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Diplomová práce

The development of Proto-Indo-European **y* in Armenian

Vývoj protoindoevropského **y* v arménštině

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Poděkování

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Abstract

The development of Proto-Indo-European **y* in Classical Armenian ranks among the most debated questions in Armenian historical phonology. This thesis reexamines all the evidence for the evolution of PIE **y* in different phonological contexts, including word-initial position, intervocalically, and in consonant clusters. Special attention is given to the various conditioned outcomes of clusters of consonant + **y* and of **y* in contact with a laryngeal, as well as the consequences of such developments for Armenian nominal and verbal morphology.

Abstrakt

Vývoj praindoevropského **j* v klasické arménštině patří mezi nejdiskutabilnější problémy arménské historické fonologie. Daná diplomová práce přezkoumává veškeré doklady pro evoluci praindoevropského **j* v různých fonologických kontextech, včetně náslovné pozice, intervokalicky a v souhláskových shlucích. Zvláštní pozornost je věnována změnám podmíněným kontaktem s rozličnými souhláskami či s laryngálami, jakož i případným důsledkům těchto změn pro arménskou nominální a verbální morfologii.

Key words

Classical Armenian, diachrony, Indo-European studies, phonology, semivowel

Klíčová slova

diachronie, fonologie, indoevropština, klasická arménština, polovokál

Content

Abbreviations

acc. = accusative case
adj. = adjective
adv. = adverb
Alb. = Albanian
aor. = aorist
(Cl)Arm. = (Classical) Armenian
Av. = Avestan
Cz. = Czech
coll. = collective
dat. = dative case
dimin. = diminutive
du. = dual
Eng. = English
fem. = feminine
gen. = genitive case
Georg. = Georgian
Gk. = Greek
Gm. = Germanic
Goth. = Gothic
IE = Indo-European
Ir. = Irish
Iran. = Iranian
Lat. = Latin
loc. = locative case
masc. = masculine
n. = noun
nom. = nominative case
ntr. = neutre
O = Old
OCS = Old Church Slavonic
P = Proto-
pl. = plural

prep. = preposition

prs. = present

Russ. = Russian

sg. = singular

Skt. = Sanskrit

suf. = suffix

TB = Tocharian B

v. = verb

Ved. = Vedic

Y = Young

Notation

C	consonant
H	laryngeal
N	nasal
R	resonant
V	vowel
V̨	nasal vowel
X̩	syllabic consonant X

[x]	sound x in phonetic transcription according to IPA
<x>	grapheme x
< x	developed from x
> x	developed into x
→ x	gave x through irregular development
/ x	developed under the condition x
x _	after x
_ x	before x
*x	x = reconstructed form
†x	x = non-existing form
~ x	alternates with x
#	word boundary
.	syllable boundary

1. Introduction

The goal of this master thesis is to re-examine the evidence for the development of Proto-Indo-European semivowel **y* in Classical Armenian. The choice of this particular area of research for my thesis was motivated by its reputation as being especially curious, intriguing, and in need of clarifying. Unlike the vast majority of Indo-European languages, Armenian does not preserve clear reflexes of **y,* and the debates over its development continue for over a hundred years till the present days.

On a closer look, that reputation holds true for some phonological contexts more than others. For instance, the intervocalic lenition and loss of **y* (see chapter 6) evokes little dispute nowadays. On the contrary, the problem of the puzzling evidence for the reflexes of **y* in Anlaut position (see ch. 5) has proven to be hard to solve, and even unsolvable according to some. Cf. Clackson (2008:129-130): „The development of the Classical Armenian sounds from the Indo-European parent language involved a number of intricate and sometimes unusual sound changes. However, the paucity of inherited vocabulary, and uncertainty over the correct etymologies of much of the Armenian vocabulary often makes it difficult, if not impossible, to reconstruct the conditioning factors for a sound change. An illustrative example of the difficulties may be provided by the fate of Proto-Indo-European initial **y* in Armenian: scholars have argued for a development to *l-, j-, ǰ-,* and *Ø*.“

In examining potential evidence for the alleged sound development, the following thesis is bound to start with the classical comparative method by establishing a formally and functionally solid relation between an Arm. form and at least one cognate from a genetically related language, and offer a common reconstructed proto-form for these forms. As hinted above, these steps are challenging to apply in Armenian mostly because of the scarcity of inherited words outnumbered by loanwords from Greek, Syriac, and above all Middle Iranian, as well as other languages (see Schmitt (1983); Olsen (1999:857-967) for an overview). *Unus testis, nullus testis* could serve as an appropriate motto for this thesis, even though it certainly does not always happen to be exactly one piece of etymology for each sound law.

To track regular reflexes and postulate a sound change, we not only need a sufficient quantity of comparative evidence, but are also concerned about its quality – e. g. lexemes closer to the centre of the lexicon obviously bring more convincing evidence. As we shall see below, sometimes one cannot afford to be that choosy with Armenian, and uses dialect forms (see ch. 6.2.) and marginal suffixes (2.3.2.) due to the despondent lack of better data.

This diploma thesis is divided into chapters according to the various possible contexts in which **y* can find itself, and the different developments that it undergoes accordingly. The main focus lies on those conditioned outcomes that have been amongst most highly debated topics throughout the scholarly literature on Classical Armenian: different outcomes of **y* in contact with resonants, palatalization before **y*, the sound in word-initial position, intervocalically etc. Other factors in the development of **y* are unfortunately described in less of a depth, and a more thorough re-examination is needed for them in the future. In addition, these developments are briefly regarded in the wider context of the possible relative chronology of changes from PIE to Armenian, and potential consequences of such developments for Armenian morphology are mentioned in short throughout the thesis.

References used during the following research aim to not overlook any of the key scholars in the history of Armenian studies, and cover authors from different schools of thought in terms of both period and location. Not surprisingly, the recent etymological dictionary of Armenian (Martirosyan 2010), as well as the most comprehensive monographies on Armenian historical phonology (Ravnæs 1991), nominal (Olsen 1999) and verbal morphology (Klingenschmitt 1982) belong to the works most often referred to in this thesis.

Graphemes and symbols that I use for the reconstructed Proto-Indo-European language do not differ from the universal notation in contemporary scientific publications. Note that **ḱ, *ǵ, *ǵʰ* are chosen for the representation of the palatovelars, and **y, *w* for the glides.

As for the transliteration of the Armenian script into letters of the Latin alphabet, I follow the standard Hübschmann-Meillet system (as described e. g. in Schmitt 1981:25-26) in most respects. Admittedly every armenist is in the habit of using this transliteration, it can however be misleading for any other linguist not familiar with this convention since it differs from the International Phonetic Alphabet in quite a few respects:

<š>	[ʃ]
<ž>	[ʒ]
<c>	[t͡s]
<j>	[d͡z]
<č>	[t͡ʃ]
<ǰ>	[d͡ʒ]
<y>	[j]

<ł> [ɭ][1]

<r̄> [r:][2]

<ea> [i̯a]

<ow> [u]

I take the liberty of diverting from the transliteration as in Schmitt (1981) only by using <ē>, <ō> instead of <ê>, <ô> for [ɐ̯][3], [au] respectively; and by using <ʰ> as a modifier indicating aspiration of a consonant, for Arm. phonemes just like the PIE ones, e. g. *tʰ, *dʰ*. In the Hübschmann-Meillet transliteration, Armenian voiceless aspirated consonants are written with a turned comma above, e. g. <tʿ>; for a reader or a user of this text trained in IPA, this diacritic sign could be confusing, as it is similar to the comma that otherwise indicates ejectives.

Word lists are predominantly organised in the Latin alphabetic order, from which the Armenian one differs in a number of ways that, once again, might have caused some inconvenience to the reader despite the similarities with the Greek alphabet. Sometimes, the logics of the text of course requires listing examples from more to less reliable ones, or starting from a stem and continuing to its derivatives.

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[1] Doubts about the exact articulation of any reconstructed phonetic unit are valid with <ł> probably more than any other Old Armenian sound. See Godel (1975:10); Ravnæs (1991:90-93). Apart from the retroflex lateral [ɭ], it is considered possible to have been the velar lateral approximant [ʟ] or the „common“ lateral that we know from Standard Average European, only velarized, i. e. [ɫ], which by coincidence matches the chosen grapheme in the traditional transliteration.

On the Classical stage of the language, this was probably not a lateral fricative of any place of articulation, e. g. [ɬ]; still, it later developed into one of the fricative sounds, [ɣ], which is used in the established pronunciation of the Classical Armenian texts nowadays likewise, so one hears [ɣ] e. g. during a service of the Armenian Apostolic Church.

Also, note that the uncertain contextual change **l* > *ł* is problematic to place on the timescale in the relative chronology by Ravnæs (1991:181).

[2] *Communis opinio* determines this phoneme as a geminate; and yet, geminated <r> is attested in the language also spelled as <rr>, e. g. մրրիկ [mərrik] 'tempest' (Godel 1975:21). Alternatively, <r̄> could have been [r], while <r> would have been pronounced as a mere tap or flap [ɾ]. See the discussion in Ravnæs (1991:87-90).

[3] Alternatively, if <e> is reconstructed as the open-mid [ɛ], then <ē> is the respectively closer vowel best transcribed as [e].

2. Palatalisation of dentals and velars before **y*

No Indo-European language branch escaped assimilation in clusters **Cy* at some stage of their development, typically resulting in sibilants, shibilants or respective affricates (Kümmel 2007:250-266). It is possible to regard the developments of stops before **y* together with any other consonant cluster consisting of two consonants that becomes a monophonemic sound (e. g. Olsen 1999:810-814). Alternatively, one can emphasize the two separate steps of the process, the first one being some kind of assimilation of the consonant to the following palatal **y*, and the second one being the loss (or possibly another change) of those **y* after the new palatals. The first phase of such a process does not differ essentially from the palatalisation that occurs before front vowels in Armenian as well as in many other languages, and it can thus be treated together by some scholars (e. g. Ravnæs 1991:135-142).

As for Armenian, I here argue that the palatalisation of PIE alveo-dentals and the three series of velars before **y* actually give identical outcomes to the palatalisation before *i* and *e.* We shall see that the overall picture of the development of these consonant groups is less complicated than is presented in some works in that field. We will start with those clusters whose development is least controversial (labiovelars + **y;* dental mediae aspiratae + **y),* and then proceed to those with less certain evidence (e. g. **ty)* or more scarce one (especially **dy, *ĝy, *ĝʰy)*, hopefully to form a picture as coherent as possible.

2.1. Labiovelars + **y*

Satəm languages are known to be less consistent than centum languages in their treatment of the three velar series. According to some, Armenian could be among those satəm languages that still distinguished to a certain point labiovelars against plain velars, at least in some contexts, cf. Olsen (1999:806): „A survey of potential evidence seems to support the view that labiovelars did indeed preserve their labial feature long enough to leave a set of distinct marks on their surroundings."

These might include: **k*^{w} *> 0 /_ o* (Džaukjan 1967:106-108; Ravnæs 1991:110-111; Olsen 1999:126, 392, 528, 805-808; Beekes 2003:176); labiovelars passing the labial quality onto the following sonoric liquid leading to *uR* or *oR*, i. e. **g*^{w}*rh*$_{2}$*-mno- > *kurawn- > krōn-k*^{h} 'religion, faith'. In a similar fashion, **g*^{w}*rh*$_{3}$*-dlo-* gave Slavic **gurdla-* (Russian *горло* 'throat') as opposed to the expected vocalisation *CiRC* (also Bičovský 2017a:42).

As for the possible distinction between the two non-palatal velar series before **y* and/or front vowels, already „Pisani (1950) pointed out the greater effect of palatalization on labiovelars... as opposed to plain velars..." (Olsen 1999:805-806). Nowadays, the majority of authors conclude that plain PIE velars had not undergone palatalization by the old Armenian stage at all (Schmitt (1981:64); Beekes (2003:177-179); Kümmel (2007:311, 324-325); Martirosyan (2010:711)). The explanation via numerous cases of levelling or stating ad hoc conditions is violation of Occam's Razor, while absence of palatalisation in plain velars is a more simple explanation that requires fewer rules; see further Džaukjan (1982:57-60); Ravnæs (1991:135-141); Job (1995:292).

2.1.1. **k*^{w}*y > č*^{h}

a) PIE root **k*^{w}*yeu-* 'to set in motion' found its way to Armenian through three derivations. In all of them, the initial cluster **k*^{w}*y-* is reflected as *č*^{h}*-*.

Č^{h}*u,* gen.-dat.[4] pl. *č*^{h}*uoc*^{h} 'departure; journey; expedition; army' should be traced back to **k*^{w}*yu-tó-* 'movement' (Olsen 1999:41, 783, 849) instead of the older reconstruction **k*^{w}*yu-ti-,* in the light of the PIE **-to-* participles continued as Arm. *o*-stems (Olsen

[4] Gen. and dat. forms are actually syncretic in all OArm. noun paradigms, both in sg. and pl. (Matzinger 2005:6). For the sake of simplicity, they will be referred to as gen. forms in this thesis from now on.

1999:37-41). The parallel formation can be seen in Skt. *cyutá-* 'moved'. Godel (1975:71), however, does not see the reconstructed **-ti-* problematic: „...the original *i*-inflection, preserved in *bard, bay, awt'...,* has been substituted by the *o*-inflection, the latter being felt regular in monosyllables of the C + *i* or *u* type..."

Aor. *č^{h}og(a)-* (suppletive to prs. *ert^{h}a-),* as in *č^{h}ogan* 'they go' is derived from **č^{h}ogánt^{h}o < *k^{w}yéw-nto* as analysed by Klingenschmitt (1982:277). He does not explain the *-o-* in the stem morphologically, but as a regular rounding of pretonic *e* before **w.* This is however not accepted in Olsen (1999:32 fn. 58). *Č^{h}uem* 'I set off', aor. *č^{h}ueac^{h} < *k$^{(w)}$yeu-,* Martirosyan (2010:547-548); cf. Godel (1975:82).

LIV (394-395) proposes an initial labiovelar for the PIE root clearly based on Armenian evidence: „Wegen der Palatalisierung in arm. *č'ogan* (mit *č'* < **k^{u}i̯*° gegenüber *c'* < **ki̯* in *lowc'e-...)* und in alb. *syen...* wahrscheinlicher als traditionell angesetztes **ki̯eu̯-* ..." In this work, two different outcomes for **ky* vs. **k^{w}y* are defensible, and yet an entirely different account for the form *lowc^{h}em* 'I kindle' is mentioned (see the section on **k̂y > c^{h}* below). But there is risk of circular reasoning here, as the pertinence of this Armenian etymon to this root seems to rely exactly on the support of this sound-correspondence, which, as is usual for Armenian, does not depend on a very large cognate group.

b) Arm. *ač^{h}k^{h}* 'eyes' is suppletive plural for *akn* 'eye'.

In the secondary meaning 'gemstone', the declension of the word is the same in singular, but has an alternative, regularly formed plural paradigm of nom. pl. *akank^{h}*. Cf. Georg. თვალი *t^{h}vali* 'eye; gemstone' that on the contrary shows irregular inflection both in the singular and plural paradigms from the weak stem for the meaning 'gemstone' (nom. pl. *t^{h}vlebi* etc.), while the secondary regular inflection is associated with 'eye(s)' (nom. pl. *t^{h}valebi* etc.).

Since long *ač^{h}(-k^{h})* has been reconstructed as a dual formation from the PIE root **h$_{3}$ek^{w}* 'to see', i. e. nom.-acc. du. **h$_{3}$ók^{w}-ih$_{1}$ > *ak-ya* parallel to Proto-Gk. **-ye* > ὄσσε (NIL:371). Unfortunately, **ih$_{1}$* does not have much of a persuasive evidence for developing into a diphthong *ya* in Armenian (Olsen 1999:171).

Alternatively, from the gen. sg. **h$_{3}$k^{w}-yéh$_{1}$-s*; in Matzinger (2005:3): **h$_{3}$k^{w}-ih$_{1}$.* Cf. Godel (1975:82), Martirosyan (2010:98-99); Clackson (1994:46) on the dual formant *-ih$_{1}$* in various Arm. forms.

In compounds, the development points to *k^wy > $č^h$ as well: e. g. *vayelowč^h* (Olsen 1999:811) < **-o-h₃k^{w}yo-* (if not, the *-owč^h* might be an allomorph of *-ič^h,* cf. the next section.)

c) One of the Old Armenian verbal agent noun suffixes, *-ič^h* (Olsen 1999:474-480), could be connected with (predominantly) nomina agentis suffixes in two other IE branches, one of which is Slavic.

Suffix **-ačь* is reconstructed for Proto-Slavic (Matasović 2014:119), rather rare in Old Church Slavonic, but common later in several languages as a productive suffix for nomina agentis (one of the exceptions being Czech *vypínač* 'switch; power button'), incl. one out of the over forty different masc. suffixes for nomina agentis in Modern Russian, e. g. Russian *трубач* 'trumpet player', cf. Serbian *trùbāč*.

A similar suffix *-ičь* can also be found in OCS, e. g. *kotoričь* 'fighter' (though probably not derived from a verbal stem, but from the n. *kotora* 'battle'). However, Matasović (2014:120), sees this suffix as an analogical development in South Slavic to form agent nouns from verbal forms ending in *-iti*.

According to Vaillant (1974:323-326), the **-ačь* suffix should not be traced back to PIE at all. He suggests a Turkic borrowing of the suffix in words such as Osman Turkish *dilmač,* Cuman/Kipchak *tylmač* – Old Russ. *тълмачь* 'interpreter', cf. Modern Cz. *tlumočit* 'to interpret' (also Vasmer 2009:72).

Second potential cognate for the Armenian suffix is Albanian *-(ë)s* of the same function: *mbjellës* 'sower' < *mbjell* 'to sow' (Olsen 1999:476).

As for the possible contradictions to the PIE reconstruction for the Arm. suffix itself (Greppin 1974) due to their employment with roots of substratum origin, the same comment could be made about any other productive suffix in later Armenian, given the vast numbers of borrowings of, especially, Iranian origin.

Considering the evidence from Armenian and Albanian at the very least, it is best to trace both of these forms back to **-(i)k^w-yo-* (cf. Godel 1975:66, 82; Schmitt 1981:85; Ravnæs 1991:138; Olsen 1999:476).

d) After the presents in *-(n)č^{h}e-m,* the *-(n)č^{h}i-m* presents underwent analogical change in the light of the relation between *-em* active presents and their mediopassive *-im* counterparts (Džaukjan 1982:181).

Note Meillet's (1936:110) observation that „[l]a nuance de sens, inchoative" of the *-(n)č^{h}i-m* presents matches that of *-num*, which sometimes displays present formations from the same stems, as *t^{h}ak^{h}-č^{h}i-m* (aor. *t^{h}ak^{h}-eay)* and *t^{h}ak^{h}-nu-m,* both 'I hide' – for more examples, see Meillet (ibidem).

Both *-(n)č^{h}e-m* and *-(n)č^{h}i-m* are associated with one of the minor types of the strong aorists in *-eay* (for the overview of aorist formations, see Schmitt 1981:144-147; Kim forthc.:1-4).

They can be traced back to **-ye/o-* presents (according to Godel 1975:122, 124; cf. a formant **-k^{w}-ye-* suggested in Ravnæs (1991:138-139) not further explained), compare OCS *znaj-ǫ* 'I know' < **ĝneh$_{3}$-ye/o-* and Arm. *čanač^{h}e-m* 'I know'. Originally, Meillet (1936:109) found parallels in Gk. -σσω and Attic -ττω formations.

Incidentally, the assimilated Anlaut in *čanač^{h}e-* from **canač^{h}e-* is an example virtually universally agreed upon (Džaukjan (1982:181); Clackson (1994); Holst (2009:116-118); LIV (168-170); Klingenschmitt (1982:67-68); nevertheless, the alleged assimilation is perplexing to me in three respects: why the change in the initial consonant of the stem did not spread analogically into other derivatives from the same root, e. g. aor. *canea-;* why only partial assimilation – for Old Arm. *č* and *č^{h}* were surely two distinct phonemes (cf. the minimal pairs *čar* 'remedy' vs. *č^{h}ar* 'malicious'), though we might debate over the exact articulation and phonetic differences between the two; and why the feature taken over by the initial consonant was the place of articulation, not the aspiration, to lead to †*c^{h}anač^{h}e-*.

One could also note here, that if it could be proven that a substantial number of the roots in this class which have demonstrably PIE pedigree are roots of the *ultimae laryngalis* type, one could tentatively propose some kind of Verschärfung and in this respect do away with the necessity to propose a separate morpheme for the prehistory of Armenian. But for reasons of morphology (the R(é)-*je-* is not extremely well represented in LIV) and given the scarcity of Armenian material, it is doubtful that this rout could be pursued with any dependable results.

The alternative to reconstruct these presents with the **-sk̂e/o-* suffix faces multiple problems. First of all, the regular reflex of PIE **k̂e* appears to be **č^{h}*. In principle, since it is not an exception in the satem group, one could assume some influence, even depalatalisation after **s*, but the resulting neutral velar (at least that is often the result in other satem branches) should not have undergone any palatalization at all (as discussed earlier). In order for *čanač^{h}e-* 'to know' to come ultimately from **ĝnh$_{3}$-sk̂é-,* Clackson (1994:36-41) reflects upon the possibility of a development *RHT > aRaT, for which he

tentatively presents numerous evidence as well as counterevidence, and concludes that „[t]here is no easy way of explaining all these different developments; they are not determined by laryngeal quality or by word position.“ (Clackson 1994:40).

As far as the verbal suffix itself goes, Klingenschmitt (1982:84) assumes a complex sound law by which *-c^he- from *-$s\hat{k}e$- (Klingenschmitt 1982:67-84) would give -$\check{c}^he$- after any of the following environments, thus covering all the verbs in question: *R̥H.[5], *$ih_1 > i$, *$eh_1 > ē$, *$in > i$, *$ən > ə$.

The inherited verbs in -$\check{c}^he$-, as $ałač^he$- 'to ask', should be distinguished from $amač^he$- (Klingenschmitt 1982:68ff.) and others derived from nouns after the existing presents in -$\check{c}^he$-, as well as the onomatopoeic verbs only, like $p^hč^he$- 'to breathe' (LIV (481); further examples in Klingenschmitt 1982:69).

The verbs in -$\check{c}^him$ include: $erkč^hi$- < *dwey-, $t^hak^hč^hi$- < *pteh₂k-, $hangč^hi$- < *k^weyh_1-, $kanač^hi$- (Klingenschmitt 1982:69); remodelled denominatives include $matč^hi$- from *mawt*.

Cf. LIV (530), Clackson (1994:173-174); Olsen (1999:811, 813), Beekes (2003:201). „Whatever the ultimate background of this type, its expansion in connection with the -*eay* aorist belongs to the gloomy history of P[roto]A[rmenian].“ (Godel 1975:124).

e) Prs. $goč^h$-*em* 'I shout' synchronically does not belong to the group of presents in the previous section, since it forms weak aor. $goč^h$-ec^h-. However, it can also be connected with the PIE suffix -*ye/o-*: *wok^w-*ye*- (Godel 1975:82).

Martirosyan (2010:718-719) follows Pedersen (1906:364, 404) in postulating *$ty > č^h$, the only cited example for that alleged sound change is however $koč^he$-*m* 'I call' < *g^wot-*ye*- that is explained with ease as *koc^he- „influenced by the almost synonymous“ $goč^he$- in Olsen (1999:811) (cf. LIV:212).

For a recapitulation of the development of *-*ye*- presents in Arm., cf. Martirosyan (2010:756).

2.1.2. *$g^{(w)h}y > ǰ$

Phonemes *g^h and especially *g^{wh} belong to the least frequent ones in PIE. One of the few words that contain the desirable sequence *$g^{(w)h}y$ is *a*-stem $lanǰ$-k^h (Olsen 1999:65-66,

[5] The dot here indicates that the laryngeal is tautosyllabic with the preceding resonant.

763 fn. 5, 773, 811; Martirosyan 2010:304) 'breast; side' (pl. tantum), for which we have an abundance of IE cognates:

Lat. *levis,* Cz. *lehký,* Ved. *laghú-,* Eng. *light* of the same semantics; Russ. *лёгкое* and PGm. **lunganjō* 'lung' as 'light(weight) body organ'.

The Greek cognate ἐλᾰχῠ́ς 'little' points to the initial **h₁-,* that encounters puzzling development in Armenian. According to Olsen (1999:762-764), all three laryngeals become *a-* word-initially before consonants. It does not happen so in *lanǰkʰ* in contrast with *aloǰ* 'young she-goat' (see ch. 3.), if correctly from **h₁lmbʰih₂.* An explanation in Olsen (1999:763) is undoubtedly suggested with hesitation: „...dissimilation of **h₁-* against an old dual ending?“ Such distant dissimilation of **h₁* does not seem to occur in **h₁su-h₂uh₁-to-* > *ōd* 'air; breeze', where *ō* < **aw*. Overall, such alleged development of initial laryngeals looks tempting, but not unproblematic, and „the evidence is admittedly somewhat scarce, particularly concerning **h₁-...*“ (Olsen 1999:762).

Alternative account for the Arm. laryngeals is the „triple representation“ similar to that in Greek. From the viewpoint of that theory, expectations with regards to **h₁-* are not fulfilled in *lanǰkʰ* either, since it should have had an initial *e-* just like its Greek cognate. E. g. *eluzane-l* 'to extract' from **h₁leudʰ-,* where the initial *e-* is not prothetic, cf. Gk. ἐλεύθερος 'free', in Beekes (2003:185).

In order to account for both *ołork* < **h₁lergʷ-* and *lanǰkʰ* from **h₁lr̥gʷʰ-,* Martirosyan (2010:308) hypothesizes that „...in the PIE initial cluster **h₁l-,* the initial **h₁-* drops in Armenian when followed by a non-labial vowel, and yields *o-* (through assimilation) when followed by a labial vowel (in this case the **l* is realized as a dark lateral *ɬ*)...“ Also Martirosyan 2010:714.

Whichever explanation is better, the PIE reconstruction seems to be most plausible in the shape of **h₁lr̥gʷʰ-yeh₂-*.

(It is perhaps noteworthy that there suggests itself another plausible cognate which, if genuine, would reduce the number of good examples in this group further. The etymological group related to Cz. *ledví* (Derksen 2008:276) 'loin' or Latin *lumbus*, if derived from a *yo*-stem by-form to **lndʰw-yo-* (as is in fact the Slavic collective itself, albeit with *e*-grade root vocalism) better than the apparently original *u*-stem noun, would only require a simplification of **dʰwy* to **dʰy.* It would develop into Arm. *lanǰ-* with the added advantage of closer semantic match (while **lendʰ* is everywhere connected to the body-region, the Germanic cognate replaced the PIE derivations of **pleu* 'float' present in Slavic, Greek, Italic and Indo-Iranian and therefore probably old). The Germanic shift

would have to have happened twice in two branches independently. The problem with laryngeal Anlaut would thus be reduced as well. As always, it has to be stressed that I rely on mere phonetic plausibility and cannot provide further undisputable example of this sequence, though see 2.2.1. for a suggestion by Olsen.)

2.1.3. *$*g^wy > č$*

From the palatalization of *$*k^{(w)}$* and *$*g^{(w)h}$* we now come to the peculiarity of *$*g$* and *$*g^w$*. Many an instance of medial velars and labiovelars escaping palatalization before front vowels in Armenian lead to the general assumption that these were actually never palatalized just like in Greek: e. g. *kin* 'woman' < *$*g^wenh_2$*-. Cf. Olsen (1999:619, 806, 808); Ravnæs (1991:136-138, 139-140); Martirosyan (2010:711); Kim (2016b).

a) The wide-spread PIE suffix *-*yo*-, though only traceable with certainty in half a dozen relics in Armenian (Džaukjan 1982:132; Olsen 1999:25-26, 829-831) by itself (not counting the Sieversian alloform *-*iyo*-, or secondary derivations), gives valuable evidence for **y* in various contexts.

One of such forms could be *murč* 'hammer', with the vṛddhi proto-derivation **mōrg-yo*- suggested by Džaukjan (1987:139). However, no root **merg*- with serious IE data exists to support such a reconstruction.

PIE **merk*- (LIV 435 fn. 1) gives Ved. *marcáyati* '(he) damages', and Kloekhorst (2008:647) connects this with *markiu̯e/a-^{zi}* 'to reject' < **mṛk-ye/o*-. In order for the Arm. *murč* to join in, though *-*k* + **y*- could not have given -*č* here, Olsen (1999:25) brings our attention to „an original nasal present connected with the root as may be deduced from Av. *mərəŋčaitē, mərəŋgəduiiē, mərəŋgəidiiāi* (root *marək*- 'kill, destroy').“

At first, this explanation might seem ad hoc, but can very well be in line with our knowledge of Arm. historical phonology. A preceding -*n*- in Armenian would stop the original *$*k^{(w)}$* from palatalising (cf. Kortlandt 1980:100; Martirosyan 2010:711) and leave a voiced plosive, as in the famous *$*penk^we$* > *hing* 'five', not †*hinč^h*. One can imagine a similar chain of events that eventually lead to *murč:* certain derivation from **merk*- with a nasal infix prevented palatalisation to *č^h*, and possible **morg*- was then generalised soon enough to undergo regular palatalisation *g* > *č*.

Semantically, this works as long as we do not find it problematic to define 'hammer' primarily as the device of damage or mutilation – cf. Lat. *murcus* 'mutilated' from the same stem.

b) It is admittedly attractive to connect Arm. *a*-stem *lič,* gen. sg. *lči* 'lake, pond' of unclear derivation (Olsen 1999:69-70) with the unverified root **leg-* or **leĝ-* 'to drip', otherwise supposed solely for Germanic and Celtic (in LIV:397). The Arm. evidence would definitely point to the stem-final plain velar.

A coll. **lēg-ih₂-* > **lēg-ya-* is a suitable proto-form both phonologically and semantically (see Olsen 1999:830).

c) There have not yet occurred a satisfactory explanation for the descent of the Arm. sufix *-ič* used with merely a small group of nouns that bear common semantics of „biting or stinging animals/insects or plants“ (Olsen 1999:462).

-ič < **-ig-yo-,* maybe also *-uč* < **-ug-yo-,* with possible diminutive function, cf. Gk. –ιγ-, -υγ-. This is uncertain, according to Olsen (1999:811, 830).

2.2. Alveo-dentals + **y*

In two-consonant clusters before **y,* there seems to be universal agreement on the fate of **d^hy > ǰ* side by side with variety of opinions on the development of the other two PIE dentals in the same phonological context. Especially confusing is the evidence for *c^h* (Godel 1975:82; Ravnæs 1991:168-169; Olsen 1999:810-811) vs. *$\check{c}^h$* for **ty* (Beekes 2003:1999; Martirosyan 2010:718-719).

I am inclined to see that the dentals would result in the same affricates before **y* as before the front vowels. This view has been present at least since Godel (1965:24-26), who „claim[s] to be held responsible" (Godel 1975:82 fn. 66) for defining this palatalization and collecting several key examples.

2.2.1. **d^hy > ǰ*

a) *O*-stem *mēǰ,* gen. sg. *miǰ-oy* 'middle' presents such a convincing etymology as to leave scholarship on Armenian historical phonology without a shade of a doubt that PIE **d^hy* must give Arm. *ǰ,* if based at least on that single word.

It is being reconstructed as **méd^h-yo-,* and the same formations are found all across PIE: OAv. *ma^{i}diia-,* Ved. *mádhya-,* Lat. *medius*, Gk. μέσος, Cz. *mezi* 'between', Gm. etc. For the vocalism *ē* ~ pretonic *i* instead of the expected *e,* see ch. 4. 1.

Also Godel (1975:82), Džaukjan (1982:132), Martirosyan (2010:466-467), Olsen (1999:811).

b) Another *o*-stem *gēǰ,* gen. sg. *giǰ-oy,* adj. 'moist' and subst. 'moisture' synchronically mirrors *mēǰ* in paradigms.

It has been reconstructed as **g^{wh}oyd^h-yo-,* cf. Russ. *жидкий* 'moist' (Vasmer 2009b:53); Martirosyan (2010:210-211). Another proposition **g^{h}eyd^h(w)y-* is briefly mentioned in Olsen (1999:811). Note that **wy* would give *ǰ* regularly just like **d^hy* (see ch. 3).

Interestingly, the Biblical usage of *gēǰ* rather points to the meaning 'thirst': Bible (Jeremiah 48:18): „Էջ ի փառաց եւ նիստ ի գիջի...", „...come down from [thy] glory, and sit in thirst..." (King James Version).

In this context, *i giǰi* 'in thirst' should obviously be interpreted as 'the want of the commonest necessaries' (Jamieson-Fausset-Brown Bible Commentary)

Alternatively then, *$g^{wh}ed^h$- 'to wish', Cz. *žádat* (LIV 217) could have produced a **yo*-stem *$g^{wh}d^h$-*yó-,* one of the cogitable accounts for the initial non-palatalised *g*-. Semantically, a noun 'wish, desire' shifts to 'thirst' or vice versa in a number of languages. Cf. Russ. *жажда* that underwent a cyclical semantic change: from 'wish' (cf. Cz. *žádost* 'request') to Modern Russ. primary meaning 'thirst' to metaphorical usage as in *жажда жизни* 'lust for life.'

c) Adjective *aǰ* 'right' (as in the right counterpart of hands, ears and other pair body parts) displays case forms of both *o*- and *u*-stems.

While the latter presumably comes from an adjective *seh_2d^h-*ú-,* Gk. parallel to Skt. *sādhú-,* its stem affricate must be levelled from some form in *-d^h-*y-,* e. g. *seh_2d^h-*yo-*.

Also Džaukjan (1982:132), Martirosyan (2010:99-100).

„A similar hesitation between *o*- and *u*-stem is found with the etymologically obscure antonym *jax* 'left', so it is of course not quite certain that the inflectional abnormity went from *aǰ* to *jax* and not the other way round.“ (Olsen 1999:186)

d) Highly disputable are origins of the older loc. sg. marker -*oǰ,* possibly from *-od^h + *y*-, cf. Clackson (1994:60-68); Olsen (1999:173); Matzinger (2005:106-111). Compared with Gk. loc. -oθι at least since Meillet (1936:37).

I argue that the proto-form could not have undergone the same epenthesis as in ch. 4, because †-$o^jǰ$- would give †-$ējǰ$- (for the established change of the diphthongs falling together see Schmitt 1983:52).

Alternative account for the ending in Olsen (1999:812) relies on the hypothetical contextual change *Ny > *oǰ,* that can actually come from two bits of evidence only, both loc. forms *knoǰ, mioǰ* (on the discrepancy with *aloǰ,* see ch. 3.); cf. Clackson (1994:63f.)

For gen.-dat.-loc. *knoǰ,* nom. sg. *kin* 'woman', PIE form *$g^wn̥h_2ih_2os$ is postulated, and a step in-between **kn̥ioh* (Olsen 1999:812) with the inscrutable sequence of three sonoric segments, then **kn̥yoh* > **kǫyoh* > **koǰ*. In a similar fashion, **smiah₂s* > **sm̥yah₂s* > > **(h)m̥yah* > **ǫyah* > **oǰ* (ibidem) for *mi* 'one', gen.-dat.-loc. *mioǰ*. In both instances, the etymological outcomes are claimed to then being levelled after their nom. sg. forms. **y* could positively lead to *ǰ* after the nasals, or even nasal vowels in these forms, but it seems a little far-fetched to posit *ǫ* in both cases instead of *an, am* as the outcome of syllabic nasals.

2.2.2. **dy > c*

a) One of the notorious PIE areas for consonants to come into clusters is on the morphemic boundary between the root, that as a rule would end in a consonant, and the suffix, that often would have a consonant at the beginning (Bičovský 2017a:135). As one of the potential sources of examples for **-C+y-,* there are various verb formations in **-ye/o-*.

One of the pioneer examples of the sound change **dy >c* was *mucane-l* 'to introduce' < **moud-ye-* by Godel (1975:82), cf. the regular *t* < **d* in *mtane-l* 'to enter, to penetrate', *e-mowt* 'he entered'; pl. tantum *mut-k*^{h} 'entrance'.

Also, **sr̥h₂ud-ye/o- > aracel* 'to feed, to graze' (Olsen 1999:811), contra section 2.3.2.

b) To reconstruct Arm. *cal / cał* 'fold, wave, ripple' as **dih₂lo-* (suggested by Olsen 1999:771, 811) does not appear suitable on the stage of PIE already, in terms of the zero grade for such a derivation from **dei(h₂)-*.

As for later, it is crucial for this etymology to accept the Arm. vocalisation of internal laryngeals and subsequent breaking of high vowels plus laryngeals (except for **h₁*) into diphthongs, in this instance **ih₂ > ea*. This alleged development is similar to the Greek and Tocharian treatments of **i* or **u* with laryngeals, and is not universally accepted (pro: Olsen 1999:770-773; contra: Clackson 1994:41-49 incl. the history of research). Moreover, if it did occur at all, it must have occured before the shift **d* > **t* (Ravnæs 1999:148) for this chain of events to work, for PIE **ty* would have given *c*^{h} (cf. the next section).

Apart from that, PIE **dy* (possibly through PArm. **ty) > c* takes place long before the creation of alternations *ea* [ja] ~ *e* (on chronological stages 40b and 53b respectively, according to Ravnæs 1999:178, 180) – then, after the loss of final syllables, we would indeed get *cal.*

The etymology is semantically justified if the ripples left on the surface of water are seen as 'shining / sparkling'. The cognates supposed to support this hypothesis in Olsen (1999:771) are Greek ζάλη and ζάλος 'whirlwind, whirlpool' that otherwise have no accepted (PIE) etymology, cf. Beekes (2010:496).

In the dictionary by Martirosyan (2010), the lexeme is not included (*cał-ik* 'flower' (dimin.) and *cał-r* 'laughter, joke', *ci-cał* 'laughter' are probably related to each other, but not to the 'wave' word, see Martirosyan 2010:336-338, 340-341).

2.2.3. **ty > c^h*

I argue for **ty* > c^h, in alignment with **te, *ti* > $c^h e$, $c^h i$. Outcomes of dentals with **y* thus merge together with the respective outcomes of clusters with palatovelars (see below) – possibly due to close places of articulation of these two occlusive series to each other.

a) Origins of the aor. *anc^h-i-,* prs. *anc^h-an-e-* 'to cross' are disputable. While Klingenschmitt (1982:160, 162, 214, 269 and elsewhere; cf. LIV:134-135) favours a derivation from **d^{h}eg^{wh}h$_2$-* placed on a problematic sound change **d^{h}g^{wh}-* > **g^{wh}d^h-* > **g^{wh}b-* > c^h, he also mentions (Klingenschmitt 1982:187) the alternative **snt-sk̂e/o-* which did not have to give **ant-s-* but **ant-c^h-* followed by the rather inevitable omission of the [t] before [t͡s^h].

For the PIE root **sent-,* semantic shift from 'to go' to 'to perceive' is assumed (LIV 533). It is known from the prs. derivation in Lat. *sentiō, sentīre* 'to feel' < **sn̥t-yé-,* which I would suggest as a possible antecedent for the Arm. verb, too.

Another option, also coherent with the palatalization before **y* outlined in this work, is **h$_2$anty-* by Olsen (1999:88, 611).

Cf. deverbative *i*-stem *anc^h-k^h* 'passage' and other derivations from the same root in Olsen (1999:88, 359 fn. 336, 460, 811).

b) The traditional reconstruction for prep. c^h- 'to' with acc. is **h$_2$d-sk̂-,* a derivation from more widespread **h$_2$éd-* > Lat. *ad,* PGm. **at,* PCelt. **ad* etc. Olsen (1999:811) suggests a continuation of PIE **poty-*.

c) Tentative examples include *k^{h}ec^h-* 'isolated' < **swet-yo-,* and more according to Olsen (1999:810-811), that shall be re-examined at another time.

2.3. Palatovelars + **y*

Even though „[i]t is more difficult to find reliable evidence...“ (Olsen 1999:811) for the clusters in question, we shall mention several most interesting examples. Palatalised reflexes of palatovelars with **y* in general seem to mirror those of dentals: **k̂y, *ty* >*c*^{h}; **ĝy, *dy* > *c*. Reliable evidence for **ĝ*^{h}*y* is yet lacking, but its outcome *ǰ (= *d*^{h}*y)* would fit into such an alignment best. On the other hand, one cannot hope for absolute symmetry in a phonemic inventory of any human language, note also the slight assymetry in the Arm. development of palatovelars in Anlaut and intervocalically.

2.3.1. **k̂y* > *c*^{h}

a) Meillet's suggestion to trace the verb *luc*^{h}*ane-,* aor. *luc*^{h}*(e)-* 'to kindle' back to a *-sk̂e/o-* present has encountered at least two contradictions.

Martirosyan (2010:312) points out that this reconstruction as opposed to others is not „assured by cognate forms.“ However, the proto-form he himself favours (Pedersen 1906; Beekes 2003:80-81), sigmatic aorist **leuk-s-,* lacks parallel formations from other languages as well, cf. LIV (419).

More importantly, *-sk̂e/o-* presents are typically formed from zero-grade roots, hence it should have been **luk-sk̂é-,* that does not match in the vocalism, although one can blame that on the analogical development.

The solution in Klingenschmitt (1982:193-194), causative **lṓwk-ye/o-,* is based on the assumption that *c*^{h} here is from secondary **k̂y /u_,* quite like the Arm. dissimilatory process of **uK*^{w} > **uK̂* – seventh stage in the Arm. relative chronology of phonological changes as listed in Ravnæs (1991:173); part of the second stage in Beekes (2003:208).

Originally, this example was proposed by Godel (1975:82).

The possibility of analogical formation after *mucane-,* aor. *muc(e)-* 'to introduce', as described in Klingenschmitt (1982:193) is untenable. Semantically, verbs for 'kindle' and 'introduce' do not form the grounds for analogical change.

b) The example of *boc*^{h}*-* " is not decisive, since there seem to be no means to determine whether it comes from **b*^{h}*ok-yo-* or **b*^{h}*ok-so-*. Cf. Olsen (1999:51).

c) PIE *-*sk̂-yo-* most probably gave Arm. adjective suffix denoting ethnicity *-ac^{h}i / -ec^{h}i;* cf. Olsen (1999:854).

2.3.2. **ĝy > c*

a) Preliminary evidence includes agent noun suffix *-ac* < **-aĝyo-,* „though that is not the only possible analysis.“ Olsen (1999:811)

b) The Arm. v. for 'to feed' *arace-l* might come from **treh$_3$g-* or **treh$_3$ĝ-* (LIV:647), the Armenian evidence pointing to the latter of the reconstructed roots.

2.4. Armenian dentals and velars overview

In the following table, the column on the very right shows the conclusion on the development of consonant + **y* clusters that we have come to in the previous pages. We compare these with the standard opinion on the development of the very same consonants via regular sound change, especially in Anlaut and intervocalically, as well as those consonants before front vowels. The overall picture of the developments of dentals, palatovelars and velars in these contexts exhibits partial symmetry.

regular outcomes [6]	palatalisation before front vowels[7]	in a cluster before *y*
**t* > *d;* VØV [8]	**t* > c^h /_ *i; e*	**ty* > c^h
**d* > *t*	**d* > *c* /_ *i; e*	**dy* > *c*
***d^h > *d*	***d^h > *ǰ* /_ *i; e*	***d^h*y* > *ǰ*

***k^w > k^h	***k^w > $č^h$ /_ *i; e*	***k^w*y* > $č^h$
***g^w > *k; c* < *u_*	***g^w > *č* /_ *i; e*	***g^w*y* > *č*
***g^{wh} > *g*	***g^{wh} > *ǰ* /_ *i; e*	***g^{wh}*y* > *ǰ*

[6] Standard outline in Godel (1975:73-77); Schmitt (1981:56-65).

[7] On the two waves of palatalisation with examples, cf. Džaukjan (1982:54-64); Ravnæs (1991:135-138).

[8] Cf. conclusions reached in the recent paper by Kim (2016a:162): „The famous Armenian consonant shift did not in fact affect all PIE voiceless stops, but only those in word-initial position or after another obstruent, crosslinguistically the most favorable environments for aspiration. The remaining instances were then lenited to voiced fricatives, so that e.g. PIE **t* (> *[d]) > *[ð]. These then reverted to stops after sonorants (e.g. in *mard*, *and**) and in pronominals (*dow, -d*), but *[ð] disappeared intervocalically, giving *Ø, **y*, or **w* depending on the identity of the neighboring vowels. Only for the position V__ r must a shift of *[ð] > *[β] be assumed, eventually producing new diphthongs in e.g. *arawr, hawr.*

The hypothesis presented here has the advantage of offering a unified, phonetically plausible account of all Armenian reflexes of PIE **t* and other voiceless stops, one which dispenses with the problematic and/or unnecessary assumptions of unconditional aspiration, "reversion" of voiceless fricatives to aspirated stops, voicing after sonorants but not vowels, labialization of intervocalic *[ð] > *[β] before back vowels, or *[ð] > *[j] in forms such as *č'ork', hark'*."

$*\hat{k} > s;\ c^h$	*$*\hat{k} > c^h$ / _ *$i;\ e$*	*$*\hat{k}y > c^h$*
$*\hat{g} > c$	*$*\hat{g} > c$ / _ *$i;\ e$*	*$*\hat{g}y > c$*
$*\hat{g}^h > j;\ VzV$	*$*\hat{g}^h > ǰ$ / _ *$i;\ e$*	*$(*\hat{g}^h y > ǰ)$*

3. Labials in clusters with **y*

There is a shortage of examples for the development of Arm. bilabials next to **y* for obvious reasons. Arm.**p* underwent massive lenition and loss in various phonological contexts (Schmitt 1981:56-58), and **b* is such a rare phoneme for PIE, that some even prefer not to reconstruct it for the proto-language at all, and the paucity of its reflexes in Arm. does not come as a surprise (Bičovský 2017a:36).

Let us then turn our attention to $*b^h$ that engages in peculiar changes in contact with **y*. I can not acknowledge any solid examples for the tentatively suggested regular development $*\underline{N}b^hy > ǰ$ as in Olsen (1999:66-67, 812): to my understanding, *aloǰ* rather illustrates the outcome of a cluster with the labio-velar approximant *w* (see in this chapter below), while *oroǰ* leaves too many questions unanswered.

A-stem *oroǰ* 'lamb' is connected with Gk. ἔριφος 'young goat', Lat. *ariēs* 'ram', OIr. *heirp* 'young goat', and thus traced back to $*(h)erb^h\text{-}ih_2\text{-}$ (Olsen 1999:66-67). The phonetic development is based on $*\text{-}ih_2\text{-} > ya$ and $*b^hy > ǰ$, neither of which is fully established, at least for now; apart from that, the initial sequence is even more disputable. The plausible distant assimilation of *oro-* from **ero-* (Olsen ibidem) still does not solve the puzzling, seemingly anaptyctic second *-o-*.

The logics behind the possible analogy to *aloǰ* (Olsen ibidem) remains mysterious to me. The assumed pre-form **erǰ-* would only share with *aloǰ* (probably from **alawǰ*) the final *-ǰ* (fairly common in Arm. elsewhere) and the semantic field of (young) domestic animals – we cannot be sure even of their potential similarities in inflection. Cf. a much better phonetically matching Arm. *erinǰ* '(young) cow' < $*(h)erin\text{-}ih_2\text{-}$ (section 5.1.). If words such as **erǰ-* and *erinǰ-* coexisted in the language, I doubt the motivation for making **erǰ-* formally more similar to *aloǰ-* of all the words in the lexicon. Admittedly, **eroǰ-* after *aloǰ-* would make their syllabic structure parallel, but speculations about *-oǰ* being synchronically reanalysed as some kind of a suffix denoting (baby) animals must be left aside considering that an arguably more prominent *-oǰ*, i. e. the old loc. sg. ending was present in the language.

As far as **wy* goes, the following examples illustrate the possibility of its development to *ǰ*.

a) Adv. and prep. *arāǰ* 'first, before, in front of'; n. 'front; beginning' of uncertain paradigm may be traced back to **pṛh₃w-yo-m* (Olsen 1999:196) as well as **pṛh₃w-ih₂-,* cf. Skt. *pūrvyá-* 'precedent, first'.

Note the skillful suggestion in HAB:245, 251 to explain the historically inappropriate *arā-* by folk etymology: *arā* + *aǰ* 'to' + 'right (side)'.

The regular outcome of **w* in Arm. is *g* in most environments, but clearly, there could not have been an instant change of the cluster **wy* > **gy*, whereby it would merge with the reflexes of PIE **gʰy*, for plain velars do not palatalise and we would expect a plain **g* vs. **gʷy* > *č* (cf. section 2.1.3.). We should assume that the intermediate stage was **gʷy* (merging thus with reflexes of PIE **gʷʰy*) which then proceeds towards *ǰ* regularly.

b) Word of unknown inflection *aloǰ* '(young) female goat' (see also section 2.1.2.) also has unknown origins. In Olsen (1999:67, 196, 762), proto-form **h₁lm̥bʰ-ih₂-* is suggested on the basis of the phonological and semantical links with Gk. ἔλαφος 'deer' and PGm. **lambaz.*

To keep such a reconstruction, a development **Ṇbʰy > *ǰ* is suggested. It is difficult to imagine this change happening in a single step, so a phonetically plausible process of such a change needs to be reconstructed based on what has been otherwise established for Arm. historical phonology. After **-m̥bʰih₂-* > **-mby-,* it would have only been natural if the two labials assimilated either in progressive or regressive direction (**-mmy-* / **-bby-*); the outcome *ǰ* from **y* would have more support after the resonant (cf. section 5.1.) than the stop, the vocalisation to *o* would however be bizarre either way.

I believe that the development could have taken a different course: the undoubted vocalisation of the sonoric **m* > *am* together with the equally established **Vbʰ V* > *-w-* (Schmitt 1981:58; Olsen 1999:211; e. g. *awel* 'broom', cf. Gk. ὄφελμα (id.) < **h₃bʰel-*) and (admittedly later) *aw* > *o* would have given: **h₁lm̥bʰ-ih₂-* > **ḥlqb⁽ʰ⁾ya-* > **alawǰ* > *aloǰ.* This is however tentative, for the relative chronology of the changes in question must be carefully reexamined first.

c) Adj. *olǰ* 'whole, sound' is best to reconstruct as **solwyo-* (Olsen 1999:26, 197, 274, 519, 798, 811, 830) > **(h)olǰ(o)-*. Other possibilities undermine what is known about the development of after-C **w (*solwos)* or epenthetic *y* after **oR (*solyo)* – cf. 4.2.

4. **y*-epenthesis

4.1. Resonants in Armenian

The two nasals, arguably the most stable PIE consonant segments, are generally preserved in Armenian (Schmitt 1981:67-68) with the following notable exceptions: **m* and **n* > 0 /_*s* (Schmitt 1981:67, 68; Martirosyan 2010:708); **-m#* > *-n#* (Schmitt 1981:67; Ravnæs 1991:99-100; Olsen 1999:794); possibly **-m-* > *-w-* (Clackson 1994:96-97, 134; Martirosyan 2010:723).

In Arm., PIE **r* is kept in most contexts (Godel 1975:78-79; Schmitt 1981:68-69) and originally alternates with *r̄* /_*n* (Godel 1975:14; Meillet 1936:42-43; Schmitt 1981:45-46); having said that, these two are not in full complementary distribution.

The regular outcomes of the other liquid **l* is *l* (Godel 1975:78-79; Schmitt 1981:69), though it also had an allophone *ł,* later a phoneme by itself, under conditions not yet fully explained. For our discussion in the next section, it worth mentioning that l > ł / C_ in the prehistory of Arm., but after *y,* it is always *l* (Godel 1975:10; Ravnæs 1991:93; Kümmel 2007:271). Sometimes, *ł* is also an irregular outcome of **r* through distant dissimilation (Meillet 1936:43; Schmitt 1981:31, 69; Ravnæs 1991:87).

The four resonants vocalize in a syllabic position into *-am, -an, -ar,* and *-al* respectively; other possibilities for their vocalisation seem so far uncertain (Godel 1975:73; Schmitt 1981:52-53; Ravnæs 1991:96-99; Clackson 1994:51).

4.2. **aRy > ayR, *oRy > oyR*

Arm. words like *ayr* (both 'man' and 'cave') ultimately from **h₂nēr-* and **(h)antēr-* might evoke an impression that an unetymological *y* was inserted into these word forms – a sound that apparently was not there before, and that sometimes could have been triggered by different other sounds in the respective forms.

However, in order to be more precise, we should realize that consonantal epentheses, and the instances of semivowel epenthesis specifically, are not about random sounds appearing in different phonological environments out of nowhere. All known examples of [j]-epenthesis before a consonant imply regular palatalisation in the language. A typical non-segmental companion of those palatalised consonants is the glide, that can later become a full segment due to the wrong timing of articulatory gestures.

The development of *y* in another notorious Arm. example, *ayl* 'other' < PIE **ál-yo-* and similar instances is suggested to be called epenthesis by some (Pedersen 1906:404-411; Ravnæs 1991:32-39; Olsen 1999:795-801), while others prefer the terms metathesis *(*ly > yl),* or anticipation of **y* instead (Martirosyan 2010:733-734). First and foremost, let us cope with the terminological confusion. As we know from examples in various languages, the developments labelled as metatheses may only superficially look as a swap of two sounds, but never consist of a single change, but rather of a series of steps that differ from one example to another, though all eventually result in the change in order of two segments.

To come back to the **ál-yo-* example, the next steps ought to have involved palatalisation *[alʲ(j)o] > change in timing *[aʲlʲo] > ellision of the off-glide *[aʲlo] > segmentalisation of the on-glide resulting in *[ajl(o)] > *ayl.* Certainly, some nuances of such an undocumented development can only be speculated about. Alternatively, one could envisage intermediate steps of a different manner: *[alʲjo] > assimilation to *[alʲlʲo] > simplification of the geminate *[alʲo] > unpacking resulting in *[aʲl(o)] > *ayl.* However, the former chain of events is more plausible and cross-linguistically supported.

In any case, this change goes along with the well-known crosslinguistic tendency for the segments in a consonant cluster to decrease in sonority. Also, all the examples of Arm. clusters in de Lamberterie (1992:245), i. e. liquid + nasal, nasal + fricative or stop etc., follow this tendency, while „[l]es autres groupes sont résolus par l'insertion d'un *ə* devant la consonne finale" – one of the examples being *skizbn* 'beginning' /əs-kiz-bən/, where however only the final cluster can be explained in these terms.

Further, see Hock (1991:110-116, 117-126); Kümmel (2007:265-266) for examples of metathesis and various kinds of epenthesis and anaptyxis in other IE languages.

No combination of *ył* is attested in OArm. Interestingly enough, in 1911 Meillet (see Ravnæs 1991:93) recognized that in some older manuscripts, instead of the usual letter for *l* after *y,* an otherwise unused sign is written: the *ł* grapheme with unclear diacritics above. This indeed could represent a third lateral sound, later fallen together with [l], and I would find it very probable to be the very palatalized [l^{j}] that I argued for above.

Otherwise, manuscripts do not indicate a presence of any [l^{j}] in the later stages of Arm. (Cf. 3.2.b.) In the relative chronology by Ravnæs (1991:178), the necessary palatalization of resonants naturally preceds Ry > yR, which is placed on the timescale as change 40a, and is supposed to have happened simultaneously with the palatalization of dentals (cf. section 2.2.), as well as **y > ǰ* after some resonants (cf. 5.).

It is necessary to further examine the distribution of that peculiar grapheme to see, whether it is not by any chance written also in words with *yl* from other source then **ly,* e. g. *gayl* 'wolf' from **way-lo-* (Olsen 1999:34, 848), naturally with no reason to suppose [l^{j}] in its prehistory. It is noteworthy that a pre-form „**u̯l̥io-*“ is mentioned in Martirosyan (1999:197) without being explicitly rejected; **way-lo-* is later debated as the preferred reconstruction. Also, according to Martirosyan (1999:196), *gayl* is „spelled *gaył* in the famous palimpsest of Agat‘angełos“ (i. e. his Պատմութիւն Հայոց from the 5th century), but it is too soon to draw conclusions from these brief pieces of information without further research.

In the light of the preceding discussion, I argue for epenthesis as the best term to cover the Arm. changes in this section, and assume that they ought to have involved the same pattern simplified as: VRj > VR^{j} > V^{j}R^{j} > VjR. From the eight pieces of classical evidence for the *y*-epenthesis collected since Pedersen (1906:404-408) we have (cf. Olsen 1999:795-796):

ayl 'other; different' < **ál-yo-,* cf. LIPP:18-27 on **ál-* vs. **ol-* (LIPP:592-594); cf. TB *ālo,* Gk. ἄλλο, Lat. *alius,* Eng. *else,* OIr. *eile*;

dayl 'beestings' < **daly* < **d^{h}ḷ$_{1}$ly-,* cf. Alb. *djalë* 'boy', Latv. *dêls* 'son', from **d^{h}eh$_{1}$(i)-* 'to suck'; also Arm. *die-m,* aor. *diec^{h}i* 'I suck, I am breastfed';

p^{h}ayl 'shine, splendour' < **p^{h}aly* < **sp(h)ḷy-* from the uncertain PIE root **(s)p(h)el-,* cf. Lat. *splendēre* 'to shine', Skt. *sphuliṅga-* 'spark';

sayr 'edge' < **sary* < **k̂ḫ₃ry.-* from **k̂eh₃-* 'to sharpen'; cf. Lat. *cōs, cōtis* 'sharpening stone', Ved. *śitá-* adj. 'sharp', YAv. *saēni-* 'tree-top' ; also Arm. *sowr* adj. 'sharp'; n. 'sword' < **k̂oh₃-ro-* (NIL:411-412);

jayn 'voice' < **jany* < **ĝʰwn̥y-* 'to sound; to ring', cf. Russ. *звон* 'ringing, chime', TB *kene* 'tune';

layn 'wide' < **la:ny* < **platany* („**-l̥-* revocalized (*al* → *la*) after the full grade **pleth2-*“, Olsen (1999:767 fn. 11) < **pl̥th₂n̥y-*, cf. Gk. πλάτανος 'plane tree'.

There are also few examples where the once palatalized segment [ɲ] that gave life to the future separate segment [j] later underwent absolute assimilation to that [j]:

**h₂nḗr* 'man' > PArm. **anēr* > **anír* > **aʲɲ(i)r* > **a(j)j(i)r* > *ayr;* vs. **h₂n̥rós* > *arn̄;*

**(h)antēr* gives homonymous *ayr* 'cave', see the regular change described in Olsen (1999:92): unaccented *-Vnt- > -Vn-; the supposed intermediate stage **antʰa(y)r* in Martirosyan (2010:734) is less clear; cf. Clackson (1994:98).

One might tentatively suggest that the reason why [ɲ] lost its nasalisation, i. e. became [j], in these two examples unlike in *jayn* or *layn,* is due to the fact that *[j] was secondary this time, and the change in fact must have happened later then the wave of regular epenthesis above, especially considering it was only after the narrowing *ē* > *i*; or perhaps due to its position before *i* in the second syllable of the proto-form.

Similar development of the (mostly) temporal adverbial suffixes *-ayn* < -*[aŋɲi] < **-anini* < **-n̥tini* (Olsen 1999:280-286, 795; not all Arm. words in *-ayn* belong to the same type of formation though, cf. *layn, orovayn* above) and (again mostly) temporal adjectival *-ayin,* gen. sg. *-aynoy* < **-aninoy* < **-n̥tinosyo* (Olsen 1999:287, 795) are yet to be clarified.

More possible evidence is outlined in Olsen (1999:795-796), out of which the following examples look faultless:

kʰayle-l 'to take steps' < **kl̥(h)ye/o-,* also *kʰayl* 'step';

kaylak 'drop' < **kaly-* + diminutive suf. *-ak-*[9] < **gl̥(h)y-,* cf. Skt. *gulikā-* 'ball; bead; pearl';

[9] On the many usages of the suffix, see Olsen (1999:240-255).

suf. *-eleayn* < **-e.liany.-* < **-eliHni-* in *lr̄eleayn* 'in silence; secretly'.

A not unproblematic suggestion (ibidem) worth reflecting upon is also **k^{w}ruH.tn̥y-* that could via **-uwaþani* give *orovayn* 'belly; womb' – doubtful are the developments of the velar, the laryngeal + alveodental cluster, and „the slightest adaptation of the vocalism (*or[u]u̯-* > *orov-*) to match the actually attested form.“ (Olsen 1999:285 fn. 188).

Furthermore, according to Olsen (1999:796), the expected epenthesis is missing in a couple of words. These include examples with the original **-i-: sal* 'anvil' < *„ *k̂ahli-“; ban* 'word' < **b^{h}ah$_{2}$ni-; bard* 'burden' < **b^{h}r̥ti-; tōn* 'feast' < **dapni-;* as well as *-i-* that would come from **ē* < **e: aniw* 'wheel' < **h$_{3}$nēb^{h}o-*. Evidently, these examples miss the point, since non of them aims for a proto-form with a **y* in a clearly non-syllabic position, and they do not seem to fit in terms of their syllabic structure. Anyway, it is alway true that without going deeper into the development of each and every one of the examples or counterexamples above, one could in theory always attribute the epenthesis in the former or the lack of it in the latter to analogical levelling of some kind.

Relating to other possible examples, *sayl* 'wagon' could have indeed originated from an unspecified pre-form **satil-,* and combined with an ending give **sat^{j}lV-* > **saytl* > *sayl* after the simplification of the cluster. Cf. Olsen (1999:956) for a possible loanword.

Even though one could presume that the epenthesis might have affected all four proto-resonants in the given context (Olsen 1999:797), and some evidence for **Vmy* > *Vym* in Arm. might come up during future research, the absence of it is hardly surprising in phonetic terms. Palatalisation is naturally tongue-articulated, which contradicts with the articulation of [m] and other labials, thus making palatalised non-linguals cross-linguistically exceptional.

One might observe, that the examples above appear to be restricted to the context after *a*. Godel (1975:87) defines this change for **aRy* > *ayR* only, as opposed to **VRy* > *VRǰ,* where V [– open], see the next section. Similarity to the pre-dialectal Gk. epenthesis after *a* vs. after other vowels only later (cf. Olsen 1999:795) is important to take into consideration, but not as legitimate supporting evidence.

However, I see no need to exclude instances of **oRy* > *oyR* here, especially since there is no convincing evidence for **oRy* > *oRǰ.* Again, more or less secure classical examples come from as early as Pedersen (1906:406), cf. Olsen (1999:796-797):

boyl 'assembly, company' < **b^{h}oly-;* cf. *bolo* 'entire' (possibly, loaned into Georg. *bolo* 'last');

hoyl(k^{h}) 'assembly, group, troop' < **hewli-* < **pelh$_{1}$-;* cf. Martirosyan (2010:417-418);

nšoyl 'light' < **k̂ew-*, cf. *šoł;*

t^{h}oyl, as in *t^{h}oyl arnel* 'to give permission' < **tolh$_{2}$i-*.

4.3. **y*-epenthesis before obstruents

Apparently, the epenthesis did not affect palatalized resonants only. Similar development is assumed in the impeccable explanation of *ayg* ‘morning‘ in Martirosyan (2010:54-56, 734-735) after the initial idea in Clackson (1994:223 fn. 98), where *y* could arise from secondary thematization in **-yo-* (the loc. sg. form being the starting point):

**h₂us-s-i* ‘dawn‘ > **aw(h)i* → **awyo* > **agʲo* > **ayg(o).*

Next, we find the word for ‘woman‘ *ēg* (gen. sg. *ig-i*) of unknown origin being used as a new evidence in favour of regular #**y-* > #0- in Martirosyan (2010:276) introducing the same process of „anticipation“. It is more coherent with the developments presented in this work to reconstruct a slightly different intermediate steps:

**yews-ih₂* > **ew-ya* > **egʲa* > **eyg(a)* > *ēg;* for the purported PIE root, cf. Skt. *yóṣā-* 'young woman'.

It goes without saying, that this etymology does not help to postulate a regular change for the initial **y,* cf. section 5. 3.

I find it suitable to incorporate here words that share the odd vocalism *ē* ~ pretonic *i* instead of the expected *e,* for they most probably developed a secondary **ey* diphthong (cf. this development **ey* > *ē* at the stage 59 in the relative chronology by Ravnæs (1991:181)) with **y* coming from the very same segmentalization of a palatalized consonant’s glide.

This theory has started at least since de Lamberterie (1978:262ff.); cf. Beekes (2003:203); Martirosyan (2010:705); Godel (1975:87). Nevertheless, „a development of **-e-* > *-ē-*... as a consequence of the adjacent palatal“ (Olsen 1999:911) can not be the fully satisfactory explanation of the phonetics behind the development, if merely because of the fact that Arm. (post-)alveolar fricatives and affricates in the evidence below are usually not defined as palatals.

mēǰ, gen. sg. *miǰ-oy* < **meyǰ(o)* < **meǰʲo* < **medʰ-* + *-yo-* 'middle', cf. Martirosyan (2010:733),

(vs. *gēǰ,* gen. sg. *giǰ-oy* < **geyǰ(o)* < **gʷʰoydʰ-* + *-yo-* 'moist').

Martirosyan (2010:276-277) does not apply the logics of the previous examples onto the last two in this outline, starting with *ēš,* gen. sg. *iš-oy* 'donkey'. In my opinion, the problems with its traditional PIE etymon **h₁ékʷos* 'horse' (cf. Pedersen 1906:404; Olsen 1999:20; Viredaz 2007:6-8) can be solved by assuming the very same secondary thematization with **-yo-:*

ēš < **eyš(o)* < **eᵡ̌o* < **h₁ékʷ-* + **-yo-*.

Ays 'demon, (evil) spirit' < **h₂ṇswyo-* (Olsen 1999:830) can be connected to the notorious Av. *ahura-* and Skt. *ásura-* < **h₂ṇsu-,* and is phonetically convincing, if it was not for the incoherence with the change **wy* > *ǰ* proposed here. I wonder if it is tenable to follow Džaukjan (1987:462) and assume **h₂ṇs-yo-* despite the expected *u*-stem (Olsen 1999:958).

Finally, *u*-stem *vrēž* 'revenge' is usually classified as one of the numerous Iranian loanwords (Olsen 1999:742, 860-861), its origins are however unknown. In the main, these loans belonging to Arm. *u*-stems correspond to Iran. *a*-stems, but no sure Iranian counterpart has been discovered in that area, though connection with **wreg-* 'to follow one's trace' (LIV:697) has been proposed. It cannot come directly from PIE since the root-final consonant does not match. From the perspective of the hypothetical PIran. **vrāǰa-* (cf. also Av. *aojah-* > Arm. *oyž* 'strength'), it is the root vowel that does not match. A way out for the vowel might be assuming that the word was borrowed from Sogdian where **-a-* > **-e-, *-ā-* > **-ē-* take place (Olsen 1999:911). As long as the Sogdian relative chronology allows, Arm. *e* can manage to gain epenthetic *y* in time for the regular developments of diphthongs both inherited and in loanwords (cf. Av. *vaēma-* > Arm. *vēm* 'stone'). The overall phonetic development of the word still remains unclear.

Finally, note that Ravnæs (1991:177) tentatively places the epenthesis that lead to *mēǰ* at the stage 32b in this relative chronology.

5. **VRy > VRǰ*

In Ravnæs (1991:178), this change is to be found under 40c in his relative chronology, with the following explanation: „The strengthening of *y to ǰ after a sonant (sterǰ) antedates the epenthesis, or is simultaneous with it."

a) As Olsen (1999:82) points out: „In a few examples, *harč* 'concubine', *hac^{c}* 'bread', *mayr* 'cedar, fir tree; of cedar, of fir tree', *net* 'arrow' and *verǰ* 'end', a combination of formal and functional considerations lead to the assumption of basic *vr̥kī́ḫ*-formations, i.e. non-ablauting, suffix-accented paradigms in nom.sg. *-*ih₂-s* > *-*i̯ah* > *-*i̯,* gen.sg. *-*íh₂-os* > *-i,* as the most likely interpretation."

With *verǰ* 'end, tail' < **uperih₂*, the *vr̥kī́ḫ*-derivation is suitable for explaining the Arm. *i*-stem. Related is Arm. *arāǰ,* cf. ch. 3. Also, Olsen (1999:76, 84, 467, 771, 827).

b) The formation of n. *sterǰ* 'barren, sterile' is probably another *-*ih₂*-stem giving **ster-ya-*, cf. Gk. στεῖρος, Lat. *sterilis*, Skt. *starī* all of the same basic meaning.[10] Its variant *sterd* naturally led some scholars to assume **sterd^{h}-yo-* (Clackson 1994:208 fn. 53). Purely in terms of the phonological development, both reconstructions are possible. Godel (1975:80); Clackson (1994:46-48); Olsen (1999:84, 771, 827).

c) *A*-stem *kamowrǰ, kamrǰi* 'bridge' is often listed as an Arm.-Gk. isogloss thanks to Gk. γέφυρα 'id.', which is rejected in Clackson (1994:134-135). He derives the Arm. form from **g^{w}eb^{h}ur-ih₂-*. That reconstruction implies the unparalleled medial *-*b^{h}-* > *-m-,* for which the outcome known from other examples is *-w-*.

Reconstruction in Olsen (1999:66) differs in the sonoric segment of the first syllable: **g^{w}m̥b^{h}ur-ih₂-*. I assume it would only be natural for the *-*b^{h}-* to be assimilated in that context, surrounded by sounds with labial articulation; I suggest **kammur-ya-* leading to [kamurd͡ʒ]. However, cf. Ravnæs (1991:96); Olsen (1999:771, 827); Viredaz (2007:9).

d) With *lowrǰ* 'cheerful; (light) blue' (→ Georg. ლურჯ-ი *lurd͡ʒi* 'blue'), and its cognate Welsh *clir* 'light, bright' (Olsen 1999:205-206, 771, 943), it seems clear that the root

[10] See Clackson (1994:208 fn. 54) on the usage of the Arm. word with animals only, in the Bible.

*$\hat{k}luh_1r$- is most plausible. The exact derivation for Arm. is nonetheless tricky to establish: it can be a *-*yo*-stem as well as *-ih_2-.
Cf. *lowrt^h* (Olsen 206 fn. 389, 774).

e) N. *erinǰ* '(young) cow' vacillates between *o*- and *u*- paradigms. I am not sure that „[t]he *u*-stem forms are easily understood as being determined by *kov, kovow*...“ (Olsen 1999:185), where *kov* is a more generic name for 'cow'. Olsen 1999:67, 827; Clackson 1994:153; further Martirosyan 2010:372.

Most plausible etymon seems to be *$(h)erin$-ih_2-, cf. ch. 3.

6. Word-initial **y*

In the next four sections, we will proceed to the etymologies that point to four different directions, starting with the possibility of initial **y-* to *ǰ-*, which I just like many others claim to be the most probable state of affairs. Before we do, I would like to point out that all four potential outcomes are phonetically plausible, the importance of otherwise precious phonetic supporting data for historical linguistics is therefore diminished in this case, and other methods are called for to have the conclusive vote.

First, we have to formulate the exact articulation of the OArm. <y>: it is generally hinted upon that it was indeed a semivowel [j], not a voiced fricative [ʝ] articulated on the same place, or indeed any other close consonant that is often represented with the same grapheme in writing systems, and can be an allophone of the glide or vice versa in different languages, cf. Russian.

As for Armenian, clear evidence for *y* being a semivowel counterpart of the vowel *i,* thus continuing their dynamics from PIE, is the fact that the (predominantly) ablative preposition *i-* 'from' has an alloform *y-* before nouns beginning with a vowel (Meillet (1903:29)). Džaukjan (1982:28) thus treats consonantal variants of y and w / v: „...вследствие упразднения специальной категории сонантов причисляются к фрикативным согласные варианты полугласных y, v; в дальнейшем этот разрыв усилился и завершился вследствие упразднения дифтонгов и появления (с XII в.) f, противопоставленной v, как глухая – звонкой...“ He also accounts for a class of semivowels containing *y* and *w*.

I believe that the four alternative shifts for an initial [j] are phonetically equally plausible, since there is no purely phonetical way for us to decide (without being influenced by examples from languages known to us) whether lenition and loss, or fortition (to affricates, or [l]) is more probable tendency for the evolution of a [j] in word-initial position. Note the absence of examples of words attested in written sources for another phonetically probable change, *y* > *h,* a shift that occurred on a regular basis later in the language (see Karst (1901:34-35) on the material from Cilician Armenian), though it could have been the intermediate stage towards loss. Cf. Kümmel (2007); Bičovský (2017a:58-60) for outcomes of the semi-vowel in other languages.

I cannot agree with disclaiming one of these four possibilities merely because of the phonetics, cf. argumentation against [j] > [d͡ʒ], and [j] > [l], respectively: „Auch das unregelmäßige idg. **j-* > arm. *l-* in *leard* "Leber" und *lowc'* "Joch" läßt sich in eine relative

Chronologie zum Lautgesetz **j-* > *ǯ-* bringen. Eine phonetische Ähnlichkeit besteht nur zwischen [j] und [l], nicht zwischen [d͡ʒ] und [l]. Folglich muß die Entwicklung zu *l-* vor dem Lautgesetz geschehen sein.“ (Holst 2009:120); „...a development to *l* is phonetically improbable.“ (Beekes 2003:162).

Also, note that „Pisani (1976:278) assumes a development "*i̯* > *ž/ḍ* > *l*".“ Olsen (1999:787) – probably more acceptable is an intermediate [ʎ], which is attested, although rarely (Kümmel (2007:225-226; ʎ > l (206-207); cf. ʎ > j (90-91) etc.).

If the reflexes of PIE **y* do not give us any decisive hints as to which route to follow, and neither does the development of the sounds with which **y* merged (PArm. **l*, **ǰ, *j*), it makes sense to leave the perspective of the single phoneme, **y*, and see whether its development is not mirrored by some other member of the same class – the class in question being semivowel. Here it is at once clear, that on the level of phonetics, the development of PIE **w* to *g* is unambiguously the result of fortition, one with numerous parallels in other IE langauges. **w*, being a labiovelar approximant, naturally allows for two positions of fortition, labial (leading to *b*) or velar, from which is the Arm. *g*.

Cf. Džaukjan (1982:40) who enlists only two common features in the development of **y* and **w*: word-initial fortition > *ǰ* (though that he does not claim to be a systematic sound change)*, g*; lenition and elision intervocalically (cf. ch. 7.)[11].

The intermediate step would be **g*^{w} (or **^{w}, according to Ravnæs (1991:178)), which later loses the labial element (again, examples of the same development can be provided from different languages.) If in general, Arm. word-initial liquids and semivowels tended at some point towards fortition, **y* would be part of this tendency.

Incidentally, another sound change that may point to this tendency is the Arm. **r-* > *er-*, if the *e-* is the result of a glottal-stop pronounced not simultaneously but slightly earlier than the resonant, as in colloquial Cz., e.g. *ruka* 'hand, arm' [ˀruka] or [ˀəruka]. For the Arm. vowel prothesis before *r-* and exceptional word-initial *r-* in the language, see Meillet (1903:21-22); Tumanjan (1971:73); Godel (1975:86); Martirosyan (2010:715-716); stage 4 in the relative chronology by Ravnæs (1991:173).

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[11] Notably, Džaukjan (1982:40) further enlists peculiarities in the development of both:

1) contamination of initial **y* with initial *l*;
2) „сохранение *u в интервокальной позиции или его переход в g в остальных случаях“;
3) „сохранение *i после согласного (с дальнейшим его переходом из звуковой единицы в признак палатализованности предыдущего смычного) или его переход в ǰ“.

6.1. **y- > ǰ-*

This option was frequently reflected upon without enough clarifying evidence, cf. Džaukjan (1982:38): „...переход *i̯ в ǰ в начальной и, по-видимому, в позиции после согласного – в условиях, не до конца выясненных (в этой позиции *i̯ обычно остается, подвергаясь иногда метатезе).“ Nowadays, it seems to be most plausible (cf. Kölligan 2012).

a) Skt. *yáva-* 'corn, barley' and other cognates of *ǰov* 'sprout' (Kölligan 2012:318) point to PIE root **yewo-*. The Arm. derivation is only slightly objectionable in its root vocalism, and in the semantic.

b) N. *ǰan* 'effort' is usually regarded as a one of the numerous *i-stem* deverbatives (cf. Olsen 1999:90); all the same, Klingenschmitt (1982:90) describes *ǰanal* 'to make effort' as denominal. Meillet (1936:52) connects the verb with Gk. ζῆλος ('zeal, emulation, jealousy' according to Beekes 2010:500).

While the source root **yeh₂-* is safe, the precise derivation remains doubtful. Olsen (1999:90-91 fn. 185) suggests **(h)yah₂-wn̥-* with respect to the Ved. cognate *yā́van-* 'persecutor'. Cf. Martirosyan (2010:556).

c) Personal pronoun for nom. 2pl. *du-k^h* ultimately comes from **yū́s*. The least problematic chain of developments for the form seems to be (cf. Katz 1998:173-194; Džaukjan 1982:40, 44, 143):

2pl. **yū́s > *ǰū́s;*

2sg. **tu* > regular **tu > du* – either influenced by 2. person deictic *-d-* < loc. particle **d^h* (Greppin (1993); if Clackson's (1994) argument against **d^h* in the marginal Arm. loc. sg. *-oǰ* is right); or *-d-* from **to-*, with the same atonic weakening as in *dow* (Kim 2016a);

2pl. clitic **us-wé-* + **ĝ^{h}i > *(s)wé* > regular **ǰe-*.

Then, there might not have been a point in time when all of the 2pl. forms were homophonically beginning with **ǰ-: *ǰū́s* and **ǰe-z, *ǰe-r* etc. The same elimination of suppletion, also by pure chance, took place in the 1pl. forms, which all display the stem *me-*. This syncretism in plural personal pronominal forms, accidentally parallel for both

numbers, thus must have led to forms like **mek^h* vs. **ǰuk^h*, **mer* vs. **ǰer*. In such a state of affairs, why should **ǰuk^h* be remodelled after *du* to *duk^h,* and not vice versa?

Later, **ǰū́s → duk^h;*

**ǰe-z* assimilated to *jez* → spread to the rest of the paradigm.

d) Amongst words of unknown origin (Olsen 1999:939; Martirosyan (2010:559-560), we can find *ǰori,* gen. sg. *ǰorwoy* 'mule'. Kölligan (2012) contributes with this word to the data for **y- > ǰ-: *ye/owo-ro-* 'yoked animal'. From the same root come names for Lat. 'mule, „beast of burden“' *iūmentum* (**yewg-s-mn̥-to-* according to Kölligan 2012:138) and Lith. 'bull, ox' (ibidem).

It can believably have a dimin. derivate *ǰoreak* 'locust', cf. Cz. *kobylka* 'locust' dimin. from *kobyla* 'mare'.

e) N. *ǰowr* 'water' fluctuating between *o-* and *C*-stem forms has been reconstructed as **yewH-r-* and connected with both Lith. *jū́ra* 'sea' and Skt. *vār* 'water'; Kölligan (2012) suggests two divide these into two stems, for the detailed outline see (2012:136-137).

A paradigmatic influence of *howr* 'fire' with which it co-occurs in texts and forms a semantic contrast that would have been frequently employed, could have confused the etymology even more. Cf. NIL:404-405; Olsen (1999:48, 50, 53, 787, 817, 855); Džaukjan (1982:40); Clackson (1994:52); not treated in Martirosyan.

Even though the evidence for **y- > ǰ-* is comparatively convincing, it is not impossible to undermine it as a result of its scarcity, as is oftentimes the case with Armenian, bringing into doubt the crucial few etymons one by one. For example, with *ǰowr* one may suggest other possibilities, e. g. **ieuH-r- / *iuH-r-* ('water'?) could give Arm. *jor* 'river, bank, valley' < **jowr,* influenced in its vowel by *corcor* 'valley'.

In the future, more evidence could be added in, e. g. PIE **yek-* (cf. OHG *jehan* 'to say') *> ǰek^h* „отличный; отлично! очень хорошо!“ (Džaukjan 1982:40).

6.2. The possibility of **y- > l-*

I have already commented on the phonetic (im)plausibility of such a change. For one, it is necessary to ask under what acoustic conditions should the two phonemes sound reasonably close to provoke reinterpretation – which is problematic. This is no dobt the reason why throughout the latest scholarship on Armenian linguistics, it proves to be difficult to find any support for this development, cf. Kölligan (2012:136); cf. Olsen (1999:787); Ravnæs (1991:65 fn. 1).

Dialectisms with *l-* < **y-* in Martirosyan (2010) provide additional data for the notion of a change from [j] to [l] or vice versa to be typologically common, but do not prove that such a change is in any way typical for Armenian, or did necessarily take place at an older stage of Arm. Cf. Martirosyan (2010:707):

„In some Armenian dialectal words, we see an initial *l-* instead of *y-*, cf. *ystak* 'pure' > Muš *listag*, *hiwsem* 'to weave' (q.v.) > Łarabał *lüsil, yesan* 'whetstone' > Alaškert, Muš, Sasun *lɛsan*. In some cases, contamination is possible. For Łarabał *lüsil*, Ačaŕyan (HAB 3: 101b) assumes contamination with PIE **plek̂-* 'to weave'. Muš *listag* may be due to the influence of *loys* 'light'. On the whole, however, a phonetic explanation seems more reasonable. It is remarkable that, in all cases, the first following consonant is the sibilant *-s-* . Thus, we may be dealing with a sound change of the type *y...s* > *l...s*, which is younger and is hardly related to the cases seen in *leard* and *luc*."

„With this hypothetical sound development in mind, one can consider the following possible example: dial. **liz* 'female buffalo', in Van [Ačařean 1913: 423a] and Moks [HayLezBrbBaŕ 1, 2001: 225b]. NPl *liz-n-ir* is attested in a Moks version of the famous folk-song "Camt'el"... The plural ending *-ner* (Van and Šatax) : *-nir* (Moks) presupposes an older NSg form with *-n...*; cf. Van/Šatax *yezner*, Moks *iznir*, the plural of *yez* (Moks *iz*) < ClArm. *ezn* 'bullock'. This implies that the older nominative form of the word under discussion would have been **lezn*. One wonders, then, if **lez-n* 'buffalo' is identical with the synonymous by-form **ye/iz* < ClArm. *ezn* 'bullock'. Typologically, compare the above-mentioned *ystak*, which is represented in Muš by two forms next to each other: *h'istag* and *listag* (see Bałdasaryan-T'ap'alc'yan 1958: 266a). Note that here, too, the following consonant is a sibilant, although in this case it is a voiced one."

If one wants to find common element in the phonetic environements of the alleged contextual change *y- > l-*, one does not have to see it in the sibilants, but in the vowels immediatelly following *l-*, which are high and front in all of the Martirosyan's examples.

Incidentally, if Armenian at some point resembled, for example, older Romance and in clusters *pl-* and *kl-* the realisation of *l* was an unconditioned palatal lateral (to which compare Latin *clāvis* 'key' and Spanish *llave* (with a palatal lateral, palatal stop or plain semivowel depending on dialect) and Italian *chiave*), dialectal phenomena may account for the occasional shift. In Spanish, in many dialects the confusion of (-)*y-* and (-)*ll-* results in merger.

a) Mkrtč'yan (1970) compares Arm. *luc* 'yoke' to Hitt. *luzzi-* 'corvée', which is semantically suitable (but cf. Džaukjan 1982:213). The problem is, that *luzzi-* goes back to either **luH-ti-* or **lh₁-uti-* (Kloekhorst 2008:620), which would give an *i*-stem in Arm. (Olsen 1999:80, 850), not an *o*-stem.

Often, *lowc* is traced back to the unfrequent in PIE thematic deverbative zero-grade **yugóm* 'yoke'. For the lack of supporting etymologies for a regular sound change **y > l,* it is generally accepted to explain this development via influence by the antonymic verb *lowcanem,* aor. *lowci* 'loose, dissolve' < **lewǵ-n̥h-* or **lu-né-g-/*lu-n-g-* (Klingenschmitt 1982:184).

Notably, Kölligan (2012:136, fn. 10) cites Eng. *female* after *male* as another example of such an influence of antonyms. However, these two words are not antonyms per se, but rather complementary counterparts. On the other hand, 'unyoke' is not only the direct opposite to 'yoke', it is its reversive. More cross-linguistic evidence for such a semantic shift is lacking.

Alternatively, one can rethink the semantics of *luc* itself. Consider Hitt. *luzzi-* for a parallel: „...the word originally meant '(work) which releases one from one's obligations'" (Kloekhorst 2008:620) > later 'unpaid work'. Similar semantic shift in the opposite direction could have happened with Arm. 'yoke, burden, bondage, slavery' > '(smth.) that releases from yoke' – makes the influence of *lowcanel* 'to loose, unchain, unyoke' look more realistic. Also cf. *lowcič*^{h} 'solvent'*, lowcumn* 'solution'.

Martirosyan (2010:311, 316) states that both *lowcanel* 'to unyoke' and *lcel* 'to yoke' are Biblical and later. I did not succeed in finding attestations of *lcem* in the Bible, and estimate it to be a much later derivate from *lowc*. It is peculiar if these two formally similar verbs were indeed used at the same time in antonymic semantics that is not reflected in their morphological structure in any way. Cf. PIE **yeu* (Ved. *yuccháti* '(he) separates') and **yeu* (Ved. *yuváti*), possibly related to the family of PIE **yeug*, in Ved. *yunákti*, Gk.

ζεύγνῡσῐ(ν), Lat. *iungit,* all '(s/he) yokes') of the opposite reconstructed meaning 'to separate' and 'to connect', respectively.

(It is perhaps stretching the speculation too far to suggest that, had the Germanic (and Baltoslavic) cognates of English *plough* been a borrowing from some eastern source – cf. Eng. *path* with the inexplicable *p-* instead of *f-*, the Arm. cognate would have been a homonymous **luc*, and yoke and plough being connected semantically, this is really the reflex of PIE **yugóm* at all.)

b) It is largely agreed upon that the contamination of *leard,* gen. sg. *lerd-i* 'liver'; later, in dialects 'back' (Martirosyan 2010:307) with 'fat' is due to a syntagmatic relationship also found in other IE languages, as in Olsen (1999:192): „**lisi (h)i̯ék*^{w}*r̥t* 'fat liver' → (by univerbation) **lisr̥t*"; then I would assume via regular sound change **lisart* > **liard.*

This explanation also seems to solve the problem of disputable lenition of intervocalic **k*^{w} that was otherwise supposed for the direct **yék*^{w}*r̥t >> leard*. Both, nevertheless, disqualify this as an example of the purported change **l* > *y*.

Other possibilities in a similar vein of analogical influence on the initial C is *leard* after *lanǰk*^{h} 'lungs', another internal organ. Or perhaps, if at some stage the change **é* > **ī* resulted in PArm. **yīKart*, this may be an isolated case of dissimilation in the palatal sequence. In any case, it seems safe to say that we have a number of competing and plausible explanations which render the change **y* > **l* unnecessary.

One point is however missing: the explanation of the diphthong *ea* in the Arm. form that, as we know, usually comes from **ia* [i̯a]. If it is true that one of the words mentioned above provided the source of *#l-* instead of *#y-,* why not †*lard*? I am inclined to believe that it cannot be exluded that **y* is in fact preserved in this word in Arm., as a part of the diphthong, whatever the origin of *l-*.

Another nuance I would like to add is based on the conclusions from the section 4.2. on palatalised resonants incl. [lʲ] existing for a certain period of time in the language due to epenthesis before resonants. Since [lʲ] is perceptually almost equal to [j], at least in #[lʲa]- vs. #[i̯a]-, it is easy to imagine the substitution – whether under the influence of any of the *l*-initial words, or not. The scarcity of other Arm. words beginning with *#ya-* does not allow to confirm this hypothesis. On purely PIE level, a plausible source of Anlaut **lʲ-* is problematic (*(*p*/*k*)*liHV-* and would have been extremely rare.

In the light of the oscillation between *i*- and *a*-stem inflectional patterns we might assume that it need not be an inherited *r/n*-stem (**yék^{w}r̥(t),* gen. sg. *yék^{w}nos*) after all, but an *i*-stem later remade structurally to *neard, nerd-i* 'tendon, sinew'.

Cf. Ravnæs (1991:65 fn. 1); Martirosyan (2010:306-307); Kölligan (2010:136).

c) Adj. *lkti* is an etymology proposed by Dumézil 1938 (cited in Olsen 1999:630, who disagrees) in support of a sound change **(H)y > l*.

Based on an attestation in Bible, Job 24:5, Dumézil corrects the meaning of *lkti* from 'impudent, undisciplined' to 'young'. Apparently, he would connect it to **h$_2$éyu-;* the suffix *-ti* would have been an internally Arm. derivation.

It is questionable, however, whether in the usual absence of clear cognates for Arm. vocabulary, this etymology is not an artefact of the reasoning which took the **y > l* as a respectable reflex and whether it would have been formulated if the etymons under a) and b) here were unknown.

Thus, to conclude, neither of the three etymologies is without problems and alternatives and not much will be lost if rather than listing **y > l* among Arm. sound changes, these will be each treated as results of other, probably analogical or contextual, changes, or simple chance similarities, such as are frequent in any language, but in the absence of better comparanda may appear to have a greater importance than it would have been the case elsewhere (e.g. in Greek).

6.3. The possibility of **y- > 0*

First proposed by Pisani (1950:180), who amongst others assumed that the development of Arm. **y* could have been similar to that of Gk. **y,* and came up with a split (whose conditions he did not seem to define though) **y-* > [d͡ʒ]- vs. *0-,* cf. Gk. **y-* [d͡z]- or [zd] vs. [h]-.

Greppin (1972) then specified the conditions of the possible split: **Hy-* > [d͡ʒ]- vs. **y-* > *0-*. Schmitt (1996:23) assumed quite the opposite contexts for the split development: **y-* > [d͡ʒ]- vs. **Hy-* > *0-*. Finally, Kortlandt, Beekes, and Martirosyan (summarized in Martirosyan 2010:706) believe that the initial Armenian **y* was actually lost in all instances: „Since a sound change **k^w-* > Arm. zero is untenable (if not impossible), and the development **i̯-* > Arm. *ǰ-* or *j-*... is not convincing either, one should posit PIE **i̯-* > Arm. zero...“ This, however, summarizes the position of a group of scholars who have been in close cooperation, whereas a number of other scholars would not share this position.

a) Interrogative and relative pronouns *o-, ov, or, owr* might go back to PIE demonstrative/relative forms, e. g.: **$h_2$yo-ro-* > *o-r* 'who, what; that'.

Postulating a regular sound change **y-* > *0* largely based on the development of a few pronominal forms is of course problematic, since these are inherently irregular, show different syntactic behaviour than in nominal forms, due to their function in the language they have higher frequency etc. For example, it is not clear, whether this word, which at one stage was mostly an enclitic, would not have lost its **y* simply because under normal conditions, it would be – phonetically speaking – postconsonantal or intervocalic, depending on the relative frequency of vocalic or consonantal Auslaut in PArm. at the crucial stage and in the relevant word classes. Such a development is not without parallel, cf. Pedersen (1909-13:233ff) for Celtic, where, according to the author, PIE Anlaut **j-* disappeared in Celtic in unaccented words.

Alternatively, one could trace these forms back to the PIE pronominal base **k^wo-* with various possible explanations. The regular Arm. outcome of **k^w*, unless palatalised, is *k^h,* which could then according to some go through > *h* > *0* in initial position (cf. also the disputable lenition of intervocalic **k^w*). This aphaeresis would not occur in other, nonclitic pronouns with the same base, e. g. **$k^w eh_2$-n̥t-* > *k^han-i* 'how many'. But as much as with the **jo-* base, the **k^w-* might have easily found itself in an intervocalic position after a number of PIE or PArm. endings, before the reduction in final syllables took place, or indeed in the

period when some of the final consonants were lost and the number of word-forms ending in vowels increased.

A possible, though admittedly speculative, confirmation of this theory could be found perhaps if the clitical pronoun like **k^{w}os* would in a phrase according to Lex Wackernagel stand second after the nominal subject, e. g. **ph$_2$téres k^{w}o-... > *hayer k^{h}o-...* > via metanalysis would result in ClArm. *har-k^{h} o-r...* 'fathers who...'. Thus, **k^{h}* would be reanalysed as belonging to the preceding noun, as the plural marker. Though this theory is problematic, it is worth considering, since the origins of the plural marker in ClArm. have not been yet satisfactorily explained otherwise.

b) Recently, two further etymologies were proposed in Martirosyan (2010:706): „...*ēg*, *i*- or *a*-stem 'female' < PArm. **eig-i- < *(y)eyw-i- < QIE *ieus-i(e)h$_2$-* or **ieus-it-*; and *ors, o*-stem 'hunt; animal for hunting' < QIE (substratum) **iork̂-o-* 'deer, roe'...“ as candidates for the change PIE **jV- > *0V-*.

So far, not much scholarly debate on these proposals have taken place. In the first case, where no other IE etymology had been proposed before, Martirosyan compares to an otherwise unclear Skr. *yoṣā-*. In the other case, he lists a number of competing etymologies by other authors. In each case however, he relies on the *a priori* valid sound law – again there is risk of circularity. Also, we must not forget that unlike a full phoneme, zero reflex is less easy to confirm.

6.4. The possibility of **y- > j*

This theory is also predominantly given up nowadays; not included in Schmitt (1981:70-71) even as a possibility for **y* in any context.

a) The source of 2pl. personal pronoun oblique stem *je-* „...ist völlig unklar...“ (Schmitt 1981:117), and the stem „...may well be the single least understood personal pronoun in all of Indo-European.“ (Katz 1998:188). Cf. Skt. *yūyám*, Goth. *jus*.

Rather vague in Džaukjan (1982:147): „...j(e)- образовалась как в результате взаимодействия форм им. *i̯ūs и косв. *u̯es и перехода начального *i̯- в j- (ср. *i̯ōi̯o- > ju, -oy „яйцо“?), так и по аналогии форм 1-го л. мн. ч. и 2-го л. ед. ч.“.

See the section above for the commentary on why it actually should come from **us-wé-* + *$\hat{g}^h$*i-* > *[d͡ʒe]- → *je-* via levelling in pronominal paradigms.

b) Arm. ձու *jow* 'egg' is the only autosemantic (content) lexeme regularly mentioned in the scientific literature as a possible evidence for **y-* > [d͡z]-, originally suggested by Pedersen (1906:406).

The only cognates to support *jow* from the assumed **yōyo-* seem to be Slavic ones, e. g. Russ. *яйцо* – however, the Slavic *j-* must be prothetic (cf. OCS *ajьce).* Cf. the standard account for 'egg' in PIE – Schindler (1969), and a recent revision in Zair (2011) who claims that „we should return to the traditional reconstruction of **H₂ōu̯i̯-o-m* for ‘egg’ rather than SCHINDLER’s reconstruction **ō-Hui̯-o-m*...“ (Zair 2011:287).

Alternative analyses for the Arm. 'egg' offer themselves, most notably: „...Bugge (1893:16) put forward the explanation of an original compound **jow-ow* ‘fish-egg‘, where **jow* would be an earlier form of *jowkn* ‘fish‘.“ (Kölligan 2012:140, cf. his objections in the formation and semantics). If one is tempted to account somehow for the formal and semantical similarity between *jow* and *jowkn*: Word-final sequence *-owkn* < probably **-ūgon-* (Olsen 1999:590-592) is restricted to five nouns in ClArm., three of them being names for animals. One of these, *kṙowkn* 'crane', could have been falsely etymologically connected to *kṙow-,* oblique form of *kṙiw* 'uproar', and analysed as *kṙow-kn* 'cry/call(-making) animal', hence the interpretation of *-kn* as the suffix of animal names. *Jowkn* 'fish'

could then be analysed as *jow-kn* 'egg(-laying) animal', and **ow* remodelled after *jow-kn* into *jow.* Cf. Gąsiorowski (forthc.:13-16) regarding the source of Arm. *kṙowkn.*

Originally, Bugge 1893 (cf. Pedersen 1906, Solta 1960) claimed that in **h₂ōwyóm* (as we would reconstruct it now) > **ow,* an initial *j-* must have been added, otherwise it would be too short to serve as a proper word, to which I have a couple of remarks:

i. Truly, there is no word consisting of a single vowel in nom. sg. attested. Note however the abundance of monosyllabic nom. sg. noun forms in ClArm. due to the loss of final syllables and other sound changes. As Džaukjan (1982:23) points out: „...в результате различных фонетических и морфологических процессов (выпадение многих окончаний, изменение палатализованных согласных, упрощение и метатеза в группах согласных, опрощение и переразложение производных основ и др.) односложных корней, выступающих в качестве самостоятельных словоформ, стало гораздо больше: все корневые имена выступают в качестве форм именительного падежа ед. ч., характеризующегося нулевым окончанием.“

ii. Mark the monosyllabic V-initial lexemes as e. g. Iranian loanword *ah,* gen. sg. *ahi* ‘fear‘ that did not require any such prothesis, at least at that stage.

iii. Moreover, the hypothetical **ow* would be unusually short in nom. sg. only, while none of its oblique forms is less of a word than respective forms of his fellow o-stems like gen. sg. *ap’oy.*

Above all, I question why there should be an unprecedented prothetic consonant, and /d͡z-/ of them all, in a language that shows instances of only prothetic vowels . (*e-, a-, o-* before liquids Džaukjan (1982:25); Godel (1975:86) and elsewhere). In general, the tendency to be observed for repairing words to fir requirement in minimal words seem to favour affixation, or analogical introduction of a longer form from the oblique cases.

Recently, Kölligan (2012:141) offers an explanation for the additional /d͡z-/: influence by *jag* 'young (of an animal)'. I doubt this admittedly tempting proposition based on semantic grounds: why is it after *jag* semantically, since there does not seem to be any crosslinguistic parallel for the denotation of 'egg' based on 'baby / young'.

Undoubtfully, the usage of these two words in a syntagma once in Łazar P^{h}arpec^{h}i and once in the Bible (Deut. 22:6) does not by itself suffice (underlying of these words in the Biblical quotes and the translations is mine):

„Եւ եթէ դիպեսցիս բունոյ հաւուց առաջի քո ի ճանապարհի, եթէ ի ծառ եւ եթէ ի գետնի, ձագուց կամ ձուոց, եւ մայրն ջեռեալ նստիցի ի վերայ ձագուցն կամ ձուոց, մի՛ առնուցուս զմայրն հանդերձ որդւովքն:“

„If a bird' s nest chance to be before thee in the way in any tree, or on the ground, [whether they be] young ones, or eggs, and the dam sitting upon the young, or upon the eggs, thou shalt not take the dam with the young.“

Biblical attestations of *jow* without *jag* are far more numerous. It is not difficult to find a passage with *jow* surrounded by other word forms containing /d͡z-/, but no one would naturally believe this to be the grounds or the supporting evidence for creating an etymology for *jow* containing analogical influence by either *jerǝ̄n* 'hand', or n. *jik* 'cry' in *jik hanicʰe* 'made a cry', here 'peeped', or indeed *barǰi* 'I raised, I picked':

„...հասից ի վերայ ամենայն տիեզերաց ձեռամբ իմով իբրեւ ի վերայ բունոյ, եւ բարձից իբրեւ զձուս մնացեալս. եւ ոչ ոք իցէ որ ապրիցէ յինէն, եւ ոչ որ ընդդէմ դառնայցէ ինձ, եւ բանայցէ զբերան իւր եւ ճիկ հանիցէ:“

„And my hand hath found as a nest the riches of the people: and as one gathereth eggs [that are] left, have I gathered all the earth; and there was none that moved the wing, or opened the mouth, or peeped.“

I further wonder why is should be the alleged influence of *jag* on *jow* parallel to the remodelling of Arm. *owstr* 'son' after *dowstr* 'daughter' (according to Kölligan 2012:141). In case with the latter, an addition of a pseudo-suffix to the etymological **ow* took place that was apparently synchronically seen as derivational means for creating a name for a family member or a child, while the roots remained intact. Also, the semantic closure between 'son' and 'daughter' is more obvious, they are counterparts in a sense, so the parallelism in their formation (again, in the suffix, not in the root) is more understandable.

Finally, *jow* possibly comes via regular sound change from **ǵʰu-tó- > jow* 'poured one'. I believe it to be semantically suitable if we think of an egg mainly as its whites and yolk, the liquid substance frequently used in cooking. As for the derivation, compare this with

other original *-*tó*- stems continued in ClArm. as primary *o*-stems; ClArm. *jew* 'shape' from the full grade of the same stem. As per LIV:189, the root **ĝʰew* does not have reflexes in Arm., therefore we cannot be completely sure as to its semantics in PArm. and can even entertain the idea that it specialized to bodily fluids, which would make it 'that which is discharged from the body' and fit the idea of laying eggs.

7. Loss of intervocalic **-y-*

It is traditionally assumed for many Arm. consonants, not only **y,* to be subject of intervocalic lenition and subsequent loss, followed by contraction of the two vowels in hiatus. Exact details of these changes however differ in various scholars.

An early observation about not only **y,* but also **s* disappearing intervocalically is present in Meillet (1903:29; 18). An intermediate stage **h* is presumed, cf.: PIE **b^{h}osó-* 'bare, naked' → **bohoko-* > *bok* 'bare(foot)'. More examples in Meillet (1903:18), Godel (1975:88-89), Kim (forthc.:13-14).

Note that, according to the relative chronology by Ravnæs, the change of intervocalic **-y-* to **-h-* occurs on stage 17, **h* being the unattested step. „The loss is posterior to **s > h, because **sy leads **yy.“ (Ravnæs 1991:174) See stages 22a and 22b for *h* (from **s*) to *0,* and **y* > in Ravnæs (1991:175). It would be only natural to assume that **y* yielded **h,* and that **h* merged with the outcome of intervocalic **s* on its way to loss.

Third sonoric consonant suggested to have undergone interV loss can be **w.* According to Kümmel (2007:127), the development of **VyV* is corresponding to that of **w*: „j > 0; w > 0 /V_V (V ≠ V)“; cf. the conditions for ellision of both glides in Džaukjan (1982:40) „если, в частности, предыдущий и последующий гласный один и тот же (*eie, *aua, *ouo и др.) и, если согласный, идущий за последующим гласным, сохраняется.“ (For parallels between the development of the two semivowels in other contexts, cf. ch. 6.).

For intervocalic lenition of stops, see a detailed outline in Olsen (1999:781-786).

However, recent re-investigation of the matter (Kim forthc.) stated that the evidence for PIE **VyV* to undergo loss is actually meager. Following the new account for intervocalic development of PIE **t* Kim (2016a.), he sums up that “...intervocalic *t did not in fact pass through a stage *[j], but instead was first lenited to *[ð]; the subsequent development to *[j], *[w], or *[Ø] depending on the neighboring vowels has close parallels in other languages, including Faroese...” (Kim forthc.:15). Thus, the only reliable examples for the original PIE **y* are **tréyes* 'three' > Arm. *erek^h* 'three', and the presents **-eye/o-* > Arm. *-e-*; he concludes that “the weakening and loss of intervocalic **y* was followed by contraction of *like vowels only*.” (Kim forthc.:16, 17; see the paper for the consequences it has on the explanation of the Arm. weak aorist formations.)

8. Notes on the relative chronology of sound developments in Armenian

The present chapter is but an assemblage of brief notes reminding of how much is yet to be done at another occasion to follow the outline given in this thesis, especially in the consequences for the relative chronology of Arm., and in the most careful reexamination of all the sound developments that could have been potentially intertwined with the changes for **y* stated above. The following notes touch upon most troublesome moments in the historical phonology of Arm. that could possibly change the statements in this thesis beyond recognition.

a) For instance, the analogical change to word-initial *l* and *j* assumed for a couple of etymologies instead of the **y* must be in each example placed on the timeline soon enough for the original sound to be closer to [j] than [d͡ʒ] which is the expected regular outcome; otherwise, one has to examine the possibility of *#ǰ-* becoming *l-* or *j-* via analogy in these instances, which is a different matter, and might be either less (with *l*) or more plausible (with *j*) than with **y* being the sound in the original form.
b) Speculatively, **w* feeds the change of **gy* > *ǰ* by providing additional **g*$^{(w)}$, (cf. chapters 3.; 6.) – see stage 43 in Ravnæs (1991:178).
c) For some etymologies suggested here, it is essential to re-examine possible counter-examples. E. g. in **g*^{w}*m̥b*^{h}*ur-ih₂-* > **kammur-ya-* > *kamowrǰ* (5.1.c.), the assimilation **mb*^{h} > **mb* > **mm* probably must have happened before than adoption of the loanword *hambaw* 'fame, rumour, report' < Ir. **ham-bāθa-* (?) (Olsen 1999:245, 889) and suchlike; unless it is a case of sporadic assimilation.
d) The loss of intervocalic **y* must have happened only after the loss of final syllables – Olsen (1999:785-786). Therefore, any possible **VyV* > ˹*˺*VV* > *V* before the final syllables drop must be explained differently.
e) According to Ravnæs (1991:174), post-consonantal **y* (post-resonantal at the very least) was preserved in the language longer the intervocalic one. Respective etymologies need to be verified in this respect, too.

For more on relative chronology, cf. Ravnæs (1991:172-181); Beekes (2003:); Bičovský (2017b:97-103); on the legit attempt to postulate absolute chronology, cf. Ravnæs (1991:182).

9. Conclusions

The steps that have been taken in the present master thesis towards reexamination of all accessible evidence for the outcomes of PIE **y* in Armenian lead to simplification and clarification of the overall picture.

We can tentatively conclude that in most types of conditioned environments, PIE (and sometimes PArm.) **y* always gives Arm. *ǰ*: word-initially, after liquids and nasals (**n* at least) in certain yet unclarified contexts, in various clusters.

However, I fear the argumentation might get circular here. There is actually not enough bullet-proof evidence for **y* > *ǰ* (in terms of both quantity and reliability) in any of the contexts, but one highly probable contextual change **y* > *ǰ* backs up the same alleged change in another context, which backs up the first one itself.

The list of possible sources for Arm. *ǰ* is quite overwhelming: apart from the position in Anlaut and after some resonants, it includes palatalised $*\hat{g}^h$, $*g^{wh}$, $*d^h$ before high vowels, and clusters $g^{wh}y$, $*d^hy$, **wy,* and possibly $*b^hy$. All of these (groups) of segments merged to the phoneme *ǰ* at different stages of the language, however, it is surprisingly rare in the OArm. lexicon overall – according to Tumanjan (1971:73) after Ačarʏan, it is the fifth least frequent grapheme (which is, in this case, phoneme) in the corpus.

Apart from that, **y* participates in the wide-spread Armenian palatalisation of dentals, palatovelars and labiovelars (but not plain velars, as many believe), simply leading to the same fricatives and affricates as in position of these before front vowels.

Furthermore*,* it is preserved as a part of diphthongs, as we in fact could observe even in the long disputable *leard.*

For all of these developments, phonetic justification and cross-linguistic parallels are possible to be found, which does not go in line with the reputation Armenian has as a language of phonetically unexplicable and typologically unique sound changes, cf. the famous **dw-* > *erk.*

We have seen that the inherited PIE suffixes containing **-i-* do not disappoint in providing evidence for this topic, whenever the vowel in question stands in non-sonoric position in a syllable. Armenian shows continuations of nominal suffixes $*\text{-}ih_2\text{-}$, **-(i)yo-,* as well as secondary combinations with these suffixes, and verbal formations in **-ye/o-* etc.

As is common for Armenian, not only is the set of etymologies for various contexts for **y* on which a certain change has been observed small, but comparatively small is also the

amount of data in the language based on which the hypothesis potentially could be verified, which seemingly leaves our hands tied.

Admittedly, certain aspects of the historical phonology of Armenian seem to form a hopeless case, but a rational approach to such a problem should be in aspiring for coherence within the system of the language, as well as turning to typological evidence for help. As we have observed on the examples in this thesis, it is most of the time possible to presume such inter-steps for an alleged development that provide phonetically and typologically acceptable explanation for the development, no matter how obscure it may appear at first.

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