Gr. ἐ-θη-κα, Phrygian e-daes.12

3.2. The genitive ending *-osio- (Skt. -asya, Gr. -oiω, 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 *-osio- 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 *-osio- as a specific genitive marker of o-stems.15

11 See Martirosyan 2010: 748–749 and Martirosyan forthc.
13 Meillet 1900: 17.
3.3. A commonly cited morphological feature found in Armenian, Greek and Indo-Iranian (and perhaps also Celtic) is the instrumental marker *-bʰi(s). Furthermore, Greek and Armenian share the use of *-bʰi- as the instrumental singular marker, probably due to extension of the athematic instrumental plural marker *-bʰis 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. mā, 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. *h₂oiu-kʷ(id): 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: *h₃r-nu-: Arm. aṁnum ‘to gain, obtain, take’ (Armenian, Greek, and probably Iranian, see §4.1.9); *yēs-nu-: Arm. z-genum ‘to put on clothes’ (Armenian and Greek, see §6.1.16); *gʷnu-er-nu-: Arm. jeṁnum ‘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. inum, 3sg.aor. e-lič ‘to fill, be filled’ from QIE *pleh₁: Gr. πίμπλημι, -αμαι ‘to fill, make full’, πλέως, Ion. πλέκ’ ‘full’, Lat. plère ‘to fill’, Skt. par ‘to fill’, pres. *piprati, 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 *skelo- added to the old root aorist *plē-(s)-, cf. Ved. āpṛas, Gr. ἐπλήσας, etc.

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

*ni-si-sd-el-o-: Arm. nstim, 3sg.aor. nst-a-w, impv. nist ‘to sit’ < *nīhišt-e-; Skt. ni śidati, Av. nīṣhīdati, MPers. nīṣṭaṇ ‘to sit’. The form is based on the reduplicated present form *si-sd- from PIE *sed- ‘to sit’: Skt. śidati, Gr. ἱκώ, Lat. sidō, etc. The verbal form *ni-si-sd-el-o- ‘to sit’ is a significant isogloss shared by Armenian and Indo-Iranian. Other languages only have the deverbalative noun *ni-sd-o-: Lat. nidus m. ‘bird’s nest, residence’, OHG nest ‘nest’, cf. Arm. nist, o-stem ‘seat, site, base; royal residence, capital’, Skt. nīḍā- m.n. ‘nest, lair, bird’s nest’, etc.\(^{21}\)

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

*liŋŋ*ŋ*-ŋ- ‘to leave’: Arm. lk’anem, 3sg.aor. e-lič ‘to leave’, Gr. λειπώ, λιμπάνω ‘to let, leave’; cf. Skt. rec-, pres. riṅktī ‘to leave, let, release’, Iran. *raić ‘to leave, let, abandon’, Lat. linquo, liquī ‘to leave, quit, forsake; to abandon’, Ofr. lécid ‘leaves’. Arm. 3sg.aor. e-lič is de-


\(^{17}\) Martirosyan 2010: 468–469. For Albanian mo, see Demiraj 1997: 275–276.


\(^{19}\) 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.


rived from thematic aorist *ẹ-likʷ-e-t, cf. Gr. ἑλπίσε, and the imperative lik' reflects IE *likʷ-e, cf. Gr. λίπε. PIE nasal-infixed present *li-n-kʷ- was remodelled to *li(n)kʷ-η: Gr. λιμπάω and Arm. lk'anem (cf. *bʰeg- 'to break', nasal present *bʰ-n- Eg.: Arm. bekanem, 3sg.aor. e-bek 'to break', Skt. bhājj-, bhānakti 'to break, shatter', OIr. bongid, -boing 'breaks', etc.). I agree with the view 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. *prk-skleo- (sk-present): Arm. harc'anem, 3sg.aor. e-harc 'to ask, question, inquire', Ved. prcchāmī, MPers. pursidan ‘to ask’, Lat. poscō ‘to ask, demand’, etc. Arm. 3sg.aor. e-harc derives from thematic imperfect *e-prk-sk- et, cf. Skt. āprcchāt. Note also Arm. imper. harc ‘vs. Skt. prcchā.

3.8. The *-η-presentes (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. μαυνόλης ‘raving, frenzied’) vs. the Armenian quasi-participles in -oł, the usage of the PIE verbal suffix *-sk- (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. cicalim ‘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.


4.1.2. *polio-i/polfieh: PArm. *(p)oliya- > Arm. ali-k¹, obl. ale-a ‘wave’; ali-k² 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.24 In view of Mycenaean po-ri-wa, the Greek word has been reconstructed as *πολιό- and its close connection with Arm. ali-k¹ 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 one in having both meanings (‘wave’ and ‘grey hair, old’) and reflecting *polio-. Perhaps we can also add Skt. palitā- ‘grey, grey of old age, aged’, though this is uncertain.24 Other languages have *polio- ‘pale, grey’, which seems to be unrelated: Lat. pallidus ‘pale’ < *palwo-, OHG falo ‘faded’ < P Germ. falwo-, OCS plavо ‘white’, etc.25

4.1.3. *h₂(ε)lh₁/*h₂-n(ε)h₁-: Arm. alam ‘to grind’ < *al-n-, Gr. ἄλέω ‘to grind’, MInd. ātā ‘flour’, Av. aṣa- ‘ground’ < *art-, MPers. ārd ‘flour’ < *ārt-, Khot. ārr- and Sogd. ‘rn ‘to grind’ from Iran. *arna-. See also §4.1.4.

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24 See Mayrhofer EWAia 2, 1996: 103–104.
4.1.4. *h2(e)lh₁-tr-ː: Arm. alawri, ea-stem ‘mill; female grinder (of corn)’, Gr. ἀλετρις ‘woman who grinds corn’. If Pers. ās, āṣya ‘mill’, Sogd. ‘rō ‘mill’ and other Iranian forms reflect *alārdrā- ‘mill’, a similar *-tr-formation of *h2(e)lh₁- ‘to grind’ (see §4.1.3), then this is a lexical isogloss among Armenian, Greek and Indo-Iranian, as is the root *h2(e)lh₁-. Note also Arm. alewr ‘flour’ and Gr. ἀλευφόν ‘flour’ (§6.1.1).


4.1.6. *h₁(e)ig- ‘goat’: Arm. ayc, i-stem, ‘goat’, ayc-i, obl. aycea- (probably from fem. in *-ih₂-), Gr. αἰξ, αἰγός f. ‘goat’ (compositional αἰγ-, YAv. ίζαινα- ‘leathern’, perhaps also Skt. ēda- m. ‘a kind of sheep’ and Alb. dhi f. (she-)goat; note also the i-less form: Skt. ajā- ‘goat’, YAv. aza- ‘goat’, Lith. ožys ‘goat’, etc.28

4.1.7. *hnēr, gen. *hnur-os ‘man’: Armenian ayr, gen. aṁ, Skt. nār-, Av. nar-, Greek ἄνήρ, gen. αἴρος, Phryg. anar, cf. also Alb. njeri ‘human being, person’; note also traces in Italic (Osc. ner-) and Celtic (Mi. ner ‘chief, hero’). For the areal distribution, compare, e.g., gen. *-osio- and *hers-uër-i- ‘arable land’.


In view of the vocopal disparity in the Greek forms ἄρσην and ἄρης, two different roots may be posited: *h₁rš-en- (with Arm. aṁ and Indo-Iran. *Hṛšan-) and *h₁rṣen- (with Skt. ṛśan- ‘manly; male animal, bull, stallion, etc.’, Lat. verrēs ‘bull’, Lith. vērīs ‘bull, ox, ox calf’, etc.), respectively.29 According to Pronk (2010), the second part of the Proto-Indo-European determinative compound *g(e)hr₃-uṛṣēn ‘bull’, lit. ‘cow-male’ (Toc. A kauṛṣ ‘bull’, B kaurṣe ‘bull’, Olc. kursi, later kussi ‘bull calf’, Skt. gō-ṛṣa- and gō-ṛṣabha- ‘bull’, etc.), was reanalyzed in Greek, Indo-Iranian and Armenian as *-rṣēn 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). Note the abundance of such isoglosses in the domain of animal husbandry (see Table set A).

4.1.9. *h₂r-nu-: Arm. aṁnun ‘to gain, obtain, win, take, grasp’, Gr. ἀρνυμαι, aor. ἀρώμεν ‘to win, gain’, probably also Av. armanu- ‘to grant, allot, provide’ (see §3.5 on nu-verbs).

4.1.10. *srutīti/-to-: Arm. aiū, i-stem, o-stem, a-stem ‘brook, tributary; channel, ditch, trench’; the threefold declension of the Armenian word points to different derivatives: *srut-i- (cf. Skt. srutī- i. f. ‘way, path’, Gr. ῥοῖς f. ‘flowing, flow’, etc.), *srut-to- (cf. Gr. ῥοῖς ‘flowing’) or *srutos- n. (cf. Skt. sı́rōtas- n. ‘stream, current’, OPers. rautah- n., Pahl., NPers. rōd ‘stream’),

27 Clackson 1994: 95–96; Martirosyan 2010: 42; Beekes 2010, 1: 78–79.
29 For references and a discussion, see Martirosyan 2010: 112.
30 Note that, in the Atharva-Veda, Skt. ṛṣabh- is usually a real male animal, whereas ṛṣabha- is generally used symbolically, often referring to, e.g., Indra or Agni (Lubotsky apud Pronk 2010: 172, 175–176).
are left with a correspondence between Armenian and Greek.

4.1.11–12. *h₂gʰi-pu-ː arcuː ‘eagle’ and *tbiH-(i)no-/*tbiH-en-oː c’in ‘kite’ (§4.2).


4.1.15. *h₂egʷiː-ː Arm. *iž, i-stem ‘viper’, Gr. ἐχίος, -ως gen., εχίος ‘viper; name of a monster’, Skt. *ahí- m. ‘snake, adder’, YAv. *āži- m. ‘snake, dragon’. The assimilation *-gʷok- > *-yəy- and the problem of the Armenian vocalism are due to a generalization of the genitive *ẹγyο- from gen. *h₁(e)gʷok-; YAv. *a-damra ‘tomb, grave, dolmen’. Note also Arm. *t’emb ‘mound; fence, wall around a house’ and Gr. τυμβος m. ‘mound, burial mound, grave’ (see §6.11.8). In view of the aberrant vocalism comparable to burgn and durgn, as well as Arm. *t- instead of d- here we may be dealing with a substrate intermediation.¹¹


4.1.17. *gʰuwy-iː- (or *gʰhuwy-iː-ː): Arm. *kogi, gen. kogu-oy, ins. kogu-o- ‘butter’, Skt. gávya-, gávya- ‘consisting of cattle, coming from or belonging to a cow (as milk, curds, etc.)’, YAv. gávya- ‘coming from cattle, consisting of cattle’, Gr. adj. *bó(γ)wος, e.g. ἐννεά-βοιος ‘worth nine beees’. This isogloss¹³ 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. *hwrth-en-iː-ː Arm. harawun-k’ (acc.pl. harawun-s) ‘sowing, seeds; sowing-field; arable land’, Gr. ἀροῦξα f. ‘tilled or arable land; pl. corn-lands, fields’, Skt. urvārā- f. ‘arable land, field yielding crop’, Av. uruvārā- f. ‘food plant, plant, ground covered with plants, flora’. As in cases of e.g. gen. *-osio- and *-ơter- ‘man’, Celtic and Italic are added: Mrfr. arbor, NPl arbanna, OIr. gen. arbe ‘grain, corn’, Lat. arvum ‘ploughed land’. Armenian, Greek and Indo-Iranian are unified by the *-rin- 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 *-rin-declension is rather archaic. The value of this isogloss is uncertain.

4.1.19. *mṛto-ː Arm. *mard, o-stem ‘man, human being’ (renders Gr. ἀνθρώπος or βροτός in the Bible), Gr. βρότος m., f. ‘(mortal) man; mortal’; Skt. mṛtā- ‘died, dead’ (verbal adj.), Av. marata- ‘dead’; cf. privative *u-mṛto-ː Skt. amṛta- ‘immortal’, YAv. amasya- ‘immortal’, Gr. ἀμβρότος ‘immortal, divine’; with different vocalism: Skt. mārta- m., Av. marata- m. ‘the mortal


³³ See already Meillet 1896: 152.
one, man’, Gr. μορτός ‘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. *kvelou-: Arm. چeum ‘to go, set forth, march off, break camp’, چog-, suppletive aorist of چCi-i ‘to go, set off’, Skt. cyaw- ‘(to start) to move, stir; to undertake’; OAv. ʃauaitē ‘to move’, YAv. fra-ʃiit- f. ‘approach’, OPers. šiyaw- ‘to set forth, go, march’; Gr. σενομαι ‘to be in violent motion, hurry; to walk, rush (to)’; participle *k’w-to- ‘moved’: Arm. چCi, o-stem ‘setting out, departure; campaign, expedition; journey’, Skt. cyutā- ‘moved (wankend, in Bewegung geraten)’, YAv. mainiu.ʃiita- ‘vom Geist angetrieben’, Gr. ἐπὶ-σήντος ‘rushing, gushing’. This isogloss is based on PIE *kei(h)2-, cf. Gr. κιω, κινεω ‘to set in movement, drive away, shake’, Lat. ciere ‘to move, stir up’, citus ‘fast’.35


4.1.22. *(p)ste/ēn-(-a)-: Arm. stin, gen. sten ‘breast of a woman’; Skt. stāna- m. ‘breast of a woman, mother’s breast, nipple’; YAv. fštāna- m. ‘breast of a woman’, MPers., NPers. pestān ‘breast’; Gr. στήμων· στήδος (Hesychius); probably also Toch. A pā.ssām, B pā.scane dual ‘woman’s breasts’ < PIE thematic dual *pstenō. The other cognates have an initial *sp-, cf. Lith. spenys ‘nipple’, OIc. speni ‘teat, nipple’, etc.37

4.1.23 *k(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 *kr(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 sarā adv. ‘together’, etc.

*k(e)r(H)-ieh2 ‘band’: Arm. sari-k’, ea-stem ‘chain, fetters, bands’ (5th century onwards); Gr. καὶρια ‘tape or cord used for ligatures’, κειρια f. ‘girth of a bedstead; swathing-band, bandage’, καιροσεῖν (Homer) ‘close-woven’, καιρῶ ‘tie the καιρο into the loom’.39

The Iranian verb is usually derived from IE *kérh2- ‘to mix, tie’: Skt. ā-śīrta- ‘mixed (with milk)’; Gr. κεραννυμι, aor. κερασ(o)ιει ‘to mix, mix up (especially of wine with water); to temper (of the climate)’. However, this is uncertain, as it is the appurtenance of Skt. śṛṇkhalā-, śṛṇkhalā- ‘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. σπευδ-η f. ‘haste, zeal’, σπευδω ‘to hasten, hurry, strive’; MPers., NPers. pōy- ‘to run’, ManParth. pāwd- ‘to hasten’. The problem of Arm. -t4 can be solved by positing *(s)peud-to- > *p’oy(t)ʰo-,41 Beekes (2010, 2: 1381–1382) notes


38 Durkin-Meierstern 2004: 308b.


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. *hēgīpio-: Arm. arcui, ea-stem: gen.sg. arcu-o-y, gen.pl. arcue-a-c‘ ‘eagle’; Skt. ṛjipyā- ‘epithet of an eagle’, m. ‘eagle’, YAv. arzīfiō.parāna- adj. ‘having eagle-feathers’, MPers. ’lwf ‘eagle’ (= phonetically /āluʃ/), āluh ‘eagle’, etc.; Gr. αἰγύπτιος m. ‘vulture’, αἰγύπτω ‘έκτος ύπω Μακεδόνων, cf. also ἀργίτως: ἀετός. Μακεδόνες. The formal difficulties of Gr. αἰγύπτιος (the expected form is ἀργίτιος) may be due to folk-etymological association with αἴξ ‘goat’, αἴτις ‘high and steep, sheer’ and γύψ ‘vulture’.42

4.2.2. *t/kvauntiH-ino- or *t/kvauntiH-enο- ‘bird of prey’: Arm. c’in, o-stem ‘kite’, Skt. śyenā- m. ‘bird of prey, falcon, eagle’, Av. saēnā- ‘a big bird of prey’, Gr. ictīνος m. ‘kite’.43

Discussion: *hēgīpio- and *t/kvauntiH-ino-/*t/kvauntiH-enο- (4.2.1+2). In RV 43.8.2, etc. the horse Dadhikrā- is compared with ṛjipyāṁ śyenāṁ. Vedic ṛjipyā- is an epithet of śyenā- ‘bird of prey, falcon, eagle’. It is remarkable that both *hēgīpio- ‘epithet of a bird of prey’ and *t/kvauntiH-ino- or *t/kvauntiH-enο- ‘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’, jī ‘horse’, perhaps also surf ‘pure, holy’ (see §§5.2–5.3).

Arm. arcui (gen. arcu-o-y) is the principal word for ‘eagle’, and its derivation from *hēgīpio-in native terms is secure both formally and semantically. The contextual relation with *t/kvauntiH-ino-/*t/kvauntiH-enο- ‘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 *hēgīpio- and treating it as an Iranian or Urartian loanword. Urartian aršibi- 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 inn ardarew slaceal t’ewok’. In a κατα- poem to the Alexander Romance we find sront’ac’ arciw ‘sharp-riding eagle’. These figures probably go back to the Armeno-Graeco-Indo-Aryan poetic language, cf. Skt. āśu-pātvā ‘swift-flying’ as epithet of śyenā- ‘eagle’ (cognate with Arm. c’in ‘kite’), Gr. ἀκνυντέτς ‘swift-flying’ (used of horses and hawks), ἀκνυ-πτέρος ‘swift-winged’; cf. also Av. arzīfiō.parāna- ‘eagle-feathered (arrow)’, Lat. acci-piter ‘hawk’, etc.44

4.2.3. *keloniĕh2: Arm. pl. sami-k‘, gen. samea-c‘ ‘the pair of yoke sticks; rudder’; Skt. śamyā- ‘pin of a yoke, peg, wedge’, yuga-śamyā- n. ‘yoke and yoke-pin’; Av. sima- f. ‘yoke-pin’ (Yašt 10.125, perhaps for *səmā-), dual yui(yu)diśamī- ‘(having) yoke and yoke-pin’ (Videv-

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The place of Armenian in the Indo-European language family

dad 14.10) for *yuuô.sami- from Indo-Iran. *juga-čam-i,45 Western Iranian: Takistani same, Aš-
tiyanı same ‘yoke-peg’; Šughni, Bajui sim-dörg (with dörg ‘wood, stick’ < Iran. *dăruka-), Khufi
sim ‘peg for fastening yoke to bullock’s neck’.46 Outside of Indo-Iranian, note Gr. κάμιξ, -ακός f. m. ‘pole, shaft; pole to support the vine; shaft of a spear; tent pole’, MHG hamel ‘shaft, pole’, etc.

4.2.4. *deh-t- ‘to bind’: Arm. *ti- ‘tie, bond’ in *sami-a-ti > sameti-k⁴ and sametay-(k/n) ‘the
tie of sami, yoke band’, Gr. δέω ‘to bind’, Skt. dā-ldyāti ‘to bind’, Av. dā- ‘to bind’.47 This etymon
is restricted to Armenian, Greek, and Indo-Iranian, possibly also Hittite, tije/a-zi ‘to bind?’ (cf.
Skt. dyāti), tijamar / tijaman- n. ‘cord, string’48 and Alb. dūaj ‘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 re-
ceived an explanation. I propose to derive it from *dh-ti-: Gr. δέοιξ ‘binding, joint’, and Skt.
-diti- ‘Gebundenheit, Fesselung’ (in á-ditiḥ ‘boundlessnes’).

Discussion: *ke/omieh₂ and *deh-t- (4.2.3+4). Armenian sami-k⁴, 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 rep-
resented in several forms: sameti-k⁴, ins.pl. sameteawk’ (Sirach 28.23–24, 30.27);⁵⁰ sametē-k⁴, acc.
sametē-s, ins. sametēw-k’ (Jeremiah 5.5, Severian of Gabala, John Chrysostom, etc.);⁵¹ samet,
i-stem (ins. pl. samet-i-w-k’ [var. lect. sametawk’, sametēwk’, etc.] in Job 39.10, see Cox 2006:
251); sametay-k’ (Commentary on Jeremiah by Mxit’ar Goš, 12th cent.); samotik⁴ (Grigor
Narekac’i, Oskip’orik); sametēn-k⁴ (Grigor Tat’ewac’i), all meaning ‘the tie of sami, yoke band’.
The compound corresponds to Gr. δέοιξ ‘band, fetter’ or ιμαξ ‘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
dialect incantation against the Evil Eye from the Javakk’ region one finds samota < *sam(ow)y-tay
(Lalayeanc’ 1892: 13a). Identical to this are samoda and somat’a found in ritual songs of Palm
Sunday in Basen and Jávakk’ respectively (Grigoryan 1970: 323). In Xotorj, a dialect that is
both geographically and linguistically close to the Karin/Erzrum group, to which Basen and
Javakk’ belong too, one finds samotek’ (YušamXotorj 1964: 506b), obviously from *samotay-k’. In
these forms the first component comes from sam(ow)j, the genitive singular of sami. It is also
found in samotik’ (Grigor Narekac’i and Middle Armenian). As for the eastern dialects, we find
Larabal, Hadrut’, etc. sambētan and Łazax sametan,¹² which presuppose *sametay-n. The wide-
spread form sameten may also be derived from *sametyn, with a common development ay > e.

45 For the Indo-Iranian forms, see Mayrhofer EWAia 2, 1996: 412–413, 613; Skjærø 1997: 119–121; de Vaan
2003: 470.
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; ÉtimSlovIranJaz 2, 2003: 444–445;
50 In the Sebastiani’i Bible, we find ștla’y ‘chain’ instead of sametik’.
51 The form sametē (ins. sametēw-k’) vs. sameti is reminiscent of the puzzling auslaut of ašē / aštē (ins.pl.
aštēwak’) ‘spear’ from Iran. *arštē- ‘spear’, cf. OPers. and Av. arštē-, etc. (HAB 1: 221a; Olsen 1999: 865). If the -ē
proves to be original, one might think of a possibility that IE *dh-ti- yielded *tey- > *tē, with a development *
Arm. -ē between consonants. More probably, however, -ē was taken from obl. aštē- and sametē-.
In dialects we also find compounds with *beran ‘mouth’ (*beran-tay), *bun ‘trunk, shaft’ (*bn-a-tay), *or ‘buttocks’ (*or-ti-k’ and *or-tay-n), *viz ‘neck’ (*viz-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, *andr- ‘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. YA *qišt-i)a f.pl. ‘door-post’ vs. Av. *ašt- ‘house’, Skt. *at-ta- 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-< *kvaultomieh₂.

5. Lexical isoglosses between Armenian and Indo-Iranian

5.1. Armenian and Indo-Iranian.


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- Budhnyā-, whose origin and abode is the dark bottom of the waters, as well as the Cosmic tree in the bottomless (a-budhnā-) abyss.\(^{58}\)

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\(^{56}\) Martirosyan 2010: 72–77.


\(^{58}\) Martirosyan prepar 2.
5.1.3. *bʰeh₂g-: 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 *bʰəg-á-: Skt. bhāgā- m. ‘part, portion, share, lot, destiny’ (RV+), OAv. bāga- ‘part’, Arom.-Iranian *bāga- ‘landed property, estate, fief’, Sogd. βγ ‘garden’, MPers. bāw from bāy ‘garden, orchard’, NPers. bāy ‘garden, orchard’, Tadj. boy, Baluchi bāg ‘garden’, etc.; cf. Skt. bhāga- m. ‘prosperity, good fortune, property, personified distribution’ (RV+), bhaj (pres. bhājati, aor. ābhaksi, perf. babhāja, etc.) ‘to share, partake, divide, distribute, apportion; to receive, enjoy’ (RV+), bhakti- f. ‘distribution, apportioning’ (RV+), OAv. bāxtā ‘genieśť, hat Anteil’, YAv. baya- m. ‘god, distribution’, baxta- ‘allotted; allotment’, OPers. baga- m. ‘god’, bāǰi- m. ‘tribute, tax’, MPers. bāj ‘tribute, tax’, bay [bg] ‘god, lord’, bāxš ‘allotment, grant’, baxt ‘luck, fate, fortune’, Parth. baxš- ‘to divide, distribute, bestow’, baxtag ‘divided’. Further: Gr. φαγεῖν ‘to eat, consume, swallow’ (< *‘to enjoy, share’).

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 *bʰəgā- from *bʰeh₂go- 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. βγ ‘garden’, MPers. bāy ‘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 decension class from the so-called Golden period), we can posit a feminine or collective *bʰeh₂g-(e)h₂. Alternatively, we might assume an old Aryan borrowing: *bʰəgā- ‘portion, share, allotment’ > PArm. *bʰag-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. açal and kutan, both displaying the meanings ‘overnight sheep pen’ and ‘moon halo’. An older example is Hitt. ı́h₁la- 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

5.1.4. *h₁og₂-ih₂z-: Arm. ezn, gen.sg. ezin, nom.pl. ezin-k’, ezan-c ‘bullock, ox’; Skt. ahī- f. (vrki-inflation) ‘cow, female of an animal’ (RV), Av. azi- (devi-inflation) ‘milking (of cows and mares)’; the appurtenance of OIr. ag n. ‘cow, cattle’ (< aʰg₁-es-) is uncertain. Arm. ezn (gen. ezin) may be a frozen accusative in *-ih₂z-m. The gender change is somehow reminiscent of the other important designation of boids, Arm. kov ‘cow’ from the PIE generic name for ‘bovid’.

5.1.5. *pro-h₂ənhi₁o- ‘breath, air’; Arm. eran ‘gentle breeze; winnowing wind; a wind-spirit’ (*pro-h₂än-o- > *e-ra(h₀)n-o- with a regular prothesis before ŗ-); Skt. prāṇa- m. ‘breath, breathing out, air’; MidIran. *frāna- ‘air’ (cf. Sogd. β̣ṛ’n, β̣ṛ’n, etc.), *pati-frāna- ‘ouverture d’aération’ > Arm. patuhaṇ ‘window’. The Indo-Iranian form is composed of PIE *pro- (cf. Skt. prā ‘before,

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61 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 *h₂emh₁- ‘to breathe’; Skt. ani ‘to breathe’, 3sg.pres. ánitī, cf. *h₂emh₁-mo-: Gr. ἀνεμός 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. *ph₂yo-: Arm. haraw, o-stem ‘south; southern wind’, Skt. pǐrva- ‘being before, going in front, first, former; eastern’, OAv. pouruuiia- ‘first, intial, former’, YAv. pauruua-, paouruua- ‘being in front, first, former, southern’; OCS prvō ‘first’, Toch. B puvare ‘earlier; first’, Alb. pārē ‘first’, etc.; with a different suffix: Lith. pirmas ‘first’, Lat. prīmus ‘first’.61 This etymology has been proposed by Jahukyan62 and, with few exceptions,63 has largely remained outside the scope of Indo-European etymological studies. Armenian and Indo-Iranian are unified by *-uo- (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. *h₃meg⁵-o-: Arm. mēg, o-stem (also i- or a-stem) ‘mist, fog, darkness’, Skt. meghā- m. ‘cloud, gloomy weather’, Av. maēga- m. ‘cloud’, Parth. mēg ‘cloud, mist’. The other cognates continue *h₃meg⁵-leh₂: Gr. ὀμίχλη ὀμίχλη ‘mist, fog’, Lith. miglā, OCS mgla ‘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 *mg₃-l-im ‘to cloud’ comparable to Dutch dial. miggelen ‘stauwevrenen’, etc.64

5.1.9. *pelörk₃-u- ‘rib, side’: Arm. yorsayseal 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’), yorsaysen ‘to cause to lie down; to let fall, overthrow’ (Paterica, Grigor Narekaci, etc.); without y-: yorsays ‘lying on the back’ (Paterica), orsayseal ‘supine’ (Movses Xorenaci 1.12).66 Skt. pārśu- f. ‘rib’, pārśvā- n. ‘the region of the ribs, side, flank’, YAv. parasu- ‘rib’, Khot. pālsuā- ‘rib; spoke’, MPers. pahlūg, NPers. pahlū ‘side, rib’, Oss. fars ‘side’, etc. The connection of this Indo-Iranian word with OCS prōsi ‘chest, bosom’, Russ. přersi ‘breast, bosom’, Lith. piršys ‘chest of a horse’, etc. is considered uncertain.67 This attractive etymology has been proposed by Jahukyan (1991: 42; 2010: 556a) 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- < *pork₃-u-. The semantic pattern is widespread in Armenian: t’ekn ‘shoulder, back’ > t’ikn tal / t’iknel ‘to recline’, kōl ‘rib, side’ and kōhn ‘side’ > on-kōhnìm and on-kōhnim ‘to recline, lie down’, kīt’-un-k’ ‘back’ > kīt’n-il ‘to lean, recline’, paṅik ‘rib, side’ > paṅkim ‘to lie down’.68

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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 (Zőhrapean 1805, 3: 149): Minč’ew yerb yorsayseal kas óv vat, kam erb i k’,noy zart’ic’es “How long wilt thou lie (κνηρό κατάκεισαί), o sluggard, and when wilt thou awake out of sleep” (Brenton 1851: 793).
68 No acceptable etymology is recorded in HAB 3: 408–409.
69 See HAB s.vv. and Martirosyan 2010: 368–369, 376.
Jahukyan 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’, bat-ay-k and balbat-ay-k ‘pretext, ostensible reason or accusation’. It probably has an adverbial origin, cf. Arm. i ver-a-y ‘on, over’, Gr. ὑπερ ‘over, plenty; beyond; above’, ὑπέρ ‘upper on the sails’, Lat. s-uper ‘above, on, over’, supra ‘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-Jula: ᾱρᾶς αγνή to lie down or recline like a superior’ from *yorsay ankan- (cf. yorsayseal ankeal in Canon Law), and ‘yors-an-k-> hōrsang tal ‘id.’, the development y→h- is exceptional in this dialect.70

The o-vocalism is found in a number of words in the same semantic field, such as kol ‘rib, side’, otn ‘spine, back’, or ‘buttocks’, p’or ‘belly’ and k’o’e ‘side’. An astonishing parallel for y-orsays-eal ‘supinely, lying on the back’ (from *orsay- ‘rib, side’) is y-ohn-eal ‘id.’ (from otn ‘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-ovyr ‘lying face downward’ > Nor-Jula b’arazver (with beran ‘mouth’), p’or-s-i-ovyr ‘(lying) belly downward’ > Łaraba p’orsowar (with p’or ‘belly’).

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

5.1.11. *kubh-ro- or *(s)kubh-ro-: Arm. surb, o-stem ‘pure, clean; holy’, Skt. subhrā- ‘shining, glimmering, beautiful’, cf. sōbh-/śubha- ‘to be beautiful; to shine’, sūbh- 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. *sm(H)-ehz- ‘year’: Arm. am, a-stem ‘year, age’, Skt. sāmā- ‘year, season’; further: Ya. ham-, OIr. sam ‘summer’, note also Arm. amairn and OHG sumar ‘summer’. The original meaning was ‘summer’.73 Arm. am and Skt. sāmā-agree both in *-ā- and semantics.

5.2.2. *h3nēb ‘nave, hub of wheel’: Arm. aniw, o-stem (also a-stem) ‘wheel; axle of a chariot; wheel as a torture instrument’; Skt. nābhi- f. ‘nave, hub of wheel; centre; navel (of the body or the world); origin, relationship, family’, nābhya- n. ‘nave, hub of wheel’; cf. also Ya. nāfām. ‘nave, origin, blood relationship’ (for the semantic relationship cf. Arm. port ‘nave’, ‘tribe, generation’), OPr. nabis ‘hub, navel’, OHG naba ‘hub’, nabalo ‘navel’, Lat. umbilicus m. ‘navel; centre, middle’ < *h3nēbk, Gr. ὄμφαλος m. ‘navel, umbilical cord’. This isogloss can be considered valid only if Skt. nābhi- indeed reflects *h3nēb-i- (vrddhi-derivation) rather than *h3nēb-ī-.74

5.2.3 *s(e)Hdzh-jo- ‘successful’ and *s(e)Hdzh-je/o- ‘to succeed, be successful’: Arm. aj, o-stem ‘right’, aj-oř and y-aj-oř ‘skilful, successful’, (y-)aj-oř-em ‘to have success’; Skt. sādhya- m. ‘a class of divinities’, sādhati ‘to succeed, reach the goal’, siddhā-, sīdhrā- successful’, sādhū- ‘straight, effective’, sīdhyati ‘to succeed, be successful’.

70 For more examples and a discussion, see Jahukyan 2010: 796.
72 Alternatively, one might treat the final -s as a relic of *si- from PIE *kei ‘to lie’ (cf. Gr. κεῖμαι ‘to lie’, etc.), which is visible in Armenian hiāsis(i) ‘north’ if indeed from *seukai-ki(y)o- (see Martirosyan 2010: 412 with ref.). This is less probable, however.
73 The original paradigm has been interpreted as follows: *s(e)om-ehz-, genitive *sēm-eoh.”


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. *hreú-oi > PArm. *arew-u(y), gen. *hre(e)w-i-ös (rather than *hreú-os, as is often assumed) > PArm. *areg-i-.

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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. sinhá- are found in a comparable mythological context. In Armenian incantations the Evil Eye often appears as an inj ‘panther’, an ariwe ‘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 (ariwe/aruc) or a bull (c’ul).78 The animals inj ‘panther’ and ariwe ‘lion’ are also listed with gel ‘wolf’ and inj ‘snake’ in a Daralagyaz incantation (K’aǰberuni 1902:

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112aNtr), which starts with the name of *Surb Daniel ‘St. Daniel’ (cf. the aforementioned vision of Daniel).79

For the association of Arm. inj (*šingʰ-o-: Skt. sinhá-) with thunderous cloud note RV 5.83.3 where the thunder of Parjanya is compared to the thunder roar of a *sinhá- ‘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 borrowing81 from a North Pontic or Near-Eastern source. Possibly related forms in non-IE languages are: the old Central Asian word for ‘lion’, *senghalsingha, Tibetan seinge, Sino, Zhañ Zhuñ saingo, etc.; North Caucasian: PEC *çinq’ ‘lynx, panther’, Chechen çop ‘snow leopard’, Avar čiçoq ‘lynx’, Lak čiçiç ‘tiger, leopard’, Akusha čiç ‘panther’, etc.; Akkad. sin/mk/gurru ‘a hunted mountain feline, gendar’; Chadic: Kwang sëmk-, sëngi ‘lion’, Chibak zing’e ‘lion’, etc.82

5.2.9. *g/wstrapu-d/hsuperei-o- ‘a kind of 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. godha- f. ‘Iguana, a species of big lizard’. In later literature (Nonnus, Galen) and dialects the Armenian word has been replaced by kov(a)ec ‘a kind of lizard’, composed of kov ‘cow’ and ec ‘sucking’. There are many semantic parallels in other languages: Xurāsānī Pers. boččoš (preverb bi + čoš- ‘Sauger’) ‘a kind of Eidechse, die nach dem Volksglauben nachts in die Hürden schleicht und den Ziegen am Euter saugt’, Ukr. moloko-sis ‘lizard’, etc.83


5.2.11. *šêi-o-: Arm. ji, o-stem ‘horse’, Skt. hāya- m. ‘horse’. Skt. hāya- is usually derived from hāy- vs. hinōti ‘to impel, set in motion; to hurl; to help’ (presumably derived from PIE *h₂eia- ‘to drive; to throw’). Arm. ji ‘horse’ and Skt. hāya- m. ‘horse’ represent a poetic word, belonging to the “language of gods”, as opposed to the PIE word for ‘horse’, viz. *h₂eikuo-> Arm. ēş ‘donkey’.84

Kurdish délaz‘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 dél ‘female’ (cf. délagur ‘female wolf’) and the otherwise unknown zi, which was earlier considered to be a loan from Arm. ji (HAB 3: 152b). Garnik Asatryan (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 *zya-; the theoretical cognate to Skt. hāya- ‘horse’. If this interpretation is accepted, we are dealing with an isolgloss between Armenian and Indo-Iranian.

5.2.12. Arm. marmin, o-stem ‘body; flesh’; Skt. mārman- 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. mėlmenys ‘die um die Nieren liegenden

82 For the forms and a discussion, see Pinault 2002: 330–331; Witzel 2003: 14–15, 45, 47; Behr 2004–05; Blažek 2005.
84 The vocalism is slightly problematic. Alternative: a substantivized *-to-participle *šêi-to- (de Lamberterie apud Olsen 1999: 40; see also Viredaz 2005–07: 7–9).
85 I am indebted to Garnik Asatryan 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-. Compare Arm. šaliit ‘raw flesh, body, corpse’ vs. Skt. sārīra- n. ‘the body, bodily frame, solid parts of the body’.

5.2.13. *g wk(e)r-nu- ‘to be warm, burn’: Arm. jernum or jēranim (aor. jēr-a- from sigm. aor. *g wk-er-s-) ‘to be/become warm, burn’; Skt. ghrṇōti ‘to glow, light’ from *g wk-hr-n(e)u- (see §3.5 on nu-verbs).

5.2.14. *kHl-ehz: 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. śilā- ‘stone, rock, crag’. The appurtenance of Goth. hallus ‘rock’ and others is uncertain.

5.2.15. *kHs-ti-: Arm. sast, i-stem ‘rebuke, scolding, censure, castigation, punishment, chastisement, threat; indignation, wrath’; sastem (prob. also *kHs-ti-) ‘to rebuke, remark indignantly, reprimand angrily, threat’, sastik ‘intense, hard, violent, rigid’; Skt. sīṣṭi- ‘punishment, command, instruction’; from the root *k(e)Hs-: Skt. sāsti ‘to punish, control, command, instruct’, Av. sāh- ‘to teach’, sāstī ‘lehrt’, sāx-a- ‘doctrine, command’, sāstar- ‘commander’, ManMPers. and Parth. sāstār ‘commander, tyrant’; probably also Alb. thom ‘to say’ and Toch. A kās ‘to scold, reprimand’.

Since Hübschmann, Armenian sast has been interpreted as an inherited word although some scholars are inclined toward an Iranian origin instead. 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 /Jcaronahukyan in directly deriving Arm. sast, i-stem ‘rebuke, punishment, indignation’ from *kHs-ti- and thus identifying it with sīṣṭi- ‘punishment, command, instruction’ and positing an Armeno-(Indo-)Aryan isogloss.

5.2.16. *k e-r-es-: 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. śāras n. ‘cream, skin on milk’. Mayrhofer (EWAia 2, 1996: 617–618) hesitantly derives the Sanskrit form from the root sār- (sṛṇāti) ‘to smash, crush, break’ from *k e-r₂-, cf. Gr. κεραίζω ‘to destroy’, etc. (HM)

5.2.17. *skHel-: Arm. sxale/im ‘to err, be mistaken; to stumble; to fail, miss’; Skt. skhalati ‘to stumble, stammer, fail’. Here belong also Arm. šel ‘slanting, crooked, oblique’, šil ‘squint-eyed’, dial. ‘mistake; disorder’; Lat. scelus, gen. sceleris n. ‘misdeed, crime’, Gr. σκέλλος ‘crook-legged’, σκολιός ‘wicked, crooked’ (on the other hand, note Gr. σφάλλω ‘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, while šel/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’.
93 Another possible case of such a borrowing is Arm. buṁ (i-stem, cf. adv. buṁ-i-aw ‘violently’ in Eusebius of Caesarea) ‘strong, violent’, ‘violently’, ‘violence, strength; tyrant’, if indeed from Skt. bhūrṇi- ‘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’, *c’in* ‘kite’, etc. For the association between ‘bird, eagle’, ‘horse’ and ‘sun’ in poetic language, cf. e.g. Skt. *pataiṅga-* 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. *nidrā*- f. ‘slumber, sleepiness’.


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. *śubhrā* ‘shining, glimmering, beautiful’. On the other hand, the Armenian word may have been borrowed from Middle Iranian *subra-*, itself a lost cognate of Skt. *śubhrā-. 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 *-b/hsuperr- > 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-.’ On the whole, it seems more likely that we are dealing with an Armeno-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 *c’in* ‘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 Movses Xorenaci 2.28 and in folkloric texts. Most explicit is the following folk prayer from Larabat: Astco c’ncuł tnac xrnak, im eress k’oto otañ taka, du im xoxek’s paho “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. *arewlg-* ‘sun, Sun God’ and Skt. *ravi-* m. ‘sun, Sun God’ (Upaniṣad+) derive from a proto-form *h2rui-i- and may be regarded as an Armeno-Aryan poetically or sacredly marked designation of ‘sun’ replacing the PIE unmarked profane word for ‘sun’, *səh₂ul-.’ This is reminiscent of the case of Arm. *ji* vs. Skt. *hāya- which we have already discussed.

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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 Śirakac’i, 7th cent., Abrahamyian 1940: 581.208) respectively.

This leads us to the derivation 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. kalin ‘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. līna (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. *lūsna- f. ‘moon’ blended with *lousino- ‘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-ar’em (aor. stem y-ari, imper. ari) ‘to rise, arise, get up, stand up, wake, resurrect’ derives from PIE *h₃y-i- ‘to raise’: Hit. arai- / ari- ‘to rise, arise, lift; to raise’, CLuw. arī(ā)- ‘to raise’ < *h₃r-oi- / *h₃r-i-; Lat. orior, -iri, 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’, ṛṅvāti ‘to rise, move’, Av. ar-, redupl. pres. ira- ‘to reach’, ira- n. ‘attack’, YAv. armao- ‘to set in motion’; Gr. ὄρνυμι or -ω, med. ὄρνυμαι ‘to rise, rise, rouse, stir (up), urge on, move’.

3sg.pres.act. iyarti, med. īrte < *Hi-H(ā)r> PArm. *Hiyar- > *(i)yar-. This would match Skt. iyarti (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. niśdātī and Av. niśhīdātī ‘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-ph₂-e- > *pineti (Skt. pibati, Lat. bibō, Ori. ibid) ceased to be sensed at a very early stage, and a new present was made by a nasal affix: *(h)ipnēmi(i) > amem.

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 *dru-, a zero-grade form of the PIE word for ‘wood’. A perfect semantic match is Skt. dārvī f. / darvī 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. ḫtary-ţi- n., which refers to an implement used for

---

grinding or crushing, probably something like ‘pestle’. For *-al(i) in designations for implements or the like cf., e.g., Hitt. ⿰لحلا- n. ‘distaff’. I wonder, therefore, whether Arm. targal is an Anatolian loanword.

There is a better Armenian match for Skt. dārvi f. and darvī f. ‘spoon’, namely torg ‘wooden framework, loom’. Here again we find an interesting Anatolian cognate: Hluw. tarw-ī(ma)-prob. ‘wooden beam’. Further, note Arm. toṙn ‘pestle’ and Skt. dróṇa- n. ‘wooden vessel, trough, bucket’.

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. alalak, obl. alatak-a- ‘shouting’ vs. Skt. alalā and Gr. ἀλαλάγη ‘shouting’; Arm. attā ‘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.

<table>
<thead>
<tr>
<th>Proto-form</th>
<th>Gloss</th>
<th>Sanskrit</th>
<th>Iranian</th>
<th>Armenian</th>
<th>Greek</th>
</tr>
</thead>
<tbody>
<tr>
<td>*phlHw-</td>
<td>Pleiades</td>
<td>*pariyajini-</td>
<td>alawunk'</td>
<td>Πλειάδες</td>
<td></td>
</tr>
<tr>
<td>*polio-/ieH</td>
<td>wave; grey</td>
<td>(palitá-)</td>
<td>*parya-</td>
<td>ali-k'</td>
<td>πολίς, -ας</td>
</tr>
<tr>
<td>*s̱(H)-ehH</td>
<td>year</td>
<td>sámá-</td>
<td>(ham-)</td>
<td>am, -a-</td>
<td></td>
</tr>
<tr>
<td>*y-buHndHno</td>
<td>bottomless</td>
<td>a-budhna-</td>
<td>MP a-bun</td>
<td>anund-, -o-</td>
<td>ρνοις</td>
</tr>
<tr>
<td>A *sru-ti-</td>
<td>stream, etc.</td>
<td>sruti-</td>
<td>OP rahtah-</td>
<td>ari, -stem</td>
<td>ρυτός</td>
</tr>
<tr>
<td>B *sr(o)u-to-</td>
<td>stream, etc.</td>
<td>srótas-</td>
<td></td>
<td>ari, -o-</td>
<td></td>
</tr>
<tr>
<td>*srey-i-</td>
<td>sun</td>
<td>ravi-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*pro-haenH</td>
<td>air, breeze</td>
<td>prná-</td>
<td>*frána-</td>
<td>eran</td>
<td></td>
</tr>
<tr>
<td>*loukeHno</td>
<td>luminous</td>
<td>rocaná-</td>
<td>raocana-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*pyHw</td>
<td>east./south.</td>
<td>párvea-</td>
<td>paurua-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*hneígH-o-</td>
<td>cloud, mist</td>
<td>meghá-</td>
<td>maέγα-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*kHl-ehH</td>
<td>stone, rock</td>
<td>šilá-</td>
<td></td>
<td>sal, -i- (*a-)</td>
<td></td>
</tr>
<tr>
<td>*kubH-ro</td>
<td>shiny, rock</td>
<td>šubhrá-</td>
<td></td>
<td>Khot. suraa-</td>
<td></td>
</tr>
</tbody>
</table>

Human, age, kinship.

<table>
<thead>
<tr>
<th>Proto-form</th>
<th>Gloss</th>
<th>Sanskrit</th>
<th>Iranian</th>
<th>Armenian</th>
<th>Greek</th>
</tr>
</thead>
<tbody>
<tr>
<td>*h₂nér</td>
<td>man</td>
<td>nár-</td>
<td>nar-</td>
<td>ayr, gen. arn</td>
<td>ἄνηρ</td>
</tr>
<tr>
<td>A *gehH</td>
<td>old</td>
<td>jaras-</td>
<td>zar-</td>
<td>cer</td>
<td>γέρας</td>
</tr>
<tr>
<td>B *gerHont-</td>
<td>old</td>
<td>járant-</td>
<td>Oss. zarond</td>
<td>cer-un(-i)</td>
<td>γέρων</td>
</tr>
<tr>
<td>*miṅto-</td>
<td>mortal</td>
<td>-miṅta-</td>
<td>-mοῖο-</td>
<td>mard, -o-</td>
<td>βροτός</td>
</tr>
</tbody>
</table>

For a discussion of all these words, see Martirosyan 2010 s.vv.
**Body, perceptions, mentality, belief.**

<table>
<thead>
<tr>
<th>Proto-form</th>
<th>Gloss</th>
<th>Sanskrit</th>
<th>Iranian</th>
<th>Armenian</th>
<th>Greek</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>u</em>e*g-nu-</td>
<td>sound</td>
<td>vagnutí</td>
<td></td>
<td>gang</td>
<td>πρωκτός</td>
</tr>
<tr>
<td>*pr(e)/o)*Hkt-</td>
<td>buttocks</td>
<td>(prštá-)</td>
<td>(paršta-)</td>
<td>erstan-k’</td>
<td></td>
</tr>
<tr>
<td><em>h,e</em>rk”-o-</td>
<td>song</td>
<td>arká-</td>
<td>erg, -o-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*m(e)/o)*rmen-</td>
<td>body</td>
<td>mármán-</td>
<td>marmin</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>sk</em>Hel-</td>
<td>to err</td>
<td>skhlátati</td>
<td>šíl / šal</td>
<td>σφαλλομαί</td>
<td></td>
</tr>
<tr>
<td><em>pe</em>ork-u-</td>
<td>rib, side</td>
<td>pāršu-</td>
<td>porosu-</td>
<td>(y)-ors-</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Movements, speech and other activities.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proto-form</td>
</tr>
<tr>
<td>------------</td>
</tr>
<tr>
<td>*s(e)Hd’-jo-</td>
</tr>
<tr>
<td>*h₃r-nu-</td>
</tr>
<tr>
<td>A *k′e/ou-</td>
</tr>
<tr>
<td>B *k’u-jo-</td>
</tr>
<tr>
<td>*kH-ti-</td>
</tr>
<tr>
<td>*(s)peud-</td>
</tr>
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</table>

**Fauna.**

<table>
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<tr>
<th>Proto-form</th>
<th>Gloss</th>
<th>Sanskrit</th>
<th>Iranian</th>
<th>Armenian</th>
<th>Greek</th>
</tr>
</thead>
<tbody>
<tr>
<td>*h₃JV(u)pék-</td>
<td>fox</td>
<td>lopášá-</td>
<td>*raupaša-</td>
<td>aḥēs</td>
<td>ἀλώπηξ</td>
</tr>
<tr>
<td>*h₃g’jipió-</td>
<td>eagle, etc.</td>
<td>ḫjipyá-</td>
<td>arzifió-</td>
<td>arcui</td>
<td>αἴγυπτιος</td>
</tr>
<tr>
<td>*kHkH-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*h₃g’jipió-</td>
<td>bird of prey</td>
<td>šyená-</td>
<td>saēna-</td>
<td>c’in, o-stem</td>
<td>ἰκτίνος</td>
</tr>
<tr>
<td>*Hke/kvault-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*h₃g’jipió-</td>
<td>weasel</td>
<td>kašká-</td>
<td>ak’tis, i-stem</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*h₃g’jipió-</td>
<td>snake, adder</td>
<td>āhi-</td>
<td>ažī-</td>
<td>iž, i-stem</td>
<td>ἔχις</td>
</tr>
<tr>
<td>*sing’o-</td>
<td>lion, panther</td>
<td>sínhá-</td>
<td></td>
<td>inj</td>
<td></td>
</tr>
<tr>
<td>*g’ou-d’eh-</td>
<td>lizard</td>
<td>godhá-</td>
<td>kov-a-di-ac’</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*g’ei-o-</td>
<td>horse</td>
<td>hāya-</td>
<td>(*zaya-</td>
<td>jī, -o-</td>
<td></td>
</tr>
</tbody>
</table>

**Animal husbandry.**

<table>
<thead>
<tr>
<th>Proto-form</th>
<th>Gloss</th>
<th>Sanskrit</th>
<th>Iranian</th>
<th>Armenian</th>
<th>Greek</th>
</tr>
</thead>
<tbody>
<tr>
<td>*h₃(e)iľ-</td>
<td>goat</td>
<td>(eđa-</td>
<td>(izaēna-</td>
<td>ayc</td>
<td>aix</td>
</tr>
<tr>
<td>*h₃s-es-</td>
<td>male anim.</td>
<td>(ṛṣabhá-</td>
<td>aršan-</td>
<td>arn</td>
<td>ἀρσην</td>
</tr>
<tr>
<td>*h₃rhrēn-</td>
<td>lamb</td>
<td>īran-</td>
<td>*varn-</td>
<td>γαιρην</td>
<td></td>
</tr>
<tr>
<td>*h₃g’k-di-</td>
<td>cow, ox</td>
<td>āhi-</td>
<td>aži-</td>
<td>ezn, g. ezin</td>
<td></td>
</tr>
<tr>
<td>*g’ou-i-</td>
<td>of cow</td>
<td>gávya-</td>
<td>gaoiia-</td>
<td>kogi</td>
<td>-βο(φ)ως</td>
</tr>
<tr>
<td>*h₃qæi-peh’-</td>
<td>shepherd</td>
<td>ari-pā-lā-</td>
<td>hoviwi, -a-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*ker-e/os-</td>
<td>cream</td>
<td>šáras</td>
<td>ser</td>
<td></td>
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</tr>
</tbody>
</table>
The place of Armenian in the Indo-European language family

Agriculture.

<table>
<thead>
<tr>
<th>Proto-form</th>
<th>Gloss</th>
<th>Sanskrit</th>
<th>Iranian</th>
<th>Armenian</th>
<th>Greek</th>
</tr>
</thead>
<tbody>
<tr>
<td>*h₂lehu-r</td>
<td>flour</td>
<td>(MInd. ățu)</td>
<td>*arnu-</td>
<td>aľeůr</td>
<td>ăľēw</td>
</tr>
<tr>
<td>*h₂(ə)lh₁-</td>
<td>to grind</td>
<td></td>
<td>*a/ārθra-</td>
<td>aľačari</td>
<td>ăľetęť</td>
</tr>
<tr>
<td>*h₂(ə)lh₁-tr-</td>
<td>grinder</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*kærhær/n-</td>
<td>arable land</td>
<td>urvārā-</td>
<td>*aluawun-k'</td>
<td></td>
<td>árouvera</td>
</tr>
<tr>
<td>*ke/omičh₁</td>
<td>yoke-pin</td>
<td>šāmyā-</td>
<td></td>
<td>sami, ea-st.</td>
<td>(kāmać)</td>
</tr>
</tbody>
</table>

House, housekeeping, crafts, implements, building.

<table>
<thead>
<tr>
<th>Proto-form</th>
<th>Gloss</th>
<th>Sanskrit</th>
<th>Iranian</th>
<th>Armenian</th>
<th>Greek</th>
</tr>
</thead>
<tbody>
<tr>
<td>*h₂enidoHt-ieh₂</td>
<td>threshold</td>
<td>(ātā-)</td>
<td>*i/ātiā-</td>
<td>*and-i-</td>
<td>aniu ‘wheel’</td>
</tr>
<tr>
<td>*h₁teh₂</td>
<td>nave, hub</td>
<td>nābhi-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*b'ehg-</td>
<td>lot, estate</td>
<td>(bhāgā-)</td>
<td>*bāga-</td>
<td>bak</td>
<td>(φαγείν)</td>
</tr>
<tr>
<td>*d'µhb₂</td>
<td>tomb, grave</td>
<td>*dāf-ma-</td>
<td>danban</td>
<td></td>
<td>táťoć</td>
</tr>
<tr>
<td>*k(e)(r)(H)ieh₂</td>
<td>to tie, form</td>
<td>*sar-</td>
<td>sarem</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*k(e)(r)(H)ieh₂</td>
<td>band</td>
<td>sari-k', -ea-</td>
<td>ke/aŭría</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*deh₁</td>
<td>to bind</td>
<td>dā-/dyāti</td>
<td>dā-</td>
<td>*i-</td>
<td>δέω</td>
</tr>
<tr>
<td>*dh₁-ti-</td>
<td>bond</td>
<td>-diti-</td>
<td></td>
<td></td>
<td>δēśių</td>
</tr>
</tbody>
</table>

6. Lexical isoglosses between Armenian, Greek and European dialects

6.1. Armenian and Greek: innovations.


6.1.2. *nvuH-sieh₂: Arm. acu ‘garden-bed’, Gr. āγυια, pl. āγυιαί f. ‘street, road’; probably a shared innovation based on PIE *h₂e/gvault-: Arm. acem ‘to bring, lead’, Skt. ájati, Gr. āγω ‘lead’, etc.98 For the semantic relationship between ‘garden-bed’ and ‘street’, compare Arm. mär ‘(wild) path, road’. The latter is comparable to the Armenian dialectal meaning ‘garden-bed’.99

6.1.3. *hšk'kuroman ‘eye’: Arm. akn gen. akan ‘eye’, Gr. ókκον, óφθαλμόν ‘eye’ (Hesychius); derived from PIE *h₃(ə)k'- ‘eye’: Skt. áksi-, Gr. όςις, Arm. ače'-k', etc.

6.1.4. *antēr / *an(n)ēr ‘cave’: Arm. ayr, i-stem ‘cave’, Gr. āντρον 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. kanur‘ ‘bridge’ vs. Gr. γέφυρα ‘bridge’. The by-form *an(n)ēr could easily develop into ayr (cf. *h₂nēr > ayr ‘man’).

98 On Gr. āγυια, Arm. acu and various explanations of -u, see Clackson 1994: 117, 225; 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.
6.1.5. *h₂os-ṛ-(e)h₂ ‘harvest, summer’; Arm. *aṙ-a- ‘harvest, harvest time’, seen in ar-a-c’ ‘harvest time, harvest of grape/fruit’, the sixth month (17th August to 15th September); Gr. ὀτ-άρα ἡ, Lac. ὀτ-άρα ‘end of the summer, beginning of autumn; harvest, fruit’; cf. also CS jesen, Russ. oseń  f. ‘autumn’, Goth. asans f. ‘harvest, summer’, OHG aran, Germ. Ernte ‘harvest’, etc. Arm. *ar-a- derives from PArm. *o(ḥ)ar-a- < neuter plural or collective *h₂os-ṛ-h₂ ‘harvest, summer’ (or *h₂os-ṛ >> fem. *h₂os-ṛ-es-h₂). Note the remarkable contrast with the preceding month name, kʿal-o-c’ ‘mowing time’, deriving from kʿelem ‘to pluck, weed, mow, harvest’ < *(s)kl-nel-o-γ, which is a Graeco-Armenian agreement too, cf. Gr. σκάλλω ‘to stir up, hoe’ from σκάλλων (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. aınem, 1sg.aor ar-ar-i, 3sg.aor. ar-ar ‘to make; to create’; Gr. ἀφαιρέω, aor. ἠφαρέων ‘to fit, equip’, etc. The agreement is unobjectionable both formally and semantically, but it may be an archaism.103

6.1.7. *Hh₂m-(dr), gen. *Hh₂m-(e)n-: Arm. awr, gen. awur, instr. awur-b ‘day; time, age’; Gr. ἡμεράς, Arc. ἡμαρ, ἡ-ατος n. ‘day’, ἡμέρα, Dor. ἡμέρα ‘id.’. Arm. aw(u) may be explained as follows: *alămôr > PArm. *əmur > *əmur > *awur > Arm. awr, gen. awur.104

6.1.8. *h₂bʰel-: Arm. awel ‘broom’, later denominative awelum ‘to sweep, broom’; Gr. ὀφέλλω ‘to sweep, broom’, ὀφέλιμα, ὀφελτρόν ‘broom’; Arm. *awel- ‘increase’ in awel-i ‘more’, awel-awelum ‘to increase’, y-awelum ‘to add to’; Gr. ὀφέλλω ‘to increase, enlarge, augment, advance’ (cf. Myc. no-pe-re-a₂ /nophelhe/ ‘useless’ < *nḥ₂bʰel-es-h₂: *νωφελης). There is no cognate to this root in other Indo-European languages.105

Jahukyan (1970: 21₃) admits the possibility that Arm. awel- ‘to increase’ has been borrowed from Urartian abili-d(u) ‘to join, increase’. Arutjunjan (1983: 339₁₉₅) 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 burgni ‘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 *bʰh₂- ‘to speak’: Arm. bam ‘to speak, say’ vs. φημί ‘to say’.

6.1.10. *bʰurg- ‘tower’: Arm. burgni, gen. brgani ‘tower; pyramid’; Gr. πύργος m. (also φύργος) ‘tower’. Notwithstanding the formal problems, which might suggest a substrate in-

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102 See Martirosyan prepar. 1.
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.
termination, this cultural term seems to be based on *bʰerǵʰ-,*bʰ₇rǵʰ-ur-, *bʰ₇rǵʰ-(e/o)nt-: Arm. barjr, gen. barju, -berj ‘high’, bānam ‘to lift, raise’ < *barj-nam; Hitt. parku- ‘high’, Skt. bhṝánt- ‘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. dargan ‘potter’s wheel’ vs. dārn ‘to turn; to return’ < *dārj-nam (see §6.5.2).

6.11. *dʰl₁h₁-ro-: Arm. dalar, o-stem ‘green, fresh’; dalar-i, dalarw-o-y, -o-j ‘greenery, grass, herb’; Gr. δάλαρος ‘blooming, fresh’. The root is visible in Gr. δάλλω ‘to bloom, flourish, grow’, δάλλος n. ‘sprout’, δάλλος m. ‘green twig, esp. of the olive, sprout’, Mr. duinhe, duille ‘leaf, foliage’, OEngl. dīle ‘dill’, Alb. dal ‘to sprout’, etc., as well as Arm. del, o-stem ‘herb; medicine; poison’. Notwithstanding the problems concerning the reconstruction of the root (*dʰl₁- or *dʰɛʰl₁-) and the suffix (*-ero- or *-ro-), I see no solid reason for separating Arm. dalar (o-stem) from Gr. δάλαρος.

It is also worth considering whether Arm. del ‘herb’ and Gr. δάλλος m. ‘green twig, sprout’ derive from an old n-stem: nom. *dʰel(H)-n-, gen. *dʰl₁nós.


6.13. *pr(e/o)Hkt-/*pr(o)kt-: Arm. erastan-k’, a-stem ‘buttocks’, Gr. πρωκτός m. ‘anus’. Clackson (1994: 166–167) takes this as an Armenian-Greek-Aryan correspondence, cf. Skt. prṣthā- n. ‘back, mountain-ridge, top’, prṣṭi- f. ‘rib’, cf. YAv. paršta- m. ‘back, spine, support in the back’, parṣti ‘back’. However, the Indo-Iranian words appear to be derived from *pr-sth₂-o- and are thus unrelated. 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.

6.14. *pre(i)gʷs-u-: Arm. erēc’, u-stem (adj.) ‘elder; presbyter’; Gr. πρεσβύς m. ‘old man; the elder; ambassador; president’; perhaps also Lat. priscus ‘ancient’.

6.15. *dʰe₂h₂-ro-: Arm. erkar ‘long’ (in both temporal and spatial aspects), Gr. *δράφος: δὴρος, Dor. δὁρος ‘lasting long’, with a different vocalism: Lat. dūrō ‘to endure, last out, survive’, Skt. dūrā- ‘far’, etc.; *dʰe₂h₂-n-: Arm. erkayn ‘long’, Gr. δὴν ‘long, far’ < *δῆν.

6.16. *ye-s-n-: Arm. z-genum, 3sg.aor. zeg-c‘-a-w ‘to put on clothes’, Gr. ἐννυμι ‘to clothe; to put on, clothe oneself’; cf. Hitt. yeš- ‘to be dressed’, Skt. vāste ‘to be clothed, wear’, etc. (see §3.5 on nu-verbs).

6.17. *te-t ‘feather, wing, blade’: Arm. t’er (widespread in the dialects: Hamšen, Axalc’xa, Laρaβаt, Ararat, Юла, Sebastia, etc.) ‘leaf; leaf of dough or paper; petal’, *t’el (dial.) ‘id.’; t’er, abl. i t’erē ‘side’ (from earlier ‘wing, feather’); t’ert, i-stem ‘leaf of a flower, plant or paper; plate’ (Phiло, Paterica, etc., and dialects); Gr. ἁπέρων 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’, πτέρωτε f. ‘wing of a


111 For the semantic development, cf. the meanings ‘side-walls of Egyptian temples’ and ‘drawbridge’ of Gr. πτέρων ‘wing’. Note also Arm. kuin ‘back, arm’ and ‘side’; Engl. wing ‘wing’ and ‘side, flank’.
bird; winged creature, bird; blade'; the other cognates represent *pet-r-: Skt. pātra- n. ‘wing, feather, leaf’, OHG fedara ‘feather’, Hitt. pattar, obl. pattan- ‘wing, feather’, etc.; derives from *pet(H)- ‘to fly’: Skt. pātati ‘to fly, rush, fall’, Gr. πετ-ω-μαι, πτε-έ-δαι ‘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. πτείλων n. ‘soft feathers, down; wing (properly of insects); the wing-like membrane on a kind of serpent,’ 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'ełn / t’it’eĩn ‘butterfly’.

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’umb-: Arm. damban ‘tomb, grave’).


6.1.21. *g’nēhik- ‘woman’: PArm. *kan-ay- (seen in pl. kanay-k’ vs. sg. kin), Gr. γυναι-κ-, voc. γυναί, nom. γυνη f. ‘wife, woman’. This is a remarkable agreement, though its nature is debated.

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. πειρω ‘to perforate, pierce, pervade’, etc. The suffixes are different in the two languages.

6.1.23. *mar-mar-: Arm. dial. *mar-m(a)r-il ‘shimmer, flicker, glimmer, extinguish gradually (said of e.g. a candle)’, Gr. μάρμαιρω ‘to flash, sparkle, gleam’ (said of any darting, quivering light), which is analyzed as a reduplicated intensive *mar-mar- (seen in pl. mārmaíρειν ‘to flash, spark, gleam’).

6.1.24. *mēhstr(u)l: ‘stepmother’: Arm. mawru, a-stem ‘stepmother’ (dial.: Hamšen muřu ‘stepmother’, Muš muri ‘step’-, Šatax muri mer ‘stepmother’, Muš / Bulanax xor’tumuru < *xor’t-‘u-mōru); Gr. μητριά ‘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 *mēhstr- f. ‘mother’.

6.1.25. *me-g’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.’

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. *-ōiu(s).
116 Clackson (1994: 135–136) is positive about this isogloss.
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. μητριάς m. ‘male relative of the mother, maternal uncle, grandfather’ from *mēhstr-ō- ‘relative of the mother’, perhaps also Arm. mi-a-mawr, gen.pl. -u-c ‘the only (offspring) of one mother’.

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6.1.26. *mēd-es-(e)h₂ ‘mind, counsel’: Arm. mit, a-stem, mostly in pl. mit-k’, gen. mt-ac ‘mind, intelligence’, Gr. μὴδεα ‘counsels, plans, arts’ (pl. of the unattested *μὴδος, -eος, s-stem neuter), μὴδομαί ‘to be minded, intend; to take care, keep watch’, cf. μεδω ‘to protect, rule over’, μεδόμαι ‘to provide for, be mindful of; to plan, contrive, devise’, Lat. medecor ‘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-h₂or’gʰi- ‘testicled, uncastrated, male (ram or buck)’: Arm. y-orj, i-stem ‘male sheep, ram’; Gr. ἕν-ορχις ‘provided with testicles, uncastrated’, cf. ἑν-ορχ-ος, ἑν-όρχ-ης meaning also ‘buck’; note also Arm. xol-orjn(ú) ‘orchis’ vs. Gr. ὄρχις m. ‘testicles, the plant orchid (because of the shape of the root)’, (HM)


6.1.29. *syekur-(e)h₂: Arm. skesur, a-stem ‘husband’s mother’, Gr. ἑκυρά ‘mother-in-law’. Other cognates continue *syekur-h₂ e.: Skt. śośrā-, NPers. xusrū, Pashto xwīše, Lat. socerus, 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’, *syekur-o-: Skt. svāšura-, YAv. xasura-, Gr. ἑκύρος, Lat. socer, OLat. socerus, OHG swehr, CS svekro (*swešur- was replaced by *swekr- < *svekr- analogically after svekry ‘mother-in-law’), Lith. šėšuras, etc.

6.1.30. *(s)k₁-ne/o-: Arm. k’alem ‘to pluck, weed, mow, harvest’, Gr. σκάλλω ‘to stir up, hoe’ prob. from *skál-l-wa; further: Lith. skeliu, skėli ‘to split’, etc. Note Arm. k’al-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-el ‘hot coal, ember’ (Lazar P’arpec’i, Hexaemeron, etc.), dial. *ant(e)-lo(c’ ‘metal rod for poking or stirring a fire, poker’, dial. *ant’-a(r)- ‘coal, ember’ in *ant’-r-o(c’ and *ant’-ar-o(c’ ‘poker’ (note also ant’ayr ‘spark’ in Bağirk’ hayoc’ and NHB, probably from *ant’-ar-I’-); Gr. ανθραξ m. ‘charcoal’.

6.2.2. *drepan-e: Arm. arteman-un-k’, gen.pl. arteman-a-(n)ec’ ‘eyelashes; eyebrow’ (Bible+), Gr. δρεπάνη, δρέπανον ‘sickle’ (from δρέπαν ‘to pluck, cut off’). According to this fascinating etymology suggested by de Lamberterie (1983; 1992: 239; 2013: 22), the human eyelbow (and/or eyelash, see below) is taken as sickle-shaped.

The basic meaning of artemanünk’ 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

123 HAB 1: 194; Martirosyan 2010: 85; Jahukyan 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; Acaian 1913: 48b, 98–99 HayLezBrBar 1, 2001: 9a. The nasalless by-form at’ar-o(c’ may be due to folk-etymological association with at’ar ‘dry dung used as fuel’. For the suffix -o(c’, see Olsen 1999: 533–537.
biblical passages ‘eyelash’ (or ‘eyebrow’) would make more sense than ‘eyelid’, e.g. Proverbs 6.25 (mī yapʾṣṭakicʿ is artewanambkʿ norā “do not be captivated with her eyelashes/eyebrows”) or Jeremiah 9.18 (er awtewanunkʿ jer bxesec’en fur “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 artewanacʿ “hair of eyelashes”).

In a remarkable passage from Movsēs Xorenacʿi 2.42 we read: “a multitude of vineyards resembled the beautiful crescent of thick lashes (zartewanacʿ xit ew gelecʾık cir); on the northern side its curved form truly imitated the arcing brows of charming maidens (gelawor kusic ʿyōnic”) (transl. Thomson 2006: 180). We can see that artewanunkʿ 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, yōnkʿ. There can be no doubt that Thomson’s translation as ‘eyelash’ is correct.

6.2.3. *sepʰ-s- or *seps- ‘to boil, cook’: Arm. epʿem ‘to cook, boil’; Gr. ἐψῳ ‘to boil, seethe (of meat and the like); to smell, refine (of metals).”

6.2.4. *(a)rųp-eh: Arm. tʿarp/ tʿarb (abl. i tʿarb-ē) ‘large wicker fishing-basket, creel’, Gr. τάρπη f., ταρπός, ταρτός m., ταρπόνη f. ‘large wicker basket’; probably a common borrowing from a lost source.

6.2.5. *qinyl(u)m- ‘hinge’: Arm. eklni, ea-stem (loc.sg. i eklnw-.orange, gen.dat.pl. ekln-e-ac'), eklni, école, dial. élkan ‘door hinge’; Gr. γιγαντίω μ. (dimin. γι(γ)γάντιον n.) ‘hinge, joint, pivot, gudgeon’. Mediterranean word (Martirosyan 2012). (HM)

6.2.6. *kalam- ‘aspen, plane’: Arm. kalaman(i) ‘white poplar, aspen’; Gr. καλάμιν-δαρπλάτανος θόνωνες ‘plane’, obviously with *dar ‘tree’ (Hesychius); in neighbouring non-Indo-European languages: Salmast Turk. kʾilāmān-bār ‘aspen’, Tʾavyrīz Turk. qālamā ‘poplar’; in Dagh-estan languages: Lak kalax, Rutul kalax ‘aspen’. For the semantic relationship, cf. Arm. čandar ‘poplar’ and ‘plane’; opʾi ‘poplar, aspen’ and Łaraba/tʾarb ‘plane’. The ending -ax in Armenian may be a suffix, possibly seen also in met-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 and in a few of the lexemes that follow points to a later stage of Mediterranean substrate vocabulary.


6.2.8. *karid- ‘crayfish’: Arm. karič, a-stem ‘scorpion’, dial. ‘crayfish’ < *karid-ga f.; Gr. κάρις, -ίδως, -ιδός (also κοφίς, κωρίς) f., generally a proper term for small crustaceans, including shrimp and prawn. For the (old feminine) suffix *-iheš, note Arm. dial. *mormonʃj ‘ant’ < *mormon-jeł (cf. morm ‘tarantula’ and Gr. Μορμών ‘bogey, bugbear’, see §6.4.8). Note also Arm. kor, gen. kor-i ‘scorpion’ (Dersim dial. gə-x), which is reminiscent of the Greek by-forms κοφίς, κωρίς.

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

6.2.10. *g(e)mbuřeš ‘bridge’: Arm. kamurj, a-stem ‘bridge’, Gr. γέφυρα f. (Boeot. βέφυρα, Cret. δέφυρα, Lac. διφυρά) ‘bridge’; in non-Indo-European languages: Hatt. ʰamur*uwa ‘beam’, Abkhaz *ŋo(m)bala-ra ‘beam over the hearth, cross-beam’, etc. The Proto-Armenian theoretical by-form *kaburj- may have been reflected in Urart. qaburzani possibly meaning ‘bridge’ in a recently discovered inscription.


6.2.11. *mosjiʔ-oi- ‘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. μοσχὸς m.f. ‘calf, young bull, any young animal’, metaphorically ‘boy’ or ‘girl, maid’, m. ‘young shoot or twig’, μοσχᾶς, -αδὸς f. ‘shoot, slip; heifer’, μοσχίς ‘like a calf (used of any young animal); three-year-old ram’; diminutives: μοσχίον ‘young calf’, μοσχίδιον ‘small shoot’, μοσχ-άριν 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 Larabal. Besides, Arm. -z- can hardly be explained from Gr. -σχ-. In my opinion we are dealing with a Mediterranean word: *mosji-th- ‘young bovine’ (with Gr. μοσχὸς m.f. ‘calf, young bull, any young animal’) > Parm. *mōz(o) + -i as in other animal designations, such as aγεί ‘goat’, mari ‘female bird’, mak’i ‘ewe’ (Martirosyan 2010 s.vv.), or directly *mosji-ii-ii- (cf. Gr. μοσχίον ‘young calf’, μοσχίς ‘like a calf; three-year-old ram’, etc.) > Parm. *mōzii/ā– > Arm. *mozi ‘young bovine, calf’. For the semantic relationship between ‘young shoot’ and ‘young animal’, compare, e.g. ClArm. erinj ‘heifer’ > Ararat dial. erinj ‘a three-year-old sprout of grapes’.\(^{130}\)

6.2.12. *noti/ii- ‘wetness’: Arm. nay, gen. nay-i ‘humid, moist; wetness, moisture; (phonet.) liquid’ (Dionysius Thrax, Book of Chries, Grigor Magistros, Esayi Něč’ec’i, etc.), nayac’un’am ‘to wet, moisten, water, irrigate’ (Philo, Book of Chries), nayakan ‘humid, moist’ (John Chrysostom); Gr. νοτία, -ινή f. ‘wetness’.

The Armenian word is usually derived from PIE *sneh- ‘to swim’: Skt. svāti ‘to bathe’, Gr. νεώ, νηχός ‘to swim’, Lat. nāre, nātāre ‘to float, swim’, etc.\(^{131}\) The Armenian word may be derived from *n(e)h2-ti-, cf. Avest. u-snātī- f. ‘Abwaschung’. However, semantically more attractive is the comparison of Arm. nay with Gr. νοτία, -ινή f. ‘wetness’ (cf. Schfeltelowitz 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 (substitute) proto-form like *noti/ii- > Parm. *noti/iiā > *nay(ia) > nay.

6.2.13. *(H)olur-: Arm. olůrm, an-stem ‘pea, bean’, dial. hůlur(ā)rōs (Goris, Larabal hůlěrō); Gr. ὅλυραi f. pl. ‘spelt; rice-wheat’ (cf. Akkad. ḫallûru, ḫi/lûrû, etc.).


6.2.15. *opi/ii- or *(t)ō/p- ‘sprout, young twig’: Arm. ortn, 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: 240\(^{131}\), 241\(^{131}\)):


\(^{129}\) 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: 230\(_{\alpha}^{131}\); Martirosyan 2010: 264–265, 785–787.


6.2.16. *kʰsan-(t)-e− ‘wool-carder, comb’: Arm. santr / sandr, ins.sg. santr-o-v (Lazar P’arpeči 3.61), abl.sg. i sandr-e (Ephrem) ‘comb; weaver’s comb’, dial. sander-k’ (Karin santr-e-k’) ‘weaver’s large comb’;¹³⁴ Gr. ξαίω ‘to card, comb wool’, ξαντής m. ‘wool-carder’ ξαντρια (title of a play by Aeschylus). 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: *kʰsan-(t)-e− > Arm. sandr, pl. sander-k’.


6.2.18. *ksen-o-/ksen(e)wo−: Arm. sin, o-stem ‘empty’, Gr. θενός and Ion. κενός from *κενρος, Epic κενε(p)o, ‘empty, idle’.

6.2.19. *stie(o)ibо− or *stie(ideh)−: Arm. stęp, o-stem ‘haste, alacrity; zeal, diligence; frequent, frequently; hastily, quickly, stipem ‘to constrain, compel, force; to urge, hasten’; Gr. στείβω ‘to tread (on something), density by treading, trod, trample, trend’, στομβή f. ‘stuffing, cushion, bulge’, στῆβος m. ‘trodden road, path, footstep, trail’. The appurtenance of OLith. staibus ‘strong, brave’ and cognates is uncertain.¹³⁷

6.2.20. *srungʰ− ‘snout, nostrils’: Arm. rung, mostly pl. ing-un-k’, instr. ing-am-b-k’, *rung-k’, a-stem ‘nostrils’; Gr. ρύγχος, ρύγχος n. ‘snout (e.g. of a pig), muzzle, beak’.


6.2.22. *skorpi-ı−, gen. *(sk)orp-ı-ös: Arm. k’arb, i-stem ‘baskilisk, asp’; Gr. σκορπίος m. ‘scorpion; a sea-fish’, σκορπίς, -δος f. ‘a sea-fish’. These words have been claimed to be derived from IE *(sk)er(p)- ‘to cut’: Arm. k’er-(l)-, k’er-b/p- ‘to scratch, chop, carve’, Gr. κερω ‘to cut (off), shave, mow off, ravage’, OHG seeran ‘to cut’, OEEngl. seorfan ‘to scratch’, etc. However, scholars are now more inclined towards a substrate origin.

6.3. Armenian, Greek and Albanian.

6.3.1. *h₂en(ǝn)ורג‘dream’: Arm. anurj-k’, i-stem, o-stem ‘dream, day-dream, prophetic vision, vision’; Gr. ἄνειρος m. ‘god of dreams, dream’, Aeol. ὄναιρος m., Cret. ὄναιρον ὄνειρον, cf. ὄναρ n. ‘dream’, especially ‘fortune-telling dream, vision’, ἄναρ’ ὄναρ (Hesychius); Alb. âdërrë (Geg.), êndërrë (Tosc.) ‘dream’ from *andërrë < *Hnr-joľa-. Probably derived from PIE *h₂eüh₃ ‘to breathe’ > ‘vital breath, energy’ (de Lamberton 2012a).

6.3.2. *bʰer-ol-(e)-u− ‘load’: Arm. béin, gen. bein, ins. beinam-b, vom.pl. bein-k’ ‘burden, load; bag, sack; freight, cargo’;¹³⁸ Gr. φερνή f., Aeol. φέρνα ‘dowry’, Dor. φέρνα f. ‘god’s share at the sacrifice’, Alb. bårre ‘burden, load; freight, load; foetus’ < *bʰor-ne₃; with a different meaning: Lith. bérnas ‘boy, (farmer’s) servant’, Latv. bērns ‘child, baby’, with o-grade: Goth. and Osl. barn n. ‘child’ > “what was borne”.¹³⁹ This word is a verbal noun from PIE *bʰer- ‘to bring, bear’.

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

¹³⁴ See Aćaṙean 1913: 954; HAB 4: 174–175; HayLezBrbBar 5, 2008: 266.
¹³⁸ In the Bible, bein corresponds to φορτίον ‘burden’ (Job 7.20), βάσταγμα ‘load’ (Jeremiah 17.21), μάρσιππος ‘bag’ (Genesis 44.11, 13), γούμος ‘freight, cargo’ (Revelations 18.11), etc.
compare the semantic shift 'share' > 'dowry' (cf. Arm. bažin 'share' > baźin-k' 'dowry', Martirosyan 2010: 803).

We can postulate *bʰer(e)n- 'load' ('that is borne'), a verbal noun from PIE *bʰer- '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 *bʰer(ο)n- 'load, freight', with a secondary transfer to the n-stems in Armenian (cf. eln 'deer cow', § 6.7.3) or *bʰer(ο)n-.

6.3.3. *gʰrī(dʰ) 'barley': Arm. gari, ea-stem, o-stem 'barley'; Gr. κρίδη f. 'barley-corns', usually pl. 'barley', from an original root noun *krip > Ep. κρί f.; Alb. drîthë 'cereals, wheat, barley'. A different formation: Lat. hordeum 'barley', OHG gersta 'barley', and Hitt. karaš n. 'wheat, emmer-wheat'.

6.3.4. *skʰodoro- or *skʰorodo- 'garlic': Arm. xstor, i-stem and o-stem, xstor 'garlic'; Gr. σκόρ(ο)δον n. 'garlic', Alb. hûrdhë, also hûdhër (Schriftsprache) f. 'garlic'.

6.4. Armenian, Greek and Latin.

6.4.1. *bʰrug(ˈ) 'deawláp': Arm. erbuc, o-stem 'breast of animals', Gr. φάρυγξ, gen. -νγος, -νγγος 'throat; dewlap of a bull', Lat. frūmen 'throat' < *frūg-smen.

6.4.2. *el(ə)tlw- vel sim. 'olive, oil': Arm. ewl, gen. iwl-oy, dial. *el 'oil'; Gr. ἐλαία, Att. ἐλάα, Ion. ἐλαι f. 'olive-tree; olive', ἐλαίως m. 'wild olive', ἐλαιον n. 'olive-oil; anointing-oil; any oily substance'; Lat. oleum n. 'olive-oil; oil'.

6.4.3. *ptel- 'elm': Arm. ʿtelī 'elm'; Gr. πτελέ-ε, Ion. -η 'elm, Ulmus glabra'; cf. also Lat. tilia 'linden'.

6.4.4. *tuũko-ro or *tũ(i)ko- 'fig': Arm. tuz, o-stem 'fig', dial. (Aslanbek and Ozim) 'female genitals'; Gr. σύκον, Boeotian τύκον n. 'fig; pudenda muliebría, female genitals'; Lat. ficus, ī and īs, f. 'fig; fig-tree'.

6.4.5. *huũl(ə)horo- n.pl. *h₂ '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. ἐδηληρα, Dor. αὐληρα, Hesychian ἄβληρα n.pl. 'reins'; Lat. lūrum, -i, n. 'thong, rawhide whip, rein'. We can reconstruct a Proto-Armenian paradigm *ulár-o-, pl. *ulár-a.

6.4.6. *gle̞t- 'milk': Arm. katn, gen. kat'ın, 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 Mehri, where we find kaxc' pointing to *kac' (the development a > Agulis ə has been blocked in position before l). Kak`avaber has kaxc' in the village of Varhavar vs. kât`na in the other three villages of the region. The conditions responsible for the loss or preservation of the *-l- are not clear. Nevertheless, I do not think that this comparison should be abandoned. 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)l 'bramble, blackberry (plant, shrub)', dial. mor-m-eni 'blackberry', mor(ə)s(i) 'tamarisk; blackberry, bramble'; Gr. μορόν n. 'black mulberry; blackberry', μορέα, ἐπ f. 'mulberry-tree, Morus nigra'; Lat. mōrum, ē, n. 'fruit of the black mulberry', mōrus, ē, f. 'black mulberry-tree' (sometimes considered a Greek loanword).

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


143 The Celtic forms (Welsh mer-wydden 'mulberry, blackberry', OIr. smér 'blackberry', etc.) point to a different proto-form, namely *sméro- (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. Μορμῶ, -ος -ους, Μορμόνος, -όνος f. ‘she-monster, bogey’ (also used by nurses to frighten children), generally ‘bugbear’, Lat. *formidō*, *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. *formica* f. ‘ant’, Gr. μυρμήξ, -ηκος, Dor. μύρμαξ, -άκος m. ‘ant; fabulous animal in India’ (by-forms: μύρμος, βύρμαξ, βόρμαξ, ὕμικαξ, ὡρκικαξ), etc. This connection or conflation becomes quite transparent in view of the following forms and meanings: μυρμήκ-ειον n. a species of φαλάγγγον, the latter being ‘a kind of venomous spider, especially Lathrodectus or malmignatte’, μύρμηκ-ιον n. ‘a species of spider’. Note also μόρμορος and μύρμος ‘panic fear’ (glossed by φοβός in Hesychius), the former of which strikingly resembles Armenian dialect of Polis/Stambul *mor-mořoz*, Crimea and Nor Naĉijewan *mirmis* ‘Easter bogey’.

A similar kind of conflation is seen in some dialectal forms of mřiwn, the Armenian word for ‘ant’: Loṙi mærmiñ and Šamaxi mærmiñ. Since Gr. Μορμῶν is feminine, one may identify it with Loṙi mærmiñ, which probably reflects fem. *mormon-jeň2*. Structurally, compare another insect-name of Mediterranean origin: karič, -a-stem ‘scorpion’, dial. also ‘crayfish’ < *karid-jeň2*, cf. Gr. κάρις, -ήδος 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 mřiŋ-uk ‘little ant’, cf. Gr. μύρμηκ-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. μύρμηκ-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 *mor-ː*: OIr. mara, OHG mera ‘nightmare’, Germ. Mahr ‘nightmare’, Engl. (night)mare; OIr. mor-(r)gan ‘lamia’, lit. ‘Alp königin’; Bulg. mora ‘nightmare’, dial. ‘evil spirit’, SCr. mora ‘nightmare, incubus’, mora ‘a kind of night butterfly’, Czech dial. mora ‘night butterfly; a mythical evil creature’, Russ. dial. mora ‘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 reduplication145) *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 Astlīk and Anaĥit, attested as being of the state pantheon in Classical Armenian sources, and as female spirits or nympha in a few later sources. In some folk tales, Anaĥit 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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146 For more data on this and a thorough discussion, see Martirosyan prepar. 3.
6.4.9. *spʰongos / *pʰsongos ‘sponge, mushroom’: Arm. sunk/ɡn ‘(tree-)mushroom’, Gr. σπόγγος, σφόνγος 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. *bʰrehr-ur (obl. *bʰrun-): Arm. albewr, albiwr, r-stem: gen. alber ‘fountain, spring’, Gr. φρέαρ, φρέατος ‘an artificial well, spring;’ cf. Goth. brunn, etc.

6.5.2. *dʰerg-/dʰroɡ-/: 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 *dʰerg- to turn’: Arm. darj-, dárnam ‘to turn; to return’ < *darj-nam, cf. Gr. τρέχω ‘to run, hurry’, etc. For another cultural term of a similar structure, cf. burgn, gen. borgn ‘tower; pyramid’ vs. bānام ‘to lift, raise’ < *bārj-nam (see §6.1.10).

6.5.3. *trso-/*tors-eh2: Arm. t’aṙ ‘perch, roost for birds’ (MidArm.; ubiquitous in the dialects), ‘bar for drying grapes’ (Mid Arm.) < *t*sos: Gr. ταρός, Att. ταρός m. ‘frame of wicker-work, crate, flat basket for drying cheeses on’, τρασιά, ταρσί, τερσί (-e- after τέρσομαι) f. ‘hurdle for drying figs; dried figs; drying-place for corn, cheese or bricks’; Germ. *torsō: OHG darra f. ‘apparatus for drying fruits, etc.’, Swed. and Norw. tarre m. ‘frame for drying malts, etc.’. 147 This implementation designation is usually derived from PIE *t(e)rš- (cf. Skt. tars- ‘to be thirsty, crave’, Gr. τέρσομαι ‘to become dry’, OHG derren ‘to make dry’, Hitt. tarš- ‘to make or become dry’, Arm. t’āramin / t’arsamin ‘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. *jork-o- ‘deer, roe, game’: Arm. ors, o-stem ‘hunt, game’; Gr. δόρκας, -άδος f. (Herodotus 7.69), ζόρκας (Herodotus 4.192), δόρξε, δόρκος, ζόρξε, ιορκός, etc. ‘a kind of deer, roe, antelope, gazelle’; Corn. iwrch ‘roe’, MWelsh iwrch ‘roe-deer (caprea mas)’. (HM)


The second member of the Indo-Iranian compound, viz. *čih-yā-, is not attested anywhere independently. However, the existence of Iranian *čéva- ‘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. μονόνυχος) and erk-a-čiw ‘having two hoofs’. Further, či 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. šūlps ‘shank’ and ‘post, pole’; OEngl. scía ‘shin, leg’, scīnu ‘shin’, MHG schie and OHG skena, skina ‘post’. 151 The last set

149 Praust apud Lubotsky 2002: 323b.
151 Note also Arm. dial. Moks srung ‘the stem ends of wheat remaining attached to the soil after mowing (stubble)’ from srunk ‘shin, shank’; Oss. xæŋ / xænga ‘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 *siwan and Greek kíon ‘column, pillar’. It is remarkable that we have yet another lexical correspondence with the same meaning and dialect distribution, namely *stlneh-. ‘post, pillar’: PArm. *stel-a-, Gr. στηλη, OHG stello (see §6.5.7).

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

6.5.6. *keudh-. ‘to hide’: Arm. soyz-: suzanem, 3sg.aor. e-soyz ‘to plunge, sink; to hide, cover’ (probably from sigmatic aorist *keudh-s-);53 Gr. κευθω, aor. κευδαι ‘to cover, hide; to be concealed, lie hidden’, κευδης ‘subterranean deities’; OEngl. hýdan ‘to hide’ from *húdjana-, Goth. huzd ‘treasure’ from *kudh-to-.54 Skt. kuhú- f. ‘new moon’ and others are hardly related.55

6.5.7. *stlneh-. PArm. *stalnā- > *stal-a- ‘post, pillar’ in ara-stal, a-stem ‘ceiling, roof’; Gr. στήλη ‘block or slab used as a memorial; monument, gravestone; post, pillar; boundary-post’; OHG stallo, MHG stolle ‘support, post’. Probably derived from IE *stel-: Gr. στέλλειν ‘to put in order, equip, prepare’, OHG stellen ‘to array, establish, arrange’, OCS stblati ‘to spread’, etc.56

Note the semantic closeness to another agreement between Armenian, Greek and Germanic: Arm. *siwan, Gr. kíon, and OHG skelina (see §6.5.5).

6.5.8. *dig/gk- ‘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 tag̣/tayg̣ pointing to an older *tig; Gr. Laconian δίζα- αἴξ. Λάκωνες (Hesychius), unless a corruption for *aiζα; Germ. *tigō ‘goat, he-goat’: OHG ziga, Germ. Ziege, etc.). The vacillation *g/gk 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. gâziti ‘to step, trample, wade’, Arm. karkut ‘hail’ vs. OCS graḍo and Lat. grandō ‘hail’.

6.5.9. *p(o)Hl- or *p(-cl-): Arm. ul, o-stem (secondarily: u-stem) ‘kid’ (probably also amul ‘childless’, as well as al-oj ‘female kid’ from a zero-grade form, with an ending comparable to oroj ‘lamb’); Gr. παλός m. f. ‘young horse, foal, filly’, secondarily also of other young animals, metath. ‘young girl, youth’; Goth. fula, OHG folo ‘id.’; Alb. pëlë ‘mure’ < *pól-n.57

6.6. Armenian, Greek and Balto-Slavic.


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

53 Beekes 2010, 1: 707.
54 For literature and other examples of sigmatic aorist in Armenian, see Martirosyan 2010: 757 and s.vv.
In recent years, the methodology of dealing with substrate words has been developed and applied by several scholars. It has been pointed out that an etymology 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.

The Armenian words that are frequently considered to be of Mediterranean origin are:

*gini* 'wine', *ewl/ewl* 'oil', *t'uz* 'fig', *spung* 'sponge', *srin* 'pipe, fife', *sunk/g* 'mushroom'.

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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-, Mlr. all < *plso-, Olc. 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. kalim, o-stem ‘acorn’ and Gr. βάλανος f. ‘acorn’ (vs. Lat. glāns, glandis f. ‘acorn, beech-nut’, Russ. želud’, SCR. želud ‘acorn’, Lith. gilė, dial. gilė ‘acorn’, etc.) may reflect a common innovation undergone jointly by Greek and Armenian (Clackson 1994: 135–136, 200/237). 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) 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:

   *r̥> Arm. -r̥- and *g̊> Arm. k, e.g. Arm. anur̥j ‘dream’ vs. Gr. ὄνε/οιρος, Arm. kamur̥j ‘bridge’ vs. Gr. γέφυρα;

   *k̥> Arm. s, e.g. Arm. siseṙn ‘chick pea’ vs. Lat. cicer ‘chick pea’, Arm. siten ‘column, pillar’ vs. Gr. κίαον;

   *g̊> Arm. c, e.g. Arm. erbuc ‘breast of animals’ vs. Gr. φάρυγξ, gen. -γος, -γγος ‘throat, dewlap’;

   *p> Arm. h- or zero, e.g. Arm. atawun (*atawun), ea-stem ‘pigeon, dove’ vs. Lat. palumbēs ‘wood-pigeon, ring-dove’ (*ph[h]-b̥-ōn, gen. *b̥-n-os); Arm. hec’, gen. hec-i ‘felloe’, if from *pelk-s, cf. OHG felga, OEngl. felg(e) ‘felloe’, etc.; Arm. ort’, o-stem ‘vine’ vs. π(τ)όρδος ‘sprout’.

2) relatively young:

   *k> Arm. k̥, e.g. Arm. kašāmi(n) ‘white poplar, aspen’ vs. Hesychian καλαμίνδαρ ‘plane’; karič, a-stem ‘scorpion’, dial. ‘crayfish’ vs. Gr. κάρις, -ίδος, -ίδος ‘crayfish’;

   *p> Arm. p, e.g. Arm. pal ‘rock’ vs. OIr. ail ‘cliff’ < *pal-i-, Mlr. all < *plso-, Gr. πέλλα ‘rock’;

The place of Armenian in the Indo-European language family

*s > Arm. s (unless these words have been borrowed from lost satam-forms in *k), e.g. Arm. sayl, i-stem and o-stem ‘wagon; Ursa Major and Minor, Arcturus’ vs. Gr. σατίνη f. ‘chariot’ and Hesychian σατιλλα: πλειάς το ἀστρον, 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 provisional 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 sisern ‘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.

<table>
<thead>
<tr>
<th>Proto-form</th>
<th>Gloss</th>
<th>Armenian</th>
<th>Greek</th>
<th>Other 1</th>
<th>Other 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>ant</em>-r-</td>
<td>coal</td>
<td><em>ant</em>-(a)r-</td>
<td>ἄνθραξ</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>hs(e)g</em>-</td>
<td>mist, fog</td>
<td>aiy</td>
<td>ἀχλ/υς</td>
<td></td>
<td>OPr. aglo</td>
</tr>
<tr>
<td>*an(f)čr</td>
<td>cave</td>
<td>ayr</td>
<td>ἀντρον</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*hs(e)rti</td>
<td>now, (near)</td>
<td>ard(i)</td>
<td>ἄρτι</td>
<td></td>
<td>(Lith. arti)</td>
</tr>
<tr>
<td>*Hēh:sm-(ð)r</td>
<td>day</td>
<td>awr, g. awur</td>
<td>ἥμαρ</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. *dye:ro-</td>
<td>long</td>
<td>erkar</td>
<td>*δράρος</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. *dye:z-n-</td>
<td>long</td>
<td>erkan</td>
<td>*δράν</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*tumbo-</td>
<td>mound</td>
<td>τύμβος</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>*mar-mar-</td>
<td>to shimmer</td>
<td>*mar-m(a)r-</td>
<td>μαρμαίρω</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proto-form</td>
<td>Gloss</td>
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<td>Greek</td>
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<td>Other 2</td>
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<tr>
<td><em>me-g'i</em></td>
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<td>merj(i)</td>
<td>μέχρι</td>
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<td></td>
</tr>
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<td><em>nottigya</em></td>
<td>wetness</td>
<td>nay, i-stem</td>
<td>νοτία</td>
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<td></td>
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<tr>
<td>*ken(e)μο-</td>
<td>empty</td>
<td>sīn, -o-</td>
<td>*κενός</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Human, age, kinship.

<table>
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<th>Proto-form</th>
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<th>Armenian</th>
<th>Greek</th>
<th>Other 1</th>
<th>Other 2</th>
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<tbody>
<tr>
<td>*pret(i)g'ya-</td>
<td>elder</td>
<td>erēc', u-st.</td>
<td>πρεσβύς</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*g'nahya-</td>
<td>wife, woman</td>
<td>*kamay-</td>
<td>γυναι-κ-</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>meh'ru'ya</em></td>
<td>stepmother</td>
<td>*mavru, -a-</td>
<td>μητριά</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>syekur-ehya</em></td>
<td>moth.-in-law</td>
<td>*skesur, -a-</td>
<td>ἐκυπρά</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Body, perceptions, mentality, belief.

<table>
<thead>
<tr>
<th>Proto-form</th>
<th>Gloss</th>
<th>Armenian</th>
<th>Greek</th>
<th>Other 1</th>
<th>Other 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>*h'ka'r'm'*on</td>
<td>eye</td>
<td>akn</td>
<td>άκκον</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*h'm(e/or)i-'a-</td>
<td>dream</td>
<td>*anurǰ, i-/o-</td>
<td>ὁνε/οιρος</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*d'(e)h's-</td>
<td>god</td>
<td>di-k'</td>
<td>θεός</td>
<td></td>
<td>(Lat. fēriae)</td>
</tr>
<tr>
<td>*pr(e/o)Hk'-'-</td>
<td>buttocks</td>
<td>erastan-k'</td>
<td>πρωκτός</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*yes-nu-</td>
<td>put on cloth.</td>
<td>z-genum</td>
<td>έννοια</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*g(e)h'ya-</td>
<td>laughter</td>
<td>cal'r, g, calu</td>
<td>γέλως, γαλ-</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>méd-es-ha</em></td>
<td>mind</td>
<td>mit-k', mt-a-</td>
<td>μηθέα</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*mor-'-</td>
<td>she-monster</td>
<td>mor-m</td>
<td>Μορμω(στ)</td>
<td></td>
<td>Lat. formidó</td>
</tr>
<tr>
<td>*srung'-</td>
<td>snout</td>
<td>*ng(r)</td>
<td>ρύγχ ἐκίσ</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*ps(e)ud-os-</td>
<td>false, lie</td>
<td>sut, -o-</td>
<td>ψευδός</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Movements, speech and other activities.

<table>
<thead>
<tr>
<th>Proto-form</th>
<th>Gloss</th>
<th>Armenian</th>
<th>Greek</th>
<th>Other 1</th>
<th>Other 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>A *h'ba'el-</td>
<td>to sweep</td>
<td>awel(-)</td>
<td>ὀφέλλω</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B *h'b'el-</td>
<td>to increase</td>
<td>awel-</td>
<td>ὀφέλλω</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*b'v'e-('n)-</td>
<td>load</td>
<td>bern</td>
<td>φερη</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*b'h'ya-</td>
<td>word, rumour</td>
<td>bay, i-st.</td>
<td>φάσις, φατις</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>k(e)(H)'i'Ya</em></td>
<td>band</td>
<td>sari-k', -ea-</td>
<td>κε/αιρία</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*keud'(-s)-</td>
<td>to hide</td>
<td>soyz</td>
<td>κεύθω</td>
<td>OEng. hŷdan</td>
<td></td>
</tr>
</tbody>
</table>

### Fauna.

<table>
<thead>
<tr>
<th>Proto-form</th>
<th>Gloss</th>
<th>Armenian</th>
<th>Greek</th>
<th>Other 1</th>
<th>Other 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>h'el-(h)m-</em></td>
<td>deer</td>
<td>eln</td>
<td>ἑλλός</td>
<td>Lith. ēlnis</td>
<td>Mfr. ailít</td>
</tr>
<tr>
<td><em>p'ter-</em></td>
<td>feather, wing</td>
<td>*t'ert'</td>
<td>πτερόν</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>lu(u)k-</em></td>
<td>lynx</td>
<td>lusa(m)n-</td>
<td>λύγξ</td>
<td>Lith. lýšis</td>
<td>OHG luhs</td>
</tr>
<tr>
<td>A <em>karid(-ja)</em></td>
<td>crayfish</td>
<td>karič, -a-</td>
<td>καρίς, -ίδος</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B <em>ko/or-i</em></td>
<td>crayf., scorp.</td>
<td>kor, -i scorp.</td>
<td>κουρίς κωρίς</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### The place of Armenian in the Indo-European language family

<table>
<thead>
<tr>
<th>Proto-form</th>
<th>Gloss</th>
<th>Armenian</th>
<th>Greek</th>
<th>Other 1</th>
<th>Other 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>*dʰgʰdʰ-</td>
<td>fish</td>
<td>jukn</td>
<td>ἵχθος</td>
<td>Lith. žīvis</td>
<td></td>
</tr>
<tr>
<td>*h₁e²logʰino-</td>
<td>hedgehog</td>
<td>ɵzni</td>
<td>ἐχίνος</td>
<td>(OHG ἰγίλ)</td>
<td>(Oss. ὑζγυν)</td>
</tr>
<tr>
<td>*jork-o-</td>
<td>deer, game</td>
<td>ɵrs, -o-</td>
<td>ἴορκος ἤ πρόκ-</td>
<td>Corn. yorch</td>
<td></td>
</tr>
<tr>
<td>*sk(o)rp-i-</td>
<td>asp, scorpion</td>
<td>k’arb, i-stem</td>
<td>σκορπίος</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Animal husbandry.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proto-form</td>
</tr>
<tr>
<td>*h₁(e)ig⁹-</td>
</tr>
<tr>
<td>*bʰrŋgʰg-</td>
</tr>
<tr>
<td>*glg-</td>
</tr>
<tr>
<td>*mosg³/oio-</td>
</tr>
<tr>
<td>*h₁enhrŋgrg⁹-</td>
</tr>
<tr>
<td>*diɡ³g⁶-</td>
</tr>
<tr>
<td>*poHl-/pol-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Flora.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proto-form</td>
</tr>
<tr>
<td>*h₁o(t)u(e)uł-</td>
</tr>
<tr>
<td>*yreh₃d-</td>
</tr>
<tr>
<td>A *d³hrno-</td>
</tr>
<tr>
<td>B *d³el(H)-n-</td>
</tr>
<tr>
<td>*ptl-</td>
</tr>
<tr>
<td>*rʰu(o)kko-</td>
</tr>
<tr>
<td>*g³hzn-eno-</td>
</tr>
<tr>
<td>*kalam-</td>
</tr>
<tr>
<td>*kast(an)-</td>
</tr>
<tr>
<td>*mor-</td>
</tr>
<tr>
<td>*p'ort'p-</td>
</tr>
<tr>
<td>*h₁orŋ⁸-</td>
</tr>
<tr>
<td>*spongos</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Agriculture.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proto-form</td>
</tr>
<tr>
<td>A *h₁šeh₁-ur</td>
</tr>
<tr>
<td>B *h₁e²hltr-</td>
</tr>
<tr>
<td>*h₁or-₃-(e)h₂</td>
</tr>
<tr>
<td>*drepan-eh₂</td>
</tr>
<tr>
<td>*g³rd(d')</td>
</tr>
<tr>
<td>*d(e)a'aw-</td>
</tr>
<tr>
<td>*sk¹odorø-</td>
</tr>
</tbody>
</table>

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Preliminary conclusions

We may preliminarily conclude that Armenian, Greek, (Phrygian) and Indo-Iranian were dialectically 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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1805 Astuacašunč’ matean Hin ew Nor Ktakaranac’ (4 vols.). Venice: S. Lazar.
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-индийские) 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 претендует на исчерпывающую полноту, позволяет, тем не менее, сделать предварительный вывод о диалектной близости армянского, греческого, (фригийского), и индоиранских языков. Внтри 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 прерiodа, развив многочисленные общие инновации. 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. *gʰwyo-/io- (or *gʰwyeu-/io-): Arm. kogi, gen. kogw-o-y, ins. kogw-o-v ‘butter’, Skt. gāvya-, gavyā- ‘consisting of cattle, coming from or belonging to a cow (as milk, curds, etc.)’, YAv. gaoia- ‘coming from cattle, consisting of cattle’, Gr. adj. -βο(ϝ)ιος, e.g. ἐννεά-βοιος ‘worth nine beeves’. This isogloss33 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 < *gʰw-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. śāras 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.