§106. pIE r remained unchanged in most IE languages, down into the recorded forms of the languages; exceptional combinations in which it suffered change in OP, are mentioned below. pIE *rekto- ‘directed’, OP rūsta- ‘straight’, Av. rāsta- ‘upright’, Lt. rēcto-.

pIE *pro, OP fra- (in qepds.), Av. frā, Skt. pra, Gk. πρό.

pIE *enter ‘inside’, OP a*ta, Av. antara, Skt. antar, Lt. inter.


pIE *proterom, OP frataram, Skt. prataram, Gk. πρῶτος.

pIE root *dihrug- in OP drauga- ‘the Lie’, Skt. dṛukhaya ‘he deceives’, Gm. trügen ‘to deceive’.


OP r may come also from pIE r ř (§66, §68, cf. §§30–35), and from pIE l l ɬ (§107, §66, §68); but there are many ambiguities, since pIE r and pIE l can be distinguished only if we have a cognate outside the Aryan branch of IE. It is also difficult in many instances, to distinguish the original vocalic r and l from the original consonantal r and l (§30–§35).

For OP developments of pAr. īr, see §§78–9; of pAr. sr, see §118.II. In borrowed names of persons and places, r is of frequent occurrence; e.g. Aārum ‘Assyria’, Arabāya ‘Arabia’, Ufrātu- ‘Euphrates’, Armina ‘Armenia’, Karkā ‘Carians’, in which the forms in other languages assure the r as original at the time of borrowing.

§107. pIE l became pAr. r, and therefore was indistinguishable from pIE r in the Aryan languages, unless a cognate from another IE branch can be added.


pIE *polu, OP paru-, Skt. puru-, Gk. ποινυ-.

pIE *levous, OP roaua, Skt. rōcas, cf. Gk. λευκός ‘white’.


In borrowings, an original l became OP r if the words were really assimilated into the OP; thus Arbāra- ‘Arbela’ = Akk. ar-ba-’ā-lā; Tigrā- ‘Tigris’ = Akk. di-iq-lāt; Nadiṭa-bāira- ‘Nidintu-Bel’ = Akk. ni-di-n-tu-’u-bēl; Babūru- ‘Babylon’ = Akk. bab-ilu. In others that received less use, the l remained: Haldita- an Armenian, Levanāna- ‘Mt. Lebanon’, Dubāla- a district in Babylonia, and Izalā- a district in Assyria.

For the development of pIE ut, see §78; for pIE ūt, §94; for pIE û, §66; for pIE ū, §68.

§108. The pIE NASALS in general remained unchanged in the various IE languages, except that they changed to agree with the position of a following stop or spirant; but this shift is hardly evidenced in OP, since nasals before homorganic stops or spirants were not written in the OP syllabary (§39).

§109. rIE m remained m, in general, in all the languages.

pIE *mā ‘not’, OP mā, Skt. mā, Gk. μῆ.

pIE *moy ‘of or to me’, OP moyt, Skt. me, Gk. μοῦ.

pIE *mpt- ‘dead’, OP marta, Skt. mṛtā-, Lt. mort-nos.

pIE *somo- ‘same’, OP hama-, Skt. saṃd-, Gk. ὑμός.

pIE *nōm ‘name’, OP nāmā, Skt. nāma, Lt. nōmen.


OP m remains before n and final, and before enclitics: kānam, jīynam, etc. nāham, ādām-śim, avākaram-ca-māiy, parwae-ṃ. On [wṛy]-kama = kama-, see §130. On pIE ṇ, see §67; on pIE ŋ, §68: on failure to write m before stops and spirants, §111.

M occurs in non-Iranian proper names and in maškā- ‘inflated skin’, from Aramaic.

1 In pIr., nasals before spirants were reduced to a mere nasalization of the preceding vowel (so also in Indic, cf. Wackernagel, Alltindische Grammatik I.§224); the OP writing fails to show whether the nasalization persisted in OP (as it did in Av.) or was entirely lost. Thus OP ašā may agree with Skt. aśā in having a nasalized vowel, or may be from a form of the root lacking the nasal; cf. ref. in Lex. s.v. aha-.
§110. PIE n remained n, in general, in OP, Av., Skt., Gk., Lt.
Pn PIE *n̄as- ‘nose’, OP acc. nāham, Skt. nās-, Eng. nose.
Pn PIE *nepōt- ‘grandson’, OP nom. napā, Skt. nāpāt, Lt. nepōs.
Pn PIE *nūmō ‘name’, OP nāmā, Skt. nāma, Lt. nōmen.
Pn PIE *vnōskēlī 3d sg. subj., OP zvnōsāiti, Lt. fut. (ĝ)nōscēlt.

OP n was of frequent occurrence in personal and place names, some at least being non-Iranian. For n before stop or spirant, see §111; for n final, see §112. For PIE ē, see §67; for PIE ů, §68. For ŋ, written niy, §25; for ū, written nū, §26.

§111. OP Unwritten Medial Nasals. OP nasals were not expressed in writing before stops and spirants (except m before enclitics, §39), but the presence of the sounds is indicated by the transliterations into other languages, or by the evidence of etymological comparisons.
Ka′pa’dā a district in Media, Elam. qa-um-pa-nāšt-
Shu’za a Semythian rebel, Elam. iš-ku-in-qa.
Hi’rūš ‘Sind’, Elam. hi-in-du-īš, Av. Hindu,
Skt. śīndhu-.
aśa-ga- ‘stone’, Av. asonga-
ba’daka ‘servant’, Phl. bandak, NPers. bāndah, a’tar ‘inside’, Skt. antār, Lt. inter.

§112. OP Final n. OP n was not written when final: loc. *nōmen, OP nāma (see Lex. s.v.);
3d pl. impf. *ehheyont, OP abawa, Skt. ābhaa.
On abaran miswritten for abaraha, see §54.1.

§113. PIE ī appears unchanged in OP, as well as in Skt., when initial and intervocalic; but in Av. it is subject to many graphic alterations:
OP yabā, Skt. yādhā.
OP yadalaiy ‘he worships’, Skt. yājāte, Gk. ētēra (pIE ī > Gk. h-).
OP dārīyatīy ‘he holds’, Skt. dhārīyatī.
OP vāyam ‘we’, Skt. vāyām.
OP drāyā ‘sea’, Av. zrāyā, Skt. jāyās-

After consonants also, PIE ī remains unchanged in OP and in Skt., but it is regularly written -iyy- (§25):
root kan- ‘dig’ + pass. -ya-, in akaniya ‘was dug’.
*duš- ‘ill’ + *yār- ‘year’, in dusāyāram ‘famine’.
urdurīyā ‘he lied’, cf. drava ‘the Lie’.
aśiyava ‘he went forth’, Skt. (mid.) acayatva.

Note PAr. kī > PAr. ēi > OP šy, §104; PAr. tī > PAr. thī > OP šy, §80. OP Maciya- to the province-name Maka must be for *makiyōs, or a late formation in which *makiyōs did not make the second phonetic change; similarly Ākauṣaciyā to *Ākauṣaka.

But hy was normally written hy and not hyi, §27; on tya, with retention of t and failure to write tiyya, see Lex. s.v.

At the end of a word, y was added in OP to a final ī: thus OP pari, Skt. pārī, Gk. περί; OP ciy, Skt. cīd, Lt. quid (§37; §84 for failure to write final d in OP); OP encl. -māiy, Skt. me, Gk. μαί.

Occasionally medial -ay- was written -aiy-; see §48. Very rarely -i-ǧ̣a- = -iyy- was used to indicate length of ī, see §23.

§114. PIE ū appears unchanged in OP and in Skt., while in Av. there are numerous changes, essentially only graphic: OP ū was the semi-vowel as in Eng. we, not the spirant as in Eng. eve:
Pn PIE *g’iyo- ‘living’, OP jīva, Skt. jīvā-s, Lt. vivos.

After consonants also, PIE ū remains unchanged in OP and in Skt., but is regularly written -uw- in OP (§26):
OP harwa- ‘all’, Skt. sārva-.
OP loc. dwaraya ‘at the door’, Skt. dhvar-.
OP acc. thvām, Skt. tvāṁ; but dissyllabic OP tūvam, Skt. tvāṁ.

But Pn PIE ū was lost after labial stops: OP 2d sg. opt. biyāḥ, 3d sg. biyāḥ, from *bhuy-ṇē-, to root *bheu-, see Lex. s.v. bav.
Note pAr. ty > pIr. thy > OP th, §81; pAr. sy > pIr. hy > OP hw, written uv for hw, and Med. f in farnah-, §118.IV; pAr. ry and ry, §35.

At the end of a word, v was added in OP to final u: OP paruw ‘much’, Skt. purú, Gk. πολύ; OP loc. Margaw Hi-daww Bābiraw (§38). Occasionally medial -aw- was written -aw-, see §48. Very rarely -u-r- = -uv- was used to indicate length of u, see §23.

§115. pIE s remained unchanged in pAr. except as follows: (1) pIE s became pAr. š if preceded by pAr. i-vowel or u-vowel (including long and short vowels and diphthongs), or by pAr. r or r' (also from pIE l or l), or by a pAr. palatal or velar stop; and (2) pIE s became a weak h-sound, indicated by h (called in Skt. visarga), when final after pAr. o and immediately followed by a pause between phrases or at the end of a sentence.

pAr. s remained in pIr. before pAr. p t k (and presumably before pAr. ph th kh, but of these there are no certain examples in OP); but in other positions it became pIr. h.

Final s was subject in Aryan to various sandhi developments other than -š and -h; these are best seen in Sanskrit. But Iranian generalized -š and -h and shows only these values and their direct phonetic developments, except for a few combinations with enclitics (the OP examples are in §105). Skt. words and forms will be cited with -s and -h in order to show clearly their relation to the OP words and forms with which they are compared.

The developments of pIr. s š h in Iranian and in OP will be discussed in the following sections.

§116. pIr. s from pIE s in pIr. st sp sk remained in OP without change:

st in pIE *esti ‘he is’, OP astiti, Skt. āstī, L. est; pIE *ghost-, ‘hand’, OP dasta-, Av. zasta-, Skt. hāstā-. OP avoštāya ‘I restored’, cf. L. stāre; OP stānām ‘place’, Skt. sthānām (it is uncertain whether the Iranian as well as the Skt. goes back to pIE sth-, but if so the aspiration was regularly lost in Iranian after a sibilant; other languages have the products of the non-aspirate).

sp in spāda- ‘army’, in Taxmospāda- (name of a Mede); in Vāyaspāra- (name of a Persian): but the ultimate origin of these words is not clear.

sk in skauyi-, Sku״za-, Skudra-: all non-Persian words by origin, and given here only as evidence for the occurrence of the sound cluster.

OP s is more commonly of other origins: (Med.) s from pIE k, §87; from clusters containing pIE k, §90, §93, §95; from pIE dental stop + t, becoming tšt, §85; and in words of uncertain etymology or borrowed from other languages: Saka-, Sug(u)da-, Nisāya-, sumabru-, and the dubious siyamān.

§117. pIr. š from pIE s after certain sounds (§115) remained unchanged in OP:

OP maštī- ‘greatest’, Av. mānišṭa-, Gk. μαγνήτος ‘longest’.

OP fraššayam ‘I sent’, Skt. ēṣaṇati ‘he brings’.

OP uška- ‘dry’, Av. uṣka-, Līth. sūska-s.

OP guṇa- ‘ear’, Skt. ghosa- ‘noised’.


pIE *es-i-st-e-to, OP aśištā ‘he stood’, cf. Gk. ἀσίστα ‘he stands’ (from *esistāya).

pIE *esit-, OP nom. aršīš, Skt. rśī- (cf. §115). OP nom. lanūš ‘body’, Skt. lanuṣ-.

For ks and other clusters giving xš, see §102; for kn and gn giving initial xšn and medial šn, §96; for -šk- as a sandhi product, §105; for pAr. čg giving OP šy, §104; for pAr. čg giving OP šy §80; for pAr. ān giving OP šn, §82.

The verbal prefix ni- affects an initial s of the verbal root; thus ni-štā- from ni- + stā- and ni-ṣad- from ni- + sad- (Iran. had-), and the value š is extended to positions where the š is separated from the i by the augment: niyaštāyam ‘I commanded’ (but avastāyam ‘I restored’), niyaštādayam ‘I commanded’. So also the enclitic pronoun -šaivy -šān -šan -šīś is generalized in the form which developed after a final i or u of the word to which it was attached; cf. Av. hōi him hōh, showing the generalization of initial h, which was regular after most finals.

For št from pIE kšt, §93. The sound š also occurs in borrowed words, such as maškā- ‘inflated skin’ (from Aramaic); and in proper names, the origin of which is not always clear (here
only after i and u): Kāpiṣakāni-, Kūṣa-, Cīṣpi-, Patīswari-, Adukanaiśa-, Čūśa-, etc.

§118. pr. h from pIE s, §115.
I. pr. h remained in OP.
pIE *solgo- ‘all’, OP haruwa, Skt. sāra-
pAr. *sainā- ‘army’, OP hainā-, Skt. sēna-
II. Before r and m the h was not written in OP:
OP rauṭa ‘river’, Skt. srōtas- ‘current, river’.
OP amiya ‘I am’, LAv. ahmi, Skt. āmi, from pIE *semī.
OP amāzam ‘of us’, Av. ahmāk-om, Skt. asmākam.
OP tavnā ‘family’, for *tavhmā from *tavzmā, §103.II.
III. OP hai was written with ĕi; OP hi initial or medial was written by i or by ĕi; OP written hēy is hi, which we expect for non-final hy and hiy and for final hi, is normally written without the i; OP final hēy = -hy (for ĕi) loses the y if it is followed by an enclitic.

For examples, and a complete list of exceptions, see §27.

IV. The writing hēu was normal for hau, as in hau, hauvam, haunavarga-, Vaunaṃa-, but was not used for hū; to express hū, with vocalic u, the single character ư was used, and to express hūv for hū (from su), ư was written—the h being omitted in both situations:
Nom. Haraduvaṭ, Skt. sāravati.
Loc. pl. anīyāw-ā, Skt. anīyāyu.
Kuwa ‘own’, Av. zva-, Skt. svā-
kuwana ‘having good horses’, Skt. su-dāva-.

In the name Vīdā-fornah- ‘Intaphernes’, the second element is identical with Av. vīrarna-ah- ‘royal splendor’, from pIE *syelet-nos-, cf. Skt. svar- ‘sun’, Lt. sol; the j instead of OP hy from su seems to be a Median peculiarity, although Intaphernes was one of the Persians who aided Darius to overthrow the false Smerdis.

V. There are other words with h, which are of uncertain etymology or are borrowed from other languages: Anāhitā, usually written Anahita, the name of a goddess with apparently an Iranian name based on an unidentifiable root; Haldīs-, an Armenian; Hīduṣa, a province-name from Indie, but with Iranian development of the initial s.

VI. For the loss of h in the sequence ahah, and subsequent contraction of the vowels, see §131.

§119. pAr. h developed from pIE s after pAr. ā when final in the phrase or sentence; it was not written in OP, but its presence as a sound is indicated by the fact that final ā remains ā in the writing if it is followed by h, but is written a if it is absolutely final. When it is desirable to indicate this unwritten h, we use a raised h or a raised s,1 as may be more convenient.

But OP abara ‘tā, Skt. āharaṇa, OP agarbāyata, Skt. agrbhāyata.

After ā, there is no evidence of the survival of h as an unwritten sound in OP:
OP npf. kartā ‘done, made’, Skt. krtā.

The instr. pl. raucahiṣ, to rauca ‘day’, raises a problem. The corresponding declension of neuter -os/es-stems is, with partial use of Skt. mánas- ‘mind’ and Av. manah- ‘mind, sense’:

pIE Skt. Av. OP
Nom. sg. *menos mánah manō rauca
Ins. pl. *meneh-bhiś mānōhiś mānhiś raucahiṣ
Loc. pl. *menes-su mánahsu raocoh-a

Apparently the suffix -as- or -a- was in some forms replaced by -ah- where -ah- yielded an easier phonetic development. We may assume that raucahiṣ is from raucahiṣ, that the h became voiceless before the voiceless stop and was lost in OP, but in Av. and Skt. was lost with an attendant change of the preceding vowel to ə. A similar replacement is seen in zūra-kara- ‘e IK- doer’ , where the h is lost before the voiceless stop; cf. Skt. manah-pati- ‘Lord of the Mind’.

§120. pIE s developed in pIE only (1) from s which in word-formation came to stand before a voiced stop; (2) from s which in word-formation

1 The s indicates more clearly the etymological origin; similarly, we quote Sanskrit words with either -h or -s.
came to stand after a voiced aspirated stop (of this there are no examples in OP); (3) in the voiced clusters *zd* and *zdθ* which developed from certain combinations of dental + dental (§85). There are only a few examples:

Personal name Vahyaz-dāta- 'Follower of' the Better Law', with vakya- 'better' (Skt. vāsya)- + dāta- 'law'.

azdā and Aura-mazdā-, with -dθ-, see §85; for basta- and gasta-, with participial -st- replacing -dθ-, see §85.

The Aryan prefix *niš-, from pIE *ni + s (§115), became niš before voiced stops, as in Av. niš-barsta- 'carrying off' (nt. sb.), and is written nij- in OP nij-āyahm 'I went forth'.

Other instances of z are largely the product of pIE ǵ and ǵh in Median (§88, §91), or in OP before consonants (§91, §95); such a z became s and then ș before n:

pIE ǵ: paruza-, vispazana-, Vahrzana-, vazraka-.

pIE ǵh: brazmaniya-, Uvārmē-, uzma-, zūra-, zavraka-.

pIE ǵ or ǵh: Zrakā-.

pIE ǵhy: patiyazayam, hźānam.

Names of non-Iranian places: Zazāna-, Zūzahya-, Izalā-.

It is to be noted that OP z remained unchanged before m, as in brazman-, though it became voiceless (and was further changed) before n, as in baršnā. But the zm which was retained in GAv. became sm in LAV.

§121. The Ablaut Grades of the Vowels:

The pIE variation of the vowels, known as ablaut gradation, is well represented in OP, though it is obscured by the pAr. changes: pIE e o a became pAr. a, pIE ě ō ā became pAr. ā, and the diphthongs similarly were reduced to pAr. ai āi, au āu. Further, the reduced ą before liquid, nasal, or semivowel, became a in pAr.; cf. also the development of the long vocalic liquids and nasals, §88. In general, then, the pIE series assumed the following forms in OP:

\[
\begin{array}{|c|c|c|c|}
\hline
\text{Series I} & \text{pIE} & \text{OP} \\
\hline
\text{e} & \text{e} & \text{ē} & \text{ā} \\
\text{o} & \text{o} & \text{ō} & \text{ā} \\
\text{v} & \text{v} & \text{ā} & \text{ā} \\
\text{en} & \text{n} & \text{ēn} & \text{ān} \\
\hline
\text{Series II} & & & \\
\text{a} & \text{ā} & \text{ā} & \text{ā} \\
\text{Series IV and V} & & & \\
\text{e} & \text{ā} & \text{ā} & \text{ā} \\
\text{o} & \text{ā} & \text{ā} & \text{ā} \\
\end{array}
\]

Notes to the Table: (1) Similarly, pIE el etc., which became pAr. ar etc. (2) Either consonantal or vocalic, according to the nature of the neighboring sounds. (3) Similarly, pIE em etc., which gave pAr. am etc. (4) There are diphthongal varieties of this series, as of Series I; but few if any examples of this series can be identified in extant OP. (5) Series III, consisting of o o nil etc., and Series VI, consisting of ō ō a, may be merely varieties of Series I and IV lacking extant examples of grades e and ō respectively. (6) The value a developed before i and u, i and y. (7) There are diphthongal varieties of Series IV and V, with zero-grades zi or i, nu or u, etc.

Apart from details, the vowel grades in the first two columns of the pIE belong by origin to accented syllables, those in the first to primarily accented syllables and those in the second to secondarily accented syllables; they are known as normal grades or accented grades. Those in the next three columns of the pIE belong by origin to unaccented syllables; those in the third column are known as zero grades, and those in the fourth and fifth as reduced grades. Those in the last two columns of the pIE have acquired length through special circumstances, such as contraction of the initial vowel of a verb with the vocalic augment, the marking of a derivative noun from a verbal root, the indication of the causative stem of a verb, or the indication of the nominative singular of a noun (sometimes extended to the accusative singular and the nominative plural); they are known as long grades, and originally bore respectively the primary and the secondary accent. But such a schematic distribution of the grades could not be thoroughgoing, since it would result in the alteration of related forms beyond the possibility of recognition, and analogy therefore interfered to preserve a useful similarity in related forms.

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1 As in §88.Ab, I intentionally omit Stormeant's pIE z coming from pII s with a preceding y (the third laryngeal, which was voiced).
PHONOLOGY

In the following lists, an attempt will be made to differentiate e and o grades; where this is impossible, the pre-form will be given with pAr. vocalism. For the most part, only examples will be given which show two different grades in OP itself.

§122. Ablaut Variation within the Root: examples from OP:

*e*s- in as-tiy ‘he is’, *s- in h-a'-tiy ‘they are’, *ēs- (augmented) in āh-ām ‘I was’.

*ped- or pod- ‘foot’ in ni-padiy pati-padam Garma-pada, (Ar.) *pād- in pādābīya ‘with the two feet’.

*sad- ‘sit’ in had-iš ‘seat, abode’; (Ar.) *sād- in niyāsadāyam ‘I established’.


*ē- ‘go’ in aitiy ‘he goes’, *i- in -idiy ‘go thou’ (para-idiy, paridiy from *pari-idiy) and -iṭa ‘gone’ (para-iṭa); *ē- (augmented) in upāyaṁ (from *upa-āyam) ‘I arrived’, uparīya-āyam ‘I behaved’, aṭi-āś ‘he went past’.

*pekk- ‘cut’ in ni-paištāniy ‘to inscribe’; *piṅk- in ptc. ni-piśtām ‘inscribed’.

*teu- in taumā ‘power’, u-tava ‘having good strength’, taviyā ‘stronger’ (for taviyā, §48);

*tu- in tuvā ‘powerful’; (Ar.) *tāu- in tāvayatiy ‘he is strong’.

*dhrough- in drauga ‘Lie’, dhrugh- in duruxtam ‘false’.

*gou- in Gau-māta, Gau-barwā; *gou- in Thalagyu-s (but see Lex. s.v.); (*gou- in Skt. gās ‘cow’).

*bheu- ‘become’ in bavatiy ‘he is’; *bhyu- in biyā ‘may he be’.


*ger- ‘make, do’ in cartaniy ‘to do’; *gor- in zūra-kara ‘evil-doer’; *gr- in ca-xr-iyā ‘he might make’, *gr- in kartam ‘made’; *gor- in akariyā ‘it was done’; qer- in u-cārām ‘successful’.

*mer- ‘die’ in marıka- ‘memorial person’ (see Lex. s.v.), *mor- in martiya ‘man’ (see Lex. s.v.), *mr- in marta ‘dead’, wā-marśiyuṣ ‘by self-death’ (see Lex. s.v.); perhaps *mr- in amariyata ‘he died’ (cf. Av. mircyle ‘he dies’).

*bendh- or *bhendh- in ba’daka ‘subject’, bhūdyh- in basta ‘bound’.


*dher- or *dhr- in adarśiyi ‘I held’, *dhr- in durwa-firm’; (Ar.) *dār- in dārayatiy ‘he holds’.

*gṛem- ‘come’ in ā-jamiyā ‘may it come’, *gṛm- in parāgmata ‘gone forth’ (see §244).

*ap- ‘water’ in inst. pl. abīś, *āp- in nom. āpīṣ, loc. āpīyā.

*bhog- in bāga ‘god’, bhog- in bājī- ‘tribute’. *gṛ- in gāṁtām ‘cattle’ (oi proved by the lack of palatalization of the g), *gṛ- in jūva ‘living’.

*prek- in ufrālama ‘well punished’, *ṛk- in aparsam ‘I punished’.

*ṛg- ‘direct, rule’ or *roṣ- in uradaṇām; *ṛṣ- in arśām, Ardū-manṛś, *ṛṣ- in rāṣṭam ‘right’ (cf. §93.n2).

*sū- ‘place’ in stānam, avāstāyam, niyāstāyam; reduced to *st- with thematic vowel, instead of *st-, in arśātā.

(Pr.)*pū- ‘protect’ in pādiy, pātuw, pala; *po- in apayaṅiy, patipaṇwā (§214).


*dē- ‘put’, only in this grade: adā ‘he made’, dāṭam ‘law’.

*dō- ‘give’, only in this grade: dāḍatw ‘let him give’.

§123. Functional Ablaut Variation within the Verbal Root: examples are found in the preceding section; they include

(1) strong grade varying with zero or reduced inside the regular paradigm, with long grade where there is contraction with the augment;

(2) long grade in causative formations, where other languages show the -ō grade: viṇādhaya-, Lt. noceō; dāraya-, mānaya-, gāraya-, sādaya-, tāvyā-, jāvaya-.

(3) long grade in substantives from the verbal root: asa-bāra-, uṣa-bāri-; u-cāram, bājī-.

§124. Functional Ablaut Variation within the Last Stem-Syllable of Nouns:

(1) In -ō stems: nom. -ōs as in martiya, and -ō in several other forms; voc. -e in martiyā; see §169.

(3) In -i- stems: -i- in nom. Ciśpiś, (Ar.) -ai- in gen. Ciśpaśiś; see §177.

(4) In -s- stems: -nś in nom.-acc. nt. manaś-cā, -nes- in instr. manahā, -nēś in nom. masc. Vida-farnā, -nś in Hara-manī, Ardu-manī; see §185.

(5) The long grade as marker of the nom. sg. of consonantal stems: -t- stem nāpā, -r- stems pātā -mātā brātā davaśā, -n- stems asā artāvā tafaśapāvā; see §188, §186, §187. Of the long grade -l[ r] in pātā, the zero-grade -lr- is seen in gen. piṣa from *po-br-os. The -u- stem dahāyuś (see above, 2) also belongs here.

(6) The long grade as marker of the acc. sg. of these same classes: asmānam ṣramāram nāham kṣānām dahāyuṃ dahāyāṃ, see §184.

(7) The long grade as marker of the nom. pl. of these same classes: dahāyāṃ; see §183.

§125. Guna and Vriddhi: The Hindu grammarians recognized a variation of vowels within the same root or formative element. The vowels which they recognized in their system of roots were taken by them as the fundamental vowels; prefixation of ā gave to each the guna-form (Skt. gnaṇa); lengthening of the guna-form gave the vriddhi-form (Skt. vyṛddhi 'growth'). But ā was its own guna; that is, ā unaltered was also the guna of ā. Thus they got the following correspondences; note that the Hindu grammarians the e and o were diphthongs ai and au (as they really were!).

Fundamental: a ā i ā u ā ū r ā
Guna: a ā e o ar al
Vriddhi: ā ā āi āu ār āl

In the main, this scheme represents the development of the PIE ablaut series in Aryan, where PIE e o a became ā and PIE ē ō ā became ā; and it would be unnecessary to introduce it here, if it were not that in both branches of Aryan, and in no other branch of Indo-European, the alteration to vriddhi-vowels was an important method of word-formation. In this use, ī and ū sometimes functioned as the vriddhi-vowels corresponding to i and u (instead of the āi and āu in the table given above).

§126. Vriddhi as a Formative. Vriddhi or lengthening of the vowel was in Aryan a much-used method of forming derivatives; many adjectives, for example, are in Skt. distinguished from the nouns from which they come, only by the vriddhi-vowel in the initial syllable. There are a number of certain examples in OP (apart from those in which the long-grade vowel may be considered a direct inheritance from PIE or from a PIE system of formation): dārāniya-kara- 'goldsmith', to darāniya- 'gold'. Bāga-yādi- 'God-worship (month)', to bāga- 'god'. wārāšika 'good sparsman' (*hār-), to arūšiš 'spear', Skt. rūši- 'spear'; this leaves it uncertain whether arūšika 'sparsman' agrees in vocalism with wārāšika, as we have taken it, or is arūšika, with arūšiš. Cf. the next item.

wūsābāra 'good horseman' (*hw-āsa-), to aša- 'horse'; asūbāra with ā is rendered probable by the unlengthened vowel in uśābāri- 'camel-borne'.
wāṃśṛṣiyān 'having his own death' (see Lex.), to *hwā- 'own'.

wūśiṣyā- 'own', with *hwā- in relation to wūtiṣyā- 'own', unless the writing with -āi- is an error.

xšayāšiya 'king', to -axšaṣiyā 'I ruled'.

āśigari- a month-name, of uncertain etymology. yāumāṇiš 'skilled', derivative of *yau-man- māṇiya- 'personal property', see Lex. s.v.

āṃrā 'skills', to *hu-nara- (here u is vriddhied to u).

Mārga- 'Margian', to Marūš 'Margiana'.
Pārsa 'Persia', to Parthava 'Parthia'.

Vriddhi is probable or possible as a formative in the first syllable of the following:
The month-names Ādukanaiśa-, Ānōmaka-, Vīyazna-; for two other month-names certainly have it (see above).

The personal names Vāyaspāra-, Frāda-.
The ethnic Pāṭiśvaris (to paitiš ī).
The place name Kāpiškāṇi-.

abagaina- or abagaina- 'of stone', adj. to abaga- 'stone'.
Ariya- or Āriya-, arawastam or āravastam, arjana- or ārjana-.
kāsaka-, kāsakaina-.

Vriddhi as a factor in the second component of a compound is seen in the following:

1 Tedesco, ZII 2.46-7, argues for ārīya- (OP graphic ārīya-) exclusively, on the ground that Skt. ārīya- is merely a later form derived from the earlier ārīya-, which then is alone original.
yād- in Bāga-yādī- and Āci-yādīya-, month-names.


Perhaps wa-dā- (for *hwā-dā-), in Paiśiṃ-vaḍā-; see Lex. s.v.

Perhaps *U-vāra-zmīy, Vi-vāna, *U-tōna, Vāya-spāra-.

bār-, -bārī-, -cāra-, as second elements of compounds.

Possibly nouns and adjectives formed on the root with the long vowel should be listed here: kāma-, pāda-, bōji-, rāda-. See also the long-vowel forms in §143.

§127. Epenthesis is the insertion in a syllable, of i or u or other vowel by the influence of a sound in the following syllable, the result being a modification of the sound of the vowel in the syllable suffering epenthesis. It is frequent in Avestan, as in pātī for *pātī, OP patiy, or pwri for *pwri, OP paru.

The only certain example in OP is yāumānīś for *yāumāniś and its compound ayā(ma)niś DNb 40, 59. It is less likely that Paiśiṃ-vaḍā- is for *paśī-ā-hvāda-, for *paṭī-, with epenthesis (see Lex. s.v.).

§128. Anaptyxis is the development of a vowel between two consonants which the speaker finds it difficult to pronounce without an intervening vowel; cf. the common pronunciation of athletic as atletic. OP has anaptyxis in the cluster dr where it is followed by uc durua ‘firm’, Skt. dhruv-s; duratam ‘false’, Skt. dṛdham; aduruvija ‘he lied’, cf. Av. acc. druṇim ‘devil’. The only other cluster which suffered anaptyxis in OP was gd, which we find in the name of Sogdiana in its various writings: sruwud = Sruqda, sruvbd = Sruqda, but also sruvbd = Sruqda, so that here the pronunciation was a shifting one.

There is a possibility that there was anaptyxis in the clusters dr br fr zr before a, but OP writing can give no evidence on this point. NPers. has dur-g = OP dura, birādār = OP brātā, fūrmān = frūmān; but the anaptyxis may be later than the OP period. For Zra-ka, Greek has Zaraγγαi (in Arrian) and Ζαράγγαi (in Herodotus) with anaptyxis, but Greek has no initial sr- or zr-, and there is also the form Αράγγαρ (in Diodorus) without anaptyxis, when the initial cluster is one which is normal in Greek. To these words we may add draya ‘sea’, and Nabukudrara. The assumption that the anaptyxis seen in the NPers. words is later than the OP times, facilitates the derivation of NPers. buzurq from vaṣraka (rather than from vaṣarka or vaṣqka, see Lex. s.v.).

§129. Haplogy is the loss of one of two similar sequences of sounds, each containing at least one consonant and one vowel, or one vowel and at least one consonant: thus English mineralogy from *mineralology. OP has one certain example, hamātā from *hama-mātā ‘having the same mother’, cf. hama-pitā ‘having the same father’, where no haplogy is possible. A second example, probable but less certain, is dvarām from *dvar-ārēm ‘door-cover’, = ‘colonnade’. Possibly also aršā-tā- ‘rectitude’ from *aršā-tā-; but cf. Lex. s.v.; and didiṣ ‘see thou’, if reduplicated pres. invm. *dhi-dhi-dhii rather than aer. invm. *dhi-dhi.

§130. Shortening of Long Consonants. Long consonants frequently developed in word formation, either by juxtaposition of two identical consonants or by assimilation of one consonant to a contiguous consonant. All long consonants of earlier origin were shortened in plr., and long consonants of later origin were shortened in plr. or in OP. There are the following examples in OP:

pIE šk > pAr. sš > plr. šš > s in the -sk-present-stems, such as OP parsāmiy, Skt. pṛcchāmi, Lt. pescō; §97.

pIE ks > pAr. čš (§92) > plr. čš > čš in OP aor. niy-apaiam to pIE root *petk-; §102.

pIE str (after u) > pAr. štr > plr. št > OP Štr čščš čščš as in OP úša- ‘camel’, Av. uṣṭra-; §79.

pIE dh > pAr. nth > plr. n as in OP vaināmī ‘I see’ to pIE *yed; §83.1.

pIE pḥḥ > pIE pAr. bbb > plr. bb > b, as in abhī from *ab-bhīs (§75.14).

This shortening took place in most languages before and after consonants; OP example: uzmā ‘stake’ from *ud-zma-, §84.

The shortening of the sandhi combination -d c- to -c- in aciy yaci (§105) is probably by way of assimilation of the weak -d (§84) to the following c-, whereupon the long consonant was shortened; but the shortening of sandhi combinations may be merely graphic when free enclitics were attached in OP, as in apitśim = apīt-śim, tua-

§131. Contraction of Vowels took place in OP (or in pre-OP) when in word formation or composition two vowels came into immediate contact. There are the following examples:

\( \ddot{a} + \ddot{a} > \ddot{a}; \) *ava-arasam > awarasam, *xšaya-arša > Xšayārša; *upa-ayam > upāyam, *fraišayam > fraišayam; *parā-arasam > parārasam; *a-ayātā > aya-tā; *paś-a-ava > pasāva; *a-unāramana > Aunāramana.

\( \ddot{a} + i > ai; *parā-i-tā > parai-tā; *parā-i-di > parai-di. \)

\( \ddot{a} + i > ai; *fraišayam > fraišayam. \)

\( \ddot{a} + u > au; pAṛr. masc. *sa and fem. *sā + *u + OP masc.-fem. haw. \)

\( i + i > i; *pari-idiy > parai-diy. \)

-iya in the interior of words > -i, see §23.I.

The view has been expressed that \( h \) was lost between two a-vowels which then contracted to \( ā; \) but this is true only if the sequence is -ahah-; note fraharaam, avakari[a], Auramazdāhā -dahā -dahā, náham, anišāya bagāha, awahanam, Thāravāhara -āham and other forms of the tense, aškham aška etc., manišāhāi, frāhājam. The examples of aḥah > āḥ are the following:

*ahāhy > āhy ‘thou mayst be’, cf. ahātiy ‘he may be’.

*bahāhy > bāhy ‘thou mayest say’.

*bahāhy > bāhy ‘thou sayest’, whence by analogy *bahatiy > bātiy ‘he says’.

*māhāhyā > māhyā ‘of the month’ (not loc., see Lex. s.v.).

Vivāna is hardly *vi-vahana-; with the same prefix and root as Av. Vī-vahana-, Skt. Vī-vās-vant; apāriyāya is not *ahāp, see Lex. s.v. ay.

For the sequence dāh there are some wrong writings in XPh: akhrēm = akhm for akhēm = akham ‘I was’, akhēryā = ahāniy for *akhāniy = *ahāniy ‘may I be’, (gen.) aur-mēdrēka = Auramazdāhā (4 occurrences; also twice in XPh) for -dahē = -dāha or -dērēka = -dāhā; but these miswritings, some of them probably explainable (§52, §53, §222.I), do not controvert the views expressed above.

§132. Consonantal Variation occurs in OP words as a result of (1) internal sandhi in word formation, (2) pAr. phonetic developments, (3) plIr. phonetic developments, (4) dialect mixture of OP and Median.

1 Neg. a- before consonants, an- before vowels, from *yp-; prefix ha- and ham- similarly (= Skt. sa- and sam-). Root final before dental suffixes: pIE gh and gh-t > gdh, replaced by the product of g in OP: adurujiyā and duruztam (§73.III, §242). pIE dh and dh-t > dzd, replaced by the product of st in OP: ba’daba and basta (§85, §242).

2 pAr. palatalization of velars before palatal vowels, giving an alternation in OP k/c, g/j (§73.III): Maka Maciṣā, kawauti kartam cārtaṇa, kašciy ciṣcīy, drau ga drau drājana adurujiyā, parā-gmatā ha’gmata ō-jamijiy.

(2-3) pAr. split of pIE s into s ŝ, and plIr. split of pAr. s into s and h (§115): stānam avasāyam niyaśāyam cīśtātā; hādiś niyaśādayam; aškham aškhanai; nom. ending in baga- pasti-š pīru-š.

3 flr. change of p t k to f th h before consonants (§74.I): parā but fra-, apārṣam but fraṣṭām, tukwam but acc. tvām, akariya but caaxrīyā, drau’ga adurujiyā but duruztam.

(4) On the differences between OP and Median consonantism, see §8.

§133. Enclesis is a frequent phenomenon in OP. The enclitics are the following:


2d sg. gen. -taiy.


pl. acc. -diś; pl. acc. -diš.

pl. acc. -tā (dubious; only in avāšā-tā DB 4.72).

Coordinating conjunctions: -a ‘and’, -vā ‘or’.

Postpositions: a, paṭi, both also as separate words before or after their nouns.

Adverbs and particles: am, -kaïy, -ciy, -diy, never separately.

-apīy, paṭīy both also separately.

Miscellaneous: yā in māṭya DB 4.43, 48, 71; yadōṭya XPh 35f (misswritten yadōṭya XPh 39), cf. yadā : yta XPh 29.

mām, elsewhere orthotone, in māṭyamām DB 1.32.

rādiy in avahya-rādyi DB 1.6f, etc.; also separately.

Double enclisis: mā-ta-mām DB 1.52; rauca-pati-vā DB 1.20; nai-pati-mā DNb 20; avā-
karam-ca-maïy DNb 27f; ciyakhram-ca-maïy DNb 51, 51f.

Exceptions: diš is written as a separate word (i.e. with a preceding divider) in DB 4.34, 35, 36; so also laïy in DNb 58. But daïy in DB 5.11 is a wrong reading, cf. §44. Other variations are noted above.

§134. The Phonetics of Enclisis has certain effects on the writing of words with enclitics. Thus the addition of an enclitic normally prevents the prolongation of -ā -ī -ā to -ā -īy -ā in the reduction to writing; and there are a few examples in which other results take place. These are discussed in the following paragraphs.

§135. The -ā before enclitic normally reverts to its true value, and the indication of length disappears: thus manā but mana-ca; avâkaram-ca-maïy; avahy-rawid; fra-harawam.

awād but awada-sa, awada-sim, awada-siš; but awad-sim DB 3.74.

ada-laiy; dūrada-laiy.

utā but uta-maïy (often), uta-sim XPh 34; but more often the utā keeps the ā: utā-maïy, uta-laiy, uta-saiy, uta-sim, uta-sim, uta-diš. The retention of the ā is by analogy to the separate word.

§136. The -iy before enclitic normally reverts to its true value, without the -ī; but occasionally analogy of the separate word causes its retention:

nai-mā, nai-maïy, nai-sim, nai-pati-mā, pati-maïy, tiyai-saiy, imai-vā, yadi-patiy, yadi-vā, [uš]-i; similarly in phrasal compounds, pati-pdadam, ni-padiy. By analogy, naiy-diš DB 4.73, 78.

dūrai + apiy, which is most often two words, appears as dūrai-apiy, without the y, and also as dūrayapiy, showing the development of intervocalic i to y.

Locatives with postpositive ā: -āi(y) became -āy before the ā, as in dwraya from *dvarai + ā, Aburaya from *Aburai + ā. But the script does not show whether locatives in -i changed the i to y before ā, or kept the vowel by analogy: drayâhā (once -hiyā) may represent either -hi- or -hi-.

Final -hiy written for -hiy (§37) was reduced to he before an enclitic: vikanâhy and vikanâh-

diš DB 4.73, 77; paribarâhy and paribărâhi-
diš DB 4.78, 74.

§137. The -uw before enclitics normally reverts to its true value, without the -v; but sometimes analogy of the separate word causes its retention:

haw, but hau-maïy hau-saiy hau-dim hau-diš;
also hau-maïy hau-laiy hau-ci."y.

anw, but anu-dim.

When -am is added, -aw should become -av-, but remains by analogy in haw-am; -ā became -a"- before -am, in twam from *tū + -am.

When ā is added to locatives, -au(e) becomes -ar- as in gāēwā, or remains by analogy as in dakhayawā; -u(e) + ā becomes -uə, which is ambiguous after consonants, representing either -w- or -v-, as in dakhaywâ, aniya-wâ (cf. Skt. loc. pl. ending -śu -su).

§138. Consonants before enclitics show few changes.

I. Doubled consonants are written single: āpiš + šim = āpišim DB 1.95f; taumaniš + šaiy = taumanišaiy DNb 25f; -kom + maïy in [n'yâkama A'Sa 4. In DNb 51f ciyakharamn'ciy is twice written for n'm'ciy, = ciyakharam-ca-maïy.

II. The reduced final consonants which are not written at the ends of words rarely reappear in sandhi; the examples are of -s c-, -s k-, -d c-, and are given in §105.

§139. Contraction of Vowels in Sandhi is to be expected in combination with enclitics, but the situations which produce it rarely occur in OP; there is one probable instance, vaśna[p]i XPh 7f, for vaśna + apiy.

§140. Sandhi in Connection with Prefixes shows the same phenomena as with enclitics.

I. Graphic -ā -iy -uw for -ā -ī -u revert to -̣ -ī -u before consonants:

Prep. upā, but upa-stam; prefix fra- (not occurring separately in OP) in fra-mārâram, fra-harawam.

Prep. pati, but pati-pdadam; pari, but pari-

barāmiy; prefix ni- (not found separately in OP) in ni-padiy, ni-raṣātiy.

Nt. adj. paruv, but paru-zanānâm; also paruv-

zanānâm and paruv : zapânâm, after separate paruv.

II. Final -ā contracts with following initial -̣ -t- dot- -̣; final -t contracts with initial -̣ -i-