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A NOTE ON THE ORIGIN OF THE OLD ARMENIAN MEDIOPASSIVE ENDINGS¹

1. Introduction

In Old Armenian, a series of mediopassive endings marks intransitive uses of verbs in the aorist indicative, aorist subjunctive, and imperative (e.g. aor. mp. *ber-ay* intr. 'I was carried' next to aor. act. *ber-i* tr. 'I carried'), except for a few verbs that take the medioapssive endings in transitive contexts (e.g. *zgec'-ay* tr. 'I put on'); see Table 1.

Table 1. The Old Armenian mediopassive inflections

Aorist indicative:	1 sgay 1 plak'	2 sg <i>ar</i> 2 pl <i>ayk</i> '	3 sg <i>aw</i> 3 pl <i>an</i>
Aorist subjunctive:	1 sgayc ' 1 plc 'uk '	2 sg <i>c</i> ' <i>is</i> 2 pl <i>jik</i> '	3 sg <i>c</i> ' <i>i</i> 3 pl <i>c</i> ' <i>in</i>
Imperative:		2 sgØ, -ir 2 plaruk'	

When compared to the agrist indicative active endings and the imperfect endings (labile), the agrist indicative mediopassive endings demonstrate a characteristic yowel -a-.

Table 2. The agrist and imperfect indicative endings

	Aor. act.	Aor. mp.	Imperf.
1 sg.	-i	-a[-]y	-i
2 sg.	-e[-]r	-a[-]r	-i[-]r
3 sg.	-Ø	-a[-]w	-yr
1 pl.	-ak'	-ak'	-ak'
2 pl.	-êk ' (*-e[-]yk ')	-a[-]yk	-ik ' (*-i[-]yk ')
3 pl.	$-in \ (*-e[-]n)$	-a[-]n	-i[-]n

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The above-mentioned endings underwent much of analogical remaking, cf. the 1 pl. -ak in all three paradigms. Yet, it is tempting to reconstruct the three-fold opposition of thematic vowels in the preterite most clearly seen in the 2 sg., 2 pl. (before PArm. *ei > Arm. \hat{e}), and 3 pl. (before PArm. *e > Arm. i in front of a nasal): aor. ind. act. *-e-, aor. ind. mp. *-a-, and imperf. lab. *-i-. These thematic vowels occupy the same slot in the word template as thematic vowels of the present indicative tense (see Table 3).

Table 3. The present indicative endings of the e-, a-, and i-conjugations

	Pres. act.	Pres. lab.	Pres. mp.
1 sg.	-e[-]m	-a[-]m	-i[-]m
2 sg.	-e[-]s	-a[-]s	-i[-]s
3 sg.	$-\bar{e}$ (*- e [-] y)	-a[-]y	-i (*- i [-] y)
1 pl.	-e[-]mk	-a[-]mk	-i[-]mk
2 pl.	-êk ' (*-e[-]yk ')	-a[-]yk '	-ik ' (*-i[-]yk ')
3 pl.	-e[-]n	-a[-]n	-i[-]n

Scholars commonly agree that the thematic vowels of the present indicative tense continue the PIE verbal suffixes. In particular, the thematic vowel -i- of the marked mediopassive conjugation is derived, according to different views, from PIE *- eh_1 - or *-ie/o- (see [Martirosyan prep. § 503.1] with further references). However, views diverge on whether the vowels of the preterite endings originated in the PIE suffixes or endings. In particular, the vowel -a- of the aorist indicative mediopassive endings, together with the 2 pl. mp. ipv. -aruk (based on the 2 sg. mp. aor. ind. -ar) and the 1 sg. mp. aor. subj. -ayc (based on the 1 sg. mp. aor. ind. -ay), can be explained as originating in root aorists from roots ending with a laryngeal (2.1), the PIE aorist endings (2.2), or the PIE suffix *- eh_2 - (2.3). In what follows, I will review these formal possibilities.

2. Hypothetical sources of Arm. mp. -a-

2.1. Athematic root agrist stems ending in laryngeals

The thematic vowel -a- of the mediopassive endings could theoretically result from the reanalysis of the morphemic boundary between the root and inflection in the Proto-Armenian mediopassive aorist forms that were derived from athematic root stems in a laryn-

geal. This hypothesis is supported by little evidence, in particular, by the mediopassive forms of Arm. dnem 'put', which can be derived from the respective forms of PIE * d^heh_l - 'put': 3 sg. * $h_l\acute{e}$ - d^hh_l -to > Arm. 3 sg. *edaw; 3 pl. * $h_l\acute{e}$ - d^hh_l -nto > Arm. 3 pl. *edan [Klingenschmitt 1982: 9]². However, the reconstruction of the forementioned 3 pl. form is dubious since it is not clear whether * $h_l\acute{e}$ - d^hh_l -nto or * $h_l\acute{e}$ - d^hh_l -ento would be correct³. If the genuine aor. mp. 3 pl. athematic ending was *-ento, the etymological PArm. aor. mp. 3 pl. *- $ext{-}an$ is expected only in root aorist stems ending with * h_l 2, cf. the explanation of Gk. aor. act. 3 pl. - $ext{-}av$ as an outcome of *- $ext{-}h_l$ -ent, e.g. in Epav from PIE * $ext{-}h_l$ -ent [Sihler 1995: 469]. However, I am not aware of such inherited verbs in Old Armenian⁴. The case of $ext{-}h_l$ -evokes further concerns: the relation of the stem final act. sg. *- $ext{-}ext{-}$ (PIE $ext{-}l^heh_l$ - > PArm. * $ext{-}l^e$ -) vs. act. pl. and mp. sg., pl. *- $ext{-}a$ - (* $ext{-}l^hh_l$ - > PArm. * $ext{-}a$ -) should have been parallel in the present and aorist forms

² The vocalization of a laryngeal is expected in *-THT- (T — any obstruent or fricative). The development of *-RHT- (R — any resonant) is more controversial in view of PIE * $(h_2)uelh_1$ -men- > Arm. gelmn 'wool', PIE * h_2enHt - ih_2 - > Arm. dr-and 'door frame', etc. (cf. [EDAIL: 74, 204]). Such examples speak against other oft cited laryngeal sources of the mp. -a- like PIE * $genh_1$ -to, which perhaps would have yielded Arm. *cind and not cnaw or *cinaw. See [Kocharov 2018] with further references.

³ The amphikinetic ablaut paradigm is commonly reconstructed for the active voice of the root aorist: aor. 3 sg. $*h_1\acute{e}-g^wem-t$ and 3 pl. $*h_1\acute{e}-g^wm-ent$, cf. [Meier-Brügger 2000: 161; Tichy 2006]. A different ablaut grade is reconstructed for mp. 3 pl. on the basis of the Indo-Iranian evidence: PIE $*h_1\acute{e}-g^wm-nto$ > Skt. \acute{a} -gm-ata [Gōto 2013: 109]. The Sanskrit injunctive mp. 3 pl. in -anta (cf. Skt. gm-anta) may be an Indic innovation and not a trace of PIE *-ento, as suggested by OAv. $v\bar{i}$ - $\acute{s}ii$ - $\bar{a}t\bar{a}$ 'they distinguished' [Ibid.: 90]. However, the opposite view is still widely spread in the scholarship (see [Harðarson 1993: 50f.]), according to which the PIE root aorist followed the amphikinetic pattern in both voices and originally had the mp. 3 pl. *-ento. Whithin this view, the regular Indo-Iranian outcome *-anta was preserved in the injunctive and analogically replaced in the indicative by *-ata from PIE *-nto in acrostatic root aorists or suffixed aorist stems (e.g. PIE *genh₁- 'give birth' \rightarrow aor. mp. 3 pl. *h₁e-genh₂-nto, see § 2.2).

⁴ Neither is there evidence for the thematic aorists, derived from roots ending in $*h_2$, which could, in theory, become the source of aor. mp. -a-.

of this athematic verb. The analogical spread of the aor. mp. *-a-would be motivated if (1) its source was limited to the singular forms (with no contrast in the laryngeal vocalization between the singular and plural forms of the aorist indicative), and (2) the spread took place after the replacement of the reduplicated present stem PArm. * $d^{(h)}e$ - $d^{(h)}\bar{e}$ - (cf. Gk. $\tau i\theta \eta \mu$, Skt. $d\dot{a}dh\bar{a}ti$; LIV^2 : 136–138) by PArm. * $d^{(h)}\bar{e}$ -ne-(Arm. dne-), which would isolate the contrast act. *- \bar{e} - vs. mp. *-a- in the singular forms of the root aorist. One wonders how this chronology correlates with the vocalization of syllabic resonants in *- ηto , see § 2.2.

Finally, although Arm. *dnem* is a frequent verb, its mediopassive forms, expressing the passive diathesis of the basically agentive transitive verb (act. 'place (smth.)' \rightarrow pass. 'be placed by smb.'), seem to be an insufficient source of a productive marker of the passive, reflexive, and anticausative diatheses. I could find no clear parallel for the development of the generic intransitivizing marker, that would cover the reflexive, anticausative, and passive meanings, on the basis of the older passive marker (see [Haspelmath 1987: 37-39] with a similar negative statement). Therefore, a more substantial source must be identified for the mediopassive -a-.

2.2. The PIE endings

The aor. mp. -*a*- is often considered a result of analogical spread of PArm. *-*a*-, which developed in some of the inherited aorist endings due to the regular vocalization of syllabic resonants (see [Sihler 1995: 458–470; Fortson 2004: 85f.; Beekes 2011: 263f., 268–270] on the reconstruction of the PIE endings discussed below).

Before the Proto-Armenian apocope, there seems to be no sufficient material for the grammaticalization of *-a- from endings, because PIE vocalized resonants must have yielded the rise of *-a- in parallel forms (1 sg. and 3 pl.) of the active and mediopassive voices (cf. [Viredaz 2003] on the vocalization of the word final syllabic resonants); see Table 4 below.

Table 4. The present indicative of the e-, a-, and i-conjugations

The agrist indicative active		The aorist indicative mediopassive		
PIE		PArm.	PIE	PArm.
1 sg.	*-m	*-an	*- $h_2(e)^5$, *- mh_2	*-a, *-an
2 sg.	*-5		$*-th_2e$	
3 sg.	*-t		*-to	
1 pl.	*-me-		*- med^hh_2	
2 pl.	*- <i>te</i> -		$*-d^hwe$	
3 pl.	*-nt (*-ent)	*-an (*-in)	*-ņto	*-anto

After the apocope, the aor. mp. 3 pl. would remain the only ending with *-a-, thus providing material for the grammaticalization of *-a- as a marker of the mediopassive voice. This possibility, evoked as early as [Kieckers 1915] has become widespread in the present-day scholarship ([Klingenschmitt 1982: 9; Olsen 2017: 443; Martirosyan prep. § M 507.2c; Viredaz, § 13.2, this volume]). Leaving aside the issue of validity of 3 pl. form as a source of the paradigmatic analogy and the lack of typological parallels for such analogical expansion [Schmidt 1990: 41], we will now turn to the question of the morphological types of the aorist, in which *-nto would be an expected allomorph.

As noticed in fn. 2, the reconstruction of the athematic mediopassive ending *- η to is insecure in the amphikinetic root aorists where *-ento might have been the correct form. However, PIE *- η to can be plausibly reconstructed for other morphological types that had a tonic stem in the mediopassive plural forms. Such are the reduplicative and root (acrostatic) imperfects and aorists, as well as signatic aorists, e.g. PIE imperf. mp. 3 pl. * h_1 e- d^h e- d^h h_1 - η to > Skt. adadhata 'they were being put', * h_1 e- h_1 e- h_1 s- η to > Skt. āsata and Gk. η aτo 'they were sitting'. The acrostatic root and signatic aorists were perhaps marginal types in the core PIE (see [Harðarson 1993;

⁵ See [Harðarson 1993: 51] on the early replacement of the PIE aor. mp. 1 sg. *-mo by the perf. 1 sg. *- h_2e . The ending *- mh_2 is reconstructed in [Beekes 2011: 269] for the proto-form of Gk. pres. mp. 1 sg. *-mai, aor. mp. 1 sg. *-mai, as a replacement of the older *- h_2 corroborated by Skt. -i. If *- mh_2 developed in the common source of Greek and Armenian, its expected Proto-Armenian outcome would be *-an.

Drinka 1995; Kümmel 1998] among others), and one may doubt their productivity in early Proto-Armenian (before *R > *aR). Additional research is required to prove that there was a functional link between these morphological types of the aorist to the mediopassive voice, which could be responsible for the rise of the productive Old Armenian mediopassive marker -a- out of the 3 pl. form.

It should be pointed out that the Greek 3 pl. -ατο is attested in very few indicative forms⁶ but is regular in the optative, perfect, and pluperfect [Rix 1976: 248; Sihler 1995: 480]. This peculiarity opens a possibility to derive the Old Armenian mediopassive voice -a- from the perfect tense forms (predominantly intransitive) and not the aorist. This scenario would make sense only if (1) there were mediopassive forms of the perfect at the earliest stages of Proto-Armenian; and (2) the elimination of the perfect and its merger with the aorist had not yet been over by the time of the Proto-Armenian apocope (e.g. when 3 pl. *-an became a markedly mediopassive ending opposed to the 3 pl. active ending *-en or *-in).

A salient illustration of caveats related to attempts to justify *-nto as the source of the spread of -a-, is provided by Arm. cnanim 'be born'. Arm. cnan can be explained by a seemingly rather straightforward mediopassive acrostatic athematic root aorist form PIE mp. 3 pl. *h_le-genh_3-nto. However, the existence of such verb, with a mediopassive athematic root aorist can be objected. PIE *genh_1-'come to being' had the reduplicative present *gi-genh_1-/*gi-gnh_1-(Gk. γ iγνομαι, Lat. $gign\bar{o}$), and its punctive construal could be expressed by the perfect tense forms with the stem *ge-gonh_1-/*ge-gnh_1- (Gk. γ έγονα, Skt. jajana) and the resultative meaning 'be born'. Altogether, the aorist stem with the full grade is attested in Gk. εγενετο and Arm. cinaw, both mediopassive. It is not clear whether the Greco-Armenian correspondence reflects the dialectal PIE athematic or thematic stem'; one may tentatively assume a change from PIE *h_le-

⁶ The athematic mp. 3 pl. could be analogically adjusted to the 3 sg., cf. imperf. mp. 3 pl. ἐτίθεντο (instead of ^xὲτίθατο < * h_Ie - d^hi - d^hh_I - η to) next to 3 sg. ἐτίθετο < * h_Ie - d^hi - d^hh_I -to. This case demonstrates that the 3 pl. was not the source of paradigmatic leveling of the vocalism of the endings.

 $^{^{7}}$ Toch. B *kantär* 'come about' is a hapax, found in a corrupted context, and is unreliable (see Peyrot 2013: 397f., 731).

 $g_n^*h_1$ -to (acrokinetic athematic) to dialectal PIE * h_1e - $genh_1$ -to or * h_1e - $genh_1$ -e-to (acrostatic thematic), which occurred in the common source of the Greek and Armenian branches. Given that the underlying verb does not have a static meaning, there seems to be no sufficient reason to align the source of E_{VEVETO} with the acrostatic stative of the type Skt. Saye 'lie' < PIE *Saye-

In the mediopassive forms, the full-grade of the root is expected in the paradigm of the sigmatic aorist, thus, PIE aor. mp. 3 pl. *CeC-s-nto > post-apocope PArm. * $CeC^{(s)}$ -an. This possibility may be illustrated by Arm. pres. zgenum 'clothe oneself', aor. zgec'av, which must be derived from dialectal PIE pres. *ues-nu-: aor. *ues-s- act. 'dress smb.', mp. 'dress oneself'. The expected mediopassive aorist form of this verb (the reflexive version of the underling derived ditransitive *n(e)u-verb), would be $*h_1e$ -ues-s-nto, whence (with an analogical extension of -c'-) z-gec'-an. Likewise, aor. meran of meranim 'die' can be directly derived from PArm. *mer-s-nto. Another possible example is Arm. pres. ant 'ernum' read (aloud)', aor. ənt'erc'ay, if from PIE pres. *terK-nu-, aor. *terK-s- [Kocharov 2017]. The expected aor. mp. 3 pl. would be $*h_1e$ -terK-s-nto > *(e-)t'erc'-an, whence *and-t'erc'-an > ant'erc'-an. However, the traces of the sigmatic agrist are rather scanty (cf. anic-anem 'curse', hec-anim 'mount', etc.), and often controversial (cf. arnum 'take'⁸, suz-anim 'hide', etc.: cf. Kortlandt, this volume). One of the most reliable verbs, luc'-anem 'kindle', aor. luc'i, from aor. *leuk-s-, is a lexicalized causative and has no mediopassive forms, so that it can hardly be taken as the source of *-s-nto > mp. *-(s)an \rightarrow mp. -a-.

Perhaps, a more productive source of the post-apocope mp. 3 pl. *-an were anticausatives in *-eh₁(-)s- commonly reconstructed as the source of the Old Armenian *i*-aorist, cf. dial. PIE * $\acute{g}nh_3$ - $\acute{e}h_1$ (-)s- \rlapnto > Arm. canean 'they recognized'. Even if the *i-aorist is an innovation in the paradigm of $\check{c}ana\check{c}$ 'em, the source of such innovation was perhaps bound to the mediopassive voice and the atonic 3 pl. *- \rlapnto .

⁸ In particular, the persistence of $-\dot{r}$ - in aor. $a\dot{r}$ -i ($a\dot{r}$ -num 'take'), as opposed to -r- in yare-ay ($ya\dot{r}$ -nem 'rise'), does not prove its sigmatic origin, since yare-ay is not a root aorist and does not provide the same proportion for the analogical spread of the root shape as $a\dot{r}$ -i.

The only objection here is that the Old Armenian i-aorist can be alternatively derived from the stative-inchoative suffix *- eh_1 - (which could have turned into a resultative/perfect marker in the common source of Greek and Armenian, wherefrom the Greek passive aorist in - η -), in which case one would expect PIE *- eh_1 -nto > PArm. *- $\bar{e}nto$.

2.3. The suffix *-e h_2 -

Meillet [1910–1911] pointed out that the -a- of the mediopassive endings goes back to a stem, which was originally not marked for the mediopassive voice, cf. aor. mp. luay tr. 'hear' next to pres. act. lsem and aor. subj. act. luic'ē. The best formal match is found in the Latin imperfects in -ā- and -bā- that go back to intransitive preterite stems in *-eh₂- (erāt < PIt. *h₁es-eh₂-t) and *b^huH-eh₂- 'was' respectively (cf. Osc. 3 pl. fufans) [Meiser 1998: 197; Weiss 2009: 414]. This formation has long been compared to the Balto-Slavic preterites in *-ā-, intransitive agentives in Greek, and Old Armenian aor. mp. -a-; cf. Lat. cēlāre intr. 'to jump', Gk. πηδᾶν intr. 'jump', Latv. lēkāju intr. 'to jump about' [Sihler 1995: 505], Arm. mnam intr. 'remain' < PArm. *mVn-eh₂-(ie/o-) < PIE *men- intr. 'remain' [LIV²: 437]⁹.

Despite the above-cited possibilities to explain mp. -a- starting from the PIE mediopassive endings, the derivation from PIE $*eh_2$ -

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⁹ Meillet claimed that the PIE denominal *-e-ie- and *-ā-ie- (*-eh₂-ie-) formations were generalized independently in separate Indo-European branches [Meillet 1977: 73–74]. Furthermore, Meillet noticed that, while the *-e-ie- and *-ā-ie- were used to derive inchoative and factitive denominal verbs respectively in the majority of branches, the situation is reverse in Old Armenian, where e-stems, from PArm. *-e-ie-, characteristize transitive verbs (e.g. berem tr. 'carry'), while the a-stems, from PArm. *-ā-ie-, are mostly found in intransitive verbs (e.g. mnam intr. 'remain'). It fact, the situation may prove to be more complicated. In Greek, both primary and denominal verbs in -αω demonstrate a variety of syntactic properties including non-agentive intransitives, agentive intransitives, as well as ambitransitive verbs [Tucker 1990: 203–275]. Correspondences like Arm. *orsam* ambitr. 'chase' < PArm. *pork-ā-ye/o- (cf. Arm. ors 'chase' < PArm. *pork-e/o-s) next to Lat. procāre ambitr. 'ask for (in marriage)' < PIt. *prok-ā-ye/o- (cf. Lat. procus 'pretendent' < PIt. *prok-o-) [de Lamberterie 1994: 139, fn. 135] may be explained by the atelic Aktionsart rather than the argument structure of these verbs.

stems remains a valid option. This possibility has the advantage of being based on a productive morphological marker. In particular, it has the priority even over the solution based on *- $eh_1(-)s$ - η to > -ean, since the suffix *- eh_2 - is not limited to the 3 pl. This type of stem was perhaps more productive in the Proto-Armenian verbal morphology than the acrostatic root and sigmatic aorists taken together. It is often associated with the imperfective morphology and intransitivity. Thus, many frequent primary verbs of the a-conjugation are agentive intransitives (gam intr. 'come', gnam intr. 'go', ert 'am intr. 'march'), while derived verbs of the a-conjugation include productive derivational model for anticausatives (spitakanam intr. 'become white'). Given that the dial. PIE imperfect merged with the aorist in Proto-Armenian before the rise of the new imperfect, it is likely that at least some of the inherited imperfect forms in *- eh_2 - were retained by the preterite (the later aorist), cf.:

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1 sg. act. *-eh_2-m > *-\bar{a}m mp. *-eh_2-(m)h_2 > *-\bar{a}(m)
2 sg. act. *-eh_2-s > *-\bar{a}s mp. *-eh_2-so > *-\bar{a}so 3 sg. act. *-eh_2-t *-\bar{a}t mp. *-eh_2-to > *-\bar{a}to
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The lability of the present tense of the a-conjugation supports the hypothesis that the *- eh_2 - suffix was no longer associated with the transitivizing morphology in Proto-Armenian. The fact, that the secondary aorists gnac 'i (pres. gnam intr. 'go'), kac 'i (pres. kam intr. 'stand'), aor. mnac 'i (pres. mnam intr. 'remain') received the active voice while being intransitive must be explained as an idiosyncratic morphosyntacite feature of verbs of motion and position, which may well be archaic, cf. PIE * h_1ei -mi 'go'. Such verbs could contribute to the reanalysis of *-a-a as a marker of intransitivity before the apocope.

Following the apocope, the markedly mp. 2 sg. *-a(h) and 3 sg. *-aw would remain a readily available sources of analogical spread. It should be stressed that, unlike the 3 pl., the 3 sg. often becomes the source of analogy in a verbal paradigm (a generalization known as Watkin's Law, cf. [Watkins 1962: 93 ff.]).

The argument, that *- eh_2 - cannot explain the stem forming -a- and the inflectional -a- at the same time in - $\underline{a}c$ ' $\underline{a}y$, is not valid, since it disregards the work of analogy. When reconstructed without a full account of analogy, aor. act. 3 sg. -eac ' must be derived from *-e(ie)- eh_2 - sk-et, with at least two instantiations of the PIE thematic vowel *-e/o-,

yielding a suffix and part of inflection at the same time. Once the -a-series of intransitive (mediopassive) endings had spread from the inherited * eh_2 -imperfects to the root agrists and the inherited * eh_2 -same agrists were recharacterized by *-c'-, there was enough room for the analogical formation of 3 sg. *-ac'-aw.

3. Conclusions

The hypothesis that Old Armenian mediopassive -a- goes back to PIE aor. mp. 3 pl. *-nto remains problematic given that traces of the acrostatic root, reduplicative, and sigmatic aorists left only residual traces in Old Armenian and the productivity of these types can be objected for Proto-Armenian.

In my opinion, the imperfect forms, derived from the verbal stems in $*-eh_2$ - or $*-eh_2$ -ie/o-, represent a more probable source for the grammaticalization of the mediopassive inflection. There is suggestive evidence that these stems were well established in the Proto-Armenian verbal system and that many of such stems had lexicalized intransitivity. Formally, they provide an impeccable source of mp. -a- across the preterite paradigm before the Proto-Armenian apocope and in the 3sg. following the apocope.

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