

ROBERT GODEL

AN INTRODUCTION
TO THE STUDY
OF CLASSICAL ARMENIAN



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by

Robert GODEL

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SECOND PART

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FOREWORD

This book does not contain anything more than what its title promises. Its scope is limited to a description of the Classical Armenian language, and to an inquiry on its origin and growth. Both parts have been planned so as to balance each other; and, as a historical study on syntax, in the present state of our knowledge, would unavoidably be full of gaps, syntax has not been included even in the descriptive part.

This latter, an outline of Classical Armenian phonology and morphology, must not be mistaken for a grammar. Several items have been purposely set aside, in order not to obscure the main features of the language. These deliberate omissions are perhaps compensated by a more systematic treatment of noun and verb inflection. Besides, more attention has been paid to phonology than is the case in recent grammars or text-books.

As for the second part, it aims at supplying reliable information on etymology, sound change and historical morphology, without concealing the difficulties that attend the comparative study of such a language as Classical Armenian. Meillet's fundamental work, *Esquisse d'une grammaire comparée de l'arménien classique*, was first published in 1903. A second, revised edition appeared in 1936. Since that date, many phonological questions have been discussed again. Meillet's views on historical morphology, though they have been less controverted, are in need of revision. This, I believe, is enough to justify a new approach.

The list of Armenian words and morphemes at the end of this volume would have increased exceedingly, should it have included all the examples quoted in the descriptive part. It therefore contains only those on which some comment is made in connection with etymology, sound change, or morphological peculiarities.

I express my gratitude to Professor Giorgio Raimondo Cardona, from the University of Rome, and to Professor Calvert Watkins, of Harvard University, who took the trouble of reading the manuscript of my Introduction. To both I am indebted for many a helpful observation.

I also have to thank Mrs. Lilliam Hurst for carefully revising my English text and removing the stylistic infelicities.

ABBREVIATIONS

C	Consonant	Alb.	Albanian
V	Vowel	AS.	Anglo-saxon
		Av.	Avestic
N.	Nominative	Gk.	Ancient Greek
Acc.	Accusative	Goth.	Gothic
G.	Genitive	Hitt.	Hittite
D.	Dative	Lat.	Latin
L.	Locative	Lith.	Lithuanian
Abl.	Ablative		
I.	Instrumental	OCSl.	Old Church Slavonic
		OHG.	Old High German
(P)IE	(Proto)-Indo-European	OIceI.	Old Icelandic
PA	Proto-Armenian	OIr.	Old Irish
ClArm.	Classical Armenian	OP.	Old Persian
ModArm.	Modern Armenian	Skt.	Sanskrit
		Umbr.	Umbrian
		Ved.	Vedic

Periodicals :

BSL	Bulletin de la Société de linguistique de Paris
HA	Handes Amsoreay (Vienna)
IF	Indogermanische Forschungen (Berlin)
JAOS	Journal of the American Oriental Society (New Haven, Conn.)
KZ	Zeitschrift für vergleichende Sprachforschung (Göttingen) [Usually called : Kühn's Zeitschrift]
Lg	Language (Baltimore)
MSL	Mémoires de la Société de linguistique de Paris
NTS	Norsk Tidsskrift for Sprogvidenskap (Oslo)
REArm	Revue des Études Arméniennes (Paris)
RicLing	Ricerche Linguistiche (Rome)
TPhS	Transactions of the Philological Society (Oxford)

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Other references will be found in the foot-notes. A Selected bibliography is appended to my report on *Diachronic Armenian* (Godel, 1970b p. 155-159). As it does not include purely descriptive studies, nor any work on Classical Armenian literature, I think it appropriate to quote here the following :

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Rüdiger Schmitt

- Die Erforschung des Klassisch-Armenischen seit Meillet (1936)*. Kratylos XVII, 1972 [1974], p. 1-68.

THE ARMENIAN ALPHABET

A SYNCHRONIC APPROACH

Trans- liter- ation				Names of the letters	Trans- liter- ation				Names of the letters
Ա	ա	a	այբ	(ayb)	Ճ	ճ	ճ	ճ	(čē)
Բ	բ	b	բեն	(ben)	Մ	մ	մ	մ	(men)
Գ	գ	g	գիմ	(gim)	Թ	թ	թ	թ	(yi)
Դ	դ	d	դա	(da)	Ն	ն	ն	ն	(nu)
Ե	ե	e	եչ	(eč')	Շ	շ	շ	շ	(ša)
Զ	զ	z	զա	(za)	Ո	ո	ո	ո	(o)
Է	է	ē	է	(ē)	Չ	չ	չ	չ	(č'a)
Ը	ը	ə	ըթ	(ət')	Պ	պ	պ	պ	(pē)
Թ	թ	t'	թո	(t'o)	Ղ	ղ	ղ	ղ	(jē)
Ժ	ժ	ž	ժէ	(žē)	Ռ	ր	ր	ր	(ra)
Ի	ի	i	ինի	(ini)	Ս	ս	ս	ս	(sē)
Լ	լ	l	լիւն	(liwn)	Վ	վ	վ	վ	(vew)
Խ	խ	x	խէ	(xē)	Տ	տ	տ	տ	(tiwn)
Ս	ս	s	սա	(ca)	Ր	ր	ր	ր	(rē)
Կ	կ	k	կեն	(ken)	Ց	ց	ց	ց	(c'o)
Հ	հ	h	հո	(ho)	Ի	ւ	ւ	ւ	(hiwn)
Չ	չ	j	չա	(ja)	Փ	փ	փ	փ	(p'iwr)
Ղ	ղ	ł	ղատ	(lat)	Գ	գ	գ	գ	(k'ē)

FIRST PART

A SYNCHRONIC APPROACH

1. A systematic description of an obsolete language like ClArm. has to be made on the ground of a 'corpus' affording sufficient and homogeneous data about its phonemic structure, grammar, and basic vocabulary. Such a corpus, of course, consists of texts only. The earliest Armenian texts have been written down in the 5th century A.D., the so-called 'golden century' (*oskedar*). Many are translations from the Greek, e.g. the Armenian Bible, and possibly P'awstos Biwzant's *History*, or from the Syriac, e.g. St. Ep'rem's *Hymns*. Others have been composed or compiled by Armenian clerics: Eznik from Kolb, Koriwn, Łazar from P'arpi, and the anonymous author known as Agat'angelos.

1.1. In this connection, it must be pointed out that 1^o) all the works of the *oskedarean* authors and translators have come down to us in manuscripts from later centuries. The most ancient one, the Moscow Gospel, was copied in 887; and the only extant copy of Eznik's treatise against the heresies (*Elc alandoc'*), preserved in the famous Library (*Matenadaran*) at Erivan, is dated from 1280, while the original treatise had been written down in the years 441-448. The reliability of the text and its orthography is therefore not quite above suspicion.

2^o) The dating of certain important literary works, traditionally referred to the 5th century, has turned out to be controversial. This is the case of Ehišē's narrative of the first religious war, i.e. Vardan Mamikonean's unsuccessful campaign against the Sassanian monarch Yazgerd II, in 451 A.D. (*Vasn Vardanay ew Hayoc' paterazmin*), and of Movsēs Xorenac'i's celebrated History of Armenia (*Patmut'iwn Hayoc'*). Even those scholars who cling to the traditional dating have to admit that the extant versions of both works display interpolations or other alterations from the following (6th to 9th) centuries.

1.2. In view of this situation, it is advisable not to include in the corpus such texts as are likely to belong to, or bear the stamp of, later times, and to limit the field to non controversial *oskedarean* literature. Even within these limits, a description of ClArm. is not very easy; but it would become more complicated were we to take into account the literature of the subsequent period. Besides, a corpus covering several centuries would not suit the purpose of a synchronic approach.

One must not be deceived by the long survival of ClArm. as a literary language (*grabar*): no literary language, however carefully cultivated and handed down, is safe from gradual alteration. From the early Middle Age down to the beginning of the 19th century, Armenian writers and poets, whatever dialect they spoke in everyday life, kept on using the old language, and trying to maintain its purity. To what extent they actually succeeded is a difficult question to answer. Doubtless, those writers, as learned men and clerics, would mostly remain aloof from the developments of the popular language, and avoid 'vulgar' words, inflections, or idioms. But they would also yield to the temptation of improving the *grabar* by artificial embellishments. This trend is perceptible in the so-called Siwni school (6th to 8th century), where Armenian literates were trained to use every kind of Greek idioms, even against the rules of Armenian syntax and inflection. On the other hand, toward the same time, traces of 'vulgarity' appear in the Armenian version of Zenob Glak's *History of Tarawn*, by Yovhan Mamikonean (7th century).

1.3. THE ALPHABET

The Armenian alphabet, like the Gothic and the Cyrillic (OCSl.), was created for religious and cultural purposes. Christian preaching had reached Armenia toward the end of the 3rd century, starting from the most active centers in the neighbouring countries: Caesarea in Cappadocia, and Edessa (Urfa) in Mesopotamia. Christianity soon became the state religion of the Armenian kingdom (301). Later, in king Pap's days (367-374), the Armenian church released itself from the authority of Caesarea's archbishop. Yet, many years still elapsed before the Armenian faithful could have the Gospel preached in their own language: Armenian clerics had to learn Greek and Syriac, as well as make oral translations and comments.

1.31. The alphabet was created in 406 or 407 by a learned cleric, Mesrop Maštoc' (Koriwn and Łazar mention the latter name only). The translation of the Bible ensued; Mesrop started with Solomon's Proverbs. It appears that Mesrop had to invent an alphabet because Armenian had never been written before that time. At least, there is no positive evidence to the contrary. Armenian historians never refer to documents or chronicles written in the national language, prior to the Mesropian period. They would hardly have ignored them, had there been any. What they sometimes quote, besides foreign historical works, are fragments of old native poetry. Movsēs has twelve extracts from the 'Songs of Golt'n' (*Golt'an ergk'*), mostly pertaining to the deeds and adventures of Armenian kings or heroes of the past (180 B.C. to 72 A.D.). These old epic lines are very fine, and we should like to have more of them. The poets were very likely wandering

rhapsodes (the profession has continued up to recent times), performing their songs not only at the kings' and lords' courts, but also among the country folk. All people enjoyed them, and in spite of the clergy's opposition (see P'awstos, III. 13), these poetic memories of pagan times remained alive for centuries. But the fragments quoted by Movsēs do not display archaic word forms, as would probably be the case if they had been preserved through a written tradition. Apparently, the stylistic features of the poems did not alter; but the language is no longer the original one: it is Classical Armenian, very much like the historians's own language.

1.32. The historical significance of Mesrop's "discovery of the letters" must therefore not be underrated. Did he really invent his alphabet? ¹ The shapes of the 36 letters are rather unlike any known characters. But in spite of several attempts to connect the Mesropian alphabet with other Eastern systems of writing, the Greek alphabet can still be safely mentioned as a model, in view of the succession of the letters :

Gk.	α β γ δ ε ζ η θ ι	κ λ μ ν ξ ο π ρ σ τ	υ φ χ (ψ ω)
Arm.	ա բ գ դ ե զ թ ժ	ի լ լւ ծ զ Ճ Ճ Ճ Յ Ն	Շ Ո Ս ը ս ղ ց յ ք

and of the use of *ու* (= Gk. *ου*) for /u/ (see below, 1.643). Furthermore, the shapes of certain letters seem derived from a variety of cursive Greek :

$$\beta < \beta; \theta < \vartheta \text{ etc. } ^2$$

Anyway, the Greek alphabet did not supply all the characters needed, and Mesrop would have had to supplement it either by borrowing letters from some other system, or by coining new signs. Coining letters, after all, is easier than setting down the phonemic system of one's own language; and since he perfectly succeeded in doing this, he may be credited with the invention of the 'Armenian letters' (*թ ժ լ լւ ծ զ Ճ Յ Ն Շ Ո Ս ը ս ղ ց յ ք*).

1.4. TRANSLITERATION OR TRANSCRIPTION ?

Transliteration means substituting Latin letters (with the addition of diacritic marks, or exceptionally, of Greek characters) for the original signs of written texts, regardless of whether or not the spelling faithfully reflects the 'pronunciation', i.e. the phonological shape of the language. It simply aims at showing how a language is written, not how it exactly sounds. This device is the only

¹ On a similar problem concerning the origin of the Avestic alphabet, see W. B. Henning's study in *Handbuch der Orientalistik* I. 4/1 (1958), p. 52.

² Feydit, p. 31-36.

scientific one in the case of defective or awkward writing systems, such as the Middle Iranian alphabets and spellings.

Transcription, on the contrary, is devised so as to represent the oral word forms, i.e. to give a phonological picture of a language. Phonetic alphabets have been created to this very purpose, though they are also used for transliterating. Transliteration, indeed, however tentative, is never totally haphazard: e.g. if there are reasons to believe that a certain letter represents a dental stop (*t*, or *d*, or *th*), it will not be transliterated by *p* or *s*. Consequently, a transliteration will sometimes approximate a transcription, insofar as the phonological values of the written signs can be conjectured with some certainty.

1.41. Regarding ClArm., the former method has proved more adequate. The only scholar who deliberately departed from the usual practice is Stuart E. Mann: his system of transcription reflects the phonological situation in the 11th century (Mann, 1963; Preface, p. ii). He devised it with the purpose of sparing his readers the difficulties that arise from the conflict between the 5th century spelling and the traditional pronunciation. From a philological point of view, however, this device is objectionable.

1.42. The current system of transliteration is mainly Hübschmann's, into which Meillet's improvements have been incorporated (Meillet, 1936, p. 13). A slight modification (*c'* and *č'* instead of *ç* and *č*) appears in the new series of the REArm³. The following text sample has been transliterated accordingly. The only particular for which I am responsible is the hyphen dividing prepositions and articles from the words to which they are attached: *y-anapat* (յանապատ) 'to the desert'; *hogwov-n* (Հոգևովն) 'by the Spirit', etc. In the manuscripts, the name of God, *Astuac*, is written Ած and the GDAbL form, written Այ, is usually restated as *Astucoy*, according to the traditional reading. But word internal *-a-* did not drop before the Middle Armenian period (12th to 14th century), so that the classical form was doubtlessly *Astuacoy* (Աստուածոյ).

1.5. TEXT SAMPLE: the Temptation of Jesus (Luke, 4.1-13)

Եւ Յիսուս լի Հոգևով սրբով դարձաւ ի Յորդանանէ և վարէր Հոգևովն յանապատ աւուրս

1 Ew Yisus li hogwov srbov darjaw i Yordananē ew varēr hogwov-n y-anapat (2) awurs

քառասուն փորձեալ ի Սատանայէ և ոչ եկեր և ոչ արբ յաւուրսն յայնոսիկ և ի կատարելն

k'arasun p'orjeal i Satanayē, ew oč' eker ew oč' arb y-awurs-n y-aynosik, ew i katarel-n

նոցա քաղցեալ: Եւ ասէ ցնա Սատանայ. Եթե որդի ես Աստուածոյ ասա քարիդ այդմիկ

noc'a k'alc'eaw. 3 Ew asē c'-na Satanay: Et'e ordi es Astuacoy, asa k'ari-d aydmik

³ Jensen (1959, § 31) already pointed out that *g* and *z*, being actually aspirated *ð* and *δ*, would be more consistently transliterated as *c'* and *č'*. Nevertheless, he stuck to the usual practice.

զի Հաց լիցի : Պատասխանի ետ նմա Յիսուս և ասէ. Գրեալ է եթե ոչ Հացիւ միայն կեցցէ
 zi hac' lic'i. 4 Patasxani et nma Yisus ew asē : Greal ē et'e oč' hac'iw miayn kec'c'ē
 մարդ, այլ ամենայն բանիւ Աստուածոյ : Եւ Հանեալ զնա ի լեառն մի բարձր եցոյց նմա
 mard, ayl amenayn baniw Astuacoy. 5 Ew haneal z-na i leārn mi barjr, ec'oyc' nma
 զամենայն թագաւորութիւնս աշխարհի ի վայրկեան ժամանակի : Եւ ասէ ցնա Սատանայ.
 z-amenayn t'agaworutiwns ašxarhi i vayrkean žamanaki. 6 Ew asē c'-na Satanay :
 Քեզ տաց զայս ամենայն իշխանութիւն և զփառս սոցա, զի ինձ տուեալ է և ում կամիմ
 K'ez tac' z-ays amenayn išxanut'iw n ew z-p'ars soc'a, zi inj tueal ē, ew um kamim
 տամ զնա : Արդ դու եթե անկեալ երկիր պագանիցես առաջի իմ, քեզ եղիցի ամենայն :
 tam z-sa. 7 Ard du et'e ankeal erkir paganic'es aŕaji im, k'ez elic'i amenayn.
 Պատասխանի ետ նմա Յիսուս և ասէ. Երթ յետս իմ, Սատանայ. զի գրեալ է, երկիր
 8 Patasxani et nma Yisus ew asē : Ert' y-ets im, Satanay, zi greal ē : Erkir
 պագցես տեառն Աստուածոյ քում և զնա միայն պաշտեսցես : Եւ աժ զնա յԵրուսաղէմ
 pagc'es tearn Astuacoy k'um ew z-na miayn paštesc'es. 9 Ew ac z-na y-Erusalēm
 և կացոյց ի վերայ աշտարակի տաճարին, և ասէ ցնա, Եթե որդի ես Աստուածոյ արկ զքեզ
 ew kac'oyc' i veray aštaraki tačari-n, ew asē c'-na : Et'e ordi es Astuacoy, ark z-k'ez
 աստի ի վայր, զի գրեալ է եթե Հրեշտակաց իւրոց պատուիրեալ է վասն քո պաշել զքեզ,
 asti i vayr, (10) zi greal ē et'e hreštakac' iwroc' patuireal ē vasn k'o pahel z-k'ez,
 զի ի վերայ ձեռաց բարձցեն զքեզ, մի երբեք Հարցես զքարի զոտն քո : Պատասխանի ետ
 (11) zi i veray jeŕac' barjc'en z-k'ez, mi erbek' harc'es z-k'ari z-otn k'o. 12 Patasxani et
 նմա Յիսուս և ասէ. Ասացեալ է թե ոչ փորձեսցես զտէր Աստուած քո : Եւ կատարեալ
 nma Yisus ew asē : Asac'eal ē t'e oč' p'orjesc'es z-tēr Astuac k'o. 13 Ew katareal
 զամենայն փորձութիւնս Սատանայի՝ ի բաց եկաց ի նմանէ առ ժամանակ մի :
 z-amenayn p'orjut'iwns Satanayi, i bac' ekac' i nmanē aŕ žamanak mi.

1.6. COMMENTS

CONSONANTS : *c* = *ts* (in Engl. *Tsar*); *j* = *dz* (in *adze*); *x* = Germ. *ch* (in *Bach*, *doch*, etc.). Diacritic marks are used for hushing consonants : *š* = Engl. *sh*; *ž* = Engl. *z* in *azure*; *č* = Engl. *ch*; *ǰ* = Engl. *j* (*joy*), and for aspirates : *p' t' k' c' č'*. On *l* and *r*, see below (1.62).

1.61. Data about the phonological values of Armenian consonants are afforded by loan words from Middle Iranian, Syriac, or Greek :

- պալատ *palat* < Gk. *palátion* (< Lat. *palātium*)
- կայսր *kaysr* < Gk. *Kaísar* (Lat. *Caesar*)
- ձնձղայ *cnclay* < Syr. *šišlā*, *šešlā* (= *šeššälā*) 'cymbal'
- ճշմարիտ *čšmarit* 'true' < Mİr. *čašmδit* 'visible, obvious'
- բագին *bagin* < Mİr. *bagin* 'altar'
- դար *dar* 'slope' < Mİr. *dar* 'valley'
- ճրագ *črag* 'lamp' < Mİr. *čirāg*
- փառ(ք) *p'ar(k')* 'glory' < Mİr. **farr* (< OP. *farnah-* 'glory')

փասիան p'asian < Gk. phāsiānós 'pheasant'

թեմ t'em 'diocese' < Gk. théma

մեքենայ mek'enay < Gk. mēkhánē 'engine'

Notice the occurrence of aspirates before s :

փսիած p'siat' < Gk. psíathos 'mat'

մետաքս metak's < Gk. metaksa 'raw silk'

just as in քսան k'san '20' (see below, 2.31).

1.62. The transliteration of η as a kind of l (l) is by no means arbitrary. Though it is traditionally pronounced as a fricative (the voiced counterpart of x), it certainly represented in early ClArm. (5th to 8th century) a dark l , not unlike the American l in 'life, ball', etc., while l was used for the clear l , as in French 'lac, bal'. Evidence for this phonological value is not wanting : beside the position of η in the alphabet, there are loan words, e.g. տիտղոս titlos < Gk. *títlos* (< Lat. *titulus* 'inscription, title'); Պաւղոս Pawlos < Gk. *Paúlos*, etc., and etymological data, e.g. :

աղ աł 'salt' : Gk. *hál-s*; Lat. *sal*

եղն ełn 'hind' : OCSl. *jelenĩ*

դեղին dełin 'yellow' and դալար dalar 'fresh, green' are derived from the same root (Cf. Gk. *thállō* 'I bloom', *thalerós* 'blooming, sturdy').

ClArm. had also two kinds of r : n (r) and p (r). The difference can be approximately figured out by contrasting the Italian strongly trilled r with the American intervocalic r (in 'berry, tomorrow')⁴.

1.63. VOWELS

The transliteration of t by \bar{e} is somewhat misleading : it seems to point to a long vowel, while ClArm. presumably had no contrast of long vs. short. But it reflects the diachronic background : t , as a development of a former diphthong (ei/ey : see below 2.211), must have once been a long vowel. Furthermore, in vowel alternation, it does not behave like either a , e , o or i , u (2.224). In Mesrop's days, it probably stood in contrast to t as a close e to an open one; but about the 10th century, e and \bar{e} eventually merged, except in word initial (1.632).

1.631. A similar development took place later on. In the early 10th century, the aw 'diphthong' (1.641), before a radical consonant, changed to a long, open

⁴ See G. Bolognesi, *Sul valore di armeno r*, RicLing 5 (1962), p. 141-145 (\dot{r} = rr).

o, entailing the later addition of a new character to the alphabet: since the 12th century, *Հաւտ* 'herd', *աւր* 'day', *կաւշիկ* 'shoe' are written *Հօտ*, *օր*, *կօշիկ*. In Modern Arm., the new vowel has merged with the original *o* (*ɑ*), except in word initial.

1.632. In the course of the post-classical period, initial *ե* developed an on-glide *y-* (*e- > ye-*), but *է* did not. Similarly, *ո* developed an on-glide *w-* (*o- > wo-*), but *օ* did not. The resulting situation in ModArm. can be illustrated as follows:

եմք /yemk'/ 'we are' : *էք* /ek'/ 'you are'
որ /vor/ 'who' (rel. pronoun) *օր* /or/ 'day'

Word internally *ե* = *է*; *ո* = *օ*:

սեր /ser/ 'progeny' : *սէր* /ser/ 'love'
Հոտ /hot/ 'odour' : *Հօտ* /hot/ 'herd'.

1.64. *վ*, *ւ* and *յ* never occur between consonants: consequently, they do not represent vowels. The same preposition occurs as *ի* before consonants, as *յ* before vowels:

ի վերայ *i veray* 'on top of'; *ի լեռն* *i learn* 'toward the mountain'
յանապատ *y-anapat* 'into the desert'; *յաւուրս* *y-awurs* 'in the days'.

As to *վ* and *ւ*, they stand in complementary distribution, the former occurring in word initial (*ի վայր* *i vayr* 'down'; *վասն քո* *vasn k'o* 'for thy sake'; *ի վերայ* *i veray*, etc.) and after *ո* (*Հոգով* *hogvov* 'by the Spirit'; *գովեմ* *govem* 'I praise', etc.); the latter, in every other environment. It thus appears that *ւ*, in spite of its position in the alphabet, is not equivalent to Gk. *υ*; otherwise, it would have become superfluous, since Gk. /ü/ (*υ*) had long ago merged with /i/ (*ι*). Mesrop seems to have taken it over with regard to the quasi diphthongs *av*, *ev*, *ηv*, which probably sounded approximately like Arm. *աւ* *aw*, *եւ* *ew*, *իւ* *iw* before consonants.

1.641. All three letters occur either between vowels (*Հայիմ* *hayim* 'I look at'; *եղեւին* *etewin* 'fir-tree'; *Հովանի* *hovani* 'shadow, shelter'), or after a vowel in word (or syllable) final position (*դիսոյ* *dšxoy* 'queen'; *արև* *arew* 'sun'; *կորով* *korov* 'vigor'; *այգի* *aygi* 'vineyard'; *Մովսէս* *Movsēs* 'Moses'), i.e. in such positions where any consonant is allowed to occur. But *վ* is never found between a vowel and an implosive consonant⁵, while both *ւ* and *յ* frequently are: *այգ* *ayg* 'dawn'; *այս* *ays* 'this'; *վայրկեան* *vayrkean* 'moment'; *լոյս* *loys* 'light'; *գոյն* *goyn* 'colour'; *մաւտ* *mawt* 'near'; *աւձ* *awj* 'snake'; *ալեւր* *alewr* 'flour'; *սիւն* *siwn* 'column', etc. Very

⁵ Except in some plural forms, on which see below (2.323).

likely, *ay*, *oy*, *aw*, *ew*, *iw* in this last case did not sound quite the same as in other environments. Armenian grammarians term them 'diphthongs'.

1.642. According to the transliteration principle, each Armenian letter has to be substituted by one Latin letter, e.g. *վ* by *v*, *ւ* by *w*, regardless of the phonemic problems involved. Hübschmann's system is therefore objectionable. He steadily uses *v* for *վ*, but transliterates *ւ* by *v* or *u*, *յ* by *y* or *i*, in turns, e.g. :

թիւ *t'iv* 'number, figure'; *թիւն* *t'ivn*⁶ 'the number'; *նաւ* *nav* 'ship'; *արքայ* *ark'ay* 'king' — but :

աւր *aur* 'day'; *արիւն* *ariun* 'blood'; *ձայն* *jain* 'sound, voice', etc.

thus anticipating the solution of two problems : 1^o) Do *վ* and *ւ* represent the same phoneme ? 2^o) Did ClArm. have diphthongs ? And if this was the case, how would they have to be defined in phonemic terms ? Meillet's transliteration is more consistent : he uses *v* for *վ*, *w* for *ւ*, and *y* for *յ* in all environments (except for the particular case of *ու* : see below), and writes, accordingly : *t'iv*; *t'ivn*; *naw*; *ark'ay*; *aur*; *ariwn*; *jayn*, etc.

1.643. Doubtlessly, *ու* and *ու* do not reflect the same phonological reality : *ov* and *ow* would of course serve the purpose, whatever value is assigned to the latter. But this value can be safely stated : Mesrop simply borrowed from the Greek the pseudo-diphthong *ou*, which had been for a long time, throughout the hellenized world, the normal sign for *u*. The decisive proof lies in the fact that, in vowel alternation, *ու* (*u*) behaves like *ի* (*i*) (2.221), which would not be the case if it had been a diphthong. Thus, the transliteration by *u*, though not quite consistent with the principle, does not raise serious objections.

⁶ I would write : *t'iv-n* (see above, 1.42 and below, 2.324).

2. Phonology.

The accuracy of Mesrop's alphabet has already been emphasized (1.32). It certainly provides a sound basis for a classification of ClArm. phonemes. Diphthongs as defined by the Armenian grammarians (1.641) need not be included in the description: *աւղ* /awd/ 'air' displays the same phonological pattern as *արդ* /ard/ 'now', *անդ* /and/ 'there'; *գիւտ* /giwt/ 'discovery' can be paralleled with *բիրտ* /birt/ 'coarse'; *այբ* /ayb/ 'the letter *ա* with *ալբ* /alb/ 'dirt', etc.

2.1. A TABLE OF ClArm. PHONEMES

Consonants

Stops :	/p/	պ	/p'/	փ	/b/	բ	Nasals :	/m/	մ
	/t/	տ	/t'/	թ	/d/	դ		/n/	ն
	/k/	կ	/k'/	ք	/g/	գ			
Affricates :	/c/	ծ	/c'/	ց	/j/	յ			
	/č/	ճ	/č'/	ճ	/j'/	ջ			
Fricatives :	/s/	ս			/z/	զ			
	/š/	շ			/ž/	ժ			
	/x/	խ							
	/h/	հ							
Resonants :					/l/	լ		/l'/	ղ
					/r/	ր		/r'/	ռ
					{/v/	վ			
					{/w/	ւ			
					/y/	յ			

Vowels

				/a/	ա		
			/e/	ե		/o/	օ
		/ē/	է				
/i/	ի					/u/	ու
				(ə	ը)		

2.11. As a result of recent studies (H. Vogt, 1958; Benveniste, 1959, p. 46-56), the stops and affricates in the 3rd column prove to have been voiced aspirates (*b'* *d'* *g'* etc.), as they still are in some modern Eastern dialects⁷. Yet the usual

⁷ This accounts for their divergent developments in Eastern and Western dialects (Bolognesi, 1960, p. 20-21).

transliteration (*b d g* etc.) can be maintained without inconvenience, since ClArm. had no contrast of simple voiced vs. voiced aspirate.

2.12. From certain obsolete spellings like *qawjɫ*, *hɫnɫjɫ* (*hɫnɫ*) beside *qawjɫ* 'wolf', *hɫnɫjɫ* 'ray of light', etc. it appears that *l* and *ɫ* have formerly been phoneme variants. They still partially stand in complementary distribution, *l* occurring in word initial (*ɫwɔd* 'I cry', *ɫɛwɔnɫn* 'mountain', *ɫwɛd* 'I hear', etc.) and after *j*, and *ɫ* before consonants (*wɫɫ* 'dirt', *nɫɫnɫjɫ* 'greeting', *ɫwɫɫɫɛwɫ* 'he felt hungry', etc.). In other positions (intervocalic or final), however, they behave as phonemes:

<i>wɫɫɫ</i> /alik'/ 'waves, billows'	:	<i>wɫɫɫ</i> /alik'/ 'bowels'
<i>wɫwɫ</i> /tal/ 'husband's sister'	:	<i>wɫwɫ</i> /taɫ/ 'verse, line'
<i>qɫɫ</i> /gol/ 'heat'	:	<i>qɫɫ</i> /goɫ/ 'thief', etc.

Similarly *r* and *ɾ* are phonemes, although such minimal pairs as

<i>ɫwɾɾɛd</i> /varem/ 'I lead'	:	<i>ɫwɾɾɛd</i> /varem/ 'I burn'
<i>wɾwɾ</i> /arat/ 'stain'	:	<i>wɾwɾ</i> /aɾat/ 'plentiful'

are not numerous. Before radical *n*, the opposition is mostly suppressed (2.231).

As to *v* and *w*, they have to be regarded rather as phoneme alternants (cf. 1.64, and Pisani, 1950, p. 186).

2.2. SYLLABLE STRUCTURE. The usual patterns are (C)V, (C)VC: *Ew Yi-sus li hog-wov ... dar-jaw i Yor-da-na-nē ew va-rēr ... ya-na-pat ... k'a-ɾa-sun p'or-jeal i Sa-ta-na-yē ew oč' e-ker ... Ew a-sē ... Sa-ta-nay: E-t'e or-di es As-tu-a-coy a-sa k'a-rid* etc.

However, (C)VCC too has to be reckoned with, in view of *aydmik*, *vayrkean*, *barjc'en*. On the problems involved, see below 2.342.

2.21 Hiatus, as a rule, is allowed in morpheme juncture, except after *a* or *o*, which require the insertion of *y*:

<i>ɫwɫwɫjɫ</i> /xalayi/ 'I moved, walked', impf. of <i>ɫwɫwɫd</i> , as against
<i>ɾɾɾɾɫ</i> /berei/ 'I brought'; <i>wɾnɾnɾɫ</i> /aɾnui/ 'I took', impf. of <i>ɾɾɾɾd</i> , <i>wɾnɾnɾd</i> ;
<i>wɾɾwɾjɾɾɾɾ</i> /ark'ayut'iwn/ 'kingdom', from <i>wɾɾwɾj</i> 'king'
<i>qɾjɾɾɾɾ</i> /goyut'iwn/ 'being, existence', from <i>qɾj</i> 'being, extant', as against
<i>ɫɾɾɾɾɾ</i> /liut'iwn/ 'fullness', from <i>ɫɾ</i> 'full'
<i>dɾwɾqɾwɾɾɾɾɾ</i> /margareut'iwn/ 'prophecy', from <i>dɾwɾqɾwɾɾɾ</i> 'prophet'.

Conversely, there is no instance of *y* after *e*, *i* or *u*.

2.211. In the most ancient manuscripts, e.g. the Moscow Gospel, *ɫ* is

substituted by *t* when immediately followed by a vowel: *մարգարէ* 'prophet', GDL. *մարգարեի*, I. *մարգարեիւ*; derivates: *մարգարեանամ* 'I prophesise', *մարգարեութիւն* 'prophecy'. Similarly in the *e*- and *i*- conjugations, the imperfect ends in *-եի* 2nd sg. *-եիր* 1st. pl. *-եաք*, etc. (but 3rd sg. *-էր*). The paralleling of these endings with those of the *a*- conjugation at once reveals the origin of the *ē/e* alternation:

<i>բերեի</i> /berei/	<i>խաղայի</i> /xałayi/
<i>բերեիր</i> /bereir/	<i>խաղայիր</i> /xałayir/
<i>բերէր</i> /berēr/	<i>խաղայր</i> /xałayr/
<i>բերեաք</i> /bereak'/	<i>խաղայաք</i> /xałayak'/ etc.

PA. **ey* yielded *ē* before consonants (*բերէր* < **bereyr*) and in word final while *-y-* dropped between *e* and a vowel (*բերեի* < **bere(y)i*). This explanation holds good for all similar cases, e.g. *մարգարէ* < **margarey*; *մարգարեանամ* < **margare(y)-anam*.

But as soon as the 10th century *t* instead of *t* appears in inscriptions. The new spelling (*բերէի-մարգարեանամ*), involving the merger of *ē* and *e* (1.63), has become traditional. It must be noted that the former one was partially ambiguous: in *բերեաք*, *մարգարէանամ*, *ea* does not make one syllable only as it does in other instances (2.213).

2.212. Hiatus occurs after *u* without qualification:

նու 'bride', GD Abl. *նուոյ* /nuoy/
լեզու 'tongue', GDL. *լեզուի* /lezui/; I. *լեզուաւ* /lezuaw/
եսու 'I gave' (aor.), 1st pl. *տուաք* /tuak'/ 'we gave'; part. *տուեալ* /tueal/ 'given'
առնուի /arñui/ 'I took' (impf.), 1st pl. *առնուաք* /arñuak'/, etc.,

but after *i* only when the radical morpheme (root or stem) is monosyllabic:

դի-եմ /diem/ 'I suckle'; *Հի-անամ* /hianam/ 'I wonder, admire'
ձի 'horse', GD Abl. *ձիոյ* /jioy/; *ձիաւոր* /jiawor/ 'rider'
մի 'one', G. *միոյ* /mioy/ or *միոջ* /mioj/; D. *միում* /mium/;
միանամ /mianam/ 'I unite'; *միայն* /miayn/ 'only'; *ի միասին* /i miasin/ 'together';
միանձն /mianjn/ 'monk'.

2.213. The addition of a morpheme beginning with *a* to a polysyllable in *-i* results in a compound phoneme /ea/, which counts as one syllable only, and can therefore be rightly termed a diphthong:

որդի /ordi/ 'son' + *-ակ* /ak/ (a diminutive suffix)
 > *որդեակ* /ordeak/ 'son' (with a connotation of endearment);

տեղի /tehi/ 'place' + *-աւ* (I. ending)
 > *տեղեաւ* /teleaw/ (cf. *լեզու* 'tongue', I. *լեզուաւ*).

The aorists *քաղցեայ* /k'alc'eay/ 'I became hungry', *փախեայ* /p'axeay/ 'I fled', etc. are derived from *i*-stems (*k'alc'i-*, *p'axi-*), and can be paralleled with the *u*-stem aorists *լու-այ* /luay/ 'I heard', *երդու-այ* /erduay/ 'I swore'.

The peculiar nature of /ea/ as a contraction of *i* + *a* is proved by the aor. 3rd. sg. form *եկեաց* /ekeac'/, from *կեամ* /keam/ 'I live'; for, the *e*- prefix (augment) is added to such aorist forms only as would otherwise be monosyllables, e.g. *ետու* /etu/ 'I gave'; *եկեր* /eker/ 'he ate'; *եցոյց* /ec'oyc'/ 'he showed', etc. (3.233).

NOTE. *Տէր* /tēr/ 'lord', GDL. *տեանն* /tean'n/, is admittedly derived from *այր* /ayr/ 'man', and has been traced back to a PA. compound **ti-ayr* 'house man, landlord' (Pisani, 1951, p. 64-65). The contrast with *միայն* /miayn/ 'only' might be explained on chronological grounds: *տէր* probably belongs to an earlier lexical layer than *միայն*. But the parallel word *տիկին* /tikin/ 'lady' does not bear evidence to PA. **ti-*, because *i* should have dropped (see below, 2.221). Only **tey-* would account for both *տէր* < **te(y)-ayr* and *տիկին* < **tēkin* < **tey-kin* (2.222). See Godel, 1970a, p. 2-4.

2.22. REGULAR VOWEL ALTERNATION. Vowel alternation, as a rule, is the result of diachronic developments. At an early stage of PA., the word stress settled upon the last syllable but one, entailing firstly the dropping of final vowels, together with the following consonants (except *n*, *r* and *l*)⁸. Later on, certain vowels and diphthongs in unstressed (non final) syllables were lost or reduced. The effect of the latter change can be formulated in synchronic terms, as rules of vowel alternation.

2.221. Final *i* or *u* : non final (ə)⁹

գիր /gir/ 'letter' : GD Abl. *գրոյ* /groy/; *գրեմ* /grem/ 'I write'
երկինք /erkink'/ 'heaven' : GD Abl. *երկնից* /erknic'/
իղձ /ihj/ 'longing, wish' : GDL. *ըղձի* /əhji/; *ըղձամ* /əhjam/ 'I wish'
ելիք /elik'/ 'he left' (aor.) : 1st sg. *լքի* /lk'i/, 2nd sg. *լքեր* /lk'er/, etc.
լքից /lk'ic/ 'I shall leave' (aor. subj.) : 2nd sg. *լքցես* /lk'c'es/, 3rd sg. *լքցէ* /lk'c'ē/, etc.

քուն /k'un/ 'sleep' : GD Abl. *քնոյ* /k'noy/
անասուն /anasun/ 'animal' : GD Abl. *անասնոյ* /anasnoy/
ջուր /jur/ 'water' : GD Abl. *ջրոյ* /jroy/; *ջրաղաց* /jrałac'/ 'watermill'
եմուտ /emut/ 'he entered' (aor.) : 1st sg. *մտի* /mti/, 2nd sg. *մտեր* /mter/, etc.

⁸ A similar change took place much later in a few words and phrases, as the consequence of an emphatic stress on the first syllable: *այսր* /aysr/ < **áysor*; *այսմ* /áysm/ < **áysum* (G. and DL. of *այս* 'this'); *այժմ* /ayžm/ < *áys žam* '(at) this hour, now'; *իբր* /ibr/ 'as' < **i bar* 'which way, how?'

⁹ 'Final' and 'non final' refer to the syllable, not to the vowel only.

VC words with initial *i* or *u* display no alternation :

իժ /iž/ 'viper' : GDL. *իժի* /iži/

ուլ /ul/ 'kid' : GDAbI. *ուլոյ* /uloy/, etc.

Final *-iw* reduces to *-u-* :

պատիւ /patiw/ 'honour' : GDAbI. *պատուոյ* /patuoy/; *պատուական* /patuakan/ 'honorable, valuable'

2.222. Final *ē* : non final *i*

Final *oy* : non final *u*

մէգ /mēg/ 'mist, fog' : GDL. *միգի* /migi/; *միգամած* /migamac/ 'misty'

աւրէնք /awrēnk/ 'law, rule' : GDAbI. *աւրինաց* /awrinac/

էջ /ēj/ 'he came down' (aor.) : 1st sg. *իջի* /iji/, 2nd sg. *իջեր* /ijer/, etc.

լոյս /loys/ 'light' : GDAbI. *լուսոյ* /lusoy/; *լուսաւոր* /lusawor/ 'luminous'

կացոյց /kac'oyc/ 'he set, placed' (aor.) : 1st sg. *կացուցի* /kac'uc'i/, 2nd sg. *կացուցեր* /kac'uc'er/, etc.

2.223. Final *ea* : non final *e*

մատեան /matean/ 'book' : GDL. *մատենի* /mateni/; *մատենագիր* /matenagir/ 'writer'

լեան /leān/ 'mountain' : GDL. *լերին* /lerin/ (Cf. 2.231)

սեաւ /seaw/ 'black' : GDAbI. *սեւոյ* /sewoy/

ատեաց /ateac/ 'he hated' (aor.) : 1st sg. *ատեցի* /atec'i/, 2nd sg. *ատեցեր* /atec'er/, etc.

Consequently, *ea* in non final syllables was to yield **ey*, which regularly developed to *e* before vowels, according to 2.221, and to *i* (through *ē*) before consonants, according to 2.222 :

Հրեայ /Hreay/ 'Jew' : GDL. *Հրեի* /Hrei/ (from **Hreyi*); *Հրեաստան* /Hreastan/ 'Judaea'.

From *ատեամ* /ateam/ 'I hate', the impf. is regularly

1st sg. *ատեի* /atei/ (from **ateyi* < *ateayi*. Cf. *խաղայի*)

2nd *ատեիր* /ateir/

3rd *ատեայր* /ateayr/ (2 syllables)

1st pl. *ատեաք* /ateak/ (3 syllables !), etc.

and the pres. subj.

1st sg. *ատիցեմ* /atic'em/ (from **ateyc'em* < *ateayc'em*. Cf. *խաղայցեմ*)

2nd sg. *ատիցես* /atic'es/, etc.¹⁰

¹⁰ The pres. subjunctive of *կեամ* 'I live' : *կեցեմ*, *կեցես* ... is therefore irregular, against Meillet's opinion (1936, p. 21).

On the later spellings *Հրէի*, *Հրէաստան*, *ստէի*, see above (2.211).

2.224. It thus appears that /ē/, /oy/ and /ea/ make up a peculiar set of phonemic entities, occurring in final (stressed) syllables only, and standing in contrast to the 'stable' vowels *a*, *e*, *o* on the one hand, and to the 'unstable' ones (*i*, *u*) on the other.

2.23. While the rules of vowel alternation spread all over the morphological system of ClArm., with scarce exceptions, only two instances of CONSONANT ALTERNATION have to be mentioned.

2.231. *ř* (before *n*) : *r* (in all other environments)

This alternation is found in the paradigm of a few irregular verbs, e.g. :

անեմ /aɪnem/ 'I do, make' : aor. *արարի* /arari/
դանամ /daɪnam/ 'I turn, return' : aor. *դարձայ* /darjay/
ընթեանում /ənt'eɪnum/ 'I read' : aor. *ընթերցայ* /ənt'erc'ay/

and in the inflection of several nouns with variable stems (3.14) :

լեան /leɪn/ 'mountain' : GDL. *լերին* /lerin/, N.pl. *լերինք* /lerink'/
դուռ /duɪn/ 'door' : GDL. *դրան* /dran/, N.pl. *դրուք* /drunk'/
դռնապան /dɪnapan/ 'door-keeper, porter'
ան /aɪn/ GDL. of *այր* /ayr/ 'man', N.pl. *արք* /ark'/, etc.

But it is no longer predictable, because in other instances *ř* has been propagated through the whole paradigm, e.g. :

անում /aɪnum/ 'I take' : aor. *առի* /aɪri/
ջեռնում /jeɪnum/ 'I warm (myself)' : aor. *ջեռայ* /jeɪay/
բեռ /beɪn/ 'burden' (Cf. *բերեմ* /berem/ 'I bring') : GDL. *բերին* /beɪin/, N.pl. *բերինք* /beɪink'/

Likewise : *բուռ* /buɪn/ 'fist' (GDL. *բրին* /brin/); *գան* /gaɪn/ 'lamb', *դան* /daɪn/ 'bitter', *ձեռ* /jeɪn/ 'hand', etc.

Conversely, *r* is preserved before *n* in the oblique cases and derivatives of nouns or adjectives ending in *-in* or *-un* :

գարուն /garun/ 'spring' : GDAbI. *գարնայնոյ* /garnaynoy/ (from a derived adjective *գարնային* /garnayin/)
վերին /verin/ 'upper, supreme' : GDAbI. *վերնոյ* /vernoy/, etc.

2.232. *c'* (before a vowel) : *s* (before *c'*, *ǰ*)

This alternation is peculiar to the subjunctive of *-c'*- aorists, provided the stem is polysyllabic :

պաշտեցի /paštec'i/, aor. of *պաշտեմ* /paštem/ 'I worship' :

Subj. 1st sg. *պաշտեցից* /paštec'ic'/ 'I shall worship'

2nd sg. *պաշտեսցես* /paštesc'es/ (from *paštec'c'es < *paštec'ic'es)

3rd sg. *պաշտեսցէ* /paštesc'ē/, etc.

մոռացայ /mořac'ay/, aor. of *մոռանամ* /mořanam/ 'I forget' :

Subj. 1st sg. *մոռացայց* /mořac'ayc'/ 'I shall forget'

2nd sg. *մոռացիս* /mořasc'is/, etc.

NOTE. On *կացից* /kac'ic'/ 'I shall stand', 2nd sg. *կացցես* (stem *կաց-* /kac'-/) see below (2.341).

-sc' is analogical in *արացես* /arasc'es/ ..., *եկեսցես* (along with *եկեսցես*) /ekesc'es/ ..., from *արարից* /araric'/ 'I shall do', *եկից* /ekic'/ 'I shall come'.

2.3. SYLLABLE STRUCTURE AGAIN : THE NEUTRAL VOWEL (ə)

The letter *ը* is written in word initial only, before *m*, *n*, or *l* + C :

ըմպեմ /əmpem/ 'I drink', *ընտիր* /əntir/ 'select', *ընկեր* /ənker/ 'companion', *ըղձամ* /əłjam/ 'I wish, long for', etc. Notice also the prepositions *ընդ* /ənd/, *ըստ* /əst/.

In this respect, the orthography does not exactly reflect the phonological reality : ə doubtlessly occurred in many other positions, where Mesrop did not deem relevant to have it written. One is thus confronted with two problems, a theoretical one : Did ə function as a phoneme, like any full vowel? And a practical one : In which environments did it regularly occur?

The phonemic character of ə can be seriously questioned in view of the very fact that it is not consistently written¹¹. Its occurrence seems to have depended on certain phonological and morphological rules, so that the 5th century reader would be spared any hesitation. But regarding those rules, we are left with our knowledge of the situation in Modern Armenian, and with partial information from orthographical treatises, the earliest of which is dated from the 2nd half of the 13th century. To apply the modern pronunciation to the classical language, as many Armenologists do, is only a makeshift solution, bringing no real light on the problem. The neutral vowel was probably apt to drop or to shift its place under certain circumstances, e.g. in word juncture. Even an optional use of ə,

¹¹ In such minimal pairs as *բերեմ* 'I bring' : *բրեմ* 'I dig' ; *բանակ* 'camp' : *բնակ* 'inhabitant, native' ; *կարեմ* 'I can' : *կրեմ* 'I bear', etc., the phonemic contrast is better expressed as V/∅ (/berem/ : /brem/ ; /banak/ : /bnak/, etc.) than as V/ə (/berem/ : /bərem/).

in certain environments, has to be reckoned with. Thus, the difficulty for unskilled readers, would have been directly opposite to that which French spelling involves: the so-called 'e muet' is written four times in "Je ne te le dirai pas", while the usual pronunciation is "Je n' te l' dirai pas". The rules of ClArm. spelling would have required: *žntldirepa*.

2.31. *Apparent initial clusters*. In PA, the dropping of unstressed *i* or *u* might result in clusters, sometimes entailing the partial assimilation of the first consonant to the following one, as in:

քսան /k'san/ '20' < **gsan* < **gisan*

թչուան /t'suar/ (and *չուան* /č'uar/) < **dšwar* < MIr. **dušwarr* 'unfortunate' (Hübschmann, p. 504; Grammont, p. 233; Bolognesi, 1954, p. 134-135).

In ClArm., however, all initial clusters were resolved by inserting *ə*, as in *քսան* [k'əsan], *թչուան* [t'əšuar], or by prefixing it to *sp-*, *st-*, *sk-*, *zb-* etc. This is proved by the active inflection of the root aorist: all the forms that lack the *e-* prefix are actually dissyllables (Cf. 2.213):

կլի [kəli] 'I swallowed', 2nd sg. *կլեր* [kəler], 1st pl. *կլաք* [kəlak'], etc.
as against 3rd sg. *եկուլ* [ekul],

սպան [əspan] 'he killed'
as against *եկեր* [eker] 'he ate', *եցոյց* [ec'oyc'] 'he showed', etc.

Likewise, the aor. subj. of *ստանամ* 'I get, obtain' is inflected like *մոռացայց* (2.232): *ստացայց*, *ստացիս*, *ստացի* ... The substitution of *c'* by *s* before *c'* proves that the aorist stem *ստաց-* /stac'-/ did not count as one syllable only; therefore *ստանամ* has to be read [əstanam].

2.311. According to this principle, any apparent cluster (CC-) in word initial involves a non written *ə*, either inserted (CəC-) or prefixed (əCC-):

a) *թթու* [t'ət'u] 'sour'; *բժիշկ* [bəžišk] 'physician'; *սխալիմ* [səxalim] 'I err'; *նմա* [nəma] 'to him'; *կնիք* [kənik'] 'seal'; *դրախտ* [dəraxt] 'paradise'; *հրեշտակ* [həreštak] 'angel', etc.

The rule applies to prefixed particles, e.g. the preposition *ց-* 'to, up to':
ցնա [c'ə-na] 'to him' (as against *ցայժմ* [c'-ayžəm] 'up to now').

b) *սպիտակ* [əspitak] 'white'; *ստեպ* [əstēp] 'frequent'; *սկիզբն* [əskizbən] 'beginning'; *զբաղեալ* [əzbaɫeal] 'occupied, busy', etc.

The preposition *զ-*, which is chiefly used as a mark of the definite direct object, is read [əz-] before any consonant:

զնա [əz-na] 'him'; *զքեզ* [əz-k'ez] 'thee' (as against *զայս* [z-ays] 'this', *զոտն* [z-otən] 'the foot').

2.312. In most instances, the initial cluster stands in contrast to a full stem form with either *i* or *u*, according to 2.221. The examples given in that paragraph can now be rewritten in phonetic transcription, by substituting CC- by CəC- :

- q/hp* 'letter' : GD Abl. *q r n j* [gəroy]; *q r t d* [gərem] 'I write';
t l h p 'he left' : 1st sg. *l p h* [lək'i], 2nd *l p t p* [lək'er], etc.;
p n l u 'sleep' : GD Abl. *p n n j* [k'ənoy];
ʒ n l p 'water' : GD Abl. *ʒ r n j* [jəroy]; *ʒ r a n a q* [jəraɫac'] 'water-mill';
t d n l u 'he entered' : 1st sg. *d m h* [məti], 2nd *d m t p* [məter], etc.

The morphological connection between the reduced stem form and the full one accounts for such seemingly exceptional cases as *u n t d* [sətem] 'I lie' (as against *u n a n a d*, *u n t u*, etc.): the full stem is found in *u n l u* 'lie', GD Abl. *u n n j* [sətoy].

2.32. *Word final*. Non inflected word forms, i.e. mostly nouns or adjectives in the sg. N Acc., display various final clusters (-CC). The following can be considered regular¹² :

- Fricative + stop : -*st*, -*sk* (and -*sp*, -*št*, -*zd*, -*xt* in loan words only);
- Nasal or *r*, *l* + stop or affricate (*m* before *p*, *b* only);
- r*, *ɾ*, *l* + nasal;
- r* + fricative : -*rs* (and -*rz*, -*rž*, -*rħ* in Ir. loans only);
- y*, *w* + any consonant (Cf. 1.641).

Class c) calls for discussion. Phonologically, -*rn*, -*ln* are on a level with -*rm*, -*lm*. The traditional pronunciation, however, is not consistent : on the one hand *β a r u d* [t'arm] 'fresh', *ʒ e r u d* [jerm] 'warm', *p n u r u d* [k'urm] 'heathen priest', *z a n u d* [hoɫm] 'wind', *m e n u d* [meɫm] 'mild, soft'; on the other *n o l u n* [duɾən] 'door', *l e a n u n* [leaɾən] 'mountain' *t e n* [eɫən] 'hind', *a s e n* [aseɫən] 'needle', etc. But the substitution of *ɾ* for *r* in *n o l u n*, *l e a n u n* (2.231) clearly points to an earlier pronunciation [duɾn], [leaɾn], and similarly [eɫn], [aseɫn].

2.321. All other final clusters have to be resolved by inserting ə before the last consonant (-*n*, -*r* or -*l*; seldom -*m*) :

- l β u n* [ewt'ən] 'seven'; *δ n l u n* [jukən] 'fish'; *a n d u n* [anjən] 'soul, self';
u n a u n [tasən] 'ten'; *t e r n u n* [erdumən] 'oath'; *h u n* [inən] 'nine';
ψ o n p p [p'ok'ər] 'little, small'; *p a r d a r* [barjər] 'high'; *z a d p* [hamər] 'dumb'; *m e n p* [meɫər] 'honey'; *t a r p* [tarər] 'element';

¹² Irregular clusters (e.g. -*k's* or fricative + fricative) are tolerated in loanwords : *d a p u* [mak's] 'toll, tax' (Syr.); *m e t a p u* [metak's] 'silk' (Gk.); *χ a r i s x* [xarisx] 'base, anchor' (?); *b e d e a š x* [bədəəšx] 'governor of a border province' (Iran).

kyoŋ [kočəŋ] 'log'; *astəŋ* [astəŋ] 'star';

dərošəm [dərošəm] 'stamp, mark'.

See also the words quoted in f. n. 8 (*həp, wjup, wjūd, wjčd*).

2.322. *Inflected word forms*

The addition of the plural endings N. *-p*, Acc-L. *-u* very often brings forth irregular clusters, e.g. *pəŋwəp, pəŋwəu* 'cities'; *dəŋp, dəŋu* 'chicks'; *ʃwəp, ʃwəu* (pl. only) 'mind'; *wəp, wəu* 'eyes', etc., not to speak of three consonant clusters: *nəŋwəp, nəŋwəu* 'camels'; *dəŋp, dəŋu* 'clothes'; *kəŋp, kəŋu* 'blind', etc.

The issue can be solved in terms of morpheme variation:

-p [-k' / -ək']; *-u* [-s / -əs] (Cf. the English plural ending *-s* in 'hats, boys; houses'). The rule of distribution may have been a purely phonological one: *-k'* and *-s* would then have occurred not only after vowels (i.e. practically *i* or *u*, seldom *ē*), but also after single consonants, whenever regular final clusters resulted; *-ək'*, *-əs* automatically in all other instances:

<i>lezuk</i>	[lezuk'] 'tongues',	<i>caŋayk</i>	[caŋayk'] 'servants',	<i>vark</i>	[vark'] 'behaviour'
<i>lezus</i>	[lezus]	<i>caŋays</i>	[caŋays]	<i>vars</i>	[vars]
<i>meŋk</i>	[meŋk'] 'sins',	<i>bank</i>	[bank'] 'words'		
<i>meŋəs</i>	[meŋəs]	<i>banəs</i>	[banəs]		
<i>wəp</i>	[ač'ək] 'eyes',	<i>kəŋp</i>	[kəŋp'] 'blind'		
<i>wəu</i>	[ač'əs]	<i>kəŋu</i>	[kəŋu]		

A number of final clusters in the pl.N., though without parallels in non inflected word forms, apparently fit into some of the regular patterns:

- a) *eresk* [eresk'] 'faces', *hərašk* [hərašk'] 'miracles', *maraxk* [maraxk'] 'grasshoppers';
- b) *amolk* [amolk'] 'pairs'¹³, *kamk* [kamk'] 'will'¹⁴, *p'ark* [p'ark'] 'glory';
- e) *nawk* [nawk'] 'ships', *covk* [covk'] 'seas', etc.

They may, of course, have been felt regular. Yet one has to reckon with another possibility: in all these forms, indeed, morpheme juncture is involved, so that the *ə* variants may have had a wider range of occurrence than can be assumed on merely phonological grounds. The pl.AccL. ending, at least, is traditionally pronounced *-əs* even after *r* and *w*, while the corresponding clusters *-rs*, *-ws* actually occur in non inflected forms. Thus, e.g.:

pl.AccL. *vark* [var-əs] 'behaviour' but sg.NAcc. *vars* [vars] 'hair'

¹³ Notice, however, that *l* does not elsewhere occur before a consonant (2.12).

¹⁴ Cf. the 1st pl. ending *-mk* in *kəŋp* 'we are', *həŋwəp* 'we move', etc.

նաւս [naw-əs] 'ships'	ակաւս [akaws] 'furrow'
Հաշիւս [hašiw-əs] 'accounts'	աղիւս [ašiw] 'brick', etc.

But we cannot decide to what extent this rule reflects the pronunciation of 5th century Armenian, nor do we know whether a similar rule held of the pl.N. ending (see below, 2.323, note).

2.323. The pl.I. of all nouns and adjectives is formed by adding *-p* to the sg.I. form :

Sg.I. առակաւ (from առակ 'parable')	:	pl.I. առակաւք
բանիւ (from բան 'word; reason' = Gk. <i>logos</i>)	:	բանիւք
գրով (from գիր 'letter')	:	գրովք
Հարբ (from Հայր 'father')	:	Հարբք
կանաճբ (from կին 'woman')	:	կանաճբք

The last two examples, displaying the abnormal cluster *-Cbk'*, have doubtless to be read [harbək'], [kanambək']. As to the other three, there is a clue in the later spelling *առակօք* (on which see above, 1.631): the change of *aw* to *ō* points to an original final cluster in *առակաւք* [arākawk'], and analogically in *բանիւք* [baniwk'], *գրովք* [gərovk'].

NOTE. The change of *aw* to *ō* did not take place in pl.N. and AccL. forms. The divergent developments would be explained by starting from, e.g., *նաւք* [nawək'], *նաւս* [nawəs], as against *առակաւք* [arākawk'].

2.324. The *demonstrative (or deictic) particles* *-u*, *-ŋ*, *-ŭ* are used either in connection with the demonstrative pronouns *այս*, *այդ*, *այն*, or as definite articles :

տունս այս /tun-s ays/ (or այս տուն) 'this house'

տունս 'the house (here)'

քարիդ այդմիկ /k'ari-d aydmik/ 'to that stone' (Luke, 4.3)

յաւուրսն յայնօսիկ /y-awurs-n y-aynosik/ 'in those days' (Luke, 4.2).

Notice, in Luke 4.1, the use of the *-ŭ* particle with reference to a previous occurrence of the same noun: լի Հոգևով սրբով 'full of (the) Holy Spirit' ... վարէր Հոգևովն 'he was led by the (said) Spirit'.

As in the case of the pl.N. and AccL. endings, morpheme variation must be here assumed, but the rule of distribution can be stated more confidently :

<i>-u</i> after vowels :	[-s];	after consonants :	[-əs]
<i>-ŋ</i> " :	[-d]	" :	[-əd]

-ն after vowels : [-n] after consonants : [-ən]
 ի տանէս [i tanē-s] (Abl.) 'from the house' : տունս [tun-əs] (NAcc.)
 քարիդ [k'ari-d] (D.) 'to the stone' : քարդ [k'ar-əd] (NAcc.)
 Հոգիին [hogi-n] (NAccL.) 'the spirit' : Հոգւովն [hogwov-ən] (I.)

Thus the addition of a demonstrative particle never generates a cluster.

Cf. Հորս [hor-əs] 'the well (here)' with որս [ors] 'hunt; game'
 բանդ [ban-əd] 'the word' with անդ [and] 'there'
 նաւն [naw-ən] 'the ship' with տաւն [tawn] 'feast'
 խոյն [xoy-ən] 'the ram' with գոյն [goyn] 'color', etc.

However, in view of the developments in ModArm., polysyllabic word forms ending in *-ay*, *-oy* may have admitted the postvocalic variants : արքայդ [ark'ay-d] 'the king'; Հոգւովն [hogwoy-n] (GD Abl.), from Հոգի 'spirit'.

2.33. Since the only function of *ə* is, it seems, to preclude forbidden consonant clusters, one will safely assume that it dropped, or rather failed to be pronounced, whenever its insertion became superfluous, i.e. whenever a modification in the environment allowed for a normal syllable division. This remark applies to *ə* in final syllables, and to initial *ə* before *st*, *sk*, etc. (2.31).

2.331. The addition of a demonstrative particle to such word forms as have been described above, 2.321-323, would entail the dropping of the preceding *ə* :

	ձուկն [ju/kən] ¹⁵	+ -ս >	ձուկնս [juk-nəs] 'the fish (here)'
	մեղր [me/lər]	+ -դ >	մեղրդ [meɫ/rəd] 'the honey (there)'
	աստղ [as/təl]	+ -ն >	աստղն [ast/lən] 'the star'
pl.N.	աչք [a/č'ək']	+ -ն >	աչքն [ač'/k'ən] 'the eyes'
	կոյրք [koy/rək']	+ -ն >	կոյրքն [koyr/k'ən] 'the blind'
pl.AccL.	աչս [a/č'əs]	+ -դ >	աչսդ [ač'/səd] 'the eyes'
pl.I.	կանամբք [ka/nam/bək']	+ -ս >	կանամբքս [ka/namb/k'əs] 'by the women (here)' ¹⁶

NOTE. The clash of *k'* with *k'* (in քաղաքքն [k'alak'/k'ən] 'the cities') and the more frequent clash of *s* with *s* (առ ձկնորսսն [ar jəknors/sən] 'at (or by) the fishers', Eznik IV 12) does not seem to have been avoided : such a phrase as յամիսսս [y-amis/səs] յայսսսիկ 'in these months' would quite naturally occur.

¹⁵ The slant lines mark the syllable boundary.

¹⁶ Cf. աւուրս [awurəs] քառասուն 'forty days' (Acc.), but յաւուրսն [y-a-wurs-ən] յայնսսիկ 'in those days' (L.) in Luke 4.2.

2.332. Similarly ə, either initial or in final syllable, might drop in derived or compound words :

աստղ [as/tə] 'star' : աստղիկ [ast/hik] 'little star'
բարձր [barjər] 'high' : բարձրանամ [barj/ranam] 'I rise'
ձուկն [ju/kən] 'fish' : ձկնորս [jək/nors] 'fisher' (Cf. որսամ 'I hunt, capture')
սպանանեմ [əspananem] 'I kill' : մարդասպան [mardas/pan] 'man-killer, murderer'

2.333. The last instance to consider is close word juncture. So, presumably ակն ունիմ [ak/nunim 'I expect' (ակն 'eye'; ունիմ 'I have'); մեղր ուտեն [meł/ruten] 'they eat honey'; ի սկզբանէ [is/kəzbanē] 'from the beginning'; սիրեցի զձեզ [sirec'iz/jez] 'I loved you', etc.

2.34. *Word internal consonant clusters* mostly consist of implosive + releasing, in agreement with the normal syllable division :

պատկեր [pat/ker] 'portrait'; ոչխար [oč'/xar] 'sheep'; մատնում [matnum] 'I approach'; պատրաստ [pat/rast] 'ready';
անասնոյ [a/nas/noy], գետնոյ [get/noy], անդնդոց [an/dən/doc'], GD Abl. of անասուն 'animal', գետին 'ground, floor', անդունդք 'abyss'.

Similarly, but with ə in the first syllable : թռչուն [t'ər/č'un] 'bird', կղզի [kəl/zi] 'island'; բժշկեմ [bəžəš/kem] 'I cure' (from բժիշկ 'physician'), սննդեան [sə/nən/-dean], GDL. of սնունդ 'food', սկզբան [əs/kəz/ban], GDL. of սկիզբն 'beginning'; մշտնջենական [məš'tən/jenakan] 'perpetual'. As a rule, ə is inserted, when necessary, before the laxest consonant : ապստամբ [apəstamb] (not *apsətamb) 'rebel'; ճակնդեղ [čakəndel] 'beet'; Ատրպատական [Atərpatakan] 'Atropatene (modern Azerbaijan)'.
Implosive clusters in the same environment as a later stage.

2.341. ClArm. had no 'double consonants', except -nn- (իններորդ 'ninth') and -rr- (մրրիկ [mərrik] 'tempest', GDL. մրրկի [mərrəki]). Consequently, the apparent cluster -c'c'- in

կացցես, կացցէ ... (1st sg. կացից 'I shall stand')
լցցես, Լցցէ ... (1st sg. Լցից 'I shall fill'), etc.

has to be resolved : [kac'əc'es], [ləc'əc'ē]. Otherwise, -c'c'- would have reduced to -sc'-, as in պաշտեսցես, պաշտեսցէ ... (2.232).

2.342. Regular implosive clusters (2.32) are expected to occur word internally as they do in word final, though perhaps less frequently. Thus, e.g. in simple

words: *անդրանիկ* [and/ranik] 'first born'; *անձրելու* [anj/rew] 'rain'; *վայրկեան* [vayr/kean] 'moment'; *աւրհնեմ* [awr/hənem] 'I bless'; and in derivatives or compounds from words ending in *-n, -r, -t, -m*:

անձնասէր [anj/nasēr] 'self-loving, selfish'
կողմնակալ [kołm/nakal] 'governor' (*կողմն* 'side' + *-կալ* 'holder')
այդմիկ [ayd/mik] < *այդմ* [aydəm] DL. of *այդ* 'that'
աստղիկ, բարձրանամ (2.332).

However, no general rule of occurrence for the (C)VCC pattern can be formulated, for want of unambiguous evidence, as will appear from the following discussions.

2.343. In *բանամ* 'I lift, raise' (aor. *բարձի*), *դառնամ* 'I turn, return' (aor. *դարձայ*), *-rj/* has reduced to *ɨ* before *n*: *baɨnam* < **barjnam*. But there are contradictory instances: in the *-nu-* presents, at least, similar clusters seem to have been preserved: *սարսնում* 'I startle'; *քաղցնում* 'I feel hungry'; *երդնում* 'I swear'. However, since the related aorists, as mentioned above (2.213) are built upon *-i* or *-u* stems, this must hold true of the presents too, which can be confidently traced back to **sarti-num*, **k'alci-i-num*, **erdu-num*. But this diachronic statement does not solve the issue; for, the contradiction can be explained away in two ways: either by assuming that the unstressed vowel, in this environment (CCVC) did not drop, but reduced to *ə*, so that we had to parallel:

- | | |
|--------------|-----------------------|
| 1. *barj-nam | *sarti-num, *erdu-num |
| 2. baɨnam | sartənum, erdənum, |

or by assigning the conflicting results to different phases of the development. Indeed, the change of **barjnam* to *բանամ* doubtlessly took place at an earlier stage of PA. than the dropping of unstressed *i* and *u*. Therefore, the preservation of implosive clusters in the same environment at a later stage would be no wonder, and the developments would have been:

- | | |
|--------------|----------------------|
| 1. *barj-nam | *sarti-num, erdu-num |
| 2. baɨnam | *sartinum, erdunum |
| 3. baɨnam | sartnum, erdnum |

Thus, there is no deciding whether *սարսնում* has to be read [sartənum] or [sartnum]. One is confronted with the same ambiguity wherever apparent clusters prove to have come about as the result of the dropping (or reducing) of *i* and *u*:

<i>դարբին</i> 'smith'	:	<i>դարբնոց</i> [darb(ə)noc'] 'forge'
<i>մարդիկ</i> 'men, people'	: GDL.	<i>մարդկան</i> [mard(ə)kan]
<i>աղջիկ</i> 'girl'	: GDL.	<i>աղջկան</i> [aɨj(ə)kan]

- ճկրտիչ* 'Baptist' : GDL. *ճկրտչի* [mækərt(ə)č'i]
աւգուտ 'use, advantage' : GDL. *աւգտի* [awg(ə)ti]
անձուկ 'narrow' : GDL. *անձկի* [anj(ə)ki]
երդումն 'oath' : GDL. *երդման* [erd(ə)man]
բարձից 'I shall lift' : 2nd sg. *բարձցես* [barj(ə)c'es], etc.

2.344. The oblique cases of polysyllables ending in *-i* display the rather unusual sequence *Cw* (*Հոգի* 'spirit' : GD Abl. *Հոգւոյ*). This spelling can be taken at its face value, in view of the contrast of *Հոգւոյ* [hogwoy] and *պատուոյ* [patuoy], GD Abl. of *պատիւ* 'honor' (2.221). Consequently, implosive clusters can be checked in the oblique cases of *այգի* 'vineyard', *աղաւնի* 'dove', *որդի* 'son' : *այգւոյ* [ayg/woy], *աղաւնւոյ* [alawn/woy], *որդւոյ* [ord/woy], etc. As to *գաղտնի* 'secret', *յայտնի* 'visible, manifest', the GD Abl. forms (*գաղտնւոյ*, *յայտնւոյ*) certainly have to be read [galtənwoy], [yaytənwoy] and the N Acc. may have been, accordingly : [galtəni], [yaytəni]. But the alternative reading (without ə) is by no means ruled out : for, the insertion of an inorganic ə in the oblique cases must be assumed in *նախնի* 'prior, ancestor', GD Abl. *նախնւոյ*; *կղզի* 'island', GD Abl. *կղզւոյ*, since neither *-xn-* nor *-lz-* are regular implosive clusters. The only conceivable reading is therefore :

նախնի [nax/ni] : *նախնւոյ* [naxən/woy]

կղզի [kəł/zi] : *կղզւոյ* [kəłəz/woy]

and also, presumably :

գաղտնի [galt/ni] : *գաղտնւոյ* [galtən/woy].

2.345. Etymology sometimes allows for a decision : e.g. Av. *āfrīnāmi* 'I praise' gives a clue as to the position of ə in *աւրհնեմ* [awr/hənem] 'I bless' (< PA. **awhrinem*), later *օրհնեմ* [ōrhənem] (1.631). Such cases however are exceptional.

We are thus brought back to our first survey of the whole issue (2.3) : the rules of occurrence of the neutral vowel partially escape our knowledge. Yet, Mesrop's spelling, puzzling though it appears to present day readers, is by no means objectionable : it is phonemic, not phonetic. And this is a strong argument against substituting the usual transliteration by a tentative, and perhaps misleading, phonological transcription.

2.4. THE TRADITIONAL PRONUNCIATION OF ClArm.

ClArm., as a written language, fairly preserved its grammatical shape through centuries, while the spoken dialects gradually altered (Cf. 1.2). But if it was possible for writers to keep close to the morphology and syntax of the classical

models, they would have hardly been able, and certainly did not trouble, to preserve or restore the original phonology: they would instead conform to the pronunciation of their own days. However, in view of the variety of modern dialectal developments, it must be assumed that a tradition was established at a certain stage of the evolution. The rules of pronunciation, as they are formulated in Armenian grammars, seem to go as far back as the 11th or 12th century.

2.41. These rules, equally valid for ClArm. (*գրաբար*) and the modern literary dialects (Eastern and Western *աշխարհաբար*), can be summed up as follows:

1) On *ե* and *է*, *ո* and *օ* (for earlier *ու*), see above, 1.632: *եկեր* [yeker] 'he ate'; *վարէր* [varer] 'he led (or was led)'; *ոչ* [voč'] 'not'; *փորձել* [p'orjel] 'to try (or be tried)'. Notice *ով* [ov], even in word initial: *Ովկիանոս* [ovkianos] 'Ocean'.

2) *եա* = [ya]: *գրեալ* [gəryal] 'written'.

3) *ոյ* (before a consonant) = [uy]: *գոյն* [guyn] 'color'; *եցոյց* [yec'uyc'] 'he showed'.

4) *իւ* (before a *radical* consonant) = [yu]: *արիւն* [aryun] 'blood'; *իւրոց* [yuroc'], pl. GDabl. of *իւր* [yur] 'his, her'.

5) On *ղ*, see above, 1.62: *աղիւս* [aγyus] 'brick'; *քաղցեալ* [k'ayc'yav] 'he felt hungry'; *եղիցի* [yeyic'i] 'it shall be'.

6) Initial *յ* = [h]: *Թիսուս* [Hisus] 'Jesus'; *յանապատ* [h-anapat] 'to the desert'; *յղի* [həyi] 'pregnant'. Both *յոյլ* 'lazy' and *Հոյլ* 'troop, swarm' are pronounced [huy].

7) Final *յ* is dropped: *ծառայ* [caia] 'servant'; *Աստուծոյ* [Astuco], GDabl. of *Աստուած* 'God' (see above, 1.42); *յարեայ* [harya] 'I got up, rose'; *գայ* [ga] 'he comes' — except in monosyllabic nouns (*Հայ* [Hay] 'Armenian'; *խոյ* [xoy] 'ram') and interjections.

8) *ւ* = [v]: *Հովիւ* [hoviv] 'shepherd'; *Հոգևով* [hogvov], I. of *Հոգի* 'spirit'. Besides, *ու*, when followed by a vowel, is also pronounced [v]: *Աստուած* [Ast(ə)-vac] 'God'; *Հովուի* [hovvi], GDL. of *Հովիւ*; *նուէր* [nəver] 'present'; *տուեալ* [təvyal] 'given'.

2.42. Notice that rules 4) and 7) do not apply to nouns ending in *-իւ*, *-այ* or *-ոյ*, either inflected in the pl.N. and Acc-L. (2.322) or followed by a demonstrative particle (2.324):

Հովիւ [hoviv] : pl.N. *Հովիւք* [hoviv(ə)k']
 Acc-L. *Հովիւս* [hovivəs]
 + *-ս* : *Հովիւս* [hoviv-əs]

+ -*ւ* : Հովիւ [hoviv-ən]

pl.N. + -*ւ* : Հովիւք [hovivk'-ən], etc.

ծառայ [caɾa] : pl.N. ծառայք [caɾayk']

Acc-L. ծառայս [caɾays]

+ -*դ* : ծառայդ [caɾay-d]

Likewise

մարդոյ [mardo], GD Abl. of մարդ 'man'

+ -*ւ* : մարդոյն [marduyn]

2.43. *Text sample* (1.5), transcribed according to the traditional pronunciation ¹⁷:

Yev Hisus li hogvov sərbov darjav i Hordanane yev varer hogvov-ən h-anapat (2) avurəs k'arəsun p'orjyal i Satanaye, yev voč' yeker yev voč' arb h-avurs-ən h-aynosik, yev i katarel-ən noc'a k'ayc'yav. 3. Yev ase c'ə-na Satana : Yet'e vordi yes Astuco, asa k'ari-d aydmik zi hac' lic'i. 4. Patasxani yet nəma Hisus yev ase : Garyəl e yet'e voč' hac'iv miayn kec'(ə)c'e mard, ayl amenayn baniv Astuco. 5. Yev hanyal əz-na i lyar(ə)n mi barjər yec'uyc' nəma z-amenayn t'agavorut'yunəs ašxarhi i vayrkyan žamanaki. 6. Yev ase c'ə-na Satana : K'ez tac' z-ays amenayn išxanut'yun yev əz-p'arəs soc'a, zi inj təvyal e yev um kamim tam əz-na. 7. Ard du yet'e ankyl yerkir paganic'es araji im, k'ez yeyic'i amenayn. 8. Patasxani yet nəma Hisus yev ase : Yert' h-etəs im, Satana, zi gəryal e : Yerkir pagc'es tyar(ə)n Astuco k'um yev əz-na miayn paštesc'es. 9. Yev ac əz-na h-Erusayem yev kac'uyc' i vera aštaraki tačari-n, yev ase c'ə-na : Yet'e vordi yes Astuco, ark əz-k'ez asti i vayr, (10) zi gəryal e yet'e hərəštakac' yuroc' patviryal e vasən k'o pahel əz-k'ez, (11) zi i vera jerac' barj(ə)c'en əz-k'ez, mi yerbek' harc'es əz-k'ari z-otən k'o. 12. Patasxani yet nəma Hisus yev ase : Asac'yal e t'e voč' p'orjesc'es əz-ter Ast(ə)vac k'o. 13. Yev kataryal z-amenayn p'orjut'yunəs Satanayi, i bac' yekac' i nəmane ar žamanak mi.

¹⁷ The stops and affricates are transliterated according to the pronunciation in the Eastern dialects.

3. Morphology ¹⁸

In ClArm., as in most IE languages, inflection and word formation have to be dealt with separately. Inflection will be given the precedence because it pertains to both simple and derived (or compound) words, while word formation is concerned with the latter only. The reverse order, however, is more usual.

Detailed tables of noun and verb inflection, such as are found in grammar books, would be out of place in this Introduction. What is needed here is rather a survey of the inflection system, together with a discussion of the theoretical and practical problems involved.

3.1. NOUN INFLECTION.

Nouns, adjectives (including numerals) and pronouns take different forms according to number (sg. or pl.) and case. ClArm. has no gender distinction and, consequently, no instance of such grammatical agreement as prevails in Latin (*magnus uir, magna urbs, magnum nomen*) and in many other cognate languages. On the morphological level, adjectives do not differ from nouns: *imastun* 'wise', *nor* 'new', *řerm* 'warm' belong to the -o- declension exactly like *Astuac* 'God', *gorc* 'work', *beran* 'mouth' etc.; *erkayn* 'long', *čřmarit* 'true', to the -i- declension like *matean* 'book', *sirt* 'heart', *erkiwl* 'fear', *awe* etc. On the syntactic level, however, they behave differently, in that polysyllabic adjectives, when placed immediately before a noun usually remain uninflected:

čřmarit Astuac 'the true God'

GDabl. *čřmarit Astuac-oy* (as against: GD. *Astuac-oy čřmart-i*
Abl. *Astuac-oy čřmart-ē*).

3.11. The *case system* is best represented by pronominal paradigms, e.g.:

Sg.N.	es 'I'	du 'thou'	na 'he, she'	nok'a 'they'
Acc.	z-is	z-k'ez	z-na	z-nosa
L.	y-is	i k'ez	i nma	i nosa
G.	im	k'o	nora	noc'a
D.	inj	k'ez	nma	noc'a
Abl.	y-inēn	i k'ēn	i nmanē	i noc'anē
I.	inew	k'ew	novaw	nok'awk'.

3.111. Even in these paradigms, there are examples of 'syncretism', i.e. of one form covering two or three different cases: *is*, AccL.; *k'ez* AccLD.; *na* NAcc.;

¹⁸ In this and the following chapters. ClArm, words and morphemes, as a rule, will be quoted in transliterated form.

nma LD.; *nosa* AccL.; *noc'a* GD. Yet, in view of the contrasting distribution of the case forms in *na*, *nok'a*, the existence of a seven case system can hardly be denied. The L., it is true, mostly coincides with the D. in the sg. (though not in *is*!), and with the Acc. in the pl. at large, so that many Armenian grammarians do not acknowledge it as a case in its own right. This opinion is not shared by Western Armenologists. At any rate, some specific L. forms do occur in the sg. (3.133; 3.181).

3.112. Ancient grammarians held the monophonemic prepositions (*նա*/*սո*/*ի*/*ր*) *z-* and *i/y-* (on this variation, see above, 1.64) as part of the Acc. and Abl. forms, a view that is partially supported by ClArm. orthography: *z-is*, *y-is*, *y-in ēn*, *z-k'ez* etc. are written as single words (*զիս*, *յիս*, *յինէն*, *զքէզ*). Abrahamyan departs from the tradition by bracketing *z-*, but not *y-*. Western Armenologists slightly disagree: Meillet and Jensen drop the prepositions altogether, while Mann maintains *z-* (with a hyphen) and drops *i/y-*. The old practice, though involving an encroachment of syntax upon morphology, may be advocated on pedagogical grounds, provided the prepositions are bracketed or separated (as in the above paradigms. Cf. 1.42).

The actual blending of a preposition with a case form is ascertainable in the interrogative pronoun NAcc., *zi*, *zinč'* 'what?' (G. *ēr*, D. (*h*)*im*, I. *iw*). In any other instance, the prepositions, however frequently joined to the Acc. (*z-*) or to the L. and Abl. (*i/y-*), never come down to mere 'case prefixes', but stand on a level with the other prepositions that occur with the same cases:

- Acc. *ekn ar is (ar na)* 'he came to me (to him or her)'
 asē c'-na 'he says to him'
 i na yusamk' 'we hope unto him'
- L. *ənd is (ənd nma, ənd nosa)* 'with me (with him, with them)'
 ar nma 'near by him (or her)'
 əst is (əst k'ez, əst nma) 'according to me (to thee, to him)'
- Abl. *asen z-inēn (z-nmanē)* 'they say about me (about him)'.

Besides, nouns are used in the Acc. without *z-* as indefinite direct object:

- tan ptul* 'they bear (give) fruit' Mark 4.20 (as against: *tay z-ptul* 'he bears (the) fruit' Matth. 13.23¹⁹);
ekn kin mi or unēr šiš iwloy nardean 'there came a woman who had a flask of nard oil' Mark 14.3;
nok'a arkin i na jers 'they laid hands upon him' Mark 14.46, etc.

¹⁹ In both places, the Greek original has a compound verb (*karpophorei*).

or to denote a space of time: *awurs k'arāsun* '(during) forty days' (Luke 4.2). Notice the occurrence of the bare Acc. (without *z-*) in formular phrases: *patasxani tam* 'I answer (give answer)'; *erkir paganem* 'I prostrate myself (kiss the earth)'; *akn unim* 'I expect, look forward (have an eye to something)', etc.

3.12. Regular declension patterns are numerous. In classifying them, it seems appropriate to contrast, first of all, *variable* and *invariable* stems (Meillet, 1913, § 43). Mixed inflection and isolated anomalous words have to be recorded separately.

Stem variation, an archaic feature reflecting PIE vowel alternation, is preserved in quite a number of nouns, including derivatives; and there is even etymological evidence for a propagation of the *-n-* inflection in PA beyond its original range (see 5.14; 5.146). Notice that stem variation, as a morphological item, has to be kept apart from the regular vowel alternation described above (2.22-2.223). The latter occurs automatically whenever the addition of a morpheme entailed a stress shift; consequently, it has no bearing on the declension: such words as *arašin* 'first' (GD Abl. *araš-noy*), *surb* 'holy' (*srboy*), *loys* 'light' (*lusoy*), *mēš* 'middle' (*mišoy*) range among invariable stems, together with *Astuac* 'God' (*Astuacoy*), *gorc* 'work' (*gorcoy*), *ker* 'food' (*keroy*), *šerm* 'warm' (*šermoy*), etc. Both stem variation and regular alternation operate simultaneously in

jukn 'fish': GDL. *jkan* (< *jukan)
dustr 'daughter': GDL. *dster* (< *duster)
learn 'mountain': GDL. *lerin* (< *learin), etc.

3.13. INVARIABLE STEM INFLECTION. The word stem underlying the whole paradigm is identical to the sg.NAcc. form. It ends in

-C(C) (On -CC, see 2.32 and fn. 12)
 -a, -i, -u or (seldom) -ē (On polysyllables in -i, see below, 3.133).

The oblique case endings consist in -V(C), exceptionally -VCC (in the pl.I., 2.323). On the pl.N. and AccL., see 2.322; 3.183.

3.131. Taking as a criterion the inflectional vowel, we get the following paradigms:

	I (-o-)	IIa (-a-)	IIb (-a-)	III (-i-)	IV (-u-)
Sg.NAcc.	erg	Hayk	lezu	cařay	gah
	'song'	pr.n.	'tongue'	'servant'	'throne'
GD.	erg-oy	Hayk-ay	lezu-i	cařay-i	gah-u
Abl.	erg-oy	Hayk-ay	lezu-ē	cařay-ē	gah-ē

I.	erg-ov	Hayk-aw	lezu-aw	cařay-iw	gah-u
Pl.GDAbl.	erg-oc'		lezu-ac'	cařay-ic'	gah-uc'

The sg.L. is formally identical to the GD. in IIb, III, IV, and to the NAcc. in I, IIa, which also display similar forms in the GD. and the Abl. In spite of this parallelism, Meillet (1913, § 49) regards IIa as a variety of IIb, while Mann only mentions it as an instance of 'minor deviation of declension' (1968, p. 100). In fact, the contrast of the *Hayk* and *lezu* patterns is limited to the sg.: in the pl. there is only one *-a-* declension. Furthermore, IIa is a marginal paradigm, insofar as it does not suit genuine Armenian words, and is mostly substantiated by Iranian, Syriac or Greek proper names, e.g. *Tigran*, *Anahit* (GDAbI. *Anahitay*), *Bel*, *Asia* (GDAbI. *Asiay*), *Homeros* (*Homeray*), etc. For more examples, see Jensen, § 135; Abrahamyan, § 54. Nouns and adjectives are exceptional: Meillet (loc. cit.) quotes *hiwt* 'matter', from Gk. *hýlē*, L. *i hiwt-n*; Abl. *z-hiwteay* (Eznik I 5); Mann has *dabir* 'sanctuary', an indirect loan from Hebrew (through OT.Gk. *dabir*) and *bosor* 'dark red', of unknown origin.

3.132. As a rule, every noun or adjective is bound to one declension pattern. This holds true of derivatives, in particular, the paradigm being predictable from the suffix: agent nouns in *-ič'*, e.g., follow the normal *a* declension (IIb): *ararič'* 'creator', GDL. *ararč'i*, I. *ararč'aw*. Infinitives and participles, too, never deviate from the original *o* declension: *asel* 'to say', GDAbI. *aseloy*; *asac'eal* 'said', GDAbI. *asac'eloy*.

Simple words, however, may be observed to be inflected according to more than one pattern: only in limited instances can the right paradigm be predicted from the bare stem. Monosyllables in *-i-* or *u*, e.g., belong to the *o* declension: *di* 'corpse', GDAbI. *di-oy*; likewise *li* 'full', *ji* 'horse', *bu* 'owl', *ju* 'egg', etc. Most polysyllables in *-ay* (*cařay*), *-ē* (*margarē* 'prophet'), *-oy* (*dšxoy* 'queen'), to the *i* declension. But arbitrariness largely prevails, and as soon as the 5th century some fluctuation is perceptible: *Yovsep'* 'Joseph' is inflected after IIa as well as after IV; both *Yovsep'-u* and *Yovsep'-ay* occur as D. forms in quite similar environments (Matth. 2.13 and 19). Such examples are very rare in early literature. But later authors are less careful and use different declensions in the same word: *aru* 'brook' (I or III); *koys* 'virgin' (IIb or III); *arj* 'bear' (I, III or IV); *her* 'hair' (I, IIb or III), etc., so that we sometimes are at a loss as to the original declension.

NOTE. The *a* and *i* declensions (IIb and III) seem particularly exposed to mutual overlapping, since the endings in the sg. GDL. and Abl. are the same. In fact, the difference in the other inflected cases has been preserved to a larger extent than might have been expected.

3.133. *Mixed inflection.* Among polysyllables ending in *-i*, some follow the *o*

declension (I), while the others conform to a mixed paradigm with *o* and *a* endings and a specific L. form in the sg. In both sets, final *-i* changes to *-w-* before *-o-* (2.344). The paradigms run as follows :

	I (-o-)	V (-o/a-)
Sg.NAcc.	hogi 'spirit'	aygi 'vineyard'
L.	hogi	aygw-oj
GD Abl.	hogw-oy	aygw-oy
I.	hogw-ov	aygeaw (< *aygi-aw : 2.213)
Pl.GD Abl.	hogw-oc'	aygeac'.

In the sg.Abl., a couple of nouns of the *-o/a-* classe have a specific form with a complex ending : *tarw-oj-ē*, *telw-oj-ē*, from *tari* 'year', *teli* 'place'. Mann (1968, p. 71) mistakenly assigns *tari* to the *-o-* class. The sg.I. is *tareaw*, not **tarwov*, which would conflict with the L. form.

The *aygi* type is doubtless a variety of the normal *-a-* declension (IIb). The *-i* ending of the GDL. (*lezu-i*) would have amalgamated with the final vowel; hence, presumably, its substitution by *-oy*. But neither *aygwoy* could do for the L. (Meillet, 1913, § 46), nor would a similar form in the L. and the NAcc. fit in with the normal *-a-* paradigm. On other occurrences of *-oj*, *-ojē*, see 3.17 (*kin*); 3.181 Note (*mi*).

3.14. VARIABLE STEM INFLECTION includes *-r*, *-l* and *-n* stems. The sg. NAcc. (Stem I) ends in :

-Cr	<i>ezr</i> 'border', <i>dustr</i> 'daughter', <i>hamr</i> 'dumb'
-Cl	<i>astl</i> 'star', <i>kočl</i> 'log' ²⁰
-Cn	<i>kolmm</i> 'side', <i>jukn</i> 'fish', <i>jiwn</i> 'snow', <i>bern</i> 'burden'
-ik, -uk	<i>calik</i> 'flower', <i>manuk</i> 'child'.

The inflected forms are built up on modified stems, according to the following distribution table (3.141-143). Notice that in all paradigms the sg.GDL. form is identical to stem II :

<i>ezr</i> 'border' :	GDL. <i>ezer</i> (= stem II <i>ezer-</i>)
<i>jukn</i> 'fish' :	GDL. <i>jkan</i> (= stem II <i>jkan-</i>)

²⁰ Nouns in *-wl* range among invariable stems : *ewl* (I) 'oil'; *cnawl* (IIb) 'parent'; *erkiwl* (III) 'fear', etc.

²¹ Derived adjectives in *-un* (*imastun* 'wise', from *imast* 'intelligence') do not belong here, but follow the *-o* declension.

d) Stem I : sg.NAcc.	Stem II : sg.GDL. (Abl.) pl.N. and AccL.	Stem III : other oblique cases
azn 'nation, race'	azin-	azan-
anjn 'soul, self'	anjn-	anjan-
leārn 'mountain'	lerin-	leran- (2.231)
and some other -n stems.		

The sg.Abl. is built up on stem II : *azn-ē* (< **azin-ē*), *anjn-ē*, *leārn-ē*; seldom, on stem III : *ezan-ē*, from *ezn* 'ox', GDL. *ezin*; *beārn-ē* (also *beārn-ē*), from *beārn* 'burden', GDL. *beārin*.

3.143. Some -n nouns or adjectives share the characteristics of both d) (in the sg.) and c) (in the pl.), thus yielding the following paradigm :

Sg.NAcc.	t'oīrn 'grandson, grand'daughter'
GDL.	t'oīrn
Abl.	t'oīrn-ē (or t'oīran-ē)
I.	t'oīram-b
Pl.N.	t'oīrun-k'
AccL.	t'oīrun-s
GD Abl.	t'oīran-c'
I.	t'oīram-bk'

Besides simple words, as *ap'n* 'bank, shore', *masn* 'part', *matn* 'finger', this pattern also fits compounds of *azn*, *anjn*. Notice the resulting contrast in the pl.N. and AccL. :

*Mazde-azn 'Mazdean' : pl.N. *mazdezun-k'* as against *azin-k'*
 AccL. *mazdezun-s* as against *azin-s*
 Likewise : *vehanjun-k'*, from *veh-anjn* 'generous', as against *anjn-k'*.

3.15. *Mixed inflection* includes several nouns and a small group of adjectives, which do not make up a homogeneous formal class, except for one common feature : the contrast between the sg. and the pl. declension. Leaving aside some particulars, we find two main varieties of mixed inflection, according to whether an -n stem is assigned to the pl. or to the sg.

3.151. *Nouns with an -n stem in the pl. only*

	k'ar 'stone' (III)	}	pl. stem : k'arin-/k'aran- (3.142 d)
GDL.	k'ar-i		
I.	k'ar-iw	}	pl. stem : eric'un-/eric'an- (3.142 c)
	erēc' 'elder, priest' (IV)		
GDL.	eric'-u		

Likewise : *pařaw* 'old woman'.

Adjectives :

	canr 'heavy'; barjr 'high' (IV)	}	pl. stem : canun-; barjun-/barjan- (3.142 c)
GDL.	can-u barj-u		
Abl.	can-uē barj-uē ²²		

Like *canr* are inflected : *manr* 'small'; *p'ok'r* 'little'; *k'alč'r* 'sweet', etc. (Meillet, 1913, § 51c; Jensen, § 147).

NOTE. At first sight, adjectives in -Cr (*canr*, *p'ok'r*) stand in contrast to nouns (*ezr*, *dustr*, *alewr*), the adjectives losing -r in all inflected forms, while the nouns preserve it throughout :

	canr	ezr
GDL.	can-u	ezer
pl.N.	canun-k'	ezer-k'

There are contradictory instances, however, among adjectives (*hamr* 'dumb', GDL. *hamer*) as well as among nouns : *asr* 'fleece', GDL. *as-u*; likewise *calr* 'laughter', *melr* 'honey'. On the other hand, *artawsr* 'tear' and *cunr* 'knee' are not inflected in the sg.; the pl. belong to the -a- declension (IIb) : *artasu-k'*, *cung-k'*, GDabl. *artasu-ac'*, *cng-ac'*.

It thus appears that PA had two classes of words in -Cr : one with -r as a part of the stem (*ezr*, *dustr*, *hamr*, etc.), and another with -r as a morpheme marking the sg. NAcc.²³ (*asr*, *melr*, *canr*, *p'ok'r*, etc.). In ClArm. the former remained unaltered, except for a casual shift to the -a- declension in the pl. (GDabl. *ezer-ac'*, beside *ezer-c'*), while the latter underwent various alterations, either in the sg., as the loss of the inflection in *artawsr*, *cunr* and some adjectives (*goltr* 'tender, mild' is invariable), or in the pl., as the expanded stem in *canun-*, *p'ok'un-*, and the shift to the -a- declension in *artasu-k'*, *cung-k'*. The decay of the original inflection plainly appears in such later forms as GDL. *meler*, I. *melerb* (instead of *mel-u*); GDL. *t'anjru*, *t'anjroy*, from *t'anjr* 'thick', etc. (Abrahamyan, § 59, p. 45).

3.152. *Nouns with an -n stem in the sg. only*

	akn 'eye'	}	pl. stem : ač'- (II)
GDL.	akan		
I.	akam-b		

²² As against *gah-ē* (3.131). The same complex Abl. ending also occurs in some nouns, e.g. *das-u-ē* (beside *das-ē*), from *das* 'order, class', *xrat-u-ē*, from *xrat* 'advice', etc.

²³ Though also occurring in derivatives and compounds : *canr-agoyñ* 'very heavy', *canr-a-sirt* 'hard hearted, obstinate'; *melr-a-hos* 'flowing with honey' (as against *asu-i* 'woollen').

So also : *unkn* 'ear', GDL. *unkan*; pl. stem : *akanj-* (II)
dur̄n 'door', GDL. *dr̄an*; pl. stem : *dur-* (II), beside *dr̄un-/dr̄an-*
 (3.142 c)

	<i>jērn</i> 'hand'	} pl. stem : <i>jēr-</i> (II)
GDL.	<i>jērin</i>	
Abl.	<i>jēran-ē</i>	

So also : *otn* 'foot', GDL. *otin*; pl. stem : *ot-* (III)

	<i>serund</i> 'breed, race'	} pl. stem : <i>serund-</i> (I)
GDL.	<i>serndean</i>	
I.	<i>serndeam-b</i>	

and other derivatives in *-und*, *-urd* (*žolovurd* 'assembly' people), *-ist-*, *-ust* (Meillet, 1913, § 59a; Jensen, § 148). On the historical development of *-ean*, see below, 5.237.

3.16. The Armenian grammarians^{23a} favour a somewhat different classification, based on what they call 'declension markers'. A declension marker (*Հոլովիչ*) is the characteristic vowel of the oblique cases²⁴ in the sg., whether this vowel appears in the case endings or within the second stem. There are as many declensions as markers : *a*, *e*, *i*, *o*, *u*, *i/a*, *o/a*. But the position of the marker entails a cross division : internal inflection (i.e. stem variation) vs. final inflection. Thus, the same *-a-* marker will be found in : *Hayk* (IIa), GD Abl. *Hayk-ay*, I. *Hayk-aw* (final *-a-* declension), as well as in : *jukn*, GDL. *jkan*, I. *jkam-b* (internal *-a-* declension). Likewise, the *i/a* marker in *lezu* (IIb), GDL. *lezu-i*, I. *lezu-aw* and in *anjn*, GDL. *anjin*, I. *anjam-b*. Notice that *-e-* occurs in internal inflection only (3.141 a), while *o*, *i* and *o/a* (I, III, V) never do. This classification is defensible from a descriptive (synchronic) point of view. In a diachronic and comparative study, it would prove less adequate.

3.17. *Anomalous words* display irregular stem variations and, exceptionally, uncommon case endings. The following, as notable reflexes of PIE noun inflection, are worth recording in full paradigms :

Sg.NAcc.	<i>ayr</i>	<i>kin</i>	<i>hayr</i>	<i>k'oyr</i>
	'man, husband'	'woman, wife'	'father'	'sister'
GDL.	<i>ārn</i>	<i>kn-oj̄</i>	<i>hawr</i>	<i>k'ēr</i>
Abl.	<i>ārn-ē</i>	<i>kn-oj̄-ē</i>	<i>hawr-ē</i>	<i>k'ēr-ē</i>

^{23a} Following A. Bagratuni, whose *Armenian Grammar for Advanced Students* (*Հայերէն քերականութիւն ի պէտս զարգացելոց*) was published in 1852.

²⁴ Remember that the Locative is not taken into account.

I.	aram-b	kanam-b	har-b	k'er-b
		or kn-aw		
Pl.N.	ar-k'	kanay-k'	har-k'	k'or-k'
AccL.	ar-s	kanay-s	har-s	k'or-s
GD Abl.	aran-c'	kanan-c'	har-c'	k'er-c'
I.	aram-bk'	kanam-bk'	har-bk'	k'er-bk'

On *tēr* 'lord', *tikin* 'lady', see 2.21., Note. Notice the unexpected forms: Abl. *tear̄n-ē* (with *-ea-* preserved, as against I. *teram-b*); I. *tiknam-b*, pl. N. *tiknay-k'*, AccL. *tiknay-s*, etc. (as against *kanam-b*, *kanay-k'*, *kanay-s*, etc.). Like *hayr* are inflected: *mayr* 'mother', *elbayr* 'brother'.

Gewl (also written *geawl*, *giwl*) 'village' belongs to the *-i-* declension (III), except for the sg.GDL. *gel-ŷ* and the Abl. *gel-ŷ-ē*. The GDL. *tuənŷean*, from *tiw* 'day time', is a parallel to *serndeān*, *žolovrdeān*, etc. (3.152), save that *-ean* is not added to the bare stem, but to an original PA case form **tiwinŷ*. An obsolete Abl. form is preserved in the phrase *i tuē* (< **tiw-ē*) 'by day' (lit. 'from day break'), beside the analogical form *tuənŷen-ē*, from *tuənŷean*.

3.18. CASE ENDINGS. In no paradigm is each of the seven cases matched by a specific form. But the distribution of the case forms is not quite the same in the sg. and in the pl. Moreover, there are differences between nominal and pronominal inflection.

3.181. On the L., see above (3.111). Aside from the mixed *-o/a-* paradigm (3.133), sg.L. forms sporadically occur in the *-o-* declension (I): *i miŷ-i* (beside *i mēŷ*) 'in the middle'; *i gišer-i* 'in the night', etc. Notice the isolated form *y-ams-ean* 'in the month', from *amis*, GD Abl. *ams-oy* (for more details, see Meillet, 1913, §§ 50 and 74; Jensen, §§ 136.1-3, 140.1, 159).

As to the G. and D., all pronouns have different forms in the sg., which is never the case in nominal inflection. Here are some examples, in addition to the paradigms quoted above (3.11):

	ayn 'that'	o(v) 'who?'	zi, zinč' 'what?'	or 'who, which' (relative pr.)
G.	aynr	oyr	ēr	or-oy
DL.	aynm	um	(h)im	or-um

On *aynr*, *aynm* (as against *nora*, *nma*), cf. 2.22 fn 8. The last example (*or*) points to a connection of the DL. ending *-um* with the *-o-* declension: indeed, *-um* has regularly developed from **-om*, as can be shown by paralleling *nma* < **num-a* with *nor-a*, both from an original stem *no-*. The same pronominal ending is also

found in some adjectives of the *-o-* declension, namely: *mi* 'one', *ayl* 'other', *mews* 'another', *nor* 'new', *hin* 'old', *arašin* 'first', which are inflected like the relative pronoun: DL. *mi-um*, *ayl-um*, *nor-um*.

NOTE. Besides *mioy*, *mium*, there is also a by-form *mi-oj*, which is chiefly used as a G. The Abl. is, expectedly, *mioj-ē*.

3.182. In the pl., the G. and the D. always coincide, except in the personal pronouns of 1st and 2nd p.pl. Moreover, the Abl. is formally identical to the GD., as in the sg. of I and IIa (3.131), except in the same pronouns and the demonstratives: *sok'a* 'these', *dok'a* 'those (near you)', *nok'a* 'those, they'; *aysok'ik*, *aydok'ik*, *aynok'ik*. The latter three very often function as appositions: *k'arink'-s aysok'ik* 'the stones, these ones = these stones' (Matth. 3.3). The situation is summed up in the following table:

	mek' 'we'	duk' 'you'	nok'a 'those, they'	aynok'ik 'those'
G.	mer	jer	} noc'a	aynoc'ik
D.	mez	jez		
Abl.	mēnǰ	jēnǰ	noc'anē	aync'anē

NOTE. In spite of the constant occurrence of *noc'anē*, *aync'anē*, etc. in ClArm. literature, these pl.Abl. forms are missing in Meillet's paradigms: he assumes that *noc'a*, *aynoc'ik*, etc. act as GD Abl. (1913, § 64). Jensen quotes *soc'anē* as a by-form (§ 215) and omits *aync'anē* (§ 217).

3.183. There is a striking contrast between the variety of declension patterns and the uniformity of most case markers ($\zeta\eta\lambda\eta\mu\lambda\epsilon\tau\rho\sigma\upsilon\lambda\epsilon\tau\rho$), especially in the pl.

The sg.Abl. ending *-ē* is common to all inflection classes, except I and IIa. It is added either to the bare stem (*lezu-ē*, *caray-ē*, *gah-ē*), or to the GDL. form, as in *canu-ē*, *xratu-ē* (3.15 and fn 22), and in variable stems at large: *ezer-ē*, *astel-ē*, *tan-ē*, *anken-ē*, *p'orjut'en-ē*, *jkan-ē*, *azn-ē*, *arn-ē*, *hawr-ē*, etc. It also shows a peculiar connection with such endings as *-(o)ǰ* (*tarwoǰ-ē*, *telwoǰ-ē*, 3.133; *knoǰ-ē*, *gelǰ-ē*, 3.17; *mioǰ-ē*, 3.181, Note) and *-um*: *orm-ē*, *aylm-ē* (cf. DL. *orum*, *aylum*, 3.181). In the demonstrative pronouns, the expanded ending *-anē* (*nmanē*, *aynmanē*) has even been propagated to the pl. (*noc'anē*, *aync'anē*).

The sg.I. markers are:

{ (V)v/w (except in IV: -w is regularly dropped after -u)
 { (C)b

In the pl., the case markers are, uniformly:

N. -k' (2.322)

AccL. -s

GD Abl. -c'

I. sg.I. marker + -k' (2.323).

The combination of stem and case markers (or endings) in various declensions is evidenced in the paradigms quoted above (3.131 and 133; 3.143; 3.17).

3.2. VERB INFLECTION

The verb system, or conjugation, consists of the following moods and tenses

Indicative : present, imperfect, aorist ;

subjunctive : present, aorist ;

imperative (never used negatively) and prohibitive (with the negative particle *mi* 'do not', which is also used with the subjunctive and the infinitive).

Besides, it includes an infinitive (ending in *-l*), with derived verbal adjectives, and a participle (ending in *-eal*). Both the infinitive and the participle belong to the *-o-* declension (3.132). Verbal adjectives in *-loc'*, being mostly used as predicates, do not occur in the oblique cases. Those in *-li* (*sireli* 'lovable, beloved'; *zarmanali* 'admirable') follow the mixed *-o/a-* paradigm (3.133).

NOTE. I have purposely omitted the so-called present participle in *-ol*, *-awl*, inflected after the normal *-a-* paradigm, though Jensen (§ 267) and Mann (1968, p. 138-139) put it on a level with the participle in *-eal*. A regular contrast is thus assumed between

Present (or active) participle (e.g. *šin-ol* 'building'; *šinawl* 'builder')

and Past participle (e.g. *šin-eal* 'built, having built').

This conception is rooted in Armenian tradition. In Modern Arm., indeed, the pres. participle in *-oy* (< *-ol*, *-awl*) is an integral part of the verb system. The Armenian grammarians, therefore, do not hesitate to assign the same function to its classical antecedent (Abrahamyan, §§ 275-278). This assumption, however, is by no means cogent, since the modern verb system does not exactly reflect the classical one.

The question therefore arises, whether the presumed participles really belong to the conjugation, or whether they have to be classified among the verb derivatives (action nouns, agent nouns, adjectives, etc.). A reliable criterion lies in the relative frequency of *-eal* and *-ol* (*-awl*) in Cl.Arm texts. To take an example at random, in Mark 1-4 there are only four occurrences of *-ol* (*-awl*): *karol* 'able' (1.40 and 45; 4.33); *serman-awl* 'sower' (4.3), as against fifty occurrences of *-eal* (not including the adverbialized part. *darjeal* 'turning back > again'). Meillet's view, therefore, proves right: 5th century Armenian had only one genuine participle (Meillet, 1913, § 128). As to *-ol*, *-awl*, they were still agent noun morphemes, like *-ič'* (Cf. 3.132). The further development, resulting in the ModArm. present participle, can be paralleled with that of *-ac* (Mann, 1968, p. 139-140), though it began earlier: in Movsēs Xorenac'i's work, an agent noun in *-ol* occurs twice with a direct object (III, ch. 35 and 67, p. 469 and 566 of the Venice ed., 1881).

3.21. The indicative and the subjunctive stand in free contrast to each other in dependent and independent clauses, fairly as they do in Latin. Roughly speaking, the indicative is used to mean what does or did happen; the subjunctive, to denote what may happen or is expected to take place, as a purpose, a wish, a demand or a prospect. The latter mood, therefore, is somehow related to the future; and since the indicative lacks a future tense, the subjunctive — especially the aorist

subj. — is frequently used to translate the Greek future. Hence the denomination of *այստոնի* (future), applied by most Armenian grammarians to the aor. subj., and their assigning it to the indicative. Abrahamyan does not go so far. In his terms, the subjunctive has no present and no aorist, but only two future tenses: 1st and 2nd *այստոնի* (§ 191). To this terminology it can be objected that the term 'future' does not cover the whole range of occurrence of the subj., as Abrahamyan himself acknowledges; nor is the subj. the only expression of futurity: the Greek future may also be translated by the pres. ind., e.g. when emphasis is involved, as in: *օ՛՛հ հատամ* 'I will not believe' (Joh. 20.25). The verbal adjectives in *-loc'*, on the other hand, provide periphrastic forms with a connotation of necessity: *Du es or galoc'-n es?* 'Art thou He who is to come?' (Luke 7.20). Therefore we do well to keep the harmless, but not misleading, term 'subjunctive'²⁵, and to avoid 'future', insofar at least as we are concerned with morphology.

3.22. In ClArm., as in several IE languages (Latin, Germanic, Slavic, Persian), the verb system has evolved towards a two stem paradigm: every verb form pertains to either the present or the aorist stem. As a rule, one stem at least, or even both, contain a suffix which is inserted between the root and the inflectional vowel (V) in the present, between the root and the ending (E) in the aorist. Thus, along with simple presents (Root + V) and root aorists (Root + E) there are presents with various stem extensions (*-an-*, *-n-*, *-č'*, *-nč'*), and *-(V)c'*- aorists²⁶. Examples:

a) *Aorist stem extended*:

p'orj-em 'I tempt'	aor. p'orj-ec'-i
hay-im 'I look'	hay-ec'-ay
as-em 'I say'	as-ac'-i
ors-am 'I hunt'	ors-ac'-i
yus-am 'I hope'	yus-ac'-ay, etc.

b) *Present stem extended*:

pag-an-em 'I kiss'	pag-i
hec-an-im 'I ride'	hec-ay
p'ax-č'-im 'I flee'	p'axe-ay (2.213), etc.

²⁵ Mann (1948, p. 47) prefers 'potential'.

²⁶ The morpheme division in the examples is somewhat arbitrary: the conjugation vowel in the present ought to be separated from the personal ending (Cf. 5.4). In some extended present stems, it proves to have been part of the suffix (*dar-na-m*, *l-nu-m*), as still appears in such doublets as *mat-nu-m/mat-č'i-m* 'I approach'; and in monosyllabic presents (*gam* 'I come', *kam* 'I stand', *lam* 'I cry', *tam* 'I give'), *a* is the radical vowel.

From *hanem*, *nstim*, *t'olum*, etc. (3.22), the participle is, expectedly: *han-eal*, *nst-eal*, *t'ol-eal*, etc.

NOTE. As pointed out above (2.213, cf. 2.243), root aorists in *-eay* are built up on *-i-* stems: *p'axeay* 'I fled' < **p'axi-ay*; *sarteay* 'I startled' < **sarti-ay*, etc. Participles are not derivable from such stems, as they are from aor. stems in *-u-* (*tu-eal* 'given'; *erdu-eal* 'having sworn'). Whatever the reason of this discrepancy, the lacking participles are supplemented by those of the corresponding causative verbs (3.244), e.g.:

p'ax-uc'-eal (from *p'ax-uc'an-em* 'I put to flight, chase') 'having fled' (as if from *p'axč'im* 'I flee').

3.222. The contrast between present and aorist is not explainable in terms of tense. In the indicative, both the imperfect and the aorist are past tenses, alternately used in narratives; and in the subjunctive, the present and the aorist occur in similar environments. A striking instance is Luke 13.30, where the same Greek future (*ésontai* 'they shall be') is translated by *elic'in* (aor.) and *linic'in* (pres.). Yet the contrast is by no means a merely formal one: it involves what is currently termed 'aspect', i.e. the expression of an event with or without regard to its duration. In English, e.g., the contrast of simple vs. continuous tenses pertains to this category, and so very likely does the ClArm. contrast, although no definitive statement can be made, as yet, about its exact bearing. According to Meillet, the present verb forms, including the impf. ind., denote an action as developing, while the aorist forms point to its completion (Meillet, 1913, § 120; cf. 1962, p. 93-104. But see also Jensen, § 296). At any rate, the solution of the problem depends on more comprehensive studies than have been made so far²⁸.

Incidentally, it is worth remarking that ClArm. has hardly any trace of *prefixes* used as aspect markers, as there are in Slavic and other IE languages. In view of the sparse compound verbs that occur in classical literature (gathered in Meillet, 1962, p. 114-120), there is no deciding whether this formation failed to develop in PA., or whether the extant examples are survivals.

3.223. The verb 'to be' has no aorist, and its paradigm is restricted to the indicative and subjunctive forms, namely:

Ind. pres.	impf.	Subj. pres.
em 'I am'	ei 'I was'	ic'em (< * <i>eyc'em</i> , cf. 2.222) 'I may or shall be'
	(2.211)	
es	eir	ic'es
ē	ēr	ic'ē
emk'	eak'	ic'emk'

²⁸ Armenian historians often use the participle as a main verb, e.g. *arareal* 'having done > he did', instead of *arar* (aor.) or *arnēr* (impf.). To my knowledge, nobody has studied the interplay of these forms in narratives.

$\bar{e}k'$	eik'	$ic'\bar{e}k'$
en	ein	ic'en

Obsolete imper. forms are preserved in the greeting phrase : *olj er* (pl. $\bar{e}k'$) 'may you be healthy, hail'.

There is also a defective verb, of which the only usual forms are :

	Ind. pres.	impf.	Infinitive
3rd sg.	<i>goy</i> 'he is, there is'	<i>goyr</i> 'he was, there was'	<i>gol</i> 'to be, to exist'
3rd pl.	<i>gon</i>	<i>goyin</i>	

As to *guc'ē* (< **goyc'ē*), originally a pres. subj. 3rd sg. ²⁹, it has gone through the same semantic development as its English equivalent 'maybe'. These defective paradigms are supplemented by the verb *linim* 'I become, happen to be', aor. *elē* (See below 3.255 c).

3.23. REGULAR INFLECTION. In agreement with the binary structure of the verb system (3.221), the personal endings in the present group and the aorist group are different. The stem form, however, is not relevant, so that the same paradigms will do for simple and extended stems as well :

<i>pag-an-em</i>	is inflected like	<i>gr-em</i>
<i>hec-an-im</i>	»	<i>hay-im</i>
<i>gr-ec'-i</i>	»	<i>pag-i</i>
<i>mor-ac'-ay</i>	»	<i>hec-ay, etc.</i>

In each group, one tense can be viewed as the primary one, from which the others are derivable.

3.231. Present group

a) The primary tense is the pres. ind. The inflection vowel (*a, e, i* or *u*) combines with the following endings :

Sg. 1	- <i>m</i>	Pl. - <i>mk'</i>
2	- <i>s</i>	-(<i>y</i>) <i>k'</i>
3	-(<i>y</i>)	- <i>n</i>

Concerning the 3rd sg. and the 2nd pl., it must be remembered that :

-*y*- occurs after *a*, but never after *i* or *u* (2.21)

-*ey*- > - \bar{e} - before C or in word end (2.211).

²⁹ As in the following sentence : *ayl ew oč' t'e hogi surb guc'ē lueal ē mer* 'we have never even heard that there may be a Holy Spirit', Act. 19.2.

We thus get four paradigms :

orsam 'I hunt'	grem 'I write'	hayim 'I look'	argelum 'I hinder'
orsas	gres	hayis	argelus
orsay	grē	hayi	argelu
orsamk'	gremk'	hayimk'	argelumk'
orsayk'	grēk'	hayik'	argeluk'
orsan	gren	hayin	argelun

b) The *impf. ind.* has vocalic endings, except in the 3rd sg. :

Sg. 1	-i	Pl. -ak'
2	-ir	-ik'
3	-(y)r	-in

The inflectional vowel *i* changes to *e*, so that the 2nd and the 3rd paradigms merge : *hayei*, like *grei*. On the morpheme juncture (-y- or hiatus), see 2.21-2.212; notice, however, the peculiar form of the 3rd sg. in the -u- paradigm :

orsayi	grei	(hayei)	argelui
orsayir	greir		argeluir
orsayr	grēr		argeloyr
orsayak'	greak'		argeluak'
orsayik'	greik'		argeluik'
orsayin	grein		argeluin

c) The *pres. subj.* marker -yc'- (cf. *ic'em*), 3.223 is followed by the inflection vowel *e* or *i* (*u* in the fourth paradigm). The endings are those of the *pres. ind.* :

orsayc'em	gric'em	hayic'im	argeluc'um
	(< *greyc'em)		
orsayc'es	gric'es	hayic'is	argeluc'us
orsayc'ē	gric'ē	hayic'i	argeluc'u, etc.

On the *pres. subj.* in -ayc'-*im* from intransitive verbs in -am, aor. -ac'ay (*yu-sayc'im*, from *yusam* 'I hope'), see Meillet, 1913, § 112; Jensen, § 289.

NOTE. The preservation of unstressed *i*, *u* (in *hayic'im*, *argeluc'um*), if not due to analogy, may result from the regular development of *-iy-, -uy- (Meillet, 1913, p. 22E).

d) The *prohibitive* ends in -r in the 2nd sg. ; the 2nd pl. coincides with the *pres. ind.* :

mí orsar	mí grer	mí hayir	mí argelur
mí orsayk'	mí grēk'	mí hayik'	mí argeluk'

e) The *infinitive*, as pointed out above (3.2) ends in -l. Here again, as in the imperfect, *i* changes to *e* : *hayel*, like *grel*; later also *hayil*; but the oblique cases always display *e* :

	orsal	grel	hayel (-il)	argelul
GDabl.	orsal-oy	grel-oy	hayel-oy	argell-oy.

3.232. *Aorist group.* There are two sets of endings, which can conveniently be termed active (A) and passive, or rather mediopassive (MP) in view of their function in most transitive verbs (3.242). Three endings are common to both sets, namely :

Aor. ind.	1st pl.	-ak'
Aor. subj.	1st pl.	-c'uk'
Aor. subj.	2nd pl.	-jik'.

3.233. The primary tense is the *aor. indicative*. The endings are :

		A.		MP.
Sg. 1	-i	pl. -ak'	-ay	-ak'
2	-er	-ēk' (-ik')	-ar	-ayk' (-aruk')
3	∅	-in	-aw	-an

The paradigms show the perfect parallelism of root aorists (*argel-i*, *nst-ay*) and -(V)c'- aorists (*orsac'-i*, *hayec'-ay*) :

argeli	orsac'i	nstay	hayec'ay
'I hindered'	'I hunted'	'I sat'	'I looked'
argeler	orsac'er	nstar	hayec'ar
argel	orsac'	nstaw	hayec'aw
argelak'	orsac'ak'	nstak'	hayec'ak'
argelēk'	orsac'ēk'	nstayk'	hayec'ayk'
(-ik')	(-ik')	(-aruk')	(-aruk')
argelin	orsac'in	nstan	hayec'an

The 3rd sg. A. often stands in contrast to the other forms :

a) If the stem is monosyllabic, it takes the *e-* prefix (augment : 2.213, 2.31) :

	(Root aor.)		(-c'- aor.)
hani 'I drew'	t'ohi 'I let'	kac'i 'I stood'	bac'i 'I opened'
haner	t'oler	kac'er	bac'er
ehan	et'oł	ekac'	ebac'

(From *kam* 'I stand', *banam* 'I open').

In 5th century literature, the augment never occurs before a vowel : *el* 'he went out'; *ar* 'he took' (later : *ēar*); *arb* 'he drank' (later : *ēarb*).

b) If the stem is subject to vowel alternation (2.22-2.223), the 3rd sg. displays the full grade vowel :

kl-i 'I swallowed'	2nd sg. kl-er	3rd sg. ekul
lc'-i 'I filled'	lc'-er	elic'
iĵ-i 'I came down'	iĵ-er	ēĵ
anic-i 'I cursed'	anic-er	anēc
luc-i 'I loosened'	luc-er	eloyc
p'axuc'-i 'I chased'	p'axuc'-er	p'axoyc' (3.244)
kec'-i 'I lived'	kec'-er	ekeac'
atec'-i 'I hated'	atec'-er	ateac'

As these last examples belong to the regular *-a-* conjugation (pres. ind. *keam*, *ateam*), the *e/ea* contrast needs no particular explanation. But it also occurs, unexpectedly enough, in *-(V)c'*- aorists related to simple *-em* presents :

grem 'I write'	: aor. grec'-i	3rd sg. greac'
katarem 'I achieve'	katarec'i	katareac', etc.

The common opinion is that *-eac'*-, reducing to *-ec'*- in non final syllables, is the original form of the suffix (Meillet, 1913, § 26; 1936, p. 115-116; Jensen, § 43; Abrahamyan, § 229). Yet, Mann may well be right in suspecting that "the 3rd sing. form of *-e-* stems (*-eac'*) contains a non historical *-a-* of uncertain origin" (1968, p. 44) : see below, 5.433.

3.234. The *subjunctive aorist* has complex endings, all of which, except the 2nd pl., contain the subj. marker *-ic'*- (*-yc'*- after *a* : cf. 3.231 c). In unstressed syllables, *i* is regularly lost :

	A.			MP.
Sg. 1	<i>-ic'</i>	pl.	<i>-c'uk'</i>	<i>-ayc'</i> <i>-c'uk'</i>
2	<i>-c'es</i>		<i>-ĵik'</i>	<i>-c'is (-c'es)</i> <i>-ĵik'</i>
3	<i>-c'ē</i>		<i>-c'en</i>	<i>-c'i (-c'ē)</i> <i>-c'in (-c'en)</i>

It must be remembered that extended aorist stems, if polysyllabic, change *c'* to *s* before *C* (*c'*, *ĵ* : 2.232, 2.341) :

argelic'	orsac'ic'	nstayc'	hayec'ayc'
argelc'es	orsasc'es	nstc'is	hayesc'is
argelc'ē	orsasc'ē	nstc'i	hayesc'i
argelc'uk'	orsasc'uk'	nstc'uk'	hayesc'uk', etc.

The bracketed A. endings in the MP. paradigm are peculiar to some anomalous verbs (3.255 b), and to the subj. of *i-* stem aorists (3.221, Note). So, from *p'axeay* 'I fled', the subj. is : *p'axeayc'*, *p'axic'es*, *p'axic'ē*, 3rd pl. *p'axic'en*.

NOTE. The aor. ind. obviously contains an *-a-* morpheme of MP. inflection : *-a-y*, *-a-r*, *-a-w*, etc. In the subj., this morpheme occurs in the 1st sg. only : *-a-yc'*, so that the paradigm looks somewhat

unbalanced. This situation seems to result from a partial remodelling of the MP. inflection. Such passive forms as *argelc'is* 'thou wilt be hindered', *argelc'i*, *argelc'in* may have been coined after *argelc'es*, *argelc'ē*, *argelc'en*: here as elsewhere (3.241) the *e/i* alternation is used to contrast active and mediopassive. If this holds true, some peculiarities in the subj. of *i*-stem aorists turn out to be archaic features. The paradigm of *p'axeayc'* displays active endings (*-c'es*, *-c'ē*, *-c'en*), together with an unstressed *i* (*p'axic'es*, *p'axic'ē*) reflecting earlier *-ey-* (2.222). Now, in this position (i.e. word internally before a consonant), *-ey-* is likely to have issued from *-eay-* (2.223). So the original inflection appears to have been:

p'axeayc', **p'axeayc'es*, **p'axeayc'ē* ...

thus preserving the *a* morpheme throughout the paradigm, while the creation of the new forms entailed its elimination from the normal inflection (*argelc'is*, *argelc'i* ...). (Godel, 1970a, p. 4-6).

3.235. The *imperative* endings are:

	A.		MP.
2nd sg.	-Ø	pl. -ēk'	-ir/-Ø -aruk' (-ayk')

Let us begin with the mediopassive *-ir* ending. It occurs

1) constantly in verbs with extended present stem (3.22 b):

hecanim 'I ride'	aor. hec-ay	imper. hec-ir	pl. hec-aruk'
darnam 'I turn'	darj-ay	darj-ir	darj-aruk'
p'axč'im 'I flee'	p'axeay	p'ax-ir	p'axeruk'
zgenum 'I dress'	zgec'-ay	zgec'-ir	zgec'-aruk'

2) optionally in verbs of the *-anam* (aor. *-ac'ay*) class (3.251 d):

imanam 'I understand'	imac'-ay	imac'-ir/ima
mořanam 'I forget'	mořac'-ay	mořac'iř/mořa, etc.

In all other instances, the 2nd sg. is identical to the aorist stem, except that in polysyllabic *-c'*- aorists (3.22 a and c):

a) *-ac'* reduces to *-a*:

asem 'I say'	aor. asac'-i	imper. asa	pl. asac'ēk'
hawatam 'I believe'	hawatac'-i	hawata	hawatac'ēk'
yusam 'I hope'	yusac'-ay	yusa	yusac'-aruk'
			etc.

b) *-ec'* changes to *-ea* in the active, to *-eac'* in the mediopassive inflection (cf. 3.233. last paragraph):

grem 'I write'	grec'-i	grea	pl. grec'ēk'
hayim 'I look'	hayec'-ay	hayeac'	hayec'aruk',
			etc.

Monosyllabic -c'- stems remain unaltered :

lam 'I cry'	lac'-i	lac'	lac'ēk'
keam 'I live'	kec'-i	keac'	kec'ēk'
banam 'I open'	bac'-i	bac'	bac'ēk'
lnum 'I fill'	lc'-i	lic'	lc'ēk', etc.

and so do all root aorist stems :

argelum 'I hinder'	aor. argel-i	imper. argel	pl. argelēk'
hanem 'I draw'	han-i	han	hanēk'
bařnam 'I lift'	barj-i	barj	barjēk'
arkanem 'I throw'	ark-i	ark	arkēk'
nstim 'I sit down'	nst-ay	nist ³⁰	nstaruk', etc.

NOTE. On the participle, see above, 3.221.

3.236. On the cohortative forms : 2nd sg. -*řir*, pl. -*řik'* (from -*em* or -*im* presents), and -*řir*, -*řik'* (from aorist stems), see Jensen, §§ 243 and 261. Meillet quotes the former (-*řir*, -*řik'*) in connection with the pres. subjunctive (1913, §§ 105 d, 122), while Abrahamyan describes the latter only under the heading : cohortative, or future of the imperative (§§ 267-272).

These forms hold a rather marginal place in the verb system, except -*řik'*, the normal ending of the 2nd pl. in the aor. subjunctive (3.234). Presumably, -*řir* was first coined to match -*řik'* : the imperative of some anomalous verbs (e.g. *tur* 'give', pl. *tuk'* ; *dir* 'lay', pl. *dik'*) could serve as a model. Hence, analogically :

argel-*řir* 'hinder' (cf. Lat. *prohibeas*) : pl. argel-*řik'*

besides the usual imperative : argel (Lat. *prohibe*) pl. argelēk'.

The partial expansion of these endings to the pres. subjunctive bears additional evidence to our above statement (3.21), namely that the pres. subj. and the so-called 'future' belong to the same mood.

3.24. DIATHESIS (VOICE)

Transitive verbs occur in active and passive clauses. In most inflectional languages, the voice contrast is expressed by the verb forms, and the passive conjugation runs parallel, and stands in contrast, to the active. However, one can conceive of a language in which the same verb forms would convey the active

³⁰ This example, though unique, is in agreement with the rule formulated above : in view of the simple -*im* present *nstim*, the -*ir* ending is not expected.

as well as the passive meaning, the contrast depending on the syntactic environment. This is actually the case of a small group of deponent verbs in Latin, the so-called 'verba communia': *criminator consulem* 'I accuse the consul' / *criminator a consule* 'I am accused by the consul'. But in Latin grammar the case is marginal, while in ClArm. not only do 'common verbs' exist as a particular class of verbs (3.242 b), but contrastive (i.e. passive vs. active) inflection is balanced by common inflection in the verb system at large. In the imperfect of all transitive verbs, e.g., there is only one paradigm for both voices:

patmein z-ban-n Astuacoy i žolowurds Hreic'-n 'they *proclaimed* the word of God in the synagogues of the Jews', Acts 13.5;
ew ənd amenayn leīnakołmn-n Hreastani *patmein* bank'-s aysok'ik 'and through all the hill country of Judaea *were* all these things *told*', Luke 1.65.

3.241. In the *present group*, the expression of the voice contrast depends on the inflection vowel, in that passive forms are freely derived from *-em* presents by substituting *i* for *e* (or *ē*). This device is closely connected with the general distribution of *-em* and *-im* presents, the former being mostly transitive (*grem*, *asem*, *paganem*, *hanem*, *koč'em*, *katarem*, etc.), the latter, intransitive (*hayim*, *bazmim*, *nstim*, *p'axč'im*, *ankanim* 'I fall', etc.). The *e/i* alternation works in the pres. indicative:

varem (-es, -ē ...)	'I lead'	:	varim (-is, -i ...)	'I am led, I behave'
asē	'he says'		asi	'it is said'
patmen	'they tell'		patmin	'(things) are told'
čanač'em	z'ims-n ew čanač'im	y-imoc'-n	'I know my own and I am known by my own', Joh. 10.14	

and in the prohibitive:

mi varer (-ēk')	'do not lead'		mi varir (-ik')	'do not behave'
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It has also been expanded to the subjunctive:

varic'em (-es, -ē ...)	'I shall lead'	³¹	varic'im (-is, -i ...)	'I shall be led, behave'
banayc'em (-es, -ē ...)	'I shall open'		banayc'im (-is, -i ...)	'I shall be opened'.

But in the imperfect, the change of *i* to *e* (3.231 b) entails the suppression of the formal contrast:

³¹ In translating the ClArm. subjunctive, I use the future for the sake of simplicity.

A. varem _____
 P. varim _____ —impf. A/P. varei (-eir, -ēr ...) 'I led/was led'

The other vowels (*a, i, u*) do not admit substitution, so that common inflection is the only possible for all transitive presents in *-am, -im, -um*, including the pres. subj. in *-ic'im, -uc'um* :

banam 'I open/am opened'	(Aor. A. : <i>bac'-i</i> ; P. : <i>bac'-ay</i>)
argelum 'I hinder/am hindered'	(Aor. A. : <i>argel-i</i> ; P. : <i>argel-ay</i>)
hamarim 'I regard/am regarded'	(Aor. A./P. : <i>hamarec'-ay</i>)
mořanam 'I forget/am forgotten'	(Aor. A./P. : <i>mořac'-ay</i>)
ənt'ėrnu 'he reads/(something) is read'	(Aor. A./P. : <i>ənt'erc'-aw</i>)

(Impf.)

banayi 'I opened/was opened'
 argelui 'I hindered/was hindered', etc.

(Subj.)

argeluc'um 'I shall hinder/be hindered'
 hamaric'im 'I shall regard/be regarded'
 ənt'ėrnuc'u 'he will read/(something) will be read', etc.

3.242. In the *aurist group*, the voice contrast is expressed by the personal endings. Passive forms are regularly derived from the corresponding active:

(Ind.)

p'orjec'-i 'I tempted'	p'orjec'-ay 'I was tempted'
patmec'-in 'they told'	patmec'-an '(things) were told'
argel 'he hindered'	argel-aw 'he was hindered'

ziard *ebac' z-ač's k'o?* 'how did he open thy eyes? Joh. 9.26

ziard *bac'an ač'k' k'o?* 'how were thy eyes opened? Joh. 9.10

(Subj.)

p'orjec'-ic' 'I shall tempt'	p'orjec'-ayc' 'I shall be tempted'
argel-c'en 'they will hinder'	argel-c'in 'they will be hindered'

(Imper.)

srbea 'make clean'	srbeac' 'be cleaned', Math. 8.3
mkrtea 'baptize'	mkrteac' 'be baptized', Acts 22.16
luac'-ėk' 'wash'	luac'-aruk' 'wash yourselves', etc.

Exceptions, however, are not wanting.

a) Common endings in the pl. have been pointed out above (3.232) :

(Ind.)

p'orjec'-ak' 'we tempted/were tempted'

(Subj.)

argel-c'uk' 'we shall hinder/be hindered'

p'orjes-ĵik' 'you will tempt/be tempted'

b) Besides, there are 'common verbs' (*Հասարակ բայեր*, Abrahamyan, p. 98), i.e. transitive verbs following the mediopassive inflection :

hamarec'-ay 'I regarded/was regarded' (from *hamarim*)

mořac'-an 'they forgot/(things) were forgotten' (from *mořanam*)

ent'erc'-aw 'he read/(something) was read' (from *ent'erinum*)

As appears from the examples, the corresponding presents end in *-im*, *-anam*, or (seldom) *-num*.

3.243. To sum up : the ClArm. verb system does not provide a morphological expression for the voice contrast through all moods and tenses. Contrastive inflection prevails in the aorist group; common inflection, in the present group. The impersonal verb forms (infinitive, verbal adjectives, participle) are also common :

p'orjeal i Satanayē 'tempted by Satan', Luke 4.2/*haneal z-na* 'having drawn him', Luke 4.5

karēk' *ampel z-bažak-n z-or es ampeloc' em, kam z-mkrtut'iwn-n mkrtel z-or*³² *es mkrteloc'-n em?* 'Are you able to *drink* the cup I am *to drink*, or to *be baptized* with the baptism with which I am *to be baptized?*', Math. 10.38.

Common inflection, indeed, does not automatically result in ambiguity; and if necessary, ambiguity can be precluded either by stem substitution (e.g. *hel-u* 'he pours'/*hel-ani*'(something) is poured'), or, more conveniently, by the use of compound tenses. The latter device is especially resorted to in the imperfect :

bereal linei (lineir, linēr ...) 'I was carried' (instead of *berei* (-eir, -ēr ...) 'I carried/was carried'). See Jensen, § 294; Abrahamyan, p. 222.

3.244. CAUSATIVE VERBS. The incomplete development of the mediopassive conjugation is somehow compensated by the regular derivation of causative verbs from intransitive — or less frequently, transitive — verbs. So from

bnakem 'I dwell' : *bnakec'uc'anem* 'I make to dwell, I establish'.

³² *z-mkrtut'iwn-n ... z-or* : a cognate Accusative, in imitation of the Greek original.

Causative verbs are built up on the aor. stem by adding to it the characteristic morpheme *-oyc'*- (> *-uc'*- word internally : 2.222) ³³. The resulting stem, recurring through the whole inflection, can be regarded as the 'basis' of the causative verb :

bnakem 'I dwell',	aor. bnakec'-i :	caus. vb. basis	bnakec'oyc'-
molorim 'I err'	molorec'-ay	»	molorec'oyc'-
kam 'I stand'	kac'-i	»	kac'oyc'-
usanim 'I study, learn'	us-ay	»	usoyc'-
dařnam 'I turn'	darj-ay	»	darjoyc'
p'axč'im 'I flee'	p'axe-ay	»	p'axoyc'-
yarnem 'I rise'	yare-ay	»	yaroyc'-, etc.

(The last two examples show that *-e* < *-i* in *-eay* aorists is lost before the causative morpheme).

The present stem has the *-an-* extension: the aorist stem coincides with the basis :

molorec'uc'-anem 'I lead astray'	aor. molorec'uc'i (3rd sg. <i>molorec'oyc'</i>)
kac'uc'-anem 'I set up, place'	kac'uc'-i (3rd sg. <i>kac'oyc'</i>)
usuc'-anem 'I teach'	usuc'i (3rd sg. <i>usoyc'</i>)
p'axuc'-anem 'I chase'	p'axuc'-i (3rd sg. <i>p'axoyc'</i>)

Causative verbs, therefore, display the same paradigm as, e.g. *paganem* 'I kiss', aor. *pag-i* (3.22 b), and belong to the same verb class (3.253 f). In the 2nd sg. of the imperative, *-oyc'* is shortened to *-o* : *bnakec'o* 'establish', *uso* 'teach', etc. Notice that causative verb bases are never monosyllabic : this accounts, at least, for the dropping of *-c'* in *bnakec'o*, *uso* as in *asa*, *hawata*, *grea* (3.235).

3.25. A CLASSIFICATION OF ClArm. VERBS. The main division holds between regular and irregular (or anomalous) verbs; but criteria of regularity have to be defined. Regular inflection, as described above (3.23-3.236) is certainly one. Yet it does not suffice : the formal relation of the aorist to the present, too, must be considered. In this respect, regular verbs are those in which, given the present form, the aorist stem is predictable. In classifying these verbs, grammarians rightly start from the different present types.

NOTE. Presents in which *n* is the last radical consonant must not be mistaken for extended *-(a)n-*presents. Such are, e.g.

- serman-em 'I sow', from *sermn* 'seed' (GDL. *serman*)
- nman-im 'I resemble', from *nman* 'like, similar'
- as against : *pag-an-em* 'I kiss', *hec-an-im* 'I ride', etc; or
- jan-am 'I strive', cf. *jan* 'effort, endeavour' (I. *janiw*)
- spairn-am 'I threaten', cf. *spairn-akan* 'menacing'
- as against : *ba-n-am* 'I open', *dar-n-am* 'I turn, return'.

³³ Exceptionally *-oyz-* (*-uz-*) or *-oys-* (*-us-*) : Meillet, 1913, p. 26; Jensen, § 74.

3.251. *Regular verb classes with -Vc'- aorist*

	Pres.	Aor. stem		
a)	-em	-ec'-	p'orjem 'I tempt'	: p'orjec'-i
			paštem 'I worship'	paštec'-i
			bnakem 'I dwell'	bnakec'-i, etc.
b)	-im	-ec'-	hayim 'I look'	hayec'-ay
			nmanim 'I resemble'	nmanec'-ay
			hamarim 'I regard'	hamarec'-ay, etc.
c)	-am	-ac'-	hawatam 'I believe'	hawatac'-i
			yusam 'I hope'	yusac'-ay
			janam 'I strive'	janac'-i/-ay, etc.

The aorist has either the active or the mediopassive inflection, or both without distinction: *janac'i*, *janac'ay* 'I strove' (Meillet, 1913, § 112; Jensen, § 289; Abrahamyan, § 243).

d)	-a-nam	-a-c'-	imanam 'I understand'	: imac'-ay
			ənt'anam 'I run'	ənt'ac'-ay
			moianam 'I forget'	moiac'-ay, etc.

The aorist, as a rule, follows the mediopassive inflection. The voice contrast, however, is sometimes expressed, as in

<i>luanam</i> 'I wash'/wash myself	{	<i>luac'i</i> 'I washed'
	{	<i>luac'ay</i> 'I washed myself'

Presents in *-enam* (< *-i-anam*) also belong here, e.g. *merjenam* 'I come nearer', aor. *merjec'ay*. Notice that the aorist would fit an *-im* present as well, which accounts for such doublets as: *yagenam/yagim* 'I get satiated'.

3.252. Some exceptions have to be mentioned in connection with a) and b):

acem 'I bring', *berem* 'I bear, bring', *hanem* 'I draw', *helusem* 'I nail, fix', *nstim* 'I sit down' have root aorists: *aci*, *beri*, *helusi*, *nstay* (cf. 3.22). On the other hand, *e* is substituted by *a* in *asem* 'I say', *asac'i*; *gitem* 'I know', *gitac'i*; *karem* 'I can', *karac'i*.

3.253. *Regular verb classes with root aorist*

e)	-um	-Ø-	argelum 'I hinder'	: argel-i
			t'ołum 'I let, remit'	t'oł-i
			zenum 'I immolate'	zen-i, etc.

f)	- <i>anem</i>	-Ø-	paganem 'I kiss'	pag-i
			tesanem 'I see'	tes-i
			lk'anem 'I leave'	lk'-i (3rd sg. <i>elik'</i>)
			usuc'anem 'I teach'	usuc'-i (3.244), etc.
g)	- <i>anim</i>	-Ø-	ankanim 'I fall'	ank-ay
			hecanim 'I ride'	hec-ay
			usanim 'I learn'	us-ay, etc.
h)	-(<i>n</i>)č'im	(-e- : 2.213)	p'axč'im 'I flee'	p'axe-ay
			hangč'im 'I rest'	hange-ay
			martnč'im 'I fight'	marte-ay, etc.

On the participles (*p'axuc'eal*, *hanguc'eal*, etc.), see 3.221 Note. On the aor. subjunctive : 3.234.

3.254. The *-num* verb class. The aor. stem is not predictable :

- <i>num</i>	-c'-	lnum 'I fill'	lc'-i (3rd sg. <i>elic'</i>)
		ənt'einum 'I read'	ənt'erc'-ay
	-Ø-	aɾnum 'I take'	aɾ-i
		jeinum 'I warm'	jeɾ-ay
		erdnum 'I swear'	erdu-ay
		(< * <i>erdunum</i> : 2.213, 2.343).	

The prevailing paradigm, however, is :

- <i>num</i>	(-e-)	k'alč'num 'I hunger'	k'alč'e-ay
		aytnum 'I swell'	ayte-ay

Since *-eay* aorists also correspond to *-č'im* presents, doublets do not fail to occur, e.g. *t'ak'num*, *t'ak'č'im* 'I hide', aor. *t'ak'eay*; *matnum*, *matč'im* 'I approach', *mateay*, etc.

3.255. IRREGULAR VERBS. Not only is the aorist stem unpredictable, but many of these verbs partially deviate from the normal inflection pattern. Such deviations, however, occur in the aorist group only : there is no instance of irregular inflection in the present group. These criteria allow for the following classification, in which root alternation is regarded as an utmost case of irregular stem contrast.

a) *Irregular stem contrast without inflectional peculiarities* :

harkanem 'I strike'	aor. har-i
yanc'anem 'I trespass'	yanc'e-ay

bařnam 'I raise, lift'	barj-i
dařnam 'I turn, return'	darj-ay
čanač'em (< *canač'em) 'I know'	cane-ay
əmpem 'I drink'	arb-i
unim 'I take hold, have'	kal-ay

b) *Irregular stem contrast with peculiar forms in the imperative and/or the aor. subjunctive (3.234) :*

ařnem 'I do, make'	arar-i; ³⁴ imper. sg. <i>ara</i>
tanim 'I carry'	tar-ay; imper. <i>tar, tarayk'</i>
yairnem 'I rise, resurge'	yare-ay; imper. <i>ari, arik'</i>
ert'am 'I go'	č'og-ay; aor. subj. <i>ert'ayc', ert'ic'es ...</i>
meľanč'em 'I sin'	meľ-ay; aor. subj. <i>melayc', melic'es ...</i>
lsem 'I hear, listen'	lu-ay; aor. subj. <i>luayc', luic'es ...</i> imper. <i>lur, luaruk'</i>
utem 'I eat'	ker-ay (but 3rd sg. <i>eker</i>); imper. <i>ker, kerayk'</i> aor. subj. <i>kerayc', keric'es ...</i>

c) *Irregular inflection in the aorist group generally :*

	gam 'I come'	tam 'I give'	dnem 'I lay, put'	linim 'I become'
Aor. ind.	eki	etu	edi	eľē
	ekir	etur	edir	eľer
	ekn	et	ed	eľew
	ekak'	tuak'	edak'	eľeak'
	ekik'	etuk'	edik'	eľēk'
	ekin	etun	edin	eľen
Aor. subj.	ekic'	tac'	edic'	eľēc'
	eke(s)c'es	tac'es	dic'es	lic'is (eľic'is)
	eke(s)c'ē	tac'ē	dic'ē	lic'i (eľic'i), etc.
Imper.	ek	tur	dir	ler (eľijir : 3.236)
	ekayk'	tuk'	dik'	leruk' (eľeruk')
Participle	ekeal	tueal	edeal	leal (eľeal)

NOTE. The occurrence of the augment (3.233 a) here is not limited to the 3rd sg., but spreads all over the aorist indicative (save *tuak'*), and even beyond (*edic'*, *edeal*, *eľēc'*, etc.). In *eki*, *ekir* ... it has coalesced with the root, so that its original prefix character can be proved by comparative evidence only.

³⁴ On the substitution of *r* by *s* in the aor. subj. (*araric'*, *arasc'es*), see above, 2.232, Note.

In the above table, the parallel inflection of *dnem* (root *di-*)³⁵ and *linim* (root **ley-*) appears at a glance. On the other hand, the bracketed forms (*elic'is*, *elic'i*, etc.) throw further light on the expansion of the augment in *eke(s)c'es*, *eke(s)c'ē*, etc. These analogous developments, however, did not take place at the same stage, and the later one (*elic'is*, *elic'i*, along which *lic'is*, *lic'i*) went on so far as to bring forth a new present: *elanim*, which does not seem to occur in 5th century literature (Cf. Abrahamyan, § 306); besides, it is not reflected in Modern Armenian. Unfortunately, this obscure competitor has been exalted by grammarians and armenologists. The result is that the original paradigm, as given above, is generally misrepresented in ClArm. grammars: *linim* is ranged among defective verbs, while *elanim* is made the head of a full conjugation (Meillet, 1913, § 117; Jensen, § 251, 256.3; Mann, 1968, p. 120).

3.26. COMPOUND TENSES. The verb 'to be' (3.223), as an auxiliary verb, combines with the verbal adjectives in *-loc'* (3.21) or with the participle. The meaning of these compound tenses is active or passive (cf. 3.243). The participle yields 'resultative' tenses, denoting a situation as the result of an action:

zarmac'eal ein 'they were in a state of amazement', Luke 2.33 (as against: *zarmanayin* 'they wondered', Luke 2.47)

t'oleal lic'in k'ez melk' k'o 'thy sins be (definitively) forgiven', Math. 9.2. If the verb has a direct object, the agent is put in the genitive:

ēr nora hraman areal i hogwoy srboy 'he had received a promise from the Holy Spirit', Luke 2.26

oč' ic'ē ant'erc'eal jer z-or arar Dawit'? 'Have you possibly not read what David did?' Math. 12.3.

This construction has been rightly explained by Benveniste (1952) as an application of the possessive genitive: *ēr nora hraman areal* 'he had received a promise' has the same construction as: *arn mioj ein erku ordik'* 'one man had two sons', Luke 15.11.

3.3. WORD FORMATION

Meillet (1913, §§ 28-40) and Jensen (§§ 57-129, besides, 315) have devoted extensive chapters to this part of morphology³⁶, thus sparing us a detailed enumeration of derivational suffixes and composition patterns. Our description, more sketchy in this respect, includes some historical comments: word formation, indeed, is the morphological level that best reflects the background of a language, so that it can serve as a link between the synchronic and the diachronic approach.

To substantiate our description, we draw upon a small corpus of derived and compound words from the first chapters of Luke (1-8) and John (1-7).

³⁵ The preservation of unstressed *-i-* in *dic'es*, *dic'ē* ... is perhaps due to analogy. See however Meillet, 1913, p. 23 (top) and 105 (*-i-* < **-iy-*).

3.31. Both derived and compound words are built up on nouns or verbs, or rather, on noun or verb stems. This statement implies that we leave aside the compound verbs, i.e. those to which a preposition is prefixed, as in English *forgive*, *understand*, etc. Indeed, though such verbs do occur in ClArm. — e.g. *ænd-unim* 'I receive' (*unim* 'I take hold, I possess'); *z-gnam* 'I ramble' (*gnam* 'I walk, go') — they hold a quite marginal place in word formation, and can be neglected without inconvenience, as mere lexical items (cf. 3.222, last §).

Noun stems are mostly identical to the sg. NAcc. form (2.32; 3.13). Verb stems are either roots, or extended *-c'* aorist stems (3.251 c-d; 3.254). Stem vowels are liable to regular vowel alternation (2.22-2.223).

There are some instances of derivation from phrases :

erkrpag-u 'worshipper', from *erkir paganem* 'I kiss the earth, worship';
zgetnem 'I throw down', from *z-getni* 'to the ground' (cf. *z-k'ari* 'against a stone', Luke 4.11);
noynžam-ayn 'presently', from *noynžam* 'the same hour'.

These derivatives must not be mistaken for compounds : in the ClArm. lexicon, there are no such words as **pagu*, **getnem*, **žamayn*.

3.311. The members of a compound word, as a rule, are linked together by the connective vowel *-a-*, unless the second member begins with a vowel :

č'ar-a-xaws 'slanderer' (*č'ar* 'malicious'; *xawsim* 'I speak');
leřn-a-kołmn 'hill country' (*leřn* 'mountain'; *kołmn* 'side, country');
barekam (< **bari-a-kam*) 'benevolent, friend' (*bari* 'good'; *kamim* 'I will, wish'),
 etc.

as against : *cov-ezr* 'seaside'; *jkn-ors* 'fisher' (2.332).

3.312. Derivation and composition, as devices of word formation, stand in contrast to each other. Certain composition patterns, however, have been more productive than others, owing to the wider, more abstract meaning of the second member, e.g. *-arar* 'doing' (aor. stem of *ařnem*, 3.255 a) : *kendanarar* 'vivifying', *xalalarar* 'pacific', *barerarar* 'benefactor', etc.; or *-kic'* 'associate, fellow, co-' (*kc'em* 'I add, join') : *orsakic'* 'fellow hunter'; *ulekic'* 'fellow traveller' (*uli* 'way, road'), etc. Such productivity may result in a morphological shift : the 2nd member, together with the connective vowel, comes to be interpreted as a derivational suffix. The most conspicuous example is *-awor* (IIb)³⁷ in : *zawrawor* 'mighty'

³⁶ See also G. Bolognesi, *Studi armeni* I, RicLing 5 (1962), p. 105-127, and on compound words Meillet's thoroughgoing study (1962, p. 159-184).

³⁷ Remember that the declension of derivative nouns and adjectives is predictable (3.132). The symbols I, IIb, III, etc. refer to the paradigms (3.131, 133; 3.141-142).

(*zawr* 'might, strength'), *p'arawor* 'glorious' (*p'ark'* 'glory')³⁸, *marmnawor* 'bodily' (*marmn* 'body'), etc.; *-wor* (< **bhorā-* 'bearing') is no more related to *berem* 'I bear, bring', as it originally was (4.323).

A similar, though more recent development accounts for :

- astan* (IIb) (nouns of lands or places) : *Hreastan* 'Judaea';
- agoyn* (III) (comparative or relative) : *zawragoyn* 'mightier, mightiest'³⁹;
- (a)pēs* } (adverbs) : *ayspēs* 'in this way, thus' (*ays* 'this'); *p'ut'apēs* 'promptly'
- abar* } (*p'oyt'* 'haste, zeal'); *brnabar* 'forcibly, violently' (*burn* 'fist, violence').

Neither **stan* nor **pēs* occur as single words. As to *-abar*, *-agoyn*, the original connection with *bark'* 'manners, behavior'³⁸, *goyn* 'colour, kind' seems to have been no longer perceptible to 5th century speakers. A decisive statement is of course not possible : one is confronted here with borderline cases : *orsakic'*, *ulekic'*, etc. have doubtless originated as compound words (Meillet, 1962, p. 180); yet the assumption of a derivational suffix *-akic'* (Meillet, 1913, § 34 e; Jensen, § 81) is not objectionable.

3.32. DERIVATIVES would be most conveniently classified under the headings 'verbal' and 'nominal', according to whether the stem is a verb or a noun. This division can be extended to compound words too, with regard to the 2nd member, i.e., in Bloomfield's terms, the 'head' of the compound.

One suffix straddles both classes : *-ut'iwn* (3.141 b) yields quality as well as action nouns : *bazmut'iwn* 'multitude' (*bazum* 'many'); *čšmartut'iwn* 'truth' (*čšmarit* 'true'); *k'ahanayut'iwn* 'priesthood' (*k'ahanay* 'priest'), etc. On the other hand : *p'orjut'iwn* 'temptation' (*p'orjem* 'I tempt'); *mkrtut'iwn* 'baptism' (*mkrtem* 'I baptize'); *yarut'iwn* 'resurrection' (*yarnem*, 3.255 b), etc. The occurrence of a denominative verb along with a radical noun makes the derivation ambiguous : e.g. *vkayut'iwn* 'testimony' may be derived from *vkayem* 'I testify' as well as from *vkay* 'witness'.

Exceptionally, a nominal suffix occurs with a verb stem, e.g. *-akan* (IIb) in *bazmakan* '(one) who is seated' (*bazmim* 'I sit, am seated'), as against *azgakan* 'relative', from *azg* 'kin, nation'; *tarekan* 'yearly, year, age' (Luke 4.19), from *tari* 'year', etc. Conversely, the verbal suffix *-un* (I) is found in *imastun* 'wise'

³⁸ Many abstract nouns are 'pluralia tantum', i.e. lack the sg. declension.

³⁹ Notice that *zawragoyn*, though derived from *zawr* (IV) 'strength, power', is semantically related to *zawrawor* 'mighty'. Cf. *mecawor* 'possessing greatness, superior' : *-awor* being normally added to nouns, not to adjectives, *mec-* stands for *mecut'iwn* 'greatness'. In such cases the accumulation of suffixes has been avoided. A special study on this phenomenon would be helpful.

(*imast* 'intelligence, sense'), as against *šaržun* 'movable, moving', from *šaržim* 'I move'; *zēhun* 'running over', from *zēlum* 'I pour/overflow'; *p'aylun* 'bright', from *p'aylem* 'I shine', etc. Such deviations from the normal line of derivation do not really bring into question the principle of classification: the original function of the suffixes can be determined on historical and comparative evidence. For want of such evidence, however, some derivatives have to be left unclassified, so e.g. those in *-ac*: *harac* (I) 'wound' (*harkanem*, 3,255 a); *ararac* (I) 'creature, creation' (*aṛnem*, 3.255 a); *erkiwlac* (IIb) 'reverent' (*erkiwl* 'awe, reverence'); *gt'ac* (IIb) 'compassionate' (*gut* 'compassion'; *gt'am* 'I pity'). The examples are not numerous. In Modern Arm., *-ac* has evolved to a past participle morpheme (Mann, 1968, p. 139-140), but this late development does not allow for any decision as to the original function of the suffix ⁴⁰.

NOTE. In this connection, a problem worth discussing is that which arises from such word pairs as

<i>grem</i> 'I write'	<i>gir</i> (I) 'writing, letter'
<i>gorcem</i> 'I perform'	<i>gorc</i> (I) 'work'
<i>sirem</i> 'I love'	<i>sēr</i> (I) 'love'
<i>nstim</i> 'I sit down'	<i>nist</i> (I. III) 'sitting, seat, place'
<i>p'aylem</i> 'I shine'	<i>p'ayl</i> (III) 'shine, brightness'
<i>anicanem</i> 'I curse'	<i>anēck</i> (III) 'cursing, curse' ³⁸
<i>harc'anem</i> 'I ask'	<i>harc</i> (III) 'question', etc.

In each pair, the relation between the verb and the radical action noun should be defined in terms of derivation; but the issue is ambiguous, because the noun stem does not differ from the verb root (or from the aorist stem, in verbs with a root aorist). A decision is often possible on historical grounds: thus, *gir*, *sēr* are found to be prior to the corresponding verbs; *grem*, *sirem* are denominative, like *vkayem*, etc. (3.332 1), whereas the action nouns belonging to the *-i-* declension are derived from the verbs, especially from the aorist stem (*anēc-*, *harc-*; cf. *ənt'ac'k* (III) 'running, run', which contains the *-c-* stem of *ənt'ac'ay*, 3.251 d). In some instances, however, the antecedent development is not so clear: on *nstim*, *nist*, see Godel, 1965, p. 22; on *gorcem*, *gorc*. Meillet, 1936, p. 105. Anyhow, *gorc* must have its *-o-* from the verb, either by analogical levelling or by actual derivation; for, the PIE prototype had *-e-*, as is shown by Gk. (*w*)*érgon*, AS. *weorc*, *werc*.

3.33. A survey of usual derivation and composition patterns.

3.331. DERIVATIVES FROM VERBS

a) Causative verbs : 3.244.

b) Action nouns in *-umn* (3.142 b): *katarumn* 'accomplishment' (*katarem* 'I achieve'); *korcanumn* 'ruin, destruction' (*korcanem* 'I destroy' ⁴¹); *šaržumn* 'motion' (*šaržim* 'I move'), etc. On *-ut'iwn*, see above 3.32,. Less important suffixes are:

⁴⁰ Meillet (1962, p. 181) and Mann (1968, p. 139) are inclined to derive *-ac* from *acem* 'I bring, handle'.

⁴¹ Cf. 3.25, Note!

-st : *imast* (III) 'intelligence, sense' (*imanam* 'I understand'); *govest* (III) 'praise' (*govem* 'I praise'). Nouns in -ist, -ust do not follow the -i- declension in the sg. (3.152) : *hangist*, GDL. *hangstean* 'rest, repose' (*hangč'im* 'I rest'); *korust* 'loss, perdition' (*kornč'im* 'I get lost, perish');
 -iwn (3.141 b) : *k'rt'mn'jiwn* 'grumbling' (*k'rt'mn'jem* 'I grumble');
 -an(k') (IIb) : *patuiran* 'order' (*patuirem* 'I command');
 -uac (I) : *xndruac* 'request' (*xndrem* 'I seek, require'); *yaweluac* 'abundance' (*yawelum* 'I increase'); *herjuac* 'division, schism' (*herjanem* 'I cleave');
 -urd, -und (3.152) : *xorhurd* 'thought' (*xorhim* 'I meditate, think'); *cnund* 'birth progeny' (*cnanim* 'I bring forth/am born' — a common verb.).

As appears from some of the examples, these derivatives may also denote the means or the result of an action : *p'rkank* 'ransom', beside *p'rkut'iwn* 'salvation' (*p'rkem* 'I save'); *kapank* 'fetters' (*kapem* 'I bind'); *žolovurd* 'assembly, people', beside *žolovumn* 'gathering' (*žolovem* 'I gather').

c) Agent nouns in -ič', -ol/-awl (IIb) (see 3.2, Note) : *p'rkič'* 'saviour'; *matnič'* 'delator, traitor' (*matnem* 'I denounce, betray'); *anicič'* 'curser' (*anicanem* 'I curse'), etc.; *nmanol* 'resembling, like' (*nmanim* 'I resemble'); *arbec'ol* 'drunkard' (*arbenam* 'I get drunk'); *cnawl* 'parent' (*cnanim*), etc.

d) *Adjectives* in -un (I) : see above, 3.32.

3.332. DERIVATIVES FROM NOUNS

a) *Denominative verbs* in -em/-im, seldom -am : *vkayem* 'I testify' (*vkay* 'witness'); *bžškem* 'I cure' (*bžišk* 'physician'); *anuanem* 'I name' (*anun*, 3.141 a); *nawem* 'I sail' (*naw* 'ship'); *srbem* 'I clean' (*surb* 'clean, pure; holy'), etc.; *yusam* 'I hope' (*yoys* 'hope').

Inchoative verbs in -anam (3.251 d) are mostly derived from adjectives : *ol'janam* 'I recover' (*ol'j* 'sound, healthy'); *č'oranam* 'I become dry' (*č'or* 'dry'); *nsemanam* 'I become dim' (*nsem* 'dim'); *tkaranam* 'I weaken' (*tkar* 'weak'), etc. But also : *k'ahanayanam* 'I become a priest, serve as a priest'; *veranam* 'I rise, am extolled' (*i ver* 'upwards').

b) *Nouns of state or quality* in -ut'iwn : see above, 3.32.

c) *Other derived nouns* : collective nouns, inflected in the sg. only : *mardik* (3.152) 'men, people' (*mard* 'man'); *mankti* (V) 'children' (*manuk* 'child'); *xozean* 'pigs' (*xoz*). Diminutive nouns in -ak (IIb) : *covak* 'lake' (*cov* 'sea'); *eramak* 'small herd' (*eram*); *ordeak* 'son' (2.213). Nouns of places or containers in -anoc', -astan, -aran (IIb) : *žolowrdanoc'* 'place of assembly, synagogue' (*žolowurd*); *ganjaran*

'treasure-house' (*ganj* 'treasure'). Nouns of trees in *-eni* (V): *moreni* 'mulberry-tree'; *t'zeni* 'fig-tree' (*t'uz*).

d) *Adjectives*. Among numerous suffixes, the following at least deserve mention:

-akan (IIb) 'pertaining or belonging to —'. See 3.32: *yawitenakan* 'eternal' (*yawiteank* 'eternity'); *korstakan* 'perishable, ruinous' (*korust* 'perdition').

With fairly the same meaning, but a more or less specialized application:

-ayin (I), *-ean* (IIb); *-eay* (III); *-in* (I). Adjectives in *-ac'i* (I) refer to persons only, and are often substantivized: *Israyelac'i* 'Israelite'; *Samarac'i* 'Samaritan'; *p'ariseac'i* 'Pharisee', etc. Likewise, many derivatives in *-ord* (IIb): *orsord* 'hunter' (*ors* 'game'); *ařaj'nord* 'leader' (*ařajin* 'first').

-awor (IIb) 'possessing, related to —'. See 3.312: *melawor* 'sinful, sinner' (*melk* 'sin(s)'); *erkrawor* 'earthly' (*erkir* 'earth'), etc.

-elēn (IIb), *-eay* (III) 'made of —': *garelēn nkanak* 'barley loaf', John 6.9 and 13; *xarazan č'uaneay* 'whip of cords', John 2.15.

-agoyn (III) 'more, very'. See 3.312: *diwragoyn* 'easier, very easy' (*diwr* 'easy'); *k'alč'ragoyn* 'sweeter, very sweet' (*k'alč'r* 'sweet'); *yarařagoyn* 'previously' (*yarař* 'before').

e) *Adverbs* in *-abar*, *-apēs* (3.312): *-aki*; *yankarcaki* 'suddenly' (= *yankarc*); *valvalaki* 'at once' (*val* 'early', reduplicated).

3.333. COMPOUND WORDS with a verb stem as their 2nd member usually follow the normal *-a-* declension (IIb). Most are agent nouns: *akanates* 'eye-witness' (*tesanem* 'I see')⁴²; *jknors* 'fisher' (*orsam* 'I hunt'; cf. 2.332); *č'araxaws* 'slanderer' (*xawsim* 'I speak'); *sermanac'an* 'sower' (*c'anem* 'I scatter, sow')⁴²; *p'oxatu* 'changer' (*tu-*, aor. stem of *tam* 'I give', 3.255 c); *barerar* 'benefactor' (3.312), etc. Some have the passive meaning: *andamaloyc* 'with loosened members, paralytic' (*lucanem* 'I loosen'); *diwahar* 'struck by a demon, demoniac' (*harkanem*, 3.255 a). Action nouns, such as *ařxarhagir* 'world-enrollment' (*grem* 'I write') are exceptional.

3.334. Compound nouns with a noun as their second member are either determinative, as: *leřnakolmn* 'hill country', *covezr* 'sea-side' (quoted above, 3.311); *k'ahanayapet* 'chief priest' lit. 'priest master', *č'orrordapet* 'tetrarch' (*pet* 'master, ruler'), etc., or possessive: *mecatun* 'rich', lit. 'having a large house'; *aylakerp* 'having another shape, transformed'; *kisamah* 'half dead', lit. 'befallen

⁴² Here, the 1st member coincides with stem II (3.141).

by a half death'; *mecajayn* 'having a loud voice' (*asē mecajayn* 'he says with a loud voice', Luke 8.28).

Compounds of the latter class automatically turn privative when the first member is a negative prefix: *anarat* 'speckless, pure' (*arat* 'spot'); *anptul* 'bearing no fruit' (*ptul* 'fruit'); *apašnorh* 'graceless' (*šnorh* 'grace').

In determinative compounds, the 2nd member preserves its own inflection. Possessive compounds often follow the *i* declension, e.g. *anptul* (I, III), as against *ptul* (I); *anhawat* (III) 'incredulous', as against *hawatk'* (I) 'faith'.

A few nominal compounds are formed by reduplication, with or without the connective vowel. This pattern is applied to monosyllables only: *mecamec* 'very great'; *č'arač'ar* 'very wicked'; *pēspēs* 'various' (Middle Iranian *pēs* 'shape'). Cf. also the derivative *valvalaki*, 3.332 e.

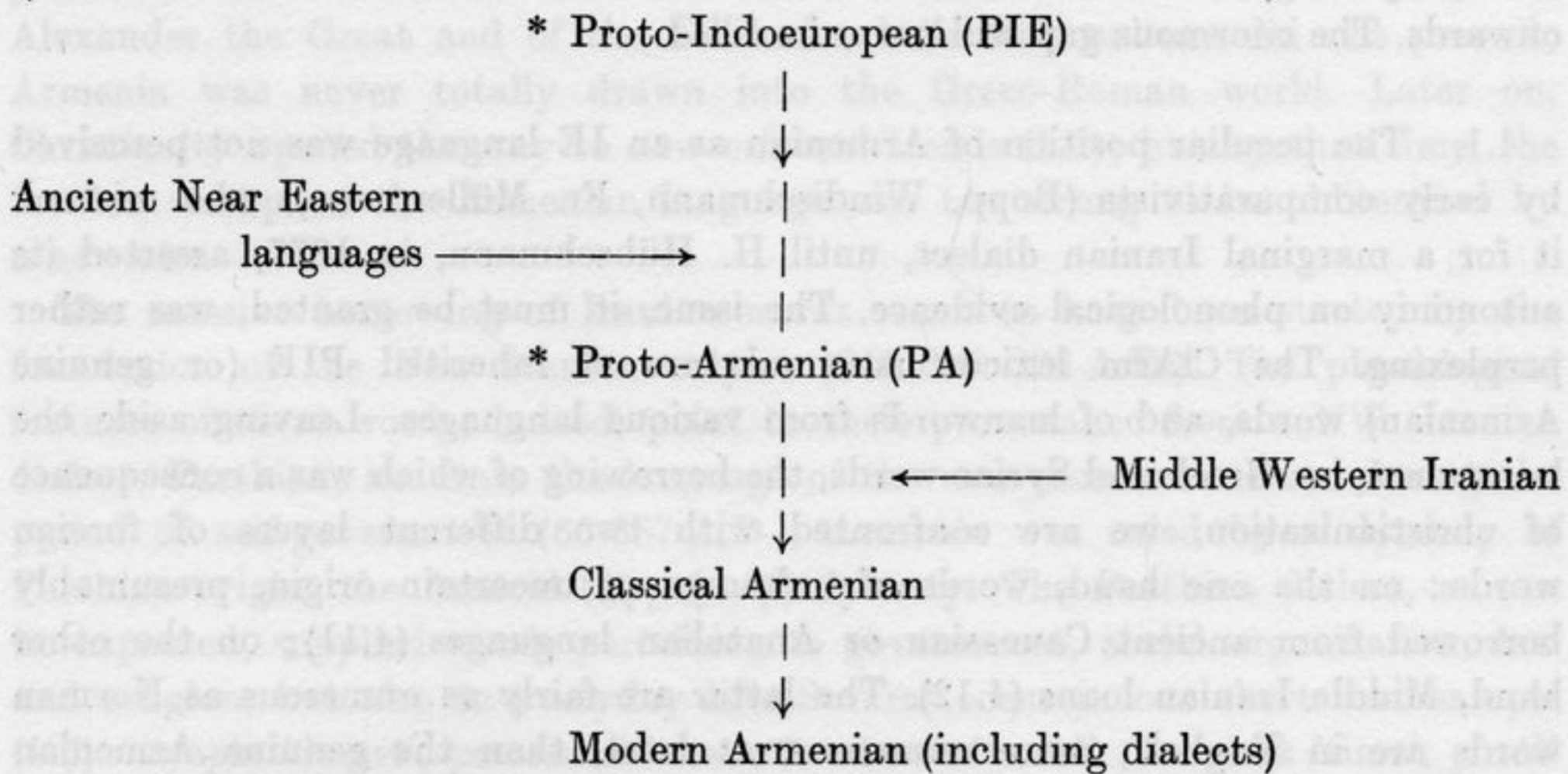
3.34. Our corpus, limited though it is, allows for a statement about the productivity of the patterns of derivation. Barring the repeated occurrences of the same word, we find that nouns in *-ut'iwn* amount to 28 % of the total number of derivatives (about 160); causative verbs to 12 %; denominative verbs in *-anam* to 8 %; adjectives in *-awor* to 6.25 %. Several suffixes are represented in only one or two words, e.g. *-iwn*, *-urd*, *-und* (3.331 b); *-anoc'*, *-eni* (3.332 c); *-in*, *-elēn* (3.332 d); *-apēs* (3.332 e). Some are lacking: *-st* (3.331 b); *-astan*, *-aran* (3.332 c); *-ayin* (3.332 d); *-abar* (3.332 e), but would not fail to appear in a larger corpus. At any rate, the contrast of such favourite suffixes as *-ut'iwn*, *-umn*, *-awor*, *-akan*, etc. as opposed to less productive ones is significant. On the other hand, the collective derivatives *mardik*, *mankti* (3.332 c), though occurring more frequently than the corresponding plurals (*mardk'*, *mankunk'*), are isolated: no parallels would be found in any corpus.

Among compounds, there are 'learned words', often coined from Greek models. Composition however, was by no means an artificial literary device: *jknors* 'fisher', *barekam* 'friend', *mecatun* 'rich', and many other usual, basic words plainly show that it did play a part in everyday spoken language.

SECOND PART

A DIACHRONIC APPROACH

4. The framework for a historical and comparative study of ClArm. can be outlined as follows :



Of PIE and PA we have no immediate knowledge. PIE phonology, morphology and lexicon, however, can be reconstructed to a certain extent through the comparative study of the extant languages, either dead, such as Avestic, Hittite, Gothic, etc. or still developing, such as Persian, Greek and the Slavic languages. All these appear to have issued from a unique proto-language, just as the Romance languages are divergent developments of Latin. In applying the comparative method, however, one must bear in mind the well ascertained fact that the unity of PIE was a relative one, involving dialectal diversity. Furthermore, recent studies have brought to light traces of successive developments within the PIE period. It is now possible, and even necessary, to contrast archaic and late PIE.

The position of ClArm. among the IE languages is that of a single idiom apparently destitute of dialectal varieties, which does not belong to a group of close cognates, such as the Indo-Iranian, the Slavic, the Germanic or the Celtic group. Its particular affinity with Phrygian, or the Thracio-Phrygian group, though repeatedly claimed by some comparativists, remains hypothetical, for

want of sufficient data on the latter languages. Old Phrygian inscriptions, in particular, have not yielded decisive evidence to this effect, so far.

We therefore have the right to use the term 'Proto-Armenian' in referring to the development of a certain PIE dialect from (approximately) 1500 B.C. to 400 A.D. In the course of so many centuries, the language doubtlessly underwent considerable changes, so that it does not seem entirely advisable to include the whole period under one denomination. But we have no other choice, since our data consist, on the one hand, of the knowledge we possess of PIE phonology and morphology, and on the other hand, of ClArm. texts from the 5th century onwards. The enormous gap will never be filled.

4.1. The peculiar position of Armenian as an IE language was not perceived by early comparativists (Bopp, Windischmann, Fr. Müller, etc.), who mistook it for a marginal Iranian dialect, until H. Hübschmann, in 1877, asserted its autonomy on phonological evidence. The issue, it must be granted, was rather perplexing. The ClArm lexicon is a mixture of inherited PIE (or genuine Armenian) words, and of loanwords from various languages. Leaving aside the latest ones, i.e. Greek and Syriac words, the borrowing of which was a consequence of christianization, we are confronted with two different layers of foreign words: on the one hand, words of unknown or uncertain origin, presumably borrowed from ancient Caucasian or Anatolian languages (4.11); on the other hand, Middle Iranian loans (4.12). The latter are fairly as numerous as Norman words are in English; more numerous, at least, than the genuine Armenian words, from which they have to be discriminated. Much work has been done to this purpose ever since the publication of Hübschmann's fundamental book (1897), but the inventory of the Iranian loans, though considerably furthered, still awaits completion.

4.11. At this juncture, something has to be said on the historical circumstances that account for this unusual number of foreign words in the Armenian lexicon.

The Armenian people is supposed to have migrated from the Balkan peninsula towards Asia Minor. According to Armenian scholars, they had settled, perhaps as soon as 1500 B.C., in the Hayaša-Azzi land, in the North-eastern quarter of Anatolia. Later on, they moved East- and Southwards, and eventually fixed in Urartu (Armenia). On their long way, as well as in their new home, they must have had intercourse with various autochthonous and neighbouring nations. Most of the early loanwords in ClArm., therefore, would have to be traced back to the languages of those nations. The decipherment of Hurrian tablets and Urartean inscriptions, however, did not prove very helpful in this respect. As to the South Caucasian languages, Georgian and Lazo-Mingrelian, they do yield

parallels to a number of obscure Armenian words (Vogt, 1938, 1961); but, since the earliest Georgian texts do not go farther back than ClArm. literature itself, the study of these lexical connections does not throw much light on the remote origin of the words at issue: so far, their only characteristic feature is a negative one: these words lack etymology.

4.12. At the turn of the 7th century B.C., Armenia became a province of the Median empire. From that time on, it was uninterruptedly exposed to the powerful influence of Iranian civilization and culture. Even in the days of Alexander the Great and of the Diadochs, hellenistic culture did not prevail; Armenia was never totally drawn into the Greco-Roman world. Later on, Christianity opened the way to new cultural trends (1.3); but by that time, the Iranian stamp on the Armenian language was too strong to be obliterated by a new one.

The massive borrowing of Iranian words seems to have been started by the foundation of the New Iranian empire (247 B.C.-226 A.D.). The phonological features of these words, indeed, point to their provenance from a NW. Iranian dialect, Parthian, i.e. from the language of the new monarchs. Even during the period of self-government (66-387 A.D.), Armenia was ruled by a dynasty of Parthian origin, the Arsacid (*Արշակունիք*) dynasty. The Parthian dialect, as can be expected, supplied words pertaining to government, social organization, law and religion, but also to everyday life. Several occur in our short text sample (1.5): *anapat* 'desert', *patasxani* 'answer', *ašxarh* 'world', *žamanak* 'time', *p'arik* 'glory', *pašt(em)* 'I worship', *aštarak* 'tower', *tačar* 'temple', *hreštak* 'angel', *patuir(em)* 'I command', *vasn* '(on) behalf'. Not only is *patasxani* an Iranian word, but the phrase: *patasxani tam* 'I answer (give an answer)' is itself a loan translation from Iranian, and so are many formular phrases.

4.121. The Parthian influence was not restricted to lexical items: it also affected morphology. A striking example is *t'agawor* 'king' (hence *t'agaworut'iwn* 'kingdom', Luke 4.5): the genuine Armenian suffix *-awor* (3.312) has been substituted for the 2nd member of a Parthian compound: **tag(a)-bar* 'crown bearing'. The corresponding feminine is reflected in *t'agu(r)hi* 'queen'⁴³. The semantic relation of *t'agu(r)hi* to *t'agawor*, and of both to *t'ag* 'crown', could not fail to suggest a morphemic analysis: *t'ag-uhi* 'crown (bearing) woman'. Thus, a new Armenian morpheme was abstracted from *one* Iranian loan word, and propagated afterwards. In Modern Armenian, derivatives in *-uhi* are coined at will, as agent nouns for female beings (e.g. *paruhi* 'female dancer', *tnorenuhi*

⁴³ On the Old Iranian forms **tāga-bara-* 'king', **tāga-brθryā* 'queen', see Benveniste, 1945, p. 74.

'directress', etc.). The same process of abstraction and propagation was all the more likely to take place when several Iranian derivatives or compounds of a given pattern could serve as models. In this way, such derivational morphemes as *-ak*, *-astan*, *-aran*, *-agoyn*, *-apēs* (3.332 c-e; cf. 3.312) became an integral part of ClArm. word formation (cf. Meillet, 1962, p. 182-184) ⁴⁴.

4.122. The inventory of Parthian words in ClArm. is of course a particular concern for Iranologists. Recent studies in this field, however, result in a somewhat unwelcome discovery: several items in Hübschmann's list of genuine Armenian words have to be barred (Benveniste 1945, 1958, 1964). The number of acknowledged Iranian loans is thus increasing at the expense of the not too large amount of inherited PIE words.

To quote only one example: *mah* (IV) 'death', in view of the earlier form *marh*, which occurs in Ep'rem's Hymns, was supposed to contain the PIE root **mer/mor/mṛ-* 'to die', together with *meranim* 'I die' and *mard* 'man (mortal)'. According to Hübschmann (1897, p. 472), *ma(r)h* could be paralleled with Ved. *mṛtyu-*, Av. *mərəθyu* 'death' (Cf. OP. *uwa-mršiyu* 'suicide'), or else with Goth. *maúrþr* 'murder' (< **mṛtro-*). Anyhow, it would be the genuine Armenian reflex of either **mṛtyu-* or **mṛtro-*. But this explanation meets with phonological difficulties: PIE **-ty-* would have yielded an affricate (*-c'*) while *-d-* in PA **mardr(o)* would probably have dropped, as *-j-* did in **darjnam* (2.343). Pedersen, (1906, p. 364-367) resorted to a PIE prototype **mṛtu-*: PA should have had a **-tu-* stem, instead of the **-ti-* stem in Lat. *mors* (< **mṛti-*), just as it has *zgest* (IV) 'dress' as against Lat. *vestis* 'id.'. The dim sound of the last vowel (*u*) is made responsible for the uncommon change of **-t-* to *-h-*, and for the contrast between *marh* (< **mṛtu-*) and *mard* (I) 'man' (< **mṛtó-*). The argument, however, is confuted by *ard* (IV) 'form, attire' < **rtú-* (Ved. *ṛtú* 'season'; cf. Gk. *artúō* 'I arrange').

Thus, one solution remains: *ma(r)h* is a loanword from the Parthian dialect, where Old Iranian **mṛθyu-* regularly developed to **marh(u)* (Bolognesi, 1960, p. 17-19). This explanation is supported by the fact that no reflexes of PIE **mṛtyu-* are found outside Indo-Iranian.

4.2. The above discussion brought us close to the problems of ETYMOLOGY, i.e. of the historical explanation of words. If the explanation is to be found within the lexicon of the language to which the words belong, it will be given in terms of word formation; and insofar as regular word forms are at issue, we

⁴⁴ In *tetrak* 'quaternion; note-book', *-ak* has been added to a Greek loanword: *tetr* < Gk. *tetrás* (5.14).

do not speak of etymology, but of derivation or composition. Such forms, indeed, are not only explainable, but also predictable, according to the rules of the language. Besides regular word forms, however, there are in every language more or less archaic forms, or relics of earlier morphological patterns. Here etymology comes into play: the detection of obsolete morphemes requires an analytical and comparative procedure, as will be shown in some examples.

4.21. An archaic pattern of composition survives in *ənker* (IIb) 'companion', a combination of the preposition *ənd* 'with' and of a radical agent noun from *ker-*, the aor. stem of *utem* 'I eat' (3.255 b). The original meaning thus appears to have been 'eating with (others), messmate'. The pattern was no longer productive in ClArm.: it may have given way to the *-kic'* type (3.312).

Obsolete prefixes are, e.g., *amb-* (Cf. Gk. *amphi*, OHG. *umbi* 'all around') in *ambolj* (III) 'whole' (Cf. *olj* (I) 'sound', *aʀolj* 'healthy'); *t(i)-* in *thas* (III) 'unripe' (*has* 'ripeness'), *tkar* (IIb) 'weak' (*kar* 'power, ability'). The full form is preserved in *tiezerk* (II) 'universe' (*eʒr* 'border, limit'): *ti-* is parallelable to Lat. *dē-* (*deformis* 'shapeless, ugly'), Welsh *di-* (*dinerth* 'weak')⁴⁵.

Passing on to derivation, besides *mecanam*, *mecut'iwn* and other regular derivatives of *mec* 'large, great', we find *mecarem* 'I magnify, honor': doubtless, a denominative (3.332 a) from an obsolete adjective **mecar*. The same morpheme, indeed, is easily detected in *ardar* (I) 'just, upright' (*ard* 'form, fashion'); *dalar* (I) 'fresh, green' (*del* 'medicine', formerly 'herb'; *delin* 'yellow'); *galar* (III) 'twisted, curved' (Cf. *gelum* 'I twist, press'; *glem* 'I roll'). The vowel alternation in *gelum/galar*, *del/dalar* (4.323), as well as the occurrence of similar derivatives in ancient Greek (*miarós* 'defiled', *sobarós* 'haughty', etc.), point to the PIE origin of the pattern.

Besides *-ar*, ClArm. has also traces of *-or*: *molor*, *molar* 'erring, false' (*molim* 'I err'); *glor* 'round' (hence *glorem* 'I roll', cf. *glem* 'id. '); *bekor* 'fragment' (*bekanem* 'I break'); *stor* 'low, inferior' (*əst* 'under, beneath'), etc. This morpheme occurs in the Armenian reflex of a well-known PIE adjective: *nor* (I) 'new', unlike its cognates, all of which are traceable to PIE **newo-* (Indo-Ir. *náva-*, Gk. *né(w)os*, OCSl. *novŭ*, Lat. *novus*) or to **newyo-* (Goth. *niujis*, Welsh *newydd*), reflects a PA derivative **newor(o)*.

4.22. These examples, to which more might easily be added, explain the synchronic contrast between productive and unproductive patterns of derivation (3.4): the latter, as a rule, are archaisms, and so is irregular inflection at large.

⁴⁵ G. Bolognesi, *Sul prefisso negativo t- in armeno*. *Rivista degli Studi Orientali* XXIII (Roma, 1948), p. 82-86.

Archaisms are of great value in diachronic studies. Although they do not enable us to reconstruct any earlier state of a language in detail, they help us to connect it with what is known of the proto-language from which it has issued. Thus, starting from PIE, we can trace phonological and morphological developments down to ClArm. Let us review, e.g., PIE suffixes which survive, or have left traces, in 5th century Armenian: derivation will thus appear in a new light.

**iyō/ā* > -i (V), in noun derivatives: *gorci* 'tool' (*gorc* 'work'); *harsanik* 'wedding' (*harsn* 'bride'); *kogi* 'butter', lit. 'cow (fat)' (*kov* 'cow').

*-*ikyā* > -ič' (IIb), in agent nouns: 3.2, Note; 3.331 c.

*-*omno-* > -*un* (I), in verbal adjectives: 3.32, 3.331 d (Meillet, 1936, p. 48).

NOTE. It must be pointed out, however, that a parallel to -ič' is to be found in the Slavic languages only (Meillet, 1936, p. 75). In other words, we are confronted here with a Slavic-Armenian 'isogloss'. Besides, Meillet's explanation of -*un* did not meet with unrestrained approval.

Very few PIE action nouns in *-*ti* and *-*tu* are preserved in ClArm.: *bay* (III) 'verb' (= Gk. *phátis* 'oracle', a poetic word; Attic *phásis* 'utterance'); *awt*' (III) 'a passing the night' (*aganim* 'I pass the night, stay'. As to the *w/g* alternation, cf. *kov*: *kogi*, quoted above); *ard* (IV) 'form'; *zgest* (IV) 'dress' (*zgenum* 'I dress, put on'). Of the latter suffix, there are no other traces; but the former remained productive in PA, though in expanded forms: -*st* (-*ist*, -*ust*: 3.331 b), and -*oyt*', e.g. in *erewoyt*' (III) 'appearance', from *erewim* 'I appear'. Later, while -*st* simply subsisted in a small number of PA derivatives, -*oyt*', along with -*ut*'*iwn* (Meillet, 1936, p. 80), had a better lot: it has even been revived of late in Eastern Armenian, to coin technical terms (*druyt*' 'deposit, thesis'; *jevuyt*' 'morpheme', etc.).

*-*mon/mn̥-* > $\begin{matrix} -mn \\ -mun \end{matrix}$ /*man-* (3.142 c), in verb derivatives (action nouns).

PA examples are: *žermn* 'heath, fever' (*žernum* 'I warm'); *skizbn*⁴⁶ 'beginning' (*sksanim* 'I begin'); *erdumn* 'oath' (*erdnum*, 2.543, 3.254); *himn* 'foundation' (the corresponding verb is lost), and some others. In ClArm., the only productive form is -*umn* (3.331 b). Of another expanded form: -*awn* < *-*amn* there are but few traces. It must have been still productive in the Parthian period, as is proved by *paštawn* 'worship', GDL. *paštaman*, from *paštem* 'I worship': the verb root is Iranian (Meillet, 1962, p. 173). A third variety is -*iwn* < *-*imn*, e.g. in *goč'iwn* 'shouting, cry', GDL. *goč'man* (< **goč'iman*). All the inflected forms, one perceives, belong to *goč'umn* as well. Yet, -*iwn* did not merge with -*umn*, and exceptionally the clash of the sg. NAcc. with the oblique cases has been removed by a change of inflection, as in *k'rt'mnžiw*n 'grumbling', GDL. *k'rt'mnžean* (3.141 b).

⁴⁶ With -*b-* < -*m-* after *z*.

4.23. So far, we have simply cast a glimpse at the PA and PIE background of ClArm. word formation. This much, however, is enough to prove that Armenian, crowded as it is with foreign words, is unmistakably an IE language, and a quite particular one: the developments of **-ti* or **-mon/mn̄*, or even of a single word like *nor* 'new', lack parallels in the cognate languages⁴⁷, and so do many morphemes which we cannot trace farther back than PA, e.g. the causative *-oyc'*- suffix (3.244). This statement will be confirmed in a diachronic study of ClArm. inflection. But before we approach this last topic, we have to come back to etymology, and take up problems we did not discuss in the preceding survey.

4.3. The genuine Armenian words, we remarked (4.1), are only one component of the lexicon. How then can they be singled out? As inherited words, they are of course traceable to PIE prototypes; but, since the same holds true of most Iranian words, too, an additional criterion is needed. Genuine Armenian words, when confronted to their cognates in other IE languages, display quite particular phonological features: e.g. *hayr* 'father' reflects the same prototype as Skt. *pitá* (*pitar-*), Gk. *patér*, Lat. *pater*, Goth. *fadar*, etc. In this connection, one must bear in mind that outward likeness is casual, and often misleading. Doubtless, Arm. *naw* 'ship' can be safely equated to Gk. *naús*, Lat. *nāuis*, OIrish *nau* 'id', but this is the exceptional case. The genuineness criterion, therefore, lies in rules of sound change, which have to be discovered, and then operated with due regard to morphology and semantics. Beside *hayr*, e.g., we find:

- Arm. *hing* 'five': Skt. *pañca*, Gk. *pénte*, Goth. *fimf*
- hur* 'fire': Hitt. *paḥhur*, Gk. *púr*, Umbr. *pir*, AS. *fȳr*
- hast* (III) 'firm': Goth. *fasti*
- heru* 'last year': Gk. *pérusi*, Skt. *parít*,

all with Arm. *h-* as against *p-* (Germanic *f-*). This situation can be construed in terms of sound change: PIE **p(V)-* > Arm. *h(V)-*. Such a rule is only tentative, until it has been tested and checked on more parallels; and then it may turn out inaccurate, and have to be corrected.

4.31. Armenian, in this respect, is a rather hard case. First of all, more materials would be welcome. Hübschmann's list of genuine Armenian words amounts to 438 items, many of which, however, are declared uncertain. Since then, the number of reliable Armenian etymologies has been slightly on the increase, while Hübschmann's inventory has had to be reduced (4.122). This

⁴⁷ I would not equate *nor* with Gk. *ne(w)arós*, as Meillet does (1936, p. 50): *-or* (< **-oro-*), unlike *-ar* (< **-oro-*), has no counterpart in Greek.

state of affairs is by no means surprising : one cannot expect a very large number of PIE words or stems to survive in such a language as ClArm., in view of the circumstances that attended its perpetuation (4.11-12), and of the late appearance of written evidence. Yet, the scantiness of materials is the main obstacle to the discovery and verification of certain rules of sound change, which remain unknown or controversial for want of decisive data.

4.311. Indeed, the particulars of sound change in Armenian appear to be more intricate than in other IE languages. It often happens that, in seeking an etymology, one has to contemplate more than one possible development. Initial *h-* e.g., is not only the Armenian reflex of PIE **p-*, as in *hayr*, *hing*, *hur*, *hast*; it also occurs in *hin* (I) 'old' (< **seno-*), *hoł* (I) 'ground' (= Lat. *solum*?). On the other hand, it seems to have developed in PA before an initial vowel, e.g. in *hot* (I) 'odour' (Cf. *odmé*, Lat. *odor*), *hum* (I) 'raw' (= Skt. *āmá-*, Gk. *ómos*), unless, as some comparativists are inclined to believe, *h-* is the reflex of a PIE laryngeal (4.322). Conversely, there is no trace of **p-* in *otn* 'foot' (cf. *het* (I) 'foot print'), nor of **s-* in *al* (III) 'salt', *ewt'n* 'seven'. To account for this situation, as well as for such 'doublets' as *hogi/ogi* 'spirit', some would appeal to the hypothesis of dialectal features (so Bolognesi, 1954, p. 150). But the ClArm. texts, unlike Ancient Greek literature, do not afford palpable evidence for dialectal diversity.

4.312. The dropping of unstressed vowels (2.221), too, raises difficulties, in that radical vowels are often obscured. Thus, *mnam* 'I remain' may derive from **men-ā-* or **mēn-ā-* (through **minam*), since PIE *e* and *ē* have merged to Arm. *i* before a nasal consonant (Meillet, 1936, p. 48; Mann, 1963, p. 11). But **mon-ā-* would suit as well, for, in the same position, **o* changed to *u*, which was to drop later. Thus, *mnam* may well belong to the same sub-class of *-am* presents as *dolam* 'I tremble', *hogam* 'I care', *orsam* 'I hunt', *solam* 'I creep', etc.

4.313. In comparative studies, besides regular sound changes, one is confronted with isolated instances of abnormous developments. Such exceptions are all the more embarrassing when the rules of sound change are partially disputable, as is the case of Armenian. We should expect such old words as *akn* 'eye', *unkn* 'ear' (together with the pl. forms), *atamn* 'tooth', *leard* 'liver', etc. to help on the discovery of regular sound change. Instead, one has to try ad hoc explanations in order to bring them into agreement with the prototypes, and in spite of many attempts, they still stand out as phonological riddles.

4.314. Theoretically, the explanation of a word, as we defined etymology (4.2), ought to be exhaustive, and to account for each phonological and morphological particular. Practically, however, this requirement is seldom fulfilled. In paralleling

Arm. *naw* 'ship' with its cognates (4.3), we considered the word stem only; for, the Armenian inflection (IIb or IV) does not reflect the original one. The reverse is seen, e.g., in *luc* (I) 'yoke': while Skt. *yugám*, Hitt. *yugan*, Lat. *iugum*, AS. *yeoc* all point to PIE **yugo-*, Arm. *l-* is amazing. Yet, in this case, the preservation of the *o* declension adds weight to the parallel, and somehow balances the unexpected phonological development⁴⁸.

Thus, besides sound change, we also have to record morphological changes, mostly resulting in a redistribution of PIE materials: so, in our example, the word stem **nāu-* on the one hand, and the **-ā-* and **-u-* morphemes on the other. Likewise, a regular verb form: *lnum* 'I fill' consists of a root (*li-*), a present stem morpheme (*-nu-*) and a 1st sg. ending (*-m*). All three components are traceable to PIE, but the combination is a new one: positing a PIE form **plēnumi* would not make sense, because such a form is not reflected in any other IE language, and consequently has to be regarded as a PA creation.

It is no wonder, therefore, that ClArm. has only scattered relics of PIE root vowel alternation (4.323). As a rule, roots are invariable⁴⁹, as *li-* in *lnum* (< **linum*), *lir* (III) 'fulness'; moreover, they are very often identical to single word stems: *li* (I) 'full'; hence: *lianam*, *liut'iwñ*.

4.32. SOUND CHANGE

In describing sound change, or linguistic changes generally, we are free to proceed forwards or backwards, according as we choose as our starting point the proto-language, or the language we are concerned with. The former procedure is the usual one and seems more adequate for didactic purposes. Consequently we need, first of all, an outline of THE PIE SOUND PATTERN. Here, the question arises, whether we have to go as far back as 'archaic PIE', or whether we may limit ourselves to 'late PIE' (4). Insofar as we are dealing with ClArm. only, there are reasons to believe that the latter choice will better suit the purpose. Some of these reasons can be easily gathered from the following outline.

4.321. PIE CONSONANTS

Stops :	<i>*p</i>	<i>*b</i>	<i>*bh</i>	(<i>*ph</i>)
	<i>*t</i>	<i>*d</i>	<i>*dh</i>	(<i>*th</i>)

⁴⁸ This etymology has been rejected of late by N. A. Mkrtč'yan (Hittite-Armenian Parallels, in *Lraber hasarakakan gitut'yunneri* 7 [Erevan, 1970], p. 58-69), who equates Arm. *luc* with Hitt. *luzzi* (*-i* stem) 'labour due to the state, forced service'. The original meaning, he believes, was 'servitude'. Of course, he does not care about the divergent inflections. Moreover, he mistakes a metaphorical meaning for the primary one.

⁴⁹ In the acceptation specified above (3.12).

$*\hat{k}$	$*\hat{g}$	$*\hat{g}h$	
$*k$	$*g$	$*gh$	$(*kh)$

Fricative : $*s$

ClArm. is one of the few IE languages that bear evidence to the existence of voiceless aspirates ($*ph$, $*th$, $*kh$). This set of phonemes admittedly developed in a late period, and did not spread over the whole IE area.

On the other hand, the contrast between palatal and velar stops ($*\hat{k}/k$, etc.) is reflected in all IE languages, though not in the same fashion. Armenian belongs to the so-called *satəm* languages, which changed the palatals to fricatives ($*\hat{k} > s$) or affricates ($*\hat{g} > c$), while other IE languages, among which Celtic, Germanic, Latin, Greek and Hittite, contrast simple velars to labialized velars :

PIE	$*\hat{k}/k$	
Lat.	k/kw (written : c/qu)	⁵⁰

In Armenian, the original contrast is neutralized after *u* or *u*- diphthongs (= Arm. *aw*, *oy* : 4.47). In this position, velars merged with palatals :

PIE	$*leukos-$	$>$	PA	$*louko-$	$>$	ClArm.	<i>loys</i> (I) 'light'
	$*yugo-$	$>$		$*y/lu\hat{g}o-$	$>$		<i>luc</i> (I) 'yoke'

as against

PIE	$*regos-$ 'darkness'		ClArm.	<i>erek</i> 'evening' (in : <i>z-erek</i> 'on the evening'; <i>c'-erek</i> 'day-time', lit. 'up to the evening').
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4.322. PIE RESONANTS AND VOWELS : $*m$, $*n$, $*r$, $*l$, together with $*i$ and $*u$, were members of a particular class of phonemes, each of which occurred in turns as a consonant or a vowel, according to the phonological environment. In the usual notation, the allophones are marked off as follows :

$*/m/$:	m	:	ṃ	:	ṃm (or 0m)
$*/r/$:	r	:	ṛ	:	ṛr (or 0r)
$*/i/$:	y	:	i	:	iy
$*/u/$:	w	:	u	:	uw ⁵⁶

On the other hand, $*i$ and $*u$ share an important feature with the genuine vowels $*e$, $*o$, $*a$, namely the contrast of long vs. short : $*i/\bar{i}$, $*u/\bar{u}$, $*e/\bar{e}$, etc. This

⁵⁰ According to certain comparativists (Bonfante, Pisani) PA, like some other PIE dialects, should have had two sets of postpalatal stops, namely simple velars ($*k$) and labialized velars ($*k^w$). The problems involved cannot be discussed here. See below, 4.334, Note; 4.452, and, for a detailed discussion : G. R. Solta, *Palatalisierung und Labialisierung*. IF 70 (1965), p. 276-315.

⁵¹ Instead of *y*, *w*, German philologists use *ï*, *ÿ*.

situation, however, is the late reflex of a quite different one. It is currently admitted that the archaic PIE sound system included laryngeal consonants, which affected the development of the adjoining vowels: $*H_2e > a$; $*eH_1 > \bar{e}$; $*eH_2 > \bar{a}$; $*iH > \bar{i}$, etc. Recent studies aim at bringing to light traces of laryngeals in various IE languages, including Armenian⁵². But, although the 'laryngeal theory' is widely accepted, comparativists, as yet, hardly agree on the particulars of its application. So we are justified in keeping up the traditional 'late PIE' vowel pattern: $*e/\bar{e}$, $*o/\bar{o}$, $*a/\bar{a}$; besides: $*\bar{i}$, $*\bar{u}$ and $*\bar{a} (< H)$. This amounts to assuming that, in 'late PIE', original lengthened vowels ($*\bar{e}$, $*\bar{o}$) had merged with the outcome of $V + \text{laryngeal}$ ($*eH$, $*oH$).

4.323. *Vowel alternation*. In PIE roots and derivational morphemes, the normal $*e$ vowel was shifted to $*o$, or dropped, according to morphological rules. Adding to this fundamental variation the less frequent lengthening of $*e$ or $*o$, we obtain the following set of regular vowel alternants:

$*e/*o/\emptyset/ (*\bar{e}/*\bar{o})$

or rather, of morpheme alternants, e.g.

$*men-/*mon-/*mn/ (*m\bar{e}n-/*m\bar{o}n-)$

$*m\bar{n}, m^o n$

In ClArm., the $*e/o/\emptyset$ alternation is best preserved in the declension of n -stems (3.141-143). Only in this case is it still instrumental on the morphological level: the stem variation $-in/-un/-an$ reflects $*-en/-on/-\bar{n}(^o n)$; in the I., $-amb < *-\bar{n}-bhi$ (Cf. Meillet, 1936, p. 78-80). The knowledge of the PIE alternation also enables us to bring together

berem 'I bring' / $-(a)wor$ (3.312) / *bard* (III) 'heap'

$< *bher-e- \quad < *bhor-\bar{a}- \quad *bh\bar{r}-ti$

The $*e$ grade is missing in: *orogem* 'I irrigate' ($< *srow-e-$)/*aru* (I, III) 'brook' ($< *sru-ti-$); *č'ogay* 'I went' ($< *kyow-\bar{a}-$)/*č'u* (I) 'start, departure' ($< *kyu-ti-$)⁵³; the $*o$ grade in: *meřanim/mard* (4.122); *del/dalar*; *gelum/galar* ($-al- < ^o l-$; 4.21). To this last pair we may add: *glem* 'I roll'. The root vowel is ambiguous (4.312); but, whether we assume $*gilem$ or $*gulem$ as the earlier form, it certainly reflects a present stem with a lengthened vowel ($*\bar{e}$ or $*\bar{o}$).

⁵² *Evidence for Laryngeals*, ed. by W. Winter, Austin, The University of Texas, 1960 (on Armenian: p. 27-41); W. Cowgill, *Evidence for Laryngeals*. The Hague, 1965.

⁵³ A typical example of morphological change (4.314): the original i inflection, preserved in *bard*, *bay*, *avt'* (4.22), has been substituted by the o inflection, the latter being felt regular in monosyllables of the $C + i$ or u type (3.132).

NOTE. We need not dwell upon the $*\bar{e} (\bar{a}, \bar{o})/\bar{a}$ alternation, which, in the light of the laryngeal theory, is currently explained as a particular instance of the general phenomenon. Indeed, it does not seem to have left traces in ClArm., except in the inflection of the verb 'to give' (3.255 c): *tam* 'I give' displays the zero grade (*ta-* < $*d\bar{a}$ -) as against *tu-* < $*d\bar{o}$ - in the aorist (*etu*) and in *tur* (I) 'gift'. On *edi*, *edak*', see 5.432, Note.

4.33. As pointed out above (4.31), the Armenian developments of PIE phonemes are not thoroughly known. Even if we disregard a few puzzling words (4.313), and deal with normal sound change only, as we shall purposely do, we must own that the evidence for certain rules is rather lean and leaves room enough for such bold etymological speculation as abounds, e.g., in Mann's historical phonology (1963). But no amount of speculation carries weight against one unobjectionable etymology. Furthermore, a change for which there is but little evidence can be proved regular on the strength of parallel developments.

The PA STRESS SHIFT has been alluded to in a previous section (2.22). After the word stress had settled on the penult, the vowel in the last syllable weakened and eventually was lost, together with the following consonants except *l*, *r*, and probably *n* (see below, 5.213): $*\acute{e}smi > em$ 'I am'; $*\acute{e}bheret > eber$ 'he brought'; $*gen\bar{a} > kin$ 'woman'; $*m\bar{r}t\acute{o}s$ (sg.N.) $> mard$ 'man', etc. Very likely *i* dropped earlier than the other vowels: this would account for the contrast between $-n < *-nti$ and $-nd < *-nte, -nto, -nt\bar{a}$ (Bolognesi, 1954, p. 127)⁵⁴. In Latin, too, *i* has been lost after a stressed syllable in *animal* < $*anim\bar{a}li$, *d\bar{o}s* < $*d\bar{o}tis$ 'dowry', etc.

4.331. The developments of the PIE vowels and resonants (except $*y$ and $*w$) can be summed up as follows:

- $*e > e$ (later $> i$ before *n*, *m*); $*\bar{e} > i$
- $*o > o$ (later $> u$ before *n*, *m*); $*\bar{o} > u$
- $*a, \bar{a}, \bar{a} > a$
- $*i, \bar{i} > i$; $*u, \bar{u} > u$.

Unexpectedly, *a* occurs instead of *e* in *tasn* 'ten' (= Gk. *d\acute{e}ka*, Lat. *decem*, OHG. *zehan*, etc.); *calr*, GDL. *calu* 'laughter' (= Gk. *g\acute{e}l\bar{o}s*); *vat'sun* 'sixty', as against *vec* 'six'. Other Armenian words have *a* as against Gk. or Lat. *o*:

- akn* 'eye', pl. *ač'k*' (3.152) : Gk. *\acute{o}sse* (Hom.), OCSl. *oči* 'eyes'; Lat. *oc-ulus*;
- ali-*, in *alewor* 'grey, hoary' : Gk. *poli\acute{o}s* 'id'
- ateam* 'I hate' : Lat. *odium* 'hatred', *\acute{o}di* 'I hate'.

⁵⁴ In *drandk*' 'doorway' (< $*dur-and-$), the *i* inflection is certainly not the original one: Skt. *\acute{a}t\bar{a}h* 'frame', Lat. *antae* 'doorposts' are $*\bar{a}$ stems.

In *asr*, GDL. *asu* 'fleece' (3.151 Note) the origin of *a* is ambiguous : cf. Gk. *pókos* m. and *pékos* nt. 'id'. These parallels seem undisputable, but the conditions of the change of **e* or **o* to *a* are not quite clear. For a tentative rule, see Grammont, p. 223-225, 245-248.

<i>*m, n, l, r</i>	No change
<i>*m̥ (^om), n̥ (^on), l̥ (^ol), r̥ (^or) ></i>	<i>am, an, al (al), ar.</i>

PA -(V)*mn* is preserved after *u* (*šaržumn*) and in monosyllables : *himn* 'foundation', *kamn* 'flail'. Otherwise, *m* was weakened to *w* : *paštawn*, *koč'iw* (4.22). Thus, *anun* 'name' (with *u* < **ow*) can be traced back to the same prototype as Gk. *ónoma*.

NOTE. On the change of *-mn* to *-wn*, see also Meillet, 1936, p. 48, and Pedersen, 1905, p. 217-218. In fact, the matter seems to be more complicated, and our statement fails to account for the preservation of *-mn* in *ayce-amn* 'roe' (cf. *ayc* (III) 'goat'), *eamn* 'hoar frost', unless these words are compounds; **amn*, however, never occurs as a single word. The relation of *atamn* 'tooth' to Gk. *odón*, G. *odóntos* involves difficulties. Supposing the Arm. word to be derived from **odnt-* (cf. Gk. *odont-*), the PA form should have been **atan(d)-mn*; *-m-*, being preceded by a consonant, was prevented from weakening.

4.332. The Armenian reflexes of PIE *consonants* are divergent or uniform according to whether the developments were, or were not, affected by the adjoining phonemes. Uniform reflexes are peculiar to voiced stops and voiceless aspirates.

a) PIE voiced stops : **b* > *p*
**d* > *t*
**g̃* > *c*
**g* > *k* / *c* after *u, aw, oy* (4.321).

Examples :

stipem 'I urge, compel' = Gk. *steíbō* 'I tread, stamp on' ⁵⁵

tur (I) 'gift, present' = Gk. *dōron*, OCSl. *darŭ* 'id' ;

hot (I) 'smell' : cf. Gk. *odmé*, Lat. *odor* 'id' ;

sirt (III) 'heart' < **kērdi-*. The root is **kērd-* (AS *heorte*) / **krd-* (Lat. *cor*, G. *cordis*). The *i* stem with the zero grade (**krdi-*) is found in Gk. *kardí-ā*, OCSl. *srŭdī-ce*, and, perhaps, in Arm. *sartnum*, 'I startle' (2.343), as in OCSl. *srŭditi se* 'to become angry' ⁵⁶.

cunr 'knee' (3.151, Note) = Gk. *gónu*, Skt. *jānu-*: cf. Lat. *genu*, Goth. *kniu*, etc.

acem 'I bring, handle' = Skt. *ájāmi*, Gk. *ágō*, Lat. *ago* 'I drive' ;

⁵⁵ For the sake of brevity, I use '=' when the words, or word stems, reflect the same prototype; 'cf.' when the parallel is limited to the root.

⁵⁶ Pisani, *Armeniaca*. KZ 61 (1934), p. 189.

mec (IIb) 'great, big' = Gk. *mégas*; cf. Goth. *mikils* 'id'; Hitt. *mekkiš* 'many, much' (?);

gorc (I) 'work, action' : cf. Gk. (*w*)*érgon*, AS. *weorc* (cf. 3.32, Note).

kin, I. *knaw* (3.17) 'woman, wife' = OCSl. *žena* 'woman'; cf. AS. *cwēn* 'wife', Goth. *qinō* 'woman, wife'. The pl. *kanayk* has the zero grade, like Gk. *guné*, G. *gunaikós*; but the alternating inflection, a most archaic feature, is preserved in Armenian only.

erek 'evening' = Gk. *érebos* 'dark place, hell', Skt. *rájas-* 'dimness, region of clouds, atmosphere', Goth. *riqiz* 'darkness'

ankanim 'I fall' : cf. Goth. *siggan* 'to sink'. The Arm. verb is built up on the zero grade of the root (cf. 5.431).

b) PIE voiceless aspirates : $*ph > p'$

$*th > t'$

$*kh > x$

Examples :

p'lanim 'I collapse'; *p'ul* 'downfall, decrease' : cf. AS. *feallan*, Lith. *pùlti* 'to fall'; Gk. *sphállō* 'I trip up, deceive' (?). The root vowel is ambiguous (*-ul-* < $*ol$ after a labial consonant ?);

y-alt' (I, III) 'large' : cf. Skt. *prthú-*, Gk. *platús* 'broad, large' ⁵⁷;

xacanem 'I bite' (with *c* < $*dy$: 4.352) : cf. Skt. *khādāmi* 'I chew, devour';

sxalim 'I err' = Skt. *skhálāmi* 'I stumble'.

For more examples (with discussions), see Meillet, 1936, p. 34-36.

4.333. The so-called *voiced aspirates* changed to simple voiced stops (or affricates) when initial or preceded by a resonant, but weakened when placed between vowels. The latter alteration took place before the dropping of last syllable vowels :

$*bh- > b$; $*(V)bh(V) > w/v$

$*dh- > d$; $*(V)dh(V) > ?$ (Decisive evidence is lacking)

$*ǵh- > j$; $*(V)ǵh(V) > z$

$*gh- > g/j$ before *e, i*; $*(V)gh(V) > ž?/j$ after *u, aw, oy* (4.321)

Examples :

berem 'I bring' = Skt. *bhárāmi*, Gk. *phérō*, AS. *biru* 'I bear'; *-(a)wor* < $*-bhorā$ (4.323). After *u*, *w* is regularly dropped : *zinuor* 'armed, soldier', from *zēn* (IV) 'weapon'. The 3rd sg. aor. *eber* does not invalidate the rule : it has its *b* from *berem*, *beri*, etc. analogically.

⁵⁷ The parallel is mine. I assume that *y-* is a prefix, as in *y-ajol* 'favourable, convenient', cf. *ajol* 'id'.

orb (I) 'orphan' = Lat. *orbis* 'bereft'; cf. Gk. *orphanós* 'orphan';

y-awelum (*ar-*) 'I increase' : cf. Gk. *ophéllo* 'id'. On *a* = Gk. *o*, cf. 4.331.

durk' (II) 'gate' = Gk. *thúrā* 'door'; cf. Goth. *daúr* (*o* stem), Lat. *foris* 'id'.

gind (IIb, III) 'ring' = Alb. *vēth* 'ear-ring'; cf. Goth. and AS. *windan* 'to wind'.

jeřn 'hand' : cf. Gk. *kheír*, *kher-*, Hitt. *keššar* 'id';

barjr, GDL. *barju* 'high' = Hitt. *parkuš*; cf. Skt. *bṛhant-* 'high', Gaulish *Brigantes* 'the exalted ones' (?), name of a people;

lizem (also *lizanem*, *lizum*) 'I lick' = Gk. *leíkhō*, OIr. *ligim*; cf. Lat. *lingo*;

ozni (< **ozini*) 'hedgehog' : cf. Gk. *ekhinos*, OCSl. *ježi*.

argand (III) 'womb' = OCSl. *grōdī* 'breast'. On the metathesis (**ghr* > *rg*), see below, 4,342⁵⁸;

jer (I) 'fine weather' = Gk. *théros* 'summer'; *jern* (I) 'warm, hot' = Gk. *thermós* 'id'; cf. Lat. *formus* 'hot' (with the *o* grade, as in Skt. *gharmá-* 'heat');

žil, *žil* (IIb) 'nerve' = OCSl. *žila*, Lith. *gýsla* 'vein, sinew'; cf. Lat. *fīlum* 'yarn' (?);

iž (III) 'viper' : Skt. *áhi* 'snake'; Gk. *ékhis* 'viper' and *óphis* 'snake'.

The prototype is controversial (Pedersen, 1905, p. 205; Meillet, 1936, p. 75).

4.334. The developments of the *simple voiceless*, except **k̑*, are more intricate. Unlike the voiced aspirates, these phonemes, when preceded by a resonant (R), did not undergo the same changes as in word initial, so that three positions, at least, have to be considered separately. Regarding the third one (intervocalic position), it must be remembered that the changes are prior to the loss of last syllable vowels (4.333).

PIE voiceless stops :

**p-* > *h-/∅*; **(R)p* > ?; **(V)p(V)* > *w, v*

**t-* > *t'-*; **(R)t* > *d*; **(V)t(V)* > *-y-* (> *∅*)/*-t'-* after *aw, oy*

**k̑* > *s*

**k-* > *k'*; **(R)k* > *g*; **(V)k(V)* > *-k'-* /*-s-* after *u, aw, oy* (4.321).

Examples :

hun (III ?) 'ford, channel' = OCSl. *potī* 'road', Lat. *pons* (*i* stem) 'bridge'; cf. Skt. *panthā(n)-/pathi-* 'road, path'; Gk. *póntos* 'sea' (?)⁵⁹;

harc'anem 'I ask, seek' = Skt. *pr̥cchāmi*, Lat. *posco* 'id' < PIE **pr̥k̑-ske-* (*eharc* 'he asked', aor. = Skt. *áp̥r̥cchat* 'id', impf.). Cf. OHG *forskōn* 'to seek'; Lith. *piṛšti* 'to suit'.

⁵⁸ Meillet's examples : *gan* (III) 'flogging', *mēg* (IIb) 'mist' (1936, p. 28) have to be discarded as Parthian loanwords (Benveniste, 1958, p. 60-61).

⁵⁹ The semantic developments of PIE **ponthi-* (**ponteH-/p̥ntH-*) have been elucidated by Benveniste, Word 10 (1954), p. 256-257.

The root is **prek-* (Goth. *fraihnan* 'to ask'; Lat. *precēs* 'request, prayer')/**prok-* (OCSl. *prosi* 'to ask, beg'; Lat. *proculus* 'suitor')/**prk-* (Arm. *harsn* 'bride, new married woman, daughter-in-law');

ul (I) 'kid' = Gk. *pólos* 'foal'; cf. AS. *fola* 'id', Lat. *pullus* 'cub, chicken'. Hence *amul* (I) 'sterile, of a female' (< **ṇ-pōlo-*)⁶⁰;

ew 'and, also' = Skt. *api* 'also, even'; Gk. *epi* 'upon, besides';

arciw, GDL. *arcui* 'eagle' = Maced. *argipus* 'id'. The by-form *arcui* (I) can be equated to Av. *ərəzifya-* 'hawk', Skt. *ṛjipyá-* 'dashing';

stuar (IIb) 'solid, huge': cf. Lith. *stiprūs* 'strong'. The Arm. *-ar* adjective (4.21) reflects **stipar(o)-* through **stiwār*.

t'ar 'stake for drying fruit, roosting perch'⁶¹ = Gk. *tarsós* 'cheese hurdle' < **tṛso-*; cf. *tarsiá* 'stake for drying figs'; OHG. *darra* 'stake for drying fruit' (< **torsā*); Lat. *torreo* 'I dry, roast'.

The widespread root **ters-/tors--/tṛs-* 'dry, be dry or thirsty' also lies in ClArm. *t'aršamim*, *t'aramim* 'I wither'; *ant'aram* 'unfading, amaranth';

mard (I) 'man' = Gk. *brotós* (Hom.) 'mortal, man', Skt. *mṛta-* 'corpse';

bay (III) 'verb' = Gk. *phátis* 'oracle', *phásis* 'utterance' (4.22);

berē (< **berey*) 'he brings' = Skt. *bhárati*, AS. *biredē*. The 3rd sg. ending **-ti*, always preceded by an inflectional vowel, reduced to *-y*, which later dropped after *i* and *u* (3.231);

hayr (< **hayir*) 'father' = Skt. *pitā* (*pitár-*), Gk. *patér*, Lat. *pater*, AS. *faeder*, OIr. *athir*. Intervocalic *-y-* < **-t-* thus appears to have remained unaltered up to the loss of the last syllable vowels. Word internally, it dropped later, as in the sg. I. *harb* < **hayarb(i)*;

awt 'a passing the night': cf. *aganim* 'I pass the night, stay', Gk. *iaúo* 'I pass the night'. The action noun **auti-* is not reflected elsewhere.

sar (I, III) 'top, summit, peak' = Skt. *śíras-* 'head, top'; cf. Gk. *kárā* 'id';

harsn 'bride' < **prken/on-* (or **prknā-*?) : see above (*harc'anem*);

tasn 'ten' = Skt. *dáśa*, Gk. *déka*, Lat. *decem*, OHG. *zehan*, etc. On *a* < **e*, see 4.331.

k'ani 'how many?': cf. Lat. *quantus* 'how great, how much';

argel (I, III) 'obstacle, prison': cf. Gk. *arkéō* 'I ward off', Lat. *arceo* 'I keep off, contain';

hing 'five' (the final vowel is preserved in *hnge-tasan* 'fifteen') = Skt. *pañca*, Gk. *pénte* (Aeolic *pempe*), Lith. *penki*;

lk'anem (aor. *lk'i*) 'I leave': cf. Gk. *leípō* (aor. *élipōn*), Lat. *linquo* 'id'; OHG. *līhan* 'to lend':; Lith. *līkti* 'to remain, to leave';

⁶⁰ Meillet, 1936, p. 48. For other examples of *-m-* < **-mp-*, see Dumézil, BSL 39 (1938), p. 241-242.

⁶¹ A typical example of an old, genuine Armenian word which does not occur in classical literature. The original inflection (*o*?) is unknown.

dustr 'daughter' < **dhuktér-* (Lith. *dukter-*, OCSl. *dušter-*, Goth. *daúhtar* 'id'). The relation of **dhuktér-* to **dhughatér-* (Skt. *duhitár-*, Gk. *thugatér*) is a controversial issue. See E. P. Hamp, *JAOS* 90 (1970), p. 228-231.

NOTE. The evidence for **t-* > *t'*, **k-* > *k'* being rather scarce, the rules were not easily discovered. Past century philologists admitted that the regular Armenian reflexes were *t* and *k*. This view is revived by Mann (1963, §§ 81 and 113), although the alleged examples, as Pedersen proved long ago (1906, p. 372-374, 381), do not stand up to scrutiny. Exceptions, however, cannot be overlooked. Irregular reflexes do occur in some pronouns: *d-* < **t* in *du* 'thou' (= Doric Gk. *tu*, Lat. *tū*, AS. *þū*, etc.); in *da*, G. *dor-a* 'that (person)'; *ayd*, G. *aydr* (< **aydor*) 'that'; *-d* (2.324), all derived from the PIE demonstrative stem **to-*. In the interrogative, pronouns and adverbs, **k* weakened to *h-* (*him* D. of *zi* 'what?'), and finally was lost: *o* 'who?'; *zi*, I. *iw* 'what?' (cf. 3.112); *ur* 'where?'.

Arm. *č'ork'* 'four' (cf. *č'orek'-tasan* 'fourteen') somehow reflects the same prototype as Skt. *catvārah*, Doric Gk. *tétores*, Lat. *quattuor*, with *o* in the penult as against *e* in Ionic *tésseres*, Lit. *ketveri*, OCSl. *četverŭ*. The difficulty lies in *č'*. Meillet's conjecture (*č'ork'* < **ktwores*, 1936, p. 54, cf. Grammont, p. 252-253) is untenable: a **ktw-* cluster would have reduced to **tw-* > *k'*-, as in *k'arāsun* 'forty'. Starting from the normal stem **k^wetwor-* (with a labialized velar), one will readily admit a dissimilation (**k^wetor-*). But the difficulty is not removed, unless we assume, as Pisani does (1950, p. 165-169) that **k^w*, unlike **k*, changed to *č'* before a front vowel: then, the development should have been: **k^wetor-* > **č'e(y)or-* > *č'or-* (Cf. Pedersen, 1906, p. 396). Pisani's assumption, however, gives rise to some objections.

Finally, *leard* (III) 'liver' has been paralleled to Skt. *yakṛt*, Lat. *iecur* (Hübschmann, p. 452), and Grammont tries to prove that intervocalic **k* did regularly vanish (p. 237-239; cf. Winter, 1955). But he does not succeed in explaining away the undisputable equation: *elik'* 'he left' = Gk. *élipe*.

4.335. PIE **s*. Leaving aside some clusters (on which see below, 4.343), and using the symbol N for 'nasal consonant' (*n* or *m*), we can state the following rules:

* <i>s(V)-</i>	>	∅(<i>h</i> ?)	
* <i>rs</i>	>	<i>r(rš)</i> ;	* <i>sr</i> > <i>r</i> ;
* <i>(N)s</i>	>	<i>s</i>	* <i>s(N)</i> > <i>N</i>
* <i>(V)s(V)</i>	>	∅	

Examples:

ał (III) 'salt': cf. Gk. *hál-s*, Lat. *sāl*, OCSl. *solŭ* 'id'

ewt'n 'seven' = Skt. *saptá*, Gk. *heptá*, Lat. *septem*, etc.

hin (I) 'ancient, old' = Ved. *sána-*, Gk. *hénos*, OIr. *sen* 'id'; cf. Lat. *senex*, G. *senis* 'old man';

or (III) 'bottom': cf. Gk. *órrhos* 'rump' (< **orsos*), AS. *ears* 'arse

t'arānim, *t'aršānim* 'I wither' (4.334);

k'erī (V) 'maternal uncle', from *k'er-*, stem II of *k'oyr* 'sister' ^{61a}. Analogous

^{61a} "L'oncle maternel est donc désigné littéralement comme 'celui de la sœur', d'après sa sœur qui est la mère de EGO" (E. Benveniste, *Le vocabulaire des institutions indo-européennes* [Paris, 1969], vol. I, p. 231.

derivatives are Skt. *svasrīya-* 'sister's son, nephew', Lat. *sobrīnus* 'cousin' (< **swesrīno-*);

us (I) 'shoulder' = Skt. *aṃsa-*, Gk. *ómos* (< **omso-*?); cf. Lat. *umerus*;

mis (I) 'flesh, meat' = Skt. *maṃsa-*, OCSl. *mešo* 'id'; cf. Lat. *membrum* 'limb' (< **mēmsro-*);

gin (I) 'price, value' = Skt. *vasná-* 'id', Lat. *uēnum do, uendo* 'I sell';

um, D of *o(v)* 'who?' < **kosme* (cf. *ume-k'*, D. of *o-k'* 'someone'): cf. Skt. *kásmāi*, Umbr. *pusme*, Goth. *hwamma*;

nu (I) 'daughter-in-law' = Gk. *nuós* < **snuso-*; cf. Lat. *nurus* 'id' (*u* stem); Skt. *snuṣā-*, OCSl. *snūxa*, AS. *snoru* 'id' (*ā* stems);

k'oyr 'sister' = Skt. *svásā* (*svásar-*), Lat. *soror*, OIr. *siur* 'id', all derived from the PIE sg.N. **swesōr*. The loss of intervocalic *-s-* and the change of **ō* to *u* brought about a diphthong, which further developed like an original **eu* (4.47). It thus appears that intervocalic *s* was lost at a very early stage of PA.

The paradigm (3.17) faithfully reflects the PIE stem variation: *k'er* < **swesr-* (sg. GDL. and Abl.): *k'or-* < **swesor-* (pl.N. and AccL.). The I. *k'erb* must have its *e* from the other oblique cases: **swesrbhi* would have yielded **k'arb*.

4.34. *Clusters*. So far, we have been dealing with the developments of PIE stops before vowels. But PIE, unlike ClArm. (2.31), had a variety of releasing clusters, mostly consisting of stop + resonant. Let us consider, firstly, those in which the resonant was *r* or *l*. Here again, voiceless stops altered more seriously than voiced, or voiced aspirates.

4.341. Voiceless stop + *r*, *l* in word initial. Insofar as evidence is available, the stop has been lost; *l* clusters reduce to *l-*; *r* clusters to *er-*:

li (I) 'full' < **plēto-* (Lat. *im-plētus* 'filled') or **plēyo-*: Gk. *pleiōs* (Hom.), *pléōs*. On *lnum* 'I fill', see 4.314.

erēc' (IV) 'elder, priest' < **preisku-*: cf. Lat. *prīscus* 'ancient' (*o* stem), *prīstinus* 'former'; also, perhaps, Gk. *présbus*, Cretan *preîgus* 'old man';

erek' 'three' < **treyes* (Skt. *tráyah*, Lat. *trēs*), Acc. *eris* < **trins* (Skt. *trīn*, Lat. *trīs*, Goth. *þrins*); *eri-* < **tri-* in *eream* (I) 'three years old';

lu (declension unknown) 'heard, news, fame' < **klutó-* (Skt. *ṣrutá-* 'heard', Gk. *klutós* 'famous', OIr. *-cloth* 'was heard') or **klutí-* (Skt. *ṣrutí-* 'hearing'). The root is **kleu-/klou-/klu-*; ClArm. has reflexes of the zero grade only: *lur* (I, III) 'hearing, fame'; *lsem* (< **lusem*), aor. *luay* 'I hear'.

Word internally, **-tr-* > *-wr-*:

arawr (I) 'plough' = Gk. *árotron*, Welsh *aradr*; cf. Lat. *arātrum*;

hawr, GDL. of *hayr* 'father' : cf. the sg.D. forms Skt. *pitṛé*, Gk. *patri*, Lat. *patri*; *hawru* (Iib) 'step-father' : cf. Gk. *patrós*, Lat. *patruus* 'paternal uncle'; *amuri* (V) 'unmarried' < **n̥-putriyo-* : cf. Skt. *putrá-* 'legitimate son or child'⁶². The loss of *w* after *u* is regular : see 3.183 and 4.333, on *zinuor* 'armed, soldier'. It is therefore possible to equate *ur* 'where?' to Skt. *kutra* 'id'; the final vowel is preserved in *ure-k* 'somewhere'.

A similar development of **-kr** is presumable, in view of *mawruk* (II) 'beard' < **smokru-*, cf. Lit. *smãkras* 'chin', Alb. *mjekrë* 'beard, chin' (Skt. *çmáçru-* 'beard' has *-çr-* < **-kr-*), and of *t'ewr* (I, III) 'crooked, awry', if etymologically related to *t'ek'em* 'I bend, shape'.

4.342. Voiced (or voiced aspirate) + *r*. Such clusters have been reversed, not only word internally, but even in word initial. In the latter position, a vowel (*e* or *a*) is prefixed :

birt (Iib or III?) 'rigid, rude' : cf. AS. *bit(t)er* 'bitter, painful' < **bhidró-*;

k'irtn 'sweat' < **swidren/on-* : cf. Gk. *hídrōs* 'id';

surb (I) 'pure, holy' = Skt. *çubhrá-* (Ved.) 'bright'. The Arm. word may be a loan from Iranian (Benveniste, 1964, p. 2);

darbin (Iib) 'smith' : cf. Lat. *faber*, G. *fabri* < **dhabhro-*;

merj 'near' = Gk. *mékhri* 'up to' < **meǵhri*;

artawsr, pl. *artasuk* 'tear(s)' < **dráku-*. A slightly different prototype is reflected in Gk. *dákru*; Goth. *tagr*, AS. *tēar* (< **daǵru-* or **daǵro-*);

argand (III) 'womb' = OCSl. *grōdĭ* 'breast';

elbayr 'brother' = Skt. *bhrātā* (*bhrātar-*), Lat. *frāter*, Goth. *brōþar*, OIr. *bráthair* 'id'. The oblique case stem *elbawr-* reflects **bhrātr-*. The substitution of *l* for *r* is also seen in *albewr* 'spring, fountain' = Gk. *pḗréār* 'well' < **bhrēwr*.

Evidence for *l* clusters is missing.

4.343. Stops, mostly voiceless, combined with other consonants, too, in particular with *s*. Reflexes of such clusters appear in the following words :

**-pn-* :

tawn (III) 'feast, holiday' < **dapni-* : cf. OIcel. *tafn* 'victim' (< **dapno-*); Lat. *dap-s* 'sacrifice, ritual meal', and probably *damnum* 'expense', Gk. *dapánē* 'id';

k'un (I) 'sleep' (with *u* from earlier *ow*) = Skt. *svápna-*, Lit. *sãpnas*, Lat. *somnus*, OIr. *súan* 'id', all reflecting PIE **swópno-*.

⁶² N. Adontz, *Mélanges Emile Boisacq*, vol. I, Bruxelles, 1937, p. 12.

**pt-* :

t'er (IIb or III?) 'side' : cf. Gk. *pterón* 'wing'. Hence : *t'eri* (V) 'defective (< lateral, marginal';)

t'eli (V) 'elm' = Gk. *pteléā* 'id'.

*-*pt-* :

ewi'n 'seven' = Skt. *saptá*, etc. (4.335);

ut' 'eight' (with *u* from *ow*) = Elean Gk. *optō*, an altered form of PIE **oktō* (Skt. *aṣṭáu*, Gk. *októ*, AS. *eaht*, etc.). The alteration, in both cases, is due to the influence of **septm*.

*-*kt-* :

dustr 'daughter' = AS. *dohtor*, etc. (4.334).

*-*kt-* :

The development, though not evidenced by comparative data, can be inferred from such pairs as

alač'em 'I pray' : *alawt'k'* (III) 'prayer'

čanač'em, aor. *caneay* 'I know' : *canawt'* (III) 'notice' (in *canawt's tam* 'I give notice')

amač'em 'I am ashamed' : *amawt'* (I) 'shame'⁶³.

The present stem morpheme is traceable to *-*ak-ye-* (Cf. Gk. *allássō* 'I change' < **allakyō*, from *állos* 'other, else'), so that in the corresponding action nouns -*awt'* may regularly reflect *-*ak-ti-*.

**st* (and **sd*) > *st* in any position :

sterj (I) 'barren, sterile' < **steryo-* : cf. Skt. *starí-* (Ved.), Gk. *steîra* (< **sterya*), Lat. *steri-lis* 'id';

astl 'star' : cf. Gk. *astér* (and *ster-opé* 'lightning'), Skt. *stár-*, Lat. *stēlla* (< **stēlnā*), AS. *steorra* 'star';

z-gest (IV) 'dress' < **westu-* : cf. Lat. *uestis* (4.22);

ost (I) 'branch, twig' = Gk. *ózdos*, OHG. *ast* 'id' < **osdo-*.

**sk*⁶⁴ > *c'* :

c'elum 'I split, tear' : cf. Lit. *skélti* 'to split';

hac'i (V) 'ash tree' < **askiā* : cf. AS. *aesc* 'id' (< **aski-*);

harc'anem 'I ask' = Skt. *prcchāmi*, Lat. *poscō* (4.334).

⁶³ The *i* inflection, preserved in *alawt'k'*, *canawt'*, is presumably the original one.

⁶⁴ The **k̄*/*k* contrast seems to be neutralized in contact with **s*.

**ks* > *c'* :

vec' 'six' < **useks* (Pisani, 1951, p. 59) : cf. Av. *xšvaš*, Gk. *héks*, Welsh *chwech* < **sweks*.

**skh* > *sx* :

sxalim 'I err' : cf. Skt. *skhálāmi* 'I stumble' (4.332). In ClArm. the cluster is disjoined (2.311).

NOTE. The regular development of **sp* is uncertain, in spite of Meillet's confidence : his unique example : *sparnam* 'I threaten', cf. Lat. *spernō* 'I repel, despise' (1936, p. 32, 35) is questionable on the semantic side, and so is on the phonological side the tentative equation : *p'oyt'* (I) 'zeal' = Gk. *spoudé* 'id' (Hübschmann, p. 501), rejected by Pedersen (1905, p. 200), but repeated ever since (cf. Godel, 1970b, p. 148).

4.35. The remaining PIE sounds, **y* and **w*, were merely allophones of **i*, **u* in antevocalic position (4.322). However, while **r*, *l*, *m*, *n* did not perceptibly alter, **y* and **w*, together with the related clusters (**ky*, **tw*, **sw*, etc.), underwent various changes, some of which resulted in mergers with the reflexes of single stops.

4.351. The development of initial **y*- is uncertain. Intervocalic *-*y*- dropped very early (*erek'* 'three' < **treyes*, 4.341), as did, centuries later, PA *-*y*- < PIE *-*t*- (4.334).

According to Meillet (1936, p. 52), **y* > *ǰ* after a resonant :

sterǰ (I) < **steryo*- (quoted above, 4.343) ;

olǰ (I, IIb) 'whole, sound' < **olyo*- : cf. OIr. *uile* 'whole' ;

anurǰ (I) 'dream' < **onōryo*- : cf. Gk. *ónar*, *óneiros* 'id'.

This view, though criticized by Pisani (1950, p. 178-179) and Mann (1963, § 147, Note 2), seems to hold good, and might be supported by additional evidence : such reduplicated verbs as *mr̥mnǰem* 'I murmur', *p̥lpǰam* (< **p̥ulp̥lǰem*) 'I bubble' presumably reflect *-*ye*- presents, as certainly do Gk. *mormúro*, Lat. *bullio* ; and, since *ver* (in *i ver* 'up, upwards') has been traced back to **upéri* (Skt. *upári* 'above, upwards', Goth. *ufar* 'above, over'), *verǰ* (I) 'end' may well be derived from **uperyo*- (as to the meaning, cf. Lat. *summus* 'upmost, last'). The only contradictory instance⁶⁵ is *ayl* (I) 'other' = Gk. *állos*, Lat. *alius*, OIr. *aile*, Goth. *aljis*, all derived from **alyo*-. But the reversal of resonant + *y* may have been the normal development after *a*.

⁶⁵ Which Meillet vainly tries to explain away (MSL 10, 1920, p. 81-82 ; cf. 1936, p. 90). Notice that ClArm. shares with Greek the adverbial use : *ayl* = Gk. *allá* 'but'.

4.352. *Clusters*. There is no controversy about the reflexes of **dhy* and **ky*: *meř* (I) 'middle' = Skt. *mádhyā-*, Gk. *mésos*, Lat. *medius*, Goth. *midjis* < PIE **médhyo-*. On *ē* instead of *e*, see below, 4.451.

čogay 'I went', *č'u* (I) 'departure': cf. Skt. *cyáve* 'I move, depart', *cyutí-* 'departure'; Gk. *seúomai*, aor. *essúmēn* 'I rush, run'. Cf. 4.323;

goč'em 'I shout, call' < **wok-ye-*: cf. Gk. *(w)óssa* (Hom.) 'rumour', voice (< **wok-yə*), and *(w)op-* 'voice' (< **wok-*), Skt. *vāc-* 'voice, speech', Lat. *uōx*, G. *uōcis* 'voice';

ač'k' (II) 'eyes': OCSl. *oči*, Lith. *akì*, Gk. *ósse* (Hom.) are old dual forms, and Arm. *ač'*- may reflect a dual NAcc. **okye* (Meillet, 1936, p. 52) or **okwī* (Pisani, 1950, p. 165). But I would rather appeal to a pl. neuter **okya*. Cf. 5.131 (on *mawruk'*, *kelcik'*).

-ič' < **-ikyā-* (4.22).

In view of this evidence, we may safely surmise that **ty*, **dy*, **ky* likewise developed to affricates:

mucanem 'I introduce' < **moud-ye-*: cf. *mtanem* 'I enter, *mutk'* (III) entering, entrance'; *xacanem* 'I bite' < **khad-ye-*: cf. Skt. *khādāmi* 'I chew, devour'; *luc'anem* 'I kindle' < **louk-ye-* (rather than **louk-ske-*, as Meillet believes: 1936, p. 107); cf. *loys* (I) 'light', 4.321. ⁶⁶

4.353. As a rule, **w* is reflected by *g* (through **gw*, presumably), except in word final after a vowel. In this latter position, it appears as *-w* (*-v*), thus merging with the reflex of intervocalic **p* or **bh*:

gayl (I) 'wolf' = OIr. *fail* 'id' (< **wailo-*);

gtanem 'I find', *giwt* (III) 'invention': cf. Skt. *vindāmi* (I find, gain'. The aor. 3rd sg. *egit* 'he found' = Skt. *ávidat* 'id');

gelum 'I twist, press': cf. Gk. *(w)elustheís* 'rolled, coiled up', *(w)élutron* 'covering'; Lat. *uoluō* 'I roll'; Goth. *af-walwjan* 'to roll back'. From the same root: *glem* 'I roll' (4.323): cf. OCSl. *valiti* 'to roll';

orogem 'I irrigate' < **srowe-* (4.323): cf. Skt. *srávāmi*, Gk. *rhé(w)ō* 'I flow' < **srewe-*;

taygr 'husband's brother' = Skt. *devá* (*devár-*), Gk. *dāér* < **daiwér-*; cf. Lit. *dieveris* 'id';

naw (IIb, IV) 'ship': cf. Skt. *nau-*, Gk. *naús*, Lat. *nāuis*, OIr. *nau*. The word stem is **nāw(V)-*, as in the Skt. G. *nāvāḥ* = Gk. *nē(w)ós*;

⁶⁶ I claim to be held responsible for these last examples, and for the rules of sound change involved (**dy* > *c*; **ky* > *c'*). Cf. Godel, 1965, p. 24-26; 1970b, p. 147.

tiw 'day time' (3.17) = Skt. *divá-* 'heaven' (but L. *divé divé* 'day by day'); Lat. *-duum* < **diwo-*, in *bī- trī-duum* 'a space of two (three) days';

arew (IV) 'sun' : cf. Skt. *raví-* 'id'. The *g* alternant is preserved in the compound *areg-akn* 'sun', lit. 'sun spring' ⁶⁷. Likewise in

kogi (V) 'butter' < **gowio/ā-*, beside *kov* (IV) 'cow' (Cf. Skt. *gau-*, Gk. *boús*, G. *bo(w)ós*, AS. *cū*);

aganim 'I pass the night', beside *awt'* (III) 'a passing the night' (< **auti-*, 4.334). But analogy generally prevailed : in *naw*, *arew*, *kov*, the sg. NAcc. form is an invariable stem (3.13), recurring in derivatives (*nawak* 'boat') as well as in the inflected forms (GDL. *nawi*, *nawu*, etc.). A trace of the original inflection (*arew*, GDL. **aregi*) is found in *areg* 'the eighth month of the Armenian year', an archaic G. (Benveniste : cf. fn 67).

NOTE. On *k'san* 'twenty', see above, 2.31. PA **gisan* is the expected reflex of PIE **wikṃti* (Av. *vīsaiti*, Dorian Gk. *wikati*, Lat. *uīginti*).

The rule formulated above, it must be granted, does not cover all the facts. Initial **w* is reflected by *v* in *vay* 'woe!' (Lat. *uae*, Goth. *wai*). Such a development, however, is not likely to have taken place elsewhere (Pedersen, 1905, p. 194-196; Pisani, 1950, p. 184-185). On the other hand, there is no denying that **w* has been lost in such words as :

neard (III) 'sinew, fibre' < **snéwr-ti* : cf. Av. *snāvarə* 'sinew, band'; Gk. *neûron* 'fibre, nerve', *neurá* 'bowstring';

nor (I) 'new' < **néw-oro-* (4.21, last line);

sor (I) 'cave, cavity' < **ków-oro-* : cf. Gk. *kó(w)oi* 'cavities', Lat. *cauus* 'hollow';

erkan (IIb, III) 'millstone' < **gráwen-* : cf. OIr. *bráu* 'id'; Skt. *grávan-* 'a stone for pressing Soma';

inn 'nine' < **énwṃ* : cf. Gk. *énatos* 'ninth' < **énwṃto-*.

It is perhaps worth pointing out that the PIE prototypes, insofar as they can be reconstructed, were stressed on the first syllable, and to contrast, e.g.

neard < **snéwr-ti-* with *taygr* < **daiwér-*
nor < **néworo-*

Should this hold true ⁶⁸, the loss of **w* must be assigned to a remote stage of PA, previous to the stress shift (4.33).

Finally, in view of Gk. *phréār* 'well' (< **bhrēwr*) and *aléata*, *áleura* (pl. nt.) 'wheat meal', from an obsolete sg. **ale(w)ar*, one cannot help tracing back to the same prototypes the Arm. words *albewr* 'spring, fountain', *alewr* 'flour'. Is *-wr* the immediate reflex of **-wr*? There is no trace of the original stem variation (**r/n*) in the inflected forms : GDL. *alber*, *aler* (also GDabl. *aliwroy* ⁶⁷). See below, 5.142.

4.354. Clusters. There is evidence for the following :

⁶⁷ Benveniste, REArm II (1965), p. 5-11.

⁶⁸ Contradictory instances are *sin* (I) 'empty, vain', if identical to Gk. *kenós* (< **kenwó-*) 'id', and, on the other hand : *cungk'* 'knees', whether a reflex of the dual form **gonwī* (Meillet, 1936, p. 84), or of a plural NAcc. parallelable to Homeric Gk. *goûna*.

⁶⁹ Anyhow, *aliwroy* can by no means reflect **aleuro-*, which would have yielded **aloyr*.

**tw* > *k* :

k'e- (oblique case stem of the 2nd sg. pronoun) < **twe-*, as against the N. *du* < **tu* (4.354, Note) : D(Acc) *k'ez* < **twe-ġhi* (5.244, last paragraph); I. *k'ew* < **twe-bhi*. The G. *k'o* is traceable to **two-* (5.245).

k'ar- (in *k'arasun* 'forty', *k'arord* 'quarter') < **twr-*, a zero grade alternant of **kwetwor-* (4.334, Note).

After *s*, the aspiration is missing : *oskr* 'bone' < **ostwer* (Meillet, 1936, p. 51).

**dw-* > *erk-* :

erku 'two' < **dwō* : Ved. *d(u)vā*, Gk. *dúō* (Hom.), OCSl. *dŭva*, Lat. *duo* (with shortened *o*); *erki-* < **dwi-* in *erkeam* 'two years old' = Skt. *dvi-*, Gk. *d(w)i-*, Lat. *bi-*, in compounds ;

erknč'im, aor. *erkeay* 'I fear', *erkiwl* (III) 'fear' contain the zero grade of the root **dwei-/dwoi-/dwi-* : cf. Av. *dvaēθā* 'menace, frightening thing', Gk. *déos* (< **dwéyos*), etc. ⁷⁰;

erkar (IIb) 'long (of time)' : cf. Doric Gk. *dārós* ('id' < **dwāró-*).

This development, recorded by Meillet (1936, p. 51) and Mann (1963, § 99) as the normal one, is amazing : one would expect *k-* < **dw-*, parallel to *k'-* < **tw-*, and some evidence for such a reflex has been brought forth, e.g. *kuł* (I) 'fold' < **dwo-plo-* (Pedersen, 1906, p. 398). Indeed, Meillet's description of the historical process, as well as his etymology of *krkin* (I) 'double, repeated' are liable to criticism (Grammont, p. 252, n. 1; Pisani, 1951, p. 54). The evidence, however, is weighty enough. Word internally, after a resonant, **dw* > *k* : *melk* (III) 'soft' < **meldwi-* : cf. Skt. *mṛdú-*, f. *mṛdvī-*; Lat. *mollis* 'id'.

**sw-* > **k'-* :

k'irtn 'sweat' < **swidren/on-* (4.342);

k'un (I) 'sleep' < **swopno-* (4.343);

k'oyr 'sister' < **swesōr*; *k'erī* (V) 'maternal uncle' < **swesrio/ā-* (4.335).

A different (dialectal?) reflex is found in *skesur* (IIb) 'mother-in-law'. The Arm. word, like Gk. *hekurá*, is derived from **swēkurá-*, not from **swēkrá-* (Lat. *socrus*, OCSl. *svekrŭ*, OHG. *swigar*). The initial cluster is altered in Skt. *çvaçrú-*, with the reflex of **kw* instead of **sw*; but there is no reason to assume, as Meillet does (1936, p. 51), that the same alteration should occur in any other IE language. Furthermore, **kw* seems to have developed to š ⁷¹ :

šun, GDL. *šan* 'dog' : cf. Skt. *ç(u)vā*, G. *çunáh*; Gk. *kúōn*, *kunós*; OIr. *cú*, *con*.

⁷⁰ On the whole word set (*erku*, *erknč'im* and cognates), see Benveniste, *Word* 10 (1954), p. 254-255.

⁷¹ The issue is discussed by E. Lidén, *Ein Beitrag zur armenischen Lautgeschichte*. Huschardzan, Wien, 1911, p. 381-388.

The Arm. NAcc. form reflects **k̂wōn*; the oblique case stem *šan-* is the outcome of some unknown analogical process;

ēš (I) 'ass' < **ekwo-*, i.e. the PIE word for 'horse' (Skt. *áçva-*, OP *asa-*, Lat. *equus*, OIr. *ech*, AS, *eoh*). The semantic change, uncommon though it is, can be accounted for: it may well have been brought about by the promotion of a less usual, perhaps foreign word: *ji* (I) 'horse', the only cognate of which is Skt. *háya-* 'id'.

4.4. The intricacies of sound change demanded a detailed, piecemeal description, which now has to be supplemented by some observations. Indeed, the phonological developments, however complicated, have not resulted in a state of confusion, but in a new system of phonemes and phoneme combinations. Let us resume the main lines of this evolution, as well as the characteristic features of its outcome.

4.41. The 'late PIE' vowel pattern (4.322) has been reduced to a six vowel system without length contrast, except that of *e* to *ē* towards the end of the PA period (1.63).

4.42. Prior to the earliest borrowings from Iranian, the PIE stops underwent a 'consonant shift' resembling the Germanic 'Lautverschiebung'. The resemblance, however, does not seem to involve any historical connection. Anyhow, the results differ perceptibly: in Armenian, the voiced aspirates remained unaltered. This fact, suspected by Pedersen (1906, p. 336-337), has been convincingly stated by Vogt and Benveniste (see above, 2.11). The voiceless aspirates, too, did not alter, except for the change of **kh* to *x*. The Armenian shift, therefore, affected the non aspirated stops only, and first of all, the voiceless. According to Meillet (1936, p. 29-30; cf. Pedersen, 1905, p. 205-206), the change originated in aspiration. But such a development would have entailed a merger of the simple voiceless with the aspirates. Now, **p* and **ph*, **k* and **kh* never merged. We must rather assume that the articulation of the simple voiceless began to weaken (Pisani, 1951, p. 68-69): the alteration of **p* and **k̂* went on unimpeded, resulting in *h/w(v)* and *s*. Similarly, **t* and **k̂* were going to change to fricatives, let us say: *β* and *ħ*⁷²; but the weakening process was somehow thwarted, so that *β* (initial or preceded by a *u* diphthong) hardened again to *t'*, and *ħ* to *k'*. By that time, the original voiced stops (**b*, **d*, **g̃*, **g*) had been devoiced. Adding to the

⁷² These symbols, needless to say, are arbitrary. By choosing *ħ*, we simply imply that the assumed fricative was different from both *h* (the reflex of **p-*) and *x* (< **kh*). See also below, 5.221.

resulting stops the affricates, reflecting either single phonemes or clusters, we are confronted with a new, perfectly balanced system :

p	t	k	c	č
p'	t'	k'	c'	č'
b	d	g	j	ǰ

4.43. The developments of consonant clusters, various though they were, converged towards a simplification of syllable structure. In particular, all releasing clusters (except **st*) were eliminated, either by the loss of initial stops (4.341), or by reversal (4.342), or by the blending of the components (**sk* > *c'*; **ky* > *č'*, etc.). This led to the generalization of the (C)V and (C)VC patterns at a certain stage of PA. Later, the dropping of unstressed *i* and *u* seems to have generated new clusters (**gisan* > *k'san* 'twenty': 2.31). But the consonant clash was mostly avoided, as in **lik'i* > *l(ə)k'i* 'I left'; **gut'am* > *g(ə)t'am* 'I pity', etc., or eventually suppressed, as in *k'san* > *k'(ə)san*. The origin of the neutral vowel, however, need not be connected with the reduction of non final *i* and *u*; but the problem of its earliest occurrences can hardly be approached as long as the related synchronic problem (2.3) remains unsolved.

4.44. *Vowel prosthesis*. The development of a vowel before initial **r* is a feature common to Greek and Armenian. In this case, Ancient Greek displays usually *e-*, while in Armenian we also find *a-* or *o-* :

erek 'evening' = Gk. *érebos* 'dark, place, hell': Goth. *riqiz* 'darkness';
arew (IV) 'sun'; Skt. *raví-* 'id';
orcam (< **orucam*) 'I vomit', cf. Gk. *ereúgomai* (aor. *érugon*) 'I belch': Lit. *riáugėti* 'to belch'.

(The root is **reug-/roug-/rug-*; hence the PA verb stem : **(o)ruǰ-a-*).

Furthermore, prosthetic vowels also occur before *r* or *ř* of later origin :

erewim 'I appear, seem' : cf. Gk. *prépō* 'I am conspicuous, resemble, beseem';
erek' 'three' < **treyes* (4.341);
arū (I, III) 'brook' < **sruti-*;
orogem (*arogem, -anem*) 'I irrigate' < **srowe-* (4.323).

NOTE. Did the phenomenon affect nasals, too? In *anicanem* 'I curse' (cf. Gk. *óneidos* 'blame, reproach')⁷³, *ayr* 'man, husband' (Gk. *anér*, Skt. *nř-* and *nára-*, Osco-Umbr. *ner-*), the initial vowel is likely to reflect a PIE laryngeal (4.322). But this is not the case in

⁷³ Meillet (1936, p. 106) is at a loss to account for *c* in *anicanem*. But see above, 4.352 (**dy* > *c*).

amis (I) 'month' < **mēnso-* : cf. Gk. *mén* (< **mēns-*), Lat. *mensis*, OIr. *mí* (G. *mís*) 'id'.

And there are instances of optional prosthesis before *n-* in *nawsr/anawsr* 'thin, sparse'; *nawt'i/anawt'i* 'hungry' (ModArm. *anosr, anot'i*). Such scarce evidence does not allow for any conclusion.

4.45. *Epenthesis*. In the PA period there must have been a trend to epenthesis as the anticipation of a subsequent phoneme (*i/y* or *u/w*); but its traces have been blurred, so that the uncontrovertible evidence for epenthetic *y* or *w* amounts to a small number of words only. As far as we can judge, epenthesis occurred mostly between *a* and a resonant. The subsequent phoneme that brought it about is either lost (as in *ayl, awr*, etc.), or altered (as in *awj, awcanem*). Regarding the former case, Pedersen's conjecture deserves consideration. He seems to discover the trace of an obsolete paradigm in the 'doublets': *dayl, dal* (III?) 'first milk' (< **dhali-*):

NAcc. *dayl* (< **dali*)

GDL. *dali* (< **dali-* + a case ending)

Both stems later evolved to lexical variants, whereas in other instances only one survived and was generalized. Hence, on the one hand: *cayr* (III) 'end, point', *sayr* (III) 'sword point', *jayn* (III) 'sound, voice'; and on the other: *k'ar* (III) 'stone', *sal* (III) 'anvil', *ban* (III) 'word, reason', etc. (Pedersen, 1906, p. 406-408). Let us simply record the most demonstrative examples.

4.451. *y* epenthesis :

dayl 'first, milk' beside *dal* (see above);

ayl (I) 'other' < **alyo-* (4.351);

p'aylem (-im) 'I shine' < **pholye-* : cf. *p'olp'olim* 'I shine, glitter';

ayr 'man, husband' (3.17) = Gk. *anér* 'id'. The PA development presumably started with the change of **ē* to *i*: **anir*, hence **aynir* > *ay(n)r* (Meillet, 1936, p. 55).

Epenthesis is also evidenced after *e* in *mēj* (I) 'middle' < **medhyo-* (4.352); *iž* (III) 'viper', if from **ēž* (< **eghi-*), GDL. *iži*, as Pedersen surmises (1905, p. 205): the development of *e* to *ey* > *ē* is assignable to the influence of the following *y* or *i* in the prototype. But if *ēš* (I) 'ass' reflects PIE **ekwo-*, as we admitted (4.354, end), the same development, in this case at least, has to be referred to some other cause. Finally, epenthesis after *o* is hardly deniable in view of such word pairs as *šol* (I, III), *n-šoyl* (III, IIb) 'ray of light'; *t'olum* 'I let', *t'oyl tam* 'I give way, permit' for which, unfortunately, comparative data are missing.

4.452. *w* epenthesis

awr (GDL. *awur*) 'day' < PA. **amur* < PIE **āmōr* : cf. Doric Gk. *ámar* (< **ām̥r*), *āmérā* 'id' (Meillet, 1936, p. 55; Pisani, 1951, p. 69);

artawsr (pl. *artasuk'*) 'tear' < **dráku-* (4.342);

awj (III) 'serpent' < **ang^whi-* = Lith. *angis* 'venomous serpent', Lat. *anguis*. In this and the following instances, the phenomenon originated in the labialized velar: the labial appendix was shifted backwards, so that **ang^whi-* changed to **aunghi*, and lastly, after the dropping of *n*, to **aughi-*;

awcanem 'I anoint' < **ng^we-* : cf. Lat. *unguo* 'id' (< **ong^we-*);

awjik' (V) 'collar' : cf. Gk. *aukhén* 'neck', with epenthesis, as against Aeolic Gk. *amphén* 'id', both from **ang^when-* (Pisani, 1950, p. 188-192).

This explanation, firstly proposed by G. Bonfante⁷⁴, relies on the assumption of labialized velars in the PIE dialect from which Armenian is descended (cf. fn 50). At any rate, it is more satisfactory than Meillet's dubitative suggestion of *n* changing to *w* (1936, p. 37, 44).

NOTE. To my knowledge, no systematic discussion of the problem as a whole has been undertaken since Pedersen's attempt (1906, p. 404-411), which is not totally successful. Several instances of *w* epenthesis, in particular, still await an explanation, e.g. in *gewl* 'village' (3.17); *giwt* (III) 'finding, invention', beside *gtanem* 'I find' (4.353); *mawt* (I) 'near', beside *matnum*, *matč'im* 'I approach', etc.

4.46. *Vowel contraction*. The loss of intervocalic **y* and **s* in early PA entailed the contraction of *e*, *o*, and probably *a*, with the following vowel :

*- <i>e(y)e-</i>	>	- <i>e-</i>	<i>erek'</i> 'three' (4.341)	
*- <i>e(s)ō-</i>	*- <i>eu-</i>	>	- <i>oy-</i>	<i>k'oyr</i> 'sister' (4.335)
*- <i>e(s)o-</i>	- <i>o-</i>		<i>k'ork'</i> , pl.N. of <i>k'oyr</i>	
*- <i>o(s)o-</i>	- <i>o-</i>		<i>bok</i> 'barefoot' : cf. Lit. <i>bāsas</i> , OHG. <i>bar</i>	

< **bhoso-* (Meillet, 1936, p. 38-39).

The same process was repeated much later, after the loss of PA *-y-* < **-t-* (4.334), at least between similar vowels :

**pətr-bhi* (sg.I.) > PA **hayarb(i)* > ClArm. *harb* (Grammont, p. 236; Pisani, 1950, p. 180) — but :

**bhəti-bhi* > **bayiw(i)* > *bayiw*

On the other hand, the close vowels (*i*, *u*) were not contracted :

diem 'I suck' = Skt. *dháyāmi* 'id'⁷⁵;

⁷⁴ G. Bonfante, *Les isoglosses gréco-arméniennes*. Mélanges Holger Pedersen, Copenhagen, 1937, p. 15-33 (on *awj*, *awcanem* : p. 25).

⁷⁵ The parallel implies divergent developments of the PIE present stem **dhəye-*. I assume that in

<i>nu</i> (I) 'daughter-in-law' (4.335) : GD Abl.	<i>nuoy</i> , I.	<i>nuov</i>
<i>li</i> (I) 'full' (4.341)	<i>lioy</i>	<i>liov</i>
<i>aru</i> (III) 'brook' (4.323)	GDL.	<i>arui aruiw</i>

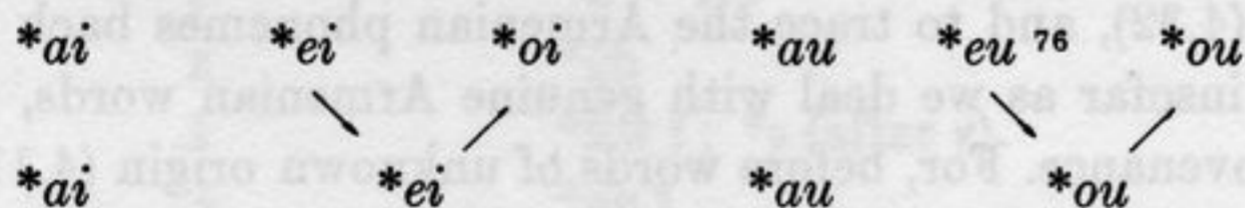
We thus gain a diachronic justification for our statements on hiatus (2.212-213). But we also have to consider the further developments of the derivational suffixes *-io-* (< **-iyo-*), *-ia-* (< **-iyā* : 4.22). The latter evolved to *-ea-*, according to the general rule (2.213), while the former appears as *-wo-* in the inflection of polysyllables ending in *-i* (3.133). These changes took place before the reduction of *-iw* to *-u-* (2.221).

In word final however, before *-n*, we find the reverse development : **-i(y)ōn* > *-iwn* :

siwn (GDL. *sean*) 'column' = Gk. *kíōn* 'id' ;

jiwn (GDL. *jean*) 'snow' = Av. *zyā* 'winter', Gk. *khiōn* 'snow', and other nouns in *-iwn* (*ariwn* 'blood', *ankiwn* 'corner', etc.), except those of the *goč'iwn* type (4.22). This quite peculiar development will detain us again, in connection with the origin of *n* stems (5.144).

4.47. The PIE *diphthong* pattern has been distorted. It eventually gave way to a new set of 'quasi-diphthongs' (Cf. 1.641). Leaving aside the so-called long diphthongs (**ēi*, **ēu*, etc.), for which no evidence is to be found in ClArm., we start from a six diphthong system, which was firstly reduced to four by the merging of **oi* with **ei*, and of **eu* with **ou* :



Later, **ou* changed to **oi*; but by that time, the articulation of the second phoneme in the surviving diphthongs had begun to tighten (**ai* > *ay*; **au* > *aw*, etc.). These changes entailed a new distribution :

ay **ey* *oy* *aw*

However, the balance of the pattern was restored, or even maintained, by the issuing of the quasi-diphthongs *ew*, *iw*, **ow*, as well as of more occurrences of

PA **ə* changed to *i* before **y*, by progressive assimilation, while in Skt. it opened to *a* through the opposite process. This enables us to account for the puzzling etymological relation of Arm. *ji* (I) 'horse' to Skt. *háya-* 'id' by positing a prototype **gháyo-*.

⁷⁶ A chronological datum is found in the development of **-esō-* to *-eu-* in the word for 'sister' (4.335), unless one accepts Grammont's far fetched explanation of *k'oyr* (p. 244).

ay, **ey*, *aw*, in consequence of various sound changes. At that stage of the development, there was no gap, no 'hole in the pattern' :

ay **ey* *oy* *aw* *ew/iw*⁷⁷ **ow*

In particular, **ow* actually occurred in such words as **anown* 'name' (< **^onomn̥*), **owt* 'eight' (< **optō*), **k'own* 'sleep' (< **swopno-*), etc. But its rate of frequency in the lexicon was probably low, and it merged with *u* previous to the reduction of this latter phoneme in unstressed position. So there is no difference in ClArm. between the reflex of PA **ow* and that of PIE **u* or **ō* :

<i>*swopno-</i> 'sleep'	<i>*dhurā-</i> 'door'	<i>*dōro-</i> 'gift'
<i>*k'own</i>		
<i>k'un</i> , GD Abl. <i>k'noy</i>	<i>durk'</i> , <i>drac'</i>	<i>tur</i> , <i>troy</i>

Close to the end of the PA period, **ey* in its turn reduced to a single vowel (1.63, 2.211). The last phase of the development is therefore :

PA	<i>ay</i>	<i>*ey</i>	<i>oy</i>	<i>aw</i>	<i>ew/iw</i>	<i>*ow</i>
ClArm.	<i>ay</i>	<i>ē</i>	<i>oy</i>	<i>aw</i>	<i>ew/iw</i>	(<i>u</i>)

NOTE. It is not easy to place the genuine diphthong *ea* in the above framework; for, its development is not connected with that of the quasi-diphthongs. However, some data allow for a chronological statement: in non final syllables, *ea* shrank to *e* prior to the reduction of unstressed **ey* to *i* (2.223, 3.234, Note).

4.5. After describing sound change from PIE to ClArm., it seems appropriate to try the reverse approach (4.32), and to trace the Armenian phonemes back to their origin. This is feasible insofar as we deal with genuine Armenian words, or with loanwords of certain provenance. For, before words of unknown origin (4.11), diachronic phonology is at a loss: the comparative method is not applicable, and we miss such historical and/or literary data as allow for the elucidation of Iranian, or Syriac words. Let us consider, e.g. *xnjor* (I, III) 'apple': the provenance of the word and the time and circumstances of its reception into the PA language being equally uncertain, one cannot tell which phonemes are reflected by *x* or *j*, unless one supposes these to have been the original ones.

The following table presents the Armenian stops, affricates and fricatives as the reflexes of PIE, or, alternately, of Middle Iranian, phonemes. The inclusion of the latter is sufficiently motivated by the importance of the Parthian element in the ClArm. lexicon. Incidentally, such phonemes as *p*, *č*, *š*, *ž*, *x*, for which scarce evidence is to be found in genuine Armenian words, occur quite frequently

⁷⁷ The spelling in the manuscripts is somewhat inconsistent (Meillet, 1936, p. 45-46; Abrahamyan, p. 8, § 13), so that *ew* and *iw* may be regarded as variants.

in Parthian loans. There is, e.g., hardly more than one unquestionable example of $p < *b$ (an exceedingly rare PIE stop), as against numerous instances of $p < \text{Iranian } p$.

NOTE. The conditions under which the same PIE consonant came to be reflected by different Armenian phonemes (e.g. j/z , $g/j/\zeta$) have been specified above (4.332-354), and consequently need not be resumed in the table.

R = resonant; N = nasal.

Arm.	$p < \text{PIE}$	PIE	Middle Iranian
p		*b	p
t		*d	t
k		*g	k
c		*ġ, *dy	
č		*gy?	č
b		*bh	b
d		*dh; *(R)t	d
g		*gh; *(R)k; *w	g
j		*ġh	(j after n)
ǰ		*gh; *dhy; *(R)y?	ǰ
p'		*ph	f-
t'		*th; *t	(t)
k'		*k; *tw; *sw	(k)
c'		*sk; *ks; *ky	
č'		*ky	
s		*k̂; *Ns	s
z		*ġh	z
š		*k̂w?; *s (after r)	š
ž		*gh?	ž
x		*kh	x
h		*p-	h; f (before r)
st		*st; *k̂t	st

5. Historical morphology

Some aspects of the PIE background of ClArm. morphology have been delineated above (4.21-22), and the notion of morphological change had to be introduced in connection with the requisites of etymology (4.314). But historical morphology is mainly concerned with noun and verb inflection. The aim is to state to what extent the ClArm. system of declension and conjugation is derivable from PIE, and, as far as possible, to trace the successive developments. At this juncture the following points have to be emphasized.

1°) PIE inflection cannot be reconstructed so confidently as the sound pattern. An overall outline of PIE declension or conjugation, without chronological and/or dialectal qualifications would be somewhat delusive. Even the concept of 'late PIE', which proved helpful in the description of sound change, must be handled with caution as soon as morphological change is at issue; for, ClArm. displays archaic PIE features, alongside with striking innovations.

2°) Morphological change, we remarked, mostly results in a new distribution of inherited materials (4.314). Consequently, foreign morphemes are not expected to appear in ClArm. inflection, and we have a right to assume, as a methodological principle, that most of the new system is explainable in terms of PIE morphology. This principle, however, must not be extended to word formation: derivational morphemes happen to be borrowed (cf. 4.121). Reduplication, too, as a morphological device (Meillet, 1913, p. 43; Jensen, §§ 125-126, 129), may well have developed in PA under foreign influences.

5.1. NOUN INFLECTION.

While in many modern IE languages gender is still a grammatical category, there is no gender contrast in ClArm. (3.1), even in pronouns: *na* 'he, she, it'⁷⁸; *ink'n* 'himself, herself, itself'. This situation is doubtless the ultimate result of a series of shifts and changes: faint traces of the masc./fem. contrast have been discovered (Meillet, 1962, p. 145); and the *-an-* plural of some *n* stems seems to have been peculiar to ancient neuters in **m_n* (Skt. *-ma*, Gk. *-ma*, Lat. *-men*): *sermank'* 'seeds', *anuank'* 'names' (3.141a).

⁷⁸ ClArm. has two sets of demonstrative pronouns: *sa*, *da*, *na*, and *ays*, *ayd*, *ayn*. As a rule, the former refer to persons, the latter, to things: Usti e *sma ays*? 'Wherefrom does *this man* have *this* (wisdom)?', Mark 6.2; Minč'der *na z-ayn xawsēr* 'While *he* was speaking *that*', Mark 5.35. But the contrast is suppressed when *sa*, *da*, *na* function as anaphorics: Et'e akn k'o gayt'aklec'uc'anē z-k'ez, han z-*na* i bac' 'If thy eye causes thee to sin, pluck *it* out', Mark 9.46 — or when *ayn* is the antecedent of the relative pronoun: ... oč' z-is ənduni, ayl z-*ayn* or arak'eac'-n z-is 'He receives not me, but *him* who sent me', Mark 9.36.

As Meillet suggests (1936, p. 12; cf. 92-93), the lack of gender in the neighbouring languages may have helped on its elimination in PA.

5.11. As pointed out above (3.183), the diversity of declension types in ClArm. is somehow balanced by the uniformity of most case markers. This latter feature implies a great deal of analogical levelling. Some of the problems involved will be discussed later.

Stem variation is faithfully preserved in irregular *-r* nouns (3.17), and in *n* stems at large (3.142-143, 4.323). The *-o-*, *-a-*, *-i-*, *-u-* declensions, too, reflect PIE patterns, and many words still display the original inflection (Meillet, 1936, p. 73-76). But, while **-o-*, **-ā-*, **-i-* or **-u-* originally belonged to the word stem, the ClArm. inflection vowels occur in the oblique cases only, so that they function as part of the case endings. This morphological shift perhaps brought about, or at least favoured, a partial redistribution of nouns and adjectives among the vocalic declensions⁷⁹. It also accounts for later fluctuations (3.132).

Regarding the inflection of Parthian loanwords, see Meillet, 1936, p. 23, whose statement, however, is controverted by Bolognesi (1954, p. 123-126).

5.12. In the largest part of the PIE area, the **-o-* and **-ā-* stem classes tended to become complementary. Thus, in most adjectives, the masc.-nt. **-o-* stem was matched by a fem. **-ā-* stem, as in Gk. *né(w)os*, *-on/né(w)ā* 'new'; OCSl. *novŭ*, *-o/nova*; Lat. *nouos*, *-om/noua*. This situation may have lasted in PA as long as the gender contrast still survived; but in ClArm. the *-o-* and *-a-* declensions are separated again: ancient **-o/ā-* adjectives follow the *-o-* declension uniquely, e.g. *ayl* 'other', *hin* 'old', *nor* 'new' (4.21), *ŷerm* 'warm', *hum* 'raw', *surb* 'pure, holy', *mēŷ* 'middle', etc.⁸⁰

Adjectives in *-i* belong to the mixed declension: *bari* 'good', GDabl. *barwoj*, I. *bareaw* (3.133), and so do the substantivized derivatives, e.g.

<i>gorci</i> 'tool',	from <i>gorc</i> (I) 'work'
<i>kogi</i> 'butter'	<i>kov</i> (IV) 'cow'
<i>kalni</i> 'oak'	<i>kalin</i> (I) 'acorn'
<i>mayri</i> 'pine wood'	<i>mayr</i> (III) 'pine'
<i>matani</i> 'ring'	<i>matn</i> 'finger', etc.

Since *-i* reflects both **-iyo-* and **-iyā-* (4.366), the alternation of *o* and *a* endings in the same paradigm is doubtless a trace of the former correlation of both stem

⁷⁹ This fact, ignored by most Armenologists, is duly acknowledged by Mann (1968, p. 4-12). Unfortunately, his argument swarms with untenable etymologies.

⁸⁰ But not *mec* (IIb) 'great, big', which reflects the same prototype as Gk. *mégas* 'id'.

classes; but at the same time, any connection with gender is excluded: *k'eri* 'maternal uncle' and *ayri* 'widow' are inflected alike.

The reason is that **-ā-* stems, originally, were not peculiar to fem. nouns, very few of which, incidentally, survive in ClArm. (*am* 'year' = Skt. *sāmā-*; *skesur* 'mother-in-law', 4.354). The *-a-* inflection of compound agent nouns (3.333) is traceable to PIE models (Meillet, 1962, p. 172-173). Furthermore, there is clear evidence for a gradual spreading about of the *-a-* declension during the PA period: it was propagated to the plural of PIE stems ending in a resonant:

<i>jerk'</i>	(GDabl. <i>jerac'</i>) 'hands'	< PIE <i>*g̃hesr-</i> (<i>*g̃her-</i>)
<i>ač'k'</i>	(GDabl. <i>ač'ac'</i>) 'eyes'	<i>*okwi/oky-</i>
<i>artasuk'</i>	(GDabl. <i>artasuac'</i>) 'tears'	<i>*draḱu-</i>
<i>mawruk'</i>	(GDabl. <i>mawruac'</i>) 'beard'	<i>*smokru-</i>

Later on, *-a-* endings (*-aw*, *-ac'*, *-awk'*) entered the inflection of most *r* and *l* words (Meillet, 1913, p. 51-52; 1936, p. 81; Jensen, §§ 150-152). In view of these developments, the discrepancy in the agent noun morpheme ClArm. *-ič'* < **-ikyā*, as against OCSl. *-iči* < **-ikyo-* (Meillet, 1936, p. 75) can be confidently ascribed to a PA innovation.

NOTE. There are no traces of the PIE agent noun suffix **-ter|tor|tr-* in ClArm.; but *-awl* (3.2, Note) may reflect an expanded form of the alternative suffix **-tel-*, well preserved in the Slavic languages (Meillet, 1936, p. 32). A derivation of *cnawl* 'parent' from **g̃enā-tl-* is consistent with the rules of sound change. The original inflection, then, should have run parallel to that of *hayr*, *hawr* (3.17). The new paradigm is built up on the oblique case stem *cnawl-*, and the *a* inflection (pl. GDabl. *cnawlac'*) is all the less surprising as it is the normal one for agent nouns at large.

5.13. The *i* and *u* declensions did not develop at the same rate. The lexical range of the former increased notably, in particular through the coining of radical action nouns: *šarž* 'motion' (beside *šaržumn*), *cin* 'birth' (*cnanim* 'I beget, am born'), *k'ayl* 'step' (*k'aylem* 'I step'), *xaws-k'* 'speech' (*xawsim* 'I speak'), etc.; see also above, 3.32 Note. If this noun type goes back to PIE, as it likely does in view of similar forms in Indo-Iranian, Slavic and Germanic⁸¹, it must have become far more productive in PA than in any other IE language.

Conversely, the *u* declension appears in a state of decay. Although it attracted some nouns ending in *-w/v* (*haw* 'bird', cf. Lat. *avis*; *arew* 'sun', cf. Skt. *ravi-*; *kov* 'cow', cf. Skt. *gauḥ*, *gav-*, Gk. *boús*, G. *bo(w)ós*), it certainly began to lose ground before the ClArm. period: unlike the other vocalic declensions, it plays no part in derivation and composition, and has left no trace in ModArm. noun inflection.

⁸¹ E.g. Skt. *rúci-* 'light, splendor'; OCSl. *rěčŕ* 'speech', *věďŕ* 'knowledge'; Goth. *slahs* (pl.N. *slaheis*) 'blow', *muns* 'thought, decision', etc. The Germanic words are masc., the other ones fem., and so are the Lat. *i* stem action nouns (*caedēs* 'murder, slaughter', *lābēs* 'downfall'), which may well pertain here.

5.131. Two sets of PIE **i* and **u* stems have to be distinguished: barytonic invariable stems, and oxytonic stems with vowel alternation (**i/ei*; **u/eu/ou*). Of the later, ClArm. has only one reflex:

erek 'three' < **trey-es*: Acc. *eris* < **tri-ns*; I. *eriwk* < **tri-bhi* (4.341).

Everywhere else, the stem vowel, when preserved, is invariably *i* or *u*. Thus, *bay* (III) 'verb', GDL. *bayi*; *zard* (IV) 'ornament', GDL. *zardu* reflect the same type of inflection as Ionic Gk. *póli-s* 'city', G. *póli-os*, pl.N. *póli-es*; *néku-s* 'corpse', G. *néku-os*, D. *néku-i*.

Archaic pl. NAcc. forms of neuter *u* stems are still recognizable in: *mawru-k*, AccL. *mawru-s* 'beard' < **smokrua*; *artasu-k*; *artasu-s* 'tears', cf. Gk. *dákrua*. PA **draku-r*, pl. *draku-a* was to yield *artawsr*, **artasu*. As this latter form was morphologically unclear, it was normalized through the addition of the usual endings *-k*, *-s* (2.322). The parallelism of the *i* and *u* declensions allows for a similar interpretation of *kelcik* 'feint' in connection with *kelc* (III) 'sham, false'. The substantivized pl. neuter **kelci* (with *-i* < *-ia*) was treated like **artasu*, **mawru*, and transferred to the *a* declension (GD Abl. *kelceac*, cf. *artasuac*).

As a rule, however, the pl.N. is formed by adding *-k* to the sg.NAcc., as in the other vocalic declensions: *bayk* 'verbs', *zardk* 'ornaments'. This can be easily explained as a case of analogical expansion (see below, 5.221).

5.132. The sg.NAcc. *-r* ending is peculiar to *u* stems: *asr* 'fleece', GDL. *asu*; *barjr* 'high', *barju*, etc. (3.151, Note). *Cunr* 'knee' and *artawsr* 'tear', both indeclinable in the sg., are no exceptions: their belonging to the same stem class is proved by comparative evidence, as well as by the pl.N. *artasuk* (5.131). Therefore *-r* reflects **-ur*. Of this ending, rare traces are to be found outside Armenian⁸². It seems to have originated in neuter nouns, such as the prototypes of Arm. *cunr*, *artawsr*, *mebr*, and possibly *asr*, *calr* (Meillet, 1936, p. 82; cf. Pedersen, 1905, p. 230-231); but this does not account for its occurrence in adjectives.

5.14. Passing on to the ClArm. variable stems (3.14), it must be pointed out that not all are traceable to PIE **r*, **l* or **n* stems. Several are words of obscure background, e.g. *ezr* 'border, side', *eljiwr* 'horn', *kočl* 'log', *kat'n* 'milk' *dašn* 'agreement', etc. The *r* and *l* stem classes include ascertainable loanwords: *kaysr* 'emperor' (1.61); *tetr* 'fourfolded parchment, quaternion' (Gk. *tetrás*); *sikl* 'a weight or coin' (Gk. *síklos*, from Hebr. *šegel*); *litr* 'pound' (Gk. *líttrā*); *arkl* 'chest, coffer' (Lat. *arc(u)la*); *vagr* 'tiger' (Iranian: cf. Skt. *vyāghrá-*), mostly in consequence of the loss of the original ending, as is the case of *tetr*, *sikl*, *litr*, etc. As a

⁸² So, perhaps, **dekur* (in Lat. *decuria* 'group of ten men'), beside **deku* (Goth. *tigu-* in *twai tigius* 'twenty', etc.). The relationship between Hitt. *pankur* (G. *pankunaš*) 'family' and *panku-* 'whole' is dubious.

similar alteration, i.e. the dropping of last syllable vowels, affected all PA words, (4.33), it would not be surprising that the reduction of **-lo/ā*, **-no/ā* to *-l*, *-n* should have entailed a change of inflection in genuine Armenian words as well ⁸³. In fact, *etl* (GDL. *etel*) 'place' may reflect **sedlā-* (Laconian Gk. *hellá*, Lat. *sella* 'seat'), or **sedlo-* (Goth. *sitls* 'id'). Likewise, *bern* (GDL. *berin*, I. *beramb*) 'burden', though inflected as an *n* stem, is parallelable to Gk. *pherné* 'that which is brought (by a wife), dowry', and consequently traceable to PIE **bhernā*. The same morphological change has been suspected in *t'ēkn* (GDL. *t'ikan*, pl.N. *t'ikunk'*) 'shoulder': cf. OCSl. *stigno* 'femur', Russ *stegno* 'haunch'; *harsn* (GDL. *harsin*, pl.N. *harsunk'*) 'new married woman, bride' (< **prk-nā*?); *sarn* (GDL. *sarin*, I. *saramb*) 'ice': cf. OIcel. *hjarn*, Russ. *seren* 'frozen snow' ⁸⁴.

All this implies that quite a number of genuine **r*, *l* and *n* stems had been preserved in PA, together with their particular inflection forms, many of which remained productive down to the ClArm. period.

5.141. Masc. and fem. **r* stems are chiefly represented by kinship nouns: *hayr* 'father', *mayr* 'mother', *elbayr* 'brother', *k'oyr* 'sister', *ayr* 'man, husband' (3.17). They display the zero grade of the (last) radical vowel in the sg. oblique cases:

	<i>mayr</i>	<	<i>*mātér</i>	<i>k'oyr</i>	<	<i>*swésōr</i>
D.	<i>mawr</i>		<i>*mātr-eí</i>	<i>k'er</i>		<i>*swésr-ei</i> ⁸⁵
I.	<i>marb</i>		<i>*mātr-bhi</i>	(<i>k'erb</i>)		
pl.N.	<i>mark'</i>		<i>*māter-es</i> ⁸⁶	<i>k'ork'</i>		<i>*swésor-es.</i>

In *ayr* < **anér*, the oblique case stem has undergone metathesis: **anr-* > PA *arn-*. Hence GDL. *arn*, I. *aramb* (< **arn-bhi*).

Unlike the above kinship nouns, *taygr* 'husband's brother' and *dustr* 'daughter' follow the normal *r* declension (stem II: *tayger*, *dster*). Evidence for the expansion of the *e* grade to the whole paradigm is found in Greek: *dāér*, G. *dāér-os*, pl.N. *dāér-es* = Arm. *taygr*, *tayger*, *taygerk'* (Cf. also OCSl. *déverī*, Lith. *dieveris*).

Little is known of the inflection of PIE **l* stems. In ClArm. it runs parallel to that of the regular *r* nouns: *astl* 'star', *astel*, *astelk'*, (Cf. Gk. *astér*, *astér-os*, *astér-es*).

⁸³ *r* stems are not concerned here; for, the alteration of stop + *r* clusters (4.341-342) belongs to an earlier period.

⁸⁴ The Germanic and Slavic words reflect **kerno-*. Arm. *sarn* (instead of **sern*) may have its *a* from *sarnum* 'I freeze': the verb root is *sari* < **kōri-* or **kōrē-* (Cf. aor. *sareay*).

⁸⁵ The choice of D. forms is arbitrary: *mawr* may just as well reflect a G. form (**mātr-és/ós*).

⁸⁶ A development: **māter-* > **ma(y)er* > *mar-* is conceivable at the best, though not verifiable.

5.142. Neuter **r* stems substituted *n* for *r* in the oblique cases. This most archaic type of inflection is not preserved in ClArm.: *awr* 'day', GDL. *awur*, pl.N. *awurk'* reflects a uniform PA paradigm: **ámur*, **amúr* + case endings. As to *albewr* 'spring, fountain', *alewr* 'flour', the oblique case stems are hardly explainable in terms of historical phonology. I would rather assume analogical innovation: *alber-*, *aler-* may well have been coined after *ezer-*, *osker-* (*oskr* 'bone'), etc., while the original sg.NAcc. forms remained unchanged (Cf. 4.353, Note). A radical change of inflection has been carried out in *hur* (I) 'fire', originally a **r/n* neuter (Hitt. *paḫhur*, G. *paḫhwenas̄*; Goth. *fōn*, G. *funins*, as against AS. *fȳr*). A trace of the alternative *n* stem (*hun-*) is found in *hnoc'* (IIb) 'oven'; but the PA word was inflected as an invariable *r* stem, as is proved by the archaic I. form *hur-b*. The dropping of the vocalic case endings would have resulted in an ambiguous paradigm: *hur*, GDL. **hur*, not consistent with the normal pattern of inflection. The anomaly has been removed by a transfer to the *-o-* declension.

5.143. The declension of **n* stems did not develop along the same lines all over the IE area. Not only are the alternating stem forms (**-en/on/n-*) distributed differently, but in some languages, as Latin and Indo-Iranian, the distribution has been partially obscured by sound change. This is not the case of ClArm. which, in this respect, stands very close to Greek. On the other hand, Armenian, together with Indo-Iranian, supplies valuable evidence for zero grade case forms, few of which are preserved elsewhere (Gk. *kúōn*, G. *kun-ós* 'dog', (*w*)*arén*, (*w*)*arn-ós* 'lamb' [= Arm. *garñ*]; Lat. *carō*, G. *carn-is* 'flesh').

5.144. The sg.N. forms of ClArm. *n* stems raise a perplexing problem, which will have to be discussed later (5.2). With regard to the sg.GDL. and the pl.N., two main types, or noun classes, can be set in contrast:

	<i>garñ</i> 'lamb'	<i>jukn</i>
GDL.	<i>garin</i> (<i>-in</i> < <i>*-en-</i> + case ending)	<i>jkan</i> (<i>-an</i> < <i>*-on-</i> + case ending)
I.	<i>garamb</i> (<i>-amb</i> < <i>*-n̥-bhi</i>)	<i>jkamb</i>
pl.N.	<i>garink'</i> (<i>-ink'</i> < <i>*-en-es</i>)	<i>jkunk'</i> (<i>-unk'</i> < <i>*-on-es</i>).

Nouns in *-iwn*, together with *šun* 'dog' (= Gk. *kúōn*), *tun* 'house' (3.141 b) belong to the second class. The reason for the discrepancy in *siwn*, pl.N. *siwnk* vs. *jukn*, *jkunk'* lies in vowel contraction (4.46). The development can be traced as follows: **-iōn-* > **-iun-* > *-iwn*. The latest stage must have been reached before the loss of last syllable vowels: thus, Meillet's and Pedersen's constructions⁸⁷ can be dispensed with.

⁸⁷ Meillet, 1936, p. 80 (on *-ut'iwn*); Pedersen, 1905, p. 216-217.

ClArm. therefore has reflexes of both **-en/n-* and **-on/n-* stems. The Armenian and Greek paradigms largely concord, save that in Greek the zero grade alternant (**-n/n-*) does not occur at all, or else, exceptionally, holds through the whole declension, as in *kúōn*, (*w*)*arén* (5.143) :

	<i>aṛn</i>	= Gk. <i>ársēn</i>	<i>siwn</i>	= Gk. <i>kīōn</i>
	'male sheep'	'male'	'column'	'id'
G.	<i>aṛin</i>	<i>ársen-os</i>	(<i>sean</i>	<i>kīon-os</i>)
pl.N.	<i>aṛin-k'</i>	<i>ársen-es</i>	<i>siwn-k'</i>	<i>kīon-es.</i>

The proportion of **-en-* and **-on-* stems is fairly the same in both languages : the former type is no more productive.

Unlike Greek, however, ClArm. has preserved a third type of inflection, characterized by the **-en/on-* alternation within the same paradigm (3.143). This archaic feature is also reflected in the declension of masc. *n* stems in Germanic :

	<i>t'or̄n</i> 'grandson'	Cf. Goth. <i>guma</i> 'man'
GD.	<i>t'or̄in</i>	{ G. <i>gumin-s</i>
		{ D. <i>gumin</i>
I.	<i>t'or̄amb</i>	
pl.N.	<i>t'or̄unk'</i>	<i>guman-s</i>

On the substitution of **-on-* for **-en-* in compounds in ClArm. (pl.N. and Acc.) and in Greek (throughout the paradigm), see Meillet's comments (1936, p. 79).

5.145. The **-on/n-* stem class includes almost all the words in *-mn* : *himn* 'foundation', *kamn* 'flail', *šermn* 'fever'; *erdumn* 'oath', and the numerous action nouns in *-umn* (3.331 b; see also 4.22). But an exact delineation of the morphological background meets with difficulties.

The PIE morpheme **-mon/mn* (*m̄n̄*) yielded both masc. and neuter nouns, the latter mostly denoting the effect of an action. At first sight, the ClArm. words fit quite well in the second category, and consequently may reflect ancient neuters (Meillet, 1936, p. 79, on *šaržumn* 'motion'). There are, however, some grounds for doubt. Firstly, as early as the PIE period, the masc. type overlapped, or competed with, the neuter; Greek has, e.g., *térmōn* 'boundary' along with *térma* 'id'; *stémōn* 'warp' as against Lat. *stāmen*. Secondly, the confusion of genders was detrimental to the neuter inflection, the distinctive feature of which was the identity of N. and Acc. in both the sg. and the pl. : the ClArm. endings of pl.N. (*-k'*) and Acc. (*-s*) stem from the PIE masc. and fem. inflection. It is therefore by no means certain, despite the merger of **o* with **ō* before a nasal, that *-un(k')*, *-un(s)* in ancient neuters should reflect **-ōn-ā/ə*, as Meillet believes. At any rate, this assumption conflicts with our above remark on *-ank'* plurals (5.1). Finally, there is no evidence in ClArm. for invariable *n* stems with a long vowel, such as

are found in other IE languages, e.g. Gk. *thurón*, G. *thurónos*, masc. 'hall'; Goth. *daúrōns*, fem. pl. 'gate' ⁸⁸.

In conclusion, the PIE masc. type reflected in Skt. *áçmā* (*áçman-*) 'stone'; Gk. *ákmōn* 'anvil', *stémōn* 'warp'; Lat. *sermō* 'talk' (G. *sermōnis*, with *ō* from the N.); Goth. *ahma* 'spirit' provides the most suitable model for the inflection of ClArm. words in *-mn*.

5.146. In the course of the PA period, the *n* inflection gained ground. The above mentioned innovations (5.14: *bern*, etc.) are the most conspicuous ones, but they do not belong to the earliest stage of this process. The *n* extension in the pl. of *k'ar* (III) 'stone' and of several *u* stems (3.151) looks rather archaic; but, for want of comparative data, the problem of its origin remains unsolved. At any rate, a connection with the PIE **r/n* alternation in neuter nouns, hinted at by Meillet (1936, p. 82), is out of the question.

The case of *jerñ* 'hand', *otñ* 'foot', *akñ* 'eye' (3.152), together with that of *calik*, *manuk* (3.142), will be discussed below, in connection with the problems related to the sg.NAcc. forms.

5.2. CASE ENDINGS.

In ClArm., the sg.N. and Acc., being reduced to the bare word stem, are indistinguishable on the morphological level ⁸⁹. This was the case of PIE neuter nouns only; but, since the prototypes of most Armenian words belong to the so-called 'animate' gender, the merger of both cases in the sg. may be ascribed to the loss of the original endings. This view does not raise serious difficulties insofar as the vocalic declensions are at issue (Meillet, 1936, p. 69); however, regarding the *n* stems, it proves inadequate.

But does the ClArm. situation actually result from a merger of two contrasting case forms, or from a selection of either the N. or the Acc. form? In other words, does *mard* 'man' reflect both the N. **mrtos* and the Acc. **mrtōn* (or **mrtom*), or only one of these forms — and in this case, which one? The answer depends on how one figures out the fate of final nasals in PA.

5.21. According to Meillet (1936, p. 56), the **m/n* contrast was neutralized in word end: in this position PA., like Greek, had only *-n* (*k'an* 'than' = Lat. *quam* 'id'). In polysyllables, **-n* was dropped (**mrtōn* > *mard*). After a consonant, **-n̄* developed to *-an*, as it did word internally, but, unexpectedly, the nasal escaped dropping: **septn̄* > *ewt'n*. This is the weak point in Meillet's theory: if

⁸⁸ Against Mann's opinion (1968, p. 14), *durñ* 'door', a normal **-on/n-* stem, need not be mentioned in this connection. Besides, *ō* in *daúrōns* may reflect **ā* as well as **ō*.

⁸⁹ The use of *z-* as a mark of the definite direct object is a matter of syntax (3.112).

*-ǎn is lost in *am* 'year' (< **samān*), *mec* 'great, big' (< **meġan*), etc., how are we to account for the discordant development :

(PIE) **podn* > (PA) **hotan* > (ClArm.) *otn* 'foot' ?

Pedersen (1905, p. 215-216) agrees with Meillet regarding the loss of *-*Vn* (and *-*Vm*). His comment implies that *-*Cn* (and *-*Cm*) did not alter, except for the merging of *-*m* and *-*n* (**septm* > *ewt'n*; **enwn* > *inn*). Thus PA should have preserved vocalic resonants in word final.

Pisani (1951, p. 47-51) puts the case in a different way : *-*m* was regularly dropped, except in monosyllables, where it changed to -*n* (*k'an*), while *-*n* was not affected : *gar'n* 'lamb' = Gk. (*w*)*arén*. In other words, the NAcc. forms of originally masc. or fem. *n* stems are derivable from PIE N. forms in *-*ēn*, *-*ōn*. Genuine reflexes of these forms, consequently, need not be sought in such words as *calik*, *manuk* (3.142 c; Meillet, 1936, p. 79-80) or *erēc'* (3.151; Pedersen, 1905, p. 218).

5.211. In view of so conflicting arguments, a re-examination of the problem cannot be dispensed with.

We do well to start from one reliable datum : a PIE vocalic nasal (*-*n̥* or *-*m̥*) is reflected by -*n* in the numerals *ewt'n* 'seven', *inn* 'nine', *tasn* 'ten', and in the relics of the neuter *-*m̥n̥* nouns, e.g. *anun* 'name' (= Gk. *ónoma*), *sermn* 'seed'. Regarding *jer'n* 'hand', *otn* 'foot', *akn* 'eye', Meillet's explanation is decidedly preferable to Pisani's⁹⁰. In these words, the NAcc. unmistakably reflects PIE Acc. forms : **pod-n̥* (-*m̥*) > *otn* (= Gk. *póda*); **ġher-n̥* (-*m̥*) > *jer'n* (= Gk. *khéra*). The *n* inflection, limited to the sg. (3.152), developed later, in imitation of genuine *n* stems. The original paradigm has left a trace in the archaic I. form *jerb* (< **ġher-bhi*) in *jerb-a-kal* 'caught by the hand, prisoner'.

Meillet's view of the development of the vocalic nasal (*-*n̥* > -*an* > -*n*), too, seems right : -*an* is preserved in ancient derivatives (*ewt'an-asun* 'seventy', *lasan-ord* 'tithe'), and in the -*ank'* plurals : in *sermank'|-s*, as in *artasuk'|-s*, *kelcik'|-s* (5.131), the normal endings have been appended to the old pl. neuter NAcc. form **serman* (< **sermana*).

5.212. In the vocalic declensions, the sg.NAcc. forms are ambiguous. This is not the case, however, in the masc. and fem. *r* and *l* stems : *hayr*, *mayr*, *elbayr*,

⁹⁰ Meillet, 1936, p. 83-84; Pisani, 1951, p. 48-49. My former misgivings (Godel, 1970b, p. 144), I confess, were unfounded : after all, the prototype of *akn* may have been masc. (Cf. Lat. *oculus*). In my opinion, however, *dur'n* 'door' does not belong here : from a radical noun **dhwor-/dhur-*, one rather expects a full grade Acc. form (**dhwor-n̥/m̥*), and *dur'n* may well be a PA *-*on/n-* derivative of *dur(k')* < **dhurā-*. Mann firstly echoed Meillet's interpretation (1963, p. 37), but afterwards changed his mind (see above, fn. 88).

k'oyr, *taygr*, *astl*, etc. doubtlessly reflect PIE N. forms (5.141). The same may be assumed regarding the *n* stems: *šun* = Gk. *kúōn*; *siwn* = Gk. *kíōn* (5.144). So, Pisani is right in equating *gar̄n* to Gk. (*w*)*arén*. Likewise, *-mn* is the regular reflex of **-mōn* as well as of **-m̄n* (of the latter, through **-man*), as we implicitly admitted (5.145). The contrary evidence alleged by Pedersen and Meillet really lacks weight: not to speak of *erēc'*, a genuine *u* stem, it can be objected that the background of the *-ik*, *-(u)k* morphemes (in *catik*, *manuk*⁹¹ is unknown. Monosyllables, at least, have *-n* (*jukn* 'fish', *mukn* 'mouse', *unkn* 'ear'), and *armukn* 'elbow' occurs along with *armuk*. Anyhow, the *n* extension does not go farther back than PA, so that the words in question do not give any clue as to the original N. forms.

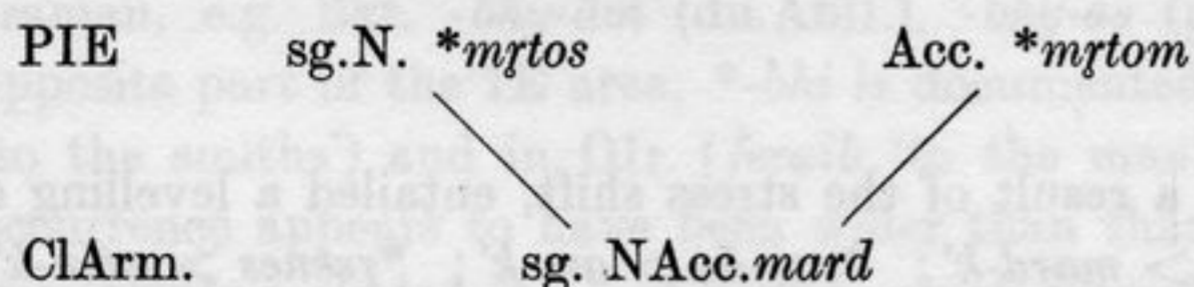
5.213. Summing up the above discussion, we come to the following formulae:

1. $*-n̄ (*-m̄) > -an > -n$
2. $*-Vn > -n$

If Meillet is right in assuming that only *-n* occurred in PA, we have to conclude that the N. forms have prevailed in all the vocalic declensions: *mard* < **m̄rtos* (not **m̄rtōn*, which would have yielded **mardn*). This conclusion is not objectionable, since Acc. forms have actually been lost in *r*, *l* and *n* stems. However, Meillet's assumption relies on only one parallel (*k'an* = Lat. *quam*). Besides, he overlooks an important difference: PIE **-n̄/n̄* always belonged to the word stem, whereas **-m̄/m̄* mostly occurred as an inflectional morpheme (sg. Acc. ending in noun declension; 1st sg. ending in past tenses of the active conjugation). When **-m̄* was part of the stem, it changed to *-n*: *jiwn* 'snow', as against Lat. *hiem-s* 'winter', Arm. *jmērn* (< **ghim-erno-?*) 'id'⁹²; otherwise, it may be supposed to have dropped together with the preceding vowel. If this is the case, a third formula has to be added to the above:

3. $*-Vm > -\emptyset$

and the sg. NAcc. of invariable stems turns out to be the result of a merger:



Both solutions of the problem equally fit the facts. The former, however, implying

⁹¹ Very likely, *manu-k* 'child' is derived from *manr*, GDL. *manu* 'small'.

⁹² ClArm. *tun* 'house' is somehow related to OCSl. *domŭ*, Lat. *domus*, and more closely to Homeric Gk. *dōma*. Presumably, it reflects **dōm*, i.e. the sg.N. of an archaic radical noun **dom-/d̄om-* (Pisani, 1951, p. 50).

the prevalence of N. forms at large, is less easily brought into agreement with the survival of Acc. forms in *jeṛn*, *otn*, *akn* (5.211).

5.22. In the *plural*, there are different endings for the N. and the Acc. (2.232), as was the case in the PIE inflection of masc. and fem. words (on the fate of the neuter declension, see above, 5.145, 5.211, end). A priori, the ClArm. endings are likely to reflect PIE case morphemes. Regarding the N., however, we are confronted with a controversial issue. The masc.-fem. pl.N. ended in **-Vs*: **-ōs* (**o* stems), **-ās* (**ā* stems) **-es* (all other stems). The problem is, therefore, whether **-Vs* was to be dropped altogether, as it admittedly was in the sg. (**mṛtos* > *mard*; **bhātis* > *bay*, etc.), or whether **-s* may have developed to *-k'* under the circumstances. If the latter possibility is ruled out, i.e. if **mṛtōs* was to yield **mard*, the addition of *-k'* has to be somehow accounted for. Several attempts have been made to this effect, none of which can be regarded as convincing⁹³. In fact, *-k'* behaves as a genuine case ending, not as a derivational morpheme (collective suffix); nor can it reflect an enclitic particle (Meillet, 1936, p. 70). Thus, we are left with the phonological issue: is a change of **Vs* to *-k'* conceivable in spite of the decisive evidence for a divergent development (**-Vs* > \emptyset) in other instances?

5.221. There are some grounds for a positive answer. Let us point out, firstly, that all the pl.N. forms of masc. and fem. nouns ended in *-s*, while in the sg.N. *-s* occurred in **o*, **i* and **u* stems only. On the other hand, the dropping of **-Vs* in the pl. would have resulted in a confusion of pl. and sg. forms. Now, the ClArm. system of declension, however open to syncretism (3.111), admits of no ambiguity with regard to the number contrast (plural vs. singular). This may account for the preservation of the pl.N. endings at the cost of a particular development. This development, as traced by Pedersen (1905, p. 226-227) and Grammont (p. 227-229), partially coincides with what we supposed to have been that of **k*:

(pl.N.)	<i>*-Vs</i>	<i>*k</i>
	<i>*-Vh</i>	<i>*h</i>
	<i>-(V)k'</i>	<i>k'</i>

The dropping of the vowel, as a result of the stress shift, entailed a levelling of the various endings: **mṛtōs* > *mard-k'*; **samās* > *am-k'*; **ṛsenes* > *arīn-k'*; **kīones* > *siwn-k'*; **k^wet(w)ores* > *č'or-k'* (but *č'orek'-tasan* 'fourteen': Meillet, 1936, p. 79), etc. Hence, analogically: *bay-k'*, *zard-k'* (5.131).

5.222. The PIE pl.Acc. ending, more or less altered in most IE languages,

⁹³ For details and references, see Godel, 1970, b p. 148-149.

is well preserved in Gothic: *daga-ns* 'days', *gasti-ns* 'guests', *sunu-ns* 'sons', *broþrunns* 'brothers' (< **bhrātŕ-ns*). Since **ŋ* developed to *an* in PA, the expected reflex of both **-Vns* and **-(C)ŋs*, after the dropping of last syllable vowels, is uniformly *-s* (4.335). As in Greek, the pl.N. and Acc. display the same stem form, even in the *r*, *l* and *n* declensions:

pl.N.	<i>*mŕtōs</i>	>	<i>mardk'</i>	; <i>*swesoŕes</i>	>	<i>k'ork'</i>	; <i>*ŕsenes</i>	>	<i>aŕink'</i>
Acc.	<i>*mŕtons</i>	>	<i>mards</i>	; <i>*swesoŕŋs</i>	>	<i>k'ors</i>	; <i>*ŕsenŋs</i>	>	<i>aŕins</i> , etc.

Hence, the synchronic rule: the pl.N. and Acc. are derivable from each other by substituting *-k'* for *-s* or vice versa.

5.223. In the pl., the L. is identical to the Acc. Since *-s* as a pl.L. ending can hardly be traced back to any PIE case morpheme⁹⁴, the Acc. form may be supposed to have taken on the syntactic function of the other case (Mann, 1968, p. 64).

5.23. *Oblique cases.* In the **o* and **ā* declensions, many case endings were to be dropped, together with the stem vowel (sg.D. **-ōi*, **-āi*; Abl. **-ōd*; G.Abl. **-ās*; pl.G. **-ōm*, etc.). In the other types of inflection, the stem, unimpaired and standing in contrast to the sg.NAcc., could still perform the part of an inflected case form. Yet, this might have resulted in the decay of noun inflection, as did similar alterations in other IE languages. In Armenian, on the contrary, the defects have been supplemented through various devices, so that, in spite of numerous mergers, ClArm. displays a larger set of cases than Germanic, Celtic, or even Greek.

5.231. To begin with the plainest item: the I. markers in *mardo-v*, *ama-w*, *bayi-w*, *zardu*⁹⁵, *ezer-b*, *jkam-b* are the regular reflexes of PIE **-bhi*. The vowel is preserved in *iwi-k'*, the I. of an obsolete indefinite pronoun **i-k'* (cf. *i-mn* 'something', and *o-k'*, *o-mn* 'someone'). The same morpheme is reflected in Mycenaean *-pi* (= /phi/) and Homeric Greek *-phi*. Extended forms occur in Indo-Iranian, e.g. Skt. *-bhy-ām* (du.Abl.), *-bhy-as* (pl.DAbl.), *-bhi-s* (pl.I.). In the opposite part of the IE area, **-bhi* is documented as a pl.D. in Gaulish (*gobed-bi* 'to the smiths') and in OIr. (*feraiib* 'to the men', etc.)⁹⁶. Its original range of occurrence appears to have been wider than that of a normal case marker; but it certainly included the I. meaning, which prevailed in PA.

⁹⁴ A derivation of *-s* from the pl.L. marker **-su* (*-si*) meets with insuperable difficulties. Meillet's statement (1936, p. 70-71) is too optimistic.

⁹⁵ On the regular loss of *-w* after *u*, see 3.183 and 4.333 (on *zinuor*).

⁹⁶ According to K. H. Schmidt, *Dativ und Instrumental im Plural* (Glotta 41, 1963, p. 1-10), the Celtic pl.D. forms should rather be traced back to **-bhis* (Cf. the Indo-Ir. pl.I.).

The pl. endings *-(o)vk'*, *-(a)wk'*, etc. (2.323), though recalling the Indo-Iranian pl.I. (Skt. *-bhis*, OP. *-biš*), need not be traced farther back than PA: judging from the occurrences of Gk. *-phi*, the PIE morpheme was used for both the sg. and the pl., perhaps mostly for the pl., as in the Mycenaean inscriptions. For the addition of *-k'*, the pl.N. could serve as a model.

5.232. A PIE case ending is recognizable in the *o* declension: *-oy* admittedly reflects **-osyo*, i.e. a G. ending well preserved in Greek (Homeric *-oio/-oo*) and Indo-Iranian (Skt. *-asya*, OP. *-ahyā*). In Armenian, it has taken on the syntactic function of the Abl. and D., but not of the L., which has merged with the NAcc. in consequence of the loss of the original ending (**-oi*). In the mixed declension, however, there is a specific L. form: *aygw-oj*, *telw-oj* (3.133). The ending obviously stems from the *o* inflection, although ancient **-i(y)o-* stems (*hogi*) do not take it. As to *-j*, whether a reflex of **-dhy(V)* or of **-gh* followed by a front vowel (Pedersen, 1905, p. 223-224), it is not derivable from any PIE case marker. On the other hand, *-oj* also occurs as a G(DL.) ending in *mioj* (3.181, Note) and, unexpectedly enough, in *knoj*, an originally **-ā* stem (3.17, 4.332). In view of this situation, one will readily presume an adverbial origin for the ClArm. case ending. Unfortunately, the background of the Greek local adverbs in *-othi*, quoted by Pedersen and Meillet (1936, p. 73), is not clear enough to allow for a satisfactory explanation of *-oj*.

5.233. In the normal *a* declension⁹⁷, the GDL. form (*lezu-i*), though declared 'enigmatical' by Meillet (1936, p. 72), does allow for an explanation in terms of PA morphological innovation. The loss of the original endings (G. **-ās*, DL **-āi*) has been compensated by the addition of *-i* to the curtailed stems. As pointed out above (3.133), the new morpheme, abstracted from the GDL. of the *i* declension (on which see 5.131), was not added to the polysyllables in *-i < *-i(y)ā*, for which the *o* declension provided a more suitable ending (*aygi*, GD. *aygwoy*, after *hogi*, *hogwoy*).

The above explanation finds support in such L. forms as *miži*, *gišeri* (3.181). The selection and propagation of *-i* as a case ending is by no means surprising, in view of the productivity of the *i* declension in PA.

5.234. In the other declensions, the lost endings (G. **-es/os*; D. **-ei*; L. **-i-*) have not been supplemented: the remaining stem, standing in contrast to the NAcc., was apt to function as a full-fledged case form: so *bayi*, *zardu*, as against *bay*, *zard* (5.131); *mawr*, *k'er*, *tayger*, as against *mayr*, *k'oyr*, *taygr* (5.141); *garin*,

⁹⁷ The other *a* declension (IIa) has no PIE background. It runs parallel to the *o* declension, which apparently was not felt suitable for foreign names.

ikan, as against *garn*, *jukn* (5.144), etc. It is of course impossible to state which PIE case is represented in the curtailed forms: all three case markers were to be dropped alike. However, an impoverishment of the PIE declension pattern in early PA, before the stress shift, is not very likely, since ClArm. displays a fairly similar one, in spite of the changes that took place in the meantime.

5.235. The Abl. ending $-\bar{e}$ ($< -ey$), at first sight, seems to be somehow related to $-oy$, the Abl. ending in the o declension. Meillet (1936, p. 73) cautiously suggests a derivation of both from the PIE adverbial morpheme $*(e/o)tos$ (Skt. *mukhatáḥ* 'from the mouth, in front'; Lat. *funditus* 'from the bottom', *intus* 'from inside', etc.). More recently, some comparativists, paralleling $-oy$, $-\bar{e}$ with the AblI. ending documented in Luwian ($-ati$) and Lycian ($-edi$, $-adi$), claimed to have detected an 'isogloss' including Armenian together with the Anatolian IE languages⁹⁸. These constructions, though not objectionable from the phonological point of view, cannot be readily accepted.

In the first place, e and o , as vowel alternants (4.323), are expected to occur in the same paradigms. Now o (in $-oy$) is obviously the stem vowel; e (in $-\bar{e}$), on the contrary, cannot have ever been part of a noun stem: indeed, $-\bar{e}$ is often added to GDL. forms (3.183). The above mentioned theories, therefore, amount to equating a complex termination ($-oy < *-o- +$ a case marker) with a single, indivisible morpheme ($-\bar{e}$). At this juncture, a remarkable peculiarity, underscored by Pedersen (1905, p. 223-224), has to be taken into account: the demonstrative pronouns *ays*, *ayd*, *ayn*, when followed by a noun, display the same form in the D., the L., and the Abl.:

- D. *aysm lerin* 'to this mountain'
- L. *y-aysm lerin* 'on this mountain'
- Abl. *y-aysm leṛnē* 'from this mountain'⁹⁹.

The conclusion to be drawn is that $-\bar{e}$ does not reflect a case ending, but an originally independant particle (postposition), which was added to the L.: *i lerin* 'on the mountain': (Abl.) *i leṛn-ē* 'from (on) the mountain'. As Bugge perceived long ago¹⁰⁰, Arm. $-\bar{e}$ is derivable from $*éti$ (Skt. *áti* 'over, beyond'; OCSl. *otŭ* 'from'; Gk. *éti* 'also, still').

⁹⁸ W. M. Austin, *Is Armenian an Anatolian Language?* Lg 18 (1942), p. 22-25; V. Pisani, *Armenische Miscellen*, Die Sprache 12 (1966), p. 227-236. On the Anatolian AblI. ending, see E. Laroche, BSL 55 (1960), p. 163-166.

⁹⁹ Did the same rule formerly apply to adjectives, too, in the same position? The Abl. form *canu*, beside *canuē*, quoted by Jensen (§ 147) might have occurred in such a phrase as: *i canu beṛnē* 'from a heavy burden'. Cf. *i nor handerjē* 'from the new garment', Luke 5.36.

¹⁰⁰ KZ 32 (1897), p. 75.

NOTE. According to the above explanation, the genuine Abl. form in the *u* declension is found in *zardu-ē*, *xratu-ē*, etc. (3.151). The lack of *u* in *gaḥ-ē*, *cov-ē*, etc. is an effect of analogy. The model has to be sought in the *a* declension: before the addition of *-i* (5.233), the L. of *am* 'year' must have been **y-am* (later: *y-ami*). Hence the Abl. *y-amē*. The analogical process started with the substitution of *-ē* to **-i-ē* in the *i* declension: *i srtē* 'from the heart', as against L. *i srti*. As a result, the paradigms differ in the I. only (3.132, Note).

Meillet (1936, p. 95-96) and Mann (1968, p. 64) are inclined to ascribe a different origin to the ClArm. preposition *i* (*y-*), according to whether it is used with the L. (or Acc.), or with the Abl.: the meanings ('in, into'/'from') seem mutually exclusive. But Pedersen's argument removes the difficulty.

5.236. The pl. GD Abl. marker *-c'* is admittedly traceable to a derivational suffix **-sko-*, reflexes of which are found in the Slavic and Germanic languages: Goth. *mannisks* 'human' (from *manna* 'man'); AS. *þēodisc* 'gentilish' (*þēod* 'people, nation'), etc. Accordingly, the prototype of, e.g., *mardoc'* must be figured out as an adjective: **mṛto-sko-* 'human', which came to be used, firstly, as a substitute for the G., and afterwards for the D. and the Abl. (Cf. the development of *-oy*, 5.232). Once acknowledged as a mere case marker, *-c'* spread through the whole nominal inflection, including adjectives and pronouns.

5.237. The *-ean* ending. Aside from the GDL. of most nouns in *-iwn*, which reflect the expected zero grade of the stem (*sean* < **kī(y)on-*: 5.144), *-ean* also occurs as a GDL. ending, together with the cognate Abl. (*-enē*) and I. (*-eamb*), in the declension of certain verb derivatives (3.152, 3.331 b). The fairly numerous action nouns in *-st*, with *-t* < **-ti* (4.22), originally belonged to the *i* declension; and so do, indeed, those which display an invariable vowel (*a*, *e*) in the last syllable. Nouns in *-st*, therefore, fall into two contrasting paradigms:

	<i>imast</i> 'understanding, sense'	<i>korust</i> 'loss, perdition'
GDL.	<i>imasti</i>	<i>korstean</i>
I.	<i>imastiw</i>	<i>korsteamb</i>

Whatever the reason of this distribution, one has to inquire whether the second paradigm is morphologically related to the *i* declension. The following parallel supplies the answer:

	<i>mah</i> 'death'	<i>korust</i>
GDL.	<i>mahu-an</i> (or <i>mahu</i>)	<i>korstean</i> < <i>*korusti-an</i>
I.	<i>mahu-amb</i>	<i>korsteamb</i>

In *korstean*, *hangstean*, etc. *-ean* is an extended form of *-i*. Analogy accounts for its further expansion: words in *-und*, *-urd* were formerly inflected as *o* stems, as they still are in the pl. In *amis* (I) 'month', *-ean* occurs in the L. only (*y-amsean*, 3.181). On *tuənʒean* (from *tiv* 'day-time'), see above, 3.17.

NOTE. According to Pisani (1951, p. 50-51), *-ean* is nothing else than the derivational suffix *-ean* (3.322 d), turned to a case ending. Indeed, in *šiš iwloy nardean aznui* 'a jar of ointment of pure nard' (Mark 14.3), it is difficult to decide whether *nardean* has to be interpreted as an indeclinable adjective, or as a G. form (instead of *nardi*)¹⁰¹. At any rate, the origin of the suffix is uncertain.

5.24. PRONOUNS. The diachronic explanation of pronominal inflection raises more perplexing problems. Besides deviations in sound change (4.334, Note), we are confronted with puzzling stem forms, especially in personal pronouns (1st sg. *in-*; 2nd pl. *je-*), but also in *ink'n* (GDL. *ink'ean*) 'self', *inč'* 'what?' (when unstressed: 'something'). These latter look like compounds: *k'n-* is perhaps derivable from the reflexive pronoun **swe-*, and *-č'* from the interrogative-indefinite **ki-* (*kwi*); but no etymology can be constructed on such vague presumptions.

With regard to these difficulties, it seems appropriate to proceed from the simplest paradigms to the more intricate ones.

5.241. The *demonstrative pronouns*, together with the related local adverbs, have developed to a close-knit system, in which three pronominal stems recur in combination with various particles (Meillet, 1962, p. 5-29)¹⁰². The relation of the stems to the speech situation is more systematic than in other IE languages:

so- 'this' (with reference to the speaking person) < **ko-*, along with **ki-*: Hitt. *ka-*, *ki-* 'this here'; Gk. **ki-* in *sémeron* 'today' (< **ky-āmeron*); OCSl. *si*; Goth. *hi-*; Lat. *ci-s*, *ci-trā* 'on this side';

do- 'that' (with reference to the addressed person) < **to-*: Indo-Ir. *ta-*; Gk. *to-*; OScl. *to-*; Goth. *þa*;

no- 'that' (without reference to either) < **no-*: cf. Hitt. *eni-*, *uni-* 'that'; OScl. *onŭ*; Lith. *anàs*, *añs*.

The peculiarities of the Armenian system appear at one glance: **ko-* instead of the widespread alternant **ki-*; **no-*, as against various cognate stems; and above all, the rather uncommon use of **to-* as a 2nd person demonstrative.

So-, *do-*, *no-* combine with the following particles: **ai-* (*ays*, *ayd*, *ayn*), which is also found in Indo-Ir. (OP. *aita*, Skt. *e-ṣá*, *e-tá*)¹⁰³; *-in* (*soyn* 'this very, the

¹⁰¹ The same ambiguity is perceptible in ModArm. *aravotyan* (from *aravot* 'morning'): *aravotyan žam* 'morning hour'. The GD. meaning appears in *aravotyan dem* 'towards the morning'.

¹⁰² This most accurate study was first published in 1898 (MSL, vol. 10). Pedersen's monograph, *Les pronoms démonstratifs de l'ancien arménien*, København, 1905, is meant to improve upon Meillet's views, which on the whole remain quite valid.

¹⁰³ Pedersen (1905, p. 240) parallels *ayn* 'that' with Skt. *anyá-* 'other' (< **anyo-*; cf. 4.451): PA **ayno* should have served as a model for the coining of **ayso*, **aydo*. This explanation has been taken over by G. Bonfante (*Mélanges H. Pedersen*, Copenhagen, 1937, p. 20).

same', G. *sorin*, D. *smin*, etc.; *doyn*, *noyn*; *astēn* 'in this very place', etc.); *-ik*, in the extended forms of *ays*, *ayd*, *ayn*: G. *aysor-ik*, D. *aysm-ik*, pl.N. *aysok'-ik*, etc., and in *awasik*, *ahawasik* 'here is, behold', etc.¹⁰⁴ Regarding the anaphoric pronouns: *sa*, *da*, *na*, conflicting explanations have been put forth by Meillet (*sa* < PA **so-ay*: 1936, p. 88) and Pedersen (*sa* < PA **so* in unstressed position: *Les pronoms démonstratifs* ... § 13), none of which is safe from objections. Meillet's theory simply amounts to positing two different arrangements of the same constituents: **ay-so* vs. **so-ay*.

As a result of these developments, the simple demonstratives (PA. **so*, *do*, *no* were reduced to the status of enclitic pronouns, and eventually, of invariable deictic particles (2.324).

5.242. The *interrogative pronouns*, in all the IE languages, are built up on the correlated stems **ko-* (*k^wo-*) and **ki-* (*k^wi-*), the original distribution of which is obscured by diverse dialectal developments. In Armenian, as in the Slavic languages, **ko-* refers to persons, **ki-* to things:

	<i>ov</i> 'who?'	Cf. <i>o-k'</i> 'anyone'	{ <i>z-i</i> 'what?'	Cf. <i>*i-k'</i> 'anything'
			{ <i>z-inč'</i>	(supplemented by <i>inč'</i>)
G.	<i>oyr</i>	<i>uruk'</i>	<i>ēr</i>	<i>irik'</i>
DL.	<i>um</i>	<i>umek'</i>	(<i>h</i>) <i>im</i>	<i>imik'</i>
I.	(<i>orov</i> , from <i>or</i>)	(<i>omamb</i> , from <i>omn</i>)	<i>iw</i>	<i>iwik'</i>

The pl. of *ov* is: *oyk'* 'which people?', GDabl. *oyc'*. On *zi*, *zinč'*, see above, 3.112.

The derivation of indefinite pronouns from the interrogative, as evidenced in the above paradigms, stems from PIE: *ok'*, **ik'* are parallelable with Skt. *kāç-ca* 'someone' (*kaḥ* 'who?'); Goth. *hwaz-uh* 'every, each' (*hwas*); Lat. *quis-que* 'id' (*quis*). The other pair of indefinite pronouns: *omn* (pl. *omank'*) 'someone', *imn* 'something' (indeclinable, but for the Abl. *imemnē*) presumably results from a similar combination: *-mn*, like *-k'*, may reflect some enclitic particle. However, for want of comparative evidence, we are left with this presumption, unless we endeavour, as Meillet does, to connect *omn* with Goth. *sums*, AS. *sum* 'some'; Gk. *hamós* 'somehow', *oud-amós* 'no one', etc., i.e. with the reflexes of PIE **somo-* (1962 [1898], p. 30-32; 1936, p. 90). But the postulated connection is not expressed in morphological terms, as it ought to be: indeed, positing a different prototype (**somno-*?) would be nothing more than an ad hoc device, since the ClArm. pronoun remains isolated anyhow¹⁰⁵.

¹⁰⁴ On the Iranian descent of *awa-*, *ahawa-*, see A. Perikhanian, REArm n.s., vol. 3 (1967), p. 21, fn. 7.

¹⁰⁵ Against Meillet, it must be urged that the ClArm. paradigm is the outcome of a partial, not

The interrogative adjective *or* (I) 'which, what?' displays the 'comparative' suffix **(e)ro-* (Meillet, 1936, p. 89-90). Its being also used as a relative pronoun is by no means surprising: cf. Engl. *who, which*, so that Pisani's divergent explanation (*or* < **yoro-*, an extended form of the PIE relative pronoun **yo-*: 1950, p. 181-182) turns out to be groundless.

5.243. PIE pronominal inflection was characterized by peculiar endings or case markers, some of which have expanded to nouns and adjectives over more or less extensive dialectal areas, e.g. the sg.G. marker **-syo* (in *-oy* < **-o-syo*, 5.232). All the ClArm. pronouns examined so far display the sg.DL. marker *-m*: *sma, aysm* (from earlier **suma, *aysum*: 3.181), *um, (h)im, orum*. This allows for exact parallels with pronominal D. forms in the cognate languages:

dm(a), (ay)dm < PA **dom(V)* = Skt. *tásmāi*, Goth. *þamma*;
um = Skt. *kásmāi*, Goth. *hwamma*, Umbr. *pusme*.

Thus ClArm. *-m* reflects **-smě*¹⁰⁶. A trace of the final vowel is perhaps preserved in the indefinite pronouns: sg.DL. *ume-k', ume-mn*.

On the sg.G., see below, 5.245. The Abl. of the demonstrative pronouns displays an extended ending *-an-ē*. Tentatively, we may suppose it to have come about, firstly, in the sg.Abl. of *sa, da, na*: the addition of *-ē* (**-ey*) to the L. would probably have resulted in vowel contraction; *-n-* may have been inserted after the declension of *n* stems:

L.	<i>i sma</i>	Abl.	<i>i smanē</i>
cf.	<i>i kołman</i>		<i>i kołmanē</i>

The new ending was propagated not only to *ays, ayd, ayn* (*y-aysmanē*, instead of **y-aysmē*), but, quite unexpectedly, to the plural, too (3.182).

Regular I. forms are preserved in *sov-in* (from *soyn*), *iw, iwik'*, *orov*, while in *sov-aw, dov-aw, nov-aw* (from *sa, da, na*) the I. marker is repeated after the particle. From the *ay-* demonstrative, the I. is *aysu* (*aysu-ik*), *aydu*, etc. The substitution of *-u* for *-ov* is unexplained. The pl.I. forms (*sok'awk', aysok'iwk'*, etc.), obviously resulting from late PA developments, need not detain us here.

total, reshaping. Whatever the origin of *-mn*, *omn* could not fail to be attracted to the *n* declension: hence the I. *omamb*, and the pl. *omank', omanc'*. But the sg.G. (*urumn*) and D. (*umemn*) did not share in the change of inflection.

¹⁰⁶ The final diphthongs in Skt. *tásmāi*, Umbr. *esmei* 'to him' seem to result from independent developments.

5.244. *Personal pronouns.* The best preserved paradigm is that of the 2nd p.sg. :

N. *du* < **tu* (OP. *tuv-am*, Gk. *sú*, OCSl. *ty*, Lat. *tū*, OHG. *dū/du*, etc.)

G. *k'o* < **two-* (Skt. *tvá-*, Gk. *sós* 'thy').

In the remaining cases, the stem is *k'e-* < **twe-*, as in Gk. *sé* (Acc.), *séo* (G.).

In the 1st p.sg., the N. *es* must somehow reflect **eġō* (Gk. *egō*, Lat. *ego*, Goth. *ik*) or, perhaps, **eġhom* (Skt. *ahám*, OP. *adam*). Anyhow, the substitution of *s* for *c* (or *z*) has to be accounted for. It has been explained in terms of 'sandhi' (Meillet, 1936, p. 57): e.g. **ec tam* > *es tam* 'I give'. The Acc.L. *is* (*z-is*, *y-is*), if from **ins*, is traceable to **em-* + a particle (cf. Gk. *emé-ge*, Goth. *mik*, Venetic *me-go*); but here again *-s* is not the expected phoneme. In both cases, the alteration may be ascribed with some likeliness to the influence of the deictic particle *-s* (2.324). As to the stem, it is plainly reflected in the G. form *im* (< **emo-*, cf. Gk. *emós* 'my'). Before *s* and *j* (D. *inj*), *m* changed to *n*. Analogically, the oblique case stem **eme-* (Gk. G. *eméo*) became *ine-*: Abl. *inēn*, I. *inew*.

Barring the 2nd pl.N. *duk'*, obviously derived from the sg., the background of the remaining personal pronouns is obscure: neither for the 2nd pl. stem *je-*, nor for the Abl. endings (sg. *-yn*, pl. *-ynŕ*: *inēn*, *k'ēn*, *mēnŕ*, *jēnŕ*) is a diachronic explanation available. In the D. however, the contrast of *-j* (*inj* 'to me') and *-z* (*k'ez*, *mez*, *jez*) points to **ġh*; and, indeed, there is evidence for a D. marker **-ġhi/ġhei*, at least in the 1st p.sg.: Skt. *mahy-am* (< **meġhi*), Lat. *mihi*, Umbr. *mehe* (< **meġhei*). Likewise Arm. *inj* < **emġhi* is used for the D. only, while *k'ez*, *mez*, *jez* serve as AccDL. forms.

5.245. *Genitive and possessive adjectives.*

In no pronominal paradigm is the sg.G. identical to the DL. (3.181). But while the latter case forms are easily traceable to PIE models, the G. marker *-r* (*sor-a*, *aysr*, *oyr*, *ēr*, etc.) seems to have developed in the course of the PA period, so that the comparative method has to be supplemented by internal reconstruction.

To start with the personal pronouns: *im*, *k'o*, *mer*, *jer* occur as genuine G. forms,

1^o) when governed by a preposition (practically *ænd* 'instead of, for'):

tac'es noc'a ænd im ew ænd k'o 'thou shalt pay to them for me and for thyself', Math. 17,26 (27).

or by a quasi preposition (or prepositional phrase):

araġi im 'before me', Luke 4.7; *vasn k'o* 'for thee', Luke 4.10;

ert' y-ets im 'go back away from me', Luke 4.8;

ekayk' z-kni im 'come and follow me', Math. 4.17;

2^o) in verb phrases (on which see above, 3.26) :

na ew ayl ewš oč'xark' en *im* 'and I have also other sheep', John 10.16 ;
oč' ... lueal ē *mer* 'we have not heard', Act. 19.2.

In noun phrases, the same words behave as possessive adjectives, in that they agree with the inflected noun : *ordi im* 'my son', G. *ordwoy imoy*, D. *ordwoy imum*, etc. The syntactic connexions, therefore, depend upon intersecting paradigms, e.g. :

	<i>es</i> 'I'
AccL.	<i>is</i>
(G.)	<i>im</i> → G. <i>imoy</i> , D. <i>imum</i> ... pl.N. <i>imk'</i> 'mine', etc.
D.	<i>inj</i> , etc.

The morphological background, however, is quite plain : *im*, *k'o* reflect adjectives :

im (I) < **emo-* (Gk. *emós* 'my')
k'o, *k'oy-* (I) < **two-* (Skt. *tvá-*; Gk. *sós* 'thy'; cf. Lat. *tuus*),

and so do *mer*, *jer*. As in the Germanic languages, the comparative suffix (5.242, last al.) has been worked up to derive possessive adjectives from the 1st and 2nd pl. pronouns : cf. Goth. *unsar* 'our', *izwar* 'your'; AS. *ūser*, *ēower*, etc. We thus hold a clue as to the origin of the G. marker *-r*.

The interrogative pronouns throw some light on the PA developments : the sg.G. *oyr*, as Meillet rightly assumes (1936, p. 87), is somehow related to Skt. *kásya*, Lat. *quoin(s)*, i.e. to the reflexes of **kosyo*; and so is *ēr* to Av. *čahyá*, Homeric Gk. *téo*, OCSl. *česo*, Goth. *hwis*, i.e. to those of **kesyo* (**keso*)¹⁰⁷. Not only do these parallels fully account for the stem forms *oy-* (< **kosyo*) and **ey-* (< **kesyo*), but at the same time they allow for a chronological statement : it appears that *-r* has been added to those forms after the dropping of final vowels. At that stage, the PA adjectival suffix **-ro* had changed to a bare case marker. We also have to conclude that the G. forms of the derived indefinite pronouns (*ur-uk'*, *ur-umn*, *ir-ik'*) have been created still later.

The place of the demonstrative pronouns in this development remains uncertain : a vowel may have been lost after *r* in **sor*, *dor*, *nor* (ClArm. *sor-a*, *sor-in*, *aysr*, etc.), but this cannot be verified. Another perplexing item is the 3rd p. reflexive adjective *iwr* (I) 'his, her'. Meillet's etymology (**sewe/o-ro-* : 1936, p. 92), implying the loss of the penultimate, is untenable, and Pisani's surmise of a 'crossing' of G. and D. forms (1950, p. 186) raises suspicion. A PA adjective **ew* < **sewo-* (Gk. *he(w)ós*, Lat. *suus*) may have come to be interpreted as a pronominal G.

¹⁰⁷ The problems that arise from the occurrence of **-so* beside **-syo*, and of a stem form **ke-* (**kwē-*) in the **ki-* (**kwi-*) paradigm need not be faced here.

Hence the addition of the *-r* marker, as in *oy-r*, **ey-r*. In ClArm., *iwr* is again a possessive adjective following, expectedly, the *o* declension ¹⁰⁸.

5.3. VERB INFLECTION.

Our conception of the PIE verb system mainly relies upon Indo-Iranian and Greek data. In these languages, all verb forms are derived from three fundamental tenses: present, aorist and perfect, expressing different 'aspects' (Cf. 3.222). The same pattern, variously reshaped, underlies the conjugation in most cognate languages, including Armenian. Only the Anatolian IE languages reflect a different, presumably more archaic, situation.

Armenian is closely related to Greek and Indo-Iranian in that, like these, it has reflexes of the PIE imperfect, a past tense derived from the present stem (Hom. Gk. *leípō* 'I leave', *leípon* 'I left'), and of the *e-* prefix (augment), which was added to the past tenses in the indicative (Gk. impf. *éleipon*; aor. *élipon*, etc.). In the oldest texts, its use is optional: Hom. Gk. *phéron/épheron*; Vedic *bhāram/ábharam* 'I bore, brought'. This may account for the fact that, in ClArm., the augment is not prefixed to polysyllabic aorist forms: *beri* 'I brought', 1st pl. *berak'*, etc. as against 3rd sg. *eber* (= Gk. *éphere*, Skt. *ábharat*). Its original function, however, was soon obscured ¹⁰⁹: in some anomalous verbs, indeed, the augment has expanded to the aor. subjunctive and to the participle (3.255 c, and Note). Neither in Indo-Iranian nor in Greek did a similar expansion take place.

5.31. The Armenian conjugation, as we saw (3.22), hinges on the contrast of present and aorist stems. The PIE perfect is lost. But it may have survived in early PA as a marginal member of the paradigm: such presents as *gitem* 'I know', *goy* (3.223) are traceable to PIE perfect stems: **woid-* (Skt. *véda*, Gk. (*w*)*oída*, Goth. *wait* 'I know'), **wos-* (AS. *waes* 'I was') ¹¹⁰. Similarly, in OCSl the inherited perfect *vědě* 'I know' (= Lat. *uīdī*) has been converted to a present: *věmĭ*.

5.32. There is substantial evidence for the mutual independence of the PIE present and aorist. Some roots yielded present stems only, e.g. **es-* 'to be', **ei-* 'to go', **aġ-* 'to lead, bring', **bher-* 'to bear'. In other instances, the comparative data point to the priority of the aorist: an archaic root (or, alternately, *-s-*) aorist is reflected in Skt. *ádām*, 'I gave', Gk. *édō-ka*, 1st pl. *édomen*, OCSl. *daxŭ*

¹⁰⁸ Against the postulated form **ew*, the objection is that *ewr* instead of *iwr* does not occur in the manuscripts. See however, fn. 77.

¹⁰⁹ Yet, in some modern dialects of the Van area, the augment still occurs as a mark of the aor. 3rd sg., not only in inherited forms, but also in analogical innovations: *et'al*, from *t'alem* 'I plunder'; *ek'ic'*, from *k'c'em* 'I throw'.

¹¹⁰ The *o* vowel in *č'ogay* 'I went' is amazing. Is this aorist derivable from a perfect stem **kyow-?*

(< **dō-s-*), Arm. *etu*. The divergent present stems in Skt. *dādāmi*, Gk. *dídōmi*, OCSl. *damī*, Arm. *tam* belong to a more advanced state of dialectal diversity.

Indeed there has been a general tendency to 'conjugation', i.e. to the coupling of present and aorist (or perfect) stems, either by deriving a new stem from the same root, as in the above example, or by associating stems from different roots. Both processes can be easily illustrated. The PIE present **bherō* is reflected in Arm. *berem*, Gk. *phérō*, Germanic **bera*, etc. In the Germanic languages, the paradigm has been completed by a preterite (Goth. *bar*, 1st pl. *bērum*; AS. *baer*, *baēron*), the model of which was supplied by such inherited perfects as *was*, *nam*, *sat*, etc. In Greek and Latin, the past tenses are not built up on the root **bher-*: Gk. aor. *énekon*, Lat. perf. *tulī*. Such 'suppletive' forms are not missing in ClArm.: *əmpem*, *arbi*; *unim*, *kalay*, etc. (3.255).

But in *berem*, *beri* we witness a third process: the aorist is traceable to the PIE imperfect, and so are other Armenian root aorists. Neither in Greek nor in Indo-Iranian is there any example of such a tense shift, which implies a thorough recasting of the former verb pattern. Besides, it appears that the ClArm. imperfect is not directly related to the PIE imperfect, since the latter, where preserved, holds the post of the aorist in the new paradigm:

Gk.	<i>phérō</i>	(impf.)	(é)pheron	(aor.)	<i>énekon</i>
			—	↓	
Arm.	<i>berem</i>	(impf.)	<i>berēi</i>	(aor.)	<i>beri</i> , 3rd sg. <i>eber</i>

In a previous section of this Introduction, the ClArm. verbs have been classified without regard to the origin of the present and aorist stems (3.25-3.255). Now, taking into account the comparative and historical evidence, and trying to check the inherited stem forms, we can outline a somewhat different classification.

5.321. *Inherited PIE presents*

a) The present is coupled with a root aorist, which reflects the PIE imperfect, as in *berem*, *beri* and a few similar verbs (3.252). But a number of verbs in *-anem* also belong to this class: in *harc'anem* 'I ask', aor. *harc'i*, one cannot fail to recognize the Arm. reflex of a PIE present stem **pr̥(k)-ske/o-* (Cf. Skt. *pr̥cchāmi*, Lat. *poscō*), and the aorist 3rd sg. *eharc'* exactly answers to the Skt. imperfect *ápr̥cchat* (Cf. OP. *aprsam* 'I asked'), just as does *eber* to Skt. *ábharat*. Consequently, the *-an-* extension in the present must be ascribed to a morphological innovation: the earlier paradigm was doubtless: **harc'em*, *harc'i*. In fact the ancient present sometimes occurs along with the extended one: *lizem* (= Gk. *leikhō*), *lizanem* 'I lick'; *orogem* (*arogem*), *aroganem* 'I irrigate'; *nerkem*, *nerkanem* 'I dye', etc.

b) The present is paired with a *-c'*- aorist, e.g. *p'aylem* 'I shine', aor. *p'aylec'i*. Insofar as comparative evidence is available, the simple *-em/im* and *-am* presents stem from PIE, while the corresponding aorists have mostly developed during the PA period. A great number of these verbs are denominative. Now, PIE denominative verbs had no aorists; the *-c'*- aorists, therefore, must be derived from extended imperfects (see below, 5.433).

NOTE. Some verbs have, exceptionally, an *-ac'*- aorist opposite to an *-em* present (3.252). These do not belong here: on *gitem* 'I know', aor. *gitac'i*, see above, 5.31.

As to the verb 'to be' (3.223), its background is partially obscure. Although *em* reflects the athematic present **esmi*, *ei* can by no means be traced to the imperfect; and Meillet's attempt to derive it from the PIE perfect is not convincing (1936, p. 127). The paradigm, however, can be brought into agreement with that of *berem* (5.332).

5.322. *Inherited PIE aorists*

The corresponding presents mostly display the *-(a)n-* extension:

<i>dnem</i> (< <i>*dinem</i>) 'I lay, put'	:	aor. <i>edi</i> (Cf. Skt. <i>ádhām</i> , Gk. <i>éthē-ka</i> ; OCSl. <i>děxŭ</i> < <i>*dhē-s-</i>)
<i>ar̥nem</i> 'I make, do'	:	<i>arari</i> (= Gk. <i>éraron</i> 'I fitted, constructed') ¹¹¹
<i>lsem</i> (< <i>*lusem</i>) 'I hear'	:	<i>luay</i> (Cf. Vedic <i>áçrot</i> 'he heard', imper. <i>çrudhí</i> ; Gk. 3rd pl. <i>ékluon</i> , imper. <i>klúthi</i> , <i>klúte</i>)
<i>gtanem</i> 'I find'	:	<i>gti</i> , 3rd sg. <i>egit</i> (= Skt. <i>ávidam</i> 'I found'; Gk. <i>eídon</i> , (<i>w</i>) <i>ídon</i> 'I saw')
<i>lk'anem</i> 'I leave'	:	<i>lk'i</i> , 3rd sg. <i>elik'</i> (= Gk. <i>élipon</i>)

On *tam*, *etu*, see above, 5.32. Several other verbs, certainly or presumably, belong to this class, e.g. *klanem* 'I swallow', aor. *kli*, *ekul*; *linim* 'I become', aor. *elē*, etc. Regarding the 'suppletive' forms, it can be assumed that both the aorist and the present are equally archaic; the comparative evidence, however, is deficient: *ekn* 'he came' doubtless equates with Vedic *ágan* 'he went' (< **egemt*); but neither for *eki* 'I came' nor for *gam* 'I come' are reliable parallels to be found.

NOTE. From the above examples, it appears that one, at least, of the regular verb classes (3.253 f) has originated in the merging of two formerly different paradigms: *harc'anem*, *harc'i*, on the one hand, and *gtanem*, *gti*; *lk'anem*, *lk'i* on the other do not have the same background.

5.323. Not all ClArm. verbs can be assigned to such or such class. In many instances, both the present and the aorist are somehow traceable to PIE stem patterns; but the 'conjugation', as defined above (5.32) seems, and sometimes proves, to result from PA developments and arrangements. In this respect, the *i*

¹¹¹ This verb is not documented elsewhere. We have to do here with a Greek-Armenian isogloss.

stem aorists (2.213, 2.243) raise a particularly perplexing problem, which will be discussed below (5.352).

5.33. THE PA VERB SYSTEM: A TENTATIVE RECONSTRUCTION. The ClArm. imperfect is not directly traceable to any PIE past tense. As to the pres. subjunctive, it looks like a combination of the pres. stem with the subjunctive of the verb 'to be': **bere-* + *ic'em* > **hereyc'em* > *beric'em*; *orsa-* + *ic'em* > *orsayc'em*, etc. (Meillet, 1936, p. 121, 126)¹¹². Regarding the *-im* and *-um* presents, the developments can be supposed to have been:

**hayi* + *ic'em* > **hayiyc'em* > *hayic'im*

**t'olu-* + *ic'em* > **t'oluyc'em* > *t'oluc'um*

This amounts to assuming that **-iy-* > *-i-*, **-uy-* > *-u-* (Cf. 3.231 c, Note), and that in the endings *e* was eventually substituted by *i*, *u*, in agreement with the pres. indicative.

Consequently, in reconstructing the earliest PA verb system, we need not take into account these secondary formations. The paradigm thus reduces to the present and aorist indicative, the imperative, and the aorist subjunctive¹¹³. According to our classification, we shall consider separately what we may term 'one stem verbs', e.g. *berem* (5.321), and 'two stem verbs', e.g. *dnem* (5.322). These denominations, of course, do not suit the ClArm. conjugation as described above (3.22): they simply refer to the original difference.

5.331. One stem verbs

	Indicative		Imperative	Subjunctive
	Present	Aorist		
	<i>berem</i>	<i>beri</i>	<i>ber</i>	<i>beric', berc'es ...</i>
	<i>*harc'em</i>	<i>harc'i</i>	<i>harc'</i>	<i>harc'ic'</i>
	(<i>harc'anem</i>)			

These paradigms concord with:

Gk.	<i>phérō</i>	<i>épheron</i>	<i>phére</i>
Skt.	<i>ṛcchāmi</i>	<i>áṛccham</i>	<i>ṛcchá</i>

But, while Greek, Vedic and Old Iranian have preserved the PIE subjunctive, Arm. *beric'* is obviously the result of innovation. The *-ic'*- morpheme does not

¹¹² Such quasi compound verb forms, it must be granted, are not in agreement with what we know of PIE morphology. But Meillet's alternative explanation (*beric'em* < **bher-oi-ske-*) does not improve the case. See E. Evangelisti's criticism: *L'imperfetto armeno e l'uso preteritale dell'ottativo indoeuropeo* (Arona, 1955), p. 11 and fn. 5.

¹¹³ The infinitive and participle will be dealt with later (5.44-45).

go back to any known mood marker: at the best. *-i-* might be related to the optative suffix **-yē/ī* (Meillet, 1936, p. 122; Pedersen, 1905, p. 207); yet the morphological environment, as Meillet admits, does not favour this conjecture.

On the other hand, evidence for a pres. stem extension **-ske/o-* is found all over the IE area, e.g. in *harc'(an)em* and its Indo-Iranian and Latin cognates (5.321). A variant **-iske-* is documented in Greek (*heurískō* 'I find', aor. *heúron*) and Latin (*remināscor* 'I remember'). Supposing it to have developed in Armenian, too, we might parallel *berem, beric'* (< **bheriskō*) with such verb pairs as:

Gk.	<i>stéromai</i> 'I lack, lose' :	<i>sterískō</i> 'I deprive'
Lat.	<i>*pacō</i> 'I contract' :	<i>pacīscō(r)</i> 'I contract, stipulate'
	(3rd sg. <i>pacit</i> , pl. <i>pacunt</i> , in archaic texts).	

The formal resemblance, it must be granted, has no semantic counterpart, and might be regarded as casual. Yet, since the original meaning or function of **-ske/o-* cannot be assessed precisely enough, it is not a priori impossible that, in PA, derived **-iske-* presents should have taken over the function of the former subjunctive, and been worked up for a modal contrast ¹¹⁴.

5.332. Let us now return to the verb 'to be'. Its paradigm never included an aorist (5.32), and, in its ClArm. state, it is not unlike that of *berem*, as reconstructed above:

Indicative		Imperative	Subjunctive
Present	Imperfect		
<i>em</i>	<i>ei</i>	<i>er, ēk'</i>	<i>ic'em, ic'es ...</i>

It will even prove quite similar if we say 'past' instead of 'aorist' or 'imperfect', and if we assume that in the subjunctive the 1st sg. (**ēc'*) and pl. (**ic'uk'*) have been substituted by *ic'em, ic'emk'* in analogy of the pres. indicative.

Most of the past tense endings are hard to explain in terms of PIE verb inflection. We only know that *beri* reflects the PIE imperfect. As to *ei*, its closest cognate is the Greek optative *eīēn*, 1st pl. *eīmen* (< **esī-men*) ¹¹⁵. Now, in both tenses, the 1st sg., 1st and 3rd pl. endings are the same:

<i>e-i</i>	:	<i>ber-i</i>
<i>e-ir</i>		<i>ber-er</i>
<i>ēr</i> (< <i>*eyr</i>)		<i>eber</i> (< <i>*ebheret</i>)

¹¹⁴ Godel, 1965, p. 31.

¹¹⁵ See Evangelisti's study (quoted above, fn. 112), especially p. 30-38. On the relationship between optative and past, generally: E. Benveniste, *Prétérit et optatif en indo-européen*. BSL 47 (1950), p. 11-20. A modern parallel is the English idiom *he would do* = *he used to do*.

<i>e-ak'</i>	:	<i>ber-ak'</i>	
<i>e-ik'</i>			<i>ber-ēk'</i>
<i>e-in</i>	:	<i>ber-in</i>	

Only in the third column is the pres. stem **bhere/o-* recognizable. The common endings *-i*, *-ak'*, *-in*, whatever their origin, point to convergent developments, and the conclusion to be drawn is that, at a remote stage of PA, only one past tense stood opposite to the present: the PIE 'aspect' contrast had been obliterated.

5.333. Two stem verbs

	Indicative		Imperative	Subjunctive
	Present	Aorist		
	<i>dnem</i>	<i>edi</i>	<i>dir, dik'</i>	<i>edic', dic'es ...</i>
	<i>lk'anem</i>	<i>lk'i, elik'</i>	<i>lik'</i>	<i>lk'ic'</i>
Cf. Gk.	(<i>leípō</i>)	<i>élipon</i>	<i>lípe</i>	

In ClArm., these paradigms are on a par with that of *berem*, save that *edi*, *lk'i*, etc., unlike *beri*, are genuine aorists. The subjunctive is built up on the aorist stem, as is shown by the following parallel:

	(<i>aṛnem</i>)	<i>arari</i>	<i>ara, ararēk'</i>	<i>araric'</i>
Gk.	<i>ararískō</i>	<i>éraron</i>	<i>*árare</i>	

Both paradigms bear evidence to an **-iske/o-* present, derived from the reduplicated aor. stem **arare/o-*. In Greek, this present is used in the indicative, whereas in Armenian *-ic'* has become a subjunctive marker: *araric'* stands in contrast to the pres. indicative *aṛnem*.

Genuine aorists, with few exceptions (3.255 c), are inflected like *beri*: the thematic aorist stem **like/o-*, e.g., is well preserved in *lk'er*, *elik'* (< **eliket*), *lk'ēk'*; the 1st sg., 1st and 3rd pl. have taken on the usual preterite endings. Our above statement on the PA unique past tense is thus borne out.

NOTE. Two verbs deviate from the above pattern:

<i>ert'am</i> 'I go'	<i>č'ogay</i>	<i>ert', ert'ayk'</i>	<i>ert'ayc', ert'ic'es ...</i>
<i>tam</i> 'I give'	<i>etu</i>	<i>tur, tuk'</i>	<i>tac', tac'es ...</i>

Regarding the former, although no satisfactory etymology has been brought forth so far, it is worth pointing out that the PIE verb **eimi*, for which it has been substituted, had no aorist. We may therefore presume that *ert'am* originally belonged to the one stem verb class: barring the aor. indicative, the paradigm runs parallel to *berem*, *ber*, *beric'*. The question then arises whether *č'ogay* is the substitute

of an earlier past tense built up on the present stem, or whether that past tense survives as the ClArm. imperfect. In this latter case, *ert'ayi* would have to be traced as far back as *ei*. For want of other clues as to the origin and development of the ClArm. imperfect at large, the case must be left undecided.

The subjunctive *tac'* (< **dǝ-skō*: Meillet, 1936, p. 133) displays the zero grade of the root vowel, as against the full grade in *etu*, *tur*, *tuk'*. This anomaly can be explained in terms of preservation of an archaic feature¹¹⁶, or, alternately, by supposing *tac'* to be derived from the present. Such a derivation, unexpected though it is in a two stem verb, would account for the difference between *tac'* and *ekic'*, *edic'*, *elēc'*: the monosyllable *tac'*, being originally unrelated to the aorist indicative, could not receive the augment.

At any rate a greater difficulty lies in the pres. indicative, for which no parallel is to be found except in Latin: *dō*, 1st pl. *damus*, like *tam*, apparently reflects an athematic present without vowel alternation. This quite unusual inflection is all the more surprising as Armenian and Latin do not belong to the same dialectal area.

5.34. THEMATIC AND ATHEMATIC INFLECTION. PIE present as well as aorist stems fall into two main classes, according to whether they do, or do not, contain the so-called 'thematic vowel', i.e. the **-e/o-* extension (Gk. *phér-o-men* 'we bear' as against *í-men* 'we go'). In ClArm., except for some irregular aorists, the contrast is no longer perceptible. The inflection of the *-em* presents, in particular, proves to be a mixture of original thematic forms, as well as athematic, coined in analogy of the verb 'to be', which in turn has been partially altered under the influence of the thematic type.

The following table is a tentative illustration of this mutual overlapping:

Athematic inflection	Thematic inflection
<i>em</i> < <i>*es-mi</i> →	<i>berem</i>
<i>es</i> < <i>*es-si</i> →	<i>beres</i>
<i>ē</i> ←	<i>berē</i> < <i>*bher-e-ti</i>
<i>emk'</i> < <i>*es-mes</i> →	<i>beremk'</i>
<i>ēk'</i> ←	<i>berēk'</i> < <i>*bher-e-te (+ -k')</i> ¹¹⁷
<i>en</i> < <i>*s-enti</i> →	<i>beren</i>

The thematic inflection is better preserved in the imperative and the subjunctive: 1st sg. *beric'* < **bherisk-ō*; 1st pl. *berc'uk'* < **bherisk-o-mes*¹¹⁸. Reflexes of thematic inflection also occur in the aorist, whether derived from the PIE imperfect (*berer*, *eber*, *berēk'*: 5.332) or from the thematic aorist (*lk'er*, *elik'*, *lk'ēk'*: 5.333).

¹¹⁶ As I assumed in a previous study (1965, p. 36).

¹¹⁷ If *-k'* in the 1st pl. reflects **-s*, as in the pl.N. (5.221), its occurrence in the 2nd pl. must be ascribed to analogy.

¹¹⁸ The development can be roughly traced as: **-omes* > **-ow(e)h* > *-uk'*. This implies, at a certain stage, a change of intervocalic (or postvocalic?) *m* to *w*, as in *anun* (4.331), *awur* (4.452). In *emk'* < **esmes*, the change was not to take place.

On the whole, the changes resulted in a levelling of verb inflection. The variety of present and aorist stems has no bearing on the personal endings (3.23). A similar statement, we remember, had to be made regarding noun inflection (5.11).

5.341. Many terminal morphemes remain unexplained : so *-r* in *eir*, *ēr*, *berer*; *-w* in the mediopassive aor. 3rd sg. (*beraw*, *elew*); the 1st pl. past tense ending *-ak'* (*eak'*, *berak'*); the 2nd pl. *-jik'* in the aor. subjunctive, together with its cognates (3.236); and the imperative endings *-(i)r*, *-(a)ruk'*. Instead of discussing the various hypotheses that have been made as to their origins, I would rather underscore two facts which may account for the unavoidable uncertainty of such attempts.

Firstly, in consequence of the stress shift, many verb forms were to lose their endings, and would have been confused, had not the original terminations been extended or supplemented (Meillet, 1936, p. 123-124, on the thematic past tenses). Furthermore, the PIE contrast of active endings vs. middle has been obliterated. The aor. subj. 1st pl. ending *-uk'*, common to the active and the mediopassive inflection (*berc'uk'* 'we shall bring, or be brought'), is traceable to a PIE active termination (see above), and so is the 1st sg. zero ending (< **-ō*) in *berayc'* as well as in *beric'*. On the other hand, the imperfect 3rd sg. *berēr* 'he brought, or was brought' is supposed to reflect a PIE middle verb form : **bher-e-tor* (Meillet, 1936, p. 127). This explanation, though consistent with the rules of sound change, cannot be recorded without discussion : not only is the survival of only one middle ending a rather strange case, but, above all, any conjecture about *berēr* ought to be made with respect to *ēr* 'he was'; for, all the imperfect forms seem somehow related to, or reshaped after, the past tense of the verb 'to be' (Cf. 5.332).

5.35. Thus, the next topic to be approached is the expression of the VOICE CONTRAST. In the ancient IE languages, as a rule, the personal endings serve as voice markers :

Gk. *phér-ō* 'I bear' : *phér-o-mai* 'I win; I am borne, carried'
 éphere 'he bore'¹¹⁹ : *éphér-e-to* 'he won; he was borne, carried'

This situation apparently continues in the ClArm. aorist (3.232). But if we look at the mediopassive terminations from the diachronic point of view, our analysis proves inadequate : in reconstructing the earlier inflection pattern, we have to separate the personal endings from the *-a-* morpheme with which they have blended (3.234, Note). It then appears that, in PA, voice was chiefly expressed

¹¹⁹ In *phérō*, the ending is no longer separable from the thematic vowel; in *éphere*, **-t* has been dropped.

by the alternating morphemes *e/i* in the present, *Ø/a* in the aorist: the voice markers had been shifted from the last constituents of the verb forms to the penultimate:

ber-e-m 'I bear' : *ber-i-m* 'I am borne'
eber 'he bore' : *ber-a-w* 'he was borne'

Contrasting personal endings are peculiar to the aor. indicative 3rd sg. (*-Ø/w*), and to the imperative. Besides, a mediopassive ending *-iwr* sometimes occurs in the impf. 3rd sg: *koč'iwr* 'he was called' (instead of the common form *koč'ēr*)¹²⁰.

The mediopassive inflection, as we know, does not cover the whole conjugation. Tracing its development amounts to inquiring about the origin of the *-i-* and *-a-* morphemes.

5.351. The *-im* presents are ultimately traceable to a class of intransitive verbs denoting physical or mental states. The comparative evidence, however, is not homogeneous. There are, in the Baltic and Slavic languages, semi-thematic *-i-* presents: Lith. *sėdi* 'he is seated', *tūri* 'he has'; OCSl. *sěditŭ* 'he is seated', *bŭditŭ* 'he is awake' (these latter with *-i-* < **-ī-*); on the other hand, *-ē-* presents are found in Italic and Germanic: Lat. *sedeo* 'I am seated', OHG. *habēm* 'I have'. The ambiguity of Arm. *i* does not allow for a decision (Meillet, 1936, p. 107-108). Yet, although such verb pairs as Lat. *pendo* 'I suspend', *pendeo* 'I am hanging' can explain the original relation of *berem* to *berim*, one will rather relate Armenian to Baltic and Slavic, and parallel *beri* to Lith. *sėdi*, OCSl. *sěditŭ*.

Only during the PA period did *-i-* evolve to a mediopassive present morpheme, and expand from the indicative to the present subjunctive (*beric'im*, *-is* ...) and eventually to the aor. subjunctive (*berc'is*, *berc'i*, *berc'in*: 3.234, Note).

5.352. In this connection, we must also consider the mediopassive *i* stem aorists (2.213, 2.343). As the related presents display various extensions¹²¹: *hangč'im* 'I rest' (*hangeay*), *martnč'im* 'I fight' (*marteyay*), *zart'num* 'I awake' (*zart'eay*), *yarnem* 'I arise' (*yareay*), etc., these verbs very likely belong to the two stem class (5.333). Consequently, *hangi-*, *marti-*, etc. may well be regarded as genuine aorist stems.

This is not Meillet's opinion. He parallels *y-areay* with the Lat. present *orior* 'I arise', and accordingly derives the *-eay* aorists from PIE imperfects (1936,

¹²⁰ Against Meillet's construction (1936, p. 127), I am inclined to regard *-iwr* as an extended form of **-iw*, i.e. of an ending which might be related to the aor. 3rd sg. ending *-w* (*bera-w*, *ele-w*), and to the isolated 3rd sg. *ic'iw* 'would that': cf. the pres. subj. of the verb 'to be', 3rd sg. *ic'ē*.

¹²¹ On *-num* and *-č'im* presents, see above, 3.254. In ClArm. these extensions are mostly exchangeable (Abrahamyan, p. 105-106), and we have no clue as to their original distribution.

p. 115). The parallel, limited to Armenian and Latin, may turn out delusive. Indeed the most archaic representative of the PIE root **or-* (**H₃er*) is a root aorist, preserved in Vedic (*árta* 'he arose') and in Homeric Greek (*órto*, part. *órmenos*). The presents do not concord, and *orior* hardly goes farther back than Arm. *y-arñem* (Cf. 5.32). On the other hand, there is no comparative evidence for ancient **i* stem aorists; but **-ē-* stems do occur in Greek, as aorist stems of intransitive or mediopassive verbs: *rhué-nai* 'to flow', *kharé-nai* 'to rejoice', *migé-nai* 'to be mixed up, or have intercourse, with', and similarly in OCSl.: *sědě* 'he sat', *bŭdě* 'he awoke'¹²². Meillet quotes Gk. *mané-nai* 'to go mad' in connection with the *-im* presents (1936, p. 108). But the Greek aorists seem more closely related to the Armenian *i* stem aorists, save that in the latter the **-ā-* morpheme (5.353) has been added to the **-ē-* stem. Now in Lithuanian, too, the past tense of the *i* present verbs displays the same extension: *-ėjo* (in *turėjo* 'he had', *sėdėjo* 'he sat') is a perfect match to Arm. *-ea-* (in *hangeay*, *yareay*). The Armenian development need not be historically connected with the Lithuanian: *-eay* aorists never correspond to simple *-im* presents. The coincidence, however, gives weight to the above argument.

NOTE. Some of the *-eay* aorists have to be explained otherwise: e.g. *sarteay*, if *sartnum* 'I startle' is actually derived from the noun stem **k̑rdi-* (4.332). In *erkeay* 'I feared' (4.354), *-e-*, whether from **-ei-* or from **-i-*, is certainly the root vowel.

5.353. The aorist morpheme *-a-* is not ambiguous. Evidence for **-ā-* in past tenses is found in the Baltic and Slavic languages, on the one hand (Lith. *likau* 'I left'; OCSl. *bŭraxŭ* 'I gathered'), in the Italic languages on the other (Lat. *eram* 'I was', *legēbam* 'I was reading', *lēgeram* 'I had read'; Oscan *fufans* 'they were')¹²³. In Armenian, *-a-*, once specialized as an aorist marker (*beray* 'I was brought'), expanded from the indicative to the other moods: imper. pl. *ber-a-ruk'* (but sg. *ber-ir*). In the subjunctive, *-a-* occurs in the 1st sg. only: *ber-a-yc'*, 2nd *berc'is*, etc.; but the subjunctive of the *i* stem aorists still bears evidence to the earlier, regular inflection: *p'axeayc'*, *p'axic'es* (< **p'axeayc'es*: 3.234, Note).

Originally, the *-a-* aorist was not bound to the mediopassive conjugation, and traces of its former independence are not missing. Leaving aside the past tense 1st pl. ending *-ak'* (*eak'*, *berak'*), which raises particular problems, we only need to mention such paradigms as:

¹²² The **-ē-* morpheme demanded the zero grade of the root vowel, as is proved by the Greek aorists and, to some extent, by the OCSl. aorists and infinitives (*bŭděti* 'to be awake', *-lŭpěti* 'to adhere') as well as the Latin presents *video* 'I see', *clueo* 'I am reputed', *maneo* 'I remain'.

¹²³ On the modal use of **-ā-* (optative > subjunctive), evidenced in Old Irish and the Italic languages, see Benveniste's study (quoted fn. 115).

<i>u^tem</i> 'I eat'	:	<i>keray</i> (3rd sg. <i>eker</i>)	imper. <i>ker</i> , <i>kerayk'</i>
<i>lsem</i> 'I hear'		<i>luay</i>	<i>lur</i> , <i>luaruk'</i>
<i>melanč'em</i> 'I sin'		<i>melay</i>	
<i>yarnem</i> 'I arise'		<i>yareay</i>	<i>ari</i> , <i>arik'</i>

or, conversely, with an *-im* present and no *-a-* aorist :

<i>linim</i> 'I become'		<i>elē</i>	<i>ler</i> , <i>leruk'</i> ,
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or again, the optional use of active or mediopassive forms in the aorist of some *a* stem verbs (3.251 c).

The correlation of *-im* presents (*hayim*, *hecanim*) with *-a-* aorists (*hayec'ay*, *hecay*) settled in the course of the PA period. The one stem verb *nstim* 'I sit' is a good illustration. In view of Skt. *ni-ṣīdāmi*, Gk. *hízzō*, Lat. *-sīdō* (< **sisde/o-*), we should expect Arm. **nstem*, aor. **nsti*, and the imperative is actually *nist*. But, unlike *berem* and the other transitive verbs (*acem* 'I bring', *hanem* 'I draw'). the intransitive present **nstem* passed over to the *-im* type, and the corresponding past, accordingly, was attracted to the mediopassive inflection : *nstay*. In some archaic verbs, an *-eay* aorist is still associated with an active present. In view of *čanač'em* 'I know' (< **canač'em*), aor. *caneay*, there can be no doubt that *p'axč'im*, *hangč'im* and the other *-č'im* presents have come about through morphological change : the earlier present forms can be safely reconstructed as **p'ax(i)č'em*, **hang(i)č'em*.

5.4. After elucidating, as far as possible, the development of the inflection. let us review the present and aorist stems in the light of the comparative evidence,

Regarding the present, it must be remarked that the morphemic analysis we applied in a previous section (3.22) proves inadequate as soon as we take into account the PIE background : the inflection vowel was originally part of the stem. As a rule, *-e-* stems (*bere-m*, *dne-m*) are traceable to PIE thematic presents. The occurrence of *-e-* instead of *-o-* where Greek has the latter (Gk. *phérō*, *phéromen*, West Gk. *phéronti*) has already been accounted for (5.34). In *-i-* stems (*beri-m*, *hayi-m*, etc.), the vowel, though ambiguous, is likely to reflect **-ī-* (5.351); the original inflection, accordingly, may have been athematic or semi-thematic. However, the ClArm. *-em* and *-im* presents need not be treated separately : not only are most of the latter derived, as *berim* from *berem* (3.241), or secondary, as *nstim*, *p'axč'im*, but the *e/i* contrast does not hold through the whole paradigm :

Pres. ind.	<i>gre-m</i>	impf. <i>gre-i</i>	aor. <i>gre-c'i</i>	inf. <i>gre-l</i>
	<i>hayi-m</i>	<i>haye-i</i>	<i>haye-c'ay</i>	<i>haye-l</i>

Both *-em* and *-im* presents will therefore be brought together as direct or indirect reflexes of PIE thematic presents.

Athematic inflection is presumable for *u* stems at large and for one part of the *a* stems, the remainder being traceable to derived thematic presents (see below, 5.41 end).

5.41. ARMENIAN REFLEXES OF PIE THEMATIC PRESENTS :

*-*e/o* stems : *acem*, *berem*; *nstim* (5.353). With a secondary *-an-* extension : *lizanem* 'I lick', beside *lizem* (= Gk. *leíkhō*).

*-*ye/o-* stems : *p'aylem*, *-im* (4.451); *mrmnĵem* 'I groan, murmur' (< **murmur-ye/o-* : cf. Gk. *mormárō*). With a secondary *-an-* extension : *xacanem*, *luč'anem* (4.352); *anicanem* 'I curse' (< **oneid-ye/o-* : 4.44, Note).

In denominative and derived presents, *-e-* < *-*eye/o-* (Meillet, 1936, p. 105) : *gorcem* 'I work, do' < **worġeye-*; *orogem*, *arog(an)em* 'I irrigate' < **sroweye-* (**sreu-/srou-/sru-* 'to flow'). As to *utem* 'I eat', substituted to the old athematic present **edmi* (Skt. *ádmi*; Lat. *edo*, 3rd sg. *ēst*; Hitt. 3rd pl. *adanzi*), it seems traceable to an iterative-durative present **ōdeye/o-* : some evidence for **ō* in similar instances is to be found in Gk. (*w*)*ōthēō* 'I thrust, push' (Cf. Skt. *ávadhīt* 'he slew'), *pōléomai* 'I go to and fro', cf. *amphí-polos* 'moving around, attendant' (and Skt. *cárāmi* 'I move'). It is therefore appropriate to trace *glem* 'I roll' — through **gulem* — back to **wōleye/o-* (Cf. OCSl. *valiti* < **wōlī-*). Examples of denominative verbs have been given in a previous section (3.332 a) and need not be resumed.

Simple *-am* presents, as a rule, contain *-*āye/o-* stems, either derived or denominative (Meillet, 1936, p. 110). On *mnam* 'I remain', see also above, 4.312 : such presents as *orsam*, *dolam*, etc. seem parallelable to Gk. *potáomai* 'I fly' (beside *pétomai*); Lat. *domare*, OHG. *zamōn* 'to tame'.

NOTE. We have to place here the ClArm. reduplicated verbs : *t'at'awem* 'I dip', *k'rk'rem* 'I search, stir', *helelem*, *ololem* 'I overflow' (cf. *helum* 'I pour'), *p'olp'olim* 'I glitter', *šawšap'em* 'I touch, feel', etc. These are not directly traceable to PIE models, nor do they belong to the *-*ye/o-* stem class. Meillet's parallel, therefore, is not to the point : the Greek verbs he quotes (1936, p. 113) rather correspond to Arm. *mrmnĵem* (see above), *trtnĵem* 'I moan, complain', *plpĵam* (for earlier **pulpulĵem*?) 'I bubble'.

5.411. *-(*o*)*ne/o-* stems : *arĵnem*, *dnem*, *lk'anem* (5.322); *y-arĵnem* 'I arise', *unim* 'I take hold, have', *tanim* 'I carry' ¹²⁴, *usanim* 'I learn' (Cf. OCSl. *vyknŏ* 'I get used, learn'), etc. This extension has been largely worked up to provide presents for ancient aorists, not only in Armenian, but also in other IE languages, especially

¹²⁴ The relation of the aorist *tar-ay* to the present *tanim* is a morphological riddle. Etymological data are missing.

in Slavic and Greek: OCSl. *vyknŕ*, aor. *vykŕ*; *stanŕ* 'I stand up', aor. *staxŕ*; Gk. *dáknō* 'I bite', aor. *édakon*; *hamartánō* 'I miss the mark, fail', aor. *hémarton*, etc. At a far later stage, *-an-* was added to inherited present stems, too, as in *lizanem*, *anicanem*, *harc'anem* (5.321). As the *-anem/im* presents are all coupled with root aorists (3.252 f-g), it is often impossible to tell whether they belong to the earlier or to the later formation.

5.412. **-ske/o-* stems: *harc'anem* (5.321). Besides, *-c'* occurs in the compound morpheme *-oy-c'* of the causative verbs (3.244). For want of comparative evidence, however, neither the original function of *-oy-* (< **-eu/ou-*) nor the relation of *-oyc'* to *-oys-* (*korusanem* 'I make to perish, lose') and *-oyz-* (*p'luzanem* 'I pull down') can be elucidated ¹²⁵.

The Armenian subjunctive, we admitted, is derived from **-iske/o-* present stems (5.331). Once the derivative suffix had evolved to a modal morpheme, nothing prevented its being added to non modal *-c'* stems; hence *harc'ic'*, *usuc'ic'*, *grec'ic'*, etc.

5.413. The *-č'em* (*-č'im*) presents doubtless belong to the **-ye/o-* stem class. Their only cognates, as Meillet perceived, are the Greek presents in *-ssō*, Attic *-ttō* (Meillet, 1936, p. 109). But one need not assume, as he does, a blending of **-ye/o-* with **-ske/o-*: here as elsewhere, Arm. *č'*, Gk. *ss* (*tt*) are the expected reflexes of PIE **ky* (4.343). Whatever the ultimate background of this type, its expansion in connection with the *-eay* aorist belongs to the gloomy history of PA.

5.42. REFLEXES OF ATHEMATIC PRESENTS

Of simple root presents there are but few relics in ClArm.: *em* 'I am' (5.34), the defective verb *bam* 'I say' (= Doric Gk. *phāmi*), and probably the monosyllables *kam* 'I stand' (Cf. Doric Gk. *ébān* 'I stepped', aor.), *gam* 'I come', *lam* 'I cry'. On *tam* 'I give', see 5.333, Note; on *gelum*: 5.423.

5.421. **-nā/nə-* stems: *banam* 'I open' (aor. *bac'i*), *t'anam* 'I wet' (*t'ac'i*); *bar'nam*, *dar'nam* (2.343), *stanam* 'I get, acquire', *mo'ranam* 'I forget', etc.

Arm. *-na-* reflects either **-nā-* or **-nə-* ¹²⁶. The alternation is preserved in Indo-Iranian (Skt. *-nā/nī-*) and in Greek. e.g. *pít'nēmi*, 1st pl. *pít'namen* 'I spread out'. It originated in the growing together of the 'infix' morpheme **-ne/n-*

¹²⁵ See fn. 33. *-oys-* also occurs in *helusem* 'I nail, fix' (aor. *helusi*) and *xraxusem* 'I cheer, exhort' (aor. *-ec'i*), from *xrax* = *urax* 'cheerful'.

¹²⁶ The latter alternant (**-nə-*) has prevailed in Germanic: Goth. *gawaknan* 'to wake up'.

and a following laryngeal: $*p^{ot}\text{-ne-}H_2\text{-} > \text{Gk. } pitn\bar{a}\text{-}; *p^{ot}\text{-n-}H_2\text{-} > pitna\text{-}$ ¹²⁷. In late PIE $*\text{-n}\bar{a}/n\bar{a}\text{-}$ had become a bare present stem extension, susceptible of various dialectal developments. The above quoted Arm. verbs have no direct cognates. But the inchoative type in *-anam* (3.332 a), still productive in ModArm., reminds one of the analogous Germanic formation preserved in Gothic: cf. Arm. *li-anal* 'to become full' and Goth. *fullnan* 'id'.

5.422. *-nu-* stems: *arnum* 'I take' (= Hom. Gk. *árnumai* 'I win'), *z-genum* 'I dress, put on', cf. Gk. $-(w)h\acute{e}nn\bar{u}mi$ 'I clothe', both from $*wes\text{-}nu\text{-}$; *erdnum* 'I swear', *lnum* 'I fill', *enkenum* 'I cause to fall, throw down' (Cf. *ankanim* 'I fall')¹²⁸, *sartnum* 'I startle', etc.

NOTE. On *helum* 'I pour' (and *t'olum* 'I let'), see Meillet, 1936, p. 48 ($l < *ln$) and 112. If he is right, *l* should have been propagated from the present to the aorist (*heli*, *t'oli*). But the present stems may reflect $*pelu\text{-}$, $t'olu\text{-}$ as well.

The original alternation $*\text{-neu}/nu\text{-}$, preserved in Indo-Iranian (Skt. *āpnómi*, 1st pl. *āpnumāḥ* 'I reach, obtain'), has given way to $\text{-n}\bar{u}/n\bar{u}\text{-}$ in Greek. So unusual a change is not likely to have come about elsewhere, so that we can confidently assume that in PA the full grade alternant $*\text{-neu-}$ had been lost.

This formation has been fairly productive: most of the *-num* presents lack cognates in the other IE languages (Cf. 4.314, on *lnum*). In ClArm. not only do the *-nu-* and $\text{-}\acute{c}'i\text{-}$ extensions behave as free variants (3.254; fn. 121), but other variations also occur, e.g. *zbatim*, *zbatnum* 'I am busy'; *hecanim*, *hecnum* 'I ride'.

5.423. *-u-* stems: *gelum* 'I twist, press'. Armenian, as it seems, has preserved an archaic present $*welu\text{-}mi$, which in Latin has passed over to the thematic inflection: *uoluō* 'I roll' ($< *welu\text{-}\bar{o}$). It is difficult to decide whether *-u-* is part of the root. At any rate, it does not recur in the aorist (*gel-i*). As, on the other hand, there is no evidence for a PIE *-u-* extension in present stems, we cannot guess how it happened that *-um* presents were regularly paired with root aorists (3.253 e). In one instance, at least, the priority of the aorist cannot be doubted: along with the irregular present *harkanem* 'I strike' (aor. *hari*: 3.255 a), there is a doublet *harum*. All that we can state is that the paradigm, once established, became productive: *-u-*, like *-ane-*, has been substituted to *-e-* in ancient thematic presents, e.g. *lizum*, *lizanem* (5.321); *gercum*, *gercanem*, *gercem* 'I shave'. Some of the *-um* presents stem from the Parthian period: *dizum* (*dizanem*) 'I pile up'; *zenum* 'I immolate'¹²⁹ are built up on Iranian words or roots.

¹²⁷ The position of the infix morpheme clearly appears in such Skt. presents as *bhi-ná-d-mi* 'I cleave, split', 1st pl. *bhi-n-d-máḥ*, as against *bhit-tí* 'splitting'. Cf. Lat. *findo* 'I cleave', pf. *findi*.

¹²⁸ Godel, 1965, p. 26.

¹²⁹ G. Bolognesi, *RicLing* 5 (1962), p. 132-135; E. Benveniste, 1964, p. 33-34.

5.43. REFLEXES OF PIE AORISTS

In describing the ClArm. conjugation, we had to distinguish, on the one hand, root aorists, and on the other, *-c'*- aorists (3.22). But, when considered from the historical point of view, the former class breaks up: some of its members reflect PIE imperfects (5.321); the other ones are derived from genuine aorists, either thematic or athematic, and only these will concern us here. Besides, the phrase 'root aorist' will henceforth be used with reference to PIE only, not to ClArm.

5.431. *Thematic aorists*

As the distinctive feature of the PIE thematic aorists was the zero grade of the root vowel (Gk. *élipon*, as against the impf. *éleipon*), we have a criterion for bringing together with *lk'i*, *gti* (5.322) a number of other aorists for which exact parallels are wanting: *mti*, 3rd sg. *emut* 'I entered' (< **mude/o-*: cf. *mucanem*, 4.352); *kli*, *ekul* 'I swallowed' (< **gule/o-*, perhaps from **gole/o-*: Skt. *girāmi* 'I swallow'); *arbi* 'I drank' (< **srbhe/o-*: cf. Lat. *sorbeō* 'I suck'); *hari* 'I stroke' (< **pore/o-*: cf. OCSl. *perq* 'I beat'), and, with mediopassive inflection: *ankay* 'I fell' (< **snge/o-*). The present *ankanim*, being derived from the aorist, does not concord with the genuine present **senge/o-*, preserved in the Germanic languages (Goth. *siggan* 'to sink').

Evidence for reduplicated thematic aorists is found in Greek and Indo-Iranian. ClArm. has only *arari* 'I made, did' (5.322, 5.333).

5.432. *Athematic root (and -s-) aorists*

In spite of sound change and of the general levelling of verb inflection (5.34, end), ClArm. still displays unmistakable relics of this archaic formation. Such reflexes, as can be expected, appear in anomalous verbs (3.255 c). To begin with the plainest parallels, let us review the 3rd sg. forms:

<i>ekn</i> 'he came'	= Vedic <i>ágan</i> (< <i>*egemt</i>)
<i>et</i> 'he gave'	= Skt. <i>ádāt</i> (< <i>*edōt</i>); cf. Gk. <i>édōke</i> ; OCSl. <i>da</i>
<i>ed</i> 'he laid, put'	= Skt. <i>ádhāt</i> (< <i>*edhēt</i>); cf. Gk. <i>éthēke</i> ; OCSl. <i>dě</i> .

There is also a Vedic 3rd sg. *dhās* (without augment), and the same *-s* instead of *-t* recurs in Hitt. *daiš* 'he set, placed', Phrygian *edaes* 'id'. It is of course impossible to tell which has been lost in Armenian.

The preservation of the root vowel in the other persons implies the loss of a following syllable: in the prototypes, the vowel certainly belonged to the penultimate; but of the original last syllable not the slightest trace is left. Therefore, neither Skt. *ádām*, nor Gk. *édōka* are suitable parallels to Arm. *etu*. On the

other hand, OCSl. *daxŭ*, Alb. *dašë* 'I gave' bear evidence to -s- aorist forms, which enables us to trace *etu* back to **edōsom*¹³⁰. This explanation applies to *edi* (< **edhēsom* : OCSl. *děxŭ*), not however to *eki*, whose relation to *ekn* remains a mystery.

Other reflexes of root (or -s-) aorists can be suspected in *luay* 'I heard' (5.322), *erkeay* 'I feared' (< **dwei/dwi-*: 5.352, end), and *erduay* 'I swore', although the etymology is uncertain. The dropping of intervocalic -s- does not allow for any statement regarding the stems: *lu-* (in *luay*), e.g., may be derived from **klu-s-* as well as from **klu-*.

On presumable reflexes of athematic **-ē-* aorists, see 5.352.

NOTE. With regard to inflection, the anomalous aorists differ perceptibly from the regular pattern. At first sight, it seems that the full grade root vowel prevailed in PA as it does in Sanskrit (*ádām*, 1st pl. *ádāma*). However, there is perhaps a trace of vowel alternation in *edi*, 1st pl. *edak'*: cf. Gk. *éthē-ka*, *éthe-men* (the root is **dhē/dhə-*). If this surmise proved right, it might throw some light on the origin of the 1st pl. ending *-ak'*: according to Bonfante, *edi* is the only source of the 1st sg. *-i* (in *ber-i*, *grec'-i*, etc)¹³¹.

5.433. *-c'- aorists*. In the first place, it must be remarked that *-c'-* does not occur after consonants: *lc'i* 'I filled' (< **lic'i*), *xc'i* 'I stopped up' (< **xic'i*) are no exceptions. Cf. also *ba-c'i*, from *banam* 'I open', as against *barj-i*, from *barnam* 'I lift, raise'. In *ənt'erc'ay* 'I read', either *i* or *u* may have been dropped; but for want of a reliable etymology, the case cannot be settled. The stems, as a rule, end in *-ec'-*, *-ac'-* (3.251-252; besides, in the *-num* verb class: *ənkec'i* 'I threw', *yec'ay* 'I leaned', *zgec'ay* 'I dressed').

In Ionic and Homeric Greek, the **-ske/o-* extension frequently occurs in derived (iterative) past tenses. It is added to imperfect or aorist stems, e.g. impf. *éphaske*, from *éphē*, (*é*)*phato* 'he said'; *phéreske*, from (*é*)*phere* 'he bore, brought'; aor. *stáske*, from (*é*)*stē* 'he stood'. The peculiar semantic shade of these preterites does not preclude a parallel with the Armenian *-c'-* aorists: these, too, prove to be extended aorists or imperfects. Except for the root vowel grade, e.g., *elic'* 'he filled' is formed like Gk. *stáske*, and traceable to **eplē-ske*. In this instance, **-ske/o-* has been added to the old root aorist **plē-(s)-*: Vedic *áprās*, Hom. Gk. *plēto*; cf. also the Latin perfect *-plēvi*, 2nd sg. *plēstī*. Likewise, *zgec'ay* 'I dressed' must somehow be derived from a genuine aor. stem. On the other hand, as we already pointed out (5.321 b), the *-c'-* aorists, when joined to simple presents, reflect extended imperfects: *mnac'i* 'I remained' < **monā(ye)-ske/o-*¹³².

¹³⁰ G. Bonfante, *The Armenian Aorist*. JAOS 62 (1942), p. 102-105. This is a strong argument for Pisani's thesis on the divergent developments of **-Vm* and **-Vn* (Cf. 5.213, end).

¹³¹ Godel, 1970b, p. 149. My previous statement (1965, p. 33) was perhaps too skeptical.

¹³² The question whether the contraction of **-āye-* to *-a-* should be dated farther back than the earliest instances of extended imperfects must be left unanswered.

However, such a formula does not seem adequate for *grec'i*, *hayec'ay*, etc. The difficulty lies in the 3rd sg. *greac'* (3.233, end) and in the imper. sg. *grea*, *hayec'* (3.235 b). I believe it can be removed: the regular alternation *ea/e* may well have been resorted to in order to avoid uncommon endings, firstly in the imperative: *grea* instead of **gre* (final *-e* never occurs except in the conjunction *et'e*, *t'e* 'that'). This conjecture is supported by one isolated, and therefore presumably archaic, paradigm: *ənkec'i* 'I threw', *ənkec'er*, *ənkec'* (later: *ənkeac'*). In the 3rd sg., *e* is substituted by *ē* in the last syllable, as in *atūēs* 'fox', GDL. *atuesu* and a few other words (Meillet, 1913, p. 19; Jensen, § 41)¹³³. Only in the imper. sg. does *ea* turn up: *ənkea*. Thus, *ənkec'i* is traceable to **songe(ye)-ske/o-*, and likewise *gorcec'i* 'I worked, achieved' to **worġe(ye)-ske/o-*, *p'aylec'i* 'I shone' to **ph^olye-ske/o-*, etc. Generally speaking, the regular *-ec'*- aorists can be equated with the Ionic imperfects in *-eske/o-*.

There remain the *-ac'*- aorists that stand opposite to *-em* presents (3.252), and those which correspond to *-(a)nam* presents. The latter, like *lc'i*, *zgec'ay*, certainly reflect genuine aorists, not imperfects; but in both cases the PA developments cannot be reconstructed with certainty.

5.44. Both the INFINITIVE and the PARTICIPLE belong to the *o* declension (3.2): in *bereal* as well as in *berel*, *-l* < **-lo-*. Evidence for primary adjectives in **-lo-* is found in several IE languages: Gk. *deilós* 'cowardly', *tuphlós* 'blind'; Lat. *pendulus* 'hanging', etc. In OCSl. this morpheme supplies the active past participle, mostly used in compound tenses (*bilŭ jesmŭ* 'I have struck'). Verbal adjectives in *-l* < **-lo-* also occur in Tokharian (Eastern dialect; instead of *-l*, Western Tokharian has *-lye*, *-lle* < **-lyo-*). Thus, we have a frame of reference for the Armenian participle in *-eal*¹³⁴. As, on the other hand, adjectives do not evolve to infinitives, the above evidence does not account for *berel*. Although there are only faint traces of PIE action nouns in **-lo-*, such a formation has to be postulated in order to explain the Armenian infinitive: it may have been productive in some limited dialectal area.

5.441. The development of infinitive forms as an integral part of the verb paradigm cannot be traced back to the PIE period. Armenian in this respect is on a par with all the cognate languages. The nominal origin of the infinitive is still ascertainable, in spite of its manifold syntactic uses¹³⁵. The original action

¹³³ This did not seem important enough to be mentioned in our survey of normal vowel alternation (2.22-2.223).

¹³⁴ Meillet's interpretation of the syntagm *nora bereal ē* 'he has brought' is wrong: see above, 3.26.

¹³⁵ Besides Meillet, 1913, §§ 123-125, see also H. Vogt, 1937.

nouns were presumably root derivatives: so, perhaps, *tal* < **də-lo-* '(a) giving'. The derivation of the infinitive from the present stem (3.231 e) is the result of a not uncommon development: in the Germanic languages, too, the infinitive belongs to the present group.

It is no wonder, therefore, that the verbal adjectives are explainable in terms of noun derivation: *sireli*, *zarmanali*, etc. (3.2) are formed in exactly the same way as *akani* 'clear-sighted' (*akn* 'eye'), *ali* 'salty' (*al* 'salt'), *hawasti* 'certain' (*hawast* 'certainty'). Likewise, *banali* 'key' (from *banal* 'to open') is parallelable to *gorci*, *goki* (4.22): many derived adjectives in *-i* < **-iyo/ā-* have been substantivized.

The other type of verbal adjective is used as predicate: *bereloc' em* 'I am to bring, or be brought' (Cf. 3.21, 3.243). The compound morpheme *-loc'* obviously contains the infinitive suffix **-lo*. As to *-c'*, I would not hesitate to declare it identical to the case marker *-c'* in *mardo-c'*, *srti-c'*, *jkan-c'*, etc. (5.236). The common opinion regarding the origin of this latter thus proves right: in *bereloc'*, *galoc'*, etc., *-sko-* still occurs as a derivational suffix, as it regularly does in Germanic and Slavic¹³⁶.

5.442. The background of the participle is not perfectly clear: *-eal* is doubtless a complex morpheme, but neither in Slavic nor in Tokharian do we find any clue as to the development of the diphthong. As a rule, though not constantly, *-eal* is attached to the aorist stem (3.221). Presumably, this rule originated in the relationship between the participle and the root aorist: *beri*, *bereal*; *ankay*, *ankeal*, etc.; hence analogically: *asac'i*, *asac'eal*; *morac'ay*, *morac'eal*. The latest stage of this process is reflected in *koč'ec'eal*, *hayec'eal*, as against *greal*, *bazmeal*.

On the other hand, some participles seem archaic: in *edeal* 'put, having put'; *leal* 'being, having been' (3.255 c), *-e-* is apparently the root vowel: **edi-al*, **ley-al*, and this analysis is the only suitable one for the isolated participle *k'alc'eal* 'hungry' < **k'alc'i-al* (on *k'alc'num*, aor. *k'alc'eay*, see 2.213, 2.243). Such scarce data do not allow for a decisive statement. Yet we can tentatively assume that the PA participle ended in *-al*, and that the ClArm. ending *-eal* has been abstracted from such forms as the above, which may have been more numerous in earlier times, e.g. before the substitution of *p'axuc'eal* for **p'axial* (3.221, Note).

¹³⁶ It would be worth while to search for other traces of its original function: e.g. *amroc'* (IIb) 'stronghold', from *amur* (I) 'solid, strong' is likely to reflect a substantivized adjective in **-o-sko/ā-*.

6. Conclusory remarks

The IE character of Armenian, suspected since the very beginning of comparative philology, was definitely ascertained in the 2nd edition of Franz Bopp's *Comparative Grammar* (1857-1861). A further, decisive step was taken by, H. Hübschmann in his 1877 article (KZ 23, p. 5-49), in which he demonstrated that Armenian is not an offshoot of the Iranian branch, as it had been thought to be up to then, but the descendant of a peculiar IE dialect.

6.1. From that time on, comparative studies on Armenian were carried on with more rigor and consistency, and the main lines of its evolution were brought to light. Yet there is still a great deal of work to do, but not only in the domain of sound change¹³⁷, which apparently is more attractive or more accessible to comparativists at large. Indeed, the most recent contributions deal with etymology or with phonological problems, while little interest is bestowed on the development of Armenian morphology.

Current research, be it said in passing, might sometimes profit by certain suggestions of earlier philologists, which have passed unnoticed or been totally forgotten. In a previous section, e.g., I cautiously asserted that decisive evidence for intervocalic **dh* is not to be found in Armenian (4.333). I might, however, have mentioned that Bugge long ago brought forth some interesting parallels, especially with Greek, to the effect that PIE **dh* between vowels should have merged with **ǵh*: *awaz* (I) 'sand' (Gk. *ámathos*, OHG. *sant*); *azn* 'nation' (Gk. *éthnos*); *suzanem* 'I plunge, cover' (Gk. *keúthō* 'I cover, hide')¹³⁸. Regarding the identity of the pl.L. and Acc., I advocated Mann's view against Meillet's (5.223), but I might have referred to the former's presumable source as well¹³⁹. This remark, however, is not meant to justify in any way Mann's prejudiced attitude toward the successive generations of Armenologists: while he exalts Hübschmann's predecessors, he underestimates the contributions of such scholars as Pedersen and Meillet, not to speak of Pisani's and Bolognesi's studies, which he does not seem to be fully acquainted with.

6.2. Hübschmann's discovery had another consequence: the placing of Armenian among the IE languages became a problem that had to be solved by measuring, as precisely as possible, the degrees of affinity between Armenian

¹³⁷ See in this respect the Notes to 4.334, 4.353, 4.452.

¹³⁸ S. Bugge, *Etruskisch und Armenisch*. Christiania 1890, p. 79. On *a-* in *azn* as against Gk. *e-*, see 4.331; on the transfer of the word to the *n* declension: 5.14.

¹³⁹ H. Osthoff, *Zur armenischen Laut- und Wortforschung*. Sprachwissenschaftliche Abhandlungen II. 4, Budapest, 1901, p. 121, fn.

and its various cognates. In this respect, some weight is attributed to the testimony of Herodotus, who mentions the Armenians as Phrygian emigrants or colonists (Hdt. VII 73). This assertion, though confirmed by a later one from Eudoxus, must not be overrated. Anyhow, the comparative method, insofar as it is applicable in this instance, has not yet succeeded in either proving or disproving the presumed affinity of the languages in question ¹⁴⁰.

On the other hand, attempts have been made to discover traces of dialectal kinship between Armenian and the ancient IE languages that have come to light during the 1st quarter of this century. Both Tokharian and Hittite --- or rather, the Anatolian branch of IE --- are marginal languages. Each displays quite peculiar features, some of which look archaic, while others are likely to reflect separate developments. Armenian is certainly a comparable case. But what can be expected in such a situation is rather the survival of archaisms in the eccentric or isolated languages than the appearance of common innovations. This opinion, however, is not shared by those who, like Pisani, reject the conception of PIE as a more or less unified language, and account for dialectal affinity in terms of successive networks of isoglosses. Yet, however one figures out the IE background, no significant isogloss including Armenian and Hittite (or Anatolian) only has been traced so far. Affinity between Armenian and Tokharian has been claimed with better grounds: a quite curious feature, common to both languages, is the use of the morpheme **-ske/o-* in causative verbs. The parallel, however, does not throw any light on the development of the Armenian causative suffix *-oyc'* (5.412).

6.3. Evidence for dialectal grouping is to be gained from different data. There are phonological isoglosses, two of which have been alluded to in connection with the PIE consonant pattern (4.321). Another holds between the languages that preserve the distinction of *e*, *o* and *a*, and those in which all three vowels have merged to *a* (Indo-Iranian), or in which the contrast of *a* and *o* has been effaced, as in Baltic, Slavic and Germanic. Armenian in this respect stands closer to Greek, Italic and Celtic, except for the sporadic occurrence of *a* instead of *e* or *o* (4.331). Whether this is enough to assign to Armenian an intermediate place is a question that does not seem to have ever been raised.

Some comparativists deliberately give the primacy to lexical isoglosses.¹⁴¹ It cannot be denied that this procedure leads to valuable results. It is significant that quite a number of words are reflected in Greek and Armenian only, e.g.

¹⁴⁰ See O. Haas, *Zur Vorgeschichte der armenischen Sprache*. HA 75 (1961), p. 563-612, and W. Dressler's criticism: *Armenisch und Phrygisch*, HA 78 (1964), p. 485-498.

¹⁴¹ So W. Porzig, *Die Gliederung des indogermanischen Sprachgebiets*. C. Winter, Heidelberg, 1954; G. R. Solta, *Die Stellung des Armenischen im Kreise der indogermanischen Sprachen*, Wien, 1960.

**meġa-* (Gk. *mégas*, Arm. *mec*); **āmṛ/āmōr-* (Dor. Gk. *ámar*, Arm. *awr*); **kīyon*, (Gk. *kíōn*, Arm. *siwn*); the reduplicated aorist **arare/o-* (5.322, cf. 5.333), etc. The weight of these lexical concordances is increased by as numerous morphological ones ¹⁴². Indeed, the preservation or the loss of a word is often a matter of chance. Our knowledge of the lexicon of an ancient language depends upon written evidence. Now, many words that never occur in the literature may have been usual in the spoken language, or have survived in unwritten dialects. Neither in the Avesta nor in the OP. inscriptions does the ancient word for 'night' appear; but it has turned up of late through a systematic investigation on modern Iranian patois. A similar case is Arm. *t'ar* (4.334). On the other hand, words are easily borrowed, and the borrowing may entail the loss of an old genuine term. There are reasons to believe that Armenian in this respect is no exceptional case.

I am therefore inclined to lay more weight on morphological isoglosses. The most significant ones unite Armenian with Greek and Indo-Iranian. Only these languages bear evidence to the so-called PIE imperfect. The augment is also documented in Phrygian aorist forms, and the prohibitive negation **mē* (Arm. *mi*) in Albanian and Tokharian, too. Other isoglosses include Western languages: see 5.231 (**-bhi-*), 5.232 (**-osyo*). This latter G. ending is also found in Italy, in old Faliscan inscriptions. These case endings can be regarded as archaic; but the development of a past tense (imperfect) from present stems is more likely to be an early common innovation of Eastern dialects ¹⁴³. A thorough discussion of the problem would exceed the scope of this Introduction.

¹⁴² Meillet's inventory (1936, p. 142-143) is not quite up to date: some items would have to be corrected or discarded, while others might be added.

¹⁴³ E. Evangelisti, *L'imperfetto armeno ...* (referred to above, fn. 112), p. 29. Strangely enough, the Italian scholar ignores the Armenian reflexes of the imperfect.

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